

NCDs at a Glance 2025

NCDs surveillance and monitoring:
Noncommunicable disease mortality and
risk factor prevalence in the Americas

PAHO



Pan American
Health
Organization



World Health
Organization

Americas Region

NCDs at a Glance 2025

NCDs surveillance and monitoring: Noncommunicable disease mortality and risk factor prevalence in the Americas

Washington, D.C., 2025

PAHO



Pan American
Health
Organization



World Health
Organization

Americas Region

NCDs at a Glance 2025. NCDs surveillance and monitoring: Noncommunicable disease mortality and risk factor prevalence in the Americas

PAHO/NMH/NV/25-0002

© **Pan American Health Organization, 2025**

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO license (CC BY-NC-SA 3.0 IGO).

Under the terms of this license, this work may be copied, redistributed, and adapted for non-commercial purposes, provided the new work is issued using the same or equivalent Creative Commons license and it is appropriately cited. In any use of this work, there should be no suggestion that the Pan American Health Organization (PAHO) endorses any specific organization, product, or service. Use of the PAHO logo is not permitted.

All reasonable precautions have been taken by PAHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall PAHO be liable for damages arising from its use.

Contents


Acknowledgments	iv
Abbreviations and Acronyms	v
Introduction	1
Noncommunicable Disease Mortality	2
NCD deaths in the Americas, 2000-2021	3
Trends in NCD mortality rates	4
NCD deaths by disease	4
NCD mortality rates by country	5
Premature mortality due to NCDs: Unconditional probability of dying	6
Country progress toward the global NCD target 2025	7
Cardiovascular diseases	8
Cancer	10
Diabetes	12
Chronic respiratory diseases	14
Suicide	16
NCD Risk Factors	18
Tobacco use	19
Obesity prevalence	21
Overweight and obesity	23
Alcohol use	25
Physical inactivity	27
Diabetes prevalence	29
Hypertension prevalence	32
Ambient air pollution	35
Technical Notes	37
Background	38
Mortality indicators	38
Risk factor indicators	40
References	42



Acknowledgments

NCDs at a Glance 2025. NCDs surveillance and monitoring: Noncommunicable disease mortality and risk factor prevalence in the Americas was prepared by Ramon Martinez, who compiled the data, conducted the analyses, developed the figures, wrote the first draft, and finalized the document based on input from the technical contributors.

Technical contributions and document review were provided by Roberta Caixeta, Silvana Luciani, Dolores Ondarsuhu, Dalila Machado, Claudina Cayetano, Renato Oliveira, and Anselm Hennis. The document was designed by Caren Sofia Guerrero, with contributions from Arantxa Cayon and Maria Migliora. Project supervision was carried out by Anselm Hennis, Silvana Luciani, and Roberta Caixeta.



Abbreviations and Acronyms

APC	alcohol per capita consumption
GHE	Global Health Estimates
CRD	chronic respiratory disease
CVD	cardiovascular disease
NCD	noncommunicable disease
PAHO	Pan American Health Organization
WHO	World Health Organization



Introduction

Noncommunicable diseases (NCDs), including cardiovascular diseases (CVDs), cancer, chronic respiratory diseases (CRD), and diabetes, are the leading causes of death and disability in the Region of the Americas. In 2021, NCDs were responsible for 6 million deaths, with 38% of these deaths occurring prematurely.

NCDs are driven by common risk factors, including tobacco use, unhealthy diets, physical inactivity, and harmful use of alcohol. These modifiable risk factors lead to metabolic changes, such as raised blood pressure, overweight and obesity, and elevated blood glucose. Environmental factors, like long-term exposure to air pollution, also influence the prevalence of these conditions.

Effective management of NCDs relies on access to quality healthcare services that ensure timely diagnosis, treatment, and care. Additionally, implementing policies at the population level to prevent and control NCD risk factors is essential for improving health outcomes and reducing the overall burden of NCDs.

Mental health is essential to overall well-being. Among mental health challenges, suicide is the fourth leading cause of death among young people aged 15 to 29, placing a significant burden on communities across the Americas. Suicide prevention remains a critical public health priority.

This brochure, *NCDs at a Glance*, provides a visual snapshot of the latest data for the Region of the Americas, highlighting key indicators from the 2018 United Nations High-Level Meeting on NCDs, which expanded the agenda to include mental health and air pollution. It presents data on NCDs, their risk factors, air pollution, and suicide, illustrating their impact on the Region. The information is disaggregated by sex and the 35 Member States of the Pan American Health Organization. It also outlines progress toward the 2025 global NCD targets.



Noncommunicable Disease Mortality

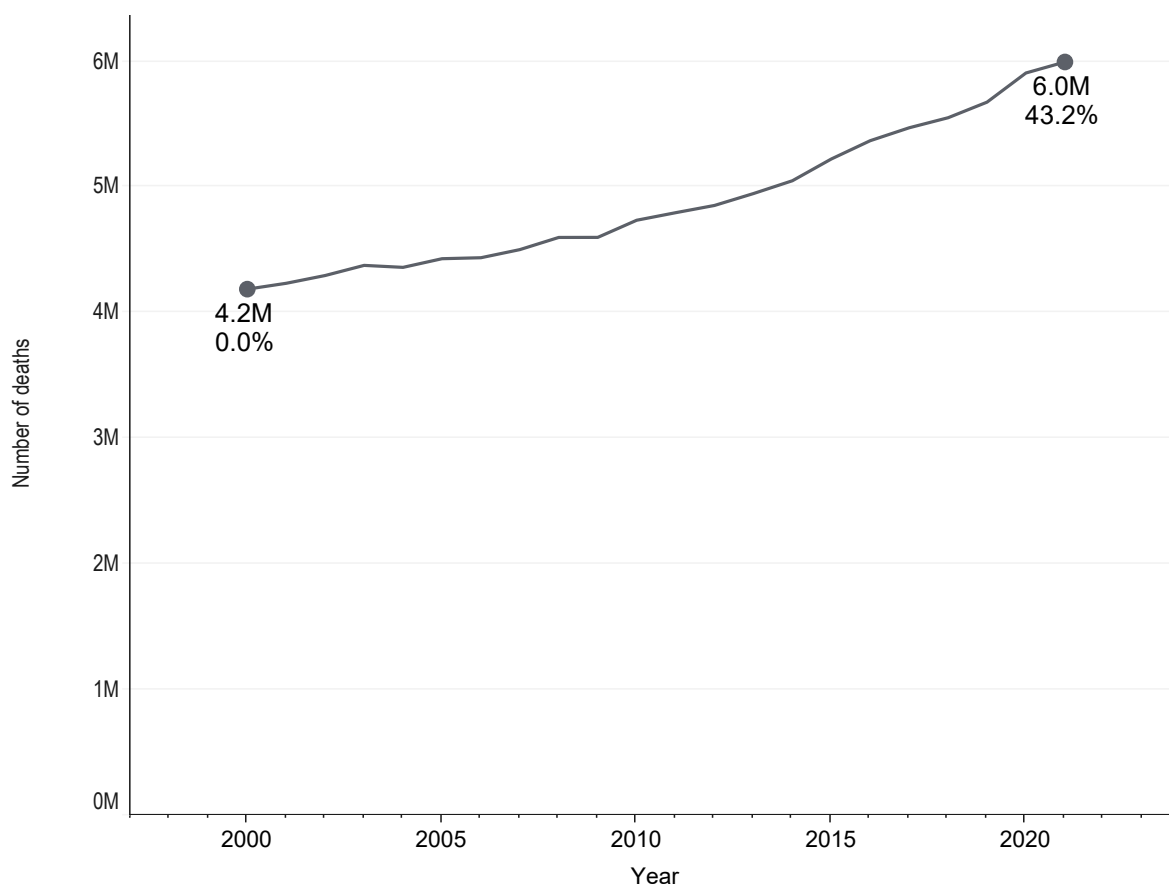
NCD deaths in the Americas, 2000–2021

Deaths in the Americas, 2021

Deaths	NCD deaths	Premature NCD deaths
9.2 million	6 million (65% of total deaths)	2.3 million (38% of total NCD deaths) in people under 70 years old

NCDs were responsible for 6 million deaths in 2021 (Figure 1). The number of NCD deaths has increased substantially since 2000, by 43% from 4.2 million. From the baseline year of 2010 of the global NCD targets, although no target has been set for the number of NCD deaths, there has been a notable increase of 27.7% from 4.7 million deaths in 2010.

Figure 1. Trend in total number of NCD deaths and percentage change from 2000 to 2021 in the Americas

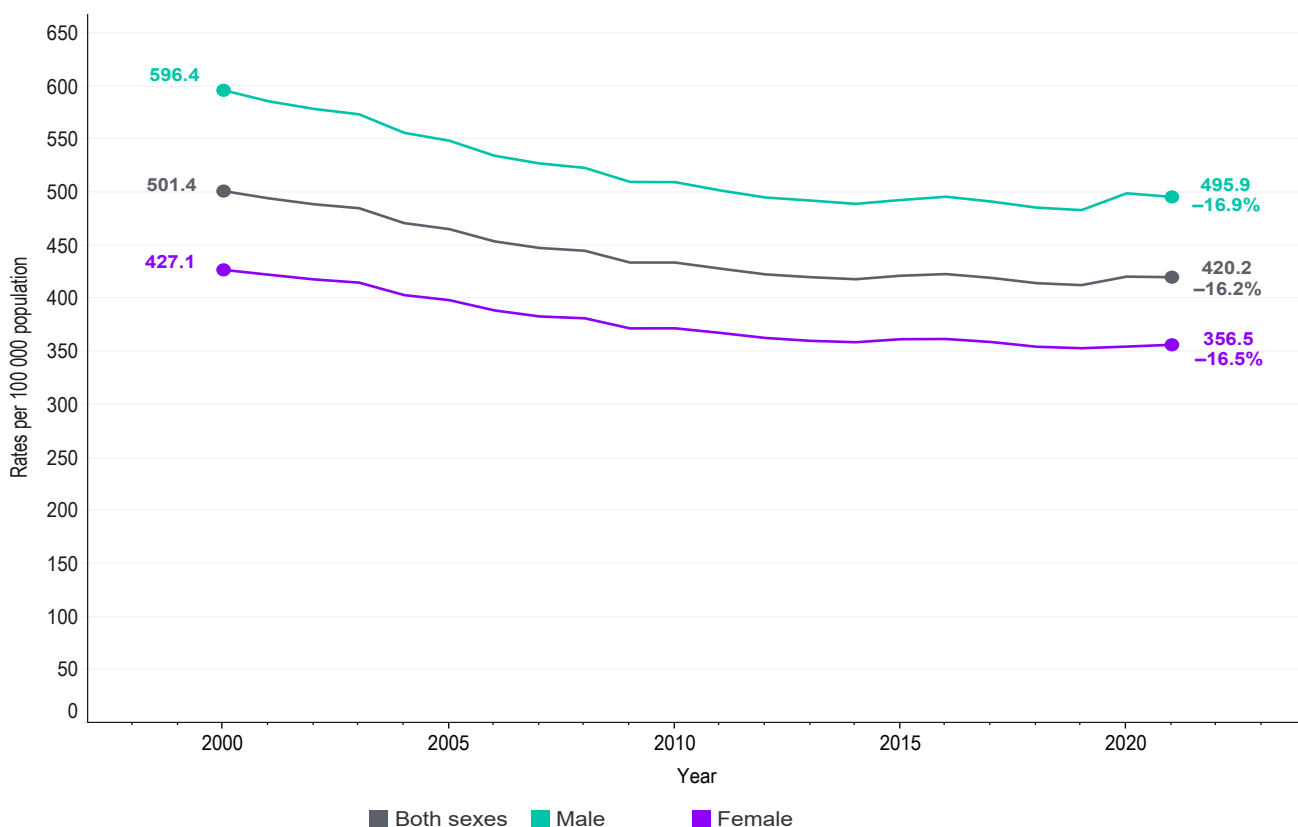


Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000–2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Trends in NCD mortality rates

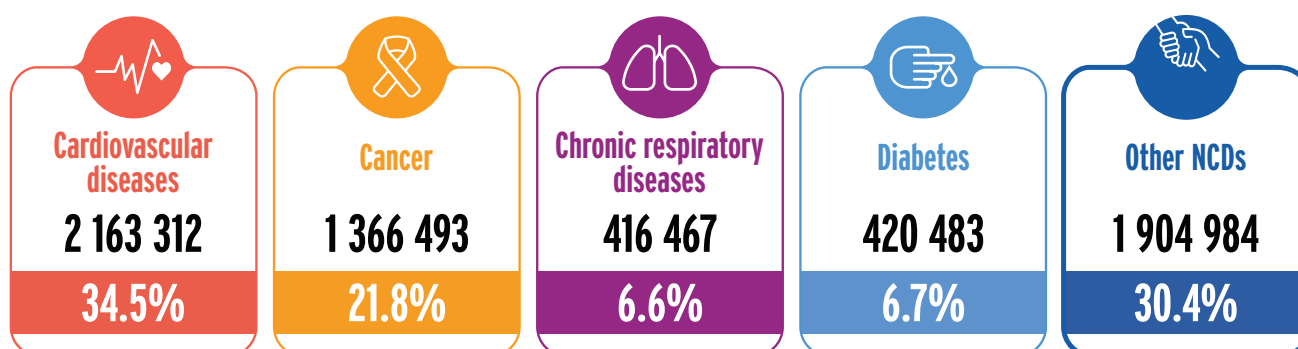
NCD mortality has declined by 16.2% from 501.4/100 000 in 2000 to 420.2/100 000 in 2021 (Figure 2), with similar decreases in males and females (16.9% decline in males vs 16.5% in females). From the baseline year of 2010 of the global NCD targets, although no target has been set for NCD mortality rates, there has been a notable slow decline of only 3.2%

Figure 2. Noncommunicable disease mortality rates per 100 000 population (age-standardized), by sex in the Americas, 2000–2021



Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000–2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

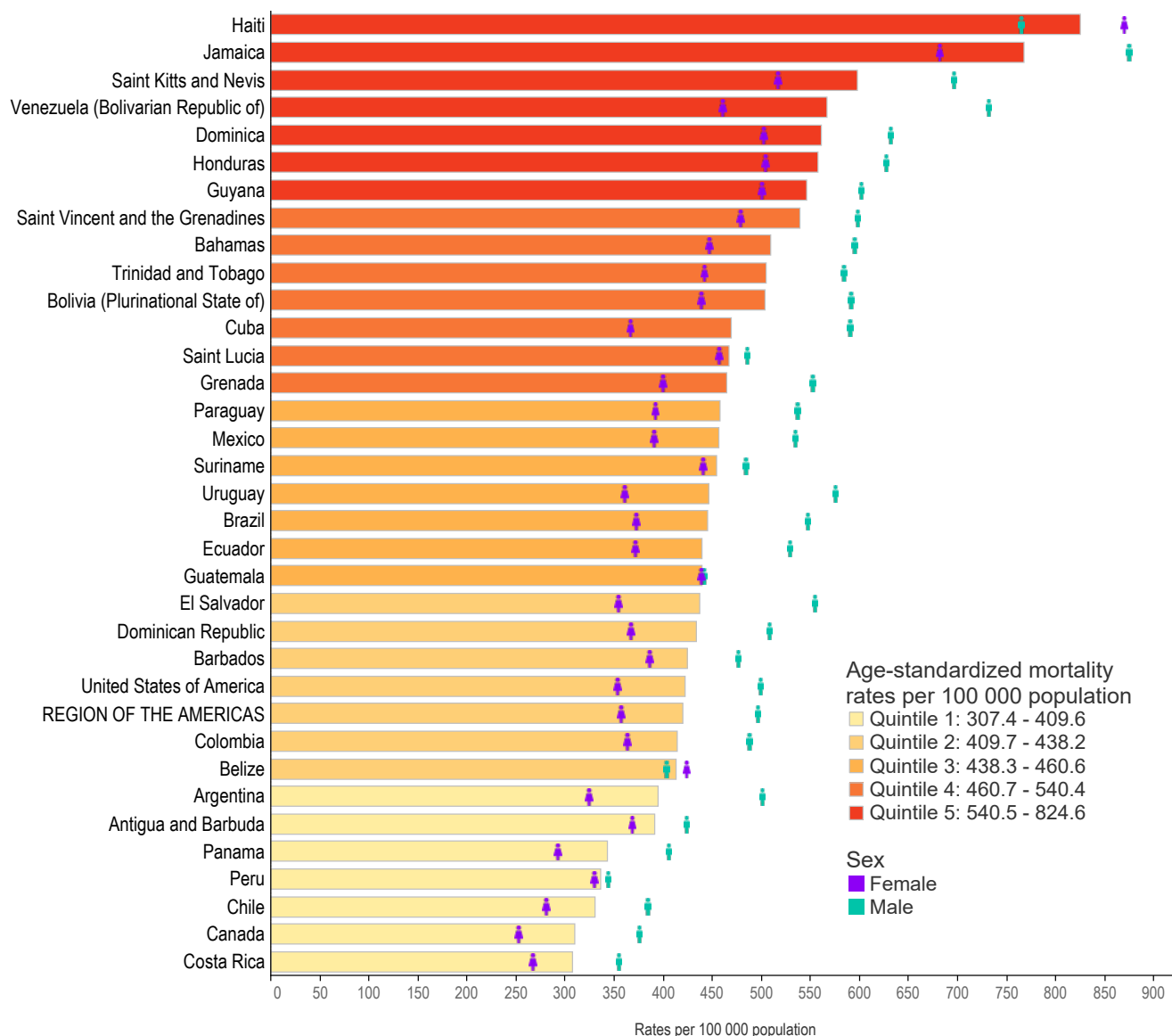
NCD deaths by disease



NCD mortality rates by country

In the Region of the Americas, **the NCD mortality rate was 420.2/100 000 population**, with a higher rate in males than females (495.9/100 000 vs 356.5/100 000). It varied widely by countries from a high in Haiti (824.6/100 000 population) to a low in Costa Rica (307.4/100 000 population), with males having higher rates of NCD mortality than females, except in Haiti (Figure 3).

Figure 3. Age-standardized mortality rates per 100 000 population due to noncommunicable diseases, by sex in countries of the Americas, 2021



Note: No data are available or verified by national authorities for the countries not shown in the chart.
Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

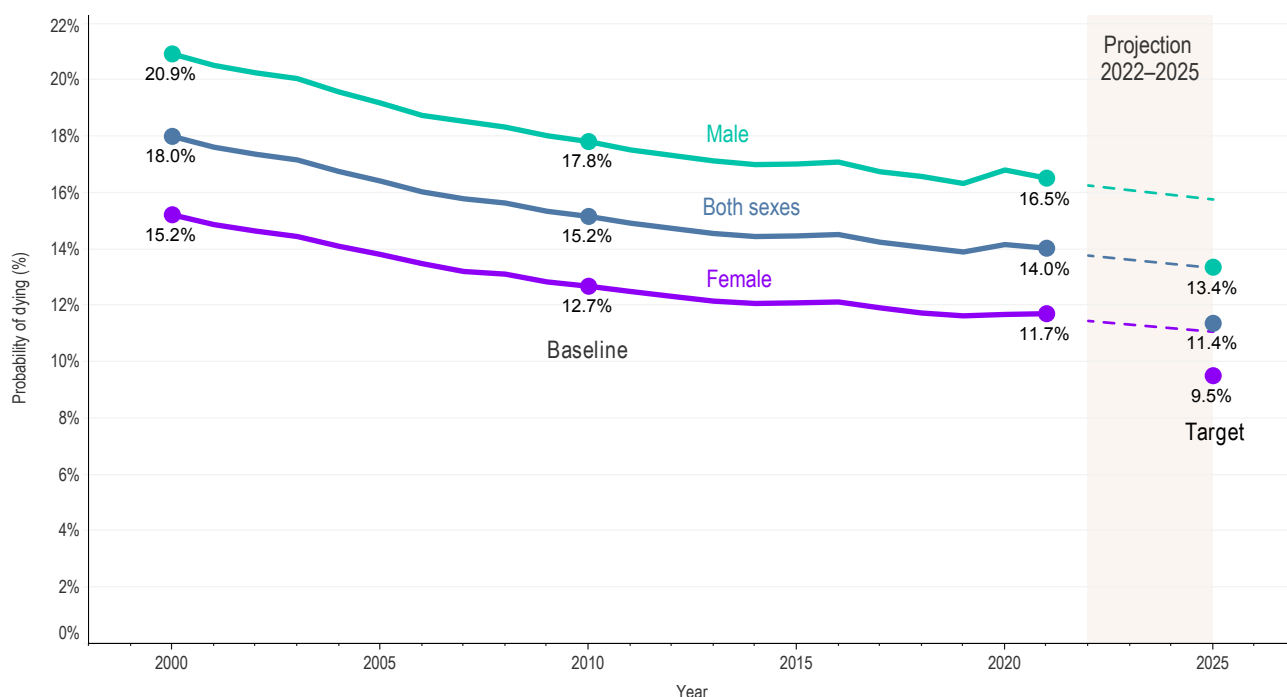
Premature mortality due to NCDs: Unconditional probability of dying

Premature NCD mortality is measured by the probability of dying between the ages of 30 and 70 years from any of the four major NCDs (CVDs, cancer, diabetes, or CRDs). In 2021, a 30-year-old individual living in the Region of the Americas had a 14.0% chance of dying before reaching 70 years of age (Figure 4), with males having a higher probability than females of doing so (16.5% vs. 11.7%).

The global NCD target is to reduce premature NCD mortality by 25% by 2025, from the baseline year of 2010. In the Region of the Americas, premature NCD mortality was reduced by 8% from 15.2% in 2010 to 14% in 2021.

Annually, at the regional level, the probability of dying prematurely from NCDs declined at an average annual rate of -0.71%, slightly faster in females (-0.76%) compared to males (-0.68%) between the baseline year of 2010 and 2021. This decline is insufficient to achieve the global NCD target, which requires an annual percentage change of at least -1.92%. The Region of the Americas is progressing but need additional efforts to reach the global NCD target by 2025.

Figure 4. Probability of dying between ages 30 and 70 years from any of the four major NCDs (cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases), by sex in the Region of the Americas, 2000-2021, and projection to 2025



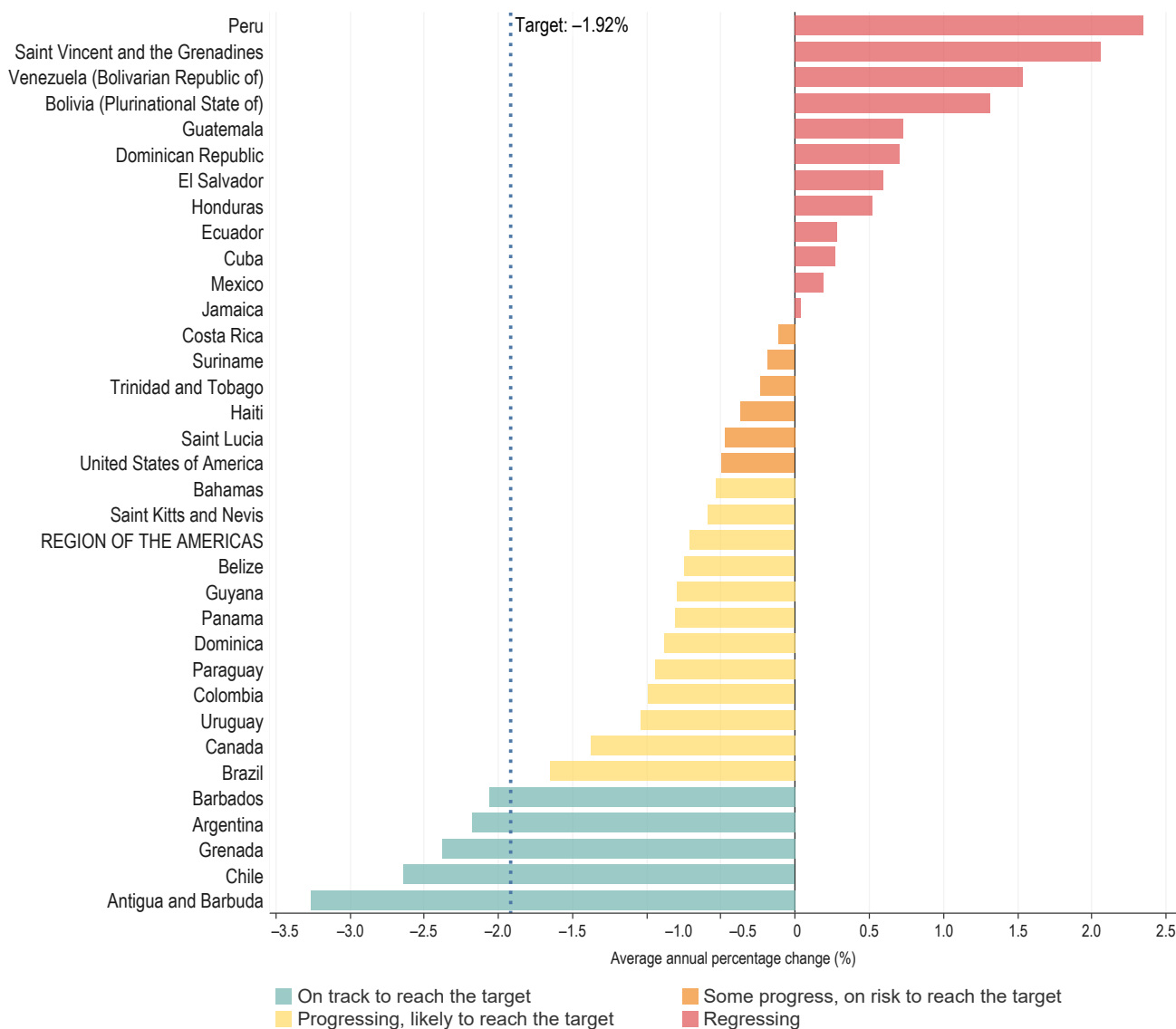
Notes: Data from 2022 to 2025 are projections based on the past trends of the period 2010-2021. Data presented with dots in 2025 represents the target value, defined as the 25% reduction relative to the baseline value in 2010.

Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Country progress toward the global NCD target 2025

Five countries (Antigua and Barbuda, Argentina, Barbados, Chile, and Grenada) out of 35 PAHO Member States are on track to achieve the global NCD target (Figure 5). An additional 11 countries (Bahamas, Belize, Brazil, Canada, Colombia, Dominica, Guyana, Panama, Paraguay, Saint Kitts and Nevis, and Uruguay) can potentially reach the target by accelerating actions.

Figure 5. Average annual percentage change in the probability of dying between ages 30 and 70 years from any of the four major NCDs in the period 2010-2021 in countries of the Americas



Notes: The vertical dotted blue line represents the average annual percentage change (AAPC) required for countries to reach the target by 2025. Countries are ranked in descending order by the AAPC of the probability of dying between ages 30 and 70 years from any of the four major NCDs in the period 2010-2021 and color-coded according to five categories of the progress assessment toward target.

No data are available or verified by national authorities for the countries not shown in the chart.

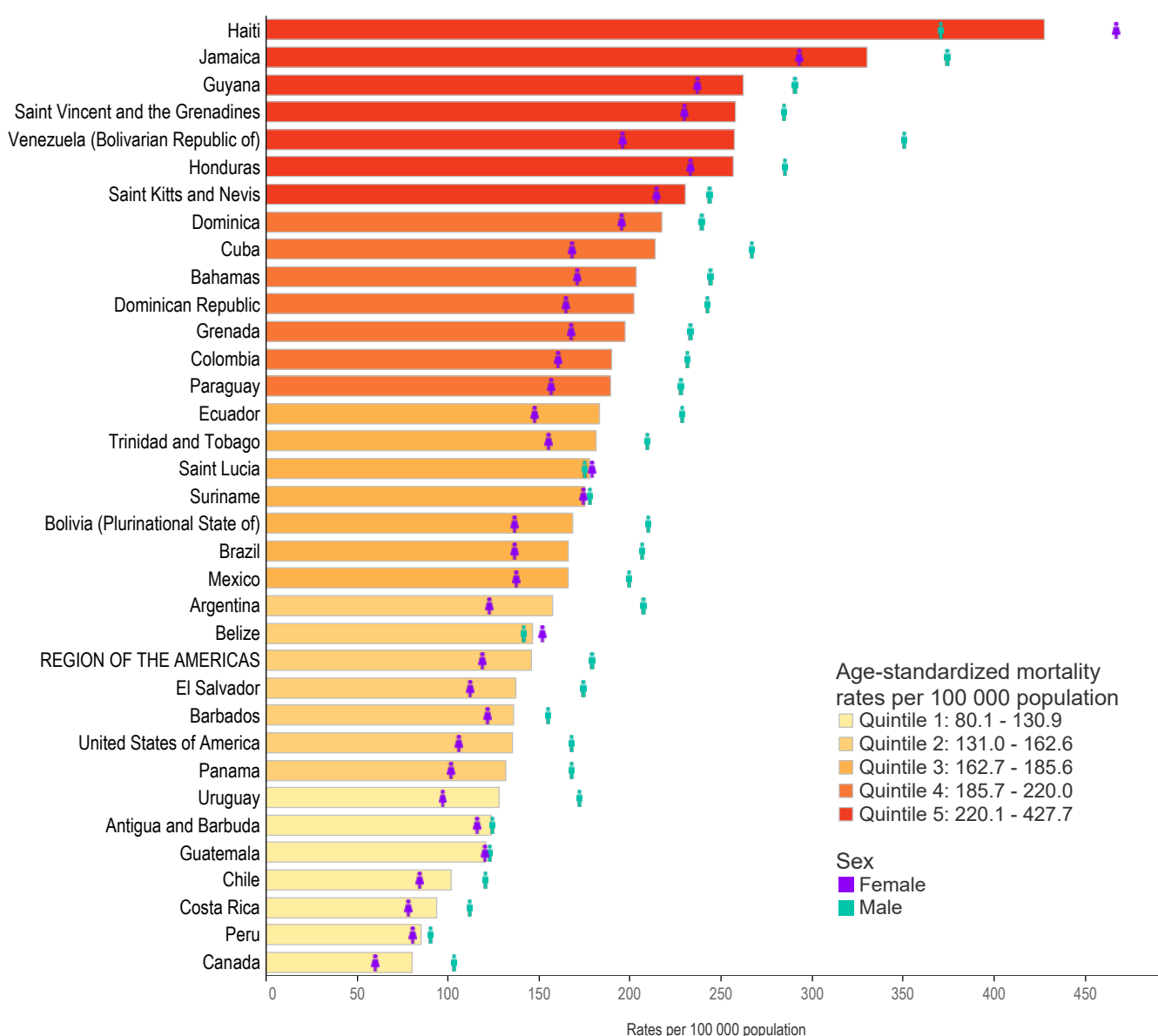
Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Cardiovascular diseases

2.16 million deaths | 146.1/100 000 population

Cardiovascular diseases (CVD), including ischemic heart disease, stroke, hypertensive heart disease, cardiomyopathy and myocarditis, and rheumatic heart disease are the leading causes of NCD deaths in all countries of the Americas. In 2021, the regional CVD mortality rate was 146.1/100 000 (Figure 6), much higher in males (178.8/100 000) than females (118.3/100 000). CVD mortality rates varied substantially by country, being five-fold higher in Haiti (427.7/100 000 people) than in Canada (80.1/100 000). Across countries, CVD mortality was higher in males than females, except in Belize, Haiti, and Saint Lucia.

Figure 6. Age-standardized cardiovascular disease death rates per 100 000 population, by sex in countries of the Americas, 2021

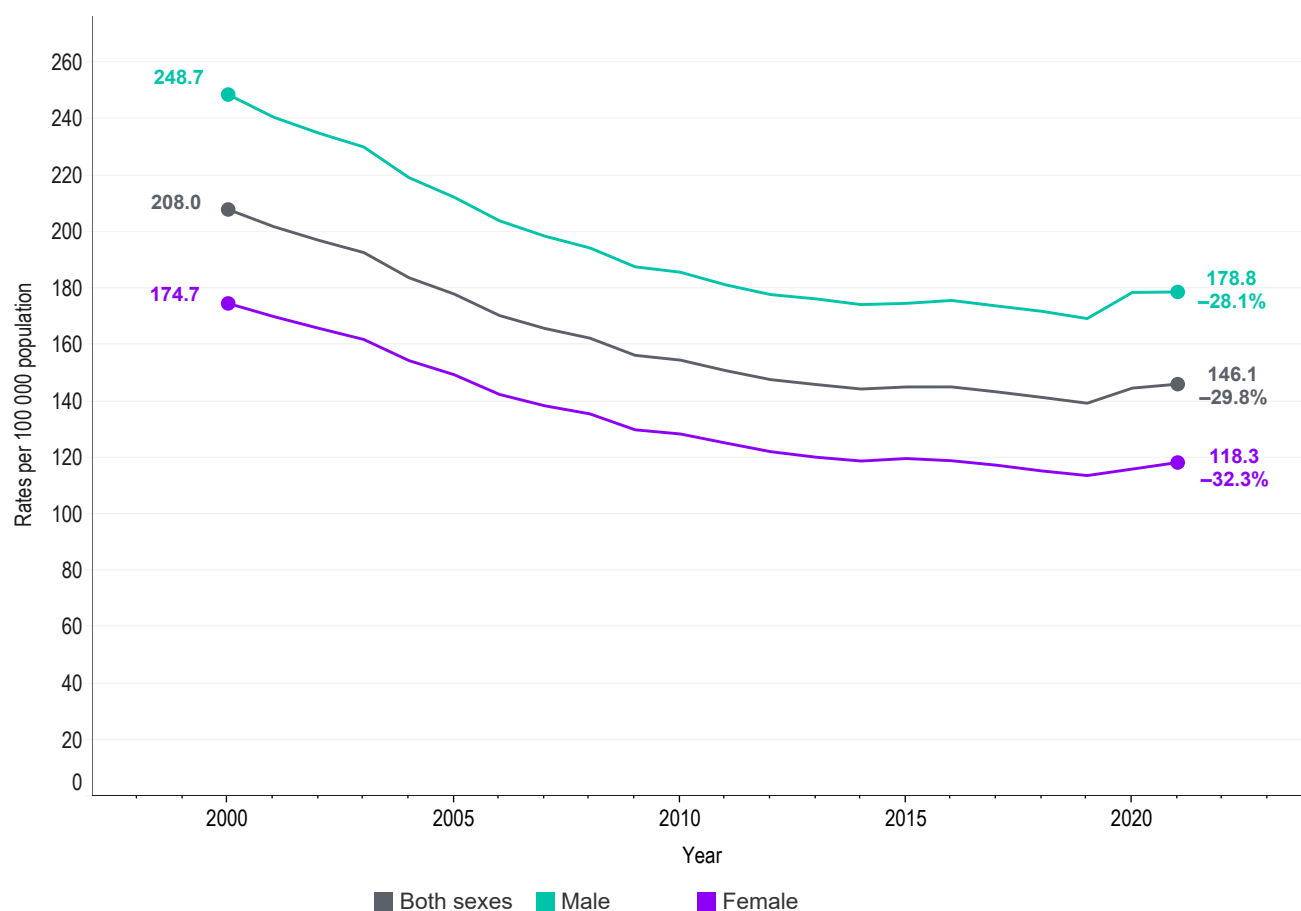


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Regional trends in CVD mortality, 2000–2021

CVD age-standardized mortality rates declined by 29.8% from 208.0/100 000 in 2000 to 146.1/100 000 in 2021. Males had consistently higher CVD mortality rates than females; however, CVD mortality rates declined slightly faster in females (–32.3%) compared to males (–28.1%). The rate of decline in CVD mortality has shown a deceleration in recent years (Figure 7).

Figure 7. Cardiovascular disease mortality rates per 100 000 population (age-standardized), by sex in the Region of the Americas, 2000–2021

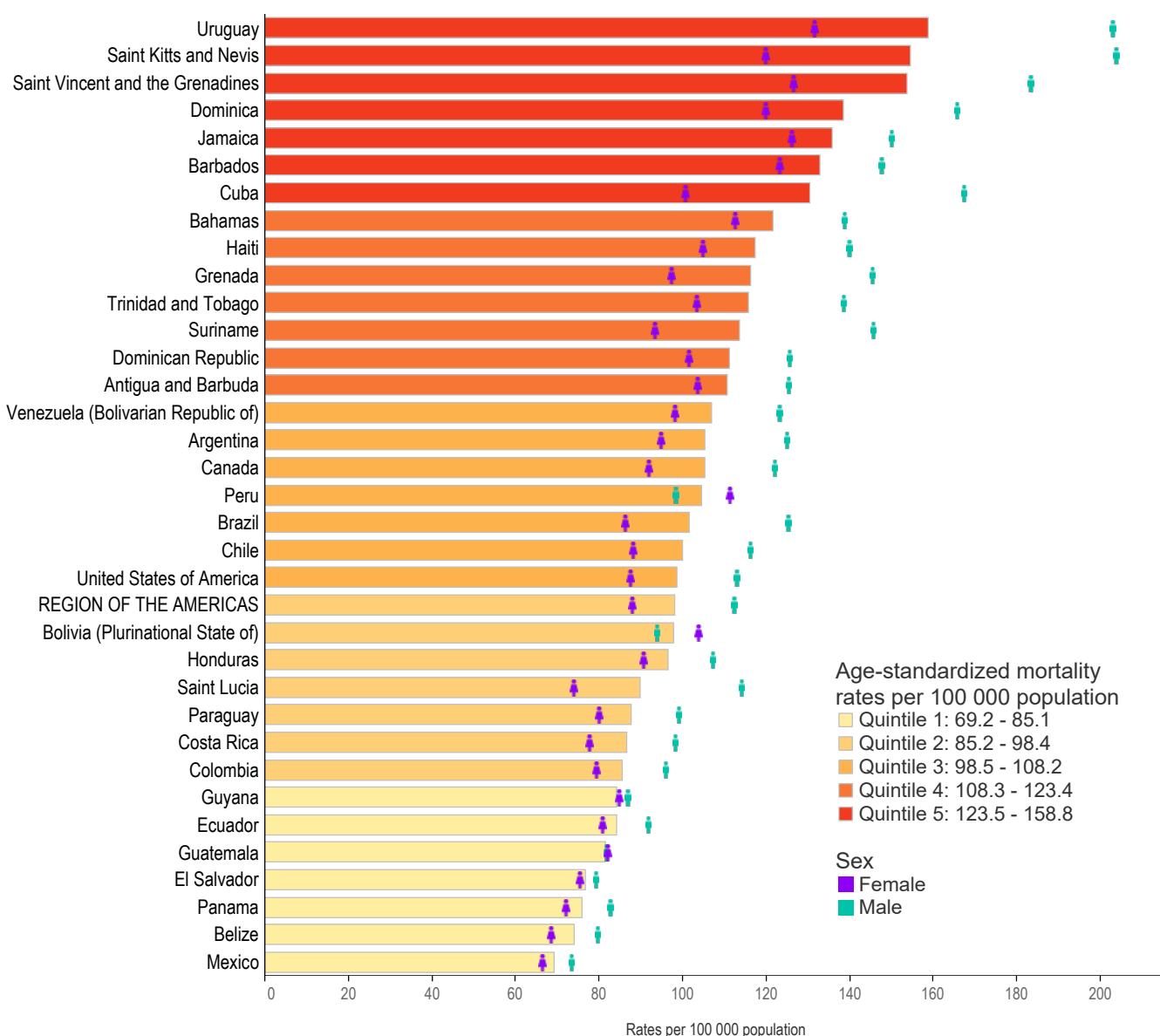


Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000–2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

1.4 million deaths | 98.1/100 000 population

Cancer is the second leading cause of NCD deaths in the Region of the Americas. In 2021, the regional age-standardized cancer death rate was 98.1/100 000 population (Figure 8), much higher in males (112.3/100 000 population) than in females (87.9/100 000 population). Cancer mortality varied across countries from a high in Uruguay (158.8/100 000 population) to a low in Mexico (69.2/100 000 population). By country, males have higher cancer death rates than females, except in the Plurinational State of Bolivia and Peru. Cancer mortality is similar for males and females in Guatemala.

Figure 8. Age-standardized cancer death rates per 100 000 population, by sex in countries of the Americas, 2021

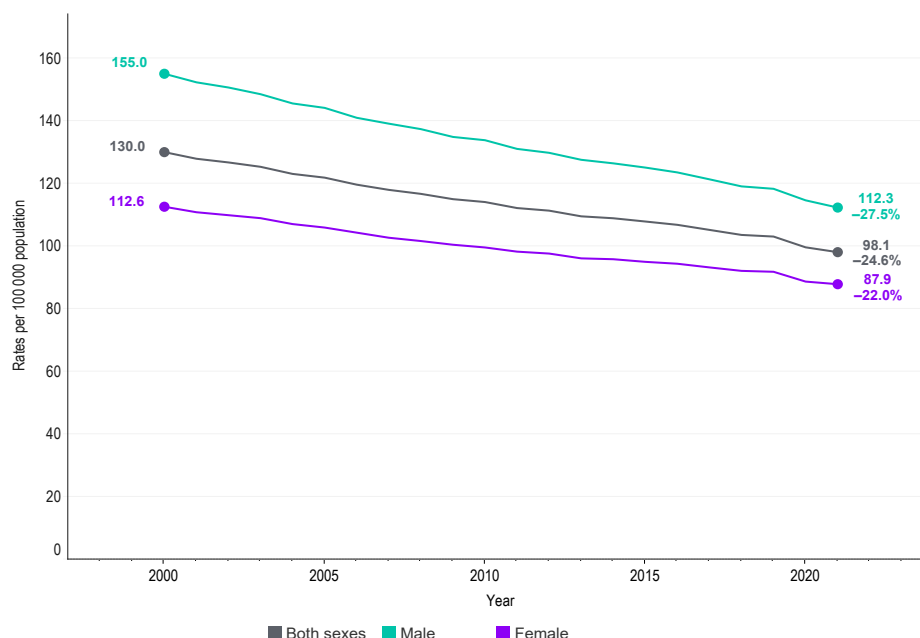


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Trends in cancer mortality, 2000-2021

Cancer mortality has declined by 24.6% from 130.0/100 000 in 2000 to 98.1/100 000 in 2021 (Figure 9). Males have consistently higher cancer mortality rates than females, although the difference between the two have been narrowing, driven by faster reduction rates of change in males.

Figure 9. Cancer mortality rates per 100 000 population (age-standardized), by sex in the Region of the Americas, 2000-2021



Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Leading causes of cancer mortality

Common causes of cancer death in the Region of the Americas differ between males and females (Figure 10). Lung cancer is the most common cause of cancer death in males, followed by prostate cancer, and in females the second cause of cancer death, after breast cancer. Colorectal cancer is among the leading cancer causes of death for both sexes.

Figure 10. Top ten causes of cancer mortality, by sex in the Region of the Americas, 2021

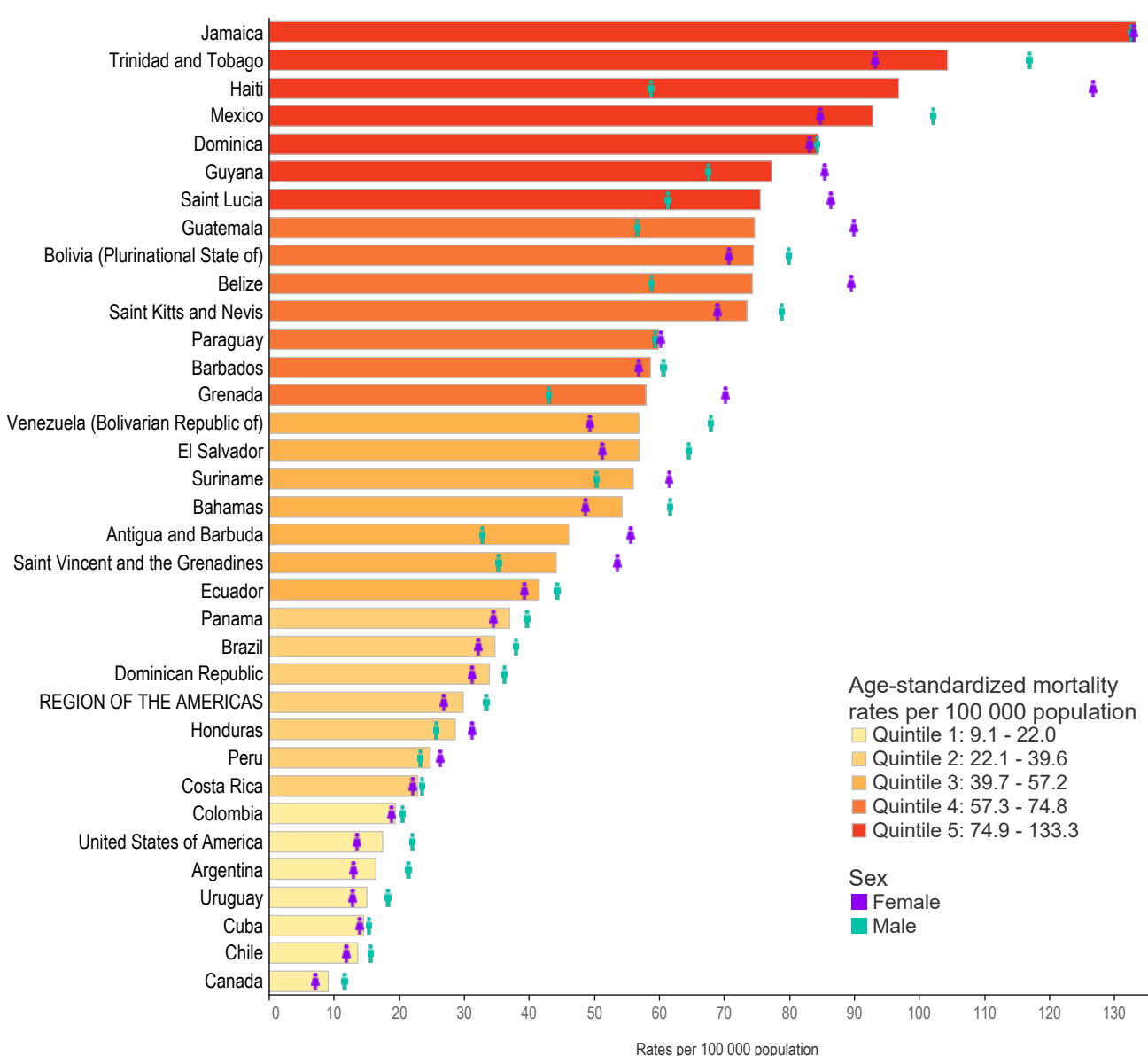
Mortality							
Males				Females			
Rank	Cancer type	Rates per 100 000 pop	% of total	Rank	Cancer type	Rates per 100 000 pop	% of total
1	Trachea, bronchus, lung cancers	25.2 (22.5-27.9)	18.9%	1	Breast cancer	21.6 (18.1-24.9)	18.0%
2	Prostate cancer	20.3 (16.9-23.7)	15.1%	2	Trachea, bronchus, lung cancers	20.4 (17.4-23)	17.0%
3	Colon and rectum cancers	14.4 (12.5-16.4)	10.8%	3	Colon and rectum cancers	13 (10.7-15.1)	10.8%
4	Pancreas cancer	9 (7.9-10.1)	6.7%	4	Pancreas cancer	8.5 (7.1-9.7)	7.1%
5	Lymphomas, multiple myeloma	8.3 (7.1-9.5)	6.2%	5	Cervix uteri cancer	7.5 (6-9.1)	6.2%
6	Stomach cancer	8 (6.7-9.6)	6.0%	6	Lymphomas, multiple myeloma	6.4 (5.2-7.5)	5.3%
7	Liver cancer	7.9 (5.6-10.9)	5.9%	7	Ovary cancer	5.6 (4.7-6.5)	4.7%
8	Leukemia	6.2 (5.2-7.2)	4.6%	8	Liver cancer	5.3 (3.6-7.6)	4.4%
9	Esophagus cancer	5.9 (5.2-6.6)	4.4%	9	Stomach cancer	5.3 (4.2-6.5)	4.4%
10	Brain and nervous system cancers	5 (4.4-5.7)	3.7%	10	Leukemia	4.6 (3.8-5.5)	3.9%

Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

420 483 deaths | 29.8/100 000 population

Diabetes is a metabolic disease characterized by elevated levels of blood glucose. Type 2 diabetes is the most common type and has increased dramatically over the past three decades, linked to the rise in obesity. The diabetes mortality rate in the Americas was 29.8/100 000 population, higher in males (33.3/100 000 population) than females (26.7/100 000 population) in 2021. By country, diabetes death rates ranged from a high in Jamaica of 133.3/100 000 population to a low in Canada of 9.1/100 000 in Canada (Figure 11).

Figure 11. Age-standardized diabetes death rates per 100 000 population, by sex in countries of the Americas, 2021

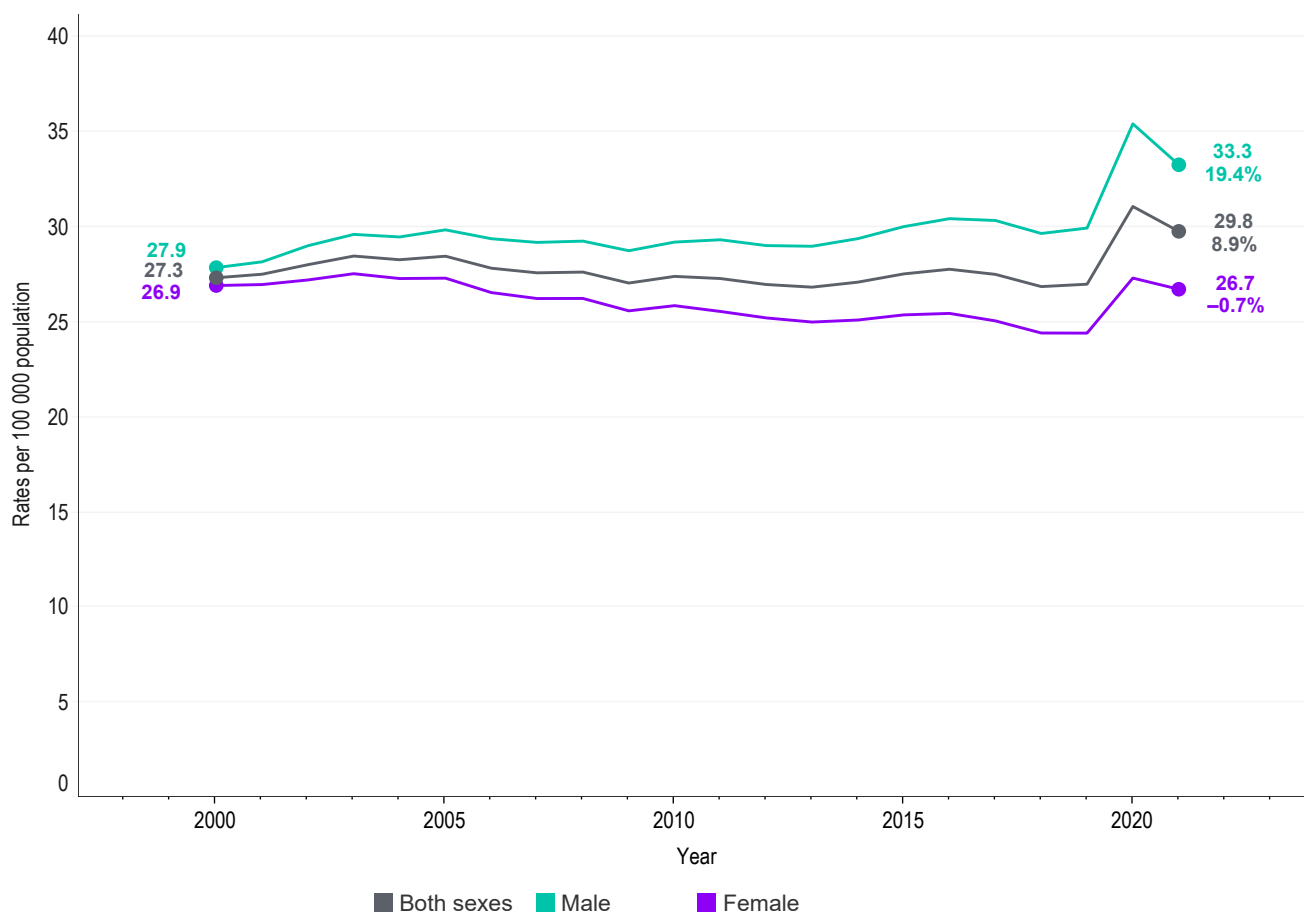


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Diabetes mortality trends, 2000–2021

Diabetes mortality rates largely remained stable from 2000 until 2019, then increased by 10.4% from 27.0/100 000 in 2020 to 29.8/100 000 in 2021 (Figure 12), probably because of the impact of the COVID-19 pandemic. Males have a higher diabetes mortality rate than females, and the difference between males and females has been widening since 2000.

Figure 12. Diabetes mortality rates per 100 000 population (age-standardized), by sex in the Region of the Americas, 2000–2021



Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000–2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

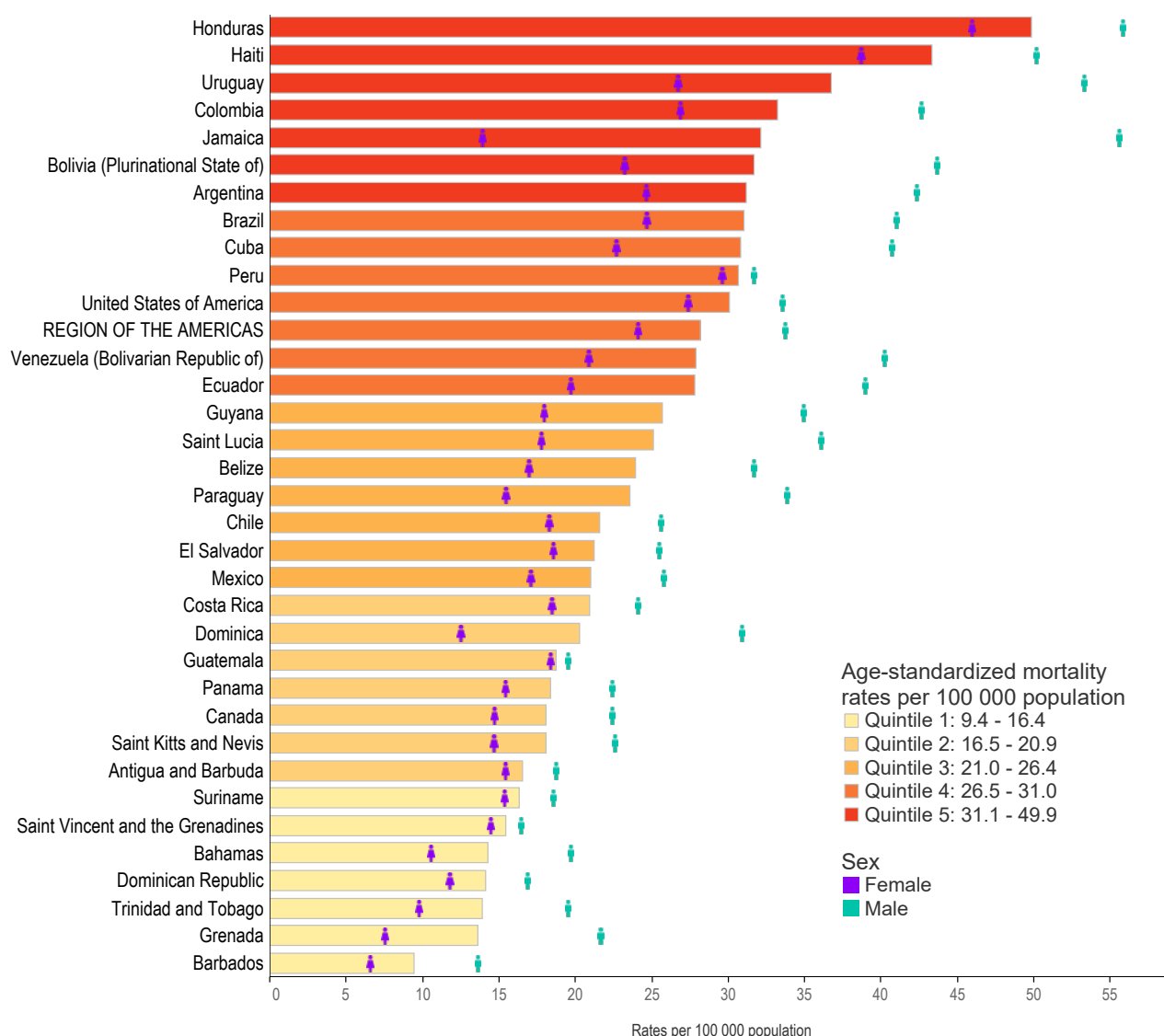
Chronic respiratory diseases

416 467 deaths | 28.2/100 000 population

Chronic respiratory diseases (CRD) include chronic obstructive pulmonary disease, asthma, occupational lung diseases, and pulmonary hypertension. Tobacco use, air pollution, occupational chemicals, and dusts are among the top CRD risk factors. The regional age-standardized CRD death rate was 28.2/100 000 population in 2021 (Figure 13), higher in males (33.7/100 000) than females (24.1/100 000).

By country, Honduras had the highest CRD mortality rate (49.9/100 000), followed by Haiti (43.5/100 000), and Uruguay (36.7/100 000), while the lowest rates were in Trinidad and Tobago (13.9/100 000), Grenada (13.6/100 000), and Barbados (9.5/100 000). Although CRDs are not curable, treatment can help control symptoms and improve the quality of life for people with such diseases.

Figure 13. Age-standardized chronic respiratory disease death rates per 100 000 population, by sex in countries of the Americas, 2021

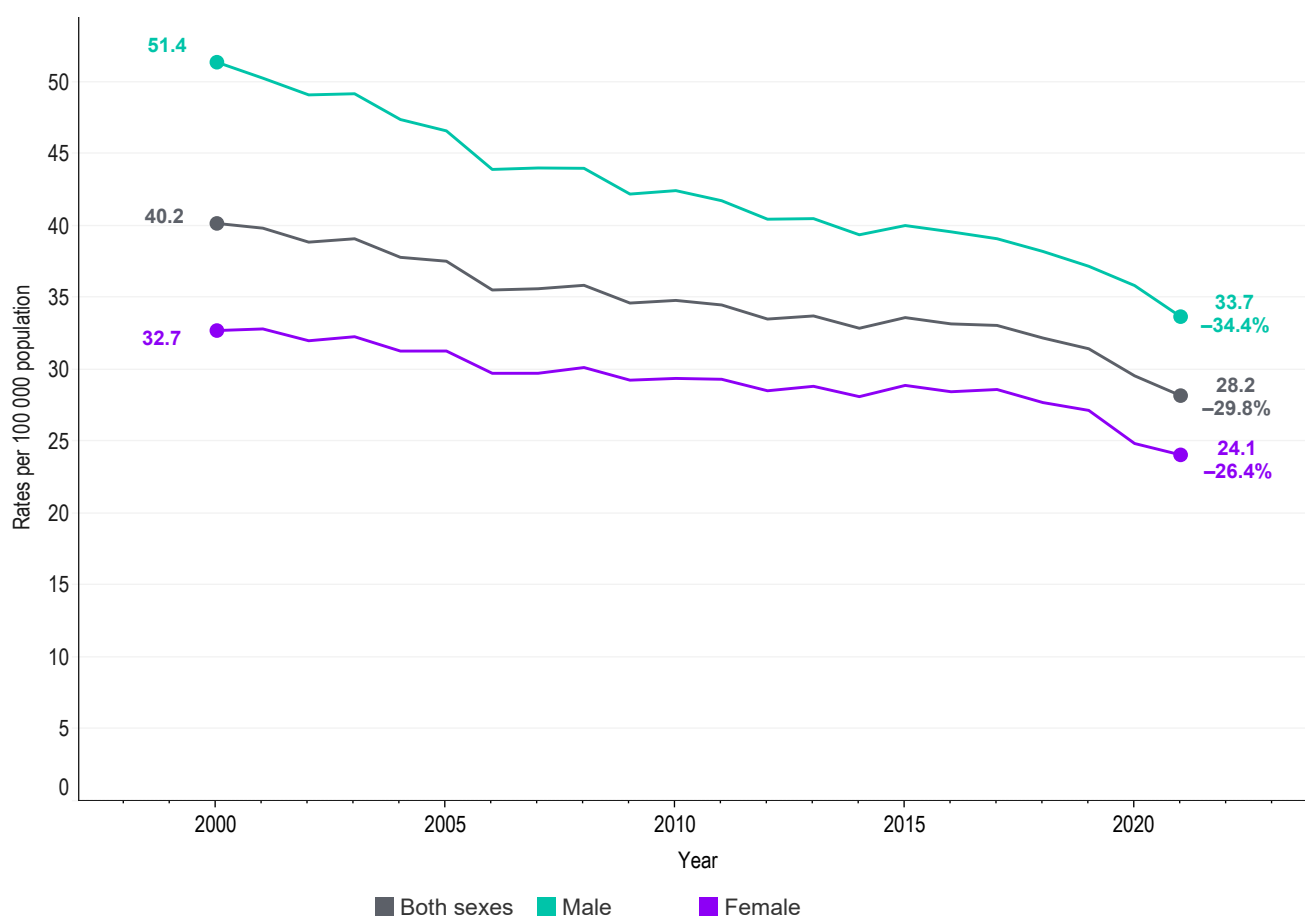


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Chronic respiratory disease trends, 2000-2021

CRD mortality rates declined by 29.8% from 40.2/100 000 in 2000 to 28.2/100 000 in 2021 (Figure 14). They were higher in males than females; however, the rate of decline was faster in males (-34.4%) than females (-26.4%) from 2000 to 2021.

Figure 14. Chronic respiratory disease mortality rates per 100 000 population (age-standardized), by sex in the Americas, 2000-2021

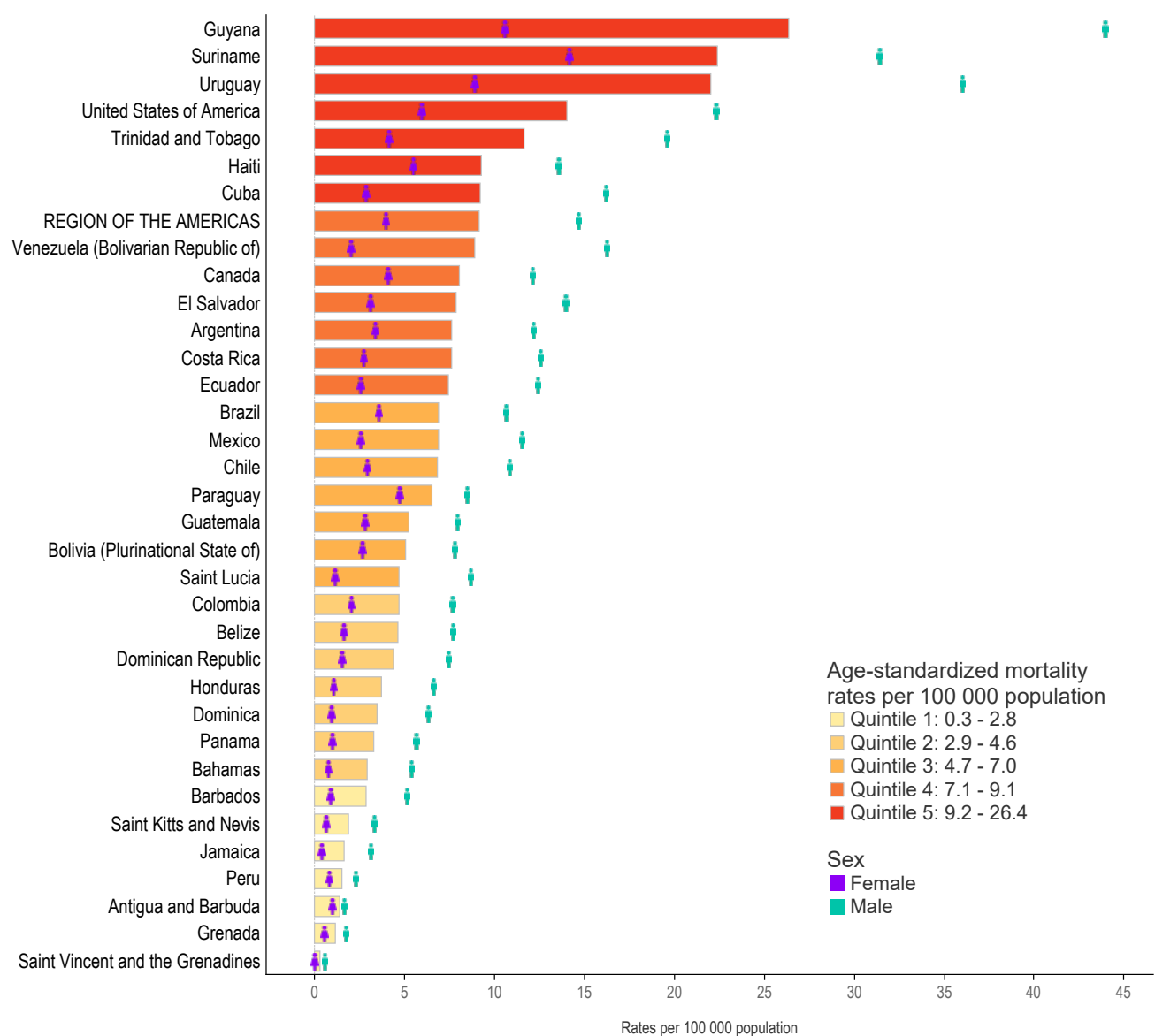


Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

100 760 deaths | 9.2/100 000 population

Suicide is a tragedy that affects families, communities, and entire countries, with long-lasting effects on the people left behind. Suicide mortality is significantly higher in males, and it occurs throughout the lifespan but is more common among adolescents and young adults. The regional suicide mortality rate was 9.2/100 000 population in 2021. Across countries, suicide ranged from a high in Guyana (26.4/100 000) to a low in Saint Vincent and the Grenadines (0.3/100 000). Suicides are preventable with timely, evidence-based, and often low-cost mental health support and interventions (Figure 15).

Figure 15. Age-standardized suicide death rates per 100 000 population, by sex in countries of the Americas, 2021

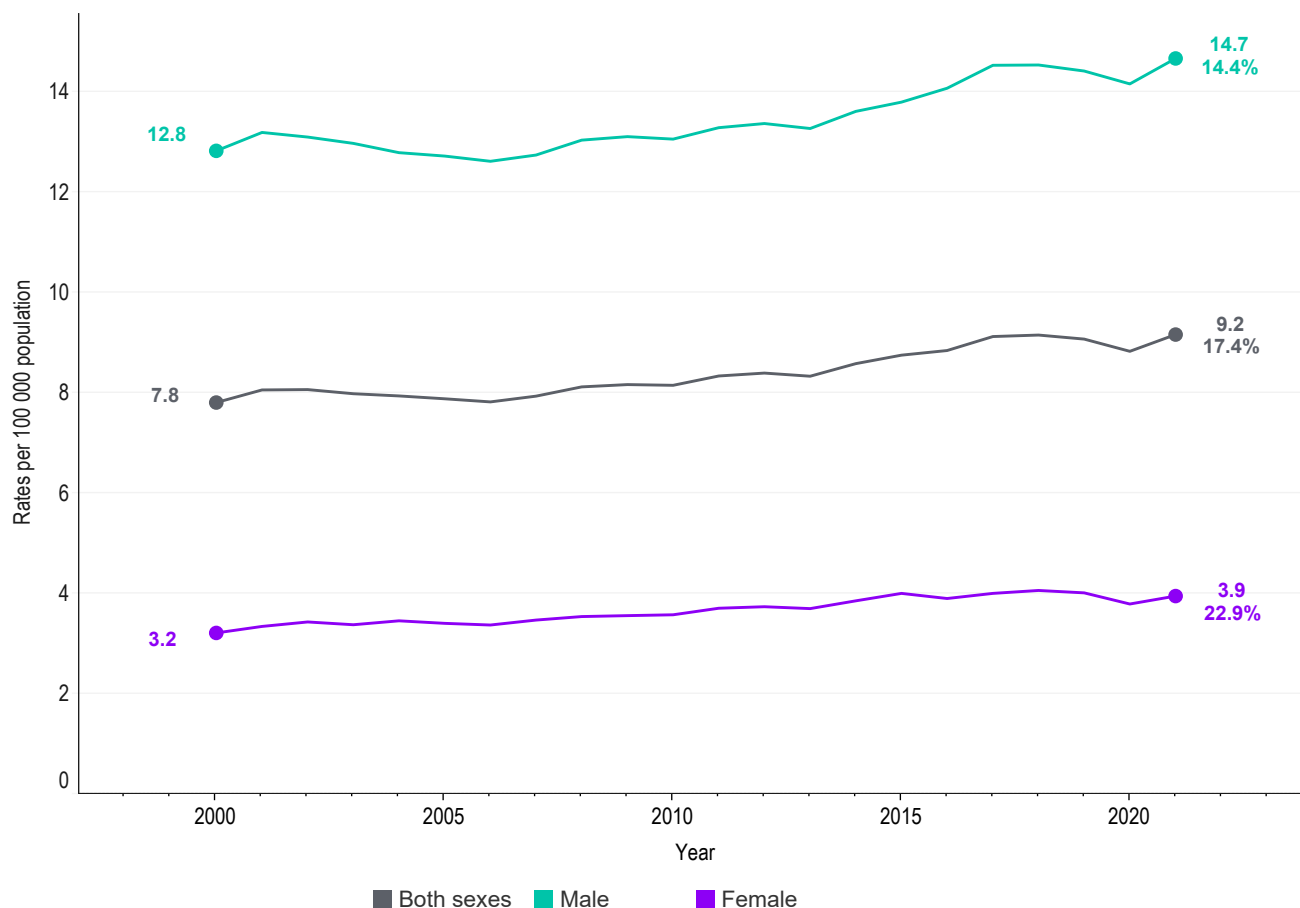


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Suicide mortality trends, 2000-2021

Suicide mortality rates increased by 17.4% from 7.8/100 000 in 2000 to 9.2/100 000 in 2021 (Figure 16), more than three-fold higher in males than females.

Figure 16. Suicide mortality rates per 100 000 population (age-standardized), by sex in the Region of the Americas, 2000-2021



Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghel-leading-causes-of-death>.

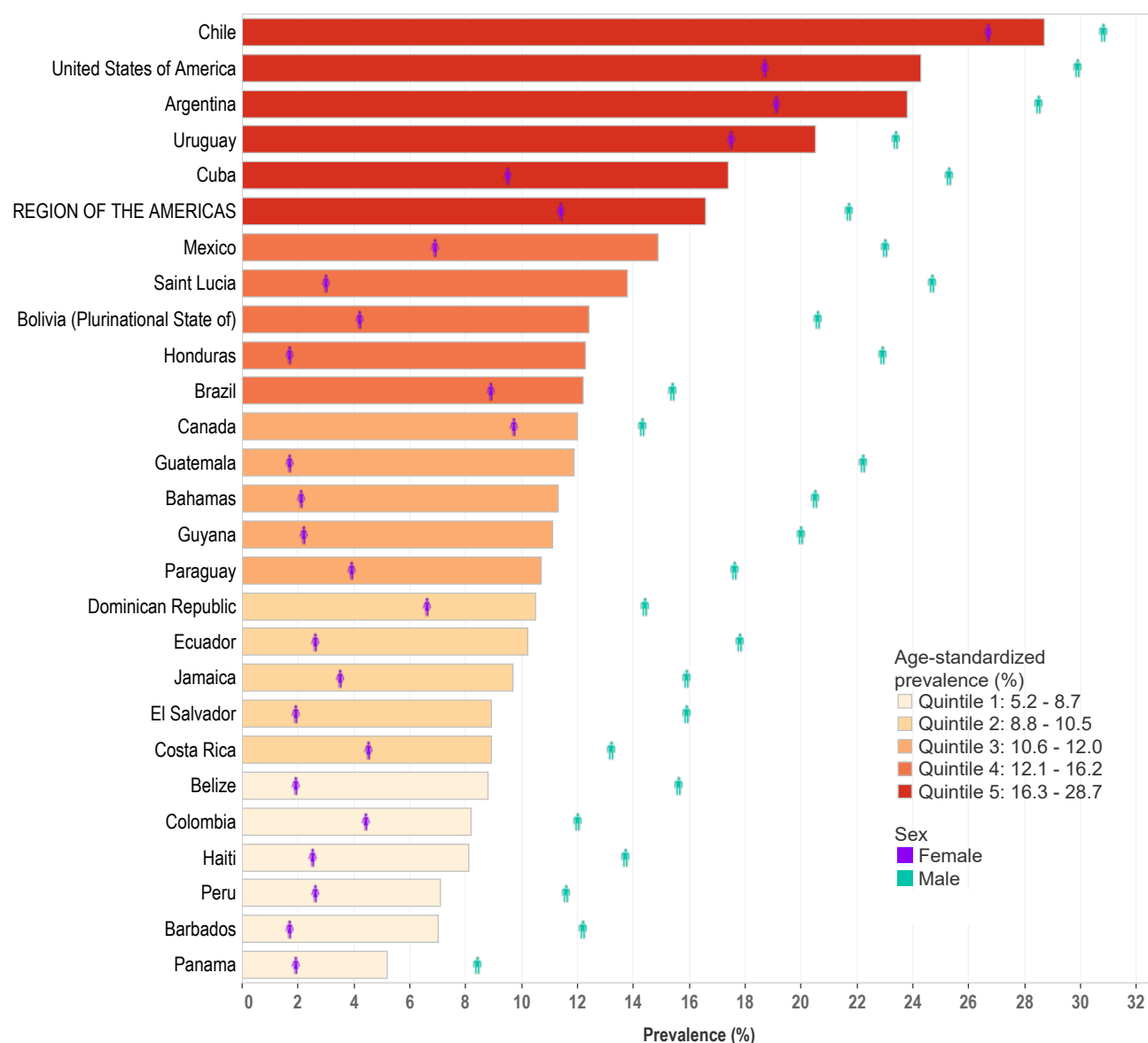


NCD Risk Factors

Tobacco use

In 2022, the estimated regional prevalence of tobacco use among people aged 15 years and older was 16.6%, lower than the global average (21.0%); and with more males who smoke than females (21.7% of males and 11.4% of females). It ranged from a high in Chile of 28.7% to a low in Panama of 5.2%. Five countries (Argentina, Chile, Cuba, United States of America, and Uruguay) had a prevalence of tobacco use higher than the regional average (Figure 17).

Figure 17. Prevalence of current tobacco use (age-standardized) among persons aged 15 years and older in the Americas, 2022

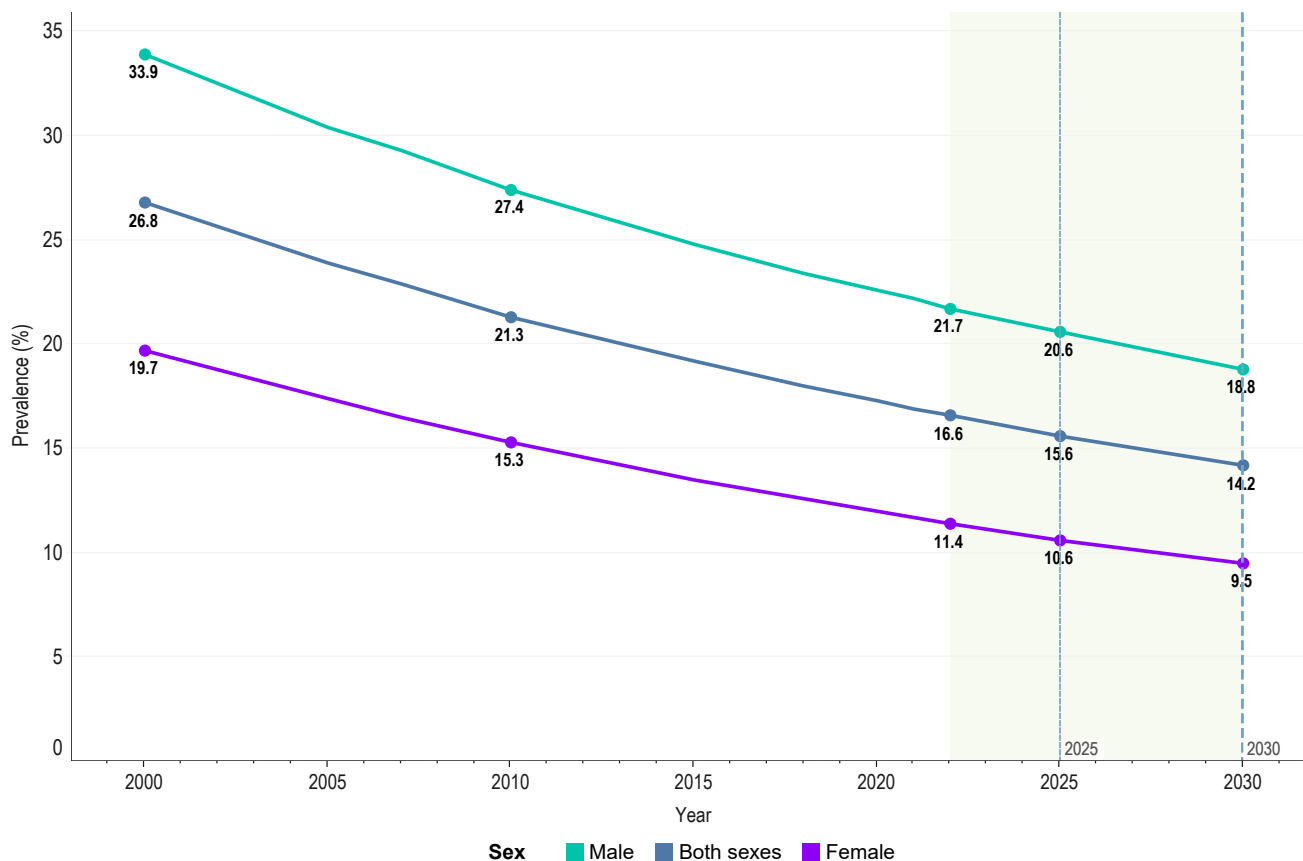


Note: No data are available or verified by national authorities for the countries not shown in the chart.
Source: World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.

Tobacco use trends

The regional prevalence of tobacco use among adults declined by 22.1% from 21.3% in 2010 to 16.6% in 2022 (Figure 18). The NCD global target for 2025 is to reduce tobacco use by 30% from the 2010 baseline year, and if the current trend continues, the Region will come close to meeting this target, by reducing the prevalence of tobacco use by 26.4% by 2025.

Figure 18. Prevalence of tobacco use among individuals aged 15 years and older (age-standardized estimates, %), by sex in the Region of the Americas, 2000-2022, and projections to 2025 and 2030



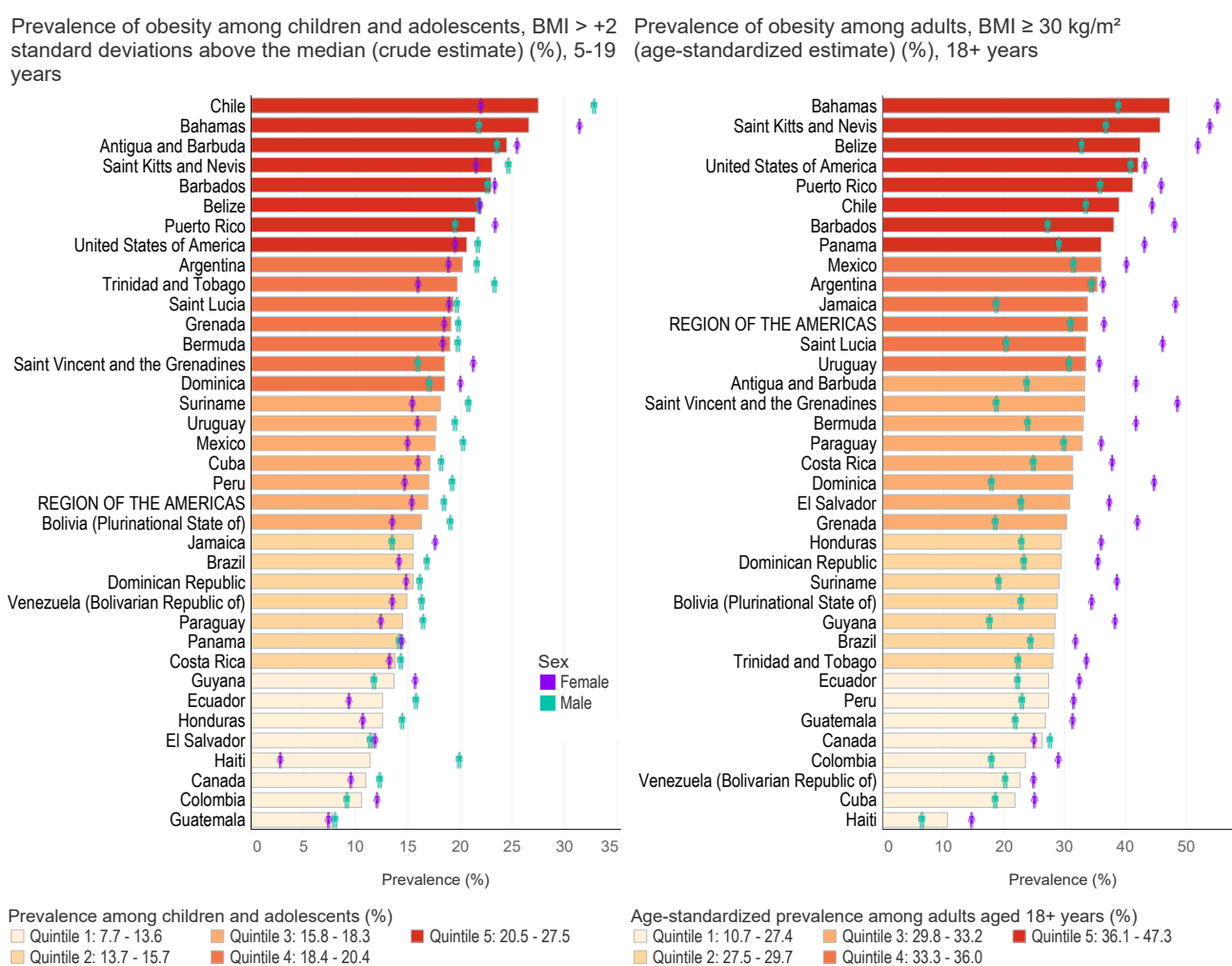
Source: World Health Organization. WHO global report on trends in prevalence of tobacco use 2000-2030. Geneva: WHO; 2024. Available from: <https://www.who.int/publications/i/item/9789240088283>.

Obesity prevalence

Obesity increases the risk of diabetes, hypertension, coronary heart disease, stroke, and certain cancers, among other conditions. It is estimated that 16.9% of children and adolescents aged 5-19 years (18.5% of males and 15.4% of females) and 33.8% of adults (31.0% of males and 36.4% of females) are obese in the Americas in 2022 (Figure 19), the highest level among all WHO regions.

By country, the prevalence of obesity in children and adolescents ranged from a high in Chile of 27.5% to a low in Guatemala of 7.7%. Among adults, prevalence of obesity varied from a high in the Bahamas of 47.3% to a low in Haiti of 10.7%, higher among females than males in all countries, except Canada.

Figure 19. Age-standardized prevalence of obesity among (A) adolescents aged 5-19 years and (B) adults aged 18 years and older in the Americas, 2022



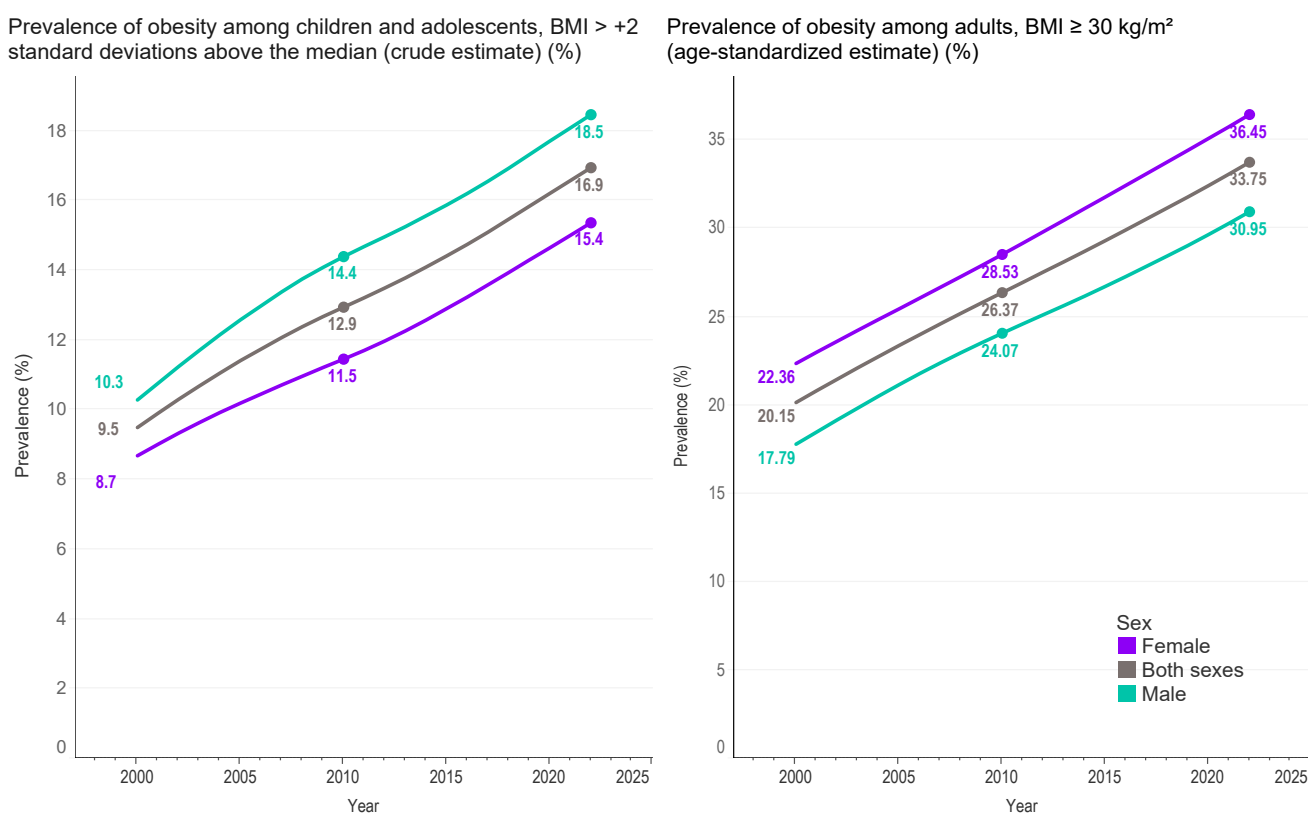
Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization, NCD data portal. Comparable estimates available from 1990-2022. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. Lancet. 2024;403(10431):1027-1050. Available from: [https://doi.org/10.1016/S0140-6736\(23\)02750-2](https://doi.org/10.1016/S0140-6736(23)02750-2).

Trends in obesity prevalence

Obesity prevalence in the Region of the Americas among children and adolescents aged 5-19 years, and among adults aged 18 years and over increased by 78.5% (from 9.5% in 2000 to 16.9% in 2022) and 67.5% (from 20.2% in 2000 to 33.8% in 2022), respectively (Figure 20).

The global NCD target is to halt the rise in diabetes and obesity from the baseline year of 2010. The regional age-standardized prevalence of obesity in adults increased by 28% from the baseline (26.4% in 2010). Although the Region is not on track to reach the target, two countries (Canada and the Bolivarian Republic of Venezuela, with percentage change of 7.9% and 1.3% from 2010 to 2022, respectively) are on track to halt the rise of obesity in adults.

Figure 20. Prevalence of obesity among (left) children and adolescents aged 10-17 years, and (right) adults aged 18 years and older in the Americas, 2000-2022



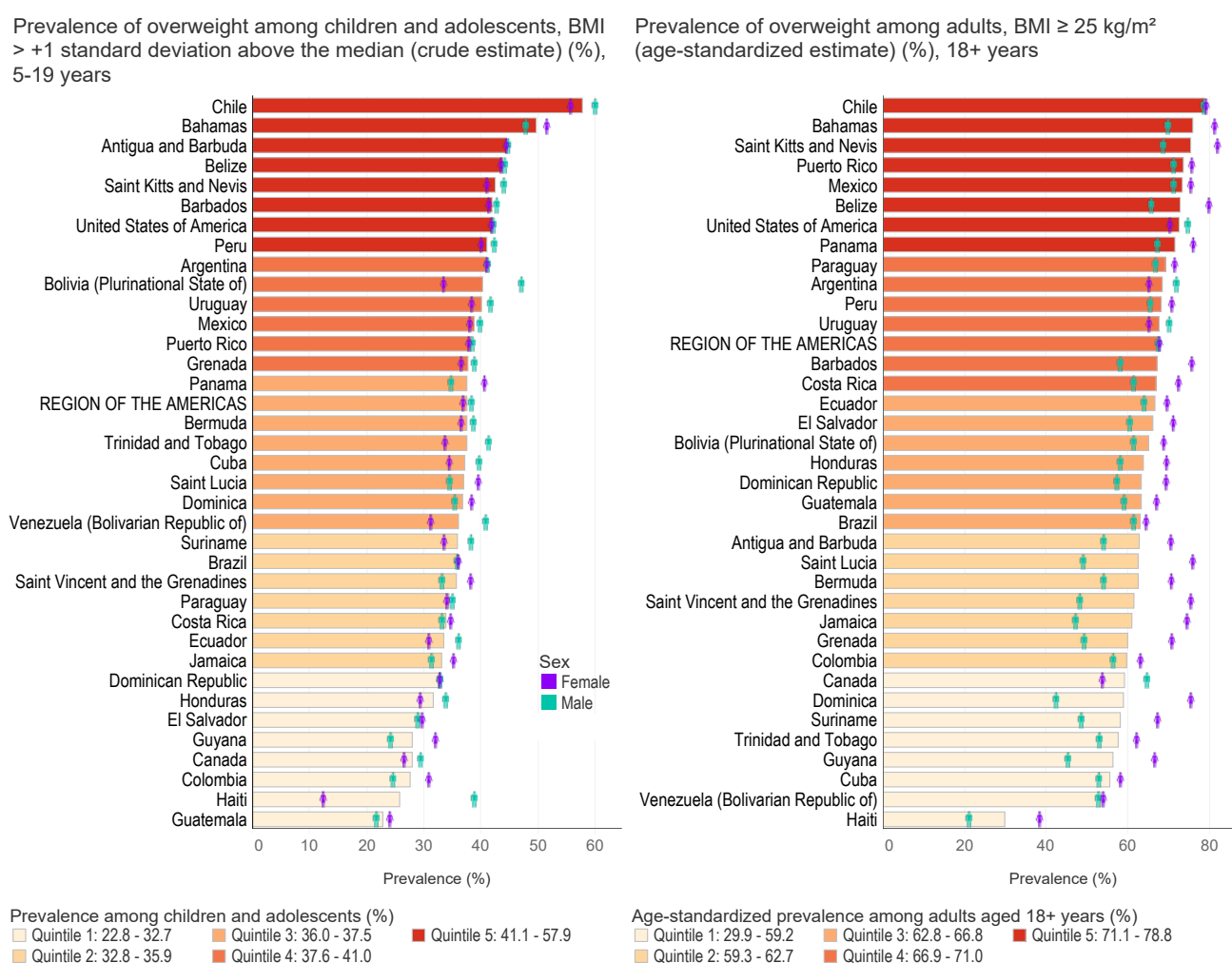
Source: NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. Lancet. 2024;403(10431):1027-1050. Available from: [https://doi.org/10.1016/S0140-6736\(23\)02750-2](https://doi.org/10.1016/S0140-6736(23)02750-2).

Overweight and obesity

In 2022, it was estimated that 37.5% of children and adolescents aged 5-19 years (38.3% of males and 36.9% of females) and 67.5% of adults (67.3% of males and 67.6% of females) were overweight or obese in the Americas (Figure 21).

By country, the prevalence of overweight and obesity in children and adolescents ranged from 57.9% in Chile to 22.8% in Guatemala. For adults, the prevalence of overweight and obesity varied from 68.8% in Chile to 29.9% in Haiti.

Figure 21. Age-standardized prevalence of overweight and obesity among (left) adolescents aged 5-19 years and (right) adults aged 18 years and older in the Americas, 2022

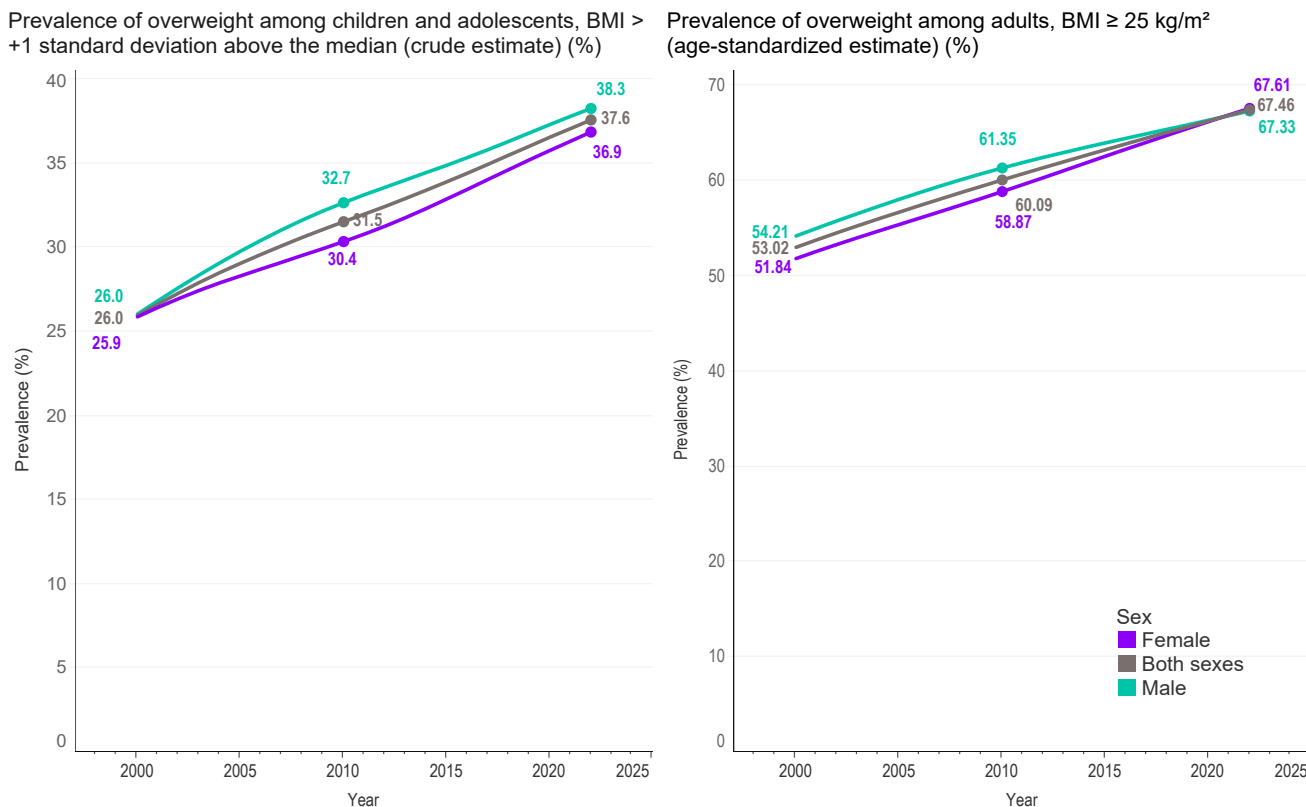


Note: No data are available or verified by national authorities for the countries not shown in the chart.
Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org/> [cited 14 February 2025]. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. Lancet. 2024;403(10431):1027-1050. Available from: [https://doi.org/10.1016/S0140-6736\(23\)02750-2](https://doi.org/10.1016/S0140-6736(23)02750-2).

Trends in overweight and obesity

The regional prevalence of overweight and obesity among children and adolescents aged 5-19 years, and among adults aged 18 years and over increased by 44.6% (from 26.0% in 2000 to 37.6% in 2022) and 27.4% (from 53.0% in 2000 to 67.5% in 2022) respectively (Figure 22).

Figure 22. Prevalence of overweight and obesity among (left) children and adolescents aged 5-19 years and (right) adults aged 18 years and older in the Americas, 2000-2022

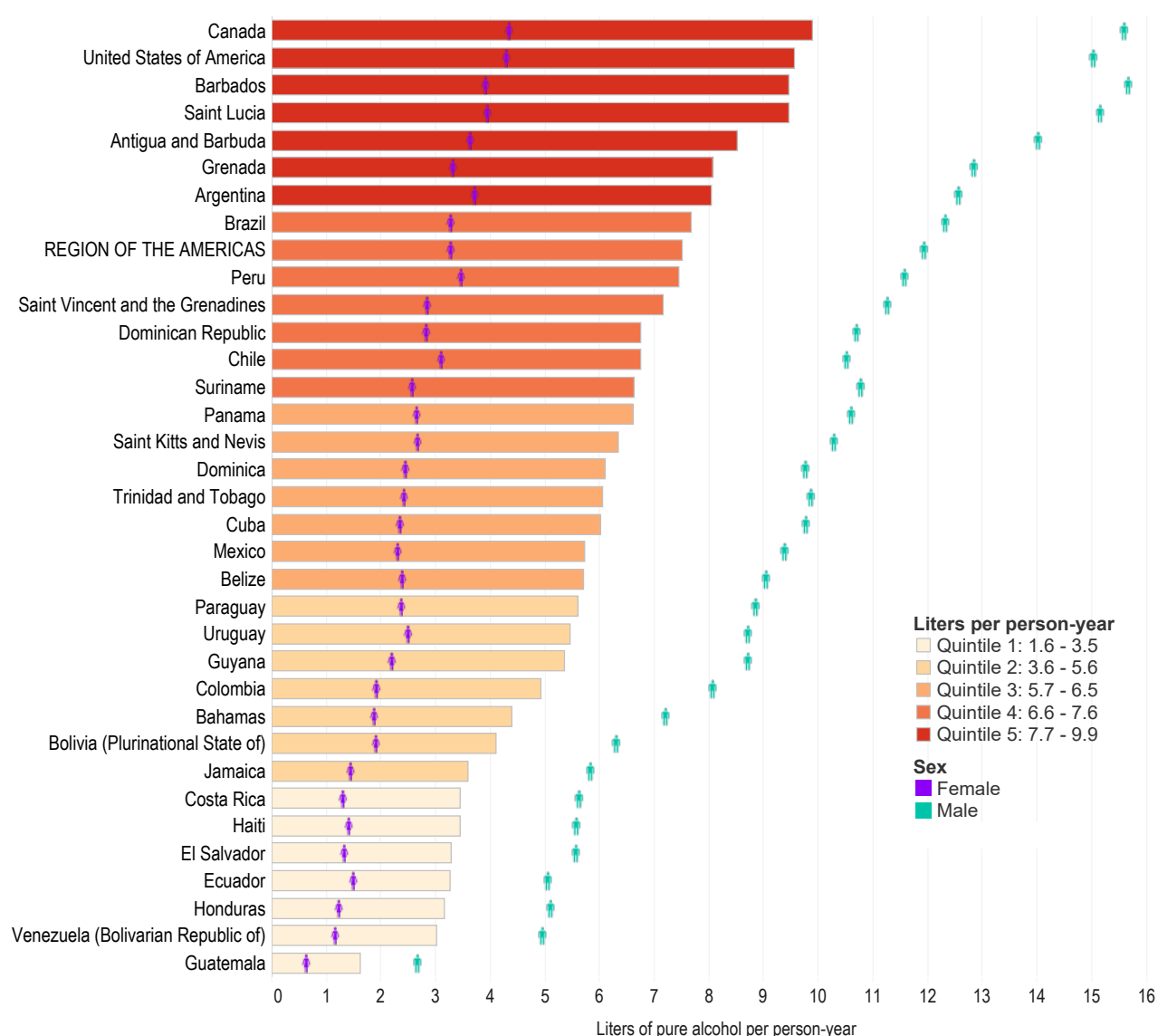


Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org/> [cited 14 February 2025]. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. *Lancet*. 2024;403(10431):1027-1050. Available from: [https://doi.org/10.1016/S0140-6736\(23\)02750-2](https://doi.org/10.1016/S0140-6736(23)02750-2).

Alcohol use

In the Region of the Americas, each adult person consumed on average 7.5 liters of pure alcohol per year in 2019. This consumption is almost four times higher in males (11.9 liters/person/year) compared to females (3.3 liters), a pattern that is evident in all countries (Figure 23). The highest level of alcohol consumption is in Canada (9.9 liters/person/year), and the lowest level in Guatemala (1.6 liters/person/year).

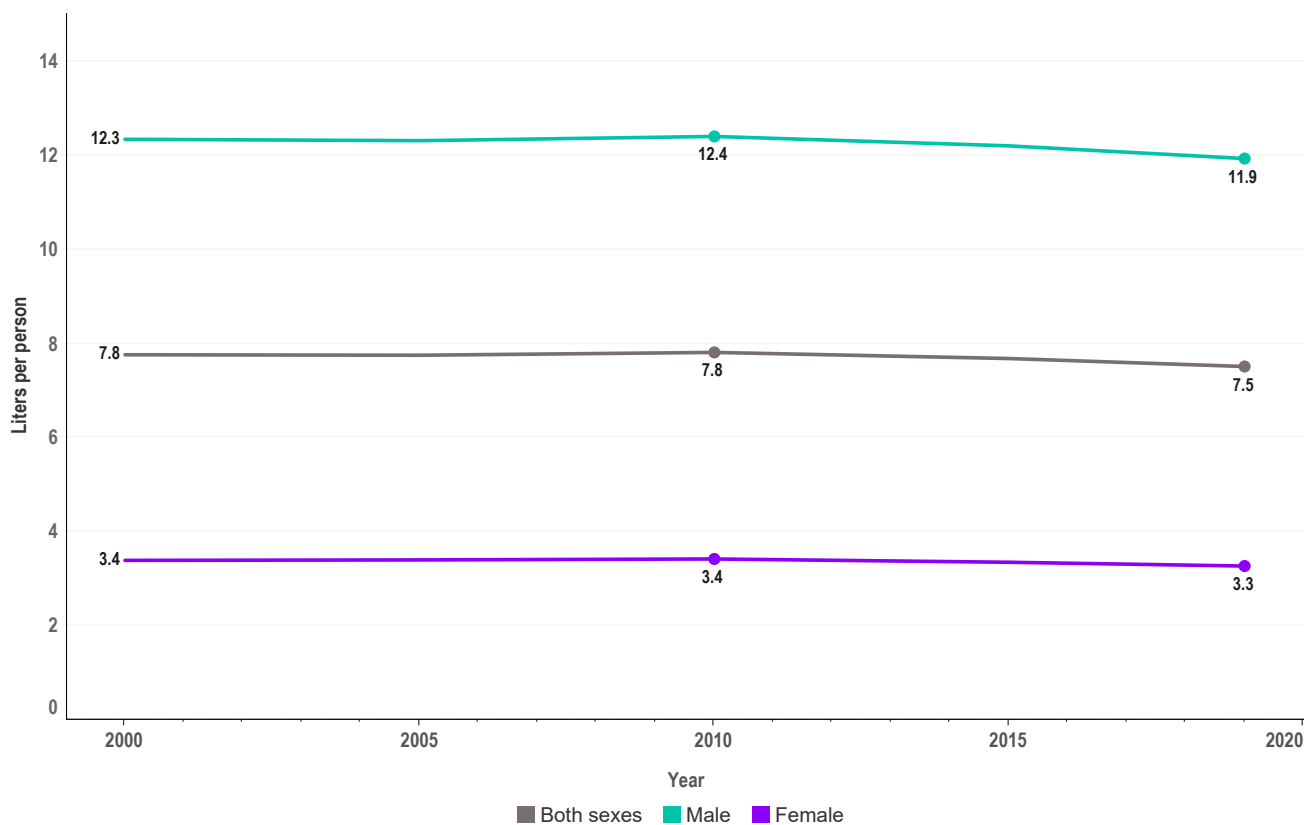
Figure 23. Total alcohol per capita consumption among adults aged 15 years and older in liters of pure alcohol per person per year in countries of the Americas, 2019



Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. Global status report on alcohol and health and treatment of substance use disorders. Geneva: WHO; 2024. Available from: <https://www.who.int/publications/i/item/9789240096745>.

The global NCD target established a 10% reduction in alcohol consumption by 2025, relative to the baseline in 2010. From 2010 to 2019, the regional level of total alcohol per capita consumption declined by 3.8%, near the target (Figure 24). This rate of change translated in an annual percentage change of -0.44%, which higher than -0.7%, the annual percentage change required to reach the target by 2025. The Region is progressing toward the target but more efforts are needed.

Figure 24. Trends in total alcohol per capita consumption among adults aged 15 years and older in liters of pure alcohol per person per year in the Americas, 2000-2019

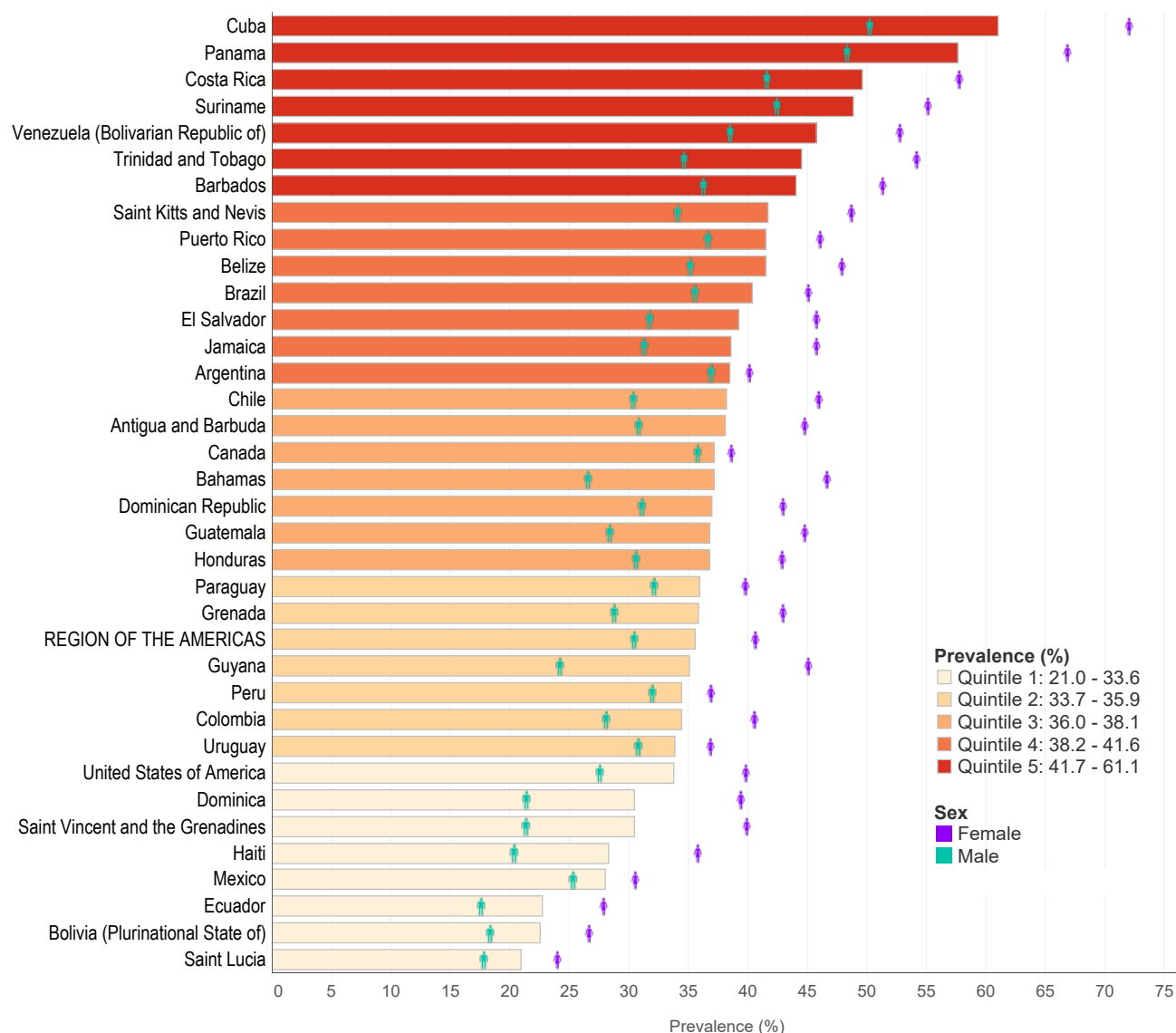


Source: World Health Organization. Global status report on alcohol and health and treatment of substance use disorders. Geneva: WHO; 2024. Available from: <https://www.who.int/publications/i/item/9789240096745>.

Physical inactivity

Among adults aged 18 years and older, 35.6% were insufficiently physically active (30.5% of males and 40.6% of females), ranging across countries from 61.1% in Cuba to 21.0% Saint Lucia (Figure 25).

Figure 25. Prevalence of insufficient physical activity among adults aged 18 years and older by sex in countries of the Americas, 2022



Note: No data are available or verified by national authorities for the countries not shown in the chart.

Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org/>.

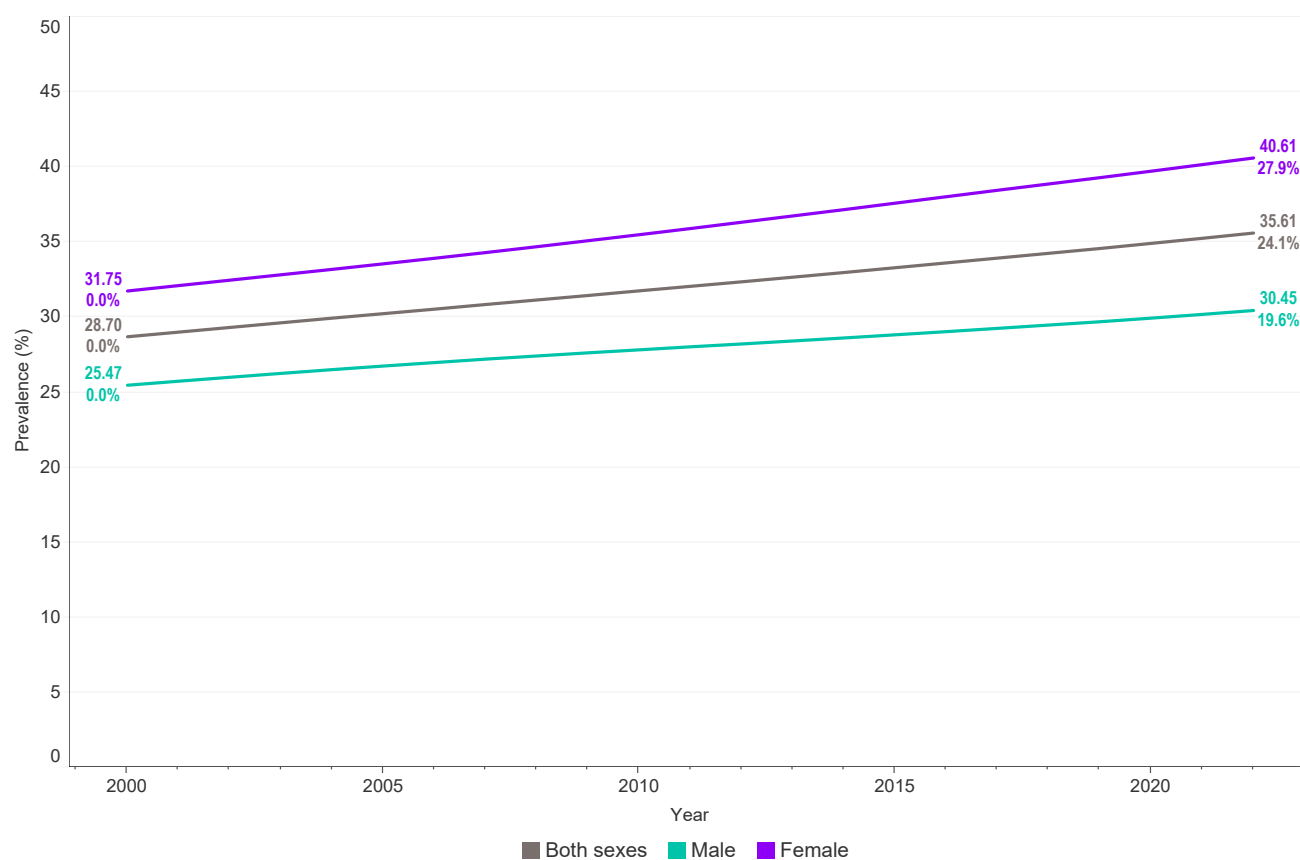
Strain T, Flaxman S, Guthold R, et al. National, regional, and global trends in insufficient physical activity among adults from 2000 to 2022: a pooled analysis of 507 population-based surveys with 5·7 million participants. Lancet Glob Health. 2024;12(8):e1232-e1243. Available from: [https://doi.org/10.1016/S2214-109X\(24\)00150-5](https://doi.org/10.1016/S2214-109X(24)00150-5).

Trends in physical inactivity

The regional prevalence of insufficient physical activity among adults rose by 24.1% from 20.7% in 2000 to 35.6% in 2022.

The global NCD target 2025 established a 10% reduction in physical inactivity from the baseline year 2010. In the Region of the Americas, the prevalence of insufficient physical activity increased by 12.1% from 31.8% in 2010 to 35.6% in 2022 (Figure 26). This trend indicates that the Region is going in the opposite direction to the set target, so effective interventions should be prioritized to reverse the current trend.

Figure 26. Trends in the prevalence of insufficient physical activity among adults aged 18 years and older in the Americas, 2000-2022



Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org/>.

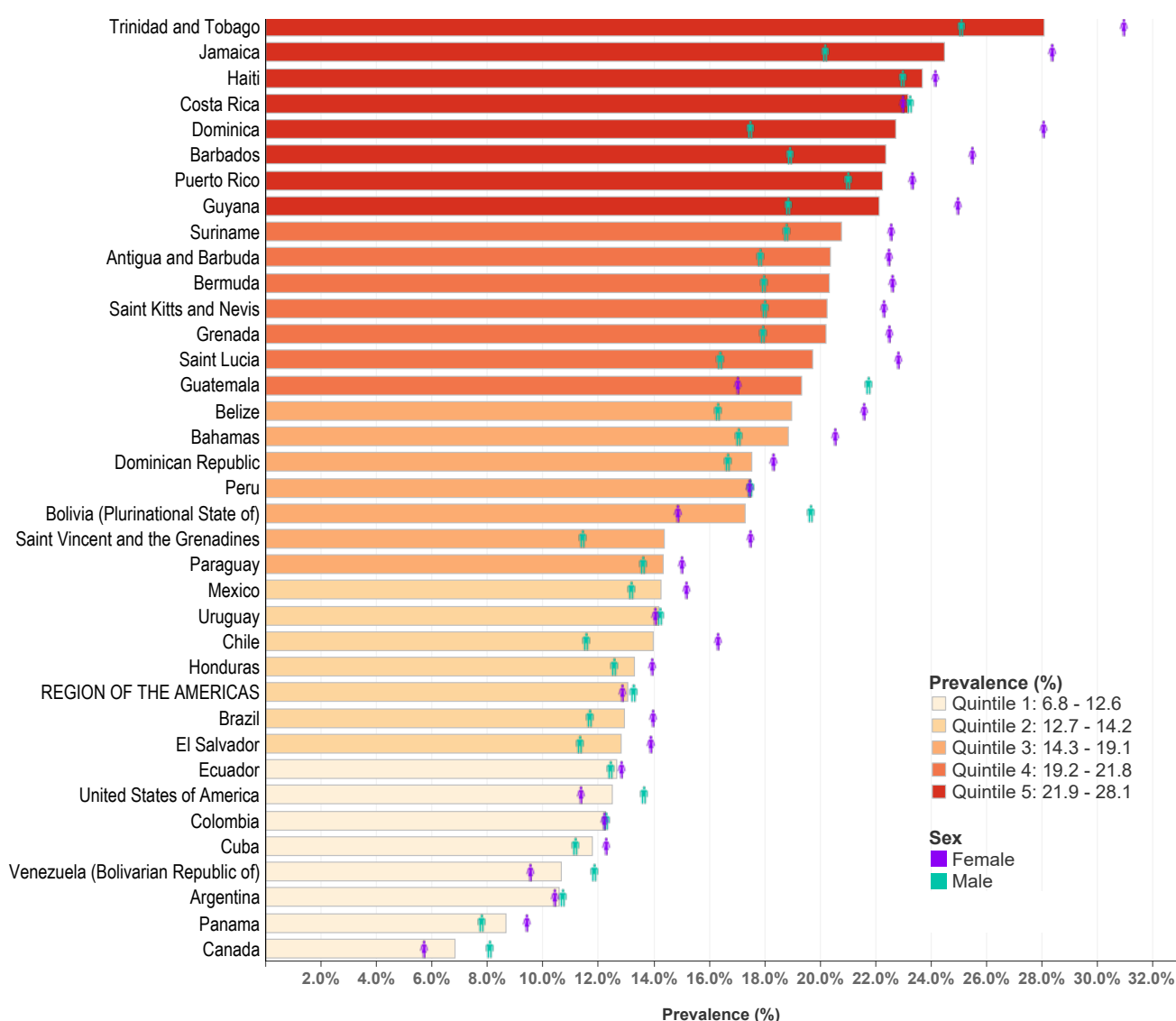
Strain T, Flaxman S, Guthold R, et al. National, regional, and global trends in insufficient physical activity among adults from 2000 to 2022: a pooled analysis of 507 population-based surveys with 5.7 million participants. *Lancet Glob Health*. 2024;12(8):e1232-e1243. Available from: [https://doi.org/10.1016/S2214-109X\(24\)00150-5](https://doi.org/10.1016/S2214-109X(24)00150-5).

Diabetes prevalence

Prevalence of diabetes by country, 2022

In the Region of the Americas, 13.1% of people (13.3% of males and 12.9% of females) were living with diabetes in 2022 (Figure 27). The prevalence of diabetes ranged from a high in Trinidad and Tobago of 28.1% to a low in Canada of 6.8%. The prevalence of diabetes is higher among females than males in most countries, except in Costa Rica, Guatemala, the Plurinational State of Bolivia, Uruguay, the United States, the Bolivarian Republic of Venezuela, Argentina, and Canada.

Figure 27. Prevalence of diabetes among adults aged 18 years and older (defined as fasting blood glucose ≥ 7.0 mmol/L or HbA1c $\geq 6.5\%$ or currently taking medication for diabetes) (age-standardized) in countries of the Americas, 2022

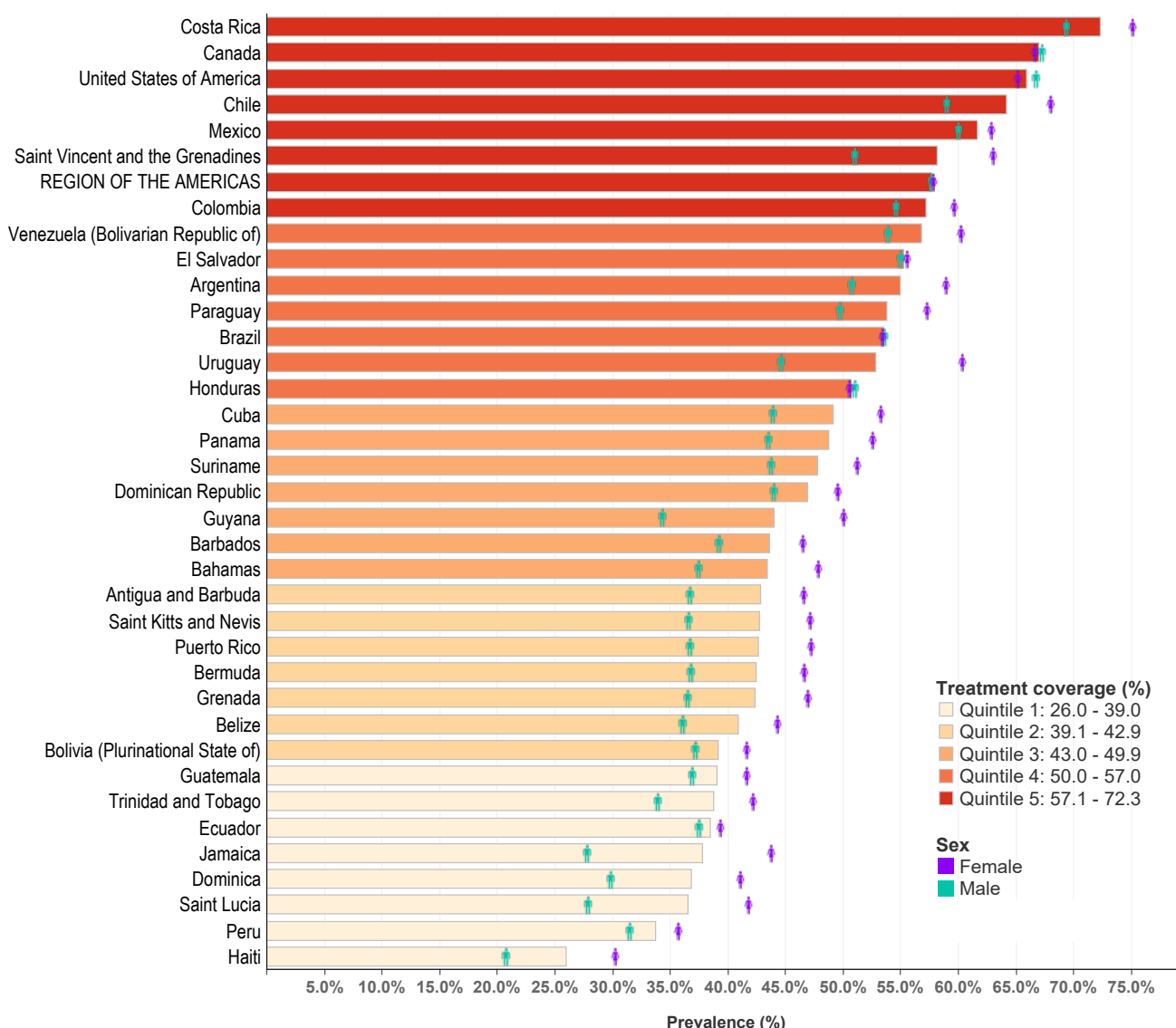


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org>.
 NCD Risk Factor Collaboration (NCD-Risc). Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: a pooled analysis of 1108 population-representative studies with 141 million participants. Lancet. 2024;404(10467):2077-2093. Available from: [https://doi.org/10.1016/S0140-6736\(24\)02317-1](https://doi.org/10.1016/S0140-6736(24)02317-1).

Diabetes treatment coverage

In 2022, only three out of five adults (58%) aged 30 years and older with diabetes were under treatment for lowering high blood glucose in the Region of the Americas (Figure 28). This diabetes treatment coverage across countries ranged from 72.3% in Costa Rica to 26% in Haiti. For most countries, diabetes treatment coverage is higher for females than males, except for Canada and the United States of America, where coverage is similar for both sexes.

Figure 28. Diabetes treatment coverage (current use of glucose-lowering medication among those with diabetes) in adults aged 30 years and over, by sex in countries of the Americas, 2022



Note: No data are available or verified by national authorities for the countries not shown in the chart.
Source: World Health Organization. NCD data portal. Comparable estimates available from 1990-2022. Available online: <https://ncdportal.org/>.
 NCD Risk Factor Collaboration (NCD-Risc). Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: a pooled analysis of 1108 population-representative studies with 141 million participants. *Lancet*. 2024;404(10467):2077-2093. Available from: [https://doi.org/10.1016/S0140-6736\(24\)02317-1](https://doi.org/10.1016/S0140-6736(24)02317-1).

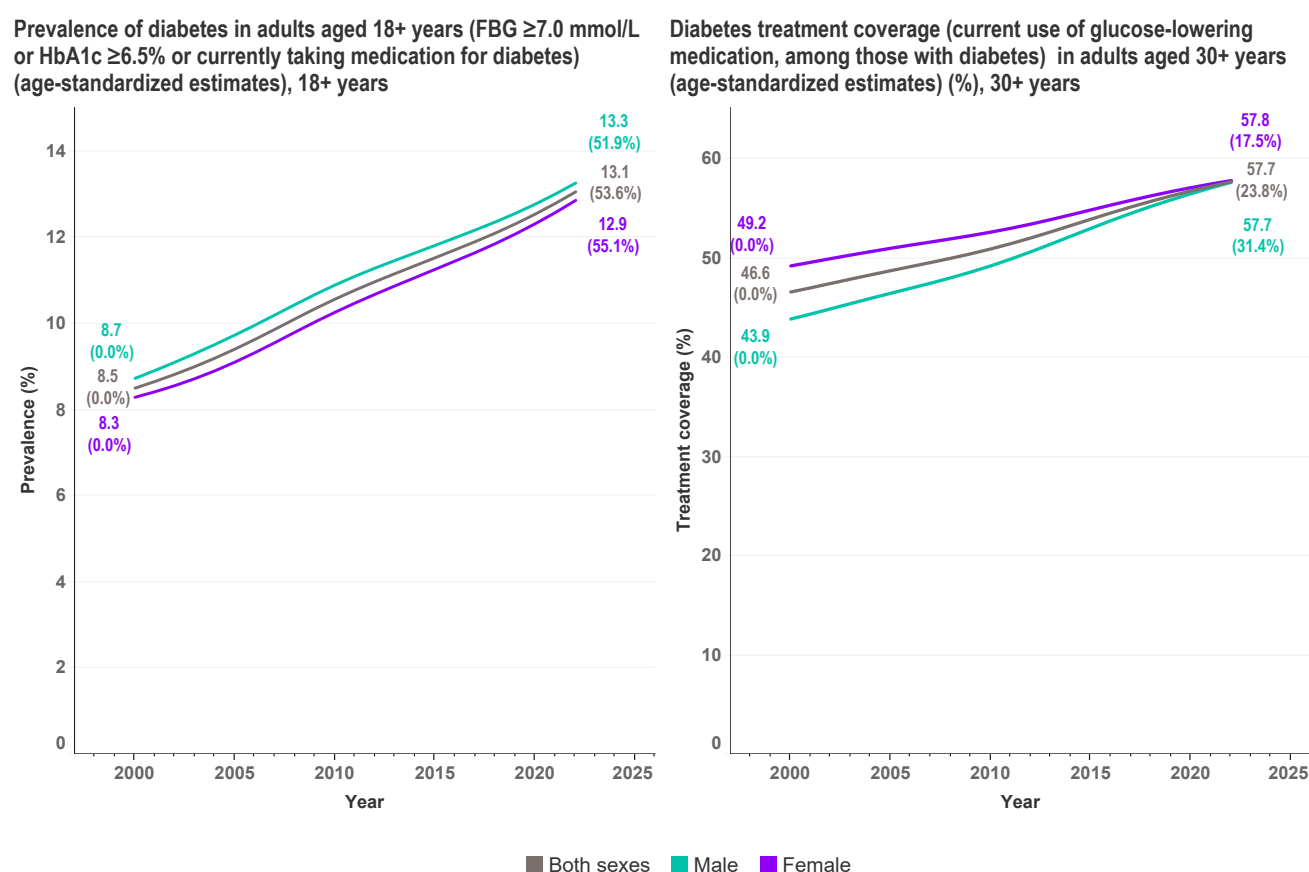
Trends in the prevalence of diabetes and diabetes treatment coverage

The regional prevalence of diabetes in adults rose by 53.6% from 8.5% in 2000 to 13.1% in 2022 (Figure 29).

The global NCD target is to halt the rise in diabetes, and the Region of the Americas is off track in all countries. Diabetes prevalence is increasing in all countries, except Mexico and the Bolivarian Republic of Venezuela, where diabetes declined by 24.7% and 4.9% from 2010 to 2022, respectively.

Regarding diabetes treatment coverage, the Region has achieved substantial progress, with an increase of 23.8% from 46.6% in 2000 to 57.7% in 2022. However, diabetes treatment coverage has deteriorated in some countries in the last decade, notably in the Dominican Republic, Haiti, Jamaica, and Saint Lucia, with declines of 7.7%, 12.7%, 20.4%, and 13.2%, respectively.

Figure 29. Prevalence of diabetes in adults aged 18 years and older (left), and (right) diabetes treatment coverage among adults aged 30 years and older in countries of the Americas, 2000-2022



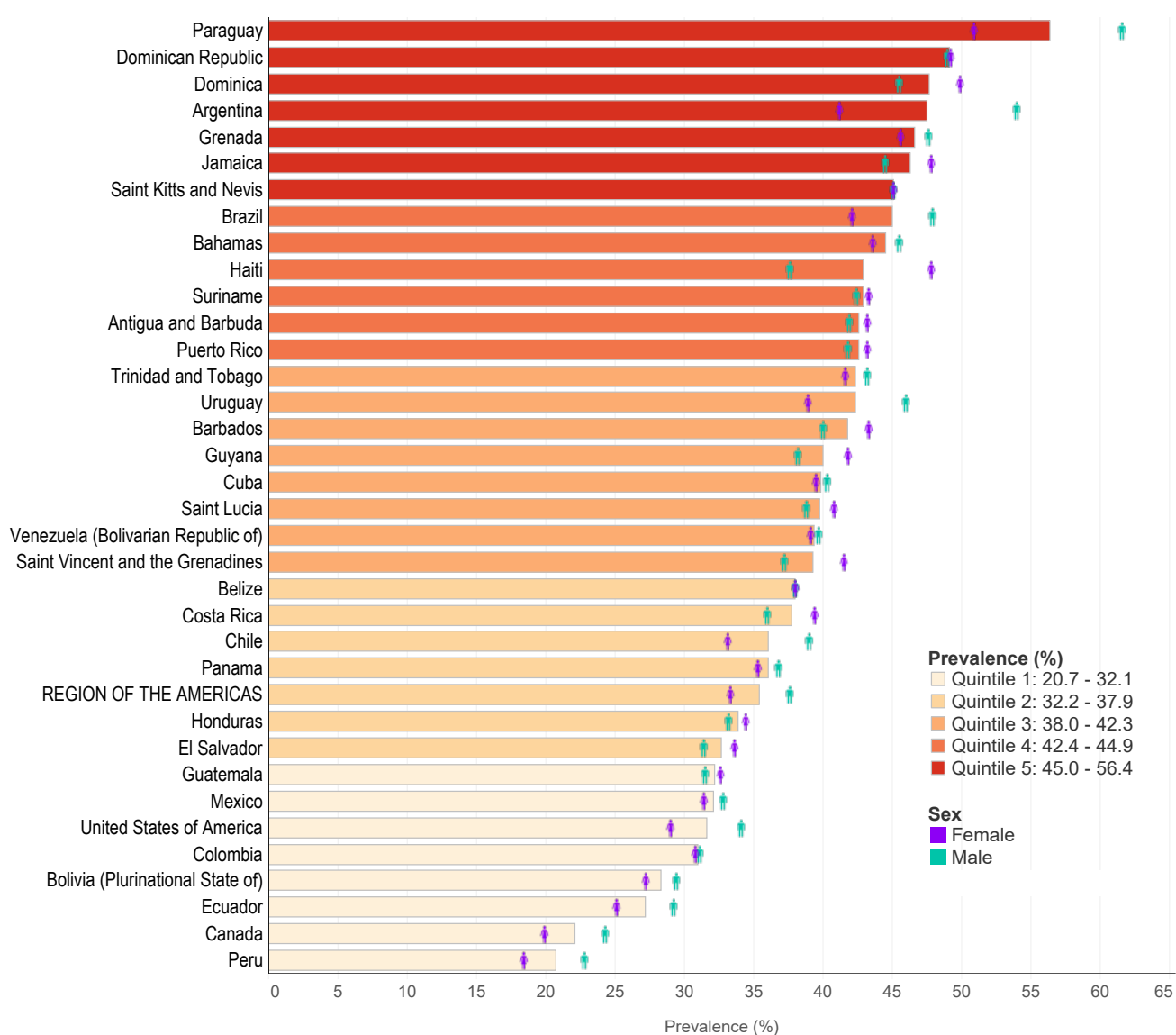
Source: NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: a pooled analysis of 1108 population-representative studies with 141 million participants. *Lancet*. 2024;404(10467):2077-2093. Available from: [https://doi.org/10.1016/S0140-6736\(24\)02317-1](https://doi.org/10.1016/S0140-6736(24)02317-1).

Hypertension prevalence

Prevalence of high blood pressure

In the Americas, 35.4% of people aged 30 to 79 years were living with high blood pressure (Figure 30), 37.6% of males and 33.3% of females, in 2019 (latest year of data available). This level represents a rise of 2.6% since 2000 when the prevalence was 34.5%. There are significant variations across countries, ranging from a high of 56.4% in Paraguay to a low of 20.7% in Peru. The highest prevalence of hypertension (higher than 45%, fifth quintile) was observed in Argentina, Brazil, Dominica, Dominican Republic, Grenada, Jamaica, Paraguay, and Saint Kitts and Nevis.

Figure 30. Prevalence of hypertension among adults aged 30-79 years (age-standardized), in countries of the Americas, 2019



Note: No data are available or verified by national authorities for the countries not shown in the chart.

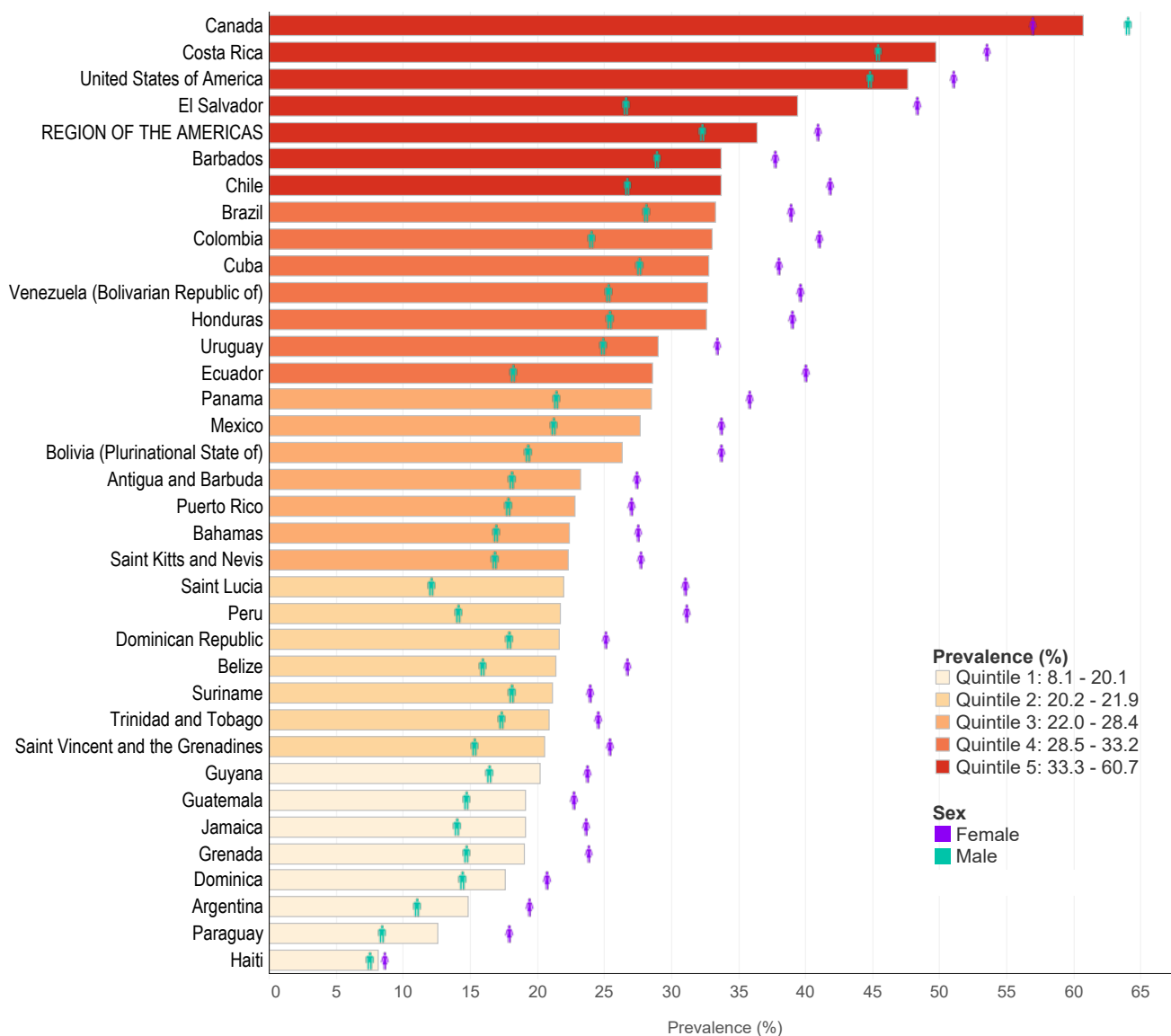
Source: NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2024;398(10304):957-980. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01330-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01330-1/fulltext).

Hypertension control

Population hypertension control is the proportion of people that have been diagnosed with hypertension (systolic blood pressure/diastolic blood pressure $\geq 140/90$ mmHg), that have been treated for lowering high blood pressure, and that have achieved and sustain optimal levels of blood pressure relative to the total number of people with hypertension.

In the Region of the Americas, only one-third (36.4% [40.9% of females and 32.3% of males]) of individuals aged 30-79 years with hypertension achieved hypertension control in 2019 (latest year of available data) (Figure 31). The population hypertension control rates varied substantially by country, ranging from a high of 60.7% in Canada to a low of 8.1% in Haiti, with females having much higher hypertension control rates than males in almost all countries.

Figure 31. Age-standardized rate of hypertension control among people aged 30-79 years with hypertension, by sex across countries of the Americas, 2019



Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2024;398(10304):957-980. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01330-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01330-1/fulltext).

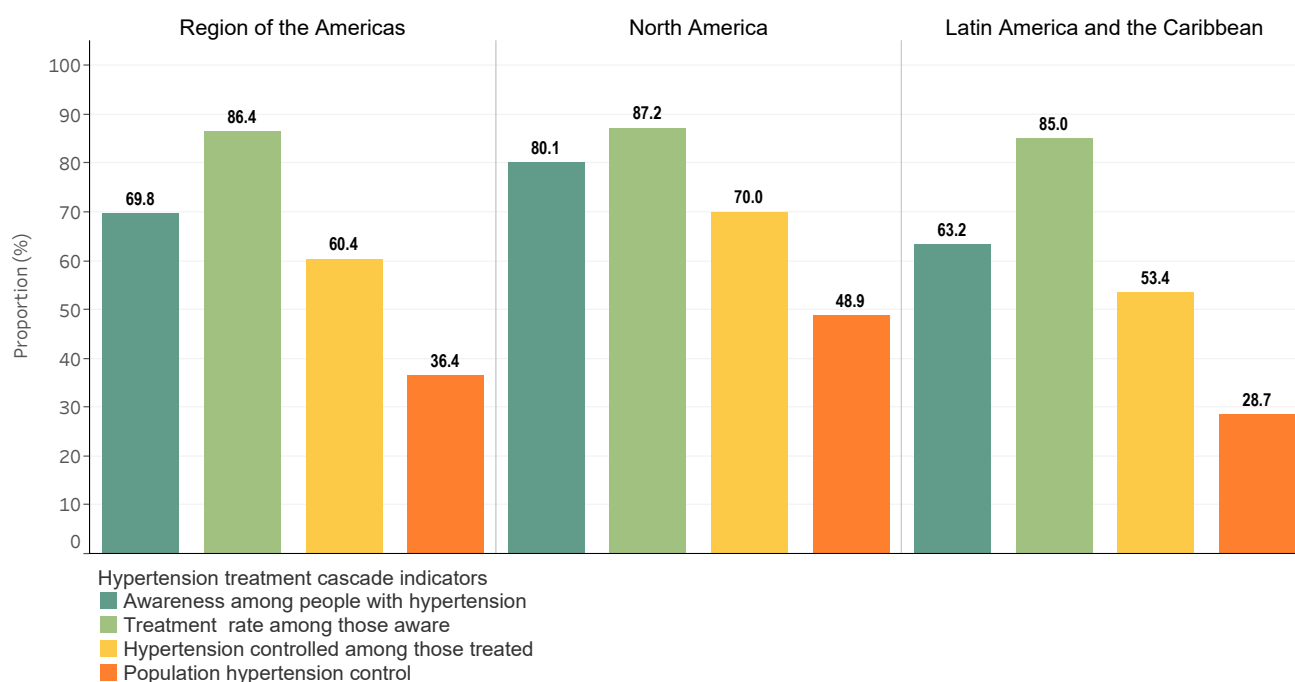
Hypertension treatment cascade

In the Region of the Americas, 69.8% of people with hypertension were aware of their diagnosis (Figure 32), and while 86.4% of them received treatment, only 60.4% of those treated achieved adequate blood pressure control in 2019 (latest year of available data). In sum, one-third (36.4%) of individuals with hypertension achieved hypertension control.

In North America (Canada and the United States of America) 80.1% of people with hypertension were aware of the diagnosis, 87.2% of those aware of the condition were treated, and 70% of those treated achieved adequate blood pressure control. This is the subregion with the highest level of population hypertension control, with 48% of individuals with hypertension achieving hypertension control.

In Latin America and the Caribbean, 72% of females with hypertension were aware of their diagnosis, 64% were treated, and 35% achieved control; while in males with hypertension, 57% were aware of their diagnosis, 47% were treated, and 23% achieved control. This means only one-quarter (28.7%) in Latin America the Caribbean achieved hypertension control, with the largest gaps being in identifying people with hypertension (63.2%), and achieving blood pressure control in those who are treated (53.4%).

Figure 32. Hypertension treatment cascade measures in the Region of the Americas, North America, and Latin America and the Caribbean, 2019



Source: NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2024;398(10304):957-980. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01330-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01330-1/fulltext).

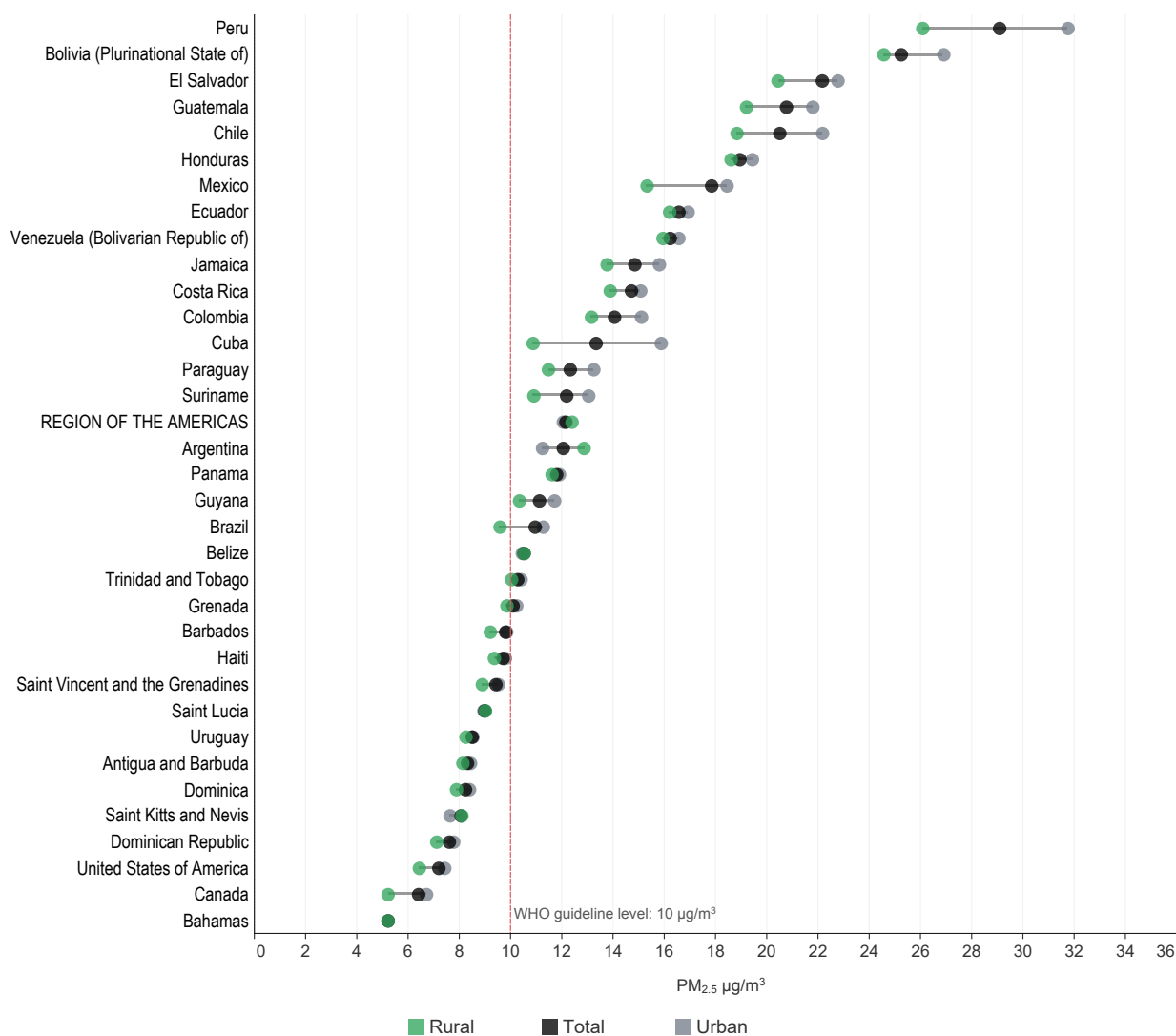
Ambient air pollution

Level of ambient air pollution in the Americas

Air pollution is a major environmental risk to health and increases the risk of acute and chronic respiratory diseases, including asthma and chronic obstructive pulmonary disease, heart diseases, and lung cancer.

In 2019, the regional mean population-weighted concentrations of fine particulate matter less than 2.5 microns in diameter (PM_{2.5}) was 12.1 µg/m³ (Figure 33), higher than the WHO air quality guidelines of 10 µg/m³. Twelve (34%) out of 35 PAHO Member States in the Americas had levels of exposure to concentrations of PM_{2.5} lower than the WHO guidelines. In the Region, the highest levels of exposure to concentrations to PM_{2.5} (≥20 µg/m³) were observed in Peru, the Plurinational State of Bolivia, El Salvador, Guatemala, and Chile.

Figure 33. Mean population-weighted concentrations of fine particulate matter of less than 2.5 microns in diameter (PM_{2.5}), by residence area in the Americas, 2019

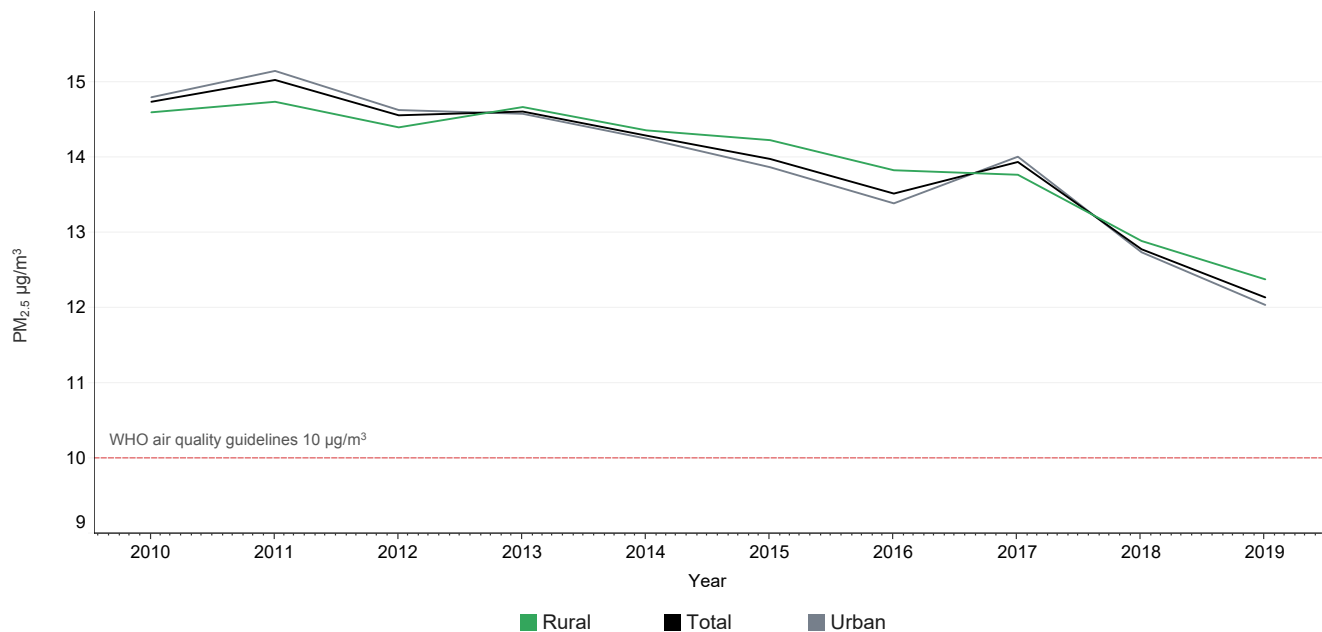


Note: No data are available or verified by national authorities for the countries not shown in the chart.
 Source: World Health Organization. NCD data portal. Comparable estimates available from 2010-2019. Available online: <https://ncdportal.org>.

Trends in ambient air pollution

The level of exposure to concentrations of PM_{2.5} in the Americas decreased from 2010 to 2019 (Figure 34). However, the regional levels of exposure (total, and urban and rural areas) were still higher than the WHO air quality guidelines. Countries of the Region need to make more efforts to comply with the WHO air quality guidelines.

Figure 34. Trend in population-weighted concentrations of fine particulate matter of less than 2.5 microns in diameter (PM_{2.5}), by residence area in the Americas, 2010-2019



Source: World Health Organization. NCD data portal. Comparable estimates available from 2010-2019. Available online: <https://ncdportal.org/>.



Technical Notes

Background

This publication presents information on the level and distribution of NCDs and their common risk factors across countries of the Region of the Americas. It includes indicators on the percentage and number of deaths from NCDs, age-standardized death rates due to the four main NCDs (cardiovascular diseases, cancer, diabetes and chronic respiratory diseases), and the risk of premature death from the four main NCDs – the indicator used to monitor Sustainable Development Goal Target 3.4 on NCDs. It also includes information on the prevalence of the main and common risk factors of NCDs.

The data presented are derived from several sources, each of which is explained in the following notes.

Mortality indicators

Indicator definitions

NCD deaths (2000-2021): Estimated number of NCD deaths by sex in countries of the Americas.

Age-standardized death rates per 100 000 population (2000-2021):

- **NCDs:** Age-standardized NCD death rates per 100 000 population, by sex and country
- **CVD:** Age-standardized cardiovascular disease death rates per 100 000 population, by sex and country
- **Cancer:** Age-standardized cancer death rates per 100 000 population, by sex and country
- **Chronic respiratory disease:** Age-standardized chronic respiratory disease death rates per 100 000 population, by sex and country
- **Diabetes:** Age-standardized diabetes death rates per 100 000 population, by sex and country
- **Suicide:** Age-standardized suicide death rates per 100 000 population in both sexes combined, by country

Probability of premature NCD mortality (%) (2016): Unconditional probability of dying at exact ages of 30-70 years from any of the four major NCDs (CVD, cancer, diabetes, and chronic respiratory diseases) expressed in percentage, by sex and country.

Methods of estimation

NCD mortality indicators presented in this publication were calculated based on the estimated number of deaths from the WHO Global Health Estimates (GHE) 2000-2021 comprehensive dataset (1).

Estimated deaths by age, sex, cause of death, and year for 35 PAHO Member States were extracted from the WHO GHE 2000-2021 comprehensive dataset (1). The WHO methods and data sources for the GHE estimates 2000-2021 are documented elsewhere (2). In summary, data from national vital statistics and mortality information systems reported to PAHO and WHO by national authorities were the main source. Mortality data were corrected by missing sex and age, and deaths were rescaled by sub-registration. Cause-of-death data quality issues due to diagnostic and coding accuracy were adjusted using formal demographic techniques called death distribution methods (DDM). For instance, deaths with underlying causes of death coded to ill-defined and garbage codes

were redistributed to well-defined causes and mapped to the GHE cause-of-death list (2).

NCDs comprise all deaths with an underlying cause of death in Group II of the GHE list of causes. The four major NCD deaths are those with underlying cause of death coded as cardiovascular diseases (I00-I99), cancer (C00-C97), diabetes (E10-E14), and chronic respiratory diseases (J30-J98), according to the GHE cause-of-death list (2).

Age-standardized death rates due to all NCDs and each of the four major NCDs rates and age-sex-specific death rates by country and year 2021 were calculated using estimates of the population from the World Population Prospects 2024 Revision database (3) for countries with a population size of 90 000 and over. The WHO World Standard Population (4) was used to adjust rates by changes in the population age distribution based on the direct method of standardization of rates.

Age-standardized suicide death rates per 100 000 population in both sexes combined by country were calculated from the estimated suicide deaths (ICD-10 codes used for suicide are: X60-X84, Y87.0) using the WHO World Standard Population (4) by the direct method.

The risk of premature death from major NCDs was measured as the unconditional probability of dying between the exact ages of 30 and 70 years from any of the four major NCDs (cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases) which was estimated for years 2000 to 2021 using age-specific death rates (in 5-year age groups, e.g., 30-34 ... 65-69, for those between 30 and 70) of the combined four main NCD categories, for each Member State (1). Using the life table method, the risk of death between the exact ages of 30 and 70 years, from any of the four causes and in the absence of other causes of death, was calculated as described below.

Five-year death rates were calculated using the equation below:

$${}_5M_x = \frac{{}_5D_x \text{ from 4 NCDs between exact age (x) and age (x + 5)}}{{}_5P_x}$$

Five-year death rates were then translated into the probability of death for each NCD using the following formula:

$${}_5q_x = \frac{5 \times {}_5M_x}{1 + 2.5 \times {}_5M_x}$$

The unconditional probability of death, for the 30-70 age range, was calculated using the formula:

$${}_{40}q_{30} = 1 - (1 - {}_5q_{30}) \times (1 - {}_5q_{35}) \times \dots \times (1 - {}_5q_{65})$$

Risk factor indicators

Prevalence estimates are given for the behavioral and metabolic risk factors defined below:

Total alcohol per capita consumption (APC), in liters of pure alcohol (2019): Total (sum of recorded APC and unrecorded APC) amount of alcohol consumed per person (15 years and older) over a calendar year, adjusted for tourist consumption, in liters of pure alcohol.

Insufficient physical activity (2022): The percentage of the population aged 18 years and older who were physically inactive - defined as not meeting the WHO recommendations on physical activity for health: 150 minutes of moderate-intensity physical activity per week, or 75 minutes of vigorous-intensity physical activity per week, or an equivalent combination of moderate- and vigorous-intensity physical activity.

Current tobacco smoking (2022): The percentage of the population aged 15 years and older who smoke any tobacco products.

Current tobacco use in adolescents (2022): The percentage of the youth population aged 13-15 years who used some smoked or smokeless tobacco product at least once in the 30 days prior to the survey.

Prevalence of hypertension (2000-2019): The proportion of people aged 30-79 years with hypertension (systolic blood pressure/diastolic blood pressure $\geq 140/90$ mmHg, or on medication for lowering high blood pressure) in the population.

Population hypertension control rate (2000-2019): The proportion of people aged 30-79 years with controlled hypertension (SBP/DBP $\leq 140/90$ mmHg) among people aged 30-79 years with hypertension.

Raised blood glucose (2022): The percentage of the population aged 18 years and older who have fasting plasma glucose of 7.0 mmol/L or HbA1c $\geq 6.5\%$ or currently taking medication for diabetes.

Obesity (2022):

- **Adults:** The percentage of the population aged 18 years and older having a body mass index (BMI) ≥ 30 kg/m²
- **Adolescents:** The percentage of the population aged 10-19 years who are more than 2 SD above the median of the WHO growth reference for children and adolescents.

Ambient air pollution (2019): The annual population-weighted mean concentrations of fine particulate matter ≤ 2.5 microns (PM_{2.5}) in the air ($\mu\text{g}/\text{m}^3$).

Methods of estimation

The primary data source for the estimates for total alcohol per capita consumption (APC) was government data on recorded alcohol per capita consumption supplied by the respective Member States. Where these data were not available, data from economic operators and the Food and Agriculture Organization of the United Nations statistical database (FAOSTAT) were used. The total per capita consumption of alcohol in 2016 was calculated from a three-year average of recorded (for 2018, 2019, and 2020) per capita consumption and applying unrecorded proportion (for 2019) and tourist consumption (for 2019) of tourists visiting the country and inhabitants visiting other countries. For male and female per capita consumption, the proportion of alcohol consumed by males versus females and the UN Population Division population estimates were used (3). Further details on the estimation methods are published in the Regional Status Report on Alcohol in the Americas 2020 (5).

For the adult insufficient physical activity estimates, data were pooled from population-based surveys reporting on the prevalence of insufficient physical activity, which included self-reported physical activity at work, at home, for transport, and during leisure time. Regression models were used to adjust survey data to a standard definition and standard age groups. In order to derive a standard year, time trends were estimated using multilevel mixed-effects modeling. Full methodological details have been published (6).

The prevalence of current tobacco smoking was estimated from national surveys that met the following criteria: (i) that the survey provided national summary data for one or more of four tobacco use definitions - daily tobacco smoker, current tobacco smoker, daily cigarette smoker, or current cigarette smoker; (ii) that the survey included randomly selected participants who were representative of the national population; and (iii) that the survey presented prevalence rates by age and sex. Countries with no surveys or insufficient surveys (e.g., only one survey in total, or no survey during the previous 10 years), were excluded from the analysis. Regression models were run at the United Nations subregional level to obtain age-and-sex-specific prevalence rates for current tobacco smoking for the years 2010-2025 (7).

Prevalence of hypertension, and hypertension awareness, treatment, and control rates were estimated using standard methods from a pool analysis of data from population-based and nationally representative studies (8).

Prevalence of raised blood glucose, The prevalence of raised fasting blood glucose, and diabetes treatment were estimated using data from 1108 population-representative studies with 141 million participants aged 18 years and older with measurements of fasting glucose and glycated hemoglobin (HbA_{1c}), and information on diabetes treatment. Diabetes was defined as having a fasting plasma glucose (FPG) of 7.0 mmol/L or higher, having an HbA_{1c} of 6.5% or higher, or taking medication for diabetes. Diabetes treatment was defined as the proportion of people with diabetes who were taking medication for diabetes. A Bayesian hierarchical meta-regression model was applied to estimate diabetes prevalence and treatment (9).

The prevalence of overweight and obesity was based on aggregated data provided by countries to WHO or obtained through a review of published and unpublished literature. The inclusion criteria for estimation analysis stipulated that data had to come from a random sample of the general population, with clearly indicated survey methods and risk factor definitions. Detailed estimation methods have been published (10).

The indicator of exposure to outdoor air pollution was estimated by dividing the annual mean concentration of fine particulate matter (particles with diameters ≤ 2.5 microns) (PM_{2.5}) in a country by the recommended annual mean concentration level of PM_{2.5} found in *WHO Air Quality Guidelines: Global Update 2005* (11). Country-level estimates of PM_{2.5} were derived using a mathematical model that used ground-level measurements of fine particulate matter compiled in the WHO outdoor air pollution database (12), data from satellite remote sensing, and other demographic data (13).



References

- [1] World Health Organization. Global health estimates: Leading causes of death. Cause-specific mortality, 2000-2021. Geneva: WHO; 2024 [cited 11 March 2025]. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>.
- [2] World Health Organization. WHO methods and data sources for global causes of death, 2000-2021. Geneva: WHO; 2024. Available from: https://cdn.who.int/media/docs/default-source/gho-documents/global-health-estimates/ghe2021_cod_methods.pdf?sfvrsn=dca346b7_1.
- [3] United Nations. World Population Prospects - 2024 revision. New York: United Nations; 2024 [cited 12 March 2025]. Available from: <https://population.un.org/wpp/>.
- [4] Ahmad OB, Boschi-Pinto C, Lopez AD, et al. Age standardization of rates: a new WHO standard-GPE Discussion Paper Series No. 31. Geneva: WHO; 2001. Available from: https://cdn.who.int/media/docs/default-source/gho-documents/global-health-estimates/gpe_discussion_paper_series_paper31_2001_age_standardization_rates.pdf.
- [5] World Health Organization. Global status report on alcohol and health and treatment of substance use disorders. Geneva: WHO; 2024. Available from: <https://www.who.int/publications/item/9789240096745>.
- [6] Strain T, Flaxman S, Guthold R, et al. National, regional, and global trends in insufficient physical activity among adults from 2000 to 2022: a pooled analysis of 507 population-based surveys with 5.7 million participants. *Lancet Glob Health*. 2024;12(8): e1232-e1243. Available from: [https://doi.org/10.1016/S2214-109X\(24\)00150-5](https://doi.org/10.1016/S2214-109X(24)00150-5).
- [7] World Health Organization. WHO global report on trends in prevalence of tobacco use 2000-2030. Geneva: WHO; 2024. Available from: <https://www.who.int/publications/item/9789240088283>.
- [8] NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. *Lancet*. 2024;398(10304):957-980. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01330-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01330-1/fulltext).
- [9] NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: a pooled analysis of 1108 population-representative studies with 141 million participants. *Lancet*. 2024;404(10467):2077-2093. Available from: [https://doi.org/10.1016/S0140-6736\(24\)02317-1](https://doi.org/10.1016/S0140-6736(24)02317-1).
- [10] NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. *Lancet*. 2024;403(10431):1027-1050. Available from: [https://doi.org/10.1016/S0140-6736\(23\)02750-2](https://doi.org/10.1016/S0140-6736(23)02750-2).
- [11] World Health Organization. Air Quality Guidelines: Global update 2005. Copenhagen: WHO Regional Office for Europe; 2006. Available from: <https://www.who.int/publications/item/WHO-SDE-PHE-OEH-06.02>.
- [12] World Health Organization. Ambient air pollution. Geneva: WHO; 2025 [cited 12 March 2025]. Available from: <http://www.who.int/airpollution/data/cities/en/>.
- [13] World Health Organization. Ambient air pollution: A global assessment of exposure and burden of disease. Geneva: WHO; 2016. Available from: <https://www.who.int/publications/item/9789241511353>.

Effective surveillance and monitoring of noncommunicable diseases (NCDs) and their risk factors are essential for informing evidence-based public health policies, addressing health inequities, and ensuring progress toward global and regional targets. By tracking trends in NCDs, their modifiable risk factors such as tobacco use, unhealthy diets, physical inactivity, harmful use of alcohol, and air pollution, along with biological risk factors such as overweight and obesity, high blood pressure (hypertension), and elevated blood glucose (diabetes), policymakers can identify emerging threats and target vulnerable populations, allocating resources efficiently. Reliable data also enable countries to evaluate interventions, adjust policies, and strengthen health systems to reduce the burden of NCDs.

This brochure presents data on NCD and suicide mortality, along with trends by sex, in the Region of the Americas and 35 Member States of the Pan American Health Organization (PAHO) from 2000 to 2021. It also highlights progress toward the 2025 global NCD targets.

While the number of NCD-related deaths in the Region increased to 6 million in 2021, the age-standardized NCD mortality rate declined by 16.2%, reflecting the impact of population growth and aging. However, premature NCD mortality – the key indicator for the Global Action Plan for NCD Prevention and Control – declined by only 0.71% annually between 2010 and 2021, falling short of the 1.92% annual reduction required to meet the 2025 target.

Among modifiable risk factors, tobacco use showed the most significant decline from 2000 to 2021, while insufficient physical activity has been on the rise. Metabolic risks, including high fasting blood glucose, overweight, and obesity, exhibited concerning upward trends during this period. Hypertension control remains suboptimal, with only 36.4% of individuals achieving adequate blood pressure levels ($\leq 140/90$ mmHg). While ambient air pollution slightly decreased between 2000 and 2019, current levels remain above World Health Organization (WHO) guideline thresholds.

To achieve global and regional NCD targets and improve population health in the Americas, countries must prioritize cost-effective interventions to reduce NCD mortality and address these persistent challenges.

PAHO

www.paho.org



Pan American
Health
Organization



World Health
Organization
Americas Region