

Chapter 4: WHO Region of the Americas

Thirty-five Member States make up the World Health Organization (WHO) Region of the Americas, which has a total population of 939 million.¹ Most of the Region's countries are low- and middle-income countries, but it also encompasses the high-income countries of Canada and the United States of America.² The average life expectancy in the Region of the Americas in 2010 was 76.2 years, which represented a four-year increase from 2005.³ By 2020, the Region will be home to almost 200 million people above the age of 60 years.³ Longer life expectancy and lifestyle changes have driven increases in noncommunicable diseases, and these diseases now cause more than three fourths of the deaths in the Region annually.⁴ The Region of the Americas and the WHO European Region have the highest incidence rates of all types of cancer.⁵ Other notable public health issues in the Region of the Americas include road traffic accidents and violence. One quarter of the world's 600 000 annual homicides occur there.³

The Region of the Americas stands out for its progress against vaccine-preventable diseases, and the high level of childhood vaccination coverage.³ Although communicable diseases cause only about 13% of deaths in the Region of the Americas, they impose a high burden of disease in some populations.³ A 2008 literature review focusing on neglected tropical diseases in Latin America and the Caribbean concluded that the subregion may have a higher burden of disease from neglected tropical diseases such as hookworm infestation and Chagas disease than from malaria, tuberculosis or HIV.⁶ The Region of the Americas saw a decline in the rate of new HIV infections between 2001 and 2009.³

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

² *Country and lending groups* [web site]. The World Bank. Available at: http://data.worldbank.org/about/country-classifications/country-and-lending-groups#Low_income (accessed on 26 February 2013).

³ *Health in the Americas: 2012 edition. Regional outlook and country profiles*. Washington, DC, WHO Regional Office for the Americas, 2012. Available at: <http://www.paho.org/saludenlasamericas/docs/hia-2012-summary.pdf> (accessed on 05 May 2013).

⁴ *Non-communicable diseases in the Americas: building a healthier future*. Washington, DC, WHO Regional Office for the Americas, 2011. Available at: http://new.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=14832&Itemid= (accessed on 05 May 2013).

⁵ *Global status report on noncommunicable diseases 2010*. Geneva, WHO, 2011. Available at: http://whqlibdoc.who.int/publications/2011/9789240686458_eng.pdf (accessed on 05 May 2013).

⁶ Hotez PJ et al. The neglected tropical diseases of Latin America and the Caribbean: a review of disease burden and distribution and a roadmap for control and elimination. *PLoS Neglected Tropical Diseases*, 2008, 2(9):e300. doi: 10.1371/journal.pntd.0000300.

Viral hepatitis in the WHO Region of the Americas

Most countries in Latin America and the Caribbean (LAC) show intermediate endemicity for hepatitis A. However, the prevalence varies from region to region. For instance, the seroprevalence of anti-hepatitis A in persons between the ages of 15 and 19 years in the Caribbean and Andean regions (Peru, Ecuador, Bolivia) is 57% and 96%, respectively.^a

A low prevalence and outbreaks of hepatitis E have been reported in some LAC countries. Although higher prevalence has been reported elsewhere, little is known about the epidemiology of this infection in the Region. For instance, studies in the Brazilian population show prevalence rates of around 3% in adults, while in Bolivia, the rates ranged from 1.7% to 16.2%.^b

Recent data indicate that from 1990 to 2005, the prevalence of hepatitis B infection fell on average to below 2% in the central and tropical Latin American regions, while it remained between 2% and 4% in the Caribbean, Andean and southern Latin American regions.^c

In Andean, central, southern and tropical Latin American countries, approximately seven million adults are estimated to be anti-hepatitis C positive, meaning that they have been exposed to hepatitis C and could contract chronic infection.^d

With respect to hepatitis D, a high prevalence of coinfection among hepatitis B cases has been observed in the Amazonian region.^e For example, a study from Colombia showed that among hepatitis B-positive inhabitants, 5.2% were hepatitis D-positive and all except one were from the Amazonian region.^f

^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 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.

^e Pascarella S, Negro F. Hepatitis D virus: an update. *Liver International*, 2011, 31:7–21.

^f Alvarado-Mora MV et al. Hepatitis B (HBV), hepatitis C (HCV) and hepatitis delta (HDV) viruses in the Colombian population – how is the epidemiological situation? *PLoS One*, 2011, 6 (4):e18888.

Responses to the WHO/Alliance survey were received from 27 of the 35 Member States in the Region (77.1%).

Box 1. Responses to the 2012 Global Hepatitis Survey: WHO Region of the Americas

Member States that submitted surveys:

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

Member States that did not submit surveys:

- | | | |
|------------------------------------|------------------------------------|--------------------------------------|
| • Belize | • Dominica | • Trinidad and Tobago |
| • Bolivia (Plurinational state of) | • Haiti | • Venezuela (Bolivarian Republic of) |
| • Chile | • Saint Vincent and the Grenadines | |

National coordination

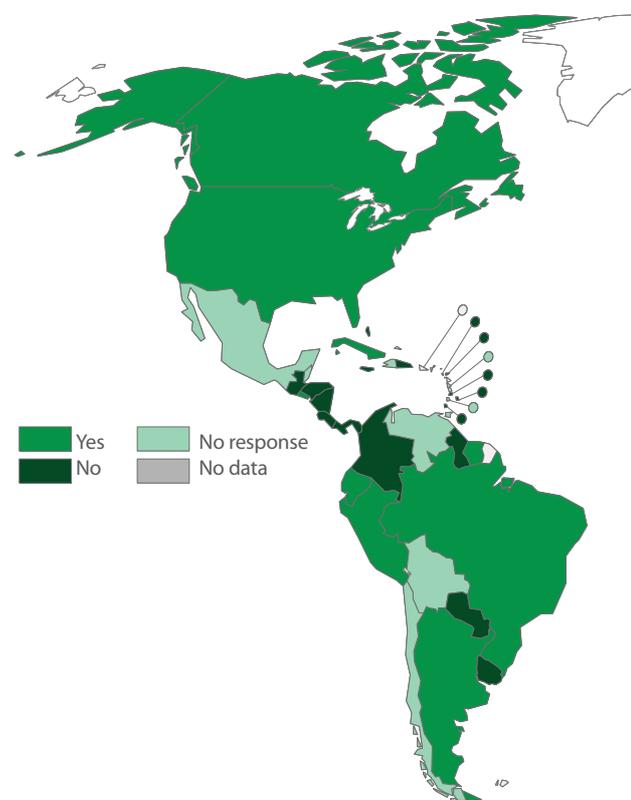
Nine responding Member States (33.3%) reported the existence of a written national strategy or plan that focuses exclusively or primarily on the prevention and control of viral hepatitis (Figure 1). Two of the nine Member States with a strategy or plan (Argentina and the United States of America) reported that it focuses exclusively on viral hepatitis, and five (Brazil, Canada, Cuba, Peru and Suriname) reported that it addresses other diseases as well. Two countries (Ecuador and El Salvador) reported that the strategy or plan only addresses hepatitis B.

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

Seven responding Member States (25.9%) 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 ($N=4$) ranged from 1 (Cuba) to 250 (Brazil) (median, 54).

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 13 Member States that provided data for this question, the numbers ranged from 0 to 150 (median, 0), with the United States of America reporting the largest number.

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?”



Twenty responding Member States (74.1%) 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 (100% of responding Member States within this subset) and people living with HIV (60.0% of responding Member States within this subset). Six responding Member States reported the inclusion of activities targeting prisoners, and five, the inclusion of activities targeting people who inject drugs. Groups identified less frequently included migrants, indigenous populations, low-income populations, those who are uninsured and those who are homeless.

Awareness-raising and partnerships

Twelve responding Member States (44.4%) reported that they had held events for World Hepatitis Day 2012 (28 July). Since January 2011, six responding Member States (22.2%) had funded some type of viral hepatitis public awareness campaign other than World Hepatitis Day (Table 1).

Table 1. Topics of public awareness campaigns on viral hepatitis held in Member States since January 2011 (N=6)

	Argentina	Brazil	Cuba	Guatemala	Suriname	United States of America
General information about hepatitis and its transmission	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	X			X
Safe water and good sanitation						
Safer sex practices	X	X	X			X
Harm reduction for people who inject drugs				X		X
Safe workplace practices				X		X
Other ^a		X	X	X		

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

Eight responding Member States (29.6%) 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, Canada reported collaborating with the Canadian Society for International Health, Canadian AIDS Treatment Information Exchange and University of British Columbia. Peru reported that it collaborated with Asociación Ciudadana de Lucha contra la Hepatitis. (Further examples can be found in the summaries of country findings later in this chapter.)

Evidence-based policy and data for action

Twenty-four responding Member States (88.9%) reported that they have routine surveillance for viral hepatitis; details appear in Table 2.

Twenty-one responding Member States (77.8%) indicated that their countries have standard case definitions for hepatitis infection and 25 (92.6%) indicated that their countries have a central registry for the reporting of deaths, including hepatitis deaths.

Eight Member States reported on the proportion of hepatitis cases and deaths registered as “undifferentiated” or “unclassified” hepatitis. The reported proportion ranged from 0% to 60.0% (median, 27.5%). 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=24)

	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	70.8	20.8	0	8.3
hepatitis B	100	0	0	0
hepatitis C	79.2	12.5	0	8.3
hepatitis D	37.5	45.8	0	16.7
hepatitis E	29.2	54.2	0	16.7
There is a national surveillance system for chronic hepatitis infection for the following forms of hepatitis:				
hepatitis B	45.8	50.0	0	4.2
hepatitis C	37.5	54.2	0	8.3
hepatitis D	16.7	70.8	0	12.5

Table 3. Data registration and surveillance (N=27)

	Yes (%)	No (%)	Do not know (%)	No response (%)
Liver cancer cases are registered nationally	63.0	18.5	7.4	11.1
Cases with HIV/hepatitis coinfection are registered nationally	40.7	51.9	7.4	0
Hepatitis outbreaks are reported	92.6	3.7	3.7	0
If YES – Hepatitis outbreaks are further investigated (N=115)	88.0	8.0	0	4.0

Member States were asked how often hepatitis disease reports are published. Of the responding Member States, 48.1% reported that hepatitis disease reports are published annually; 11.1%, monthly; and 7.4%, weekly. No hepatitis disease report is published by 25.9% of responding Member States.

Five responding Member States (18.5%) (Argentina, Canada, Cuba, Guyana and Peru) reported the existence of a national public health research agenda for viral hepatitis.

Seven responding Member States (25.9%) reported that viral hepatitis serosurveys are conducted regularly. Among this subset, two (Canada and the United States of America) indicated that serosurveys take place every two years and one (Argentina) indicated that serosurveys take place twice annually. Of the

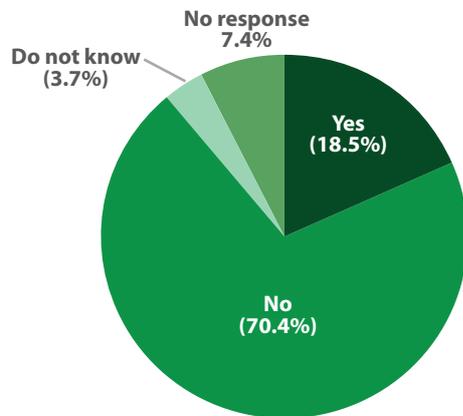
same subset, 57.1% reported that the most recent viral hepatitis serosurvey was carried out in either 2011 or 2012.

Prevention of transmission

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

Five responding Member States (18.5%) 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. Of the three Member States that answered this question, two (Costa Rica and Suriname) said that the timeframe was not specified while the third (Cuba) said 2013 for the paediatric population and 2015 for the rest of the population.

Figure 2. Responses to the question, "Has your government established the goal of eliminating hepatitis B?" (N=27)



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 18 Member States that provided this information, responses ranged from 0% to 100% (median, 33.5%). 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 18 Member States that provided this information, responses ranged from 79.7% to 100% (median, 94.0%).

Nineteen responding Member States (70.4%) reported the existence of a national policy that specifically targets mother-to-child transmission of hepatitis B; details are presented in Table 4. More than two thirds of Member States with such a policy indicated that one component of the policy calls for screening of all pregnant women for hepatitis B.

Twenty responding Member States (74.1%) reported the existence of a specific national strategy and/or policy/guidelines for preventing hepatitis B and hepatitis C infection in health-care settings.

Table 4. Activities called for in national policy targeting mother-to-child transmission of hepatitis B (N=19)

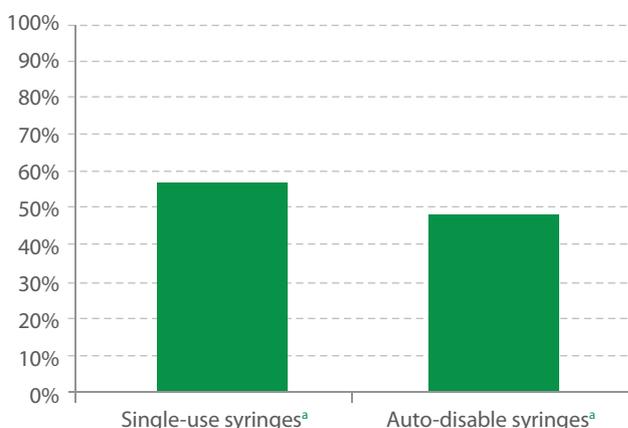
	All pregnant women are screened for hepatitis B	All pregnant women found to have hepatitis B are counselled	Health-care providers follow up with all pregnant women found to have hepatitis B during pregnancy for the purpose of encouraging them to give birth at health-care facilities	Upon delivery, all 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
Antigua and Barbuda	X	X	X	X	X
Argentina	X	X	X	X	X
Bahamas	X	X	X	X	
Brazil				X	X
Canada	X	X		X	X
Colombia	X	X	X	X	X
Costa Rica	X	X	X	X	X
Cuba	X	X	X	X	X
Ecuador	X			X	X
Grenada	X	X	X	X	X
Guatemala					X
Guyana	X	X	X		
Honduras		X	X	X	X
Jamaica		X	X	X	X
Panama					X
Peru					X
Suriname	X	X	X	X	X
United States of America	X	X		X	X
Uruguay	X	X	X	X	X
TOTAL	13	14	12	15	17

Nineteen responding Member States (70.4%) reported that health-care workers are vaccinated against hepatitis B prior to starting work that might put them at risk of exposure to blood.

Twenty-three responding Member States (85.2%) 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 56.5% of policies, and auto-disable syringes in 47.8% (Figure 3).

Twenty-six responding Member States (96.3%) reported that single-use or auto-disable syringes, needles and cannulas are always available in all health-care facilities.

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=23)



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

Table 5. Hepatitis prevention: policies, practices and guidelines (N=27)

	Yes (%)	No (%)	Do not know (%)	No response (%)
There is a national infection control policy for blood banks	77.8	7.4	11.1	3.7
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis B	96.3	0	0	3.7
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis C	88.9	0	7.4	3.7
There is a national policy relating to the prevention of viral hepatitis among people who inject drugs	14.8	63.0	14.8	7.4
The government has guidelines that address how hepatitis A and hepatitis E can be prevented through food and water safety	59.3	25.9	7.4	7.4

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). Twenty-one Member States reported that the figures are not known and four did not reply. Cuba reported that less than 5.0% of the total injections that are administered annually in health-care settings are unnecessary and Guyana reported that less than 14.0% are unnecessary.

Screening, care and treatment

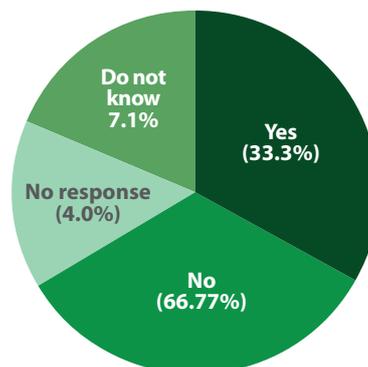
Member States were asked how health professionals in their countries obtain the skills and competencies required to effectively care for people with viral hepatitis. Responding Member States most frequently indicated that these are acquired in schools for health professionals (pre-service education, 74.1%). Additionally, on-the-job training was identified in 70.4% of responses, and postgraduate training in 46.2%.^a

Nine responding Member States (33.3%) reported the existence of national clinical guidelines for the management of viral hepatitis (Figure 4). Eight of these nine Member States indicated that the guidelines include recommendations for cases with HIV coinfection. Eight of 13 responding Member States (61.5%) indicated that there are national clinical guidelines for the management of HIV, which include recommendations for coinfection with viral hepatitis.

Fourteen responding Member States (51.9%) indicated that they have a national policy relating to screening and referral to care for hepatitis B. Ten (37.0%) reported having such a policy for hepatitis C.

Regarding hepatitis B testing, 25 responding Member States (92.6%) indicated that people register by name for testing. Twenty-one members of that subset (84.0%) indicated that the names are kept confidential. Fourteen responding Member States (51.9%) reported that the hepatitis B test is free of charge for all individuals. Among the nine other Member States that answered the question, eight (88.9%) reported that the hepatitis B test is free of charge for members of specific groups. Groups identified included blood donors, pregnant women and people living with HIV. Nine responding Member States (33.3%) reported that the hepatitis B test is compulsory for members of specific groups. Groups identified included blood donors and pregnant women.

Figure 4. Responses to the question, “Are there national clinical guidelines for the management of viral hepatitis?” (N=27)



^a N=26 (This response option was not included in the survey completed by Colombia.)

Regarding hepatitis C testing, 22 responding Member States (81.5%) indicated that people register by name for testing. Eighteen members of that subset (81.8%) indicated that names are kept confidential. Twelve responding Member States (44.4%) reported that the hepatitis C test is free of charge for all individuals. Among the nine other Member States that answered the question, five (55.6%) reported that the hepatitis C test is free of charge for members of specific groups. Groups identified included blood donors, pregnant women and people living with HIV. Seven responding Member States (25.9%) reported that the hepatitis C test is compulsory for members of specific groups. Groups identified included blood donors and pregnant women.

Sixteen responding Member States (59.3%) reported that publicly funded treatment is available for hepatitis B and 13 (48.1%) that it 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 Argentina).

Twenty-two responding Member States (81.5%) 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 tenofovir, lamivudine and interferon alpha.

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	59.3
Interferon alpha	59.3
Tenofovir	40.7
Pegylated interferon	33.3
Entecavir	22.2
Adefovir dipivoxil	18.5
Telbivudine	11.1
Drugs for treating hepatitis C	% of Member States reporting its inclusion (N=12)
Ribavirin	37.0
Pegylated interferon	37.0
Interferon alpha	25.9
Telaprevir	11.1
Boceprevir	7.4

Twelve responding Member States (44.4%) 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 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: surveillance for viral hepatitis (74.1%) and estimating the national burden of viral hepatitis (70.4%) (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=27)

<i>Awareness-raising, partnerships and resource mobilization (first WHO strategic axis)</i>	
Developing the national plan for viral hepatitis prevention and control	63.0%
Integrating viral hepatitis programmes into other health services	59.3%
Awareness-raising	59.3%
<i>Evidence-based policy and data for action (second WHO strategic axis)</i>	
Viral hepatitis surveillance	74.1%
Estimating the national burden of viral hepatitis	70.4%
Developing tools to assess the effectiveness of interventions	51.9%
Assessing the economic impact of viral hepatitis	55.6%
<i>Prevention of transmission (third WHO strategic axis)</i>	
Increasing coverage of the birth dose of the hepatitis B vaccine	33.3%
<i>Screening, care and treatment (fourth WHO strategic axis)</i>	
Increasing access to treatment	37.0%
Increasing access to diagnostics	55.6%
Improving laboratory quality	46.2% ^a
Developing education/training programmes for health professionals	63.0%

^a N=26 (This response option was not included in the survey completed by Colombia.)