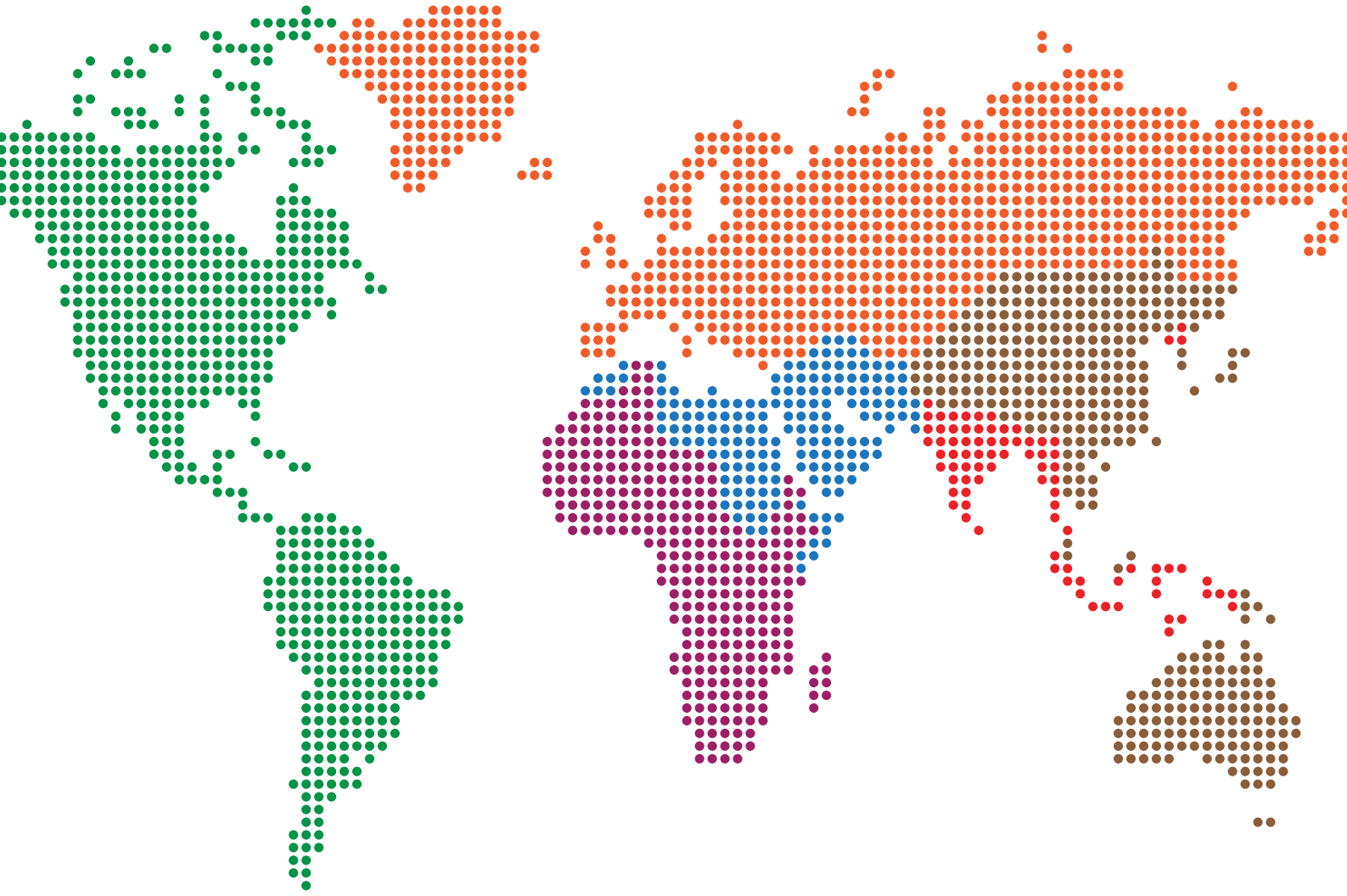
Global policy report on the prevention and control of viral hepatitis

IN WHO MEMBER STATES



World Health Organization

WHO Library Cataloguing-in-Publication Data

Global policy report on the prevention and control of viral hepatitis in WHO Member States.

1. Hepatitis – prevention and control. 2. Hepatitis, Viral, Human – prevention and control. 3. Hepatitis B vaccines. 4. Health policy. 5. National health programs. I. World Health Organization.

ISBN 978 92 4 156463 2 (NLM classification: WC 536)

Photo credits: Page 10 – *WHO / Christopher Black* I Page 30 – *WHO / Antonio Suarez Weise* I Page 66 – *WHO / Torgrim Halvari* I Page 92 – *WHO / Tom Pietrasik* I Page 146 – *WHO / Andrew Caballero Reynolds* I Page 166 – *WHO / Jim Holmes*

Design and layout: Vivian Lee, Design Geneva
Technical editing: Bandana Malhotra

Global policy report on the prevention and control of viral hepatitis

IN WHO MEMBER STATES

World Health Organization

FOREWORD

The five viruses that cause infections of the liver are responsible for a widely prevalent and growing disease burden. No country, rich or poor, is spared. These viruses are important as they cause infectious diseases in their own right. Hepatitis A and E viruses are major foodborne and waterborne infections, which cause millions of cases of acute illness every year, with several months sometimes needed for full recovery. But viral hepatitis also makes a substantial contribution to the burden of chronic diseases and the premature mortality they cause. Worldwide, infections with hepatitis B and C viruses cause an estimated 57% of cases of liver cirrhosis and 78% of cases of primary liver cancer. The availability of a vaccine that confers lifelong protection against infection with the hepatitis B virus gives public health a rare opportunity to prevent a leading cause of cancer, especially in low- and middle-income countries.

The significance of these challenges and opportunities was formally acknowledged in 2010, when the World Health Assembly adopted its first resolution on viral hepatitis. That resolution, which called for a comprehensive approach to prevention and control, opened a new era of awareness about the magnitude of disease caused by viral hepatitis and the need for urgent action on several fronts.

As attention to viral hepatitis continues to build, so has recognition of the many strategies available for prevention and control in all resource settings. Control measures for viral hepatitis fit well with the current drive to strengthen health systems, especially as many measures touch on the fundamental capacities of a well-functioning health system. These include reaching every child with immunization programmes that include hepatitis B vaccine, protecting against mother-to-child transmission of the virus, and ensuring the safety of blood, transfusion services, organ donation, and injection practices. The broad social and environmental determinants of viral hepatitis further call for improvements in housing, sanitation, and food and water safety. The fact that many infections are silent, causing no symptoms until there is irreversible damage to the liver, points to the urgent need for universal access to immunization, screening, diagnosis, and antiviral therapy.

As hepatitis viruses show great diversity in their prevalence and modes of transmission in different parts of the world, policies and strategies for prevention and control need to be tailored to the specific national or sub-national context. The 2010 World Health Assembly resolution urged Member States to generate reliable information as a foundation for building prevention and control measures that match the local epidemiological profile and health system capacities.

This report is a contribution to that objective. It sets out the results of a survey conducted in mid-2012 by the World Health Organization and the World Hepatitis Alliance. The survey aimed to gather country-specific baseline data on hepatitis policies in WHO Member States in all six regions. Survey data also offer insight into conditions in specific countries that may have hindered past efforts to achieve hepatitis policy objectives. Gaps that need to be filled are identified, as are specific areas of policy development where WHO assistance is needed. Such baseline data will serve as a solid benchmark as countries, supported by WHO and its partners, seek to make the "silent" epidemic of viral hepatitis more visible – and more manageable.

Dr Margaret Chan
Director-General
World Health Organization

ACKNOWLEDGEMENTS

We would like to sincerely thank the many respondents to this survey from the participating WHO Member States.

This document was written by Jeffrey V. Lazarus, Kelly Safreed-Harmon and Ida Sperle from the University of Copenhagen in coordination with the World Health Organization's Global Hepatitis Programme and the World Hepatitis Alliance.[a]

Charles Gore, Hande Harmanci, Jeffrey V. Lazarus, Tim Nguyen, Raquel Peck, Kelly Safreed-Harmon and Stefan Wiktor contributed extensively to the development of this document.

The questionnaire was reviewed by members of the WHO Viral Hepatitis Action Group: Diana Chang-Blanc, Jesus Maria Garcia-Calleja, Ana Maria Henao-Restrepo, Selma Khamassi, Neelam Dhingra-Kumar, Ana Maria Padilla-Marroquin, Anita Sands, Andreas Ullrich, Annette Verster, Marco Vitoria and Krisantha Weerasuriya.

The survey was disseminated to Member States by WHO staff from the regional offices: in AFRO by Frank John Lule, in AMRO/PAHO by Luis G. Castellanos and Nuria Diez Padrisa, in EMRO by Mamunur Malik, in EURO by Martin Donoghoe and Irina Eramova, in SEARO by Vason Pinyowiwat, in WPRO by Karen Hennessey, Chin-Kei Lee, Ying-Ru Jacqueline Lo, Tamano Matsui and Tomoe Shimada.

This project was supported by the Ministry of Health, Labour and Welfare of Japan. The World Hepatitis Alliance provided a research grant to the University of Copenhagen for conducting the survey.

[a] The World Hepatitis Alliance is an umbrella nongovernmental organization with 166 patient group members in 67 countries. It was admitted into Official Relations at EB130 and is partnering with WHO in the delivery of materials for World Hepatitis Day.

ABBREVIATIONS AND ACRONYMS

AFRO	World Health Organization Regional Office for Africa
AIDS	acquired immune deficiency syndrome
AMRO	World Health Organization Regional Office for the Americas
EMRO	World Health Organization Regional Office for the Eastern Mediterranean
EURO	World Health Organization Regional Office for Europe
GDP	gross domestic product
HBsAg	hepatitis B surface antigen
HCV	hepatitis C virus
HIV	human immunodeficiency virus
IDU	injecting drug user
NGO	nongovernmental organization
PAHO	Pan American Health Organization
PPP int $	purchasing power parity in international dollars
SEARO	World Health Organization Regional Office for South-East Asia
STD	sexually transmitted disease
STI	sexually transmitted infection
WHO	World Health Organization
WPRO	World Health Organization Regional Office for the Western Pacific

TABLE OF CONTENTS

Executive summary

Viral hepatitis is a group of infectious diseases that affects hundreds of millions of people worldwide, causing serious illness and death from acute hepatitis infection, liver cancer and liver cirrhosis. Although there are effective tools and strategies for the prevention and treatment of hepatitis, low awareness of hepatitis has limited their impact. Given the variation in how the five main types of hepatitis (A, B, C, D and E) manifest across and within countries, global prevention and control efforts need to be transformed into national and sub-national prevention and control strategies.

In 2010, the World Health Assembly adopted resolution WHA 63.18 in recognition of viral hepatitis as a global public health problem. The World Health Organization (WHO) followed up on the resolution by crafting a strategy that addresses four axes: awareness-raising, partnerships and resource mobilization; evidence-based policy and data for action; prevention of transmission; and screening, care and treatment.

The periodic evaluation of implementation of the WHO strategy requires an initial baseline survey of all Member States. In mid-2012, WHO, in collaboration with the World Hepatitis Alliance, conducted such a survey, asking Member States to provide information relating to the aforementioned four axes of the WHO strategy. In particular, Member States were asked whether key prevention and control activities are being conducted. This report presents the results. The first chapter provides an introduction to viral hepatitis and to the global response to this group of diseases. The second chapter provides a global overview of the survey findings. Chapters three through eight present findings from the six WHO regions, including summaries of data from all responding countries. Additional survey data, study methodology information and the survey instrument can be found in Annexes A–E.

One hundred and twenty-six Member States submitted the survey for a response rate of 64.9%. The regional response rate varied from 26.1% for the African Region to 100% for the South-East Asia Region. Across income groups, the response rate ranged from 47.4% for low-income countries to 80.0% for high-income countries.

Implementing a national response to comprehensively address viral hepatitis is a challenge for many governments. Because of the high burden of hepatitis-related diseases and the different routes of transmission and health outcomes, they need to simultaneously implement a variety of prevention and care interventions. Additionally, government officials should focus on monitoring hepatitis outbreaks and disease trends while collaborating with civil society to raise awareness about hepatitis. The results of the survey indicate that some Member States are addressing some aspects of this response but that much more needs to be done.

An important step that can help Member States to identify priorities and marshal resources is to develop a written national strategy or plan that focuses exclusively or primarily on viral hepatitis. This plan could either stand alone or function as part of a broader health-planning document. Only 37.3% of responding Member States reported the existence of such a plan. Even fewer (28.6%) had a governmental unit dedicated to addressing hepatitis prevention and control. Furthermore, the number of government staff working full-time on hepatitis-related activities is small; more than half of the countries reported having no more than two employees.

Almost three fourths of responding Member States reported that they had a viral hepatitis prevention and control programme that included activities targeting specific populations. The populations most commonly targeted were health-care workers, including health-care waste handlers (86.0% of responding Member States within this subset), and people who inject drugs (54.8% of responding Member States within this subset).

National governments can play an important role in making their citizens aware of the importance of viral hepatitis, how to avoid getting infected and how to seek care. World Hepatitis Day (28 July), which was established in 2010 as part of the World Health Assembly resolution 63.18, is an important means of raising awareness about hepatitis. Two years after the passage of the resolution, almost 40% of responding Member States reported that they had engaged in activities to mark World Hepatitis Day. However, it is important for the remaining Member States, particularly where the burden of viral hepatitis is high, to organize World Hepatitis Day activities. Civil society organizations can play a significant role in further publicizing health messages for World Hepatitis Day and throughout the year. However, less than half of responding Member States reported that they collaborated with civil society groups within their countries to develop and implement the governmental viral hepatitis prevention and control programme.

Obtaining reliable data is important for planning and monitoring the implementation of hepatitis control activities. Most Member States (82.5%) reported having a national surveillance programme that regularly collected data and reported results regarding hepatitis incidence. In only approximately half of these Member States did the surveillance system include a method for monitoring chronic hepatitis B and C, which are responsible for most hepatitis-related morbidity and deaths. To properly assess the scope of chronic hepatitis requires conducting regular prevalence serosurveys in both the general and most-at-risk populations; however, only about two thirds of Member States reported conducting such surveys.

There have been significant advances in the prevention of viral hepatitis. The most important is the wide-scale implementation of universal childhood vaccination for hepatitis B. As of 2011, 180 countries included hepatitis B vaccination in their routine vaccine schedules and the coverage is approaching 80%. The survey results provide additional data concerning national hepatitis B vaccination policies. Slightly more than three fourths of Member States reported having a specific policy for the prevention of mother-to-child transmission which includes vaccination. This is important as infection transmitted from mothers

to their children is the principal route of transmission in many countries, particularly in Asia. Health-care workers are another group requiring special attention for vaccination in view of their high risk of infection through needle-stick injuries. Almost two thirds of Member States reported having a vaccination policy for health-care workers.

In many countries, transmission of hepatitis to patients through unsafe injection practices in health-care settings is still a problem. The majority of the responding Member States reported addressing this through a national policy on injection safety and recommending the use of single-use syringes.

With the development of reliable tests to identify hepatitis infections, transmission of hepatitis through transfusions is preventable; 94.4% and 91.3% of Member States reported screening all donated blood units for hepatitis B and C, respectively. The survey was not able to assess other recommended practices, such as the promotion of blood donations from voluntary non-remunerated blood donors or the utilization of quality control measures for laboratory testing.

Hepatitis treatment is undergoing a revolution. New medications are being developed and introduced, which will improve control and provide higher cure rates for hepatitis B and C. It is important for countries to be prepared for the anticipated scale up of treatment by training health-care providers, establishing national treatment guidelines, and including hepatitis medications in their essential medicines lists. The survey results indicate that much progress must be made in these key areas. Only half of reporting Member States indicated that they have clinical guidelines for the treatment of hepatitis, and less than half reported including key medications for the treatment of hepatitis B such as tenofovir or entecavir in their essential medicines list. Only 54.8% reported including pegylated interferon, which is the current mainstay of hepatitis C treatment. Encouragingly, approximately 60% of Member States reported having publicly funded treatment programmes. The survey was not able to assess the geographical coverage of these treatment services or their success in reaching most-at-risk populations.

One of WHO's core functions is to help Member States in their efforts to improve the health of their populations. In the survey, 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 a national plan for viral hepatitis prevention and control (58.1%), estimating the national burden of viral hepatitis (54.8%) and developing education/training programmes for health professionals (54.0%). In order to provide this assistance, it will be important to identify adequate resources and coordinate activities at WHO Headquarters and the regional levels.

The survey has limitations that constrain the ability to interpret the results, including a low response rate from the African Region. In addition, it was not possible to collect information concerning the quality of the programmes or their geographical scope. Nevertheless, the survey does document notable achievements, particularly in the area of prevention of hepatitis transmission. National governments still need to do much more to comprehensively address this global killer. Furthermore, in view of limited resources, it will be vital for all relevant organizations at the international, national and local levels to work together to maximize the impact of hepatitis control activities.

Chapter 1: Introduction

Viral hepatitis is a group of infectious diseases that affects hundreds of millions of people worldwide. Five distinct hepatitis viruses have been identified: A, B, C, D and E. Hepatitis B and C, which can lead to chronic hepatitis, are particularly prevalent; 240 million people are thought to be chronically infected with hepatitis B and 184 million people have antibodies to hepatitis C. [1,2]

The five hepatitis viruses have different epidemiological profiles and also vary in terms of their impact and duration. The transmission route depends on the type of virus. Transmission routes that contribute greatly to the spread of hepatitis are exposure to infected blood via blood transfusion or unsafe injection practices, consumption of contaminated food and drinking water, and transmission from mother to child during pregnancy and delivery. Unsafe injection practices, including the use of unsterile needles and syringes, serve as a major pathway for the spread of hepatitis B and C, and reducing transmission of both diseases means changing these practices.

Due to its largely asymptomatic nature, viral hepatitis is a silent epidemic; most people are unaware of their infection. Untreated chronic hepatitis B and C infection can result in liver cirrhosis and liver cancer. According to the Global Burden of Disease estimates, hepatitis B and hepatitis C together caused 1.4 million deaths in 2010, including deaths from acute infection, liver cancer and cirrhosis.[3] To put these figures in the context of other major infectious diseases, it is estimated that malaria caused 660 000 deaths in 2010,[4] and tuberculosis and HIV 1.4 and 1.7 million deaths, respectively, in 2011.[5,6] Prevention and control of hepatitis can therefore make a significant contribution to saving lives by preventing cancer and thereby reducing the burden of noncommunicable diseases.

The global public health response to viral hepatitis recognizes that surveillance and control are vital to ensure that testing, care and treatment are available to all people who need these services in every country of the world. As there is an effective vaccine for hepatitis B, immunization has been a central strategy for most countries to reduce the burden of hepatitis B. There is no vaccine available to prevent the spread of hepatitis C, but the screening of blood products and the use of sterile needles and syringes have contributed to lowering hepatitis C transmission in many countries.

However, as with other major public health challenges, the mere existence of effective tools and strategies for prevention and treatment is not enough to halt viral hepatitis. A major stumbling block has been the low awareness of viral hepatitis, both in the general population and among key populations. Since knowledge about the various risks and transmission routes is central to preventing the spread of hepatitis, increasing awareness is an important component of the global public health response.

Increasing awareness is also key to making hepatitis a larger part of the local, national and regional health agenda. Gaps can be seen between policy and practice, as even in countries with evidence-informed hepatitis policies, there is inadequate implementation of protocols for prevention, treatment and control. This situation indicates a need for improvement in the response to viral hepatitis at all levels.

A global problem with a global response

Viral hepatitis is a global health problem from which no country, rich or poor, is spared. This problem takes a multitude of different forms, with factors such as the type of hepatitis, the most common transmission pathways, and the most effective strategies for diagnosis and treatment all varying across and within countries. Thus, global efforts to make hepatitis a public health priority need to be transformed into prevention and control strategies that are tailored to specific conditions at the national and sub-national levels.

---

[1] *Prevention and control of viral hepatitis infection: framework for global action*. Geneva, WHO, 2012.

[2] 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(4):1333–1342.

[3] Lozano R et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 2012, 380(9859):2095–2128.

[4] *World malaria report 2012*. Geneva, WHO, 2012. Available at: http://www.who.int/malaria/publications/world_malaria_report_2012/wmr2012_no_profiles.pdf (accessed on 03 May 2013).

[5] *Global tuberculosis report 2012*. Geneva, WHO, 2012. Available at: http://www.who.int/tb/publications/global_report/gtbr12_main.pdf (accessed on 03 May 2013).

[6] *UNAIDS Report on the global AIDS epidemic 2012*. Geneva, 2012. Available at: http://www.unaids.org/en/resources/publications/2012/name,76121,en.asp (accessed on 03 May 2013).

In 2010, the World Health Assembly adopted resolution WHA 63.18 in recognition of viral hepatitis as a global public health problem.[7] The resolution emphasized the need for governments and populations to take action to prevent, diagnose and treat viral hepatitis, and called upon the World Health Organization (WHO) to develop and implement a comprehensive global strategy to support these efforts. WHO has crafted guidance for the World Health Assembly's 194 Member States within a health systems approach, as described in *Prevention and control of viral hepatitis infection: framework for global action*.[1] The WHO strategy addresses the following axes:

1. Awareness-raising, Partnerships and Resource Mobilization

2. Evidence-based Policy and Data for Action

3. Prevention of Transmission

4. Screening, Care and Treatment.

The 2010 resolution adopted by the World Health Assembly furthermore designated 28 July as World Hepatitis Day, envisioning this as an opportunity for Member States to promote awareness about viral hepatitis.[7] The first official World Hepatitis Day was in 2011. WHO encourages governments, international organizations and civil society groups around the world to observe World Hepatitis Day with activities that call attention to the disease burden imposed by viral hepatitis, and to the prevention and control measures that need to be implemented.

Monitoring the response: the 2012 survey

The periodic evaluation of implementation of the WHO strategy requires an initial baseline survey of how all Member States are responding to viral hepatitis. In mid-2012, WHO and the World Hepatitis Alliance conducted such a survey, asking Member States to provide information relating to the four axes of the WHO strategy.

This report presents the survey results. It describes the major dimensions of prevention and control policies and programmes for viral hepatitis in WHO Member States. Furthermore, survey data provide insight into how conditions in specific countries may have hindered previous efforts to achieve hepatitis policy objectives. Findings also highlight gaps that must be addressed in order to improve hepatitis policies and programmes at the national and global levels.

The second chapter of this report provides an overview of the global findings. Chapters three through eight present findings from the six WHO regions, including summaries of data from all responding countries. Additional data for selected survey questions appear in Annexes A–C. Annex D describes the study methodology, and Annex E the survey instrument.

It is anticipated that follow-up surveys, some utilizing the same questionnaire and others addressing specific issues in greater detail, will be carried out every one to two years to monitor overall progress in implementation of the WHO hepatitis prevention and control strategy.

[7] World Health Organization. Sixty-third World Health Assembly. *Viral hepatitis: WHA 63.18*. Geneva, Switzerland, 21 May 2010.

Chapter 2: Global findings

One hundred and twenty-six Member States submitted the World Health Organization/World Hepatitis Alliance survey ("WHO/Alliance survey") (Figure 1), a response rate of 64.9%. Respondents and non-respondents are listed by WHO region in Box 1.

Response levels by region are presented in Table 1, along with response levels by income group according to the World Bank classification. The regional response rate varied from 26.1% for the African Region to 100% for the South-East Asia Region. Across income groups, the response rate ranged from 80.0% for high-income countries to 47.4% for low-income countries.

Box 1. Responses to the 2012 Global Hepatitis Survey from each WHO region

WHO African Region

Member States that submitted surveys:
Cameroon, Chad, Comoros, Côte d'Ivoire, Mali, Mauritania, Nigeria, Rwanda, Sierra Leone, South Africa, United Republic of Tanzania and Zimbabwe

Member States that did not submit surveys:
Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Central African Republic, Congo, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Niger, Sao Tome and Principe, Senegal, Seychelles, Swaziland, Togo, Uganda and Zambia

WHO Region of the Americas

Member States that submitted surveys:
Antigua and Barbuda, Argentina, Bahamas, Barbados, Brazil, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Suriname, United States of America and Uruguay

Member States that did not submit surveys:
Belize, Bolivia (Plurinational State of), Chile, Dominica, Haiti, Saint Vincent and the Grenadines, Trinidad and Tobago, and Venezuela (Bolivarian Republic of)

WHO Eastern Mediterranean Region

Member States that submitted surveys:
Afghanistan, Bahrain, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lebanon, Oman, Pakistan, Qatar, Somalia, South Sudan, Sudan, Syrian Arab Republic and Yemen

Member States that did not submit surveys:
Libya, Morocco, Saudi Arabia, Tunisia and United Arab Emirates

WHO European Region

Member States that submitted surveys:
Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Ireland, Israel, Italy, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, Poland, Republic of Moldova, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and Uzbekistan

Member States that did not submit surveys:
Bosnia and Herzegovina, Greece, Iceland, Kazakhstan, Monaco, Norway, Portugal, Romania and Turkmenistan

WHO South-East Asia Region

Member States that submitted surveys:
Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste

Member States that did not submit surveys:
no country

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 and 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 and Vanuatu

Table 1. Responses received by WHO region and income group[a]

	High income (*N*=50)	Upper–middle income (*N*=53)	Lower–middle income (*N*=50)	Low income (*N*=38)	Other (*N*=3)[b]
Africa (*N*=46)	0 (0%)	1 (12.5%)	3 (27.3%)	8 (26.9%)	n/a
Americas (*N*=35)	5 (83.3%)	16 (80.0%)	6 (85.7%)	0 (0%)	n/a
Eastern Mediterranean (*N*=22)	4 (66.7%)	3 (60.0%)	8 (88.9%)	2 (100%)	n/a
Europe (*N*=53)	26 (83.9%)	10 (71.4%)	5 (100%)	3 (100%)	n/a
South-East Asia (*N*=11)	n/a	2 (100%)	5 (100%)	4 (100%)	n/a
Western Pacific (*N*=27)	5 (83.3%)	2 (50.0%)	7 (53.8%)	1 (25.0%)	0 (0%)
Total: Income group	**40 (80.0%)**	**34 (64.2%)**	**34 (68.0%)**	**18 (47.4%)**	**0 (0%)**

[a] *Source for income group classifications*: World Bank 2012 data (http://data.worldbank.org/about/country-classifications/country-and-lending-groups.)

[b] Income group classifications were not available for three Western Pacific countries that did not submit surveys: Cook Islands, Nauru and Niue.
n/a = not available

Figure 1. Map of global responses

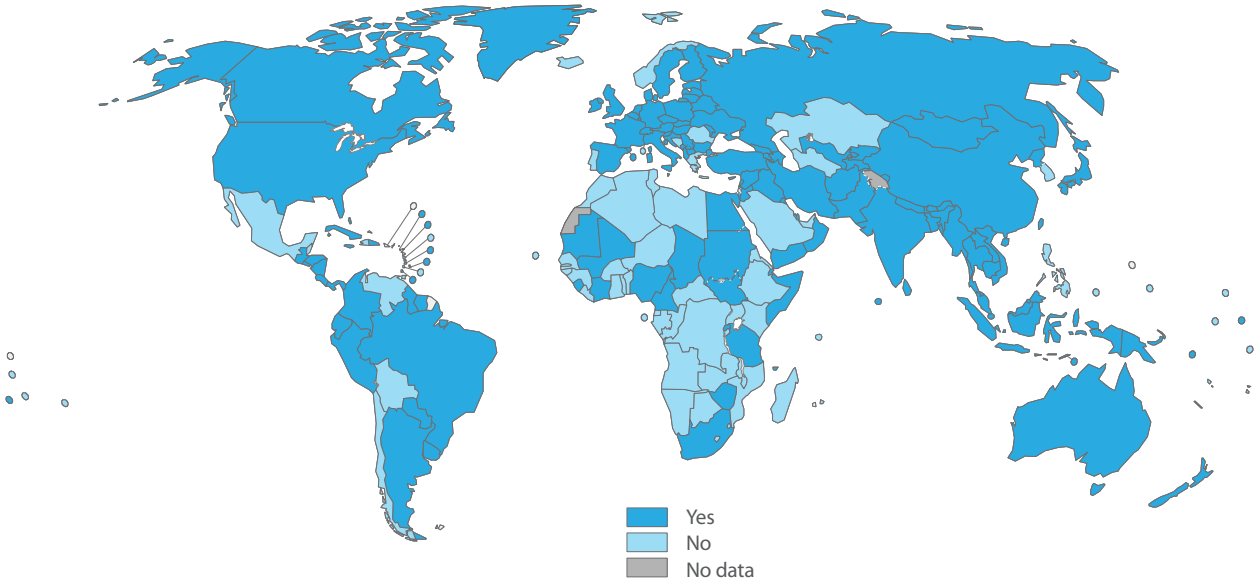
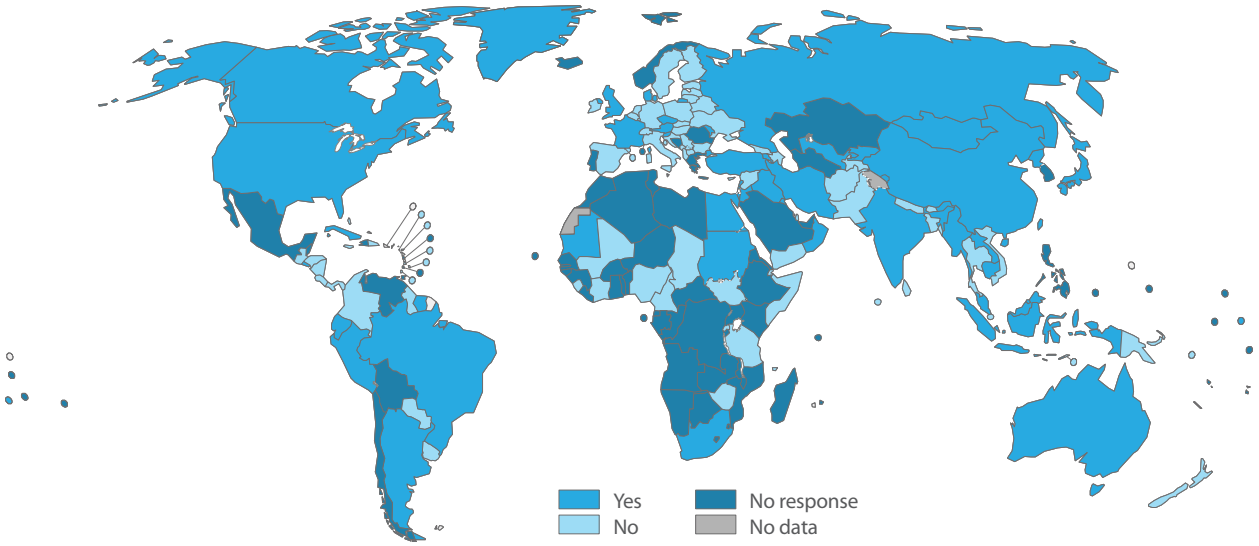


Figure 2. Responses to the question, "Is there a written national strategy or plan that focuses exclusively or primarily on the prevention and control of viral hepatitis?"



National coordination

Forty-seven responding Member States (37.3%) reported the existence of a written national strategy or plan that focuses exclusively or primarily on the prevention and control of viral hepatitis (Figure 2).

Eighteen of the 47 Member States with a strategy or plan reported that it focuses exclusively on viral hepatitis, and 20 reported that it addresses other diseases as well. Five countries reported that the strategy or plan addresses only hepatitis B and one reported that it addresses only hepatitis C. Three countries reported that the strategy or plan addresses both hepatitis B and hepatitis C.

The 47 Member States that reported the existence of a strategy or plan were asked about its specific components. Forty-six reported the inclusion of a component for vaccination. Forty-three reported the inclusion of a component for prevention of transmission in health-care settings, and the same number for general prevention and surveillance. Thirty-seven reported the inclusion of a component for treatment and care. Thirty-six reported the inclusion of a component for raising awareness. Thirty-five reported the inclusion of a component for the prevention of transmission via injecting drug use.

Thirty-six responding Member States (28.6%) reported that they had 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*=30) ranged from 0.1 (New Zealand) to 250 (Brazil) (median, 5).

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 47 Member States that provided data for this question, the number ranged from 0 to 213 (median, 2), with Armenia reporting the highest number.

Ninety-three responding Member States (73.8%) reported that they had a viral hepatitis prevention and control programme that included activities targeting specific populations. The populations most commonly targeted were health-care workers, including health-care waste handlers (86.0% of responding Member States within this subset) and people who inject drugs (54.8% of responding Member States within this subset). Forty-four responding Member States (47.3%) reported the inclusion of activities targeting people living with HIV and 36 responding Member States (38.7%) reported the inclusion of activities targeting prisoners. Groups identified less frequently included migrants, indigenous populations, low-income populations, those who are uninsured and those who are homeless.

Awareness-raising and partnerships

Forty-eight responding Member States (38.1%) reported that they had held events for World Hepatitis Day 2012 (28 July). Since January 2011, 36 responding Member States (28.6%) had funded some type of viral hepatitis public awareness campaign other than World Hepatitis Day (Annex A).

Sixty responding Member States (47.6%) reported that they collaborated with civil society groups within their countries to develop and implement the governmental viral hepatitis prevention and control programme.

Evidence-based policy and data for action

One hundred and four responding Member States (82.5%) reported that they have routine surveillance for viral hepatitis; details are given in Table 2.

Table 2. Types of surveillance in Member States reporting the existence of routine surveillance for viral hepatitis (*N*=104)

	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	86.5	5.8	0	7.7
hepatitis B	96.2	2.9	0	1.0
hepatitis C	85.6	9.6	0	4.8
hepatitis D	38.5	41.3	1.0	19.2
hepatitis E	45.2	35.6	1.0	18.3
There is a national surveillance system for **chronic** hepatitis infection for the following forms of hepatitis:				
hepatitis B	52.9	43.3	0	3.8
hepatitis C	49.0	46.2	0	4.8
hepatitis D	23.1	64.4	0	12.5

One hundred and seven responding Member States (84.9%) indicated that their countries have standard case definitions for hepatitis infection and 100 (79.4%) indicated that their countries have a central registry for the reporting of deaths, including hepatitis deaths.

Fifty-seven Member States reported on the proportion of hepatitis cases and deaths registered as "undifferentiated" or "unclassified" hepatitis. The reported proportion ranged from 0% to 100% (median, 1.0%).[a] Additional survey findings on surveillance are presented in Table 3.

Member States were asked how often hepatitis disease reports were published. Of the responding Member States, 40.5% reported that they publish hepatitis disease reports annually;

[a] These figures represent data from 55 of the 57 Member States. Data from the Russian Federation and Mali are not included here because those Member States reported the information in a different way. *See* the Russian Federation and Mali country findings elsewhere in the report for information about undifferentiated/unclassified hepatitis in those Member States.

Table 3. Data registration and surveillance (*N*=126)

	Yes (%)	No (%)	Do not know (%)	No response (%)
Liver cancer cases are registered nationally	69.8	22.2	5.6	2.4
Cases with HIV/hepatitis coinfection are registered nationally	47.6	45.2	5.6	1.6
Hepatitis outbreaks are reported	91.3	5.6	3.2	0
If YES – Hepatitis outbreaks are further investigated (N=115)	94.8	4.3	0.9	0

21.4%, monthly; and 12.7%, weekly. No hepatitis disease report is published by 23.8% of responding Member States.

Thirty-two responding Member States (25.4%) reported the existence of a national public health research agenda for viral hepatitis.

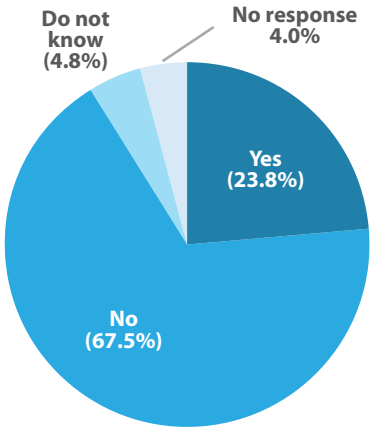
Forty-one responding Member States (32.5%) reported that viral hepatitis serosurveys are conducted regularly. Among this subset, 17.1% indicated that serosurveys take place at least once per year and, of the same subset, 43.9% reported that the most recent viral hepatitis serosurvey was carried out in either 2011 or 2012.

Prevention of transmission

Fifty-one responding Member States (40.5%) reported that they have a national hepatitis A vaccination policy.

Thirty responding Member States (23.8%) reported that they have established the goal of eliminating or reducing hepatitis B (Figure 3).

Figure 3. Responses to the question, "Has your government established the goal of eliminating hepatitis B?" (*N*=12)[a]



[a] Four Member States that answered "yes" to this question (Australia, Latvia, Republic of Moldova and Sweden) added comments indicating that their goals relate to reducing rather than eliminating hepatitis B.

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 86 Member States that provided this information, responses ranged from 0% to 100% (median, 58.0%). 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 101 Member States that provided this information, responses ranged from 0% to 100% (median, 92.0%).

Ninety-six responding Member States (76.2%) reported the existence of a national policy that specifically targets mother-to-child transmission of hepatitis B; details are presented in Annex B. Of the Member States with such a policy, 65.6% indicated that one component of the policy calls for screening of all pregnant women for hepatitis B.

Eighty-eight responding Member States (69.8%) reported the existence of a specific national strategy and/or policy/guidelines for preventing hepatitis B and hepatitis C infection in health-care settings.

Eighty responding Member States (63.5%) reported that health-care workers are vaccinated against hepatitis B prior to starting work that might put them at risk of exposure to blood.

One hundred and nine responding Member States (86.5%) 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 77.1% of policies, and auto-disable syringes in 30.3% (Figure 4).

One hundred and ten responding Member States (87.3%) reported that single-use or auto-disable syringes, needles and cannulas are always available in all health-care facilities.

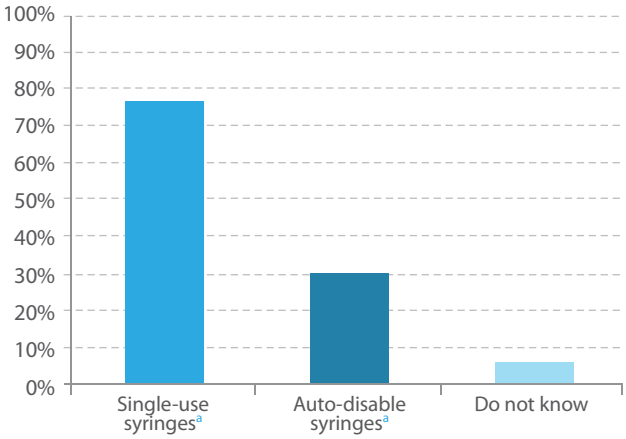
Member States were asked for official estimates of the number and percentage of unnecessary injections administered annually in health-care settings (e.g. injections that are given when an equivalent oral medication is available). One hundred and thirteen Member States reported that the figures are not known and six did not reply. Among the seven responding Member States providing this information, responses ranged from 0% to 68.0% (median, 14.0%), with Denmark and Tonga reporting 0% and Mongolia reporting 68.0%.

Additional findings relating to the prevention of hepatitis transmission are presented in Table 4.

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 acquired in schools for health professionals (pre-service education,

Figure 4. 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*=109)



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

77.0%). Additionally, on-the-job training was identified in 73.0% of responses and postgraduate training in 61.6%.

Sixty-four responding Member States (50.8%) reported the existence of national clinical guidelines for the management of viral hepatitis (Figure 5). Thirty-five of these 64 Member States indicated that the guidelines include recommendations for cases with HIV coinfection. Forty-four of 74 responding Member States indicated that there are national clinical guidelines for the management of HIV, which include recommendations for coinfection with viral hepatitis.

Fifty-nine responding Member States (46.8%) indicated that they have a national policy relating to screening and referral to care for hepatitis B. Forty-eight (38.1%) reported that they have such a policy for hepatitis C.

Regarding hepatitis B testing, 116 responding Member States (92.1%) indicated that people register by name for testing. One hundred and one members of that subset (87.1%) indicated that the names are kept confidential. Fifty-two responding Member States (41.3%) reported that the hepatitis B test is free of charge for all individuals. Among the 70 other Member States that answered the question, 43 (61.4%) reported that the hepatitis B test is free of charge for members of specific groups. Groups identified included blood donors, health-care workers, pregnant women, people living with HIV, patients on haemodialysis, prisoners and people who inject drugs. Sixty-one responding Member States (48.4%) reported that the hepatitis B test is compulsory for members of specific groups. Groups identified included blood donors, health-care workers, pregnant women, people living with HIV, patients on haemodialysis and prisoners.

Regarding hepatitis C testing, 109 responding Member States (86.5%) indicated that people register by name for testing. Ninety-five members of that subset (87.2%) indicated that the names are kept confidential. Forty-eight responding Member States (38.1%) reported that the hepatitis C test is free of charge for all individuals. Among the 69 other Member States that answered the question, 39 (56.5%) reported that the hepatitis C test is free of charge for members of specific groups. Groups identified included blood donors, health-care workers, pregnant women, people living with HIV, patients on haemodialysis, prisoners and people who inject drugs. Fifty-seven responding

Figure 5. Responses to the question, "Are there national clinical guidelines for the management of viral hepatitis?" (*N*=126)

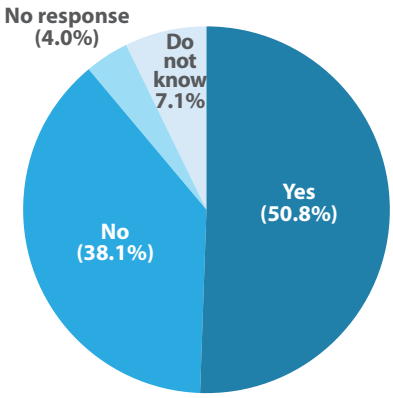


Table 4. Hepatitis prevention: policies, practices and guidelines (N=126)

	Yes (%)	No (%)	Do not know (%)	No response (%)
There is a national infection control policy for blood banks	88.9	5.6	4.0	1.6
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis B	94.4	3.2	0	2.4
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis C	91.3	3.2	4.0	1.6
There is a national policy relating to the prevention of viral hepatitis among people who inject drugs	34.1	51.6	11.1	3.2
The government has guidelines that address how hepatitis A and hepatitis E can be prevented through food and water safety	50.0	39.7	7.9	2.4