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2017

Pan American Health Organization

World Health Organization

REGIONAL OFFICE FOR THE Americas

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Atlas of Mental Health of the Americas
2017

Pan American Health Organization

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REGIONAL OFFICE FOR THE Americas

Washington, DC
2018

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PREFACE

The WHO Mental Health Atlas series represents the most complete and widely used source of information on the status of mental health worldwide. This 2017 edition of the Mental Health Atlas of the Americas is an important compilation of information on mental health systems in PAHO Member States. It contains a substantial portion of the reference data needed to measure progress towards the achievement of objectives and targets of the Comprehensive Mental Health Action Plan 2013-2020.

The WHO Mental Health Atlas project was launched in 2001 to address a lack of information on mental health resources, and was updated in 2005, 2011, and 2014. The regional report for the Americas was produced for the first time in 2014. The 2017 version continues to provide up-to-date information on the availability of mental health services and resources throughout the Region, including financial allocations, human resources, and specialized mental health facilities.

The data in this report show that there has been a gradual development of mental health policies, laws, programs, and services in the Region of the Americas. However, major efforts, commitments, and resources are still needed to meet the regional objectives. The findings set forth in the 2017 Atlas confirm a trend reflected in previous editions: resources are still insufficient to meet the growing burden of mental illness, and are unevenly distributed. Furthermore, the existing services need to be transformed in order to increase coverage and improve access to mental health care, and to ensure that mental health is an integral part of national policies for universal health coverage. At the same time, a potentially positive finding in the Region is that resources and services are gradually being shifted from psychiatric hospitals to community services. This indicates that the countries are moving towards developing community-based mental health programs, a key recommendation of the Pan American Health Organization.

Although the ability to provide data differs significantly from country to country, with data lacking completeness or precision in some areas, the Member States have made serious efforts to complete the survey. The current version contains information from 42 countries and territories, representing 97% of the Region's population.

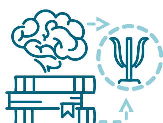
The Atlas of Mental Health of the Americas 2017 is a significant contribution, providing a summary of the most extensive data available on the Region's mental health systems. It offers a view of the situation at the both the regional and subregional levels, enabling countries to compare their individual situations with that of the Region as a whole.

The Atlas of Mental Health of the Americas 2017 should help the countries' health planners and policy makers to identify areas that require urgent attention. In addition, researchers will find the data in the 2017 Atlas useful for research on health services. The Atlas will continue to be of use to health professionals and nongovernmental organizations in their efforts to advocate for more and better mental health resources.

EXECUTIVE SUMMARY

- 34 of the 35 Member States, and the majority of territories within the area covered by the Pan American Health Organization (PAHO) (98% of the total population), completed at least part of the Atlas questionnaire;

- 97% of the Member States reported on a set of five selected indicators dealing with mental health policies, mental health laws, promotion and prevention, availability of services, and the mental health workforce.



GOVERNANCE OF THE MENTAL HEALTH SYSTEM

- 76% of the Member States have stand-alone mental health policies or plans, and 67% have stand-alone mental health legislation;

- In the last five years, 46% of the PAHO Member States have updated their policies and plans;

- 11 countries (92% of the countries that responded) have developed or updated their mental health policies or plans in accordance with international and regional human rights instruments;

- The human and financial resources allocated for mental health are limited, constraining the implementation of national plans. Nevertheless, 75% of the Member States reported that they have indicators that they use to monitor implementation of most of the components of their mental health action plans.

FINANCIAL AND HUMAN RESOURCES FOR MENTAL HEALTH

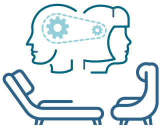
- Median annual per capita expenditure for mental health is US$ 13.8, with a significant difference between high-income countries (US$ 48 per capita) and middle- and low-income countries (US$ 2.5 per capita).

- Median public spending on mental health across the Region is a mere 2.0% of the health budget, and over 60% of this is allocated to psychiatric hospitals.

- The median number of mental health workers across the Region is 10.3 per 100,000 population, but this figure varies greatly among countries and occupations (from less than one per 100,000 in low-income countries to 236 in the United States and Canada).

- The professionals with the most prominent presence in the mental health sector, especially in South America, are psychologists (5.4 per 100,000 population), followed by nurses (3.87 per 100,000 population), particularly in the non-Latin Caribbean. Psychiatrists are few in comparison with other mental health professionals (1.39 per 100,000 population), though this figure is similar to the world average, and there are extremely few pediatric psychiatrists.

- 80% of the mental health workforce is employed in the public health sector. One fifth of psychiatrists and one third of mental health nurses work in psychiatric hospitals, serving less than 1% of the population.



AVAILABILITY OF MENTAL HEALTH SERVICES

- The median number of beds for mental health service users ranges from 16.7 per 100,000 population in psychiatric hospitals to 2.9 per 100,000 for psychiatric services in general hospitals;
- Over two thirds of mental health service users hospitalized in psychiatric hospitals (74%) are discharged within a year, while 20% stay for more than 5 years.
- Community residential facilities are present in nearly half of the countries, with a median of 1.4 facilities per 100,000 population. However, these facilities have 12 times fewer beds than in psychiatric hospitals.
- There are equally large disparities between countries in terms of the availability of outpatient care services, child and adolescent care, and social support.

PROMOTION AND PREVENTION IN MENTAL HEALTH

- 17 countries (73% of the countries that responded) have at least two functioning national multisectoral mental health and prevention programs;
- Of the programs reported to be operational, most are concerned with suicide prevention, early childhood development, promotion of parental mental health, and mental health promotion in schools (15% each).
- Suicide continues to be an important problem in the Region, with rates in the United States and Canada subregion above the world average.

INTRODUCTION

The purpose of the World Health Organization (WHO) Mental Health Atlas is to provide up-to-date information on the availability of existing mental health resources and services, and to furnish basic data for meeting the targets established in the Comprehensive Mental Health Action Plan 2013-2020.

The Mental Health Atlas was prepared for the first time in 2001, as the Atlas of Mental Health Resources in the World 2001 (WHO, 2001). Successive updates have been published since then (WHO, 2005; WHO, 2011; WHO, 2014).

Although the Region's countries and territories are represented or included in the world report, the ability to analyze the regional situation in greater detail highlights the extent to which the countries have progressed with the commitments established in the Regional Plan of Action.

In terms of methodology, the information and data in the Mental Health Atlas are derived from a questionnaire compiled by designated focal points in each WHO Member State, with support from the PAHO/WHO Representative Office in each country. The survey and report are prepared every two years, as the Member States agreed when they approved the WHO Mental Health Action Plan.

The questionnaire collects data on the following areas related to mental health:

a. Mental health system governance

b. Financial and human resources for mental health

c. Mental health service availability

d. Mental health promotion and prevention

Additional details on the methodology can be viewed in the world report of the 2017 Atlas (WHO, 2018).

LIMITATIONS

Although best attempts have been made to obtain information from all of the countries in the Region, not all participants provided data for all indicators. This important limitation should be taken into account in examining the findings. In some cases, no data existed for specific indicators; in others, it was not reported in time or in the specific format required for the questionnaire. An example is mental health budgets: mental health care may be part of the primary health care system or may be broken down using different categories based on expenditures or diseases, thus making it difficult to produce a single figure. Moreover, in some countries it can be difficult to obtain data for certain sections of the questionnaire, such as those dealing with the distribution of human resources in the various mental health sectors and services.

2. PARTICIPATING COUNTRIES

The PAHO countries and territories listed in Table 1 completed the questionnaire for the WHO Mental Health Atlas 2017. In all, 42 countries and territories answered the questionnaire at least partially, representing 97% of the Region's total population. For the purposes of this report, the term "countries" includes territories. To facilitate comparison, the countries were divided into four subregions and four income groups (World Bank classification, 2017) (Tables 2.1 and 2.2).

[1] World Health Organization. (2015). Mental health atlas 2014. World Health Organization. http://www.who.int/iris/handle/10665/178879

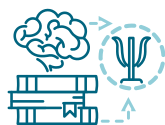
TABLE 2.1 Participating countries and territories in the Americas, by subregion

Central America, Mexico and the Latin Caribbean	Non-Latin Caribbean	South America	Canada and United States
Costa Rica	Anguilla	Argentina	Canada
Cuba	Antigua and Barbuda	Bolivia	United States
Dominican Republic	Bahamas	Brazil	
El Salvador	Barbados	Chile	
Guatemala	Belize	Colombia	
Honduras	Bermuda	Ecuador	
Mexico	British Virgin Islands	Paraguay	
Nicaragua	Cayman Islands	Peru	
Panama	Curaçao	Uruguay	
	Grenada	Venezuela	
	Guyana		
	Haiti		
	Jamaica		
	Montserrat		
	Saint Kitts and Nevis		
	Saint Lucia		
	Saint Vincent and the Grenadines		
	Sint Maarten		
	Suriname		
	Trinidad and Tobago		
	Turks and Caicos Islands		
N=9	N=21	N=10	N=2

TABLE 2.2 Participating countries and territories in the Americas, by income, according to the World Bank classification (2017)

Low-income countries	Lower middle-income countries	Upper-middle income countries	High-income countries
Haiti	Bolivia	Argentina	Antigua and Barbuda
	El Salvador	Belize	Bahamas
	Guatemala	Brazil	Barbados
	Guyana	Colombia	Canada
	Honduras	Costa Rica	Chile
	Nicaragua	Cuba	Saint Kitts and Nevis
	Paraguay	Dominican Republic	Trinidad and Tobago
		Ecuador	United States
		Grenada	Uruguay
		Jamaica	
		Mexico	
		Panama	
		Peru	
		Saint Lucia	
		Saint Vincent and the Grenadines	
		Suriname	
		Venezuela	
N=1	N=7	N=17	N=9

FINDINGS



1. GOVERNANCE IN THE CONTEXT OF THE MENTAL HEALTH SYSTEM

1.1 MENTAL HEALTH POLICIES AND PLANS

Mental health policy can be broadly defined as an official statement of a government that conveys an organized set of values, principles and objectives to improve the mental health of a population and reduce the burden of mental disorders. A mental health plan is a detailed scheme for action on mental health that usually includes setting principles for strategies and establishing timelines and resource requirements.

The first strategic line of action of the PAHO Plan of Action on Mental Health deals with the formulation and implementation of policies, plans, and laws related to mental health. Its objectives involve strengthening leadership and governance for the formulation of comprehensive mental health plans that are integrated with public policies, and improving the availability of national mental health legislation aligned with international human rights instruments.

The existence of a mental health policy and plan helps to improve the organization and quality of mental health services delivery, as well as access and community-based care for people with mental disorders and their families. In all, 32 countries (82% of the countries that answered the questionnaire) have a stand-alone mental health policy or plan, while 16 countries (38%) have updated their policy or plan in the last five years (since 2013) and 25 countries (60%) have done so in the last ten years (since 2007) (Table 1.1.1).

TABLE 1.1 Existence and revision status of mental health policies and plans

Countries that report having a stand-alone mental health policy/plan			Countries that report having updated their policy/plan in the last 5 years (since 2013)		
Subregion	Number	% of respondents	Subregion	Number	% of respondents
Canada and United States (N=2)	2	100%	Canada and United States (N=2)	1	50%
Central America, Mexico, and Latin Caribbean (N=9)	6	67%	Central America, Mexico, and Latin Caribbean (N=9)	2	22%
Non-Latin Caribbea (N=21)	15	71%	Non-Latin Caribbea (N=21)	10	48%
South America (N=10)	9	90%	South America (N=10)	3	30%
Total (N=42)	32	76%	Total (N=42)	16	38%

There is little variation between the subregions of the Americas. Most of the countries have policies/plans, and a significant proportion of them have updated their policies/plans in the last five years. Of the seven countries in the Region that do not have stand-alone mental health policies, three have mental health policies and plans integrated into other policies or plans relating to general health or disability.

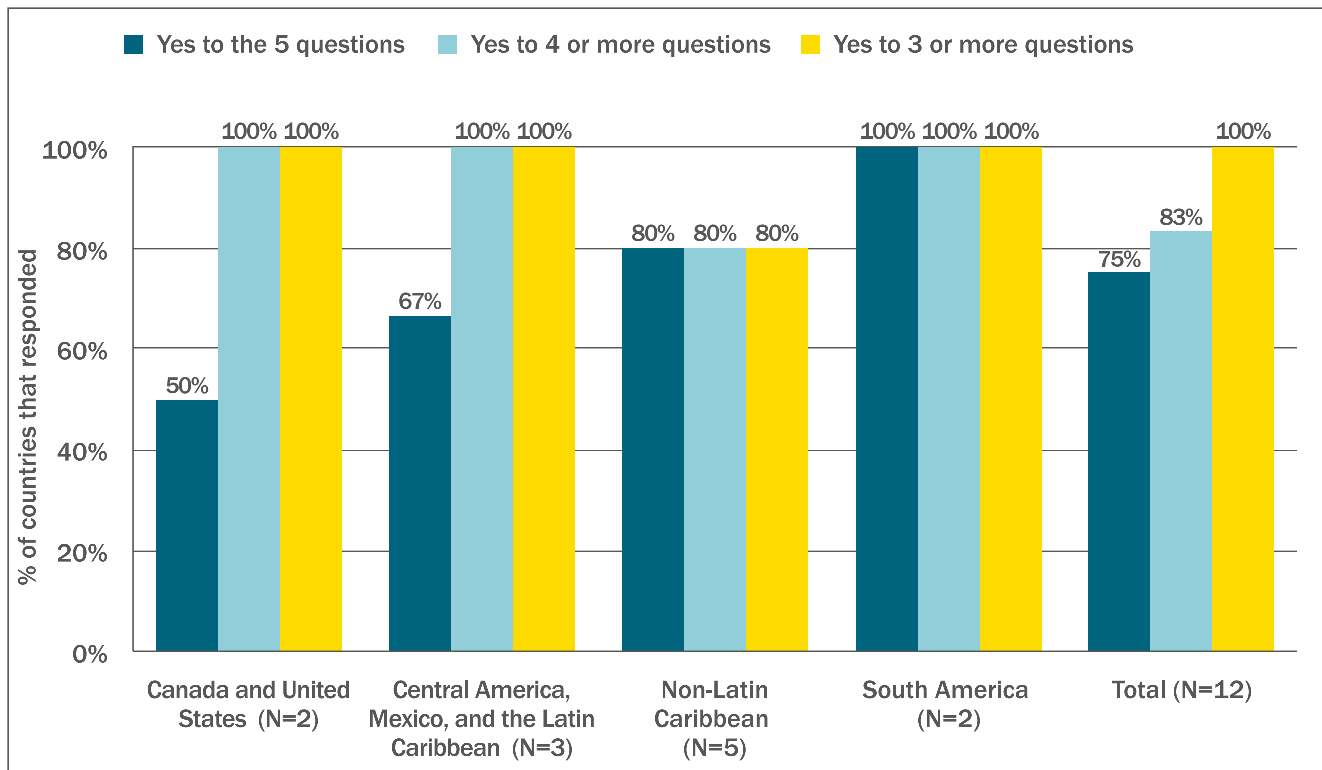
With regard to the Plan of Action on Mental Health 2015-2020, it is clear that progress has been made on the two objectives of the first strategic line, and that the target of 30 countries having national mental health policies or plans in line with regional and global mental health plans by 2020 has already been surpassed.

There are five checklist items to determine compliance with international human rights instruments: (1) The policy/plan promotes the participation of persons with mental disorders in decision-making processes; (2) the policy/plan promotes a recovery approach to mental health care; (3) the policy/plan promotes a full range of services and supports to enable people to live independently and be included in the community; (4) the policy/plan pays explicit attention to respect for the human rights of people with mental disorders; and (5) the policy/plan promotes transition towards community-based mental health services.

All of the countries that responded on this indicator (N=21) consider that their policy/plan promotes a transition towards community-based mental health services and pays explicit attention to respecting the human rights of people with mental disorders and psychosocial disabilities.

More than two-thirds of the countries that responded consider that their policy/plan fulfills each of the following three checklist items by: promoting a full range of services and supports to enable people to live independently and be included in the community; promoting a recovery approach to mental health care (including the participation of users of mental health services in developing their treatment and recovery plans); and promoting the participation of persons with mental disorders and psychosocial disabilities in decision-making about problems that affect them (Figure 1.1.1).

FIGURE 1.1.1 Policies/plans on mental health and human rights: score on the checklist (% of countries that responded)



Using a country's score on these five checklist items to evaluate a policy's comprehensiveness with regard to human rights, 100% of the responding countries scored at least 3, while 75% met all five checklist items. While there are some variations between subregions, only a small number of countries responded (N=12).

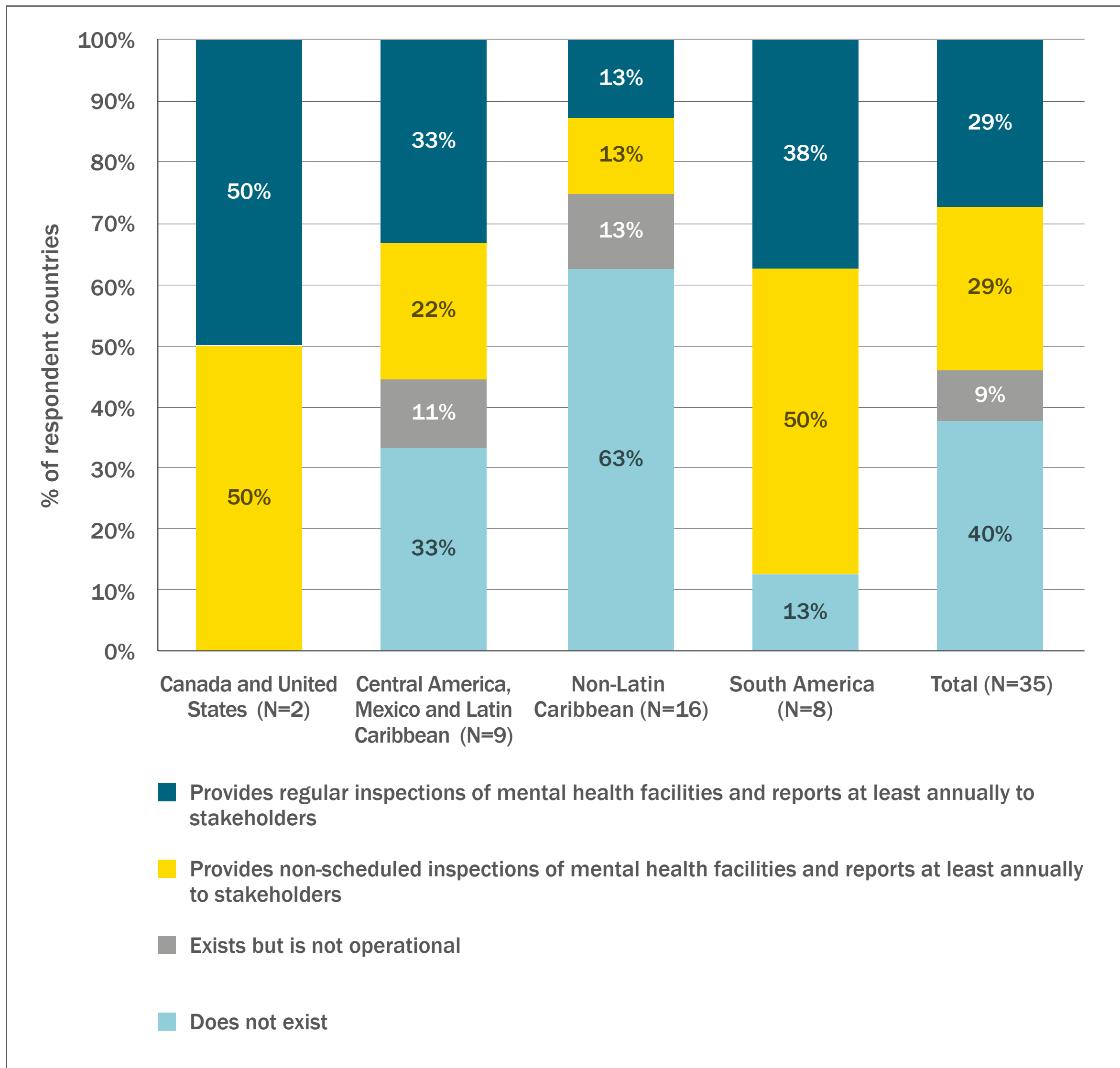
1.2 MENTAL HEALTH LEGISLATION

Mental health legislation is also a key component of governance. This involves specific legal provisions related principally to mental health, and generally centering on issues such as protecting the human rights of people with mental disorders, involuntary hospitalization and treatment, supervised discharge, professional training, and the structure of services. The Convention on the Rights of Persons with Disabilities (CRPD) is the international reference document on the human rights of persons with mental disabilities.

A total of 26 countries report having a stand-alone mental health law, representing 60% of the countries in the Region and 67% of the respondents (N=39). Of these, 12 (46%) have updated their mental health legislation in the last five years (since 2012). A large percentage of countries do not have legislation that has been updated since 1990 (seven countries, or 27%). Of the 13 countries stating that they have no stand-alone law on mental health, eight do have mental health legislation as part of more general legislation on health or disability.

To assess progress on aligning mental health legislation with international human rights instruments, countries were asked whether they have a specific authority or independent body to assess such alignment, and to describe its level of functioning (Figure 1.2.1).

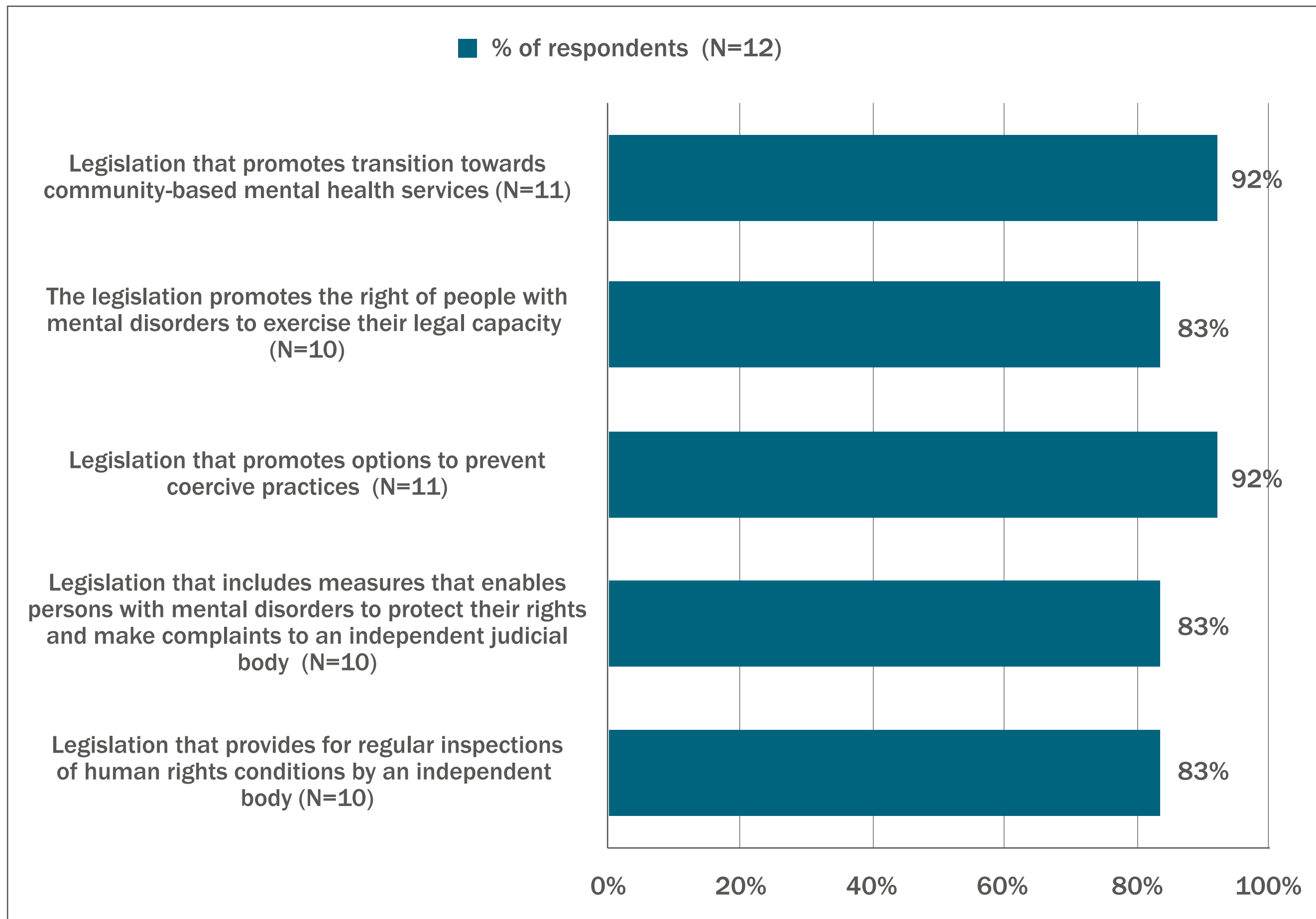
FIGURE 1.2.1 Existence of a dedicated authority or independent body to assess compliance with international human rights instruments, by subregion



Sixty percent of countries have a dedicated authority or independent body, but in 9% of countries that responded, it is not operational (N=35). Only 25% of the countries surveyed reported that the relevant authority or body carries out regular inspections of mental health facilities and reports at least annually to stakeholders.

In terms of conforming with international human rights instruments, 11 of the 12 countries that responded checked at least three of the items on the list, while nine countries checked five items (Figure 1.2.2).

FIGURE 1.2.2 Degree to which legislation aligns with human rights instruments (%)



Ninety-two percent of the countries that responded have legislation promoting transition to community-based mental health services; 83% have legislation that promotes the rights of people with mental disorders and psychosocial disabilities to take legal action; 92% have legislation that promotes alternatives to coercive practices; 83% have legislation that provides ways for people with mental disorders to protect their rights and submit complaints to an independent judicial body; and 83% have legislation that provides for regular inspections of human rights conditions in mental health facilities by an independent body.

1.3 STAKEHOLDER PARTICIPATION

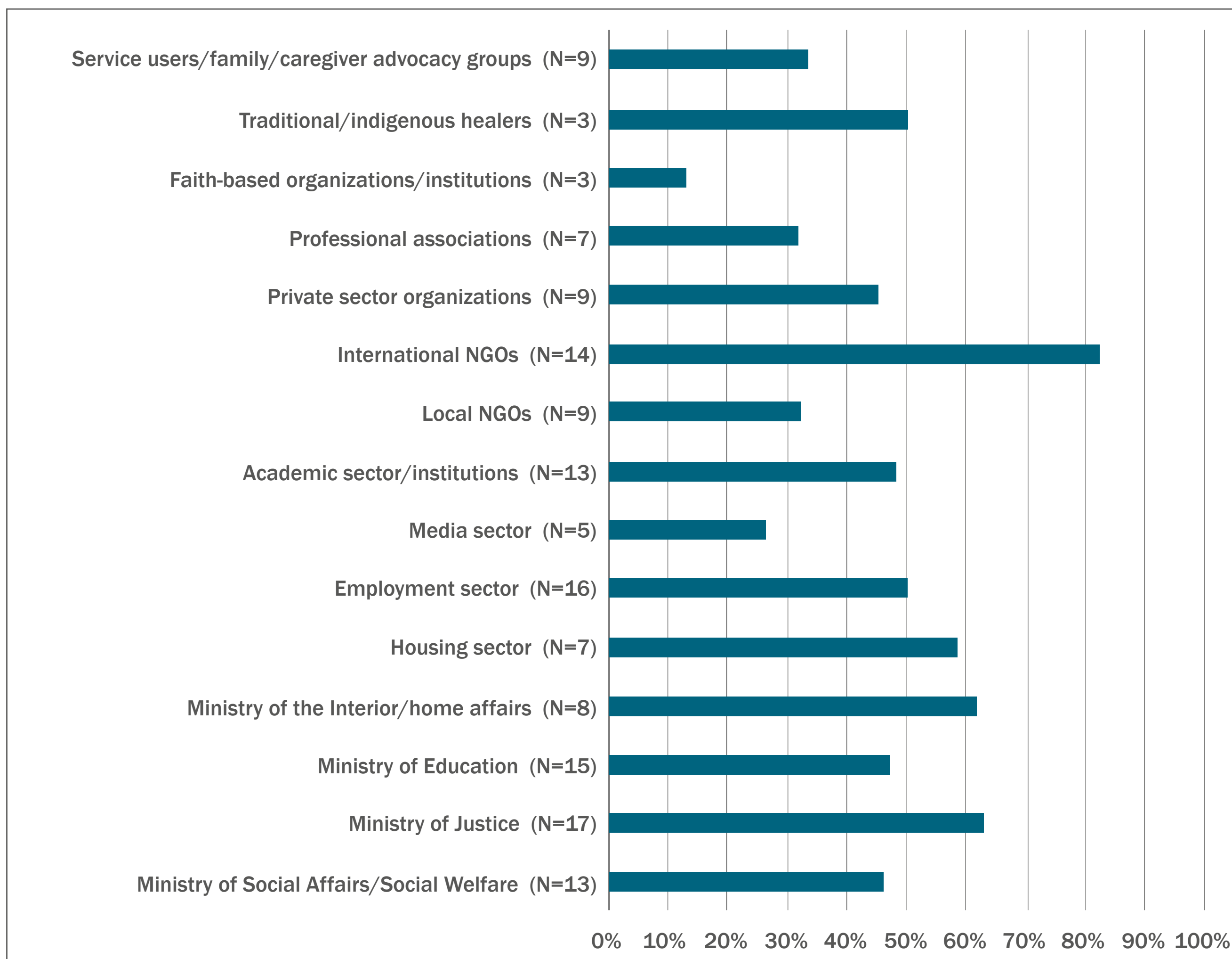
Participation by stakeholders, particularly user groups and family members, involves a variety of issues, such as: the availability of information on organizations of people with mental disorders and psychosocial disabilities, and on organizations of family members and caregivers; a policy of participation promoted by the ministry of health; the participation of people with mental disorders and psychosocial disabilities, as well as participation of family members and caregivers, in developing mental health policies and legislation; participation on governmental committees interested in mental health policy and the development of services; and the availability of resources for participation, along with the reimbursement of associated costs.

A checklist was created to learn about stakeholder participation. The countries were asked to specify whether there is ongoing collaboration between governmental mental health services and other departments, services, and sectors. They were also asked to state the number and type of collaborators currently involved in planning or delivering mental health services, promotion, prevention, treatment, and rehabilitation.

Direct collaboration with stakeholders was considered formal collaboration only when at least two of the three following checklist items were answered in the affirmative: (a) Is there a formal agreement or joint plan with the stakeholder? (b) Are there specific stakeholder funds for delivering the service? and (c) Are there regular (at least annual) meetings with the stakeholder?

Of the 39 countries that responded, 36 reported at least one formal collaboration with stakeholders. The distribution, however, varies significantly between sectors (Figure 1.3.1).

FIGURE 1.3.1 Global percentage of countries that have formal collaborations with stakeholder groups (%)



In terms of formal collaboration, the countries of the Region engage mainly with international NGOs (82%), ministries of justice (63%), ministries of the interior/internal affairs (62%), and the housing sector (58%). However, non-formal collaboration with governmental mental health services is most frequently with ministries of education (97%), social welfare (85%), and justice (80%), in addition to local NGOs (91%) and academic institutions (83%). Only 33% of countries (N=9) reported ongoing collaboration with service users and with family and caregivers of people with mental illness.

In summary, the available information on mental health legislation indicates that 22 of the countries (67%) have specific stand-alone mental health legislation that is being partially or fully executed, with a satisfactory level of compliance with human rights standards. In the last five years, 46% of the countries have updated their mental health policies and plans, while 92% have developed or updated their policies or plans in accordance with international and regional human rights instruments. The majority of the countries have collaborations with stakeholders, particularly with local and international NGOs, ministries of justice, ministries of the interior/home affairs, ministries of education and social welfare, and academic institutions.

The high level of alignment between mental health legislation and international human rights instruments exceeds the target in the PAHO Plan of Action on Mental Health 2015-2020, which calls for 18 countries to have developed or updated their mental health legislation in accordance with international and regional human rights instruments by 2020.

2. FINANCIAL AND HUMAN RESOURCES FOR MENTAL HEALTH

Financial resources are essential for achieving the objectives of plans and programs, and for developing and maintaining mental health services. However, estimating a country's mental health spending is complex, due to the variety of funding sources involved (e.g., employers and households, as well as government and nongovernmental agencies, and even different sources within the same government entities, based on level of care), service providers (specialized mental health services, general health services, primary care, and social welfare services), and the services provided.

2.1 GOVERNMENT MENTAL HEALTH EXPENDITURE

Governments are the main source of financing for the care and treatment of severe mental disorders in the Region. Sixty percent of the countries (N=25) were able to provide full information on mental health spending, along with specific information on psychiatric hospitals. Median annual per capita mental health spending in the countries that responded is US$ 13.8, with major variation between different countries' income levels. Spending in the low-income countries (US$ 0.1), lower middle-income countries (US$ 1) and upper middle-income countries (US$ 8.4) is very limited, and is much lower than the median estimated for the Region's high-income countries (US$ 48 per capita) (Figure 2.1).

FIGURE 2.1 Median per capita spending on mental health and on psychiatric hospitals, by subregion and income group (US$ [2017])

Mental health
Psychiatric hospitals
200
180
160
140
120
100
80
60
40
20
0
13.8
8.41
193.5
27.33
1
0.57
24.2
23.42
2.3
0.54
0.1
0.08
1
0.75
8.4
4.8
48
47
Total (N=25)
Canada and United States (N=2)
Central America, Mexico, and Latin Caribbean (N=5)
Non-Latin Caribbean (N=13)
South America (N=15)
Low income (N=1)
Lower middle- income (N=4)
Upper middle-income (N=10)
High-income (N=6)

Most public spending on mental health goes to psychiatric hospitals. The countries of the Region that responded (N=25) allocate 61% of their public expenditure on mental health to psychiatric hospitals, ranging from 33% in high-income countries to nearly 100% in high-income countries of the non-Latin Caribbean.

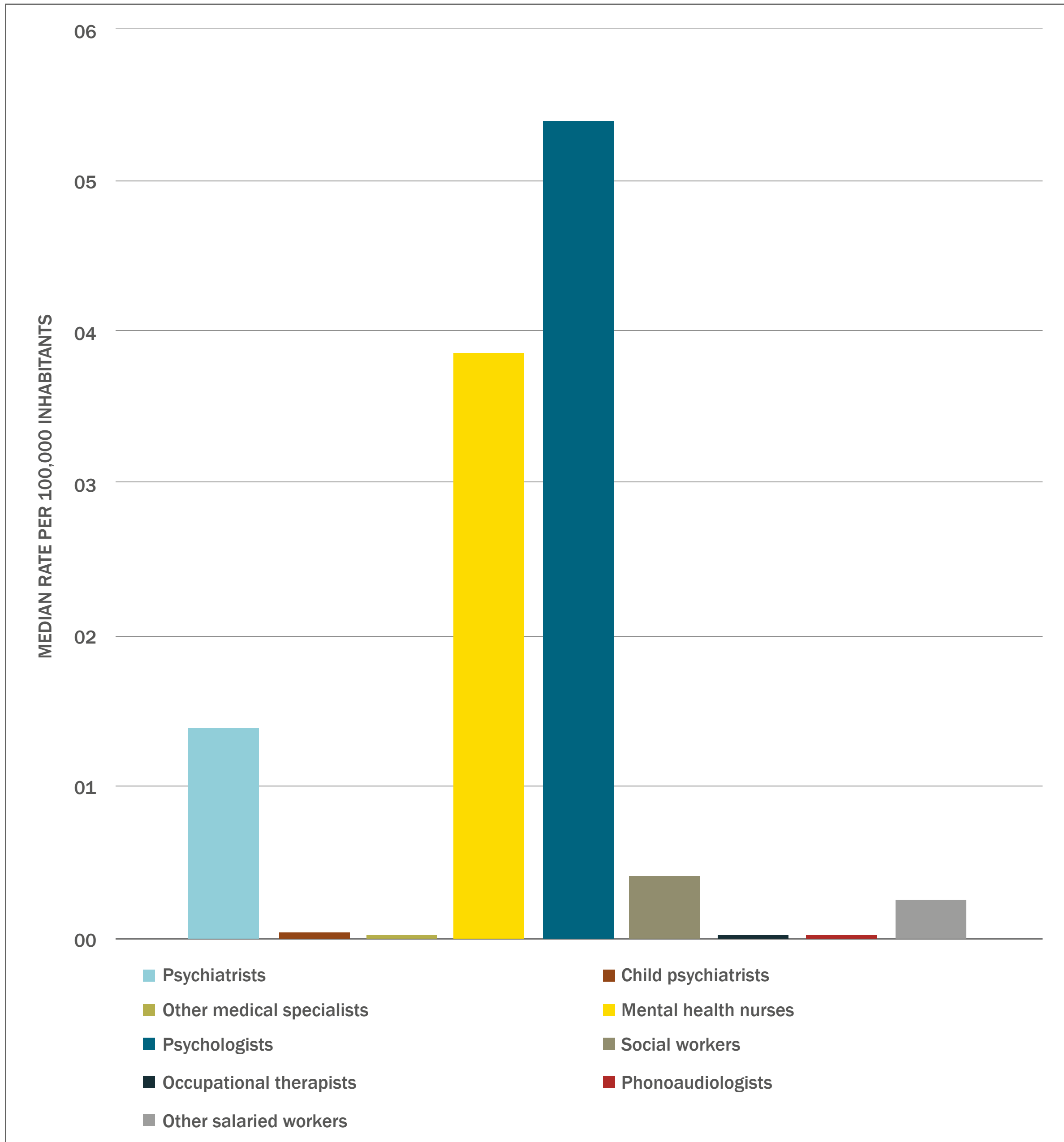
Of the countries that answered the question related to severe illnesses (N=37), 81% reported that the care and treatment of people with psychoses, bipolar disorder, and moderate/severe depression are included in their national health insurance or refund schemes. In response to a question about how people with severe mental illness pay for services, it was estimated that 5% pay mainly or totally out of pocket, and that 9% pay for psychiatric drugs out of pocket. The highest out-of-pocket mental health expenditure rates were reported in low-income countries.

2.2 MENTAL HEALTH WORKERS

Countries were asked to estimate the total number of mental health professionals working in the country, with a breakdown by specific type of employment (including psychiatrists, other medical professionals, nurses, psychologists, social workers, occupational therapists, and other paid workers in the mental health field). A total of 34 countries were able to provide partial estimates of the number of mental health workers, in many cases also broken down by types of health care facilities (mental health services, hospitals, mental health services for children and adolesents).

Based on the data provided, the regional median is 10.3 mental health workers per 100,000 population, ranging from less than one per 100,000 population in low-income countries to over 50 per 100,000 population in high-income countries (Figure 2.2.1).

FIGURE 2.2.1 Regional median number of individuals working in the mental health sector (per 100,000 population)



The median rate of human resources for mental health in the Region varies across the different occupations, from 0.02 occupational therapists per 100,000 population to 5.4 psychologists per 100,000 population. The population of mental health workers is composed of: 47% psychologists, 34% mental health nurses, 12% psychiatrists, 3.6% social workers, 2.2% other types of workers, 0.2% occupational therapists, 0.1% other medical professionals, and 0.03% child psychiatrists. Psychiatrists continue to be a limited human resource, with a regional median of 1.4 psychiatrists per 100,000 population, similar to the world average (1.3 psychiatrists per 100,000 population). The mental health workforce of the Region of the Americas includes the highest proportion of psychologists in the world--five times higher than the global average. There is a troubling shortage of child psychiatrists, occupational therapists, and speech pathologists in the Region, a situation also found in other regions of the world (Table 2.2.1).

TABLE 2.2.1 Median number of mental health workers (rate per 100,000 population)

	Psychiatrists	Child psychiatrists	Other medical specialists	Mental health nurses	Psychologists	Social workers	Occupational therapists	Speech pathologists	Other salaried workers	Total
Total (N=39)	1.4	0.0*	0.0*	3.9	5.4	0.4	0.0*	0.0	0.2	10.3
Subregion										
Canada and United States (N=2)	12.6	2.0	-	36.5	39.3	92.5	3.7	25.5	78.1	235.5
Central America, Mexico, and the Latin Caribbean (N=9)	0.9	0.0*	0.1	0.2	7.3	0.3	0.0*	0.0	0.0	10.9
Non-Latin Caribbean (N=18)	1.2	0.0	0.0	7.9	0.6	0.5	0.0	0.0	5.0	9.7
South America (N=18)	2.4	0.2	0.6	0.1	8.6	0.2	0.1	0.1	0.5	8.8
Income level										
Low-income (N=1)	0.1	0.0	0.0	0.2	0.6	0.4	0.0*	0.0*	0.0	1.2
Lower middle-income (N=7)	0.7	0.0*	0.0*	0.0	1.8	0.2	0.0	0.0	0.0	2.1
Upper middle-income (N=17)	1.8	0.2	0.5	4.0	7.3	0.6	0.1	0.0	0.5	24.6
High-income (N=8)	0.6	1.0	0.0	4.3	0.0	4.0	0.0	0.5	5.0	8.7

* Value less than or equal to 0.04

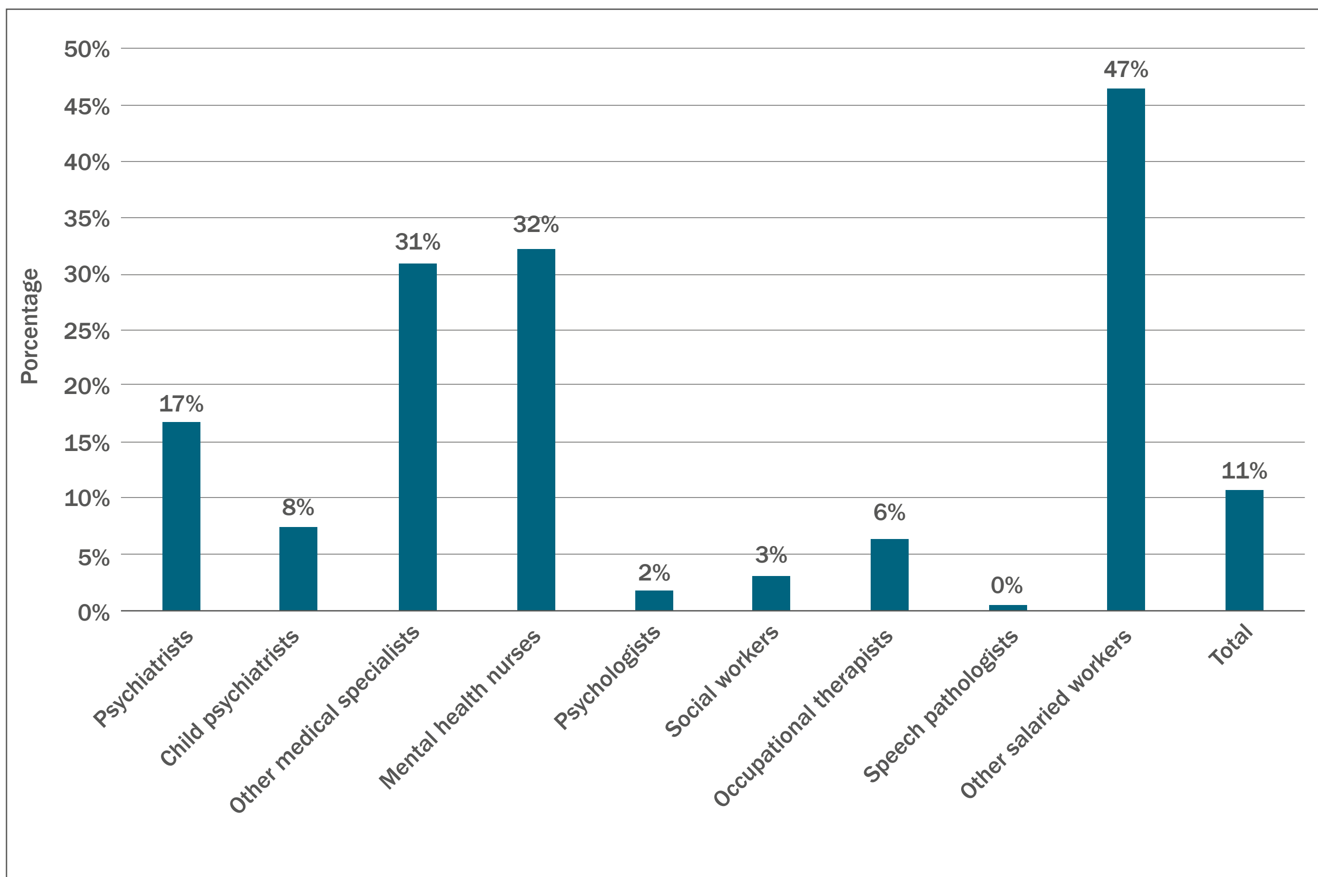
There are significant differences in the proportion of mental health workers in different subregions. The United States and Canada subregion has the largest mental health workforce in the Region, primarily due to the high concentration of social workers (92.5 per 100,000 population) and psychologists (39.3 per 100,000 population). The other subregions have workforces composed primarily of psychologists (in South America, Central America, and the Latin Caribbean) and mental health nurses (in the non-Latin Caribbean). There are also major variations according to the countries' income levels: 6.3 psychiatrists per 100,000 population in high-income countries versus less than 0.5 per 100,000 in medium- and low-income countries. Similarly, in high-income countries, over four nurses per 100,000 population work in mental health, compared with less than 0.2 per 100,000 in lower middle-income countries.

Personnel in hospitals and outpatient facilities

Data on the proportion of mental health personnel working in government inpatient and outpatient mental health services indicate that 80% of the Region's mental health workforce is employed in the public health sector. This may underestimate the mental health workforce in the private sector, given the limited data available at the national level.

In the 31 countries that provided information on government-employed mental health workers, 17% of psychiatrists, 8% of child psychiatrists, 31% of other medical specialists, and 32% of nurses work in psychiatric hospitals. These proportions are independent of the size of the beneficiary population and of the budgets allocated to psychiatric hospitals--institutions that account for the bulk of human resources and mental health spending (Figure 2.2.2).

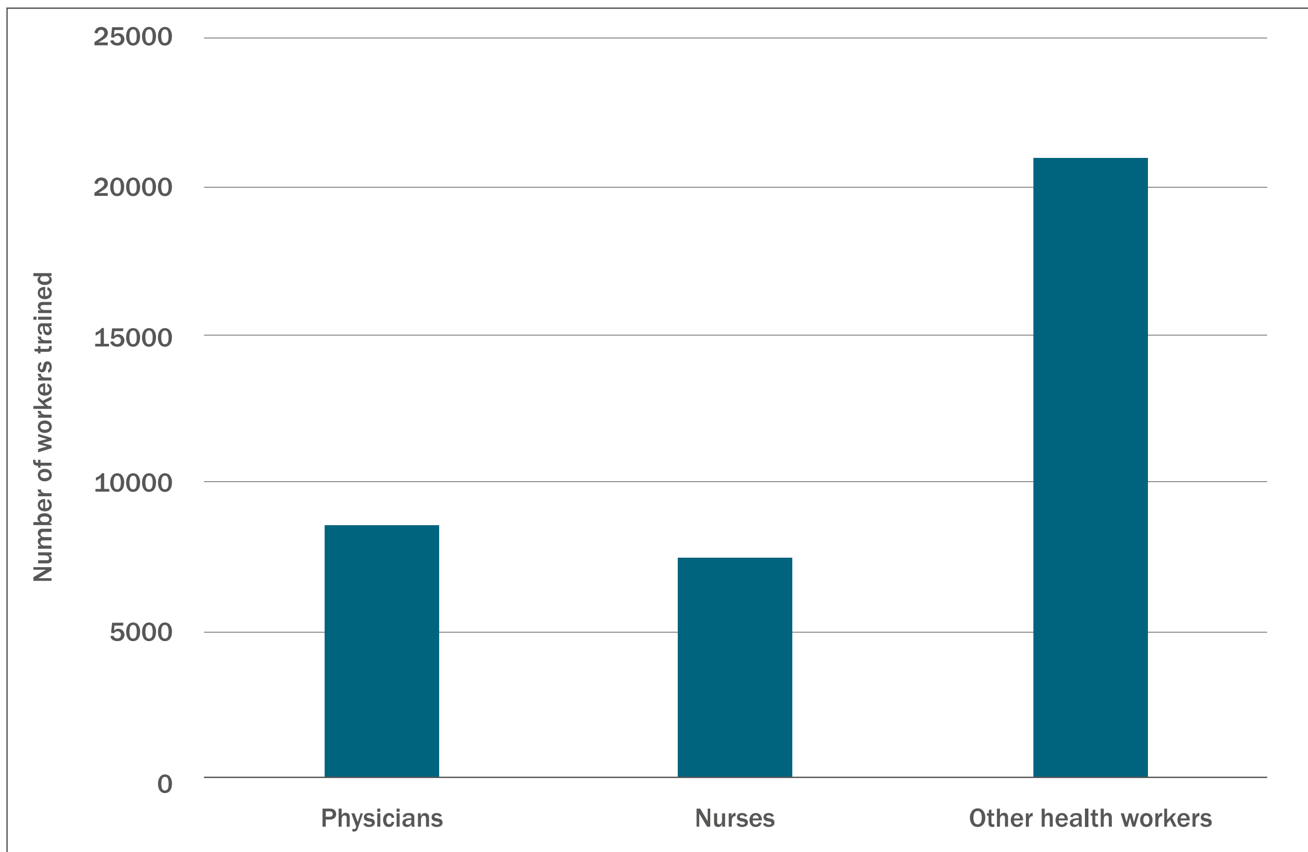
FIGURE 2.2.2 Percentage of mental health workers in hospital-based services



2.3 MENTAL HEALTH TRAINING AT THE PRIMARY CARE LEVEL

Mental health training for primary health care personnel--such as the training provided through the mhGAP program--is a crucial factor in improving the sector's capacity to recognize and treat patients with mental illnesses and help reduce the treatment gap. Countries were asked to report total numbers of primary care personnel, including a breakdown by occupation, and to indicate numbers of workers who had received at least two days of training on mental health in the last two years. According to the responses of 26 countries, a median of 5% of physicians and 1.8% of nurses met this level of training in the last two years.

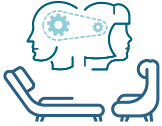
FIGURE 2.3.1 Number of general, non-specialized health workers trained in mental health in the last year



Mental health training in the primary care context is provided mainly to personnel other than doctors and nurses; the distribution of such training varies both by subregion and by country.

To summarize, median per capita annual spending on mental health in the Americas is US$ 13.8, with major variations between high-income countries (US$ 48 per capita) and other countries (US$ 2.5 per capita). However, over 60% of these funds go to psychiatric hospitals, which employ 80% of the mental health workforce.

At the regional level, the median number of mental health workers is 10.3 per 100,000 population, but there is wide variation between countries (ranging from less than one per 100,000 population in the low-income countries to 236 per 100,000 population in the United States and Canada subgroup), with further variation from one occupation to another. The workers most represented in the mental health sector, particularly in South America, are psychologists (5.4 per 100,000 population), followed (particularly in the non-Latin Caribbean) by nurses (3.87 per 100,000 population). There are few psychiatrists (though the number per 100,000 population is similar to the world average) and extremely few child psychiatrists. One out of five psychiatrists and one out of three mental health nurses work in psychiatric hospitals, which serve less than one percent of the population.



3. AVAILABILITY OF MENTAL HEALTH SERVICES

3.1 HOSPITAL CARE

Hospital care includes psychiatric hospitals and psychiatric services in general hospitals.

Psychiatric Hospitals

Psychiatric hospitals are hospitals with varying levels of specialization, which provide inpatient services and long-term residential hospitalization for people with mental disorders. Most of these facilities are independent of, separate from, or less integrated in the rest of the health care system.

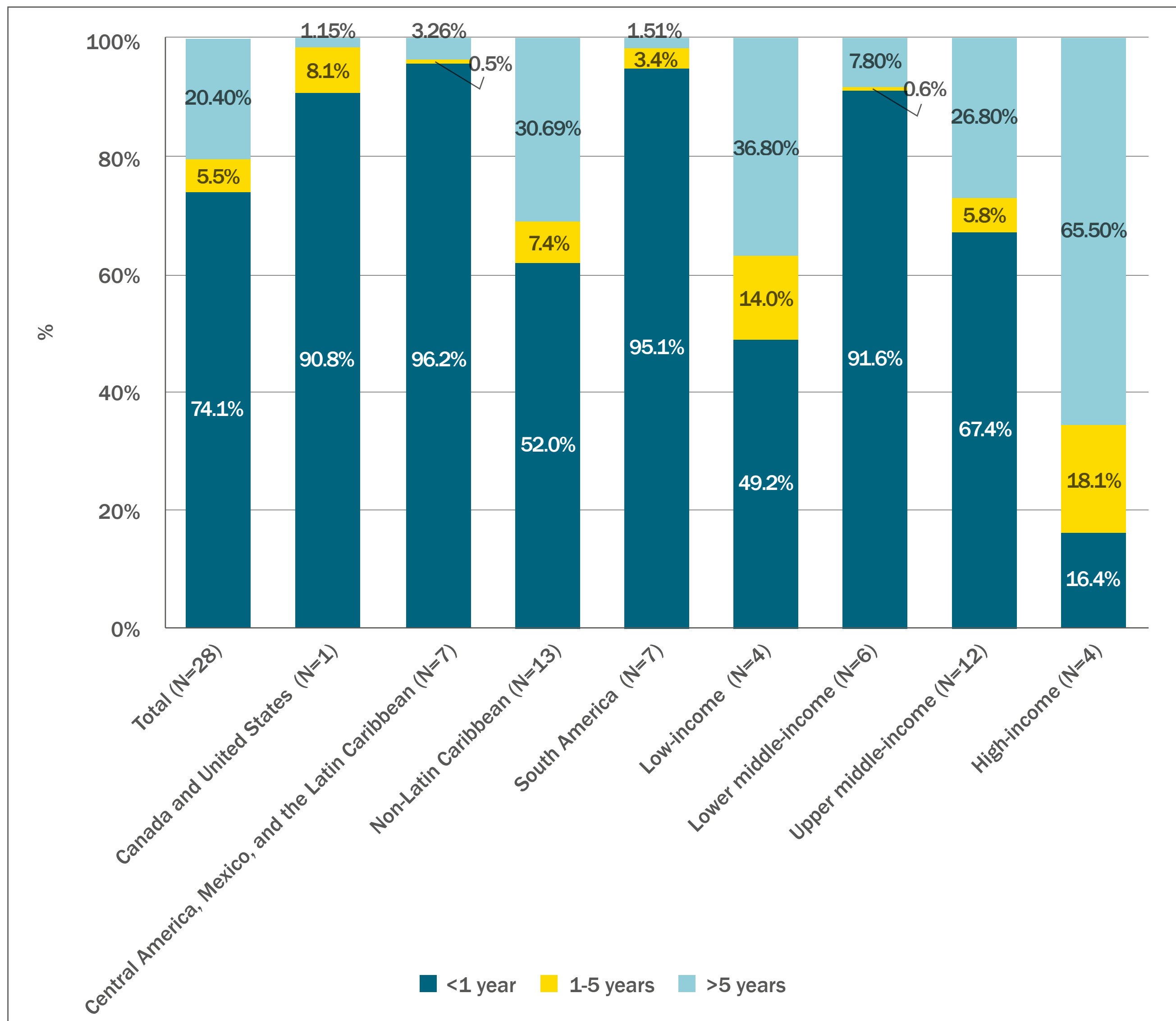
Of the 39 countries that provided data, only seven reported having no psychiatric hospital. All of these were in non-Latin Caribbean territories, except for the Dominican Republic (Table 3.1.1).

TABLE 3.3.1 Summary of indicators for psychiatric hospitals and psychiatric services in general hospitals, by subregion and income level

	Psychiatric hospitals (rates per 100,000 population)			Psychiatric services in general hospitals (rates per 100,000 population)		
	Facilities (N=30)	Beds (N=27)	Income (N=24)	Facilities (N=30)	Beds (N=26)	Facilities (N=19)
Total (N=34)	0.07	16.7	33.6	0.2	2.9	51.0
Subregion						
Canada and United States (N=2)	0.1	14.9	37.4	0.4	12.8	76.0
Central America, Mexico, and the Latin Caribbean (N=8)	0.03	3.5	17.5	0.1	0.4	10.5
Non-Latin Caribbean (N=11)	0.4	67.6	163.2	1.0	4.3	147.2
South America (N=9)	0.1	5.1	25.4	0.2	1.6	40.5
Income level						
Low income (N=1)	0.02	1.95	10.6	0.01	0.1	-
Medium-low income (N=6)	0.03	4.1	26.1	0.07	0.2	27.0
Medium-high income (N=13)	0.1	22.3	89.4	0.2	1.7	42.8
High income (N=17)	0.2	51.1	92.1	0.4	6.7	66.2

Based on data provided by 27 countries, there are 16.7 beds per 100,000 population in psychiatric hospitals in the Region. Though a number of the Region's countries are in transition towards community-based residential care combined with the treatment of acute problems in psychiatric wards of general hospitals, psychiatric hospitals still have a large number of beds, especially in high-income countries of the non-Latin Caribbean.

FIGURE 3.1.1 Length of stay in psychiatric hospitals, by subregion and income level (median rates per 100,000 population)



Countries provided responses on the length of stay in psychiatric hospitals, indicating that the vast majority of patients hospitalized in the Region are discharged within a year (74%), though 20% have a median stay of more than five years. In certain regions and groups, including the non-Latin Caribbean and the low- and high-income countries, over 30% of patients in psychiatric hospitals have been there for more than a year, and in some cases for more than five years. This goes against the trend indicated by world data, where the higher a country's income level, the lower is the percentage of long hospitalizations in psychiatric hospitals. The Region of the Americas is the world region with the highest percentage (20%) of stays longer than five years in psychiatric hospitals.

Psychiatric services in general hospitals

Psychiatric units in general hospitals provide hospitalization and care for acute mental health problems for a limited time, usually a matter of weeks or months. Regionally, the majority of the countries (31 of the 39 that responded) reported the existence of psychiatric services in general hospitals, but with only 2.9 beds per 100,000 population (in contrast to the 16.7 beds per 100,000 population in psychiatric hospitals). There are substantial differences in this respect between subregions and between countries in different income levels (Figure 3.2.1).

The proportion of beds provided by psychiatric services in general hospitals is highest in Canada, the United States, and other high-income countries, and is markedly lower in Central America, Mexico, and the Latin Caribbean, and in low- and lower middle-income countries.

Compared with other world regions, the median rate of beds provided by psychiatric services in general hospitals in the Region of the Americas is close to the world average (2.0 per 100,000 population), but with an admissions rate that exceeds the world average (44.4 per 100,000 population).

Involuntary admissions

The median rate of involuntary admissions in the Region, based on the 22 countries that provided data, is 3.3 per 100,000 population. This includes involuntary admissions to psychiatric hospitals, psychiatric wards of general hospitals, and community-based residential facilities.

Psychiatric hospitals account for the majority (85%) of involuntary admissions in the Region, with a rate of 1.2 per 100,000 population (based on data from 21 countries). This is related to the fact that one out of ten admissions to psychiatric hospitals is involuntary.

3.2 OUTPATIENT CARE

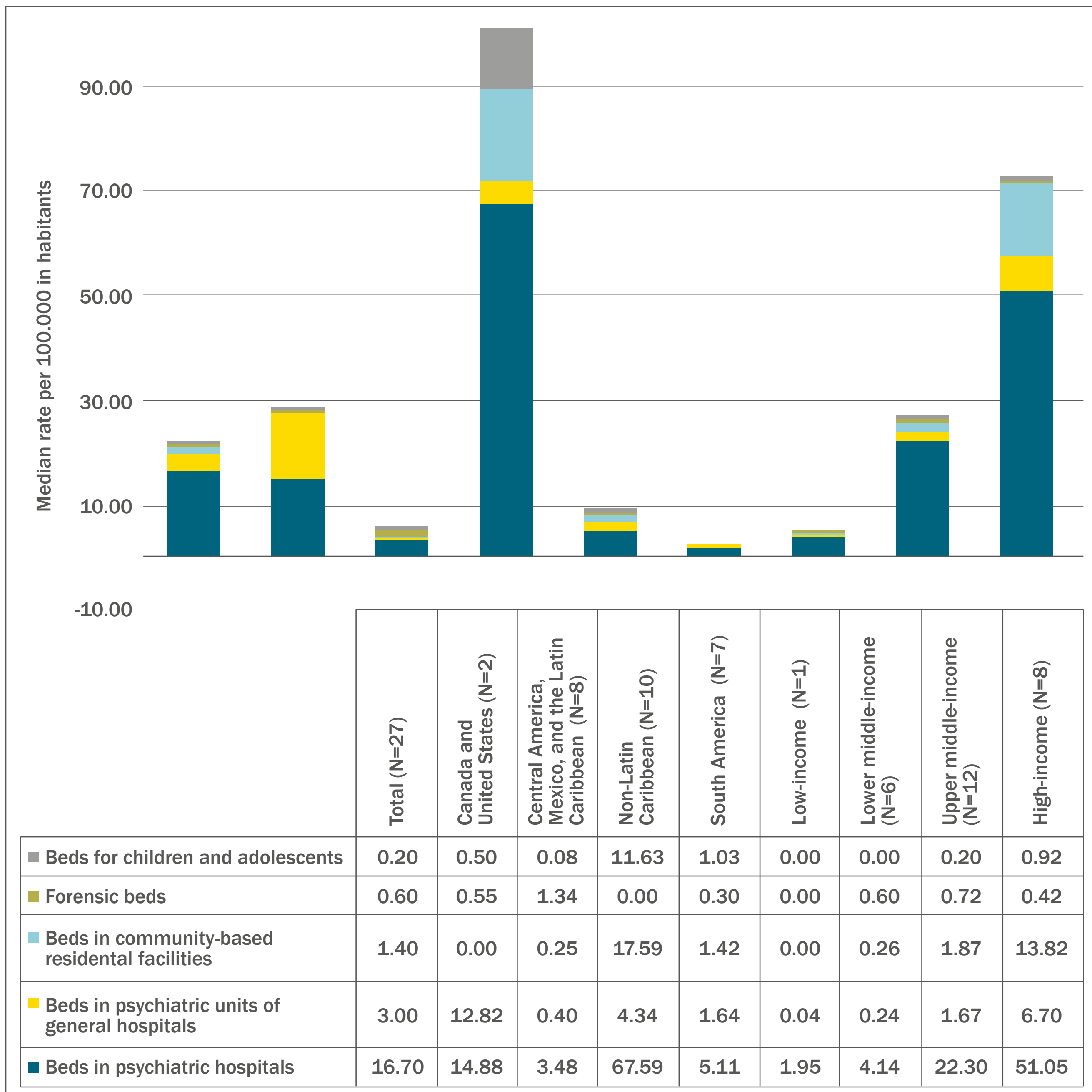
Community-based outpatient mental health care includes care provided by the outpatient departments of hospitals, ambulatory mental health services, and community-based mental health centers and facilities, including both residential facilities and day facilities.

Residential facilities

A residential mental health facility is a community-based facility that is not a hospital and that provides nighttime residence for people with relatively stable mental disorders who do not require intensive medical treatment, but who need social and clinical management of their mental health problems.

Community-based residential facilities are present in almost half of the countries (19 out of 35 reporting data), with a median of 1.4 facilities per 100,000 population. This is the highest rate of all WHO world regions; nevertheless, the availability of beds is 12 times lower than in psychiatric hospitals (Figure 3.2.1).

FIGURE 3.2.1 Total number of mental health beds per 100,000 population, by subregion and income level



	Total (N=27)	Canada and United States (N=2)	Central America, Mexico, and the Latin Caribbean (N=8)	Non-Latin Caribbean (N=10)	South America (N=7)	Low-income (N=1)	Lower middle-income (N=6)	Upper middle-income (N=12)	High-income (N=8)
Beds for children and adolescents	0.20	0.50	0.08	11.63	1.03	0.00	0.00	0.20	0.92
Forensic beds	0.60	0.55	1.34	0.00	0.30	0.00	0.60	0.72	0.42
Beds in community-based residental facilities	1.40	0.00	0.25	17.59	1.42	0.00	0.26	1.87	13.82
Beds in psychiatric units of general hospitals	3.00	12.82	0.40	4.34	1.64	0.04	0.24	1.67	6.70
Beds in psychiatric hospitals	16.70	14.88	3.48	67.59	5.11	1.95	4.14	22.30	51.05

The majority of the Region's beds in community-based residential facilities are in South America, constituting an important resource and component of the overall mental health services in this subregion.

Facilities for day treatment of mental health problems

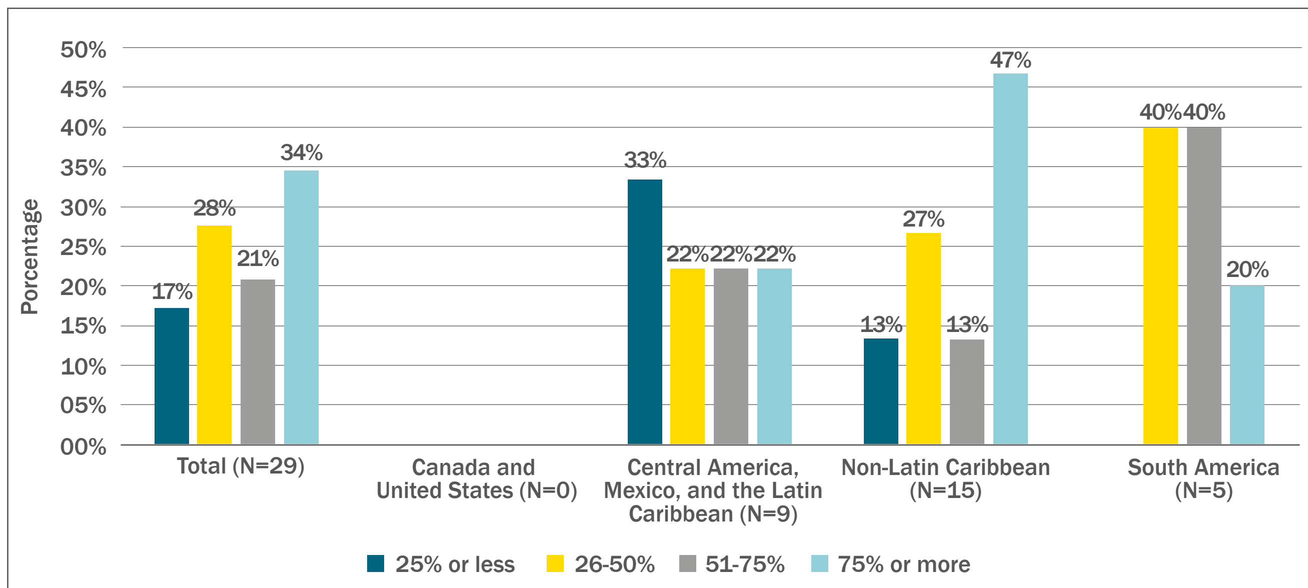
Facilities for day treatment of mental health problems provide daytime group care, as well as promotional and preventive activities, and they offer supervision and monitoring for non-specialized health facilities. These facilities usually: (1) are available simultaneously to groups of users (as opposed to providing services for one individual at a time); (2) expect a user to remain in the facility for a period of time after direct contact with staff (i.e., the service is not intended for users to simply have appointments with staff and then leave immediately); and (3) have individual users remain in the facility for half a day or a full day, while they participate in various rehabilitation or recreation activities.

Although 67% of the 37 countries that responded have day treatment facilities, their availability and use in the Region is relatively low, with a median of 3.5 establishments per country and 0.3 facilities per 100,000 population.

3.3 CONTINUITY OF CARE FOLLOWING HOSPITAL DISCHARGE

When evaluating continuity of care, one marker that indicates the quality of the mental health care system is the proportion of patients discharged from hospital units who receive monitoring within one month. In 29 countries, the overall rates for this indicator are generally high, and a third of the countries state that over 75% of patients receive monitoring during the first month. However, nearly half of the countries report that less than 50% of patients receive an outpatient monitoring visit within one month (Figure 3.3.1).

FIGURE 3.3.1 Continuity of care: Proportion of patients who receive an outpatient follow-up visit within a month of discharge

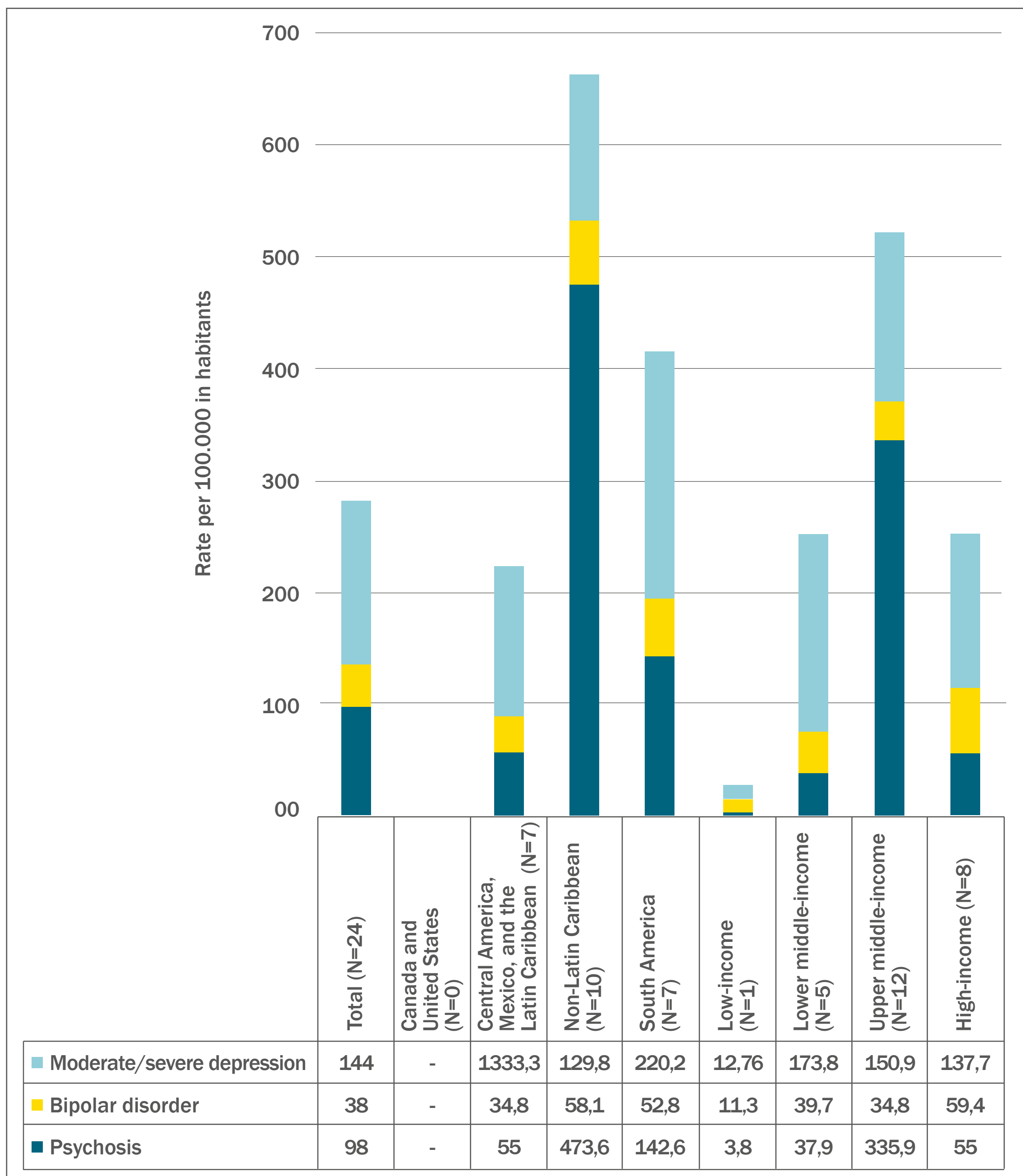


The non-Latin Caribbean and South America have the highest percentages of individuals who receive follow-up outpatient visits within a month of hospital discharge.

3.4 TREATED PREVALENCE

Treated prevalence is the proportion of people with mental disorders served by mental health systems. In the Americas during the last year, 267.7 people per 100,000 population received care for severe mental disorders (psychoses, bipolar disorder, and moderate and severe depression), with significant variations between subregions and income levels (Figure 3.4.1).

FIGURE 3.4.1 Total treated prevalence of psychosis, bipolar disorder, and moderate/severe depression, by subregion and income level (per 100,000 population)



	Total (N=24)	Canada and United States (N=0)	Central America, Mexico, and the Latin Caribbean (N=7)	Non-Latin Caribbean (N=10)	South America (N=7)	Low-income (N=1)	Lower middle-income (N=5)	Upper middle-income (N=12)	High-income (N=8)
Moderate/severe depression	144	-	1333,3	129,8	220,2	12,76	173,8	150,9	137,7
Bipolar disorder	38	-	34,8	58,1	52,8	11,3	39,7	34,8	59,4
Psychosis	98	-	55	473,6	142,6	3,8	37,9	335,9	55

The data from 24 countries indicate that the regional rate of people with severe mental disorders who are in treatment is 429.8 per 100,000 population, with treated prevalence varying greatly among the three types of disorders. Moderate/severe depression has the highest treated prevalence in the various subregions and income levels, except for the non-Latin Caribbean and the medium-high income level, where this is exceeded by the rate of persons with psychosis.

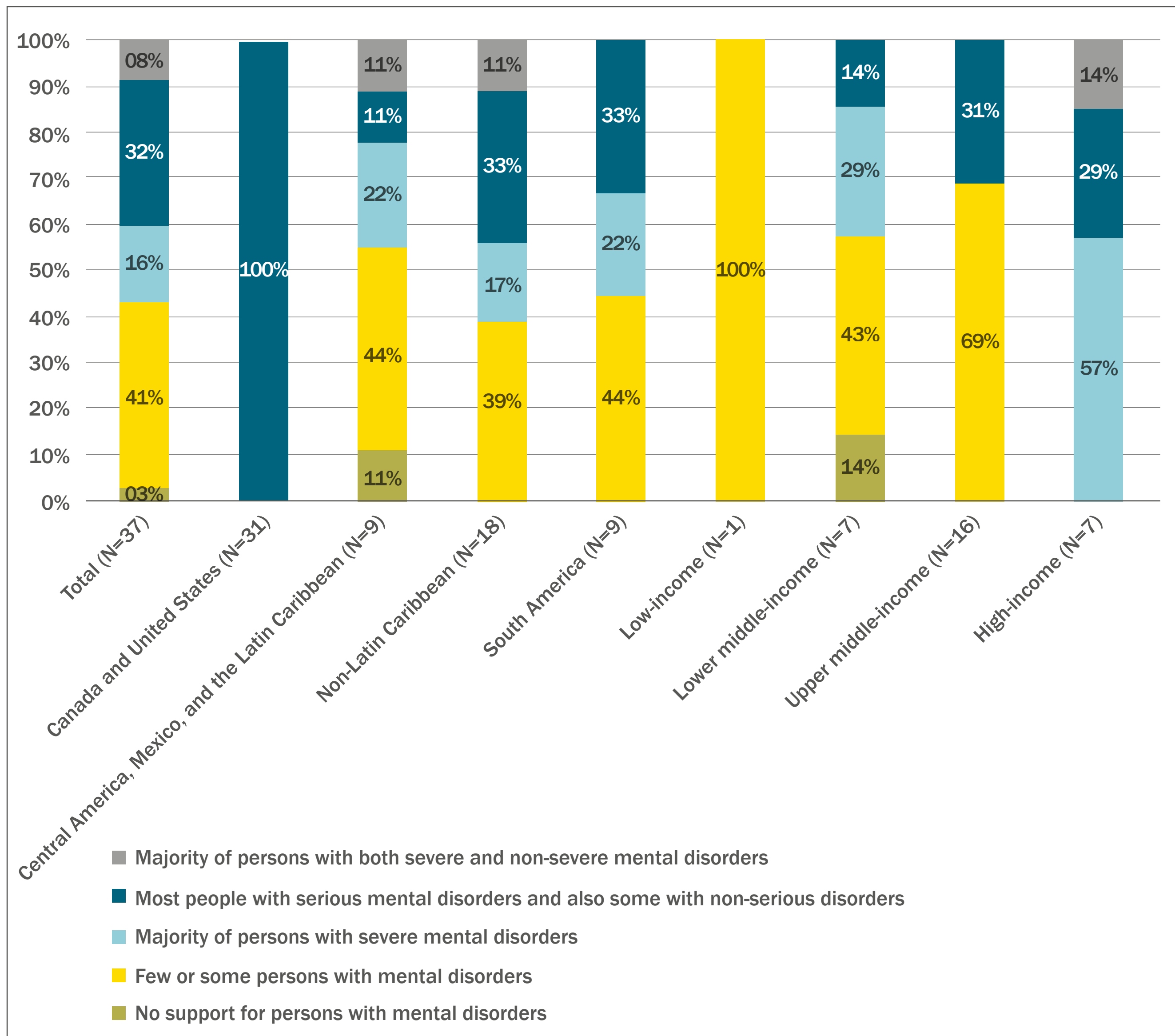
In terms of treatment for moderate/severe depression, the Region of the Americas has nearly double the global rate (global rate: 95.8 per 100,000 population), while treatment for psychosis is half the global rate (global rate: 171.3 per 100,000 population), with the rate for bipolar disorders similar to the global rate (global rate: 41 per 100,000 population).

3.5 SOCIAL SUPPORT

Social support is usually defined as a range of interpersonal relations or connections that have an impact on an individual's functioning, and that include support provided by individuals and by social institutions.

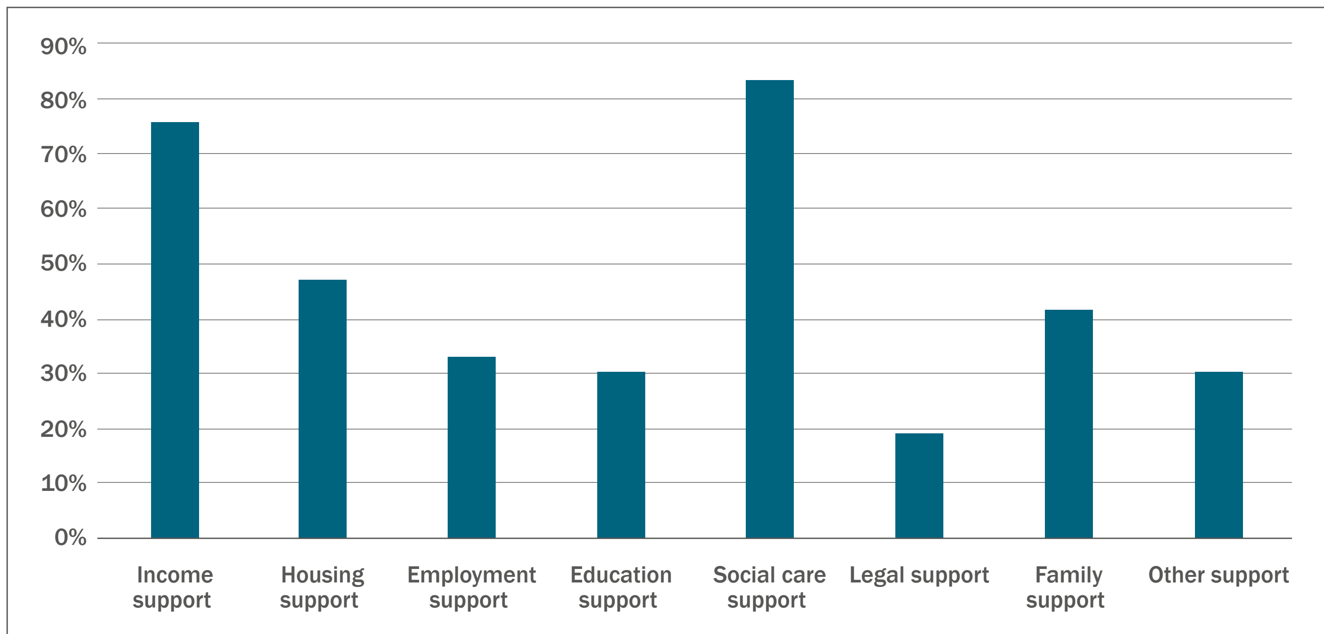
Countries were asked to report on the availability of government-provided social support for people with mental disorders, and to specifically include people with mental disorders who are officially registered/recognized as recipients of government support (for example, in the form of disability payments or income support). The countries were also asked to exclude people with mental disorders who were receiving monetary and non-monetary support from family members, local charitable organizations, and other nongovernmental organizations.

FIGURE 3.5.1 Availability of government social support for persons with severe mental disorders, by subregion and income level



Over half of the 37 responding countries reported that the majority of people with severe and non-severe mental disorders, receive disability pensions, income support, or non-monetary forms of support (such as support in housing, employment, and education) (N=21). However, nearly half reported that social support is available for “few or some” people with mental disorders (N=15).

FIGURE 3.5.2 Types of government social support provided for persons with mental disorders (%)



Among people who receive government support, the main components are social support (84%) and income support (76%), followed by employment support (33%), education support (31%), and legal support (19%).

In summary, with regard to the availability of mental health services, beds for mental health patients in the Region continue to be found mainly in psychiatric hospitals, where the rate is six times higher than in general hospitals. Approximately 12% of hospitalizations in psychiatric hospitals are involuntary, and while more than two-thirds of hospitalized patients are discharged within one year, 10% have median stays of over five years.

Community-based residential facilities are found in almost half of the countries, with a median rate of 1.4 facilities per 100,000 population, but with 12 times fewer beds than in psychiatric hospitals.

Government support mainly involves income and social support and, less frequently, employment, educational, and legal support.

4. MENTAL HEALTH PROMOTION AND PREVENTION

4.1 MENTAL HEALTH PROMOTION AND PREVENTION PROGRAMS

The development and establishment of policies and programs for mental health promotion and prevention are a necessary part of regional efforts to improve mental health in the overall population. Strategic Line of Action 3 of PAHO's regional Plan of Action on Mental Health includes developing and implementing programs for promotion and prevention in the context of mental health systems and services.

Examples of broad strategies for mental health promotion and prevention of mental illness throughout the life course include information campaigns, promotion of rights, programs for early childhood and life course skills, provision of healthy working conditions, and programs to protect against child abuse and other types of domestic and community violence.

To be considered "functional", a program must have at least two of the following three characteristics: (a) human and financial resources; (b) a defined implementation plan; and (c) evidence of progress and/or impact. Programs not meeting these criteria, or concerned only with treatment or care, were excluded. In all, 17 of the 23 countries and territories that answered this question (73%) have functional programs for mental health promotion and mental illness prevention, with the highest rates in South America and North America. Analysis of the types of programs reported indicates that one third can be described as programs for mental health awareness, designed to improve mental health literacy or combat stigma and discrimination through specific events or via multimedia. The most common programs involve suicide prevention, early childhood development, parental mental health promotion, and school-based mental health promotion (15% each).

FIGURE 4.1 Promotion and prevention programs: Proportion of countries with at least two functional programs, by subregion and income level

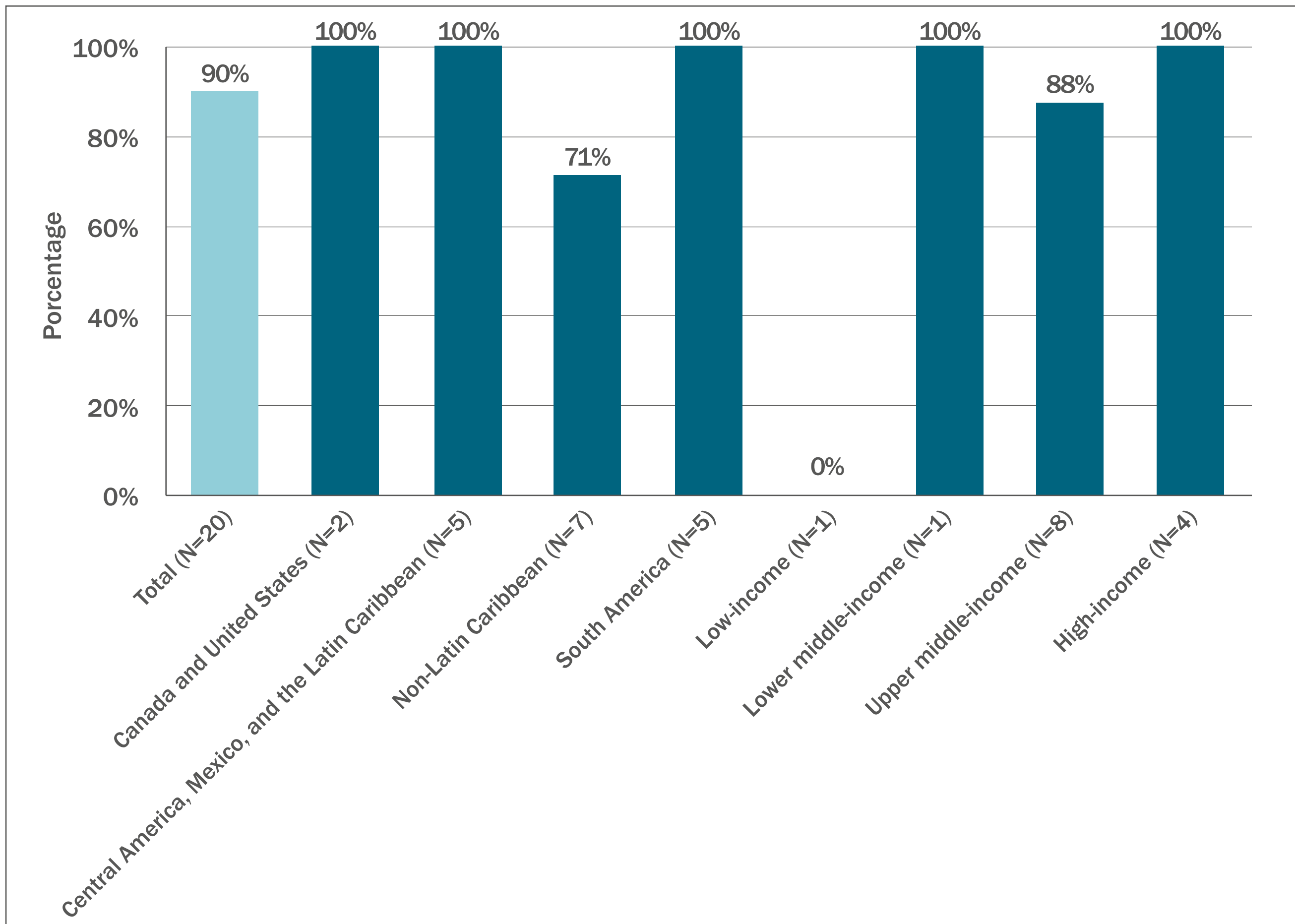
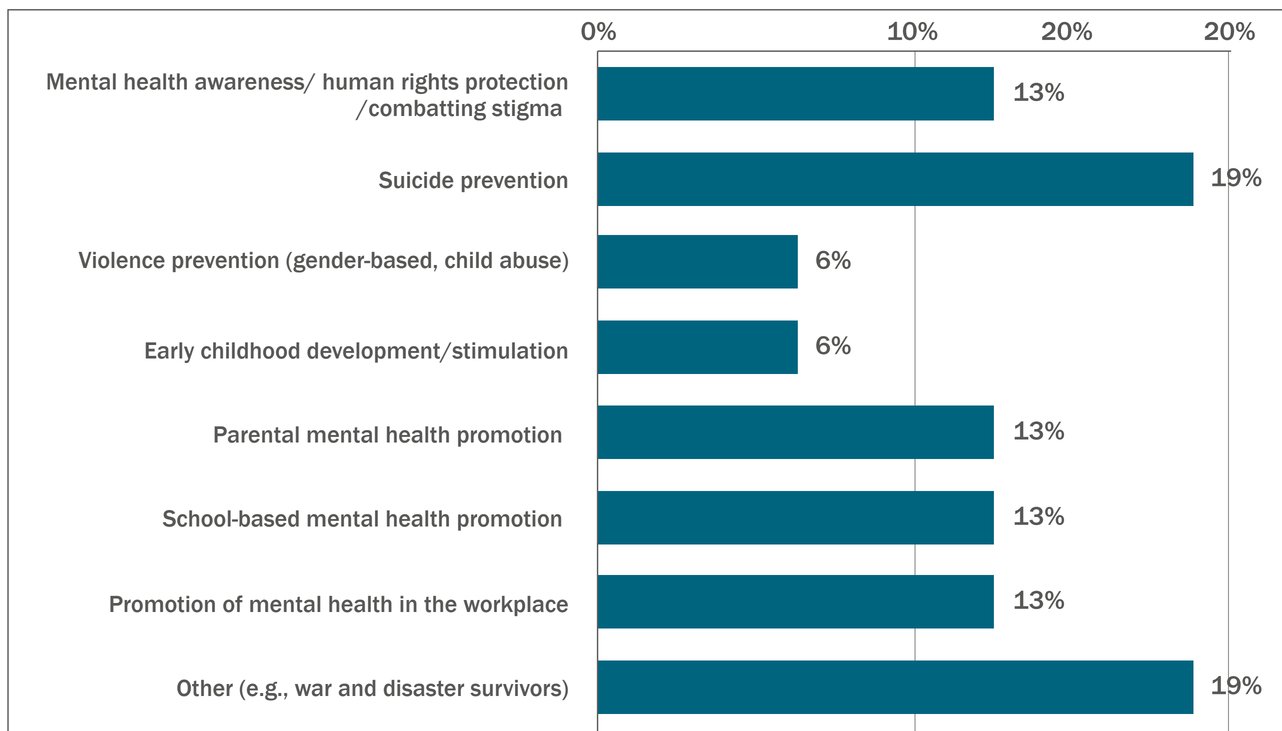


FIGURE 4.1.1 Principal type of program/focus: percentage of totally functional programs

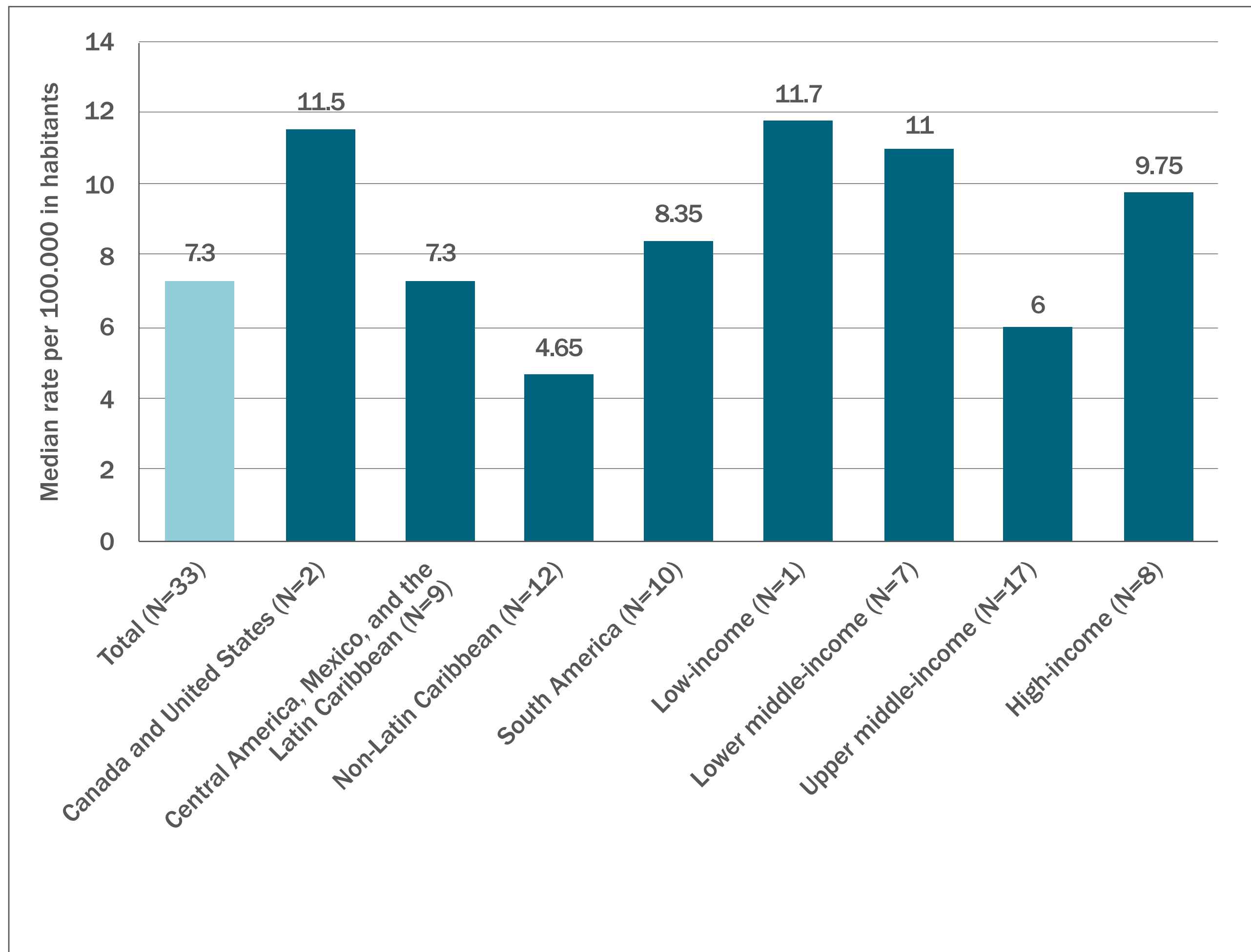


4.2 SUICIDE PREVENTION

In the Region of the Americas, suicide causes an estimated 65,000 deaths per year and suicide prevention is a specific priority in the mental health sector. The Strategic Plan 2014-2019 and the PAHO Plan of Action on Mental Health aim to reduce premature mortality from suicide. Given the weakness of vital statistics systems in many countries, and the identified problems of underreporting and underestimation of suicide as a cause of death, the most consistent and reliable estimates of suicide rates come from the PAHO regional report on suicide (2014). The regional age-standardized suicide rate between 2005 and 2009 was estimated at 7.3 per 100,000 population.

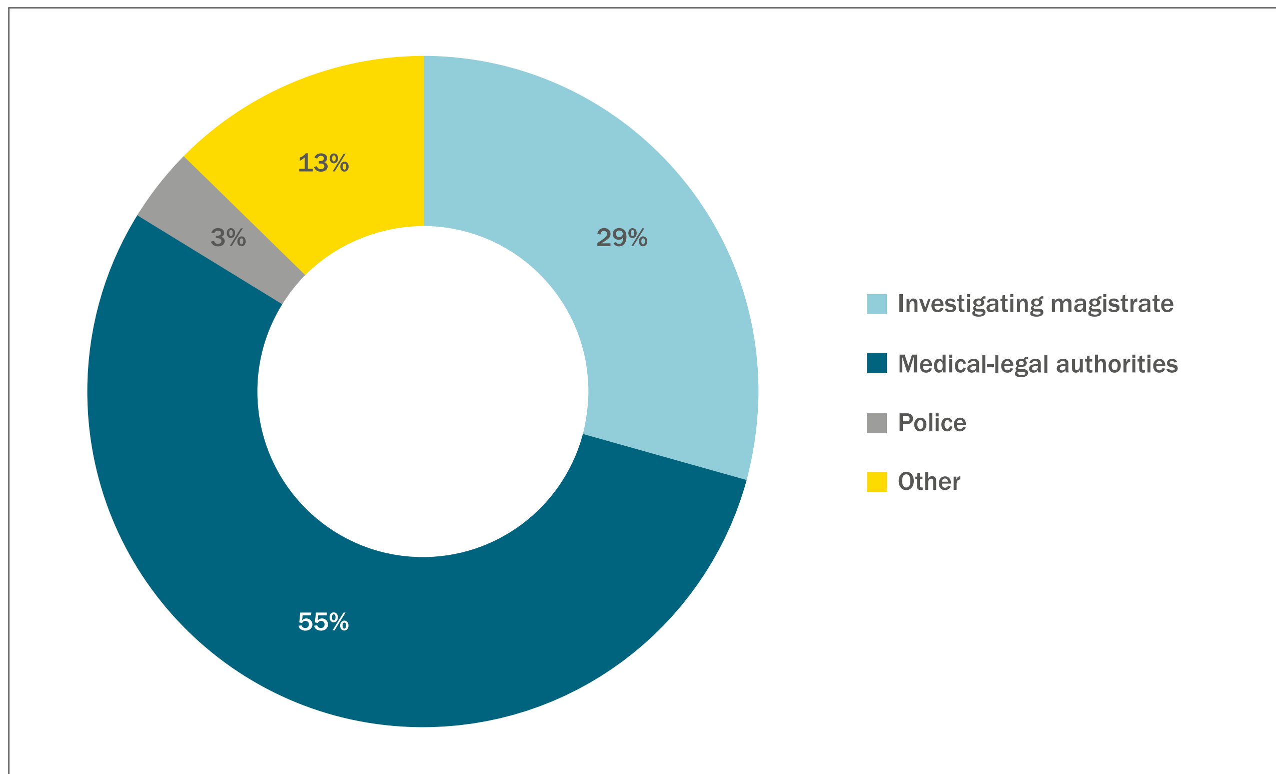
Countries were asked to provide data on the numbers of deaths by suicide (by age and sex) used for national suicide rate estimates. They were also asked to state whether they had a national suicide prevention strategy. Half of the 39 countries that responded have suicide prevention strategies, but they vary in their degree of development from one subregion to another. Implementation of a suicide prevention strategy is most prevalent in South America, and is nearly nonexistent in the non-Latin Caribbean.

FIGURE 4.2.1 Age-standardized suicide rates per 100,000 population, by subregion and income level



The age-standardized suicide rate for the 33 countries that answered the survey question was 7.3 per 100,000 population, with an above-average rate in the Canadian and United States subgroup, in South America, and in the high-income countries as a whole.

FIGURE 4.2.2 Entity responsible for making the determination of suicide (mortality due to suicide) (%)



The monitoring of suicide data has been recognized as important for providing reliable information for country-to-country comparisons. One of the important elements of suicide surveillance systems is the determination of suicide and the cause of suicide. Currently, autopsy authorities and investigating magistrates account for over two-thirds of those responsible for determining suicide as the cause of death.

To summarize, the majority of the countries that responded to the survey have at least two functional national multisectoral mental health and mental illness prevention programs, designed primarily for suicide prevention, early childhood development, parental mental health promotion, and school-based mental health promotion. Despite the fact that many of these programs are aimed at suicide prevention, and that the regional rate of mortality from suicide does not exceed the target set in the regional plan (7.4 per 100,000 population), suicide continues to be a major problem in the Region, with rates above the world average in the Canadian and United States subregion and in some countries of the non-Latin Caribbean.

CONCLUSIONS

Comparing the present data with the findings of the 2014 Mental Health Atlas of the Americas is difficult, since some of the indicators have changed as a result of feedback received by the representatives of the Member States, and also because the countries that completed the questionnaire for this edition of the Atlas are not identical to the group that responded to the 2014 Atlas. This creates some additional limitations in using these two editions of the Atlas to compare data over time. Nevertheless, it is possible to compare some of the indicators for resources and the development of services.

According to the data obtained, the Region has seen a nearly 100% increase in per capita annual mental health spending (from US$ 6.96 to US$ 13.8), and a reduction in spending on psychiatric hospitals (from 73% to 61%). However, psychiatric hospitals continue to receive more than half the budget in the Region and practically 100% of the resources in the non-Latin Caribbean. Although some countries with high levels of spending participated only in this edition of the Atlas (which could influence the resulting values), the use of the median as a measure of central tendency prevents undue influence of atypical values.

There was no reduction in the median number of beds in psychiatric hospitals at the regional level, meaning that the downward trend in psychiatric beds in the Region is not uniform. At the same time, the availability of beds in the psychiatric units of general hospitals in the Region has generally risen (from 0.65 to 2.9 per 100,000 population) except in the non-Latin Caribbean subregion (declining from 4.7 to 4.3 per 100,000 population).

The regional rate of admissions to psychiatric hospitals (33.6 per 100,000 population) has declined since 2014 (from 44.2 per 100,000 population). The rate of admissions is directly related to the number of beds and country income levels and is especially high in the high-income countries of the non-Latin Caribbean. Compared with other WHO world regions, the Region of the Americas has the second highest rate of psychiatric hospital admissions, second only to Europe.

The number of beds in community-based residential facilities in the Region has increased, compared to data in the 2014 Atlas.

Community-based residential facilities are present in nearly half of the countries (19 of the 35 that provided data), with a median rate of 1.4 facilities per 100,000 population, a figure significantly higher than the rate reported in the 2014 Atlas (0.007 per 100 population). Worldwide, this is the highest rate of any WHO region; nevertheless, the availability of beds in these facilities is 12 times lower than in psychiatric hospitals.

The difference between the number of countries that responded to the 2014 and 2017 questionnaires for the regional Atlas makes it impossible to compare rates of mental health workers. However, it is clear that nurses and psychologists continue to be the main human resources for mental health, though there is significant variation between countries and subregions.

The changes observed between the two editions of the regional Atlas are both modest and heterogeneous. Some countries have progressed on certain indicators, while experiencing setbacks on others. The differences between countries limit the benefits of regional progress and underscore the need for sustained improvement in Member States' commitment to advancing mental health agendas and activities in accordance with national, regional, and global plans.

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Pan American Health Organization

World Health Organization

REGIONAL OFFICE FOR THE Americas