

# NCDIS AT A GLANCE 

# Noncommunicable Disease Mortality and Risk Factor Prevalence in the Americas 

NCDs at a Glance: NCD Mortality and Risk Factor Prevalence in the Americas PAHO/NMH/19-014

## © Pan American Health Organization 2019

All rights reserved. Publications of the Pan American Health Organization (PAHO) are available at (www.paho.org) Requests for permission to reproduce or translate its publications should be addressed to the Publications Program through the website (www.paho.org/permissions).

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.


## Risk Factors

Risk Factor Prevalence in the Americas 15
Tobacco Use 16
Overweight and Obesity 17
Harmful Use of Alcohol 19
Noncommunicable Diseases
NCD Deaths in the Americas 04
NCD Mortality Rates 05
Risk of Dying Prematurely from NCDs 07
Cardiovascular Diseases 09
Cancer 10
Diabetes 11
Chronic Respiratory Diseases 12
Suicide 13


Noncommunicable diseases (NCDs), principally cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases, are the leading causes of death, and are responsible for approximately $80 \%$ of all deaths in the Region of the Americas. NCDs can be prevented through reduction of their main risk factors, namely tobacco use, harmful use of alcohol, unhealthy diet, and physical inactivity. Premature deaths from NCDs can be mitigated through timely disease detection, treatment and care.

The NCD agenda has been expanded beyond this concept of four diseases and four risk factors. Mental health is now included in the global NCD agenda, and air pollution, globally recognized as a significant risk factor for cardiovascular diseases and chronic respiratory diseases, is now included as the fifth NCD risk factor.

This document considers the $5 \times 5$ NCD agenda and presents a snapshot of data on NCDs and risk factors for the Region of the Americas, for each category of disease and risk factor, by sex and for the 35 Member States of the Pan American Health Organization. It is intended to provide a visual snapshot of the current status of NCD mortality and risk factor prevalence and convey the significance of the burden of NCDs throughout the Region.


## NCD Deaths in the Americas



## NCD deaths by subregion*



North America

Central America, Mexico
and Latin Caribbean
1,146,000 total deaths

South America and Andean Area
$\mathbf{1 , 9 4 0 , 8 0 0}$

| $\mathbf{4 0 , 4 8 0}$ |
| :--- |
| 51,220 total deaths |



3,058,000 total deaths
$39 \%$ of NCD deaths are in people under 70 years of age

## NCD Mortality Rates

## 5.5 million deaths

The regional NCD mortality rate is 436.5/100,000, ranging from a high in Guyana of $\mathbf{8 3 1 . 4}$ per 100,000 to a low in Canada of 291.5 per 100,000. Countries in the Non-Latin Caribbean subregion have among the highest NCD mortality rates.


Age-standardized NCD death rates per 100,000 population, 2016

## PREMATURE NCD MORTALITY

## 2.2 million deaths

Approximately 39\% of NCD deaths occur in people under 70 years of age, and this varies by country depending on the population age structure. It is highest in Guyana (57.9\%) and Haiti (52.4\%) and lowest in Barbados (28.4\%) and Canada (28.5\%).

of NCD deaths in people $<70$ years of age


Proportion (\%) of NCD deaths in people under 70 years of age, 2016

Probability (\%) of dying prematurely (30-70 years of age) from NCDs, 2016

## Risk of Dying Prematurely from NCDs

The probability of dying from one of the four main NCDs, between the ages of 30-70 years, was $15 \%$ ( $18 \%$ for males, $\mathbf{1 3 \%}$ for females) in the Region of the Americas in 2016. This has decreased substantially since 2000, when the risk of premature NCD death was 19\% (23\% for males, $16 \%$ for females). Based on this trend, and a simple linear projection for 2016-2025, the target of $25 \%$ reduction in premature NCD mortality by 2025 , relative to the 2010 baseline will not be met for the overall region.
$\qquad$

## In the Region of the

 Americas: Unconditional probability of dying between the ages of 30-70 years from one of the four main NCDs, by sex, 2000-2016 with projections to 2025

By country: Unconditional probability of dying between the ages of 30-70 years from one of the four main NCDs, by sex, $2000-2016$ with projections to 2025


## [cont.]



## Cardiovascular Diseases

## 1.9 million deaths

Cardiovascular diseases (CVD), including ischemic heart disease, cerebrovascular disease, and rheumatic heart disease are the leading causes of NCD deaths in all countries, with the exception of Canada. The regional CVD mortality rate in 2016 was 150.7/100,000 and it was much higher in men (185.2/100,000) than in women (121.6/100,000). CVD mortality rates differ substantially by country, with a six-fold difference between the highest rate in Guyana $(443.5 / 100,000)$ and the lowest rate in Canada (75.8/100,000).

CVD death rate per 100,000 population 150.7


[^0]
## Cancer

## 1.3 million deaths

Cancer is the second leading cause of NCD deaths in the Region of the Americas. The cancer death rate in the region was 105.7/100,000 in 2016, and it was highest in Grenada (155.5/100,000) and Uruguay (154.3/100,000), and lowest in Mexico (72.1/100,000) and Guatemala (78.3/100,000). Overall, men have higher cancer death rates than women, except in Bolivia, Guyana, and El Salvador where rates are higher among women. An estimated $40 \%$ of cancers can be prevented through healthy lifestyles, a third of cancers can be diagnosed in a timely manner through screening and early detection, and all people
 can benefit from appropriate treatment and palliative care.


Age-standardized cancer death rates per 100,000 population, 2016

## Diabetes

## 342,603 deaths

Diabetes, a metabolic disease characterized by elevated levels of blood glucose, and in particular type 2 diabetes has increased dramatically over the past three decades, largely as a consequence of the rise in obesity. The diabetes death rate in the Americas was 33.1/100,000 in 2016, and it was highest in the Non-Latin Caribbean. Diabetes death rates range from a high of 115.5/100,000 in Trinidad and Tobago to a low of 9.1/100,000 in Canada. Diabetes can be prevented through adoption of healthy lifestyles and maintaining a healthy body weight, and

Diabetes death rate per 100,000 population 33.1 in persons with diabetes, it can be effectively controlled with drug therapy and healthy lifestyles.


Age-standardized diabetes death rates per 100,000 population, 2016

## Chronic Respiratory Diseases

## 496,695 deaths

Chronic respiratory diseases (CRD) include chronic obstructive pulmonary disease, asthma, occupational lung diseases and pulmonary hypertension. Tobacco smoke is perhaps the most significant CRD risk factor, and other risk factors include air pollution, occupational chemicals and dusts. The CRD death rate in the Americas was 36.2/100,000 in 2016, and it was higher among men than in women. It was highest in Argentina (53.1/100,000), Haiti (44.1/100,000), and Colombia (41.0/100,000), while lowest in the Bahamas (9.6/100,000). These diseases are not curable; however, treatment can help

GRD death rate per 100,000 population
36.2 control symptoms and improve the quality of life for people with CRD.


Age-standardized chronic respiratory disease death rates per 100,000 population, 2016

## Suicide

## 97,288 deaths

Suicide is a tragedy that affects families, communities and entire countries and has long-lasting effects on the people left behind. Suicide is a common phenomenon in all countries, occurring throughout the lifespan, but is more common among adolescents and young adults. The regional suicide mortality rate was $9.1 / 100,000$ in 2016. Guyana had the highest rate ( $30.2 / 100,000$ ), some three times higher than the regional average, followed by Suriname (23.2/100,000) and Uruguay (18.4/100,000). Suicides are preventable with timely, evidence-based, and often low-cost mental

Suicide death rate per 100,000 population
9.1 health support and interventions.


Age-standardized suicide death rates per 100,000 population, 2016


## Risk Factor Prevalence in the Americas




## Tobacco Use

The estimated prevalence of tobacco smoking in adults was $15.2 \%$ ( $19.3 \%$ in men and $11.1 \%$ in women) in the Region, in 2017. In general, men smoke more than women. Among adolescents aged 13 to 15 years, the prevalence of tobacco use in the Americas was $11.4 \%$, in 2016, ranging from a high of $25.3 \%$ in Dominica to a low of $6.9 \%$ in Brazil.

## Prevalence of current tobaceo smoking in ADULTS

15.2\%

## Prevalence of current tobacco use in ADOLESCENTS <br> 11.4\%

Prevalence (\%) of current tobacco smoking in adults, 2017


Prevalence (\%) of current tobacco use in adolescents by subregion, 2016


Prevalence (\%) of current tobacco use in adolescents (13-15 years of age)


## Overweight and Obesity

Obesity increases the risk of diabetes, hypertension, coronary heart disease, stroke, and certain cancers, among other conditions. The estimated prevalence of obesity was $28 \%$ ( $26 \%$ in men and $31 \%$ in women) in the Americas in 2016, the highest among all WHO regions. With the exception of Canada, the prevalence of obesity in adults was much higher among women than men.


Prevalence (\%) of obesity in adolescents, 10-17 years of age, 2016
Prevalence (\%) of obesity in adults, 2016

Overweight, coupled with obesity increases the risk of NCDs. The estimated regional prevalence of overweight and obesity was 62.5\% (64\% in men and $61 \%$ in women) in 2016, the highest among all WHO regions. The United States of America, Mexico, and the Bahamas had the highest prevalence of overweight and obesity, while Trinidad and Tobago had the lowest. Generally, the prevalence of overweight and obesity is higher among women in most countries.

Prevalence of overweight and ohesity in adults
62.5\%


Prevalence (\%) of overweight and obesity in adults, 2016

## Harmful Use of Alcohol

It is estimated that the adult population consumed 7.8 liters of pure alcohol per person per year, in the Region, in 2018. Alcohol consumption is much higher among men ( 12.2 liters/person/year) than women ( 3.6 liters/person/year), and this pattern is evident in all countries. Uruguay is the country with the highest level of alcohol consumption (11.1 liters/person/year), and Guatemala has the lowest level (2.5 liters/person/year).

Alcohol per capita consumption in adults (iliers/person/year)


Alcohol per capita consumption (liters/person/year) in adults, 2018

## Physical Inactivity

People who are insufficiently physically active have an increased risk of NCDs, compared with those who engage in at least $\mathbf{3 0}$ minutes of moderate-intensity physical activity most days of the week. Physical inactivity was most prevalent in Brazil and Costa Rica, while lowest in Uruguay and Dominica.


## Raised Blood Glucose

The prevalence of raised fasting blood glucose ( $\geq 7.0 \mathrm{mmol} / \mathrm{L}$ ) was estimated as $8.3 \%$ in adults ( $8.5 \%$ in men and $8.1 \%$ in women), in the Region, in 2014. It ranges from a high of $14.5 \%$ in Saint Kitts and Nevis to a low of $5.5 \%$ in Canada, and in most countries, it is higher among women than men.

Prevalence of raised fasting blood glucose in adults
0.5010


## Raised Blood Pressure

Raised blood pressure is the leading risk factor for cardiovascular diseases.
The prevalence of raised blood pressure (defined as systolic and/or diastolic blood pressure $\geq 140 / 90 \mathrm{mmHg}$ ) was estimated as $17.6 \%$ in adults ( $20.3 \%$ in men and $14.8 \%$ in women), in the Region, in 2015. It ranges from a high of $27.1 \%$ in Saint Lucia to a low of $12.9 \%$ in the United States of America.


## Ambient Air Pollution



Air pollution is a major environmental risk to health and increases the risk of acute and chronic respiratory diseases, including asthma, heart disease and lung cancer. The annual average of air pollution exceeds the WHO air quality guideline (AQG) level of $10 \mathrm{~g} / \mathrm{m}^{3}$ in all countries in the Region. The level of exceedance is particularly high ( $\geq 2.3 \%$ ) in Guatemala, Peru, Suriname, and El Salvador.


Exceedance of the WHO guideline level for the annual mean concentration of particles of $\leq \mathbf{2} .5$ micrometres in the air, 2016

## Global NCD Targets for 2025



A 25\% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.


Tobacco Use
30\%
reduction


Salt Intake
30\%
reduction


Harmful Use of Alcohol
10\%
reduction


Physical Inactivity

reduction


Diabetes \& Obesity

increase


CVD Druy Therapy
and Counseling

## 50\%

coverage


Essential Medicine \& Basic Technologies

coverage


This brochure presents data on mortality due to noncommunicable diseases (NCDs) and prevalence of their common risk factors for countries in the Region of the Americas. The focus is on the $5 \times 5$ NCD agenda, which includes the main NCDs (cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases) along with mental health; as well as the main NCD risk factors (tobacco use, harmful use of alcohol, unhealthy diet, physical inactivity) along with air pollution. It includes information on the number and percentage of deaths, age-standardized death rates, premature death from NCDs, and the prevalence of NCD risk factors. Data provided are based on the latest year available.

## Demographic data

Population (2016): The estimated mid-year population size in both sexes combined for 2016, by country.

## » Methods of estimation

The population estimates were taken from the latest revision of the World Population Prospects, Revision 2017. Further details on the estimation methods are published in the World Population Prospects Report 2017 [1]. Population estimates are regional and subregional levels were calculated by adding population estimates at country level for those countries included in each subregion.

## Mortality data

Total number of deaths (2016): estimated number of deaths due to all causes, in 2016.
NCD deaths (2016): estimated number of deaths due to all NCDs.

## Proportion of deaths due to NCDs (2016):

- All NCDs: percentage of deaths due to all NCDs from the total number of deaths.
- Cardiovascular diseases: percentage of deaths due to cardiovascular diseases from all NCD deaths.
- Cancer: percentage of deaths due to cancer from all NCD deaths.
- Chronic respiratory diseases: percentage of deaths due to chronic respiratory diseases from all NCD deaths.
- Diabetes: percentage of deaths due to diabetes from all NCD deaths.
- Other NCDs: percentage of deaths due to NCDs, excluding the four main NCDs (cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases), from all NCD deaths.

Death rates (2016):

- NCDs: age-standardized all NCD death rates per 100,000 population.
- Cardiovascular diseases: age-standardized cardiovascular diseases death rates per 100,000 population.
- Cancer: age-standardized cancer death rates per 100,000 population.
- Chronic respiratory diseases: age-standardized chronic respiratory disease death rates per 100,000 population.
- Diabetes: age-standardized diabetes death rates per 100,000 population.
- Suicide: age-standardized suicide death rates per 100,000 population.

Premature deaths due to NCDs (2016): percentage of NCD deaths that occurred in people under 70 years of age from all NCD deaths.

Probability of premature NCD mortality (2016): unconditional probability of dying at exact ages of 30 to 70 years from any of the four main NCDs (CVD, cancer, diabetes, and chronic respiratory disease) expressed in percentage.

## » Methods of estimation

Noncommunicable disease mortality data were calculated based on the estimated number of deaths from the WHO Global Health Estimates (GHE) 2018 [2].

Estimated total deaths and deaths by age, sex, cause of death, and year for 33 out of 35 PAHO Member States were extracted from the WHO GHE 2000-2016 comprehensive dataset [2]. Dominica and Saint Kitts and Nevis were excluded because no estimates were available, as their populations are less than 90,000 persons. The WHO methods and data sources for the GHE estimates 2000-2016 are documented elsewhere [3]. In summary, data from national vital statistics and mortality information systems reported to PAHO and WHO by national authorities are the main source. Mortality data were corrected to account for 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 death distribution methods. For instance, deaths with underlying causes of death coded to ill-defined and garbage codes are redistributed to well-defined causes and mapped to the GHE cause of death list [3].

NCD deaths 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 the underlying cause of death coded as cardiovascular diseases (IOO-I99), cancer (COO-C97), diabetes (E10-E14), and chronic respiratory diseases (J30-J98), according to the International Classification of Diseases, 10th Revision (ICD-10) and their mapping to the GHE cause of death list [3].

Age-standardized death rates for all NCDs, age-standardized death rates for the four main NCDs and age-sex-specific death rates by country for the year 2016 were calculated using World Population Prospects, 2017 Revision database [4] for countries with population size 90,000 and over, and the International Database from the US Census Bureau [5] for countries and territories with populations less than 90,000. The WHO World Standard Population [6] was used to calculate the age-standardized mortality rates by the direct method.

Premature mortality from NCDs, using the unconditional probability of dying between ages 30 and 70 years from any of the four main NCDs, was estimated for 2016 using age-specific death rates (in 5-year age groups, e.g. 30-34 ... 65-69, for those between 30 and 70 years) of the combined four main NCDs, for each Member State [2]. Using the life table method, the risk of death between the exact ages of 30 and 70 years, from any of the four NCDs and in the absence of other causes of death, was calculated as described below.

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

$$
{ }_{5} M_{x}=\frac{{ }_{5} D_{x} \text { from } 4 \text { NCDs between exact age }(x) \text { and age }(x+5)}{{ }_{5} P_{x}}
$$

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

$$
{ }_{5} q_{x}=\frac{5 \times{ }_{5} M_{x}}{1+2.5 \times{ }_{5} M_{x}}
$$

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

$$
{ }_{0} q_{30}=1-\left(1-{ }_{5} q_{30}\right) \times\left(1-{ }_{5} q_{35}\right) \times \ldots \times\left(1-{ }_{5} q_{65}\right)
$$

Suicide death rates were calculated from the estimated total number of suicide deaths per 100,000 population, using ICD 10 codes: X60-X84, Y87.0.

All mortality indicators were calculated at regional and subregional levels applying the corresponding method of calculation of the indicator using the aggregated number of deaths and respective aggregated population for those countries and territories in each sub-region.

## NCD Risk Factors

Prevalence estimates are age-standardized for the risk factors defined below:

- Total alcohol per capita consumption in adults (APC), in liters of pure alcohol (2018): 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 in adults (2016): 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.
- Salt intake in adults (2010): the mean population salt intake in grams per day among adults aged 20 years and older.
- Current tobacco smoking in adults (2017): the percentage of the population aged 15 years and older who smoke any tobacco products.
- Current tobacco use in adolescents (2016): the percentage of the student population aged 13 to 15 years who smoked cigarettes on one or more days, or smoked any tobacco product other than cigarettes, or used any smokeless tobacco product in the past 30 days prior to the survey.
- Raised blood pressure in adults (2015): the percentage of the population aged 18 years and older having systolic blood pressure $\geq 140 \mathrm{mmHg}$ and/or diastolic blood pressure $\geq 90 \mathrm{mmHg}$.
- Raised blood glucose in adults (2014): the percentage of the population aged 18 years and older who have a fasting plasma glucose of $7.0 \mathrm{mmol} / \mathrm{L}$ or higher, or a history of a diagnosis of diabetes, or use of insulin or oral hypoglycemic drugs.
- Obesity (2016):
o In adults: the percentage of the population aged 18 years and older having a body mass index (BMI) $\geq 30 \mathrm{~kg} / \mathrm{m}^{2}$.
- In 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.
- Overweight and Obesity (2016):
- In adults: the percentage of the population aged 18 years and older having a body mass index (BMI) $\geq 25 \mathrm{~kg} / \mathrm{m}^{2}$.
- Ambient air pollution (2016): the exceedance of the WHO guideline level for the annual mean concentration of particles of $\leq 2.5$ micrometers in the air (proportion).
- Household air pollution (2016): the percentage of the population with primary reliance on polluting fuels and technologies.


## » 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 country. If 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 2018 was calculated from a three-year average of recorded (for 2015, 2016, and 2017) per capita consumption and applying unrecorded proportion (for 2016) and tourist consumption (for 2016) of tourists visiting the country and inhabitants visiting other countries. For male and female per capita consumption, the proportion of alcohol consumed by men versus women, and the UN Population Division population estimates for 2016 [4], were used. Further details on the estimation methods can be found in the corresponding publication [7].

For physical inactivity, age-standardized estimates are based on data pooled from population-based surveys, which included self-reported data on 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 elsewhere [8].

Age-standardized estimates for sodium intake (grams per day) were estimated using hierarchical Bayesian estimation models based upon available data from urine-based and diet-based national and regional surveys. The full methodology has been published [9]. The sodium intake estimates were then converted to salt intake estimates by multiplying by 2.54 .

Crude-adjusted prevalence for 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 UN subregional level to obtain age-and-sex-specific prevalence rates for current tobacco smoking for the years 2010-2025 [10, 11]. The regional and subregional estimates for tobacco smoking in adults and tobacco use in adolescents may differ from other publications due to use of different methods of calculation and also by the countries considered.

Age-adjusted estimates for raised blood pressure, raised blood glucose, and obesity were 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 definition. Detailed estimation methods have been published elsewhere [12, 13, 14].

The indicator of exposure to outdoor air pollution was estimated by dividing the annual mean concentration of fine particulate matter (particles with diameters $\leq 2.5$ micrometers) (PM2.5) in a country by the recommended annual mean concentration level of PM2.5 found in WHO Air Quality Guidelines: Global Update 2005 [15]. Country level estimates of PM2.5 were derived using a mathematical model that used ground-level measurements of PM compiled in the WHO outdoor air pollution database [16], data from satellite remote sensing, and other demographic data [17].

The proportion of the population in a country relying mainly on polluting fuels and technologies for cooking was used as a proxy indicator for estimating population exposure to household air pollution. Current households using mainly coal, wood, charcoal, dung, crop residues, and kerosene are considered exposed. Information on the types of fuels and technologies used by households for cooking has been regularly reported in household surveys or census and compiled in the WHO household energy database [18]. The data were further modeled to derive point estimates by country and year at the national, urban, and rural levels [18].

For the NCD risk factors, the regional prevalence was obtained from WHO, where available, and based on the estimation methods reported by WHO. Where not available, regional prevalence and subregional prevalence were calculated by applying the population-weighted average method to the national estimates and the corresponding population for the year 2016.


## Noncommunicable Disease Mortality

|  | Total population 2016 | DEATHS |  |  |  | PROPORTION OF DEATHS DUE TO NCDS (\%) |  |  |  |  |  | All NCDs |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total number | NCD deaths |  |  | $\underset{\text { NCOS }}{\text { Nill }}$ | Cardiovascular | Cancer | Chronic respiratory diseases 2016 | Diabetes <br> 2016 | Other NCDs 2016 |  |  |  |
|  |  | 2016 |  |  | 2016 | 2016 | 2016 | 2016 |  |  |  | Total | 2016 |  |
|  |  |  | Total | Male | Female |  |  |  |  |  |  |  | Male | Female |
| Region of the Americas | 992,182,000 | 6,875,460 | 5,549,900 | 2,843,50 | 2,706,390 | 80.7 | 28.1 | 19.6 | 7.2 | 5.0 | 20.8 | 436.5 | 518.1 | 369.6 |
| North America | 358,490,000 | 3,058,000 | 2,700,200 | 1,354,700 | 1,345,500 | 88.3 | 29.4 | 23.2 | 8.7 | 3.0 | 24.1 | 405.0 | 476.8 | 342.8 |
| Canada | 36,290,000 | 256,000 | 226,200 | 12,700 | 113,500 | 88.3 | 24.9 | 30.6 | 7.3 | 2.7 | 22.9 | 29.5 | 340.5 | 248.6 |
| United States of America | 322,200,000 | 2,802,000 | 2,474,000 | 1,242,000 | 1,232,000 | 88.3 | 29.9 | 22.4 | 8.8 | 3.0 | 24.2 | 417.8 | 492.1 | 353.4 |
| Central America and Mexico | 174,948,000 | 890,000 | 686,000 | 357,160 | 328,600 | 76.9 | 23.9 | 12.8 | 5.2 | 12.7 | 22.3 | 454.0 | 520.8 | 397.3 |
| Belize | 367,000 | 2,000 | 1,400 | 760 | 600 | 67.4 | 25.5 | 14.3 | 3.2 | 7.9 | 16.5 | 711.9 | 808.1 | 617.5 |
| Costa Rica | 4,857,000 | 25,000 | 20,500 | 11,000 | 9,500 | 83.3 | 29.3 | 23.4 | 6.5 | 3.7 | 20.3 | 366.4 | 429.3 | 310.6 |
| El Salvador | 6,345,000 | 42,00 | 31,100 | 16,000 | 15,100 | 73.8 | 23.2 | 15.7 | 2.9 | 5.4 | 26.6 | 49.1 | 594.1 | 412.2 |
| Guatemala | 16,582,000 | 80,000 | 47,500 | 23,900 | 23,500 | 59.2 | 17.3 | 10.0 | 3.4 | 8.3 | 20.3 | 451.2 | 502.5 | 409.1 |
| Honduras | 9,113,000 | 39,000 | 26,200 | 13,000 | 13,200 | 66.5 | 25.1 | 14.0 | 4.3 | 2.1 | 21.0 | 442.3 | 493.1 | 401.0 |
| Mexico | 127,500,000 | 653,000 | 521,800 | 272,700 | 249,000 | 79.9 | 24.4 | 12.3 | 5.6 | 15.3 | 22.4 | 457.7 | 525.7 | 399.4 |
| Nicaragua | 6,150,000 | 29,000 | 22,300 | 11,500 | 10,800 | 76.4 | 24.6 | 14.1 | 3.6 | 5.6 | 28.5 | 473.1 | 54.7 | 412.2 |
| Panama | 4,034,000 | 20,000 | 15,200 | 8,300 | 6,900 | 74.6 | 27.2 | 17.3 | 6.4 | 7.0 | 16.8 | 368.0 | 430.7 | 311.2 |
| Latin Caribbean | 32,972,000 | 256,000 | 182,600 | 95,700 | 86,900 | 71.3 | 33.1 | 16.2 | 3.9 | 3.5 | 14.5 | 545.0 | 612.0 | 486.1 |
| Cuba | 11,476,000 | 98,000 | 82,400 | 44,200 | 38,300 | 83.7 | 35.6 | 24.9 | 5.6 | 2.4 | 15.1 | 399.8 | 470.4 | 336.9 |
| Dominican Republic | 10,649,000 | 66,000 | 47,500 | 25,600 | 21,800 | 72.3 | 34.9 | 16.0 | 2.6 | 3.7 | 15.1 | 49.3 | 560.7 | 427.5 |
| Haiti | 10,87,000 | 92,000 | 52,70 | 25,900 | 26,800 | 57.1 | 28.9 | 7.4 | 3.4 | 4.3 | 13.2 | 751.4 | 812.2 | 701.4 |
| Andean Area | 139,268,000 | 790,000 | 563,200 | 295,300 | 268,000 | 71.2 | 26.5 | 17.1 | 5.4 | 5.1 | 17.1 | 450.0 | 530.3 | 385.5 |
| Bolivia (Plurinational State of) | 10,888,000 | 71,000 | 45,90 | 23,500 | 22,400 | 64.5 | 23.5 | 11.2 | 4.6 | 4.0 | 21.2 | 495.0 | 539.5 | 456.3 |
| Colombia | 48,65,000 | 282,000 | 211,400 | 110,100 | 101,200 | 74.8 | 29.7 | 19.9 | 6.5 | 3.4 | 15.3 | 462.8 | 547.2 | 396.1 |
| Ecuador | 16,385,000 | 84,000 | 60,700 | 31,500 | 29,300 | 72.2 | 23.6 | 16.6 | 5.2 | 7.7 | 19.1 | 405.0 | 455.6 | 361.2 |
| Peru | 31,774,000 | 172,000 | 119,400 | 61,500 | 57,900 | 69.2 | 20.8 | 16.6 | 5.6 | 3.5 | 22.8 | 414.6 | 477.5 | 361.6 |
| Venezuela (Bolivarian Republic of) | 31,568,000 | 181,000 | 125,800 | 68,700 | 57,200 | 69.5 | 29.9 | 15.8 | 4.0 | 8.3 | 11.6 | 473.8 | 593.2 | 381.6 |
| Southern Cone | 279,626,000 | 1,827,000 | 1,377,600 | 720,400 | 657,200 | 75.3 | 27.9 | 18.6 | 7.0 | 4.6 | 17.1 | 444.1 | 550.0 | 362.6 |
| Argentina | 43,84,000 | 328,000 | 254,500 | 128,500 | 126,000 | 77.6 | 27.8 | 20.0 | 10.5 | 2.8 | 16.5 | 424.7 | 552.3 | 334.4 |
| Brazil | 207,00,000 | 1,320,000 | 975,400 | 516,800 | 458,500 | 73.9 | 28.0 | 17.7 | 6.4 | 5.0 | 16.8 | 451.8 | 555.6 | 370.2 |
| Chile | 17,910,000 | 110,000 | 92,900 | 47,500 | 45,400 | 84.7 | 27.1 | 25.5 | 6.4 | 4.7 | 21.0 | 379.5 | 471.8 | 309.7 |
| Paraguay | 6,725,000 | 36,000 | 27,000 | 14,000 | 13,100 | 74.4 | 28.9 | 15.9 | 3.2 | 6.6 | 19.7 | 506.0 | 552.6 | 464.0 |
| Uruguay | 3,444,000 | 33,00 | 27,800 | 13,600 | 14,200 | 84.9 | 28.2 | 26.3 | 8.2 | 2.9 | 19.4 | 436.7 | 580.0 | 340.1 |
| Non-Latin Caribbean | 6,878,000 | 51,920 | 40,480 | 20,630 | 19,820 | 76.8 | 30.8 | 17.2 | 3.1 | 10.8 | 14.9 | 534.6 | 615.9 | 469.5 |
| Antigua and Barbuda | 101,000 | 650 | 530 | 270 | 260 | 81.8 | 32.8 | 20.6 | 4.4 | 8.2 | 15.8 | 548.3 | 667.3 | 464.7 |
| Bahamas | 391,000 | 2,400 | 1,800 | 890 | 880 | 73.9 | 30.3 | 22.2 | 1.7 | 5.0 | 14.7 | 418.4 | 511.0 | 351.8 |
| Barbados | 285,000 | 3,200 | 2,700 | 1,300 | 1,300 | 82.8 | 29.4 | 22.7 | 3.5 | 8.9 | 18.2 | 522.7 | 638.4 | 436.6 |
| Dominica | 74,000 | ... |  |  | ... | .. | .. | ... | ... | ... | ... | ... | ... |  |
| Grenada | 107,000 | 780 | 630 | 310 | 330 | 81.3 | 31.9 | 20.0 | 2.5 | 10.6 | 16.3 | 607.0 | 706.9 | 525.4 |
| Guyana | 773,000 | 6,600 | 4,400 | 2,300 | 2,200 | 67.6 | 34.5 | 8.4 | 2.9 | 8.3 | 13.5 | 831.4 | 886.6 | 777.9 |
| Jamaica | 2,881,000 | 20,000 | 15,800 | 7,900 | 7,900 | 80.0 | 29.7 | 19.8 | 3.2 | 11.9 | 15.4 | 434.3 | 480.2 | 395.3 |
| Saint Kitts and Nevis | 55,000 | ... |  |  | ... | ... | ... | ... | ... | ... | ... | ... | ... |  |
| Saint Lucia | 178,000 | 1,300 | 1,100 | 560 | 530 | 82.0 | 33.3 | 19.3 | 4.9 | 8.8 | 15.8 | 488.0 | 565.1 | 422.1 |
| Saint Vincent and the Grenadines | 110,000 | 890 | 720 | 400 | 320 | 81.0 | 35.6 | 18.6 | 3.3 | 10.8 | 12.7 | 655.7 | 789.9 | 54.1 |
| Suriname | 558,000 | 4,000 | 3,000 | 1,600 | 1,400 | 75.9 | 33.2 | 15.7 | 2.4 | 6.4 | 18.3 | 616.5 | 759.7 | 503.5 |
| Trinidad and Tobago | 1,365,000 | 12,100 | 9,800 | 5,100 | 4,700 | 80.7 | 32.6 | 15.5 | 3.3 | 15.3 | 14.0 | 620.3 | 755.5 | 519.0 |


| DEATH RATES, AGE-STANDARDIZED PER 100,000 POPULATION |  |  |  |  |  |  |  |  |  |  |  |  | PREMATURE NCD DEATHS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cardiovascular diseases |  |  | Cancer |  |  | Diabetes |  |  | Chronic respiratory diseases |  |  | Suicide | Proportion (\%) of NCD deaths <70 years of age 2016 | Probability (\%) of dying between $30-70$ years due to NCDs <br> 2016 |  |  |  |
| Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |  | Total | Male | Female |  |
| 150.7 | 185.2 | 121.6 | 105.7 | 122.4 | 93.5 | 33.1 | 35.6 | 30.8 | 36.2 | 44.2 | 30.3 | 9.1 | 38.9 | 15.1 | 17.8 | 12.6 | Region of the Americas |
| 127.6 | 159.6 | 99.3 | 113.5 | 131.7 | 99.3 | 14.6 | 18.2 | 11.5 | 37.9 | 43.7 | 33.7 | 13.4 | 33.6 | 14.1 | 16.9 | 11.4 | North America |
| 75.8 | 94.8 | 58.5 | 110.9 | 126.9 | 98.3 | 9.1 | 11.5 | 7.0 | 22.4 | 27.1 | 18.9 | 10.4 | 28.5 | 9.8 | 11.5 | 8.1 | Canada |
| 133.4 | 167.0 | 103.9 | 113.8 | 132.3 | 99.4 | 15.3 | 19.0 | 12.0 | 39.7 | 45.6 | 35.4 | 13.7 | 34.1 | 14.6 | 17.5 | 11.8 | United States of America |
| 139.2 | 165.4 | 116.8 | 77.2 | 81.6 | 74.3 | 77.9 | 80.5 | 75.4 | 29.6 | 35.4 | 25.1 | 5.5 | 41.8 | 15.2 | 16.8 | 13.8 | Central America and Mexico |
| 288.1 | 326.1 | 249.8 | 138.8 | 170.7 | 108.5 | 85.6 | 75.6 | 95.3 | 35.6 | 52.5 | 19.3 | 5.9 | 47.5 | 22.1 | 25.5 | 18.5 | Belize |
| 126.0 | 152.2 | 101.9 | 105.2 | 122.8 | 91.0 | 16.4 | 16.4 | 16.3 | 27.3 | 32.1 | 23.3 | 7.5 | 36.6 | 11.5 | 13.7 | 9.4 | Costa Rica |
| 150.3 | 179.0 | 128.3 | 106.5 | 104.8 | 107.9 | 36.9 | 33.6 | 39.3 | 18.6 | 20.7 | 17.0 | 13.5 | 38.0 | 14.0 | 15.1 | 13.1 | El Salvador |
| 135.0 | 149.1 | 123.6 | 78.3 | 78.4 | 78.5 | 68.2 | 61.1 | 74.0 | 26.6 | 31.3 | 22.9 | 2.9 | 44.2 | 14.9 | 14.9 | 15.0 | Guatemala |
| 170.8 | 235.1 | 117.0 | 95.2 | 98.4 | 94.0 | 15.0 | 10.6 | 18.6 | 29.2 | 25.8 | 32.1 | 3.4 | 45.0 | 14.0 | 16.1 | 12.1 | Honduras |
| 136.5 | 161.6 | 114.8 | 72.1 | 76.4 | 69.4 | 91.4 | 96.6 | 86.6 | 31.0 | 37.8 | 25.7 | 5.2 | 41.6 | 15.7 | 17.4 | 14.1 | Mexico |
| 155.0 | 172.0 | 141.4 | 89.6 | 99.9 | 82.3 | 36.9 | 32.3 | 40.5 | 22.5 | 27.3 | 19.0 | 11.9 | 44.6 | 14.2 | 14.8 | 13.7 | Nicaragua |
| 130.9 | 162.6 | 101.8 | 88.8 | 100.6 | 79.1 | 35.8 | 35.0 | 36.3 | 30.0 | 35.3 | 25.3 | 4.4 | 38.0 | 13.0 | 15.4 | 10.8 | Panama |
| 264.0 | 290.6 | 239.1 | 112.8 | 131.9 | 97.3 | 32.2 | 27.0 | 36.5 | 29.2 | 36.4 | 23.5 | 10.9 | 43.6 | 20.6 | 22.9 | 18.3 | Latin Caribbean |
| 161.1 | 190.2 | 134.3 | 127.1 | 155.2 | 103.1 | 12.1 | 10.6 | 13.3 | 26.1 | 29.7 | 23.4 | 10.1 | 34.7 | 16.4 | 19.0 | 13.8 | Cuba |
| 238.3 | 271.4 | 206.9 | 110.1 | 127.6 | 95.4 | 26.2 | 25.6 | 26.6 | 17.4 | 20.9 | 14.2 | 10.5 | 44.4 | 19.0 | 21.7 | 16.5 | Dominican Republic |
| 398.1 | 415.8 | 381.6 | 100.3 | 111.4 | 93.0 | 59.4 | 45.6 | 70.8 | 44.1 | 58.6 | 32.7 | 12.2 | 52.4 | 26.5 | 28.2 | 25.0 | Haiti |
| 169.7 | 209.6 | 137.0 | 107.5 | 117.3 | 101.2 | 33.2 | 35.9 | 30.9 | 34.3 | 42.8 | 27.8 | 6.3 | 43.5 | 15.4 | 17.6 | 13.3 | Andean Area |
| 180.5 | 206.4 | 156.8 | 89.5 | 81.3 | 98.1 | 32.9 | 30.8 | 34.8 | 34.5 | 41.2 | 29.1 | 12.9 | 46.6 | 17.2 | 17.7 | 16.8 | Bolivia (Plurinational State of) |
| 185.6 | 228.9 | 150.6 | 120.9 | 135.1 | 110.7 | 21.3 | 22.4 | 20.4 | 41.0 | 51.1 | 33.3 | 7.0 | 44.0 | 15.8 | 18.3 | 13.5 | Colombia |
| 131.6 | 154.2 | 111.5 | 95.1 | 98.3 | 93.6 | 44.8 | 44.8 | 44.8 | 28.3 | 35.6 | 22.2 | 7.2 | 39.7 | 13.0 | 13.9 | 12.2 | Ecuador |
| 124.1 | 146.7 | 103.9 | 100.6 | 106.2 | 97.7 | 21.7 | 23.6 | 19.9 | 33.6 | 42.1 | 26.8 | 5.1 | 41.5 | 12.6 | 14.1 | 11.2 | Peru |
| 207.3 | 272.9 | 155.6 | 106.1 | 123.4 | 95.2 | 57.3 | 66.2 | 49.8 | 27.8 | 35.0 | 22.8 | 3.8 | 45.5 | 18.1 | 21.8 | 14.5 | Venezuela (Bolivarian Republic of) |
| 162.9 | 204.5 | 130.0 | 111.5 | 136.9 | 93.7 | 27.7 | 29.9 | 25.8 | 40.1 | 52.4 | 31.7 | 7.0 | 42.6 | 16.2 | 19.6 | 13.1 | Southern Cone |
| 143.4 | 193.2 | 106.6 | 119.7 | 147.8 | 101.9 | 16.1 | 20.9 | 12.6 | 53.1 | 70.9 | 41.7 | 9.1 | 33.5 | 15.8 | 19.7 | 12.2 | Argentina |
| 170.3 | 211.6 | 137.2 | 108.5 | 133.1 | 90.8 | 30.3 | 32.2 | 28.6 | 39.1 | 50.6 | 31.1 | 6.1 | 45.4 | 16.6 | 20.0 | 13.5 | Brazil |
| 116.6 | 148.3 | 91.1 | 118.6 | 144.6 | 101.6 | 20.5 | 24.3 | 17.8 | 27.1 | 35.8 | 21.4 | 9.7 | 33.4 | 12.4 | 14.8 | 10.1 | Chile |
| 199.8 | 220.7 | 179.7 | 109.4 | 124.9 | 96.7 | 46.3 | 38.1 | 53.7 | 22.0 | 30.3 | 14.9 | 9.3 | 45.0 | 17.5 | 18.7 | 16.3 | Paraguay |
| 132.4 | 176.6 | 101.1 | 154.3 | 206.2 | 120.6 | 15.0 | 19.0 | 12.2 | 38.7 | 58.9 | 26.4 | 18.4 | 29.3 | 16.7 | 21.4 | 12.5 | Uruguay |
| 219.0 | 245.1 | 195.6 | 116.4 | 142.4 | 98.4 | 74.1 | 72.1 | 76.0 | 21.7 | 31.9 | 13.6 | 9.0 | 38.1 | 18.6 | 21.0 | 16.4 | Non-Latin Caribbean |
| 217.1 | 257.0 | 187.9 | 139.4 | 180.7 | 114.4 | 56.5 | 60.8 | 52.1 | 29.1 | 37.4 | 22.6 | 0.5 | 45.6 | 22.6 | 25.2 | 20.0 | Antigua and Barbuda |
| 171.9 | 206.0 | 144.1 | 124.7 | 161.4 | 102.7 | 28.0 | 28.7 | 27.2 | 9.6 | 15.3 | 5.8 | 1.6 | 44.5 | 15.5 | 18.6 | 12.7 | Bahamas |
| 179.7 | 214.9 | 151.0 | 150.2 | 188.3 | 124.6 | 53.3 | 55.2 | 51.2 | 21.0 | 31.1 | 14.2 | 0.4 | 28.4 | 16.2 | 19.7 | 12.9 | Barbados |
| ... | ... | ... | ... | ... | $\ldots$ | $\ldots$ | ... | $\cdots$ | ... | ... | ... | ... | ... | ... | ... | ... | Dominica |
| 235.4 | 267.6 | 207.6 | 155.5 | 197.0 | 127.2 | 79.0 | 85.2 | 71.9 | 18.5 | 21.3 | 16.6 | 1.7 | 36.2 | 21.4 | 25.5 | 17.3 | Grenada |
| 443.5 | 465.3 | 418.1 | 97.8 | 95.8 | 102.8 | 101.1 | 90.2 | 110.0 | 39.0 | 50.7 | 28.9 | 30.2 | 57.9 | 30.5 | 32.4 | 28.8 | Guyana |
| 152.7 | 160.5 | 144.9 | 115.8 | 144.5 | 92.6 | 64.5 | 54.3 | 73.3 | 17.4 | 27.8 | 8.7 | 2.0 | 30.3 | 14.7 | 16.0 | 13.4 | Jamaica |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | $\ldots$ | ... | ... | ... | ... | Saint Kitts and Nevis |
| 191.3 | 209.9 | 173.3 | 120.6 | 141.4 | 106.1 | 51.0 | 50.0 | 51.4 | 28.4 | 43.6 | 15.4 | 7.3 | 40.1 | 18.8 | 20.7 | 16.9 | Saint Lucia |
| 287.9 | 337.7 | 242.9 | 150.1 | 191.0 | 119.6 | 88.4 | 93.0 | 85.1 | 26.0 | 41.3 | 13.0 | 2.4 | 41.0 | 23.2 | 27.1 | 19.1 | Saint Vincent and the Grenadines |
| 272.2 | 338.5 | 216.9 | 126.1 | 152.7 | 108.9 | 51.7 | 56.9 | 47.3 | 19.9 | 28.8 | 13.2 | 23.2 | 47.3 | 21.7 | 26.4 | 17.2 | Suriname |
| 249.4 | 295.7 | 209.1 | 117.6 | 147.6 | 100.3 | 115.5 | 129.4 | 105.1 | 26.0 | 37.4 | 17.7 | 12.9 | 42.7 | 21.3 | 24.6 | 18.0 | Trinidad and Tobago |


|  | TOBACCO |  |  |  |  |  |  | ALCOHOL <br> Alcohol per capita consumption in adults (liters/per person/year) |  |  | OVEPWEIGHT AND OBESTTY |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prevalence of current tobacco smoking in adults (\%) |  |  | Prevalence of current tobacco use in adolescents (\%) |  |  |  |  |  |  | Prevalence of overweight and obesity in adults (\%) |  |  | Prevalence of obesity in adults (\%) |  |  | Prevalence of obesity in adolescents (\%) |  |  |
|  |  |  | 2017 |  |  |  | 2016 |  |  | 2018 |  |  | 2016 |  |  | 2016 |  |  | 2016 |
|  | Total | Male | Female |  | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| The Region of the Americas | 15.2 | 19.3 | 11.1 |  | 11.4 | 12.1 | 10.5 | 7.8 | 12.2 | 3.6 | 62.5 | 64.1 | 60.9 | 28.3 | 25.9 | 31.0 | 12.8 | 14.0 | 11.5 |
| North America | 19.6 | 22.8 | 16.4 |  | 7.5 | 8.4 | 6.5 | 9.7 | 15.0 | 4.6 | 67.5 | 72.4 | 62.7 | 35.5 | 34.9 | 36.2 | 19.8 | 21.4 | 18.0 |
| Canada | 13.5 | 16.0 | 11.1 | 206177 | 10.0 | 12.1 | 7.8 | 9.2 | 14.3 | 4.2 | 64.1 | 69.8 | 58.5 | 29.4 | 29.5 | 29.3 | 11.4 | 13.6 | 9.1 |
| United States of America | 20.3 | 23.6 | 17.0 | 2018 | 87.2 | 8.0 | 6.3 | 9.8 | 15.1 | 4.6 | 67.9 | 72.7 | 63.2 | 36.2 | 35.5 | 37.0 | 20.7 | 22.3 | 19.0 |
| Central America and Mexico | 11.2 | 17.3 | 5.2 |  | 18.0 | 19.9 | 15.9 | 5.9 | 9.4 | 2.5 | 62.9 | 61.0 | 64.6 | 27.2 | 22.3 | 31.4 | 12.3 | 13.4 | 11.1 |
| Belize | $\ldots$ | $\ldots$ | $\ldots$ | 2014 | 412.3 | 16.6 | 8.2 | 6.5 | 10.4 | 2.7 | 54.8 | 48.1 | 61.2 | 24.1 | 16.5 | 31.5 | 10.6 | 10.8 | 10.4 |
| Costa Rica | 10.1 | 15.1 | 5.1 | 2013 | 38 | 9.7 | 8.1 | 4.6 | 7.4 | 1.9 | 61.6 | 59.9 | 63.3 | 25.7 | 21.1 | 30.4 | 10.8 | 11.0 | 10.5 |
| El Salvador | 10.5 | 18.7 | 2.3 | 2015 | 513.1 | 15.3 | 10.7 | 3.7 | 6.2 | 1.6 | 59.9 | 57.0 | 62.3 | 24.6 | 18.9 | 28.9 | 10.3 | 9.4 | 11.1 |
| Guatemala |  | $\ldots$ | ... | 2015 | 17.1 | 19.5 | 14.4 | 2.5 | 4.1 | 1.1 | 55.9 | 51.4 | 59.9 | 21.2 | 15.1 | 26.4 | 8.4 | 8.4 | 8.5 |
| Honduras | $\ldots$ | $\ldots$ | $\ldots$ | 2016 | 77.9 | 9.6 | 6.4 | 4.1 | 6.6 | 1.6 | 55.8 | 51.8 | 59.5 | 21.4 | 15.6 | 26.9 | 8.2 | 7.8 | 8.6 |
| Mexico | 14.3 | 21.9 | 6.7 | 2011 | 119.8 | 21.6 | 17.7 | 6.6 | 10.5 | 2.8 | 64.9 | 63.6 | 66.0 | 28.9 | 24.3 | 32.8 | 13.5 | 15.2 | 11.7 |
| Nicaragua | $\ldots$ | $\ldots$ | $\ldots$ | 2014 | 417.6 | 20.6 | 14.5 | 5.4 | 8.8 | 2.2 | 58.2 | 54.7 | 61.4 | 23.7 | 17.9 | 29.0 | 9.3 | 8.7 | 10.0 |
| Panama | 6.0 | 9.7 | 2.2 | 2017 | 7.8 | 7.9 | 7.4 | 7.7 | 12.1 | 3.3 | 58.8 | 56.2 | 61.3 | 22.7 | 17.8 | 27.6 | 9.0 | 8.0 | 10.0 |
| Latin Caribbean | 15.6 | 22.3 | 8.9 |  | 12.9 | 13.9 | 11.6 | 6.4 | 10.2 | 2.6 | 58.2 | 54.2 | 62.0 | 24.9 | 19.2 | 30.4 | 10.6 | 12.1 | 9.1 |
| Cuba | 27.8 | 40.5 | 15.1 | 200 | 11.5 | 13.0 | 9.7 | 6.2 | 9.9 | 2.6 | 58.5 | 54.5 | 62.5 | 24.6 | 18.9 | 30.3 | 9.7 | 10.7 | 8.7 |
| Dominican Republic | 9.7 | 11.6 | 7.8 | 2016 | 7.4 | 8.3 | 6.0 | 7.1 | 11.3 | 3.0 | 61.2 | 56.9 | 65.3 | 27.6 | 21.0 | 34.1 | 13.1 | 13.7 | 12.5 |
| Haiti | 8.5 | 13.5 | 3.4 |  | 19.7 | 20.3 | 19.2 | 5.8 | 9.5 | 2.3 | 54.9 | 51.1 | 58.3 | 22.7 | 17.9 | 26.9 | 9.2 | 12.1 | 6.1 |
| Andean Area | 5.2 | 8.2 | 2.2 |  | 13.8 | 15.0 | 12.3 | 5.6 | 8.9 | 2.5 | 59.1 | 56.8 | 61.2 | 22.0 | 17.6 | 26.2 | 8.0 | 8.4 | 7.5 |
| Bolivia (Plurinational State of) | ... | $\ldots$ | $\ldots$ | 2018 | 810.9 | 13.6 | 8.1 | 5.2 | 7.9 | 2.5 | 56.1 | 52.2 | 59.8 | 20.2 | 14.5 | 25.6 | 7.8 | 8.2 | 7.3 |
| Colombia | 8.2 | 12.6 | 3.9 | 2017 | 20.2 | 20.6 | 19.6 | 5.7 | 9.2 | 2.4 | 59.0 | 56.6 | 61.2 | 22.3 | 17.6 | 26.6 | 6.1 | 6.3 | 6.0 |
| Ecuador | ... | $\ldots$ | $\ldots$ | 2016 | 13.0 | 15.3 | 10.7 | 5.6 | 8.6 | 2.7 | 56.0 | 52.6 | 59.2 | 19.9 | 14.9 | 24.7 | 8.0 | 8.9 | 7.2 |
| Peru | 10.2 | 16.6 | 3.8 | 2014 | 49.7 | 10.9 | 8.4 | 6.0 | 9.2 | 2.9 | 57.5 | 54.8 | 60.1 | 19.7 | 15.2 | 24.2 | 6.4 | 7.0 | 5.8 |
| Venezuela (Bolivarian Republic of) | $\ldots$ | $\ldots$ | $\ldots$ |  | 9.4 | 11.0 | 7.2 | 5.4 | 8.5 | 2.3 | 63.4 | 62.9 | 63.8 | 25.6 | 22.4 | 28.6 | 12.4 | 13.0 | 11.6 |
| Southern Cone | 17.2 | 21.4 | 12.8 |  | 10.8 | 10.1 | 11.3 | 7.8 | 12.4 | 3.6 | 57.9 | 59.4 | 56.4 | 23.5 | 20.3 | 26.3 | 10.2 | 11.8 | 8.5 |
| Argentina | 21.9 | 27.7 | 16.1 | 2012 | 20.2 | 18.7 | 21.4 | 9.5 | 14.7 | 4.7 | 62.7 | 66.2 | 59.3 | 28.3 | 27.3 | 29.0 | 14.4 | 18.3 | 10.4 |
| Brazil | 13.8 | 17.6 | 9.9 | 2015 | 5.9 | 6.7 | 7.0 | 7.3 | 11.7 | 3.2 | 56.5 | 57.6 | 55.4 | 22.1 | 18.5 | 25.4 | 9.0 | 10.1 | 7.8 |
| Chile | 45.0 | 49.2 | 40.7 | 2013 | 324.5 | 19.8 | 27.8 | 9.4 | 14.5 | 4.6 | 63.1 | 64.7 | 61.4 | 28.0 | 24.9 | 31.0 | 13.6 | 15.6 | 11.5 |
| Paraguay | 13.4 | 21.7 | 5.1 |  | 47.0 | 7.4 | 6.6 | 5.8 | 9.1 | 2.5 | 53.5 | 53.7 | 53.3 | 20.3 | 17.1 | 23.4 | 9.1 | 10.0 | 8.0 |
| Uruguay | 22.5 | 26.0 | 18.9 |  | 412.8 | 12.7 | 12.5 | 11.1 | 17.4 | 5.4 | 62.9 | 64.9 | 60.8 | 27.9 | 24.9 | 30.6 | 12.2 | 14.2 | 10.0 |
| Non-Latin Caribbean |  |  |  |  | 14.4 | 16.7 | 12.1 | 6.1 | 9.7 | 2.6 | 53.2 | 45.5 | 60.6 | 23.2 | 14.8 | 31.0 | 10.8 | 10.7 | 10.9 |
| Antigua and Barbuda | ... | $\ldots$ | $\ldots$ | 2017 | 7.5 | 7.9 | 7.0 | 7.5 | 12.1 | 3.4 | 48.0 | 40.1 | 55.6 | 18.9 | 11.6 | 25.9 | 10.0 | 9.6 | 10.3 |
| Bahamas | 11.0 | 18.6 | 3.3 | 2013 | 12.6 | 16.1 | 8.4 | 4.2 | 6.7 | 1.9 | 64.4 | 60.3 | 68.1 | 31.6 | 24.4 | 38.1 | 15.3 | 15.7 | 14.9 |
| Barbados | 7.7 | 13.3 | 2.1 | 2013 | 14.5 | 17.4 | 11.4 | 9.8 | 16.2 | 4.2 | 52.4 | 44.7 | 59.9 | 23.1 | 14.7 | 31.3 | 10.7 | 10.6 | 10.9 |
| Dominica | .. | $\ldots$ | $\ldots$ | 209 | 25.3 | 30.4 | 19.8 | 8.1 | 13.0 | 3.3 | 60.3 | 54.7 | 65.7 | 27.9 | 19.9 | 35.6 | 13.3 | 12.7 | 14.0 |
| Grenada | $\ldots$ | $\ldots$ | $\ldots$ | 2016 | 69.7 | 12.5 | 7.1 | 9.5 | 15.1 | 4.0 | 51.4 | 43.7 | 58.8 | 21.3 | 13.3 | 29.0 | 9.2 | 9.1 | 9.3 |
| Guyana | 12.6 | 23.0 | 2.3 | 2015 | 14.8 | 19.0 | 10.4 | 6.3 | 10.0 | 2.5 | 49.4 | 41.5 | 56.6 | 20.2 | 12.7 | 27.1 | 8.7 | 8.4 | 9.0 |
| Jamaica | 11.3 | 18.2 | 4.4 |  | 15.6 | 15.9 | 15.0 | 4.1 | 6.6 | 1.7 | 55.5 | 47.4 | 63.2 | 24.7 | 15.3 | 33.4 | 11.4 | 11.0 | 11.9 |
| Saint Kitts and Nevis |  |  |  | 200 | - 9.2 | 10.4 | 7.8 | 9.5 | 14.9 | 4.2 | 52.3 | 45.0 | 59.3 | 22.9 | 15.3 | 30.1 | 10.8 | 11.0 | 10.6 |
| Saint Lucia | $\ldots$ | $\ldots$ | $\ldots$ | 2017 | 10.2 | 12.4 | 8.1 | 9.8 | 15.8 | 4.1 | 48.1 | 39.3 | 56.3 | 19.7 | 12.0 | 27.0 | 7.6 | 7.1 | 8.0 |
| Saint Vincent and the Grenadines | $\ldots$ | $\ldots$ |  |  | 19.4 | 23.6 | 14.6 | 8.4 | 13.4 | 3.4 | 55.0 | 48.9 | 61.1 | 23.7 | 16.6 | 31.0 | 10.9 | 11.1 | 10.7 |
| Suriname | $\ldots$ | $\ldots$ |  |  | 11.7 | 17.1 | 7.3 | 5.0 | 8.0 | 2.1 | 58.9 | 53.4 | 64.2 | 26.4 | 18.9 | 33.7 | 12.3 | 13.8 | 10.7 |
| Trinidad and Tobago |  |  |  |  | 14.0 | 17.3 | 10.8 | 9.0 | 14.2 | 4.1 | 46.0 | 37.1 | 54.5 | 18.6 | 10.8 | 26.0 | 9.4 | 9.4 | 9.4 |


| RAISED BLOOD GLLCOSE <br> Prevalence of raised fasting blood glucose (\%) |  |  | RAISED BLOOD PRESSURE <br> Prevalence of raised blood pressure (\%) |  |  | PHYSICAL INACTIVITY <br> Prevalence of physical inactivity in adults (\%) |  |  | SALT <br> Salt intake in adults (grams/day) |  |  |  | Household air pollution (\%) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female |  |  |  |
| 8.3 | 8.5 | 8.1 | 17.6 | 20.3 | 14.8 | 39.3 | 33.1 | 45.2 | 8.7 | 9.4 | 8.6 |  |  | The Region of the Americas |
| 7.1 | 8.0 | 6.2 | 12.9 | 15.3 | 10.5 | 38.9 | 31.1 | 46.3 | 9.0 | 10.0 | 9.0 |  | < | North America |
| 5.5 | 6.2 | 4.8 | 13.2 | 15.6 | 10.8 | 28.6 | 25.7 | 31.4 | 9.0 | 10.0 | 9.0 | - | 4 | Canada |
| 7.3 | 8.2 | 6.4 | 12.9 | 15.3 | 10.5 | 40.0 | 31.7 | 48.0 | 9.0 | 10.0 | 9.0 | - | 45 | United States of America |
| 10.8 | 10.4 | 11.2 | 19.9 | 22.2 | 17.8 | .. | ... | .. | 7.1 | 7.4 | 7.1 | 2.0 | 21.0 | Central America and Mexico |
| 12.7 | 10 | 15.2 | 22.7 | 24.4 | 21.0 | ... | ... | ... | 7.0 | 7.0 | 6.0 | 2.1 | 15 | Belize |
| 8.9 | 8.8 | 8.9 | 18.7 | 21.0 | 16.3 | 46.1 | 37.7 | 54.3 | 8.0 | 8.0 | 8.0 | 1.6 | 7 | Costa Rica |
| 10.1 | 9.3 | 10.7 | 18.7 | 20.4 | 17.2 | ... | ... | ... | 8.0 | 9.0 | 8.0 | 2.3 | 14 | El Salvador |
| 9.7 | 8.9 | 10.4 | 21.2 | 22.0 | 20.4 | 37.1 | 37.1 | 37.1 | 7.0 | 8.0 | 7.0 | 2.4 | 55 | Guatemala |
| 9.3 | 8.5 | 10.0 | 21.4 | 22.6 | 20.2 | ... | ... | ... | 7.0 | 8.0 | 7.0 | 2.0 | 47 | Honduras |
| 11.2 | 10.9 | 11.5 | 19.7 | 22.3 | 17.3 | 28.9 |  | 32.2 | 7.0 | 7.0 | 7.0 | 2.0 | 15 | Mexico |
| 10.1 | 9.2 | 11.0 | 20.8 | 21.6 | 19.9 | ... | ... | ... | 8.0 | 9.0 | 8.0 | 1.7 | 48 | Nicaragua |
| 9.3 | 8.9 | 9.8 | 19.9 | 22.3 | 17.3 | ... | ... | ... | 9.0 | 9.0 | 8.0 | 1.1 | 11 | Panama |
| 9.0 | 8.1 | 9.9 | 21.6 | 23.3 | 19.8 | 25.4 | 21.9 | 28.9 | 7.0 | 7.0 | 6.0 | 1.5 | 10.3 | Latin Caribbean |
| 8.4 | 7.3 | 9.6 | 19.0 | 20.9 | 16.9 | 36.9 | 30.9 | 42.8 | 7.0 | 7.0 | 6.0 | 1.7 | 21 | Cuba |
| 10.1 | 8.6 | 11.4 | 21.5 | 23.8 | 19.1 | 39.0 |  | 43.4 | 7.0 | 7.0 | 6.0 | 1.3 | 10 | Dominican Republic |
| 8.7 | 8.6 | 8.8 | 24.5 |  | 23.7 | ... | ... | ... | 7.0 | 7.0 | 6.0 | 1.5 | >95 | Haiti |
| 8.4 | 8.2 | 8.6 | 17.6 | 19.9 | 15.2 | 25.1 | 23.1 | 28.1 | 9.0 | 9.4 | 8.7 | 1.8 | 10.1 | Andean Area |
| 8.0 | 7.0 | 8.9 | 17.9 | 19.7 | 16.1 | ... | ... | ... | 9.0 | 10.0 | 9.0 | 2.0 | 20 | Bolivia (Plurinational State of) |
| 8.5 | 8.3 | 8.7 | 19.2 | 21.5 | 16.9 | 44.0 | 38.8 | 48.9 | 10.0 | 11.0 | 10.0 | 1.5 | 8 | Colombia |
| 8.0 | 7.5 | 8.5 | 17.9 | 19.8 | 16.0 | 27.2 |  | 29.7 | 8.0 | 8.0 | 7.0 | 1.5 | 45 | Ecuador |
| 7.7 | 7.2 | 8.1 | 13.7 | 16.1 | 11.2 | ... | ... | ... | 8.0 | 8.0 | 7.0 | 2.4 | 25 | Peru |
| 9.5 | 9.9 | 9.0 | 18.6 | 21.5 | 15.7 | 31.4 |  | 33.3 | 9.0 | 9.0 | 9.0 | 1.6 | $<5$ | Venezuela (Bolivarian Republic of) |
| 8.7 | 8.3 | 9.0 | 23.0 | 26.8 | 19.3 | 44.3 | 38.6 | 49.7 | 9.5 | 10.2 | 9.3 | 1.2 |  | Southern Cone |
| 9.7 | 9.9 | 9.5 | 22.6 | 27.6 | 17.6 | 41.6 | 37.6 | 45.3 | 8.0 | 8.0 | 7.0 | 1.2 | $<5$ | Argentina |
| 8.3 | 7.8 | 8.7 | 23.3 | 26.7 | 19.9 | 47.0 | 40.4 | 53.3 | 10.0 | 11.0 | 10.0 | 1.1 | 45 | Brazil |
| 10.5 | 10.2 | 10.8 | 20.9 | 25.4 | 16.5 | 26.6 | 24.4 | 28.6 | 7.0 | 7.0 | 7.0 | 2.1 | 8 | Chile |
| 8.1 | 8.0 | 8.3 | 24.6 | 27.8 | 21.3 | 37.4 | 38.1 | 36.8 | 11.0 | 11.0 | 10.0 | 1.1 | 34 | Paraguay |
| 9.5 | 9.1 | 9.8 | 20.7 | 24.7 | 16.8 | 22.4 |  | 25.7 | 7.0 | 7.0 | 7.0 | . | 45 | Uruguay |
| 11.9 | 9.9 | 13.7 | 23.1 | 25.5 | 20.7 | 31.0 | 24.7 | 37.1 | 6.1 | 6.6 | 6.0 | 1.8 |  | Non-Latin Caribbean |
| 11.5 | 9.9 | 13.0 | 23.4 | 26.4 | 20.4 | $\ldots$ | ... | ... | 7.0 | 7.0 | 6.0 | 1.8 | 45 | Antigua and Barbuda |
| 12.5 | 11.2 | 13.7 | 20.9 | 25.2 | 16.8 | 43.3 | 30.0 | 55.6 | 8.0 | 8.0 | 7.0 | 1.8 | < | Bahamas |
| 12.2 | 10.5 | 13.7 | 24.4 | 27.0 | 21.7 | 42.9 | 29.3 | 54.9 | 9.0 | 9.0 | 8.0 | 2.2 | $<5$ | Barbados |
| 11.1 | 8.5 | 13.6 | 22.5 | 25.7 | 19.4 | 21.6 | 13.4 | 29.8 | 7.0 | 7.0 | 7.0 | 1.8 | 9 | Dominica |
| 11.1 | 8.8 | 13.3 | 24.3 | 26.8 | 21.6 | 28.7 | 21.9 | 35.4 | 7.0 | 7.0 | 6.0 | 2.2 | < | Grenada |
| 10.9 | 9.1 | 12.6 | 23.1 | 24.5 | 21.5 | ... |  | ... | 6.0 | 7.0 | 6.0 | 2.0 | 26 | Guyana |
| 11.9 | 9.3 | 14.4 | 21.8 | 24.5 | 19.2 | 32.6 | 28.4 | 36.6 | 5.0 | 5.0 | 5.0 | 1.3 | 10 | Jamaica |
| 14.5 | 12.7 | 16.3 | 25.3 | 27.9 | 22.7 | 32.2 | 24.1 | 40.4 | ... | ... | ... | 1.2 | 45 | Saint Kitts and Nevis |
| 14.5 | 13.7 | 15.1 | 27.1 | 29.9 | 24.4 | 39.8 | 26.6 | 52.1 | 7.0 | 8.0 | 7.0 | 2.1 | < | Saint Lucia |
| 10.6 | 9.3 | 11.8 | 23.3 | 25.9 | 20.7 | ... | ... | ... | 7.0 | 7.0 | 7.0 | 2.1 | 45 | Saint Vincent and the Grenadines |
| 12.3 | 10.9 | 13.5 | 22.4 | 24.6 | 19.9 | 44.4 | 38.1 | 50.6 | 7.0 | 8.0 | 7.0 | 2.4 | 10 | Suriname |
| 11.7 | 10.4 | 13.0 | 25.8 | 27.6 | 23.9 | 38.2 | 27.2 | 48.6 | 7.0 | 8.0 | 7.0 | 2.2 | 45 | Trinidad and Tobago |

## References

[1] United Nations, Department of Economic and Social Affairs, Population Division. World population prospects: the 2017 revision, methodology of the United Nations population estimates and projections. Working Paper No. ESA/P/WP.250. New York: UN; 2017.
[2] World Health Organization. Global health estimates 2016: deaths by cause, age, sex, by country and by region, 2000-2016. Geneva: WHO; 2018. https://www.who.int/healthinfo/global_burden_disease/estimates/en/ (accessed 21 March 2018).
[3] World Health Organization. WHO methods and data sources for global causes of death, 2000-2016. Geneva: WHO Department of Information, Evidence and Research; March 2018. http://terrance.who.int/mediacentre/data/ghe/GlobalCOD_method_2000_2016.pdf?ua=1 (accessed 4 February 2019).
[4] United Nations, Department of Economic and Social Affairs. World population prospects - 2017 revision. New York: UN; 2017. https://esa.un.org/ unpd/wpp/ (accessed 17 August 2018).
[5] United States Census Bureau. International Data Base (IDB). August 2017. Washington, DC: Census Bureau. https://www.census.gov/data-tools/ demo/idb/informationGateway.php (accessed 21 May 2018).
[6] Ahmad OB, Boschi-Pinto C, Lopez AD, et al. Age standardization of rates: a new WHO standard. GPE Discussion Paper Series: No. 31. Geneva: World Health Organization; 2001. http://www.who.int/healthinfo/paper31.pdf (accessed 21 May 2018).
[7] Manthey J, Shield K, Rylett M, Hasan O, Probst C, Jürgen R. Global alcohol exposure between 1990 and 2017 and forecasts until 2030 : a modelling study. Lancet. 2019;393(10190):2493-2502. doi: 10.1016/S0140-6736(18)32744-2
[8] Guthold R, Stevens GA, Riley LM, Bull FC. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population- based surveys with 1.9 million participants. Lancet Global Health. 2018;6(10):1077-1086. doi: 10.1016/S2214-109X(18)30357-7.
[9] Powles J, Fahimi S, Micha R, et al. Global, regional and national sodium intakes in 1990 and 2010: a systematic analysis of 24 h urinary sodium excretion and dietary surveys worldwide. British Medical Journal. 2013;3(12):e003733. doi:10.1136/bmjopen-2013-003733.
[10] World Health Organization. Global report on trends in prevalence of tobacco smoking 2000-2025, 2nd edition. Geneva: WHO; 2018. http://www. who.int/tobacco/publications/surveillance/trends-tobacco-smoking-second-edition/en/ (accessed 16 August 2018).
[11] World Health Organization. Report on the global tobacco epidemic, 2019. Geneva: WHO; 2019. Licence: CC BY-NC-SA 3.0 IGO. https://www.who. int/tobacco/global_report/en/
[12] NCD-RisC. Worldwide trends in blood pressure from 1975 to 2015: a pooled analysis of 1479 population-based measurement studies with 19.1 million participants. Lancet. 2016;389(10064):37-55. doi:10.1016/S0140-6736(16)31919-5.
[13] NCD-RisC. Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. Lancet. 2016;387(10027):1513-1530. doi: 10.1016/S0140-6736(17)32129-3.
[14] NCD-RisC. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016 : a pooled analysis of 2416 populationbased measurement studies with 128.9 million participants. Lancet. 2017;390(10113):2627-2642.
[15] World Health Organization. Air quality guidelines: global update 2005. Copenhagen: WHO Regional Office for Europe; 2006. https://www.who. int/phe/health_topics/outdoorair/outdoorair_aqg/en/ (accessed 17 August 2018).
[16] World Health Organization. Global ambient air quality database. Geneva: WHO. http://www.who.int/airpollution/data/cities/en/ (accessed 17 August 2018).
[17] World Health Organization. Ambient air pollution: a global assessment of exposure and burden of disease. Geneva: WHO; 2016.
[18] WHO Household energy database. Geneva: World Health Organization. https://www.who.int/airpollution/data/household-energy-database/en/ (accessed 17 August 2018).

This brochure presents current data on NCDs and risk factors for the Region of the Americas, for each category of disease and risk factor, for the 35 Member States of the Pan American Health Organization.

It is intended to provide a visual snapshot of the current status of NCD mortality and risk factor prevalence and convey the significance of the burden of NCDs throughout the Region.

www.paho.org/nmh

(
Pan American


[^0]:    Age-standardized cardiovascular disease death rates per 100,000 population, 2016

