



# Mental health in the Americas: an overview of the treatment gap

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**ABSTRACT** **Objective.** To understand the mental health treatment gap in the Region of the Americas by examining the prevalence of mental health disorders, use of mental health services, and the global burden of disease.

**Methods.** Data from community-based surveys of mental disorders in Argentina, Brazil, Canada, Chile, Colombia, Guatemala, Mexico, Peru, and the United States were utilized. The World Mental Health Survey published data were used to estimate the treatment gap. For Canada, Chile, and Guatemala, the treatment gap was calculated from data files. The mean, median, and weighted treatment gap, and the 12-month prevalence by severity and category of mental disorder were estimated for the general adult, child-adolescent, and indigenous populations. Disability-adjusted Life Years and Years Lived with Disability were calculated from the Global Burden of Disease study.

**Results.** Mental and substance use disorders accounted for 10.5% of the global burden of disease in the Americas. The 12-month prevalence rate of severe mental disorders ranged from 2% – 10% across studies. The weighted mean treatment gap in the Americas for moderate to severe disorders was 65.7%; North America, 53.2%; Latin America, 74.7%; Mesoamerica, 78.7%; and South America, 73.1%. The treatment gap for severe mental disorders in children and adolescents was over 50%. One-third of the indigenous population in the United States and 80% in Latin America had not received treatment.

**Conclusion.** The treatment gap for mental health remains a public health concern. A high proportion of adults, children, and indigenous individuals with serious mental illness remains untreated. The result is an elevated prevalence of mental disorders and global burden of disease.

**Keywords** Mental disorders; professional practice gaps; mental health services; Americas.

Disparities in the prevention, care, and rehabilitation of mental disorders in the Americas is a growing public health

problem. Addressing the growing burden of mental disorders requires an understanding of the prevalence, the

associated burden of disease, and the treatment gap for these disorders. The global burden of mental disorders, among other factors, is associated with the high prevalence of mental disorders, the early onset of mental disorders, and the wide treatment gap (1, 2).

Reducing the treatment gap and the 12-month prevalence of mental disorders is the primary modifiable factor in

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diminishing the global burden of mental disorders and its societal impact. Consequences of failure to reduce the treatment gap include low educational attainment, reduced motivation to work, difficulties in work performance, impairments in personal function, discrimination that reduces occupational attainment, and lower income attainment (3, 4). Mental disorders are also associated with increases in poverty, impaired family function, teen pregnancy, domestic violence, poorer quality of life, and mortality beyond that due to suicide (5 – 9). In the Americas, as elsewhere in the world, only a minority of individuals with mental disorders have received treatment in the preceding year, and initial treatment contact is frequently delayed for many years (10, 11).

Although research on the epidemiology of mental disorders in Latin America has been concentrated primarily in a few countries, advances have been made in the last decade (12). There has been an increasing number of studies on the prevalence of mental illness in the community, with data on service utilization. In addition, studies on the rates of mental illness in children, adolescents, and indigenous populations have been conducted. Research initiatives, such as the Global Burden of Disease Study (13), the World Mental Health Surveys (14), the Mental Health Atlas (15, 16), and the WHO Assessment Instrument for Mental Health Systems (WHO-AIMS; 17) have provided a better understanding of the prevalence, burden, and treatment gap in the Americas.

The objective of this report was to understand the extent of the mental health treatment gap in the Region of the Americas by examining the prevalence of mental health disorders, use of mental health services, and the global burden of disease in the region.

## MATERIALS AND METHODS

The Global Burden of Disease Study 2016 (GBD 2016) was used to estimate the proportion of disease burden that came from mental and substance use disorders (18). Data from the Institute of Health Metrics and Evaluation (19) was obtained for each country in the Americas by specific disorder, age, and gender. GBD 2016 estimates for Disability Adjusted Life Year (DALY) and Years Lived

with Disability (YLD) were determined for the Region of the Americas as a whole (including the Caribbean, Latin America, and North America). These were compared to global estimates. In addition, estimates were made by subregion: North America (Canada and the United States); Mesoamerica (Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama); the Latin Caribbean (Cuba, Dominican Republic, Haiti, and Puerto Rico); South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela); and the non-Latin Caribbean (Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, Dominica, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Grenada, Guyana, Suriname, Trinidad and Tobago, United States Virgin Islands).

Studies on a 12-month prevalence of mental disorders were selected based on being the most representative community-based survey of a country—using the Composite International Diagnostic Interview (CIDI; 20), the Diagnostic Interview Schedule for Children (DISC; 21), or a latter equivalent interview schedule—and having available service utilization data to permit calculation of the treatment gap. The studies, therefore, were not necessarily a country's most recent mental health prevalence survey. Data from studies that were part of the World Mental Health Survey (WMHS) were obtained from published reports: Argentina (22),  $n = 3\,927$ , age  $\geq 18$  years, was based on a nationally representative sample; Brazil (23),  $n = 5\,037$ , age  $\geq 18$  years, collected data from metropolitan São Paulo; Colombia (24),  $n = 4\,426$ , age 18 – 65 years, included all urban areas; Mexico (25),  $n = 5\,782$ , age 18 – 65 years, included all urban areas; Peru (26),  $n = 3\,930$ , age 18 – 56 years, was based on five urban areas; and the United States (27),  $n = 9\,282$ , age  $\geq 18$  years, was a nationally representative sample from its National Comorbidity Survey Replication. The study selected for Canada (28),  $n = 38\,492$ , age  $\geq 15$  years, was representative of much of the country and used the WMHS CIDI. For Chile (29),  $n = 2\,978$ , age  $\geq 15$  years, a CIDI 1.1 survey of four provinces represented the major geographic areas and used the Diagnostic and Statistical Manual of Mental Disorders, 3rd edition, revised (DSM-III-R) rather than DSM-IV. For Guatemala (30),

$n = 1\,452$ , age 18 – 65 years, a nationally representative survey used the CIDI 2.1 and sampled all the ethnic groups in the country, including the Ladino (mixed indigenous and European heritage, but identifying as non-indigenous) and the Maya (encompassing 21 different ethnicities) populations.

If the information was not readily presented in a table, it was extrapolated from the data presented in the reports. For Canada (28), Chile (29), and Guatemala (30), the data files were obtained from the investigators (Canada public domain) and analyzed with SUDAAN (Research Triangle Institute, Raleigh, North Carolina, United States) using the appropriate weights to account for the national census and the sample design. The 12-month treatment rate was used for all countries except Chile, which used a 6-month rate. Severity of mental disorders for the WMHS was based on the Sheehan Disability Scale (31). For Canada, Chile, and Guatemala, the severity of mental disorders was rated with an index based on the diagnosis and the extent of comorbidity (29, 32). Estimates of the treatment gap for the Americas and subregions were calculated by the mean and median across studies, as well as a weighted mean. The weighted average took into account each country's population (1); unlike the mean and median estimates, which did not distinguish among countries based on population size. In addition, the weighted 12-month prevalence of those without treatment by subregion was estimated.

Treatment gaps were also examined for children and adolescents and the indigenous population. For the Chile study ( $n = 1\,558$ , age 4 – 18 years), based on four provinces representing all major geographic areas, parents were interviewed on behalf of children 4 – 11 years of age; only the adolescent was interviewed in the group 12 – 18 years of age; and severity of disorders was based on the DISC severity criteria (33, 34). In the Puerto Rico study ( $n = 1\,886$ , age 4 – 17 years), a nationally representative sample, both child and parent were interviewed and the Children's Global Assessment Scale (CGAS; 35, 36) was used. In the two CIDI-Adolescent Supplement studies in Mexico ( $n = 3\,005$ , age 12 – 17 years) and the United States ( $n = 10\,123$ , age 13 – 18 years), only the adolescent was interviewed (37 – 39). Severity of mental

disorders was measured using the Sheehan Disability Scale in Mexico (37) and the CGAS in the United States (38, 39). The Mexico survey was limited to Mexico City. The nationally representative study of the United States used lifetime service utilization (40), while the other studies were based on 12-month service utilization. The 12-month prevalence rates were used for all of the child and adolescent studies.

Studies providing prevalence and service utilization of indigenous populations in the Americas were obtained from Chile ( $n = 75$ , age  $\geq 15$  years; 43), Guatemala ( $n = 409$ , age 15 – 65 years; 30), and the United States (41, 42)—based on a study of two indigenous tribal groups ( $n = 3\,084$ , age 15 – 54 years) and a nationally representative sample of American Indians and Alaska natives ( $n = 701$ , age  $\geq 18$  years). DSM-IV and the 12-month treatment rates were used in all, except Chile which used DSM-III-R and a 6-month treatment rate. The 12-month prevalence rates were used for each of the studies. The data presented on the Mapuche in Chile (43) and the Maya in Guatemala was obtained from analysis of data files provided by the investigators.

## RESULTS

### Global burden of mental disorders

Mental and substance use disorders account for 10.5% of the DALYs in the Americas (Table 1). Among children, 5.2% of all DALYs are due to mental and substance use disorders, whereas among those 15 – 59 years of age, the rate is 16.6%. Mental health and substance use disorders account for 22.0% of YLDs in the Americas and 28.5% among those 15 – 59 years of age. North America has a markedly higher GBD associated with mental health and substance use disorders than does Latin America and the Caribbean (LAC).

Among those 15 – 59 years of age, there were notable differences in DALYs and YLDs between North America and LAC: DALYs for schizophrenia were 1.3 versus 0.9; alcohol use disorders, 2.0 versus 2.1; drug use disorders, 7.7 versus 1.7; depressive disorders, 4.8 versus 3.0; bipolar disorders, 0.9 versus 1.2; and anxiety disorders, 3.0 versus 2.4. The YLDs for schizophrenia were 2.2 versus 1.8; alcohol use disorders, 2.2 versus 3.0;

**TABLE 1. Global Burden of Disease 2016: percentage of Disability Adjusted Life Years (DALYs) and Years Lived with Disability (YLDs) due to mental and substance use disorders**

|                                 | DALYs |       |     |          | YLDs |       |      |          |
|---------------------------------|-------|-------|-----|----------|------|-------|------|----------|
|                                 | 0–14  | 15–59 | 60+ | All ages | 0–14 | 15–59 | 60+  | All ages |
| <b>Both sexes</b>               |       |       |     |          |      |       |      |          |
| Americas                        | 5.2   | 16.6  | 3.6 | 10.5     | 17.2 | 28.5  | 9.6  | 22.0     |
| North America                   | 10.4  | 22.0  | 3.8 | 12.9     | 22.2 | 32.2  | 9.4  | 23.3     |
| Latin America and the Caribbean | 4.0   | 13.2  | 3.5 | 8.9      | 15.3 | 25.8  | 10.0 | 20.9     |
| Mesoamerica                     | 3.5   | 12.4  | 3.2 | 8.1      | 15.0 | 24.0  | 9.1  | 19.5     |
| South America                   | 4.8   | 14.1  | 3.6 | 9.4      | 16.3 | 26.9  | 10.4 | 21.8     |
| Non-Latin Caribbean             | 3.5   | 11.1  | 2.8 | 7.2      | 13.0 | 23.8  | 9.4  | 19.0     |
| <b>Female</b>                   |       |       |     |          |      |       |      |          |
| Americas                        | 5.3   | 18.1  | 4.0 | 11.1     | 16.0 | 26.8  | 9.9  | 20.9     |
| North America                   | 10.9  | 22.5  | 4.1 | 13.0     | 21.9 | 30.1  | 9.6  | 22.1     |
| Latin America and the Caribbean | 4.0   | 15.2  | 3.8 | 9.6      | 13.7 | 24.4  | 10.3 | 19.9     |
| Mesoamerica                     | 3.3   | 13.1  | 3.3 | 8.2      | 12.8 | 22.1  | 9.3  | 18.1     |
| South America                   | 5.0   | 16.8  | 4.1 | 10.7     | 15.2 | 26.0  | 10.8 | 21.1     |
| Non-Latin Caribbean             | 3.4   | 12.7  | 3.2 | 8.0      | 11.5 | 22.9  | 9.8  | 18.3     |
| <b>Male</b>                     |       |       |     |          |      |       |      |          |
| Americas                        | 5.1   | 15.4  | 3.3 | 10.0     | 18.5 | 30.5  | 9.3  | 23.3     |
| North America                   | 10.0  | 21.6  | 3.5 | 12.7     | 22.5 | 34.8  | 9.1  | 24.7     |
| Latin America and the Caribbean | 4.0   | 11.9  | 3.2 | 8.2      | 16.9 | 27.4  | 9.6  | 22.1     |
| Mesoamerica                     | 3.6   | 11.8  | 3.2 | 8/0      | 17.1 | 26.3  | 9.0  | 21.2     |
| South America                   | 4.6   | 12.1  | 3.1 | 8.5      | 17.4 | 27.9  | 9.8  | 22.6     |
| Non-Latin Caribbean             | 3.5   | 9.9   | 2.5 | 6.6      | 14.6 | 24.9  | 9.0  | 19.7     |

*Source:* Prepared by the authors from the study results using data from the Institute of Health Metrics and Evaluation.

drug use disorders, 8.2 versus 2.5; depressive disorders, 8.5 versus 6.4; bipolar disorders, 1.6 versus 2.6; and anxiety disorders, 5.2 versus 5.1.

### Prevalence of mental disorders

The prevalence of mental disorders across the Americas varies considerably depending on the study: the 12-month prevalence range ranged from 7.2% in Guatemala to 29.6% in Brazil. The rate of severe mental disorders ranged from 2.0% in Guatemala to 10.0% in Brazil (Table 2). The weighted mean 12-month prevalence of mental disorders in the Americas was 17.0%; North America, 22.5%; Latin America, 14.8%; Mesoamerica, 9.7%; and South America, 17.0%. Table 3 presents the rates by subregions for anxiety, affective, and substance use disorders and by severity.

### Treatment gap

A summary of mental health services utilization by type of provider is presented in Table 4. The weighted mean

for the treatment gap in the Americas for any mental disorder was 71.2%; for severe disorders, 57.6%; and for severe to moderate disorders, 65.7%. The treatment gap for severe mental disorders in North America was 40.5%; Latin America, 69.9%; Mesoamerica, 77.4%; and South America, 66.8%. For severe to moderate disorders, the treatment gap increased substantially; North America, 53.2%; Latin America, 74.7%; Mesoamerica, 78.7%; and South America, 73.1% (Table 5). Substance use disorders had the highest treatment gap in the Americas. In Latin America, the treatment gap for substance use disorders was 83.7% compared to 69.1% for North America. The treatment gap for anxiety disorders ranged from 56.2% in North America to 81.8% in Mesoamerica. For affective disorders, the treatment gap was 58.4% in North America and 77.4% in Mesoamerica.

Mental disorders are highly prevalent among children and adolescents: 16.2% in Puerto Rico, 38.3% in Chile, 39.4% in Mexico, and 42.6% in the United States. The treatment gap for children and adolescents was over 64%

**TABLE 2. Twelve-month prevalence of mental disorders in studies that have service utilization data**

| Disorder                | Argentina WMHS | Brazil WMHS | Canada CCHS | Chile CPPS | Colombia WMHS | Guatemala CIDI | Mexico WMHS | Peru WMHS | USA NCS-R |
|-------------------------|----------------|-------------|-------------|------------|---------------|----------------|-------------|-----------|-----------|
| Field work              | 2015           | 2005–2008   | 2002        | 1992–1999  | 2003          | 2009           | 2001–2002   | 2004–2005 | 2001–2003 |
| Age                     | 18 ≥           | 18 ≥        | 15 ≥        | 15 ≥       | 18–65         | 18–65          | 18–65       | 18–65     | 18 ≥      |
| Sample size             | 3 927          | 5 037       | 38 492      | 2 978      | 4 426         | 1 452          | 5 782       | 3 930     | 9 282     |
| Diagnosis               | DSM-IV         | DSM-IV      | DSM-IV      | DSM-III-R  | DSM-IV        | DSM-IV         | DSM-IV      | DSM-IV    | DSM-IV    |
| Anxiety disorders       | 9.4            | 19.9        | 4.7         | 9.3        | 14.4          | 2.1            | 6.6         | 7.9       | 18.1      |
| Affective disorders     | 5.7            | 11.0        | 5.2         | 9.9        | 7.0           | 1.4            | 4.8         | 3.5       | 9.5       |
| Substance use disorders | 2.4            | 3.6         | 11.0        | 10.4       | 2.8           | 3.0            | 2.5         | 1.7       | 3.8       |
| Any                     | 14.8           | 29.6        | 18.7        | 17.0       | 21.0          | 7.2            | 12.1        | 13.5      | 26.2      |
| Severe                  | 3.7            | 10.0        | 4.4         | 6.9        | 4.9           | 2.0            | 3.7         | 2.3       | 5.8       |
| Moderate                | 5.3            | 9.8         | 6.0         | 6.9        | 8.6           | 1.1            | 3.5         | 5.6       | 9.8       |
| Mild                    | 5.8            | 9.8         | 8.3         | 3.2        | 7.5           | 4.1            | 4.9         | 5.6       | 10.5      |

**Source:** Prepared by the authors from the study results and in part from the following references 22 – 27.

CIDI, Composite International Diagnostic Interview; CCHS, Canadian Community Health Survey; CPPS, Chile Psychiatric Prevalence Survey; DSM, Diagnostic and Statistical Manual of Mental Disorders; NCS-R, National Comorbidity Survey-Revised; WMHS, World Mental Health Survey

**TABLE 3. Twelve-month prevalence of mental disorders by regions**

| Disorder                | Americas | North America | Latin America | Mesoamerica | South America |
|-------------------------|----------|---------------|---------------|-------------|---------------|
| <b>Weighted mean</b>    |          |               |               |             |               |
| Anxiety disorders       | 14.7     | 16.7          | 13.2          | 6.1         | 16.2          |
| Affective disorders     | 8.3      | 9.1           | 7.7           | 4.4         | 9.0           |
| Substance use disorders | 3.8      | 4.5           | 3.2           | 2.6         | 3.5           |
| Any                     | 22.7     | 25.4          | 20.7          | 11.5        | 24.4          |
| Severe                  | 6.1      | 5.7           | 6.4           | 3.5         | 7.6           |
| Moderate                | 8.0      | 9.4           | 7.0           | 3.2         | 8.5           |
| Mild                    | 8.5      | 10.3          | 7.2           | 4.8         | 8.3           |
| <b>Mean</b>             |          |               |               |             |               |
| Anxiety disorders       | 10.3     | 11.4          | 9.9           | 4.4         | 12.2          |
| Affective disorders     | 6.4      | 7.4           | 6.2           | 3.1         | 7.4           |
| Substance use disorders | 4.6      | 7.4           | 3.8           | 2.8         | 4.2           |
| Any                     | 17.8     | 22.5          | 16.5          | 9.7         | 19.2          |
| Severe                  | 4.9      | 5.1           | 4.8           | 2.9         | 5.6           |
| Moderate                | 6.3      | 7.9           | 5.8           | 2.3         | 7.2           |
| Mild                    | 6.6      | 9.4           | 5.8           | 4.5         | 6.4           |
| <b>Median</b>           |          |               |               |             |               |
| Anxiety disorders       | 9.3      | 11.4          | 9.3           | 4.4         | 9.4           |
| Affective disorders     | 5.7      | 7.4           | 5.7           | 3.1         | 7.0           |
| Substance use disorders | 3.0      | 7.4           | 2.8           | 2.8         | 2.8           |
| Any                     | 17       | 22.5          | 14.8          | 9.7         | 17.0          |
| Severe                  | 4.4      | 5.1           | 3.7           | 2.9         | 4.9           |
| Moderate                | 6.0      | 7.9           | 5.6           | 2.3         | 6.9           |
| Mild                    | 5.8      | 9.4           | 5.6           | 4.5         | 5.8           |

**Source:** Prepared by the authors from the study results.

in Puerto Rico and the United States; over 66% in Chile; and over 86% in Mexico. Severe mental disorders in children and adolescents had a treatment gap over 50%: Chile, 59.4%; Mexico, 80.8%; Puerto Rico, 50.4%; and the United States, 52.6%.

Among the indigenous population in the United States, approximately one-third of those with a mental disorder

had not received treatment. In Chile and Guatemala, the treatment gap was markedly higher—over 80%. Use of traditional healers was low in the Latin American studies, 0% among the Mapuche in Chile and 8.2% among the Maya in Guatemala. In the United States, among the two tribes studied, 19% – 39% with mental disorders utilized a traditional healer.

## DISCUSSION

The treatment gap for adults remains wide throughout the Americas. It is much larger in Latin America, but still unacceptably high in North America. Despite the lower treatment gap in North America, the global burden of disease for mental health is higher comparatively, which may reflect the elevated prevalence of mental disorders in North America. When the prevalence of mental disorders is taken into account, the treatment gap for North America begins to approach that of Latin America. The weighted 12-month prevalence treatment gap for substance use disorders in North America exceeds that of Latin America; however, the prevalence for severe disorders remains markedly lower.

The treatment gap is illustrated by the wide disparities in mental health resources for adults across countries in the Americas. For example, the mental health workforce per 100 000 population in Mesoamerica is 8.7; in the non-Latin Caribbean, 69.2; South America, 8.7; and the United States, 125.2 (15). Overall, in the Americas, the mental health workforce per 100 000 is 10.9 (16). The median rate of beds in mental hospitals per 100 000 in the Americas is 16.7; Mesoamerica, 3.9; the non-Latin Caribbean, 75.3; South America, 9.0; and the United States, 23.6. The median rate of psychiatric beds in general hospitals per 100 000 in the Americas is 1.7; in Mesoamerica, 0.2; the non-Latin Caribbean, 4.7; South America, 0.3; and the United States, 11.5. The median rate of community residential facility beds per 100 000 in Mesoamerica is 0; the non-Latin



**TABLE 4. Percent utilizing mental health services by severity of mental disorders and type of service provider**

| Country               | Total | Any disorder | Severe | Moderate | Mild | No disorder |
|-----------------------|-------|--------------|--------|----------|------|-------------|
| <b>Argentina-WMHS</b> |       |              |        |          |      |             |
| General medical       | 3.8   | 11.2         | 10.8   | 10.5     | 12.3 | 2.4         |
| Mental health         | 8.0   | 18.2         | 21.5   | 23.5     | 11.3 | 6.2         |
| Any health care       | 10.9  | 26.3         | 27.8   | 31.3     | 21.0 | 8.2         |
| Non-health care       | 1.7   | 3.3          | 4.2    | 2.2      | 3.7  | 1.4         |
| Any treatment         | 11.6  | 27.8         | 30.2   | 32.5     | 22.1 | 8.7         |
| <b>Brazil-WMHS</b>    |       |              |        |          |      |             |
| General medical       | 3.3   | 8.6          | 12.0   | 7.7      | 5.9  | 1.1         |
| Mental health         | 5.6   | 14.0         | 23.2   | 12.3     | 6.4  | 2.0         |
| Any health care       | 8.0   | 19.7         | 30.2   | 17.2     | 11.6 | 3.0         |
| Non-health care       | 2.0   | 5.2          | 9.5    | 4.6      | 1.5  | 0.7         |
| Any treatment         | 9.0   | 21.9         | 32.8   | 20.0     | 12.7 | 3.6         |
| <b>Canada-CCHS</b>    |       |              |        |          |      |             |
| General medical       | 5.4   | 17.5         | 42.0   | 17.7     | 4.6  | 2.8         |
| Mental health         | 5.4   | 16.4         | 40.3   | 16.6     | 4.0  | 3.0         |
| Any health care       | 8.3   | 24.1         | 55.5   | 2.5      | 7.5  | 4.8         |
| Non-health care       | 2.9   | 7.6          | 18.8   | 7.0      | 2.2  | 1.8         |
| Any treatment         | 9.5   | 25.9         | 58.0   | 27.1     | 8.5  | 5.8         |
| <b>Chile-CPPS</b>     |       |              |        |          |      |             |
| General medical       | 17.7  | 34.1         | 57.5   | 41.9     | 17.4 | 12.9        |
| Mental health         | 5.6   | 13.1         | 29.4   | 9.6      | 5.0  | 3.5         |
| Any health care       | 20.1  | 38.5         | 65.0   | 44.3     | 20.3 | 14.8        |
| Non-health care       | 1.2   | 2.7          | 1.0    | 4.8      | 3.1  | 0.8         |
| Any treatment         | 20.1  | 38.5         | 65.0   | 44.3     | 20.3 | 14.8        |
| <b>Colombia-WMHS</b>  |       |              |        |          |      |             |
| General medical       | 2.3   | 6.0          | 9.3    | 6.1      | 2.7  | 1.4         |
| Mental health         | 3.0   | 7.7          | 27.8   | 10.3     | 7.8  | 3.4         |
| Any health care       | 5.0   | 13.2         | 25.7   | 11.5     | 8.4  | 3.0         |
| Non-health care       | 0.7   | 1.7          | 4.6    | 0.8      | 0.4  | 0.5         |
| Any treatment         | 5.5   | 14.0         | 27.8   | 10.6     | 8.2  | 3.4         |
| <b>Guatemala-CIDI</b> |       |              |        |          |      |             |
| General medical       | 2.2   | 6.3          | 9.1    | 6.1      | 0.4  | 2.8         |
| Mental health         | 3.0   | 3.8          | 2.3    | 4.6      | 6.6  | 2.1         |
| Any health care       | 4.5   | 8.9          | 9.4    | 10.6     | 7.1  | 4.2         |
| Non-health care       | 5.7   | 10.4         | 8.1    | 19.1     | 10.5 | 5.3         |
| Any treatment         | 8.7   | 15.1         | 13.1   | 19.1     | 17.1 | 8.3         |
| <b>Mexico-WMHS</b>    |       |              |        |          |      |             |
| General medical       | 1.7   | 6.5          | 8.1    | 6.8      | 4.9  | 1.1         |
| Mental health         | 2.8   | 10.2         | 25.8   | 17.9     | 11.9 | 1.8         |
| Any health care       | 4.2   | 15.8         | 20.2   | 18.6     | 10.2 | 2.7         |
| Non-health care       | 1.2   | 3.9          | 3.6    | 4.1      | 3.5  | 0.9         |
| Any treatment         | 5.1   | 18.6         | 23.8   | 20.8     | 12.6 | 3.4         |
| <b>Peru-WMHS</b>      |       |              |        |          |      |             |
| General medical       | 1.9   | 5.0          | 7.7    | 5.3      | 3.1  | 1.6         |
| Mental health         | 3.9   | 12.0         | 21.4   | 8        | 11.5 | 2.8         |
| Any health care       | 5.8   | 16.7         | 27.8   | 13.3     | 14.6 | 4.4         |
| Non-health care       | 1.9   | 5.6          | 9.7    | 6.3      | 2.6  | 1.4         |
| Any treatment         | 7.2   | 20.1         | 32.8   | 18.1     | 15.4 | 5.6         |
| <b>USA-NCS-R</b>      |       |              |        |          |      |             |
| General medical       | 9.3   | 22.8         | 32.1   | 23.6     | 18.9 | 4.7         |
| Mental health         | 8.8   | 21.7         | 41.9   | 20.7     | 13.3 | 4.4         |
| Any health care       | 15.3  | 36.0         | 52.3   | 34.1     | 22.5 | 8.1         |
| Non-health care       | 5.6   | 13.2         |        |          |      |             |
| Any treatment         | 17.9  | 41.1         | 59.7   | 39.9     | 26.2 | 10.1        |

**Source:** Prepared by the authors from the study results and in part from the following references 22 – 27.

CIDI, Composite International Diagnostic Interview; CCHS, Canadian Community Health Survey; CPPS, Chile Psychiatric Prevalence Survey; NCS-R, National Comorbidity Survey-Revised; WMHS, World Mental Health Survey

Caribbean, 2.8; South America, 0.8; and the United States, 15.2. Access to basic medications remains an issue in some countries of Latin America; for example, in Peru antidepressants and antipsychotics were available in about two-thirds of hospitals and less than 20% of health centers and small health clinics (44).

The treatment gap for children and adolescents across the Americas is alarming, ranging from 64% – 86%. The need to address mental health services and improve access to care for children has received little attention. A report from Mexico highlights the issues facing Latin America (45). The infrastructure for child mental health care is lacking in both material and workforce resources, in particular, a lack of child psychiatrists and training programs for child and adolescent mental health providers. Primary care providers have no training to detect mental disorders in children. Furthermore, mental health services in Mexico are delivered through an underfunded, underresourced, and uncoordinated network of institutional providers isolated from the larger health care system.

The indigenous population in Latin America, although only represented by two studies (one of which was a small sample survey), highlight a marked difference in the treatment gap with the general population. The needs of the indigenous population, however, do not differ from the non-indigenous (46).

Countries in Latin America have invested less in mental health care compared to other subregions and countries of similar income (47). Key factors that have continued to impede improving mental care, decreasing the treatment gap, and reducing the global burden of disease include weak political will to implement reforms; a low allocation of health budgets to mental health; absence of legislation to protect the human rights of people with mental disorders; the persistence of inappropriate, but costly systems of hospital care; and a slow shift in investment from a mental hospital-model to community model (47). In addition, there are individual barriers to care, such as the belief that the problem will resolve on its own or that the individual can solve the problem, stigma, lack of mental health literacy, financial burdens, lack of trust in the health care system, and the belief that treatment is not helpful.

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**TABLE 5. Treatment gap by mental disorder and by severity**

| Country/Region       | Anxiety disorders | Affective disorders | Substance use disorders | Any disorder | Severe | Moderate | Mild | Severe-Moderate |
|----------------------|-------------------|---------------------|-------------------------|--------------|--------|----------|------|-----------------|
| <b>Country</b>       |                   |                     |                         |              |        |          |      |                 |
| Argentina-WMHS       | 70.0              |                     |                         | 72.2         | 69.8   | 67.5     | 77.9 | 68.4            |
| Brazil-WMHS          | 77.0              | 63.6                | 81.4                    | 78.1         | 67.2   | 80.0     | 86.3 | 73.5            |
| Canada-CCHS          | 69.4              | 58.9                | 76.2                    | 74.1         | 42.0   | 72.9     | 91.5 | 60.0            |
| Chile-CPPS           | 39.0              | 50.0                | 74.5                    | 61.5         | 39.8   | 52.0     | 60.6 | 45.3            |
| Colombia-WMHS        | 82.4              | 84.8                | 92.5                    | 86.1         | 72.2   | 89.4     | 91.8 | 83.2            |
| Guatemala-CIDI       | 97.1              | 95.1                | 97.0                    | 84.9         | 86.9   | 80.9     | 82.9 | 84.8            |
| Mexico-WMHS          | 77.8              | 86.8                | 82.9                    | 81.4         | 76.2   | 79.2     | 87.4 | 77.9            |
| Peru-WMHS            | 81.2              | 72.5                | 87.2                    | 79.9         | 67.2   | 81.9     | 84.6 | 77.2            |
| USA-NCS-R            | 43.6              | 57.8                | 61.9                    | 58.9         | 40.3   | 60.1     | 73.8 | 52.4            |
| <b>Americas</b>      |                   |                     |                         |              |        |          |      |                 |
| Weighted mean        | 63.9              | 66.7                | 74.7                    | 71.2         | 57.6   | 71.5     | 81.2 | 65.7            |
| Mean                 | 70.8              | 71.2                | 81.7                    | 75.2         | 62.4   | 73.8     | 81.9 | 69.2            |
| Median               | 77.0              | 68.1                | 82.2                    | 78.1         | 67.2   | 79.2     | 84.6 | 73.5            |
| Prevalence           | 9.4               | 5.5                 | 2.8                     | 16.2         | 3.5    | 5.7      | 6.9  |                 |
| <b>North America</b> |                   |                     |                         |              |        |          |      |                 |
| Weighted mean        | 56.5              | 58.4                | 69.1                    | 60.4         | 40.5   | 61.4     | 75.6 | 53.2            |
| Mean                 | 46.2              | 57.9                | 63.3                    | 66.5         | 41.2   | 66.5     | 82.7 | 56.2            |
| Prevalence           | 9.4               | 5.3                 | 3.1                     | 15.3         | 2.3    | 5.8      | 7.8  |                 |
| <b>Latin America</b> |                   |                     |                         |              |        |          |      |                 |
| Weighted mean        | 76.7              | 73.7                | 83.7                    | 79.0         | 69.9   | 78.7     | 85.2 | 74.7            |
| Mean                 | 74.9              | 75.5                | 85.9                    | 77.7         | 68.5   | 75.8     | 81.6 | 72.9            |
| Median               | 77.8              | 78.7                | 85.1                    | 79.9         | 69.8   | 80.0     | 84.6 | 77.2            |
| Prevalence           | 10.1              | 5.7                 | 2.7                     | 16.4         | 4.5    | 5.5      | 6.1  |                 |
| <b>Mesoamerica</b>   |                   |                     |                         |              |        |          |      |                 |
| Weighted mean        | 81.8              | 77.4                | 79.3                    | 81.8         | 77.4   | 79.3     | 86.9 | 78.7            |
| Mean                 | 87.5              | 91.0                | 90.0                    | 83.2         | 81.6   | 80.1     | 85.2 | 81.4            |
| Prevalence           | 5.0               | 3.4                 | 2.1                     | 9.4          | 2.7    | 2.5      | 4.2  |                 |
| <b>South America</b> |                   |                     |                         |              |        |          |      |                 |
| Weighted mean        | 75.3              | 67.1                | 83.4                    | 77.8         | 66.8   | 78.5     | 84.5 | 73.1            |
| Mean                 | 69.9              | 67.7                | 83.9                    | 75.6         | 63.2   | 74.2     | 80.2 | 69.5            |
| Median               | 77.0              | 68.1                | 84.3                    | 78.1         | 67.2   | 80.0     | 84.6 | 73.5            |
| Prevalence           | 12.2              | 6.0                 | 2.9                     | 19.0         | 5.1    | 6.7      | 7.0  |                 |

**Source:** Prepared by the authors from the study results

CIDI, Composite International Diagnostic Interview; CCHS, Canadian Community Health Survey; CPPS, Chile Psychiatric Prevalence Survey; NCS-R, National Comorbidity Survey-Revised; WMHS, World Mental Health Survey

Organization for the Americas (PAHO/WHO) has identified five strategic areas (48) to address the treatment gap:

- i. Development and implementation of national mental health policies, plans, and laws;
- ii. Promotion of mental health and prevention of psychological disorders, with emphasis on the psychosocial development of children;
- iii. Primary health care-centered mental health services delivery;
- iv. Human resources development; and
- v. Strengthening capacity to produce, assess, and use information on mental health.

WHO has developed targets for countries by the year 2020 (49):

- 80% will have developed or updated their policies/plans for mental health in line with international and regional human rights instruments.
- 50% will have developed or updated their laws for mental health in line with international and regional human rights instruments.
- Service coverage for severe mental disorders will have increased by 20%.
- 80% will have at least two functioning national, multisectoral promotion, and prevention programs in mental health.

- The rate of suicide in countries will be reduced by 10%.
- 80% will routinely collect and report at least a core set of mental health indicators every 2 years through their national health and social information systems.

A recent review focused on Latin America and the Caribbean suggested (50):

- Creating a larger consensus among stakeholders to improve mental health care;
- Having users and families participate in policy and service development;
- Increasing funding allocated to mental health;

- Strengthening research capacity and, in particular, for evidence-based mental health reforms;
- Increasing and improving the public health capacity of mental health leaders;
- Strengthening the capacity of the ministries of health in implementing mental health policy;
- Promoting international cooperation in capacity building, research, and policy development. In addition, outpatient mental health care needs to be decentralized;
- Collaborative mental health care integrated with primary care needs developing and expansion;
- Primary child and indigenous mental health needs to be prioritized; and
- National mental health information systems need to be developed and strengthened.

Progress in reducing the mental health treatment gap in the Americas has been slow. In Latin America, the lack of financing and political will have prevented the scaling up of mental health, which has resulted in integrated care, community mental health, and psychosocial rehabilitation not being successfully implemented in the Region on a large scale (51). There are a number of examples, however, of programs that were developed to integrate mental health with community care in Argentina, Belize, Brazil, Chile, Cuba, Jamaica, and Mexico (52); some of these programs have undergone rigorous evaluation, but not all. The Chile National Depression Treatment Program in primary care is touted as a model (53).

One of the more notable programs has been the Mental Health Gap Action Program (mh-Gap). The mh-Gap aims to reduce the treatment gap by scaling up mental health care in primary care settings and capacitating primary care providers (PCPs) to become the gateway to mental health care. Additionally, an mhGap goal is to reduce barriers to mental health care in the primary health care settings by scaling up PCPs' knowledge. Well-designed controlled studies of mhGap in the Americas

are needed, particularly given the failure of other initiatives to train PCPs to provide mental health care in the Region (54).

To be successful, interventions should be customizable, transportable to different settings, and have a delineated process for knowledge transfer. As changes at the different levels of the mental health systems are implemented, outcome measures need to be included as quality indicators. For example, repeating the WHO-AIMS at specific intervals could be used as a measure of progress. Quality indicators measured at the local level and at the Ministry of Health level need to be established and implemented. At the national level, mental health indicators that could be monitored for adult, children, indigenous populations, and the severely mentally ill include: the number of beds dedicated to mental hospitals, general hospital psychiatric units, day programs, and rehabilitation programs, in both the private as well as the public sector; the rate of involuntary hospitalizations; length of stay in mental hospitals and psychiatric units in general hospital; primary care treatment of mental illness; human resources; and expenditures for mental health. Mental health indicators for clinicians have been developed and also should be monitored as the mental health systems in countries are strengthened.

**Limitations.** The data presented are estimates of prevalence and the treatment gap for the Region of the Americas. Data were available only on a few countries in Latin America, and none of the non-Latin Caribbean. In North America, both the United States and Canada were represented. A similar methodology was used for each of the prevalence studies; yet, there are marked differences in the rates of prevalence. Methodological issues cannot be fully dismissed. The Chile study is older than the others, and data on treatment seeking was based on 6 not 12 months, which may have over-estimated that country's treatment gap. A more recent study in Chile (55) found that 21.2% were treated with antidepressants in the past year, suggesting that the older study

over-estimated the gap. The three different estimates of the treatment gap presented (mean, median, and weighted) illustrate that countries in the same subregion differ in treatment gap. It is not fully clear whether these estimates would remain relatively similar if all of the countries of the Americas were included.

## Conclusions

The mental health treatment gap in the Americas is a public health priority. A high proportion of adults, children, and indigenous individuals with serious mental illness remains untreated. The global burden of mental health and the prevalence of mental illness are high, and in part, reflect the treatment gap.

A metric that is not available in these studies, one that could be used to measure progress in subsequent national, psychiatric, epidemiological studies, is the number of those in treatment who no longer meet criteria for 12-month prevalence, but who have had a lifetime prevalent disorder. As mental disorders are often chronic, a rise in this remission metric would illustrate success in reducing the treatment gap.

Although concerted efforts are being made at the local level to address the treatment gap by scaling up and task-shifting overall, with a few exceptions there has been little progress. Mental health should be a priority at the national level across the Americas. Verifiable quality indicators are needed to demonstrate progress.

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## RESUMEN

### La salud mental en las Américas: una visión general de la brecha de tratamiento

**Objetivo.** Comprender la brecha en el tratamiento de la salud mental en la Región de las Américas mediante la revisión de la prevalencia de los trastornos de salud mental, el uso de los servicios de salud mental y la carga mundial de enfermedad.

**Métodos.** Se utilizaron datos de encuestas comunitarias de trastornos mentales de Argentina, Brasil, Canadá, Chile, Colombia, Estados Unidos, Guatemala, México y Perú. Se emplearon los datos publicados de la Encuesta Mundial de Salud Mental para estimar la brecha de tratamiento. Para Canadá, Chile y Guatemala, la brecha de tratamiento se calculó a partir de los archivos de datos. Se estimaron la brecha de tratamiento media, media ponderada, y mediana, y la prevalencia de 12 meses por gravedad y categoría de trastorno mental para las poblaciones generales de adultos, niños y adolescentes, e indígenas. Se calcularon los años de vida ajustados por discapacidad y los años vividos con discapacidad a partir del estudio Carga Global de Enfermedad.

**Resultados.** Los trastornos mentales y por consumo de sustancias representaron el 10,5% de la carga mundial de enfermedad en las Américas. La tasa de prevalencia de 12 meses de los trastornos mentales severos varió del 2% al 10% en los estudios. La brecha de tratamiento media ponderada en las Américas para los trastornos moderados a graves fue del 65,7%; en América del Norte de 53,2%; en América Latina de 74,7%; en Mesoamérica de 78,7%; y en América del Sur de 73,1%. La brecha de tratamiento para los trastornos mentales graves en niños y adolescentes fue superior al 50%. Un tercio de la población indígena en los Estados Unidos y el 80% en América Latina no recibieron tratamiento.

**Conclusión.** La brecha de tratamiento para la salud mental sigue siendo un problema de salud pública. Una gran proporción de adultos, niños y personas indígenas con enfermedades mentales graves continúan sin tratamiento. El resultado implica una prevalencia elevada de trastornos mentales y de la carga mundial de enfermedad.

#### Palabras clave

Trastornos mentales; brechas de la práctica profesional; servicios de salud mental; Américas.

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**Saúde mental nas Américas:  
uma visão geral da lacuna  
de tratamento****RESUMO**

**Objetivo.** Compreender a lacuna de tratamento em saúde mental na Região das Américas examinando a prevalência de transtornos mentais, o uso de serviços de saúde mental e a carga global de doença.

**Métodos.** Foram utilizados dados de inquéritos comunitários de transtornos mentais na Argentina, Brasil, Canadá, Chile, Colômbia, Guatemala, México, Peru e Estados Unidos. Os dados publicados na Pesquisa Mundial de Saúde Mental foram utilizados para estimar a lacuna de tratamento. Para o Canadá, Chile e Guatemala, a lacuna de tratamento foi calculada a partir de arquivos de dados. A lacuna de tratamento média, média ponderada e mediana, e a prevalência de 12 meses por gravidade e categoria de transtorno mental foram estimadas para as populações adulta, infantil-adolescente e indígena em geral. Os anos de vida ajustados por incapacidade e os anos de vida com incapacidade foram calculados a partir do estudo Carga Global de Doença.

**Resultados.** Os transtornos mentais e de uso de substâncias foram responsáveis por 10,5% da carga global de doença nas Américas. A taxa de prevalência de 12 meses de transtornos mentais graves variou de 2% a 10% entre os estudos. A lacuna de tratamento média ponderada nas Américas para transtornos moderados a graves foi de 65,7%; em América do Norte de 53,2%; em América Latina de 74,7%; em Mesoamérica de 78,7%; e na América do Sul de 73,1%. A lacuna de tratamento para transtornos mentais graves em crianças e adolescentes foi superior a 50%. Um terço da população indígena nos Estados Unidos e 80% na América Latina não recebeu tratamento.

**Conclusão.** A lacuna de tratamento para a saúde mental continua sendo uma preocupação de saúde pública. Uma alta proporção de adultos, crianças e indígenas com doença mental grave permanece sem tratamento. O resultado é uma elevada prevalência de transtornos mentais e de carga global de doença.

**Palavras-chave**

Transtornos mentais; lacunas da prática profissional; serviços de saúde mental; Américas.

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