

Burden of Disease caused by Opioid Use disorders in the Americas Region

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Sources of Information:

1. The WHO's Global Health Estimates (GHE), series 2000-2019

2. The Global Burden of Disease, Injuries and Risk Factors (GBD): Multinational collaborative study University of Washington, Seattle; series 1990-2021





• 450k deaths due to opioid use

Drug type	Drug use disorders	HIV	HBV	HCV	RTA	Suicide	Total deaths
Opioid	123 848	60 679	7 287	233 941	5 351	17 383	448 489
Cocaine	7 420	2 589	258	8 789	2 285	4 741	26 082
Amphetamine	4 454	5 427	666	21 345	9 214	5 555	46 661
Cannabis	-	-	-	-	14 206	-	14 206
Other	46 035	346	56	1 637	-	-	48 074
All drugs	181 758	69 040	8 267	265 711	31 056	27 679	583 511



3 Global deaths attributable to drug use, WHO 2019



Approach to the definition and uses of the burden of disease indicator - DALYs

https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158

- Mortality does not give a complete picture of the burden of disease borne by individuals in different populations.
- The overall burden of disease is assessed using the **disability-adjusted life year (DALY)**, a time-based measure that combines years of life lost due to premature mortality (YLLs) and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (YLDs).





Approach to the definition and uses of the burden of disease indicator DALYs (AVAD in Spanish)

https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158

- One DALY represents the loss of the equivalent of one year of full health.
 DALYs are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to disease or health condition in a population.
- Despite not being the most prevalent substance use disorder, Opioid Use disorders is the largest contributor to the DALYs



America Both sexes, All ages, DALYs per 100,000

1990 rank

2021 rank



1 Neonatal disorders 2 Ischemic heart disease 3 Lower respiratory infect 4 Road injuries 5 Diarrheal diseases 6 Stroke 7 Interpersonal violence 8 Congenital defects 9 Low back pain 10 Lung cancer 11 Diabetes 12 Headache disorders 13 Other musculoskeletal 14 COPD 15 Depressive disorders 16 Anxiety disorders 17 Cirrhosis liver 18 Falls 19 Self-harm 20 Asthma 21 Protein-energy malnutrition 22 Chronic kidney disease 23 Age-related hearing loss 24 Alzheimer's disease 25 HIV/AIDS 26 Alcohol use disorders 27 Breast cancer 28 Colorectal cancer 29 Gynecological diseases **30** Tuberculosis 31 Oral disorders 34 Stomach cancer 39 Blindness and vision loss 42 Osteoarthritis 45 Drug use disorders

HME

1 COVID-19 2 Ischemic heart disease 3 Diabetes 4 Low back pain 5 Stroke 6 Interpersonal violence 7 Other musculoskeletal 8 Neonatal disorders 9 Chronic kidney disease 10 Depressive disorders 11 Road injuries 12 Anxiety disorders 13 COPD 14 Other COVID Outcomes 15 Drug use disorders 16 Headache disorders 17 Lung cancer 18 Alzheimer's disease 19 Lower respiratory infect 20 Cirrhosis liver 21 Falls 22 Age-related hearing loss 23 Congenital defects 24 Self-harm 25 Oral disorders 26 Colorectal cancer 27 Osteoarthritis 28 Alcohol use disorders 29 Breast cancer 30 Gynecological diseases 31 Blindness and vision loss 34 Asthma 36 HIV/AIDS 37 Stomach cancer 52 Diarrheal diseases

67 Protein-energy malnutrition

74 Tuberculosis

Communicable, maternal, neonatal, and nutritional diseases Non-communicable diseases Injuries Other COVID-19 pandemicrelated outcomes

CAUSES OF DALYs IN AMERICA (level 3)

Drug Use Disorders moved from position 45th in 1990 to 15th in 2021

A 251% increase in the period, reaching 733 DALYS x 100.000 pop in 2021



6

High-income North America Both sexes, All ages, DALYs per 100,000

1990 rank

2021 rank



1 Ischemic heart disease 2 Lung cancer 3 Low back pain 4 Road injuries 5 Stroke 6 COPD 7 Neonatal disorders 8 Other musculoskeletal 9 Headache disorders 10 Diabetes 11 Alzheimer's disease 12 Depressive disorders 13 Anxiety disorders 14 Self-harm 15 Interpersonal violence 16 Colorectal cancer 17 Breast cancer 18 HIV/AIDS 19 Age-related hearing loss 20 Lower respiratory infect 21 Falls 22 Congenital defects 23 Asthma 24 Cirrhosis liver 25 Alcohol use disorders 26 Drug use disorders 27 Osteoarthritis 28 Oral disorders 29 Chronic kidney disease 30 Gynecological diseases 31 Prostate cancer 32 Cardiomyopathy 35 Pancreatic cancer 39 Endo/metab/blood/immune

41 Hypertensive heart disease

	1 COVID-19
	2 Ischemic heart disease
	3 Drug use disorders
4	4 Diabetes
	5 Low back pain
	6 COPD
	7 Other musculoskeletal
	8 Stroke
	9 Lung cancer
1	10 Depressive disorders
	11 Alzheimer's disease
1	12 Chronic kidney disease
	13 Anxiety disorders
1	14 Falls
1	15 Headache disorders
1	16 Road injuries
1	17 Age-related hearing loss
	18 Self-harm
1	19 Cirrhosis liver
ł	20 Colorectal cancer
1	21 Osteoarthritis
	22 Neonatal disorders
	23 Breast cancer
	24 Other COVID Outcomes
	25 Alcohol use disorders
	26 Asthma
	27 Oral disorders
1	28 Hypertensive heart disease
1	29 Endo/metab/blood/immune
1	30 Pancreatic cancer
1	31 Interpersonal violence
	32 Lower respiratory infect
	35 Prostate cancer
	37 Gynecological diseases
	39 Congenital defects
	40 Cardiomyopathy

64 HIV/AIDS

Communicable, maternal, neonatal, and nutritional diseases Non-communicable diseases Injuries Other COVID-19 pandemicrelated outcomes

CAUSES OF DALYs IN NORTH AMERICA (level 3)

Drug Use Disorders moved from position 26th in 1990 to 3er in 2021

Increasing 380% (1.838 DALYS x 100.000)



Region of the Americas Both sexes, All ages, DALYs per 100,000

1990 rank

2021 rank



1 Ischemic heart disease	
2 Lower respiratory infect	
3 Neonatal preterm birth	
4 Diarrheal diseases	
5 Low back pain	
6 Lung cancer	
7 Diabetes type 2	
8 Violence firearm	
9 Other musculoskeletal	
10 Ischemic stroke	· .
11 Neonatal encephalopathy	
12 Migraine	
13 Motor vehicle road inj	
14 COPD	
15 Anxiety disorders	
16 Intracerebral hem	
17 Pedestrian road inj	
18 Falls	
19 Major depression	/
20 Congenital heart	
21 Asthma	
22 Protein-energy malnutrition	Ì
23 Age-related hearing loss	
24 Alzheimer's disease	/
25 Alcohol use disorders	
26 Neonatal sepsis	
27 Breast cancer	``
28 Colorectal cancer	
29 HIV/AIDS other	
33 Self-harm other means	
36 Neck pain	
43 Hypertensive heart disease 46 Endo/metab/blood/immune	
67 Opioid use disorders	
83 Hypertensive CKD	



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	1 COVID-19
-	2 Ischemic heart disease
	3 Diabetes type 2
-	4 Low back pain
	5 Other musculoskeletal
	6 Anxiety disorders
	7 COPD
	8 Major depression
	9 Other COVID Outcomes
-	10 Violence firearm
	11 Lung cancer
	12 Alzheimer's disease
	13 Migraine
Ì	14 Lower respiratory infect
-	15 Falls
	16 Opioid use disorders
4	17 Age-related hearing loss
	18 Ischemic stroke
1	19 Neonatal preterm birth
`	20 Intracerebral hem
	21 Colorectal cancer
	22 Motor vehicle road inj
-	23 Alcohol use disorders
	24 Self-harm other means
-	25 Breast cancer
	26 Hypertensive heart disease
	27 Neck pain
	28 Asthma
	29 Endo/metab/blood/immune
	33 Hypertensive CKD
Ì	35 Pedestrian road inj
-	37 HIV/AIDS other
Ì	41 Congenital heart
ĥ	43 Neonatal encephalopathy
Ì	55 Diarrheal diseases
Ni	

59 Neonatal sepsis

80 Protein-energy malnutrition

Communicable, maternal, neonatal, and nutritional diseases Non-communicable diseases Injuries Other COVID-19 pandemicrelated outcomes

CAUSES OF DALYS IN AMERICA (level 4)

Opioid Use Disorders moved up from 67th in 1990 to 16th position in 2021

Increasing 391% (570 DALYs x 100.000)



North America Both sexes, All ages, DALYs per 100,000

1990 rank

1 Ischemic heart disease	
2 Lung cancer	
3 Low back pain	
4 Motor vehicle road inj	
5 COPD	
6 Other musculoskeletal	
7 Ischemic stroke	
8 Alzheimer's disease	
9 Migraine	
10 Anxiety disorders	
11 Diabetes type 2	
12 Colorectal cancer	
13 Neonatal preterm birth	
14 Breast cancer	
15 Major depression	
16 Age-related hearing loss	
17 HIV/AIDS other	
18 Lower respiratory infect	
19 Falls	
20 Asthma	
21 Alcohol use disorders	· · ·
22 Violence firearm	
23 Intracerebral hem	- 1 -
24 Self-harm by firearm	
25 Prostate cancer	
26 Self-harm other means	
27 Neck pain	
28 Schizophrenia	
29 Pancreatic cancer	
30 Other cardiomyopathy	
31 Opioid use disorders	- 7
35 Endo/metab/blood/immune	
37 Hypertensive heart disease	
76 Hypertensive CKD	
84 CKD due to diabetes type 2	

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	1 COVID-19
	2 Ischemic heart disease
	3 Opioid use disorders
	4 Low back pain
	5 Diabetes type 2
	6 COPD
	7 Other musculoskeletal
-	8 Lung cancer
	9 Alzheimer's disease
	10 Major depression
	11 Anxiety disorders
	12 Falls
-	13 Age-related hearing loss
	14 Ischemic stroke
	15 Migraine
	16 Colorectal cancer
ì	17 Motor vehicle road inj
	18 Breast cancer
	19 Other COVID Outcomes
-	20 Alcohol use disorders
	21 Asthma
	22 Hypertensive heart disease
-	23 Self-harm other means
	24 Endo/metab/blood/immune
•	25 Intracerebral hem
-	26 Pancreatic cancer
	27 CKD due to diabetes type 2
	28 Neonatal preterm birth
	29 Lower respiratory infect
	30 Self-harm by firearm
	31 Hypertensive CKD
	32 Neck pain
•	34 Prostate cancer
	37 Schizophrenia
`	38 Violence firearm
	53 Other cardiomyopathy

2021 rank

1 COVID-19

68 HIV/AIDS other

Communicable, maternal, neonatal, and nutritional diseases Non-communicable diseases Injuries Other COVID-19 pandemicrelated outcomes

CAUSES OF DALYs IN NORTH AMERICA, (level 4)

Opioid Use Disorders moved up from 31st in 1990 to 3er position in 2021

Increasing 553% (1.504 DALYs x 100.000)



9

Trends in age-standardized rates per 100 000 population due to **opioid use disorder** by sex across subregions of the **Americas**, 2000-2019



 $[\]textbf{Source:} \ \textbf{Global Health Estimates 2020, World Health Organization (WHO).}$

Disability-Adjusted Life Years (DALYs)

Hover for info

Burden of Drug Use Disorders: level by country Rates per 100,000 population



Source: Global Health Estimates, 2020. WHO

Disability-adjusted Life Years (DALYs) rates (age-standardized per 100,000 population) due to drug use disorders in the Region of the Americas, 2021

Distribution of DALYs by drug type across subregions



DALY rates per 100 000 population

Source: Global Burden of Diseases, Injuries and Risk Factors Study.

- Central Latin America: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panamá, Venezuela

- Andean Latin America: Bolivia, Ecuador, Perú

- Tropical Latin America: Brazil, Paraguay

- Southern Latin America: Argentina, Chile, Uruguay

Disability-adjusted Life Years (DALYs) rates (age-standardized per 100,000 populatio drug use disorders in the Region of the Americas, 2021

Distribution of DALYs by drug type across subregions (excluding High-income North America)



Source: Global Burden of Diseases, Injuries and Risk Factors Study.

- Central Latin America: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panamá, Venezuela
- Andean Latin America: Bolivia, Ecuador, Perú
- Tropical Latin America: Brazil, Paraguay
- Southern Latin America: Argentina, Chile, Uruguay

Age-standardized deaths rates per 100,000 population caused by drug use disorders in the Region of the Americas, 2021

Distribution of deaths by drug type across subregions



Source: Global Burden of Diseases, Injuries and Risk Factors Study.

- Central Latin America: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panamá, Venezuela

- Andean Latin America: Bolivia, Ecuador, Perú

- Tropical Latin America: Brazil, Paraguay

- Southern Latin America: Argentina, Chile, Uruguay

Age-standardized deaths rates per 100,000 population caused by drug use disorders in the Region of the Americas, 2021

Distribution of deaths by drug type across subregions (excluding High-income North America)



Source: Global Burden of Diseases, Injuries and Risk Factors Study.

- Central Latin America: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panamá, Venezuela

- Andean Latin America: Bolivia, Ecuador, Perú

- Tropical Latin America: Brazil, Paraguay

- Southern Latin America: Argentina, Chile, Uruguay



In Brief:

- ✓ The burden of disease The Disability-Adjusted Life Year (DALY) is a crucial indicator for prioritizing public health policies. It highlights the significant impact of drug use disorders on population health.
- ✓ The mortality, and disease burden caused by opioid use disorders in the Region of the Americas are higher than the global average, a situation primarily driven by North American countries.
- ✓ The burden of disease Opioid use disorders accounts for about 50% of DALYs due to drug use disorders across American subregions excluding North American countries.
- ✓ It is necessary to improve access to comprehensive prevention and treatment programs in the region to reduce the burden of disease caused by opioid consumption, and we will surely raise this next with the presentation of our invited experts.





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