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United Nations Office on Drugs and Crime

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2 DRUG USE AND HEALTH CONSEQUENCES

WORLD DRUG REPORT 2020

ISBN: 978-92-1-148345-1
eISBN: 978-92-1-005047-0
United Nations publication, Sales No. E.20.XI.6

Suggested citation:
World Drug Report 2020 (United Nations publication, Sales No. E.20.XI.6).

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PREFACE

This is a time for science and solidarity, as United Nations Secretary-General António Guterres has said, highlighting the importance of trust in science and of working together to respond to the global COVID-19 pandemic.

The same holds true for our responses to the world drug problem. To be effective, balanced solutions to drug demand and supply must be rooted in evidence and shared responsibility. This is more important than ever, as illicit drug challenges become increasingly complex, and the COVID-19 crisis and economic downturn threaten to worsen their impacts, on the poor, marginalized and vulnerable most of all.

Some 35.6 million people suffer from drug use disorders globally. While more people use drugs in developed countries than in developing countries, and wealthier segments of society have a higher prevalence of drug use, people who are socially and economically disadvantaged are more likely to develop drug use disorders.

Only one out of eight people who need drug-related treatment receive it. While one out of three drug users is a woman, only one out of five people in treatment is a woman. People in prison settings, minorities, immigrants and displaced people also face barriers to treatment due to discrimination and stigma. Of the 11 million people who inject drugs, half of them are living with hepatitis C, and 1.4 million with HIV.

Around 269 million people used drugs in 2018, up 30 per cent from 2009, with adolescents and young adults accounting for the largest share of users. More people are using drugs, and there are more drugs, and more types of drugs, than ever.

Seizures of amphetamines quadrupled between 2009 and 2018. Even as precursor control improves globally, traffickers and manufacturers are using designer chemicals, devised to circumvent international controls, to synthesize amphetamine, methamphetamine and ecstasy. Production of heroin and cocaine remain among the highest levels recorded in modern times.

The growth in global drug supply and demand poses challenges to law enforcement, compounds health risks and complicates efforts to prevent and treat drug use disorders.

At the same time, more than 80% of the world's population, mostly living in low- and middle-income countries, are deprived of access to controlled drugs for pain relief and other essential medical uses.

Governments have repeatedly pledged to work together to address the many challenges posed by the world drug problem, as part of commitments to achieve the Sustainable Development Goals, and most recently in the 2019 Ministerial Declaration adopted by the Commission on Narcotic Drugs (CND). But data indicates that development assistance to address drug control has actually fallen over time.

Balanced, comprehensive and effective responses to drugs depend on governments to live up to their promises, and provide support to leave no one behind.

Health-centred, rights-based and gender-responsive approaches to drug use and related diseases deliver better public health outcomes. We need to do more to share this learning and support implementation, most of all in developing countries, including by strengthening cooperation with civil society and youth organizations.

The international community has an agreed legal framework and the commitments outlined in the 2019 CND Ministerial Declaration. The United Nations Office on Drugs and Crime (UNODC) provides integrated support to build national capacities and strengthen international cooperation to turn pledges into effective action on the ground.

The theme for this year's International Day against Drug Abuse and Illicit Trafficking, "Better Knowledge for Better Care", highlights the importance of scientific evidence to strengthen responses to the world drug problem and support the people who need us. It also speaks to the ultimate goal of drug control, namely the health and welfare of humankind. Through learning and understanding we find compassion and seek solutions in solidarity.

It is in this spirit that I present the UNODC *World Drug Report 2020*, and I urge governments and all stakeholders to make the best use of this resource.

Ghada Waly
Executive Director
United Nations Office on Drugs and Crime

Acknowledgements

The *World Drug Report 2020* was prepared by the Research and Trend Analysis Branch, Division for Policy Analysis and Public Affairs, United Nations Office on Drugs and Crime (UNODC), under the supervision of Jean-Luc Lemahieu, Director of the Division, and Angela Me, Chief of the Research and Trend Analysis Branch, and the coordination of Chloé Carpentier, Chief of the Drug Research Section.

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The *World Drug Report 2020* benefited from the expertise of and invaluable contributions from UNODC colleagues in all divisions.

The Research and Trend Analysis Branch acknowledges the invaluable contributions and advice provided by the *World Drug Report* Scientific Advisory Committee:

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The research and production of the joint UNODC/UNAIDS/WHO/World Bank estimates of the number of people who inject drugs in Booklet 2 were funded by the HIV/AIDS Section of the Drug Prevention and Health Branch of the Division for Operations of UNODC.

CONTENTS

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EXPLANATORY NOTES

The designations employed and the presentation of the material in the *World Drug Report* do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Countries and areas are referred to by the names that were in official use at the time the relevant data were collected.

Since there is some scientific and legal ambiguity about the distinctions between "drug use", "drug misuse" and "drug abuse", the neutral term "drug use" is used in the *World Drug Report*. The term "misuse" is used only to denote the non-medical use of prescription drugs.

All uses of the word "drug" and the term "drug use" in the *World Drug Report* refer to substances controlled under the international drug control conventions, and their non-medical use.

All analysis contained in the *World Drug Report* is based on the official data submitted by Member States to the UNODC through the annual report questionnaire unless indicated otherwise.

The data on population used in the *World Drug Report* are taken from: *World Population Prospects: The 2019 Revision* (United Nations, Department of Economic and Social Affairs, Population Division).

References to dollars ($) are to United States dollars, unless otherwise stated.

References to tons are to metric tons, unless otherwise stated.

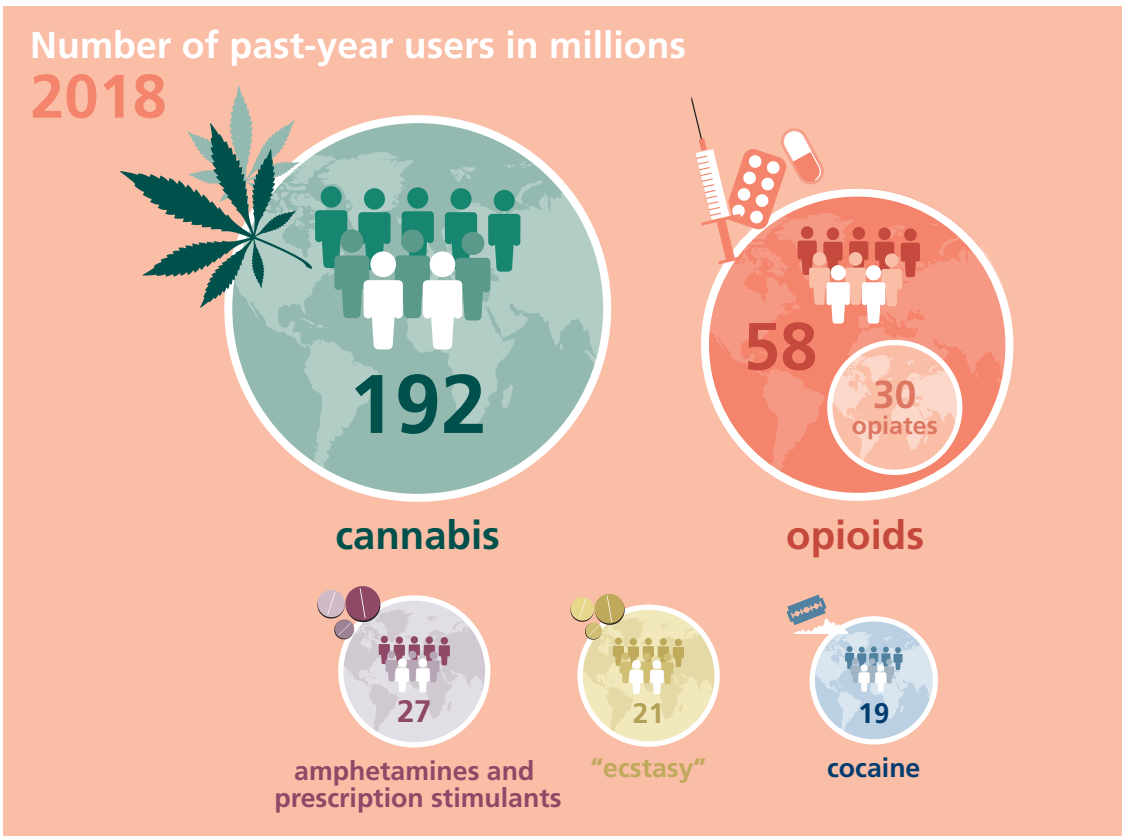
The following abbreviations have been used in the present booklet:

AIDS	acquired immunodeficiency syndrome
DALYs	Disability-adjusted life years
ECOWAS	Economic Community of West African States
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
HIV	human immunodeficiency virus
MDMA	3,4-methylenedioxymetamphetamine
NPS	new psychoactive substances
PWID	people who inject drugs
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

SCOPE OF THE BOOKLET

This, the second booklet of the *World Drug Report 2020*, contributes evidence to support the international community in implementing operational recommendations on drug demand reduction and treatment, as well as other health-related outcomes, including those contained in the outcome document of the special session of the General Assembly on the world drug problem, held in 2016.

The booklet provides a global overview of the extent of and trends in drug use, including drug use disorders, and its health consequences. Using the latest estimates as a basis, the booklet reviews the general situation and trends in the use of each drug type in the main consumer markets at the subregional level. It then addresses the health impact of drug use, including the global number of deaths and years of "healthy" life lost as a result of drug use. The booklet concludes with an analysis of the number of people who inject drugs and those among them who are living with HIV and hepatitis.



IMPACT OF DRUG USE ON HEALTH

The impact of the use of drugs on development – the most important impact being the effect on health and well-being – and the attainment of the Sustainable Development Goals can be observed at the individual and community levels, as well as globally. People who initiate drug use and subsequently develop drug use disorders typically transition through several stages, from initiation of use to escalation, maintenance and, eventually, dependence or addiction.[1] There is a strong association between drug use disorders and psychiatric comorbidities, and there are common risk factors that contribute both to mental health disorders and drug use disorders.[2, 3, 4, 5] Similarly, people with drug use disorders experience adverse health consequences of drug use, including non-fatal overdoses, infectious diseases such as HIV and hepatitis C, and premature death.[6]

Drug use, particularly when it develops into drug use disorders, can also have an impact on the social development of individual users. There is an association between drug use disorders and social disadvantage, including low educational attainment, increased difficulty in finding and remaining in employment, and financial instability and poverty.[7, 8] Moreover, the impact of harmful drug use[9] can extend beyond individuals to affect the health and well-being of others, including their families, neighbourhoods and the community at large, in a similar manner to how parental, family and neighbourhood influences impact harmful patterns of drug use and dependence.[10, 11, 12, 13, 14, 15]

Two core principles of the 2030 Agenda for Sustainable Development are to "ensure that no one is left behind" and to "reach the furthest behind first". People who use drugs and those with drug use disorders are some of the first to be left behind in almost all circumstances, with only one in eight of them having access to services for the treatment of drug use disorders. In addition, the global epidemics of HIV and hepatitis C continue to be major global public health concerns. PWID are one of the most vulnerable populations affected by these infectious diseases. The prevalence of HIV and hepatitis C is disproportionally high among this group, and it accounts for a significant proportion of new HIV and hepatitis C infections globally.[16, 17]

1 Denise B. Kandel, ed., *Stages and Pathways of Drug Involvement: Examining the Gateway Hypothesis* (Cambridge, Cambridge University Press, 2002).

2 United States, National Institute on Drug Abuse, *Common Comorbidities with Substance Use Disorders* (2018), updated April 2020.

3 Stephen Ross and Eric Peselow, "Co-occurring psychotic and addictive disorders: neurobiology and diagnosis", *Clinical Neuropharmacology*, vol. 35, No. 5 (September/October 2012), pp. 235–243.

4 Tonya D. Armstrong and Jane E. Costello, "Community studies on adolescent substance use, abuse, or dependence and psychiatric comorbidity", *Journal of Consulting and Clinical Psychology*, vol. 70, No. 6 (2002), pp. 1224–1239.

5 Kim T. Mueser and others, "Antisocial personality disorder in people with co-occurring severe mental illness and substance use disorders: clinical, functional, and family relationship correlates", *Psychosis*, vol. 4, No. 1 (January 2012), pp. 52–62.

6 Kandel, ed., *Stages and Pathways of Drug Involvement*.

7 Nora D. Volkow and others, "Adverse health effects of marijuana use", *New England Journal of Medicine*, vol. 370, No. 23 (June 2014), pp. 2219–2227.

8 See also Booklet 5: *Socioeconomic characteristics and drug use disorders* in the present report.

9 The International Statistical Classification of Diseases and Related Health Problems (ICD 11) defines the term "harmful use of substance" as a pattern of substance/drug use that has caused damage to a person's physical or mental health or has resulted in behaviour leading to harm to the health of others.

10 Laura Lander, Janie Howsare and Marilyn Byrne, "The impact of substance use disorders on families and children: from theory to practice", *Social Work in Public Health,* vol. 28, Nos. 3-4 (May 2013), pp. 194–205.

11 Dustin T. Duncan, Joseph J. Palamar and James H. Williams, "Perceived neighbourhood illicit drug selling, peer illicit drug disapproval and illicit drug use among U.S. high school seniors", *Journal of Substance Abuse Treatment and Prevention Policy*, vol. 9, No. 35 (September 2014).

12 Catherine Spooner and Kate Hetherington, *Social Determinants of Drug Use*, Technical Report, No. 228 (Sydney, National Drug And Alcohol Research Centre, University of New South Wales, 2004).

13 Suneerat Yangyuen, Manop Kanato and Udomsak Mahaweerawat, "Associations of the neighborhood environment with substance use: a cross sectional investigation among patients in compulsory drug detention centers in Thailand", *Journal of Preventive Medicine and Public Health*, vol. 55, No. 11 (January 2018), pp. 23–32.

14 Hanie Edalati and Marvin D. Krank, "Childhood maltreatment and development of substance use disorders: a review and a model of cognitive pathways", *Trauma, Violence, and Abuse*, vol. 17, No. 5 (December 2016), pp. 454–467.

15 Shanta R. Dube and others, "Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: the adverse childhood experiences study", *Pediatrics*, vol. 111, No. 3 (March 2003), pp. 564–572.

16 UNAIDS, *Miles to Go: Closing Gaps, Breaking Barriers, Righting Injustices* (Geneva, 2018).

17 WHO, *Global Hepatitis Report 2017* (Geneva, 2017).

EXTENT OF DRUG USE

More than a quarter of a billion people worldwide use drugs

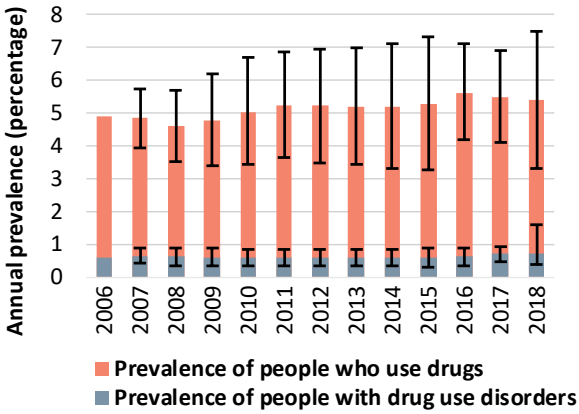
In 2018, an estimated 269 million people worldwide had used drugs at least once in the previous year (range: 166 million to 373 million). This corresponds to 5.4 per cent of the global population aged 15–64 (range: 3.3 to7.5 per cent), representing nearly 1 in every 19 people.

Over the period 2009–2018, the estimated number of past-year users of any drug globally increased from 210 million (range: 149 million to 272 million) to 269 million (range: 166 million to 373 million) – in other words, by more than a quarter (28 per cent) – partly as a result of growth in the global population. Consequently, the prevalence of drug use increased by over 12 per cent, from 4.8 per cent (range: 3.4 to 6.2 per cent) of the adult population in 2009 to 5.4 per cent (range: 3.3 to 7.5 per cent) in 2018. However, considering the wide uncertainty intervals of these estimates and that in any given year the global estimates represent the best available data, any comparison of the estimates over time should be undertaken with caution.

Over the past decade, there has been a diversification of the substances available on the drug markets. In addition to traditional plant-based substances – cannabis, cocaine and heroin – the past decade has witnessed the expansion of a dynamic market for synthetic drugs and the non-medical use of pharmaceutical drugs and prescription medicines.[18] The availability of more potent drugs, the increasing number of substances and their consecutive or sequential use among occasional or regular users poses an even greater challenge to the prevention of drug use and the treatment of drug use disorders than in the past.

In recent years, hundreds of NPS have been synthesized. The majority of those are stimulants, followed by synthetic cannabinoid receptor agonists, while

FIG. 1 Global prevalence of drug use and drug use disorders, 2006–2018



Source: UNODC, responses to the annual report questionnaire.

Note: Estimated percentage of the annual prevalence of drug use is for adults (aged 15–64) who used drugs in the past year. The global estimates of the extent of drug use and drug use disorders reflect the best available information for the year 2018. Changes compared with previous years largely reflect the information updated by countries, for which new data on the extent of drug use were made available in 2018. Therefore, the global and regional estimates presented in a given year are based on both the new estimates that were available for a particular country in the reference year and the most recent estimates available for the other countries.

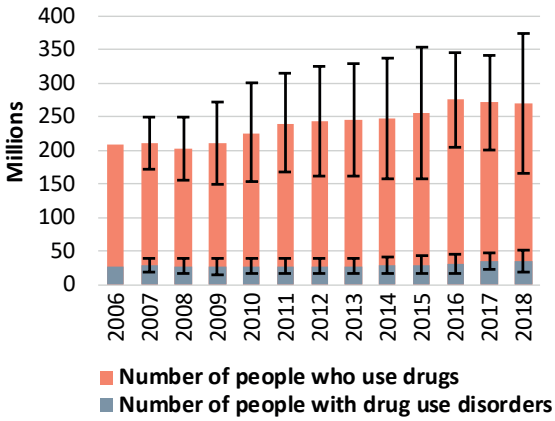
an increasing number of NPS are opioids (fentanyl analogues or research opioids). NPS within the same effect group – for example, stimulants – comprise a wide range of chemical substances; thus, their effects remain unpredictable and they sometimes have severe adverse health consequences, including death. Most NPS tend to be transient and, other than their use among some marginalized groups of people who use drugs, have not carved out a niche of their own on the drug markets. However, patterns of NPS use, in particular the use of synthetic cannabinoid receptor agonists among marginalized, vulnerable and socially disadvantaged groups, including homeless people and those in prisons or on probation, have been observed.[19]

One of the main concerns remains the non-medical use of pharmaceutical and other synthetic opioids in various subregions. In North America, the use of

18 See also *World Drug Report 2020: Cross Cutting Issues – Opioid Crisis* (United Nations publication, Sales No. E.20.XI.6 (Booklet 4)).

19 *World Drug Report 2018: Analysis of Drug Markets – Opiates, Cocaine, Cannabis, Synthetic Drugs* (United Nations publication, Sales No. E.18.XI.9 (Booklet 3)).

FIG. 2 Global number of people who use drugs and people with drug use disorders, 2006–2018



Source: UNODC, responses to the annual report questionnaire.

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synthetic opioids such as fentanyl (and fentanyl analogues), most of which are not diverted from licit sources, resulted in a continued increase in opioid overdose deaths in 2018. In other subregions, such as West, Central and North Africa, the market for the non-medical use of tramadol appears to have grown considerably.[20]

Over 35 million people suffer from drug use disorders

Among the estimated 269 million people who used drugs in the past year, some 35.6 million people (range: 19.0 million to 52.2 million) are estimated to suffer from drug use disorders, meaning that their pattern of drug use is harmful, or they may experience drug dependence and/or require treatment. This corresponds to a global prevalence of drug use disorders of 0.7 per cent (range: 0.4 to 1.0 per cent) among the population aged 15–64.

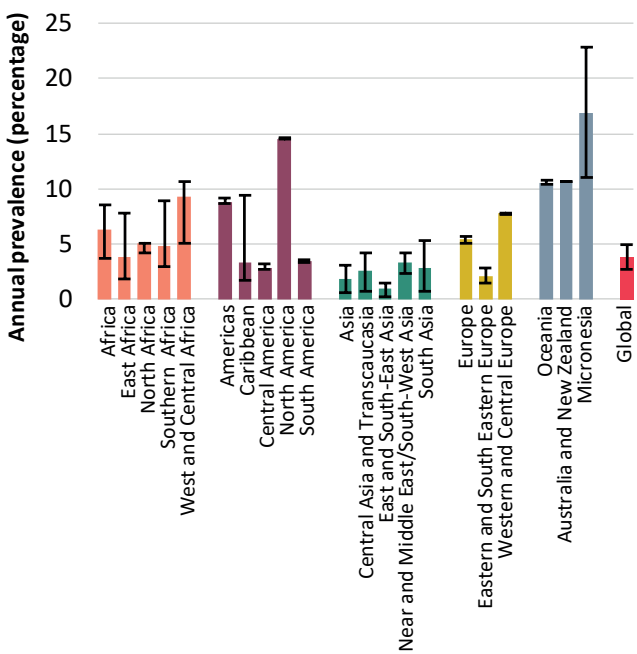
20 See also *World Drug Report 2020* (Booklet 4).

Cannabis remains by far the most commonly used drug

Worldwide, there were an estimated 192 million past-year users of cannabis in 2018, corresponding to 3.9 per cent of the global population aged 15–64. The past-year use of cannabis is substantially higher than the global average in North America (14.6 per cent), Australia and New Zealand (10.6 per cent) and West and Central Africa (9.3 per cent).

In 2009, cannabis use was reported to be stabilizing or declining in countries with established cannabis markets, such as in Western and Central Europe, North America and Australia and New Zealand, but that trend was offset by increasing use in many countries in Africa and Asia.[21] A decade later, cannabis use in Western and Central Europe has remained stable overall and has increased considerably in North America, Africa and Asia.[22]

FIG. 3 Cannabis use, by region and subregion, 2018



Source: UNODC, responses to the annual report questionnaire.

21 See *World Drug Report 2010* (United Nations publication, Sales No. E.10.XI.3).

22 In the absence of comprehensive survey data from Africa and Asia, the information is based on the cannabis use perception index as reported by countries in the annual report questionnaire. Over the period 2009-2018 most of the

Cannabis use in the Americas has been increasing over the past decade

The Americas remains the region with the highest annual prevalence of cannabis use (8.8 per cent among the population aged 15–64). In the United States of America, cannabis use has been consistently increasing since 2007, in particular among young adults (aged 18–25) and older adults (aged 26 and older).[23]

The main increase has been observed among regular users of cannabis; for example, the prevalence of daily or near-daily use of cannabis doubled over the period 2009–2018. In 2018, 4.7 per cent of the population aged 18 and older – around 11.6 million people – were estimated to be daily or near-daily users of cannabis.[24] In comparison, in Western and Central Europe, nearly 1 per cent of the adult population were estimated to be daily or near-daily users of cannabis, a rate that has remained more or less stable over the past decade.[25]

An increase in past-year cannabis use is also reported in South American countries that have provided new survey data. In Uruguay, for example, as reported in a survey conducted in 2018, 12.1 per cent of men and 5.8 per cent of women used cannabis in the past month – that is, taken together, 8.9 per cent of the population aged 15–65.[26] While all measures of cannabis use have shown increases since 2011, past-month use of cannabis has increased the most, having nearly doubled, which suggests that the main increase since 2011 has been among regular and frequent cannabis users. The highest

countries returning the annual report questionnaire from Africa and Asia reported an increase in cannabis use. See also *World Drug Report 2019: Cannabis and Hallucinogens* (United Nations publication, Sales No. E.19.XI.8 (Booklet 5)).

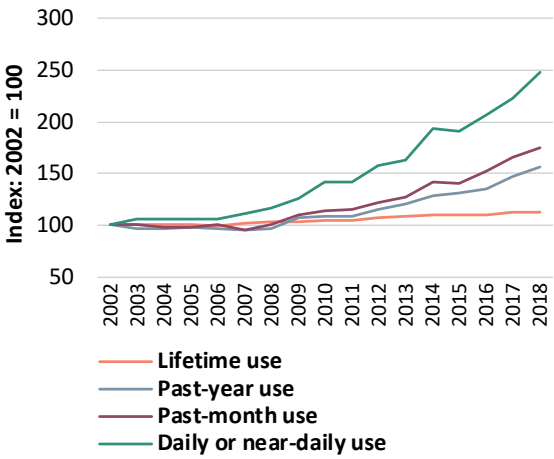
23 Based on the data from the Substance Abuse and Mental Health Services Administration, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health*, HHS Publication No. PEP19-5068, NSDUH Series H-54 (Rockville, Maryland, Center for Behavioral Health Statistics and Quality, 2019).

24 United States, Substance Abuse and Mental Health Services Administration, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health: Detailed Tables* (Rockville, Maryland, Center for Behavioral Health Statistics and Quality, 2019), Table 7.28A.

25 EMCDDA, *European Drug Report 2019: Trends and Developments* (Luxembourg, Publications Office of the European Union, 2019).

26 Uruguay, Observatorio Uruguayo de Drogas and Junta Nacional de Drogas, *VII Encuesta Nacional en Hogares sobre Consumo de Drogas en Población General: Informe de Investigación* (December 2019).

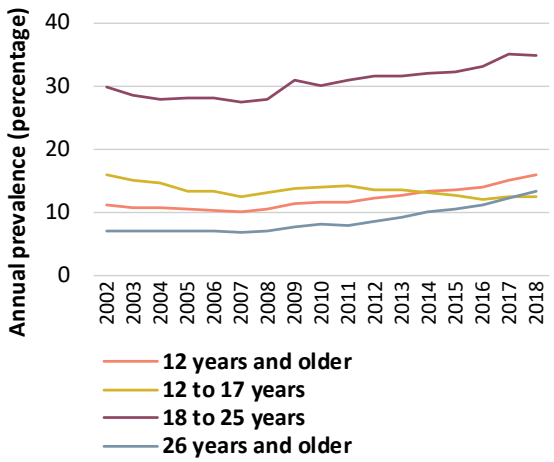
FIG. 4 Trends in cannabis use, United States, 2002–2018



Source: United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.

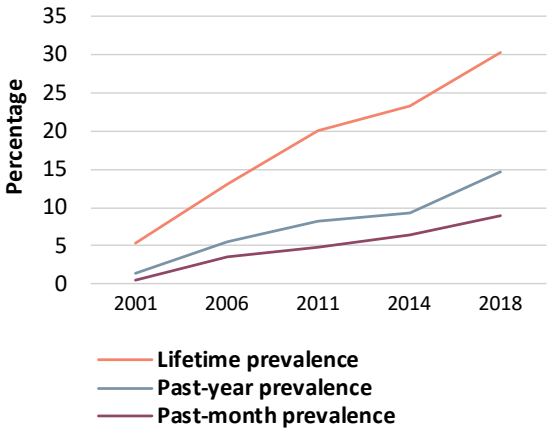
Note: Among the population aged 18 and older.

FIG. 5 Trends in cannabis use, by age group, United States, 2002–2018



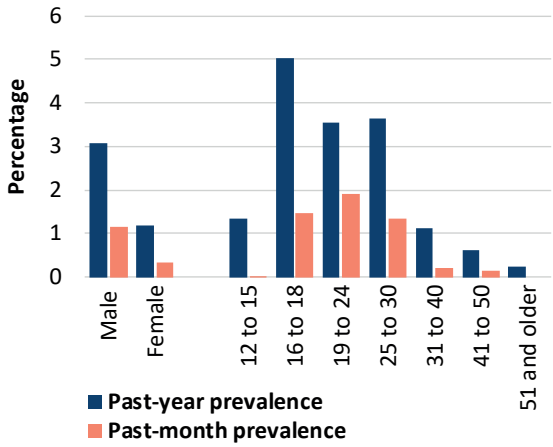
Source: United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.

FIG. 6 Trends in cannabis use, Uruguay, 2001–2018



Source: Uruguay, Observatorio Uruguayo de Drogas and Junta Nacional de Drogas, *VI Encuesta Nacional en Hogares sobre Consumo de Drogas, 2016: Informe de Investigación and VII Encuesta Nacional en Hogares sobre Consumo de Drogas en Población General: Informe de Investigación* (December 2019).

FIG. 7 Cannabis use, by gender and age group, Plurinational State of Bolivia, 2018



Source: Plurinational State of Bolivia, Consejo Nacional de Lucha Contra el Tráfico Ilícito de Drogas (CONALTID) and Observatorio Boliviano de Seguridad Ciudadana y Lucha Contra las Drogas (OBSCD), *3er Estudio Nacional de Prevalencia y Características de Consumo de Drogas en Hogares de Ciudades Capitales de Departamento y el Alto* (2018).

past-month prevalence of cannabis use was reported among young people aged 19–25 (20.8 per cent) followed by those aged 26–35 (16.4 per cent).[27] Around 9.9 per cent of those who reported cannabis use in the past year were reported to be daily or near-daily users of cannabis (13.1 per cent male versus 5.2 per cent female). More than one third of regular cannabis users were considered to be dependent.

A drug use survey conducted in the Plurinational State of Bolivia in 2018 also shows an increase in the past-year and past-month prevalence of cannabis use among the adult population, with 2 per cent of the population estimated to be past-year users of cannabis in 2018, compared with 1.3 per cent in 2014.[28, 29] The past-year and past-month prevalence of cannabis use was higher among men than women, among young people aged 16–30 than among the older population, and among those from "medium-low" socioeconomic groups (past-month prevalence of 1.1 per cent) and "low" socioeconomic groups (past-month prevalence of 1.0 per cent). Around one third of past-month users were daily or near-daily users of cannabis and almost half of daily or near-daily users were reported to be suffering from cannabis use disorders.

Cannabis use in Western and Central Europe is increasing, in particular in some countries with large populations

In Western and Central Europe, the prevalence of past-year cannabis use has fluctuated over the past decade from 6 to 7 per cent among the population aged 15–64.[30] However, some countries in the sub-region, in particular countries with large populations such as Germany, Italy and the United Kingdom (England and Wales), have reported an increase in cannabis use in recent drug use surveys.

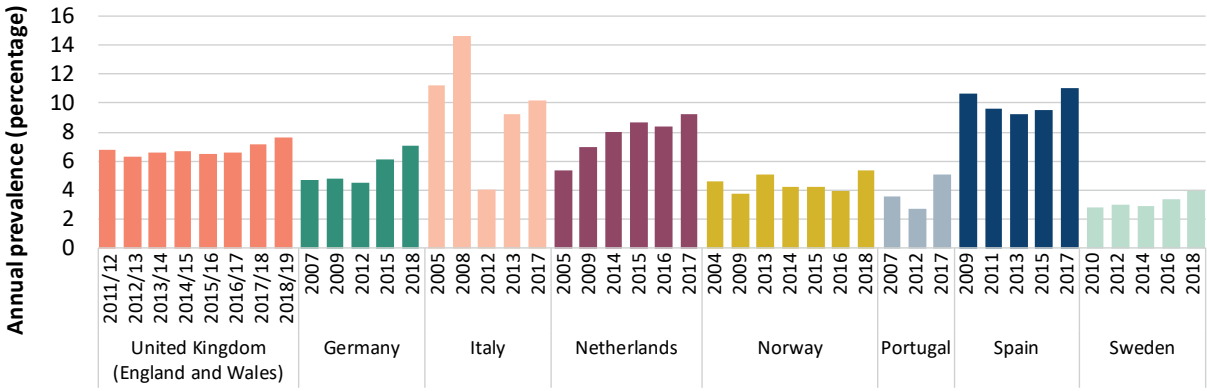
27 Ibid.

28 Plurinational State of Bolivia, Consejo Nacional de Lucha Contra el Tráfico Ilícito de Drogas (CONALTID) and Observatorio Boliviano de Seguridad Ciudadana y Lucha Contra las Drogas (OBSCD), *3er Estudio Nacional de Prevalencia y Características de Consumo de Drogas en Hogares de Ciudades Capitales de Departamento y el Alto* (2018).

29 The survey results indicate that between 2014 and 2018 the prevalence was stable when considering that the prevalence estimates in 2014 and 2018 were within the margins of error.

30 Based on cannabis use prevalence in Western and Central Europe across different years; see also *World Drug Report 2019* (Booklet 5).

FIG. 8 Trends in cannabis use, selected countries in Western and Central Europe, 2004–2018



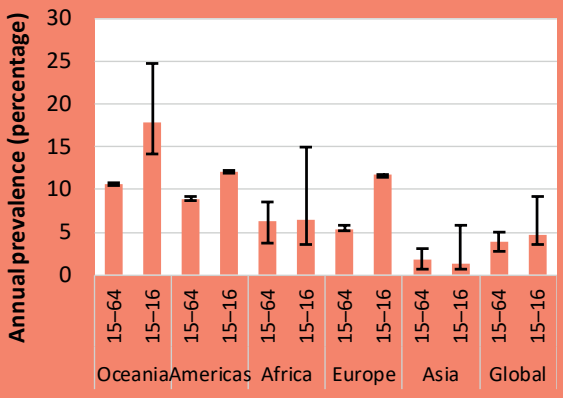
Source: UNODC, responses to the annual report questionnaire.

Drug use among adolescents and young adults

Adolescence and early adulthood are an important period of transition. It is a time of physical and psychological development, with changes occurring in the brain, and of cognitive and emotional development. For some, it is also a time of increased vulnerability to the initiation of drug use. Adolescence (12–17 years of age) is the critical risk period for the initiation of substance use. Within the population aged 15–64, peak levels of drug use are seen among those aged 18–25.[a] This situation is observed in countries in most regions and for most drug types.[b]

Cannabis is the most widely used drug among young people. Globally, it is estimated that there were 13 million past-year users of any drug among students aged 15–16 in 2018, with an estimated 11.6 million past-year users of cannabis. This corresponds to an annual prevalence of cannabis use of 4.7 per cent among this age group – a rate that is higher than the rate among the general population aged 15–64 (3.9 per cent). Past-year use of cannabis among young people aged 15–16 is high in Oceania (17.8 per cent), the Americas (12.1 per cent) and Europe (11.7 per cent).

Global and regional use of cannabis among people aged 15–16, and among the general population aged 15–64, 2017



Source: UNODC, responses to the annual report questionnaire; and other government reports.

Note: The estimates of the annual prevalence of use among those aged 15–16 are based on school surveys in most countries and may not be representative of all those.

The risk of developing dependence on cannabis among those who have ever used the drug (even once) has been estimated at 9 per cent by studies in the United States.[c] That rate rose to 17 per cent among lifetime users who started using cannabis in adolescence, according to studies in the United States, New Zealand and Australia.[d]

[a] *World Drug Report 2018: Drugs and Age – Drugs and Associated Issues among Young People and Older Peo*ple (United Nations publication, Sales No. E.18.XI.9 (Booklet 4)), p. 11.

[b] See also *World Drug Report 2019: Global Overview of Drug Demand and Supply* (United Nations publication, Sales No. E.19.XI.8 (Booklet 2))

[c] Catalina Lopez-Quintero and others, "Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)", *Drug and Alcohol Dependence*, vol. 115, Nos. 1–2 (May 2011), pp. 120–130.

[d] James C. Anthony, "The epidemiology of cannabis dependence", in *Cannabis Dependence: Its Nature, Consequences and Treatment*, Roger A. Roffman and Robert S. Stephens, eds. (Cambridge, Cambridge University Press, 2006), pp. 58–105.

Opioids cause the greatest harm to the health of users

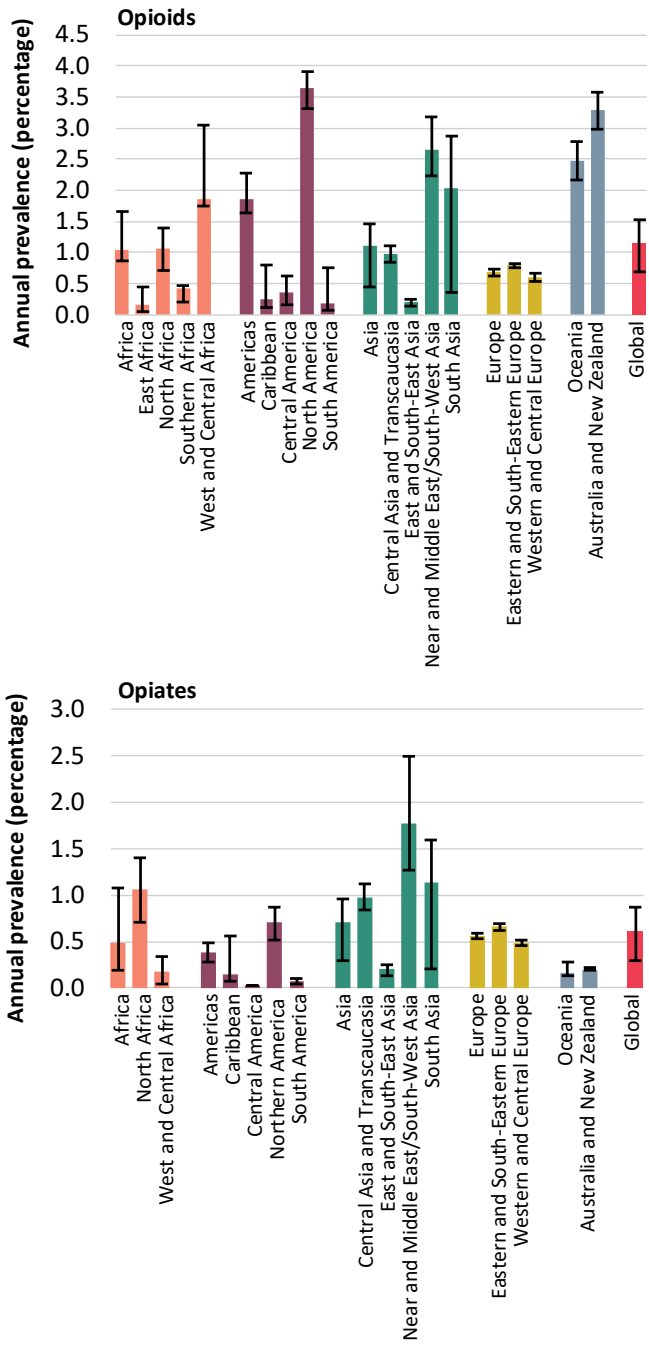
Opioids, which include opiates (heroin and opium) and pharmaceutical and other synthetic opioids, are a major concern in many countries because of the severe health consequences associated with their use. For example, in 2017, the use of opioids accounted for nearly 80 per cent of the 42 million years of "healthy" life lost as a result of disability and premature death (disability-adjusted life years, or DALYs) and 66 per cent of the estimated 167,000 deaths attributed to drug use disorders.[31]

In 2018, 57.8 million people globally were estimated to have used opioids in the past year, a figure that includes those who had used opiates (30.4 million) and those who had misused pharmaceutical opioids.[32] This corresponds to a past-year prevalence of opioid use of 1.2 per cent of the global population aged 15–64. The use of opioids is higher than the global average in North America (3.6 per cent), Australia and New Zealand (3.3 per cent), the Near and Middle East and South-West Asia (2.6 per cent) and South Asia (2.0 per cent). The population of South Asia accounts for approximately 20 per cent of the global population aged 15–64 and more than one third of the estimated number of opioid users worldwide live in that subregion.

The past-year prevalence of opiate use is higher than the global average (0.6 per cent) in the Near and Middle East and South-West Asia (1.8 per cent) and South Asia (1.1 per cent), two subregions that together account for almost 60 per cent of the estimated number of opiate users worldwide.

Although global estimates are not available, the non-medical use of pharmaceutical opioids is reported in many countries, in particular in countries in West and North Africa and the Near and Middle East (tramadol), and in North America (hydrocodone, oxycodone, codeine, tramadol and fentanyl).

FIG. 9 Use of opioids and opiates, by region and sub-region, 2018

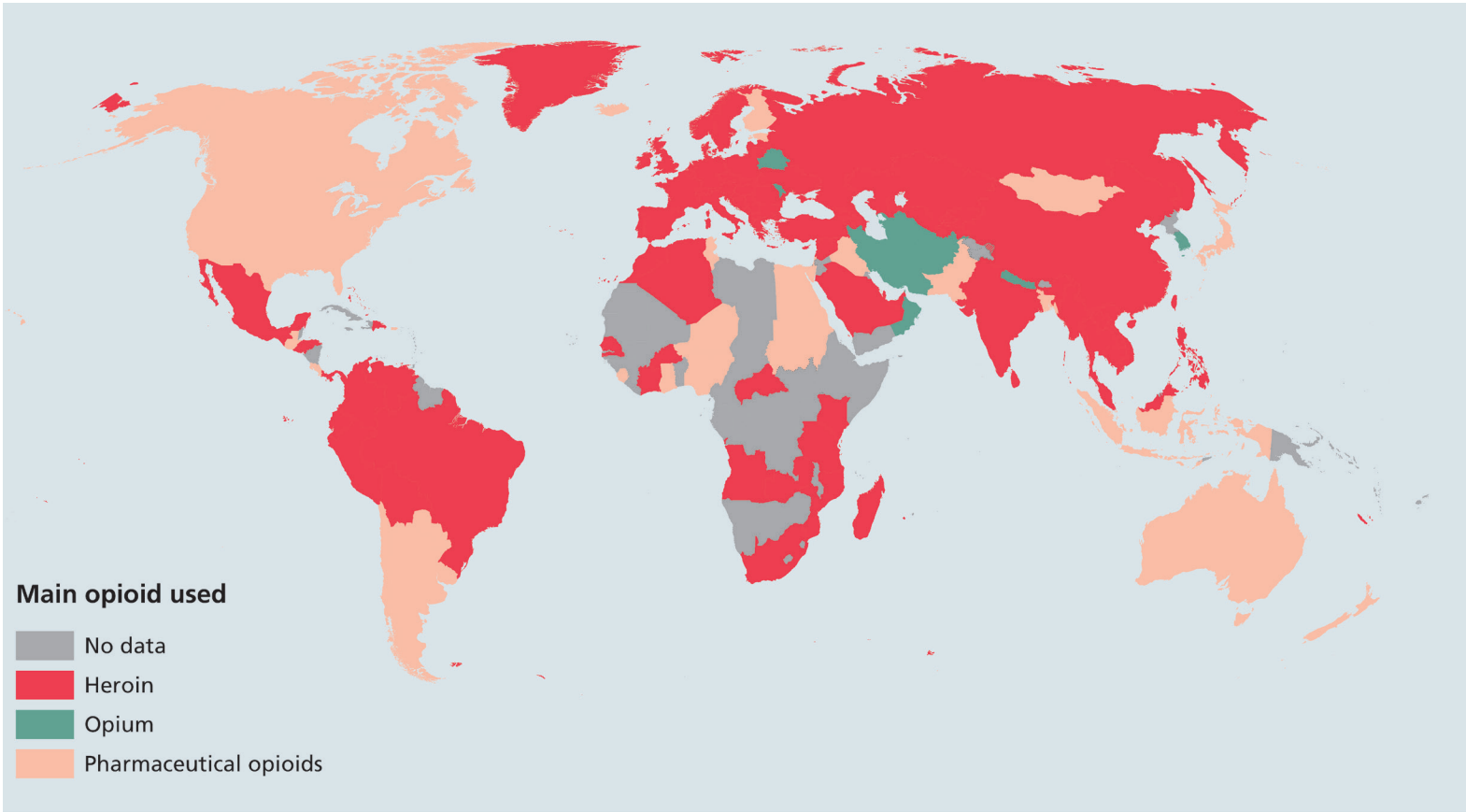


Source: UNODC, responses to the annual report questionnaire.

31 Institute for Health Metrics and Evaluation, "Global Burden of Disease Study 2017 (GBD 2017) Data Resources: GBD Results Tools".

32 The term "misuse" is used here only to denote the non-medical use of prescription drugs.

MAP 1 Most commonly used opioid, 2018 or latest available data



Source: UNODC, responses to the annual report questionnaire.

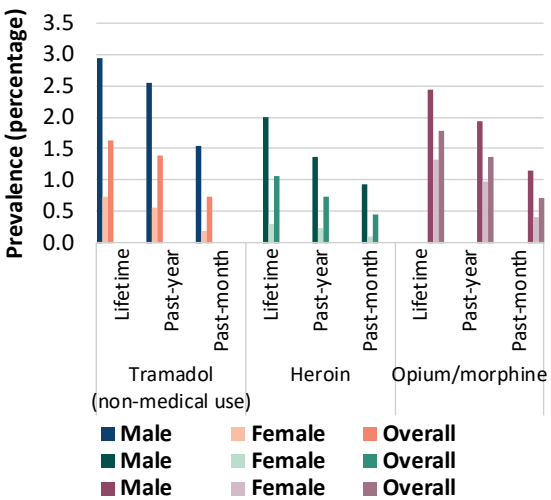
Note: Information is based primarily on the reported prevalence of opioid use and, when that was not available, on the ranking or data on treatment of opioid use reported in the annual report questionnaire.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Opioid crisis in West, Central and North Africa

With the exception of Nigeria, where 4.6 million people were estimated to have used opioids – mainly tramadol[33] – in 2017, population-level prevalence estimates of the use of opioids are not available for countries in West, Central and North Africa. However, many countries in those subregions report high levels of non-medical use of tramadol. For example, in Egypt, 2.5 per cent of male and 1.4 per cent of female students aged 15–17 had misused tramadol in the past year. Students in that country also reported the use, to a lesser degree, of heroin or opium/morphine in 2016.[34] Furthermore, data on the provision of treatment suggest that the prevalence of the non-medical use of opioids is quite high in Egypt. Tramadol tablets available in some parts of Africa are reportedly intended for the illicit market and may be of a dosage higher than usually prescribed for medical purposes.[35]

FIG. 10 Opioid use among students aged 15–17, Egypt, 2016



Source: Results of the First Mediterranean School Survey Project on Alcohol and Other Drugs (MEDSPAD) in Egypt (December 2017).

33 National Bureau of Statistics and UNODC, *Drug Use Survey in Nigeria 2018* (Funded by the European Union) (Vienna, 2019).

34 Egypt, General Secretariat of Mental Health and Addiction Treatment, and Pompidou Group, Council of Europe, MedSPAD: Results of the First Mediterranean School Survey Project on Alcohol and other Drugs (MEDSPAD) in Egypt, (December 2017).

35 See *World Drug Report 2020* (Booklet 4), for further details.

Ongoing opioid crisis in North America and signs of an increase in the non-medical use of pharmaceutical opioids in Europe

The opioid crisis continues in North America, with a new record level in the number of opioid overdose deaths attributed to the use of fentanyl and its analogues. These substances are added to heroin and other drugs as adulterants and are also sold as counterfeit prescription opioids, such as oxycodone or hydrocodone, and even as counterfeit benzodiazepines, to a large unsuspecting population of users of opioids and other drugs.[36, 37] In 2018, in the United States, 10.3 million people or 3.7 per cent of the population aged 12 and older had misused opioids in the past year.[38] Of those people, 9.9 million (3.6 per cent of the population) reported the non-medical use of prescription opioids while nearly 800,000 reported past-year use of heroin.

The number of overdose deaths in the United States reached its peak in 2017 at 70,237 deaths (21.7 deaths per 100,000 population), of which 47,600 (68 per cent: 14.9 deaths per 100,000 population) were attributed to opioids.[39] In 2018, for the first time since 1999, the number of overdose deaths declined over the previous year by 4 per cent to 67,367 deaths (20.7 deaths per 100,000 population). Opioids were responsible for most of those deaths, accounting for 46,802 in total in 2018 (14.6 deaths per 100,000 population), of which 67 per cent were attributed to fentanyls.[40]

36 Patil Armenian and others, "Fentanyl, fentanyl analogs and novel synthetic opioids: a comprehensive review", *Neuropharmacology*, vol. 134, part A (May 2018), pp. 121–132.

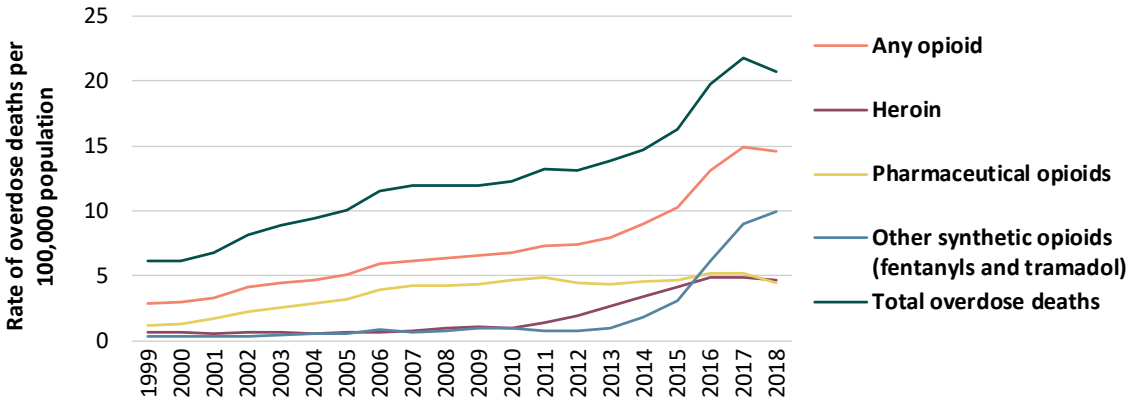
37 United States, Department of Justice, Drug Enforcement Administration, *2018 National Drug Threat Assessment* (October 2018).

38 United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.*

39 Lawrence Scholl and others, "Drug and opioid: involved overdose deaths – United States, 2013-2017", *Morbidity and Mortality Weekly Report*, vol. 67, Nos. 51–52 (January 2019), pp. 1419–1427.

40 Based on analysis of the date from the Centers for Disease Control and Prevention, National Center for Health Statistics, Wide-ranging OnLine Data for Epidemiologic Research, "Multiple cause of death (detailed mortality) for 1999–2018".

FIG. 11 Trends in rates of overdose deaths in the United States, 1999–2018



Source: Centers for Disease Control and Prevention, Wide-ranging Online Data for Epidemiologic Research (CDC WONDER), "Multiple cause of death (detailed mortality) for 1999–2018".

Similarly, opioid overdose deaths in Canada increased by 50 per cent in two years, from 3,023 deaths in 2016 (8.4 deaths per 100,000 population) to 4,398 deaths in 2018 (11.9 deaths per 100,000 population), the majority of them (80 per cent) involving fentanyls.[41]

There are also signs of increasing non-medical use of pharmaceutical opioids in Western and Central Europe, as reflected in the increasing proportion of treatment admissions for the use of those substances in recent years. In 2017, users of pharmaceutical opioids, including misused methadone, buprenorphine, fentanyl, codeine, morphine, tramadol and oxycodone, accounted for 22 per cent of all clients entering drug treatment in the subregion for opioid use disorders (as their primary drug).[42]

Opioid use is increasing in India

A major drug use survey carried out recently in India found that in 2018, 2.1 per cent of the population aged 10–75, a total of 23 million people, had used opioids in the past year. Among opioids, heroin is the most prevalent substance, with a past-year prevalence of 1.1 per cent among the population aged 10–75; this is followed by the non-medical use of pharmaceutical opioids, with a past-year prevalence of almost 1 per cent, and by opium at almost 0.5 per cent. In general, the past-year use of opioids is much higher among men (4 per cent of the male population) than women (0.2 per cent of the female population). Moreover, 1.8 per cent of adolescents aged 10–17 are estimated to be past-year opioid users. Of the 23 million past-year opioid users, roughly one third, or 7.7 million people, suffer from opioid use disorders. Compared with earlier estimates from a survey carried out in 2004, overall opioid use in India is estimated to have increased fivefold.[43]

Use of amphetamines, especially methamphetamine, is increasing in parts of Asia and North America

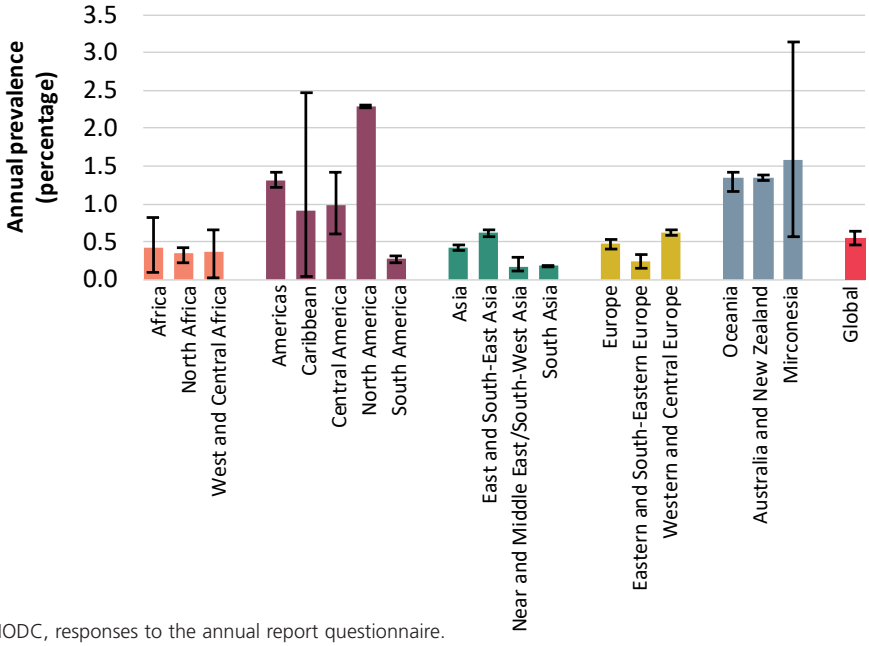
Around 27 million people worldwide, corresponding to 0.5 per cent of the adult population, are estimated to have used amphetamines, including amphetamine, methamphetamine and pharmaceutical stimulants, in the past year. The past-year prevalence of the use of amphetamines is particularly high in North America (2.3 per cent of the population aged 15–64) and Australia and New Zealand

41 Canada, Public Health Agency of Canada, Public Health Infobase, "Opioid-related harms in Canada". Available at https://health-infobase.canada.ca/substance-related-harms/opioids/ (March 2020).

42 EMCCDA, *European Drug Report 2019*.

43 Atul Ambekar and others, *Magnitude of Substance Use in India*, 2019 (New Delhi, Ministry of Social Justice and Empowerment, 2019).

FIG. 12 Use of amphetamines, by region and subregion, 2018



Source: UNODC, responses to the annual report questionnaire.

Note: "Amphetamines" includes the non-medical use of amphetamine, methamphetamine and pharmaceutical stimulants.

(1.3 per cent). The past-year use of amphetamines in Asia, as a percentage of the population, is at a similar level (0.5 per cent) to the global average. Nearly half of the global estimate of past-year users of amphetamines (12.7 million people) reside in Asia, although the region is home to 60 per cent of the global population aged 15–64.

The type and form of amphetamines used vary considerably between regions and subregions. In North America, the non-medical use of pharmaceutical stimulants and methamphetamine is most prevalent; in East and South-East Asia and Oceania (Australia and New Zealand), it is methamphetamine; and in Western and Central Europe and the Near and Middle East, it is amphetamine. In the latter subregion, amphetamine is commonly known as "captagon". In many countries in South and Central America, especially those that have reported recent survey data, the non-medical use of pharmaceutical stimulants is more common than the use of other amphetamines. The non-medical use of weight loss pills is reportedly more prevalent among women than among men, with pills such as sibutramine hydrochloride monohydrate (sold under the brand names Aderan and Ipomex) and phentermine (sold under the brand names Duromine and Suprenza), along with methylphenidate and amphetamine, reported to be the most commonly misused pharmaceutical stimulants in those subregions. [44, 45]

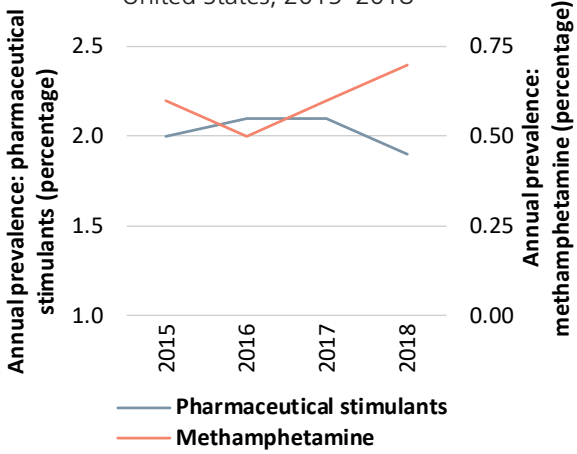
Use of amphetamines seems to be increasing in North America

In North America, there were indications of an increase in methamphetamine use in 2018. In the United States, 1.9 per cent of the population aged 12 and older, or 5.1 million people, reported the misuse of pharmaceutical stimulants, while 0.7 per cent of the population aged 12 and older, or 1.9 million people, reported the use of methamphetamine in the past year. While recent survey data show a declining trend in the misuse of pharmaceutical

44 Argentina, Secretaría de Políticas Integrales sobre Drogas de la Nación Argentina (SEDRONAR), Estudio Nacional en Población de 12 a 65 años, sobre Consumo de Sustancias Psicoactivas: Argentina 2017 – *Informe de Resultados No.1: Magnitud del Consumo de Sustancias a Nivel Nacional* (Buenos Aires, 2017).

45 Mario E. López López and Alma C. Escobar de Mena, *Estudio Nacional Sobre Consumo de Drogas en Población General de El Salvador 2014* (San Salvador, Dirección Ejecutiva de la Comisión Nacional Antidrogas, 2014).

FIG. 13 Trend in the use of amphetamines, United States, 2015–2018



Source: United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.*

stimulants,[46] there has been an increase in methamphetamine use in the United States. In 2018, methamphetamine use declined among young adults (aged 18–25), but increased significantly among adults aged 26 and older.[47] This excludes institutionalized and homeless populations, however, both of which may be affected by disproportionately higher rates of drug use.

In recent years, reported methamphetamine per-gram purity levels in the United States have averaged more than 90 per cent, while prices have declined by a further 18 per cent over the past year to $56 per pure gram.[48] Although in the United States, methamphetamine has historically been mixed with heroin to create a "speedball", such combinations are increasingly rare. Recent forensic laboratory reports indicate that, while still comparatively rare, there are combinations of methamphetamine, fentanyl and fentanyl analogues on the United States drug markets.[49]

Number of people using amphetamines appears stable in Western and Central Europe but the level of consumption seems to be increasing

In Europe, the prevalence of the use of amphetamines in the past year is estimated at 0.5 per cent of the population aged 15–64, or 2.5 million people, in 2018. In Western and Central Europe, amphetamine is more commonly used than methamphetamine, the consumption of which has mainly been reported in Czechia, although increasing use of the drug is now being reported in other countries, such as Cyprus, (eastern) Germany, Slovakia and Spain, as well as in parts of Northern Europe. Since 2009, the use of amphetamines has been relatively stable in most countries in Western and Central Europe,[50] although countries with high prevalence, such as Germany (1.2 per cent) and the Netherlands (1.8 per cent), are reporting the increasing use of amphetamines.

European wastewater analysis confirms the patterns of use of amphetamines reported in household survey data, which point to an overall prevalence of amphetamine use in Europe that is higher than that of methamphetamine, as methamphetamine use is predominant in only a few countries. Wastewater analyses, conducted in 140 cities in 33 countries across Europe, suggest that the quantity of amphetamine consumed per capita over the period 2011–2019 was 1.7 times larger in 2019. In most of the cities included in the analysis, amphetamine was the most consumed substance of the amphetamines group in 2019 (or the latest year available). However, the level of methamphetamine found in wastewater was higher than that of amphetamine in the following countries and cities: Czechia, Germany (in regions bordering Czechia), northern Italy (Milan), Lithuania, Slovakia, Spain (Madrid and Barcelona), some cities in Switzerland (Zurich, Basel and Geneva) and Turkey (Istanbul).

46 The non-medical use of prescription stimulants includes amphetamine or methylphenidate products, anorectic (weight-loss) stimulants or stimulants such as Provigil used to treat sleeplessness due to narcolepsy or other sleep disorders.

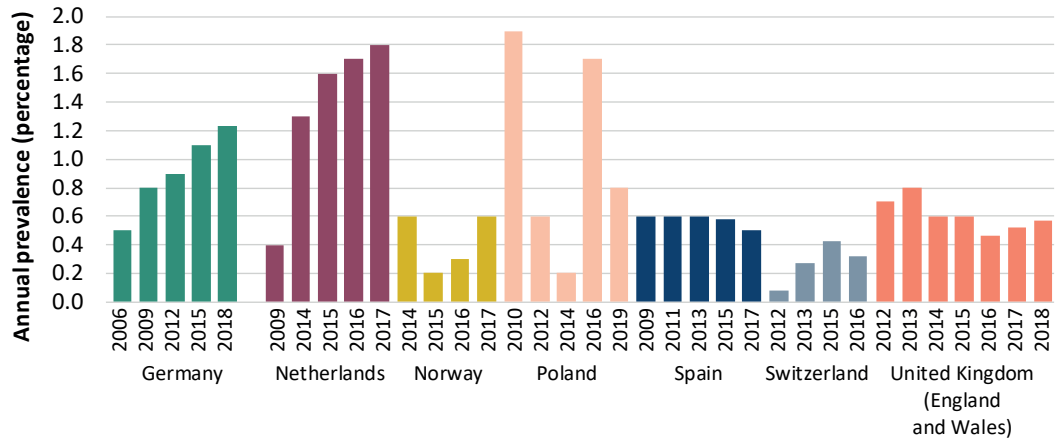
47 United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.*

48 United States, Department of Justice, Drug Enforcement Administration, *2019 National Drug Threat Assessment* (December 2019).

49 Ibid.

50 *World Drug Report 2010.*

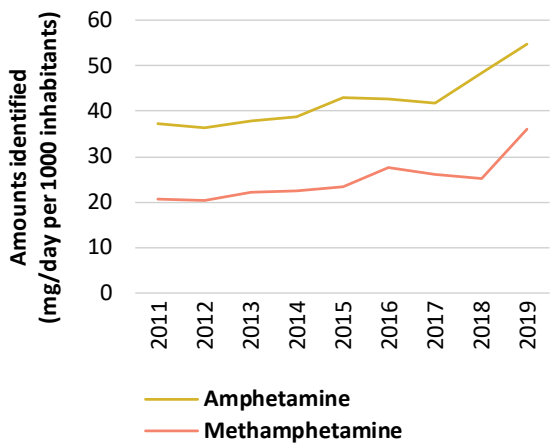
FIG. 14 Trends in the use of amphetamines, selected countries in Western and Central Europe



Source: UNODC, responses to the annual report questionnaire.

Note: This figure includes those countries that have reported recent data.

FIG. 15 Quantities of amphetamine and methamphetamine found in wastewater, 140 cities in Europe, 2011–2019



Source: UNODC calculations based on wastewater data provided by Sewage Analysis CORe group Europe (SCORE).

Note: Average quantity of amphetamine/methamphetamine found in wastewater in 140 cities in 33 countries weighted by the population of the sites: assumption of gradual increase/decrease in years in which no analysis took place in a city and no change since latest available data.

Quantities of amphetamine and methamphetamine found in wastewater over the period 2011–2019 increased by nearly half and by three quarters, respectively, in the participating cities, albeit with some fluctuations. The upward trend was more marked in the case of methamphetamine.

Methamphetamine use remains of concern in East and South-East Asia

More than one third (9.9 million people) of the estimated global number of users of amphetamines are in East and South-East Asia. The increased use of methamphetamine, both in the form of tablets and crystalline methamphetamine, continues to be reported in the subregion.[51]

A recent household survey conducted in Indonesia in 2017 reported past-year prevalence of the use of amphetamines at 0.5 per cent, or roughly 1 million past-year users, 850,000 of whom were past-year users of methamphetamine.[52] Similarly, in the Philippines, on the basis of a 2016 household survey, 1.1 per cent of the population aged 10–69, or approximately 850,000 people, were estimated to be past-year users of methamphetamine,[53] while in Thailand 1.3 per cent of the population (653,000 people) aged 12–65 were estimated to be past-year users of methamphetamine tablets, whereas 0.7 per cent of the population (372,000) used crystal methamphetamine in 2019.[54]

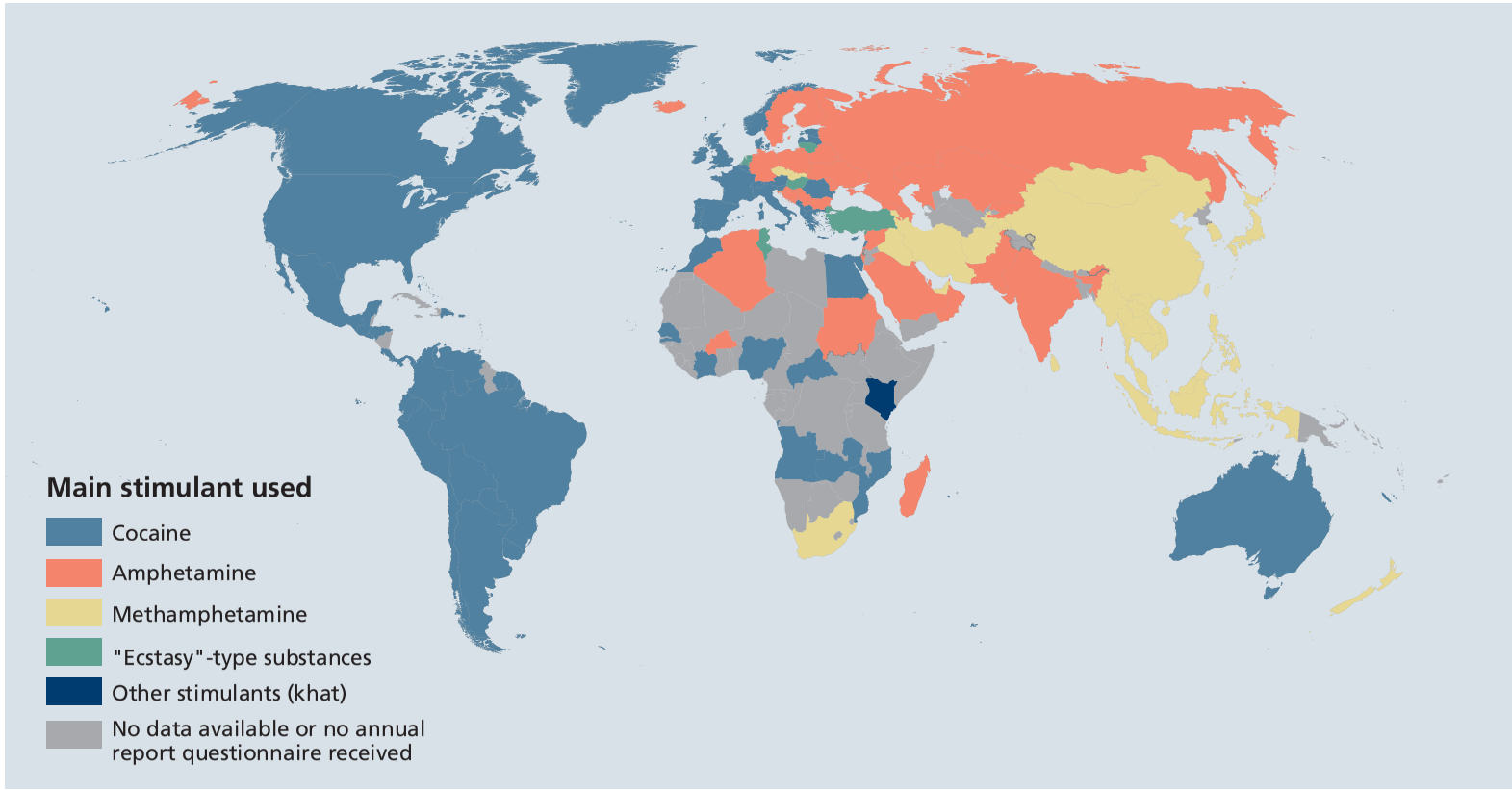
51 Manop Kanato and others, eds., *ASEAN Drug Monitoring Report 2018*, 2nd ed. (Bangkok, ASEAN Narcotics Cooperation Centre, 2019).

52 UNODC, responses submitted by Indonesia to the annual report questionnaire for 2018.

53 UNODC, responses submitted by the Philippines to the annual report questionnaire for 2017.

54 Office of the Narcotics Control Board and Administra-

MAP 2 Main stimulant drug used, 2018 or latest available data



Source: UNODC, responses to the annual report questionnaire.

Note: Information is based primarily on the reported prevalence of stimulant drugs (cocaine, amphetamine, methamphetamine and "ecstasy") and, when that was not available, on the ranking or data on treatment of stimulant drug use reported in the annual report questionnaire.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

In other countries in East and South-East Asia, the number of drug treatment admissions is the only indicator available to provide information on the extent of drug use. With the exception of Viet Nam, all countries in the subregion continued to report methamphetamine as the primary drug of concern in drug treatment admissions in 2018 (or the latest available year). While China does not report data on drug treatment admissions, the majority of registered drug users (nearly 60 per cent)[55] in 2018 comprised users of synthetic drugs (mainly methamphetamine).[56]

Overall, the use of methamphetamine tablets is more common than the use of crystalline methamphetamine, as reflected in the proportion of methamphetamine tablet users reported to be in treatment in the subregion in 2018.[57] Nevertheless, in Brunei Darussalam, Cambodia, Malaysia, the Philippines and Singapore, the majority of people seeking drug treatment were users of crystalline methamphetamine; in the Lao People's Democratic Republic and Thailand, the majority were primarily users of methamphetamine tablets.[58]

Wastewater analysis shows an increase in methamphetamine use in Australia and New Zealand

In Oceania – mainly Australia and New Zealand – the use of methamphetamine is more common than that of amphetamine. In New Zealand, the use of methamphetamine is considered to have increased in recent years.[59] According to a 2018/19 survey in that country, 1 per cent of the population aged 15 and older, or 39,000 people, used amphetamine[60] in the past year,[61] a significant increase from 2017/18. However, analysis of wastewater shows that methamphetamine is the most commonly detected drug nationwide.[62] In 2019, 14–16 kg of methamphetamine were consumed each week in the sites tested,[63] with a corresponding consumption of an average of 600 mg of methamphetamine per 1,000 people per day, ranging from less than 200 mg per 1,000 population in the Southland region to 1,100 mg per 1,000 population in the Northland region. Moreover, the price of methamphetamine fell over the period 2016–2018, suggesting that there is an ample supply driving the price down and likely increasing use of the drug.[64]

In Australia, the past-year prevalence of the use of amphetamines in 2016 was estimated at 1.4 per cent of people aged 14 and older, or 280,000 past-year users.[65] More than half of those people (57 per cent) reported crystalline methamphetamine as their main drug of use, while others reported the use of methamphetamine powder (20 per cent) and the non-medical use of pharmaceutical amphetamines (11 per cent). The past-year prevalence of the use of amphetamines (2.8 per cent) was highest among young adults aged 20–29. The past-year use of methamphetamine in Australia has declined considerably since 2001, when it was reported at 3.4 per cent of the population aged 14 and older.

By contrast, wastewater analysis in Australia shows that increasing amounts of methamphetamine are consumed each year in the country, from an estimated average of 8.4 tons in 2016/17 to 11.5 tons in 2018/19.[66] The wastewater analysis conducted in 2019 was carried out at 22 sites in state capitals and 36 regional sites, and covered 57 per cent of the

tive Committee for Substance Abuse Academic Network, *National survey on substance use in Thailand 2019,* Thailand 2019.

55 UNODC, response to the annual report questionnaire for 2018.

56 UNODC, *Synthetic Drugs in East and South-East Asia: Latest developments and challenges* (May 2020).

57 Kanato and others, eds. *ASEAN Drug Monitoring Report 2018.*

58 Ibid.

59 UNODC, responses submitted by New Zealand to the annual report questionnaire for 2018.

60 Past-year amphetamine user is a person who has used amphetamine for recreational or non–medical purposes, or to get high, in the past 12 months. The type of amphetamine used is not specified in the survey.

61 New Zealand, Ministry of Health, "Annual update of key results 2018/19: New Zealand Health Survey", 14 November 2019.

62 New Zealand Police, "National Wastewater Testing Programme: Quarter 4 2019", February 2020.

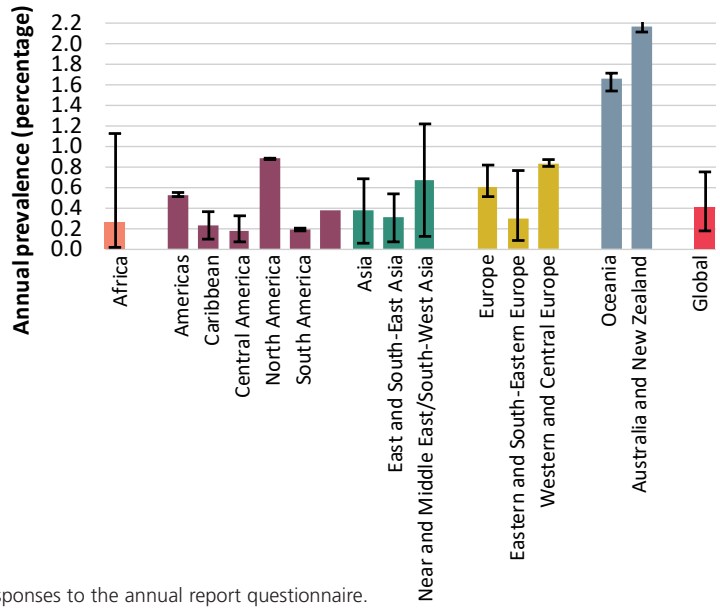
63 Ibid.

64 UNODC, responses submitted by New Zealand to the annual report questionnaire for 2018.

65 Australian Institute of Health and Welfare, *National Drug Strategy Household Survey 2016: Detailed Findings*, Drug Statistics Series No. 31 (Canberra, 2017).

66 Australian Criminal Intelligence Commission, *National Wastewater Drug Monitoring Program: Report No. 9* (March 2020).

FIG. 16 Use of "ecstasy", by region and in selected subregions, 2018



Source: UNODC, responses to the annual report questionnaire.

population and a wide range of catchment sizes. Overall, the average per capita consumption of methamphetamine was highest at regional sites: 1,500 mg per 1,000 population per day, compared with an average of 1250 mg per 1,000 population per day at state capital sites.[67] The largest amounts of methamphetamine were consumed in New South Wales, followed by Victoria and Queensland.

In addition, interviews conducted every year with a sentinel group of people who regularly inject drugs point to fluctuating trends in methamphetamine use. That use peaked in 2003, when 89 per cent of respondents reported using methamphetamine in the past six months, before declining to 60 per cent in 2010 and then increasing again in 2019, with three in four respondents (78 per cent) reporting the use of methamphetamine, mainly in crystalline form, followed by powder and base forms, in the six months prior to the interview.[68] The median amount of either powder or crystalline methamphetamine used on a typical day in the past six months was 0.20 g, while the frequency of crystalline methamphetamine use among those who regularly inject the drug was a median of 48 days, or twice a week, in 2019. The expansion of the crystalline methamphetamine market in Australia is also confirmed by the higher perceived purity of the drug and its decreasing price, which in 2019 was recorded at the lowest observed since 2003 – a median price of 260 Australian dollars per gram.[69]

Forms of "ecstasy" have diversified, with a high MDMA content available on the main markets

In 2018, around 20.5 million people globally were estimated to have used "ecstasy" in the past year, corresponding to 0.4 per cent of the global population aged 15–64. The prevalence of past-year use of "ecstasy" is relatively high in Australia and New Zealand (2.2 per cent), North America (0.9 per cent) and Western and Central Europe (0.8 per cent). The use of "ecstasy" is mainly associated with recreational nightlife settings, with relatively higher levels of use among younger people.[70]

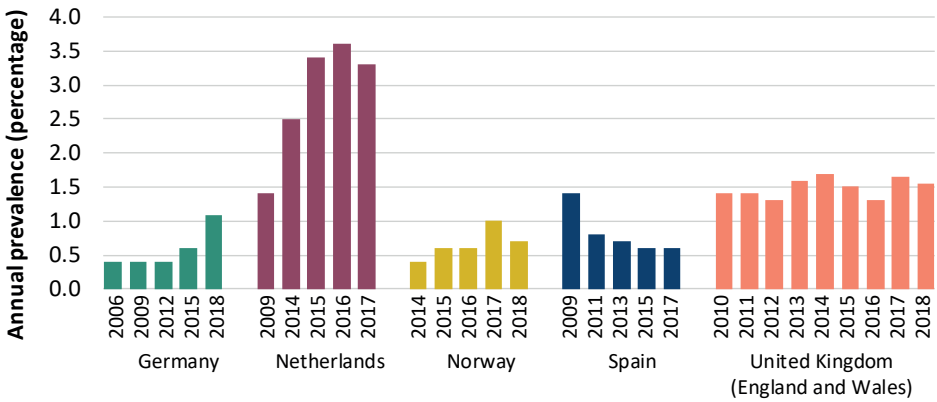
67 Ibid.

68 Amy Peacock and others, *Australian Drug Trends 2019: Key Findings from the National Illicit Drug Reporting System (IDRS) Interviews* (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2019).

69 Ibid.

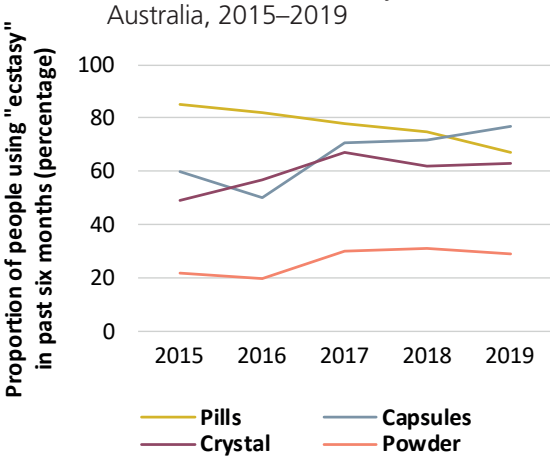
70 See, for example, *World Drug Report 2018*, (Booklet 4) and EMCDDA, *European Drug Report 2019*.

FIG. 17 Trends in the use of "ecstasy" in countries in Western and Central Europe that reported recent data



Source: UNODC, responses to the annual report questionnaire.

FIG. 18 Trends in form of "ecstasy" used, Australia, 2015–2019



Source: Amy Peacok and others, *Australian Drug Trends 2019: Key Findings from the National Ecstasy and Related Drugs Reporting System (EDRS) Interviews* (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2019).

Since 2010, the forms of "ecstasy" used have also diversified, as high-purity powder and crystalline forms of the drug have become available and are commonly used in Europe, Australia and New Zealand.[71, 72] In Western and Central Europe, the MDMA content of "ecstasy" tablets reached a 10-year high in 2017. While some countries with a high prevalence of use, such as the Netherlands and the United Kindgom, reported a decline in their last survey, Germany has been reporting an increasing trend in the use of MDMA or "ecstasy". In Australia, the use of "ecstasy" tablets continued to decline in 2019, with 67 per cent of respondents to a recent study having used it in the past six months. "Ecstasy" capsules remained the most common form (77 per cent of "ecstasy" users) of the substance used since monitoring began in 2003.[73] Moreover, one in four participants who reported "ecstasy" use in the past six months reported weekly or more frequent use of the substance, with a median number of two capsules used in a typical session.[74]

Indications of increasing cocaine use in Western and Central Europe and mixed trends in the Americas

Globally, an estimated 19 million people were past-year users of cocaine in 2018, corresponding to 0.4 per cent of the global population aged 15–64. The main cocaine markets continue to be North America and Western and Central Europe, with a prevalence of use of 2.1 per cent and 1.4 per cent, respectively, while the highest prevalence of past-year cocaine use is in Australia and New Zealand, at 2.2 per cent of the population aged 15–64. Cocaine use is also higher than the global average in Central America (0.7 per cent) and South America (1.0 per cent).

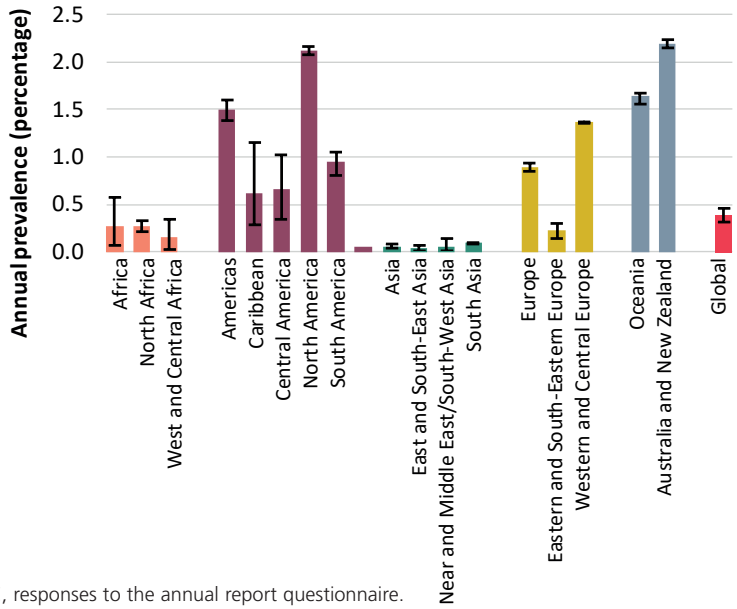
71 EMCDDA, *European Drug Report 2019*.

72 Amy Peacock and others, *Australian Drug Trends 2019: Key Findings from the National Ecstasy and Related Drugs Reporting System (EDRS) Interviews*.

73 Ibid.

74 Ibid.

FIG. 19 Use of cocaine, by region and selected subregions, 2018



Source: UNODC, responses to the annual report questionnaire.

Cocaine use in the other subregions remains much lower than the global average.

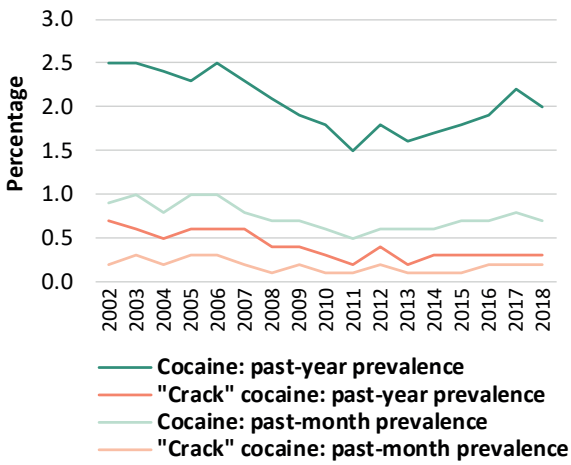
Use of cocaine is stabilizing in North America

In the United States, 2 per cent of the population aged 12 and older, or 5.5 million people, are estimated to have used cocaine in 2018, including 757,000 people (0.3 per cent of the population) who used "crack" cocaine in the past year.

As a long-term trend, past-year use of cocaine reached a low in 2011 but has been increasing ever since, stabilizing at a high level since 2016. Cocaine use in the past month and daily and near-daily use among past-month users has remained stable over the past four years. Overall, of the estimated 1.9 million past-month cocaine users, 6.4 per cent were estimated to be daily or near-daily users of cocaine in 2018; on average, past-month users had used cocaine for 4.8 days in the past month. Moreover, as with most other drugs, past-year prevalence of cocaine use was reported to be highest among young adults (aged 18–25), at 5.8 per cent.[75]

There are also indications of the increasing availability of high-purity cocaine at lower prices on the United States market: between 2013 and 2017, the

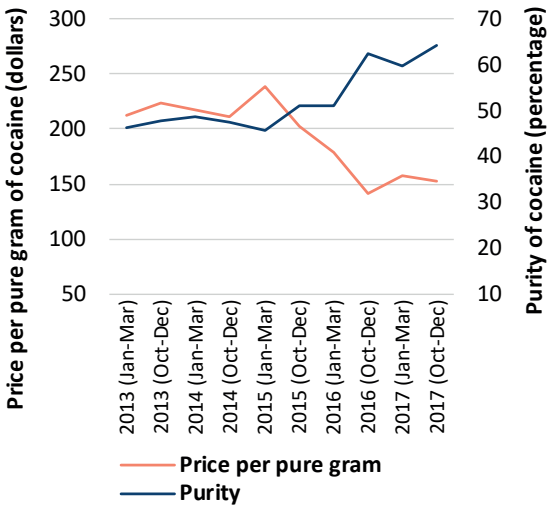
FIG. 20 Trends in the use of cocaine and "crack" cocaine, United States, 2002–2018



Source: United States, Substance Abuse and Mental Health Services Administration, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health: Detailed Tables* (Rockville, Maryland, Center for Behavioral Health Statistics and Quality, 2019).

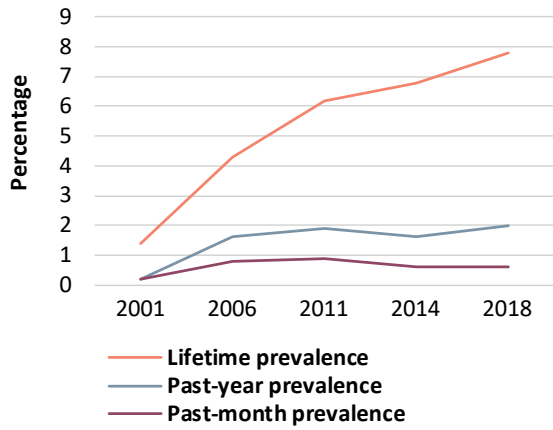
75 United States, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health: Detailed Tables.*

FIG. 21 Price and purity of cocaine, United States, 2013–2017



Source: United States, Department of Justice, Drug Enforcement Administration, *2019 National Drug Threat Assessment* (December 2019).

FIG. 22 Trends in cocaine use, Uruguay, 2001–2018



Source: Observatorio Uruguayo de Drogas, *VII Encuesta Nacional en Hogares sobre Consumo de Drogas.*

retail price per pure gram of cocaine decreased by 29 per cent, while in that same period average purity increased by 32 per cent.[76]

Mixed trends in cocaine use in South America

In South America, 2.8 million people, or almost 1 per cent of the population aged 15–64, were estimated to be past-year cocaine users in 2018. With nearly 1.5 million past-year cocaine and "crack" cocaine users, Brazil is the largest cocaine market in South America.[77]

The use of cocaine base paste, which was previously confined to countries where cocaine is manufactured, has spread to many countries in South America. However, such use is difficult to estimate since people who use cocaine base paste are usually from socially marginalized groups that are not well captured by household surveys.[78]

Argentina, Bolivia (Plurinational State of) and Uruguay, the countries in South America with new information on drug use, report mixed trends in the use of cocaine among the general population. In Argentina in 2017, 1.5 per cent of the population (2.4 per cent of males and 0.7 per cent of females) aged 12–65 had used cocaine in the past year.[79] The highest prevalence of past-year cocaine use (3 per cent) was reported among young people aged 18–24 and, to a lesser extent, among adults aged 25–49. Cocaine base paste was estimated to have been used by 0.1 per cent of the general population in the past year, mainly by males and people aged 25–34, although this could be an underestimate. Over the period 2010–2017, the number of cocaine users nearly doubled in Argentina; an increase that was greater among women than among men, and greater among adults aged 35–49 than among any other age group.

In Uruguay, the past-year prevalence of cocaine use was reported as 2 per cent of the adult population in 2018, a rate that has remained stable since 2006. In 2018, the past-year use of cocaine in Uruguay was higher among men than among women and, by age group, higher among people aged 26–35. Around 7 per cent of past-year cocaine users reported that they "sometimes" used it weekly, and 1 per cent reported that they used it daily. Nevertheless, almost

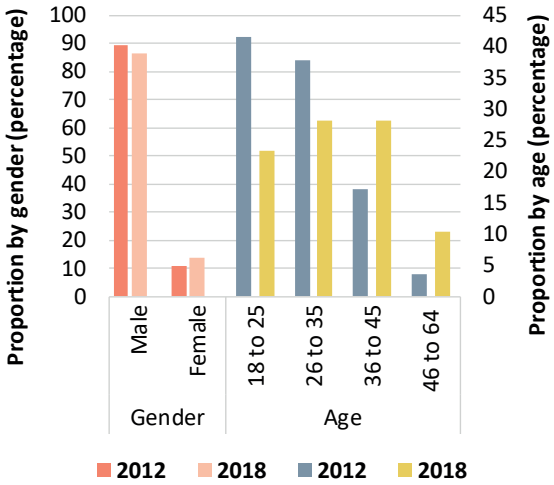
76 Drug Enforcement Administration, *2019 National Drug Threat Assessment*.

77 Based on UNODC estimate of 1.0 per cent of the population aged 15–64 having used cocaine in the previous year in 2016.

78 Argentina, SEDRONAR, "Consumo de Cocaína: Estudio Nacional en Población de 12 a 65 años sobre Consumo de Sustancias Psicoactivas – Argentina, 2017" (Buenos Aires, 2017).

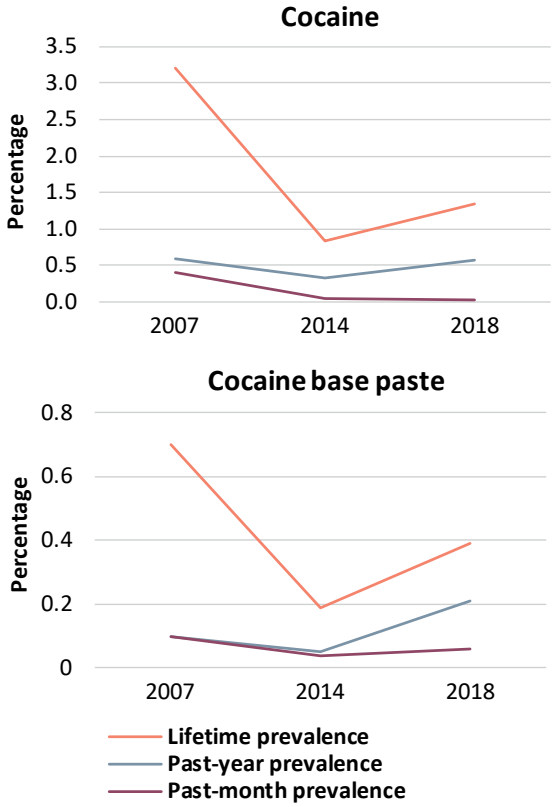
79 Ibid.

FIG. 23 Distribution of people who use cocaine base paste by gender and age group, Uruguay, 2012 and 2018



Source: Observatorio Uruguayo de Drogas and Junta Nacional de Drogas, *Personas, Calle, Consumos: Dos Estudios sobre Uso de Pasta base en Uruguay – Aproximaciones Cuantitativas y Etnográficas* (Montevideo, 2019).

FIG. 24 Trends in the use of cocaine and cocaine base paste, Plurinational State of Bolivia, 2014–2018



Source: Plurinational State of Bolivia, *3er Estudio Nacional de Prevalencia y Características de Consumo de Drogas en Hogares de Ciudades Capitales de Departamento y el Alto.*

43 per cent of past-year cocaine users in that country were considered to be suffering from cocaine use disorders.[80]

In 2018, there were an estimated 8,800 regular users (around 4 people per 1,000 population aged 15–64) of cocaine base paste in Uruguay, which is considerably lower than the previous estimate of 14,000 regular users in 2012.[81] The majority of cocaine base paste users were men (86 per cent) aged 26–35 (38 per cent); however, a higher proportion of younger users, aged 18–25, were women. Comparison of two studies, which used respondent-driven sampling to survey regular cocaine base paste users in 2012 and 2018, found that there has been a decline in the use of the substance among young adults. However, the proportion of older users – those in the age groups 36–45 and older – has increased considerably, indicating an ageing cohort of users who initiated use at the age of 18, in around 2002–2004, and have progressed with the use of cocaine base paste over the years.[82] The use of cocaine base paste is reportedly common among marginalized population groups (in particular the homeless and people living in shelters) and among those who had less than primary level of education.

In the Plurinational State of Bolivia in 2018, around 0.6 per cent of the population aged 15–64 were estimated to be past-year users of cocaine and 0.2 per cent past-year users of cocaine base paste.[83] The past-year use of cocaine and cocaine base paste have

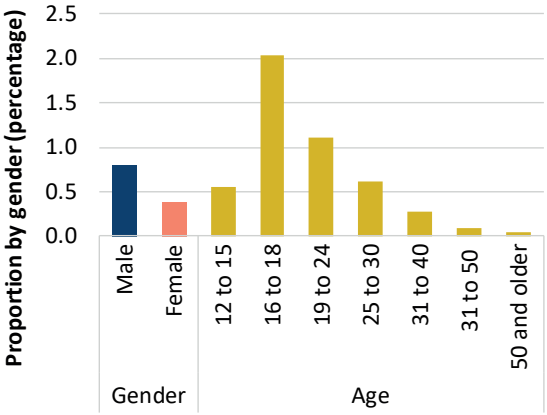
80 Observatorio Uruguayo de Drogas, *VII Encuesta Nacional en Hogares sobre Consumo de Drogas*.

81 Observatorio Uruguayo de Drogas and Junta Nacional de Drogas, *Personas, Calle, Consumos: Dos Estudios sobre Uso de Pasta base en Uruguay Aproximaciones Cuantitativas y Etnográficas* (Montevideo, 2019).

82 Ibid.

83 Plurinational State of Bolivia, Consejo Nacional de Lucha Contra el Tráfico Ilícito de Drogas (CONALTID) and Observatorio Boliviano de Seguridad Ciudadana y Lucha Contra las Drogas (OBSCD), *3er Estudio Nacional de Prevalencia y Características de Consumo de Drogas en Hogares de Ciudades Capitales de Departamento y el Alto* (2018).

FIG. 25 Use of cocaine, by gender and age group, Plurinational State of Bolivia, 2018



Source: Plurinational State of Bolivia, *3er Estudio Nacional de Prevalencia y Características de Consumo de Drogas en Hogares de Ciudades Capitales de Departamento y el Alto.*

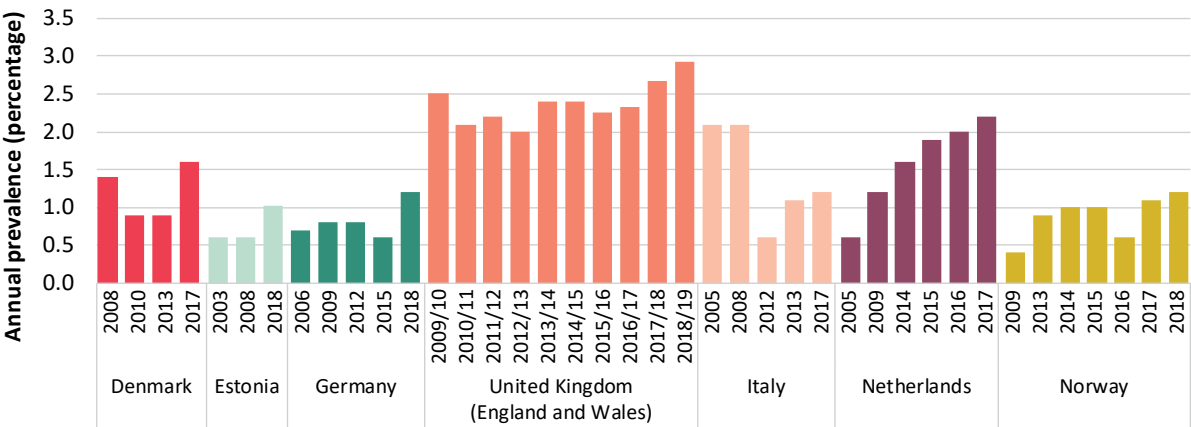
both increased since the last survey in 2014, with the past-year increase in cocaine base paste more pronounced than that of cocaine.[84] Cocaine use in the country was more frequent among men than women and, by age group, more frequent among those aged 16–24 than other age groups, as well as being more frequent among middle-income groups (high middle- and middle-income groups) than low-income groups. The use of cocaine base paste was, however, reported to be more common among the low-income groups. Despite the past-year prevalence of cocaine use being lower among women than men in the Plurinational State of Bolivia, proportionately more women (57 per cent) than men reported regular use of cocaine in the past year.

Indications of increasing cocaine use in Western and Central Europe

In Western and Central Europe, 1.4 per cent, or 4.4 million people aged 15–64, were estimated to be past-year cocaine users in 2018. Many countries in the subregion, especially those with a high prevalence of cocaine use, have reported an increase in cocaine use in the past year. There is also evidence of an increase in the availability of cocaine of the highest reported purity in over a decade in the European Union.[85]

The overall increase in cocaine consumption in Europe in recent years is even more noticeable in wastewater analyses, which indicate an increase of more than 50 per cent since 2011 – mostly since 2015 – in the quantities of cocaine consumed in 136 cities in 29 countries in Europe over the period 2011–2019.[86] Western Europe not only dominates

FIG. 26 Trend in cocaine use, countries in Western and Central Europe that reported recent data



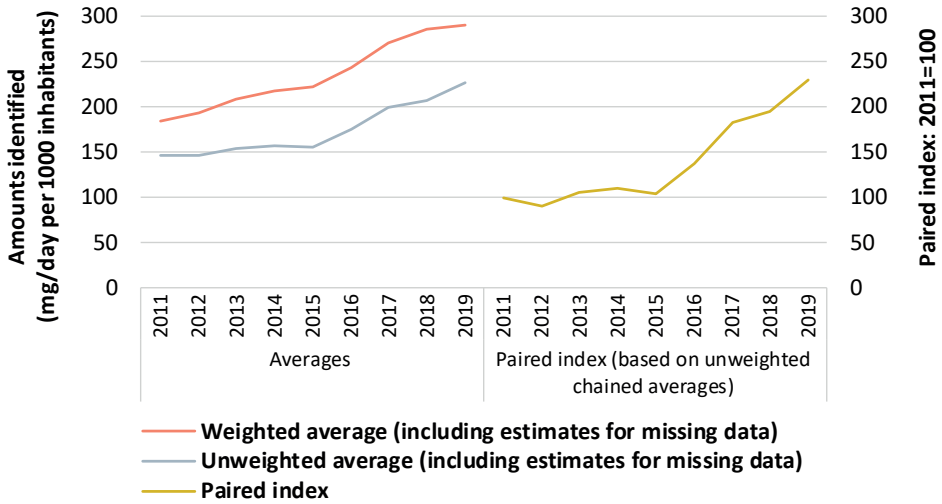
Source: UNODC, responses to the annual report questionnaire.

84 The survey results indicate that between 2014 and 2018 the prevalence was stable, since the prevalence estimates in 2014 and 2018 were within the margins of error.

85 EMCDDA and Europol, *EU Drug Markets Report 2019* (Luxembourg, Publications Office of the European Union, 2019).

86 UNODC calculations based on Sewage Analysis CORe group Europe (SCORE). For details of the calculations, see the online Methodology annex to the present report.

FIG. 27 Benzoylecgonine (cocaine metabolite) found in wastewater, 136 cities in Europe, 2011–2019



Source: UNODC calculations based on wastewater data provided by Sewage Analysis CORe group Europe (SCORE).

Note: Average quantity of benzoylecgonine found in wastewater in 136 cities (150 sites), weighted by the population of the sites: assumption of gradual increase/decrease in years in which no analysis took place in a city and there was no change since latest available data. Owing to the change in number of cities and sites, the information presented here is not comparable with that presented in the World Drug Report 2019.

the region in terms of cocaine use, but also in terms of cocaine consumption based on the quantity of cocaine metabolites (benzoylecgonine) found in wastewater.[87] All of the cities with large per capita quantities of cocaine metabolites found in their wastewater are located in Western Europe, in particular in Belgium, the Netherlands, France, Spain, Switzerland and the United Kingdom. Smaller quantities were found in cities in Northern Europe (most notably Finland), countries in Central Europe (Czechia and Slovakia) and the Baltic region (Lithuania).[88]

Despite a high prevalence of cocaine use, the quantities of cocaine consumed in Australia and New Zealand are small as use is sporadic

In Australia in 2016, 2.5 per cent of the population aged 14 and older were estimated to have used cocaine in the past year, making the prevalence of cocaine use that year the highest estimate since 2001.[89] While the highest estimated prevalence of cocaine was among young adults aged 20–29 – both past-year use (6.9 per cent) and past-month use (2.4 per cent), the average age of those who reported cocaine use in the past year rose from 28 years in 2001 to 31 years in 2016. As in other large cocaine markets, the majority of cocaine users reported sporadic use of cocaine, with 64 per cent of past-year cocaine users reporting using the drug once or twice a year, around 10 per cent using it about once a month, and around 3 per cent using it once a week or more.

The upward trend in cocaine use in Australia shown in household survey data up until 2016 may have continued in subsequent years. The wastewater analyses undertaken across Australia in 2019 covered 57 per cent of the population and were conducted at 22 sites in state capitals and 36 regional areas, covering a wide range of catchment population sizes in the country.[90] The estimated amount of cocaine

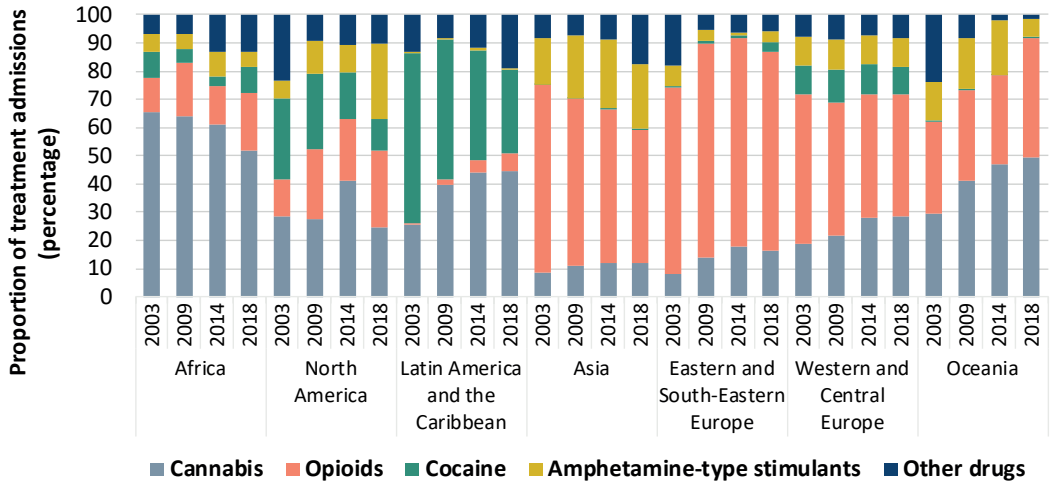
87 Benzoylecgonine is the main cocaine metabolite; a substance formed in the transformation of cocaine in the body, it is expelled through urination.

88 UNODC calculations based on Sewage Analysis CORe group Europe (SCORE).

89 Australian Institute of Health and Welfare, *National Drug Strategy Household Survey 2016: Detailed Findings* (Canberra, 2017).

90 Australian Criminal Intelligence Commission, *National*

FIG. 28 Trends in the primary drug of concern in drug treatment, by region and selected subregions, 2003, 2009, 2014 and 2018



Source: UNODC, responses to the annual report questionnaire.

consumed per year has increased by 50 per cent since 2016/17 to an estimated 4,636 kg of cocaine consumed in the country in 2018/19.[91] Overall, cocaine consumption was reported to be lower at regional sites than in the state capitals. On average, 500 mg of cocaine per 1,000 population per day was estimated to be consumed in Australia. New South Wales had a higher consumption than other regions, although some sites in Queensland, the Northern Territory and the Australian Capital Territory also had a relatively high consumption.

People in drug treatment

For people with drug use disorders, the availability of and access to treatment services remains limited at the global level, as only one in eight people with drug use disorders receives drug treatment each year. Moreover, while one in three drug users is a woman, women continue to account for only one in five or less people in treatment. Information on those in drug treatment can provide useful insight into trends and geographical variations with respect to drug use disorders. However, that information not only reflects the level of demand for drug treatment (the number of people seeking help or referred by the criminal justice system or by their families, for example) but also the extent of the availability of and access to drug treatment services.

Over the past decade and a half, all regions other than Africa have seen an increasing proportion of drug treatment being provided for cases of cannabis use disorders. In most of the regions, among people entering treatment for cannabis use disorders, nearly half were first-time entrants, with a mean age of 26 years.[92] In Africa, although the proportion of people treated for cannabis as the primary drug of concern has been decreasing, it remains significant (50 per cent in 2018). In West and Central Africa, for instance, between 2014 and 2017 more than 7 out of 10 people in drug treatment underwent treatment for cannabis use disorders. In Africa, the increasing proportion of people treated for opioid use disorders likely reflects the increasing use of opioids, especially tramadol, in West and Central Africa. In that subregion, opioids (heroin and tramadol) were, after cannabis, the second most common drug type for which people accessed drug treatment services over the period 2014–2017.[93]

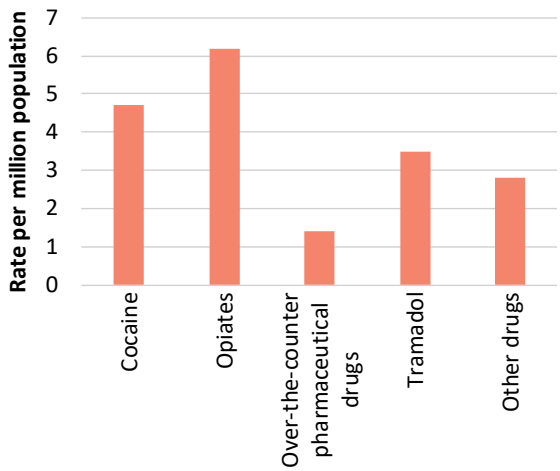
Wastewater Drug Monitoring Program: Report No. 9.

91 Ibid.

92 This calculation, and those for other drugs presented in this section, are based on data for treatment provided covering 2014 to 2018 as submitted by Member States in the annual report questionnaire.

93 UNODC and ECOWAS, *West African Epidemiology Net-*

FIG. 29 People in treatment for drug use disorders, West Africa, 2014–2017



Source: UNODC and ECOWAS, *West African Epidemiology Network on Drug Use (WENDU) Report: Statistics and Trends on Illicit Drug Use and Supply, 2014–2017* (2018).

Note: The data in this figure exclude people in treatment for cannabis use disorders.

The increase in treatment demand related to cannabis use disorders in some regions warrants special attention. There is great variability in the definition and practice of what constitutes treatment of cannabis use disorders. Treatment at present consists of behavioural or psychosocial interventions, such as cognitive behavioural therapy (in which irrational, negative thinking styles are challenged and the development of alternative coping skills is promoted) and motivational interviewing (in which a user's personal motivation to change their own behaviour is facilitated and engaged).[94] These interventions may vary from one-time online contact or screening and brief intervention in an outpatient setting, to a more comprehensive treatment plan including treatment of other comorbidities in an outpatient or inpatient setting. Some of the factors that may influence the number of people in treatment for cannabis use disorders include changes in the number of people who actually need treatment; changes in the treatment referral system; changes in awareness of potential problems associated with cannabis use disorders; and changes in the availability of and access to treatment for cannabis use disorders.[95]

Opioids (predominantly heroin) remain the main drug for which people undergo drug treatment in Europe (in particular Eastern and South-Eastern Europe) and Asia, accounting for nearly 50 per cent of all treatment admissions in 2018. Compared with users of other drugs, those with opioid use disorders entering treatment tend to be older, in their mid-thirties, and between one quarter and one third of them are first-time entrants.[96] This corresponds to findings published in scientific literature, for instance studies from Europe, which suggest that there is an ageing cohort of opioid users in Europe.[97]

Treatment for the use of amphetamine-type stimulants is more common in Asia (predominantly for the use of methamphetamine) and Oceania (based on data from Australia and New Zealand) than in other regions. As is the case with cannabis users, people who are in treatment for disorders related to the use of amphetamines tend to be younger – in their mid-twenties – than users of opioids in treatment, and the majority of them also tend to be first-time entrants.[98] People receiving treatment for the use of methamphetamine account for more than three quarters of those in treatment in Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, the Philippines, Singapore and Thailand.[99]

The provision of treatment in which cocaine is the primary drug of concern represents a large share of drug treatment in the Americas, in particular in Latin America and the Caribbean. In Latin America,

work on Drug Use (WENDU) Report: Statistics and Trends on Illicit Drug Use and Supply, 2014–2017 (2018).

94 Jonathan Schettino and others, *Treatment of Cannabis-related Disorders in Europe*, EMCDDA Insights Series, No. 17 (Luxembourg, Publications Office of the European Union, 2015).

95 For a detailed discussion on this, see *World Drug Report 2016* (United Nations publication, Sales No. E.16.XI.7).

96 Based on analysis of data for treatment provision reported by countries in the annual report questionnaire for the years 2015–2018.

97 Anne Marie Carew and Catherine Comiskey, "Treatment for opioid use and outcomes in older adults: a systematic literature review", *Drug and Alcohol Dependence*, vol. 182, (2018), pp. 48–57.

98 Based on analysis of data for treatment provision reported by countries in the annual report questionnaire for the years 2015–2018.

99 UNODC, responses to the annual report questionnaire.

Achieving target 3.5 of the Sustainable Development Goals "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol": a review of the global indicator on the coverage of treatment interventions for drug use disorders

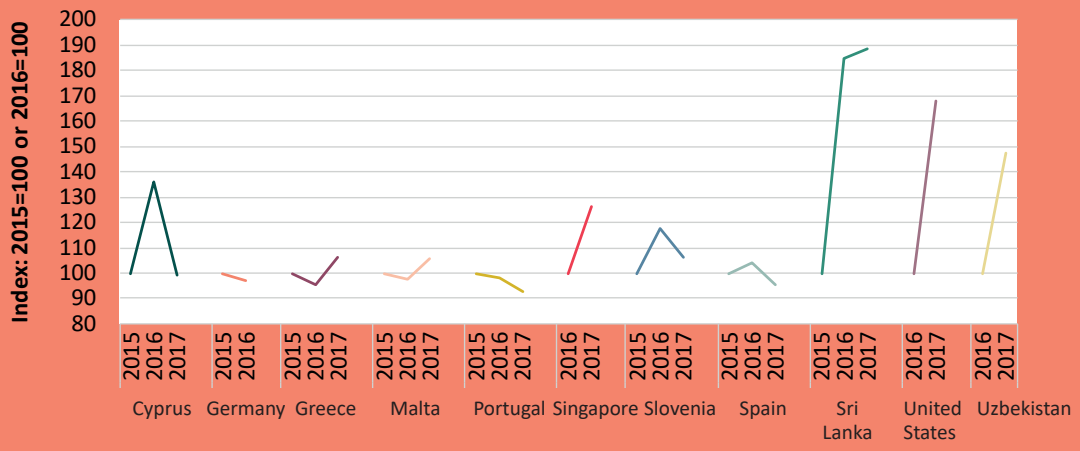
A global indicator framework has been developed for monitoring progress towards the 2030 Agenda for Sustainable Development. Under Sustainable Development Goal 3, dedicated to good health and well-being, and target 3.5 "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol", one of the two indicators designated for the monitoring of the target, indicator 3.5.1, is dedicated to measuring the coverage of treatment interventions (including pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders. It has been operationalized as the proportion of people who received treatment for their drug use disorders in a given year over the total estimated number of people with drug use disorders. Over the period 2015-2017, data on this indicator were reported to UNODC by 30 countries in Africa, Americas, Asia and Europe.

Available data show that drug treatment coverage varies widely between drug types and countries, ranging from less than 1 per cent to 86 per cent. Caution is required in interpreting differences in the coverage of drug treatment between countries as they may, at least partly, result from differences in methodologies for estimating the number of people with drug use disorders and in the recording and reporting of people receiving treatment for their drug use disorders. Overall, it remains challenging to identify whether or not general progress towards achieving the target has been made.

When focusing on opioids, which are responsible for the highest estimated number of DALYs attributed to drug use disorders[a] worldwide, data also show a similar variation in the coverage of drug treatment between countries. Progress in achieving the target for opioid use disorders is visible in a few countries. In the United States, for example, such coverage increased by 68 per cent in the period 2016–2017, probably as a result of the health system reform of 2017[a] and in response to the opioid crisis affecting that country in recent years.

The coverage of drug treatment is influenced by a number of factors related to the availability and accessibility of the services, including: national policy for the provision and cost of drug treatment (health insurance,

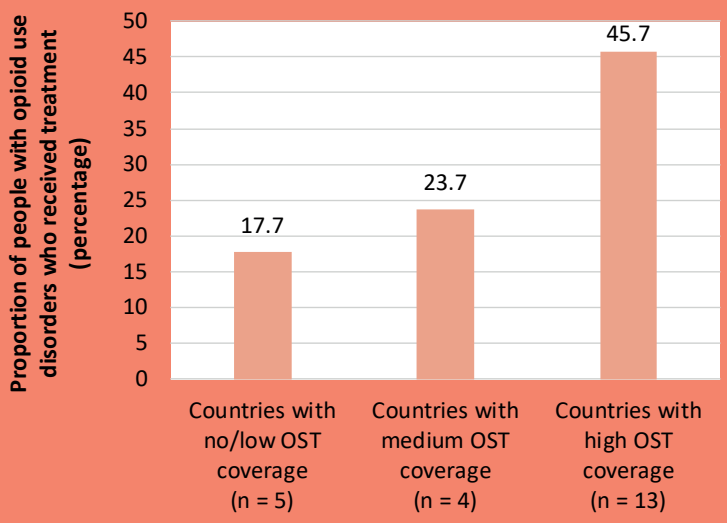
Trends in the drug treatment coverage of people with opioid use disorders, selected countries, 2015-2017



Source: UNODC, responses to the annual report questionnaire.

Note: Trends are independent of the level of the treatment coverage of people with opioid use disorders. Caution is thus required when interpreting such trends, as marked increases/decreases in the index may result from changes in very low treatment coverage estimates.

Average drug treatment coverage of people with opioid use disorders, in countries grouped by level of opioid substitution treatment provision, average 2015–2017



Source: UNODC, responses to the annual report questionnaire.

Note: The level of opioid substitution treatment (OST) provision is based on qualitative assessments reported by Member States: low coverage is defined as lower than 20 per cent, medium as between 20 and 40 per cent and high coverage as higher than 40 per cent.

government-provided treatment, out of own pocket expenses); the extent of integration of drug treatment services within the health care delivery system, including a system of treatment referrals at various levels within the system and across the criminal justice system; the number, settings and geographical coverage of available drug treatment facilities; the capacity or the number of drug treatment slots available in a treatment facility in a given period; the nature and range of interventions provided, for instance, long-term opioid agonist treatment for opioid use disorders as opposed to management of withdrawals and other psychosocial interventions provided; the existence of a national treatment reporting system and of reliable estimates of both the number of people with drug use disorders (or of those in need of drug treatment) and of the number of those receiving drug treatment. Understanding of these contextual factors is therefore key when interpreting data on coverage of drug treatment services.

It is also important to acknowledge that the nature of treatment interventions differs by drug type. This may have an impact on the provision of and referrals to treatment for the use of different drugs and on retention into treatment, all of which directly influence drug treatment coverage by drug type. For the treatment of disorders related to the use of cannabis and psychostimulants, there are currently no pharmacological interventions available, thus behavioural interventions are the only available and effective treatment, whereas for opioid use disorders, pharmacological treatment – opioid agonist and antagonist treatment – along with psychosocial interventions, are the mainstay.[b] Data show, for example, that the higher the level of provision of opioid substitution treatment, the better the coverage of treatment for opioid use disorders.

[a] Nicole Kravitz-Wirtz and others, "Association of Medicaid expansion with opioid overdose mortality in the United States", *JAMA Network Open*, vol. 3, No. 1 (January 2020).

[b] WHO and UNODC, *International Standards for the Treatment of Drug Use Disorders, Revised Edition Incorporating Results of Field-Testing* (Geneva; Vienna, 2020).

as in other subregions, people entering treatment for cocaine use disorders tend to be in their mid-thirties, and 30 to 40 per cent are first-time entrants.

HEALTH CONSEQUENCES OF DRUG USE

The health consequences of drug use can include a range of negative outcomes such as drug use disorders, mental health disorders, HIV infection, hepatitis-related liver cancer and cirrhosis, overdose and premature death. The greatest harms to health are those associated with the use of opioids and with injecting drug use, owing to the risk of acquiring HIV or hepatitis C through unsafe injecting practices.

Psychiatric comorbidities among people with substance use disorders

In recent decades, recognition of co-occurring mental health disorders among people with substance use disorders has been growing. Although substance use disorders commonly occur together with other mental illnesses, it is often unclear whether one is a cause of the other or if common underlying risk factors contributed to both disorders. The relevance of the comorbidity of substance use and mental health disorders is related not only to the high prevalence of that comorbidity but also to the difficulty of managing it, particularly given the lack of integration of drug treatment and mental health services in many countries. People with co-occurring mental health disorders and substance use disorders also report lower rates of treatment success, a higher rate of psychiatric hospitalizations and a higher prevalence of suicide than those without comorbid mental disorders.[a]

[a] EMCDDA, *Comorbidity of Substance Use and Mental Health Disorders in Europe*, EMCDDA Insights Series, No. 19 (Luxembourg, Publications Office of the European Union, 2015).

An estimated 11.3 million people worldwide inject drugs

PWID are often subject to marginalization and stigmatization, which create social and economic barriers to accessing public health services especially services for the prevention of the adverse health consequences of injecting drug use.[100]

Injecting drug use is a significant public health concern and causes morbidity and mortality owing to the risk of overdose and blood-borne infections (mainly HIV and hepatitis B and C),[101] transmitted through the sharing of contaminated needles and syringes and other drug paraphernalia or risky sexual behaviour in some groups[102, 103, 104, 105, 106, 107] and subsequent severe immunosuppression, cirrhosis, neoplastic disease and inflammation sequelae. Social and physical effects can further aggravate potential underlying mental health conditions.

The joint UNODC/WHO/UNAIDS/World Bank

100 D. Richardson and C. Bell, "Public health interventions for reducing HIV, hepatitis B and hepatitis C infections in people who inject drugs", *Public Health Action*, vol. 8, No. 4 (December 2018).

101 WHO, *Guidance on Prevention of Viral Hepatitis B and C among People Who Inject Drugs* (Geneva, 2012).

102 UNODC. *HIV Prevention, Treatment, Care and Support for People Who Use Stimulant Drugs: Technical Guide* (Vienna, 2019).

103 Vic Arendt and others, "Injection of cocaine is associated with a recent HIV outbreak in people who inject drugs in Luxembourg", *PLOS One,* vol.14, No. 5 (May 2019).

104 Naomi Braine and others, "HIV risk behavior among amphetamine injectors at U.S. syringe exchange programs", *AIDS Education and Prevention*, vol. 17, No. 6, (December 2005).

105 Catherine Mwangi and others, "Depression, injecting drug use, and risky sexual behavior syndemic among women who inject drugs in Kenya: a cross-sectional survey", *Harm Reduction Journal*, vol. 16, No.1 (May 2019).

106 Bach Xuan Tran and others, "Factors associated with substance use and sexual behavior among drug users in three mountainous provinces of Vietnam", *International Journal of Environmental Research and Public Health,* vol. 15, No. 9 (August 2018).

107 Erica Pufall and others, "Sexualized drug use ('chemsex') and high-risk sexual behaviours in HIV-positive men who have sex with men", *HIV Medicine*, vol. 19, No. 4 (April 2018).

The Global Burden of Disease Study 2017: mortality and morbidity attributable to the use of drugs

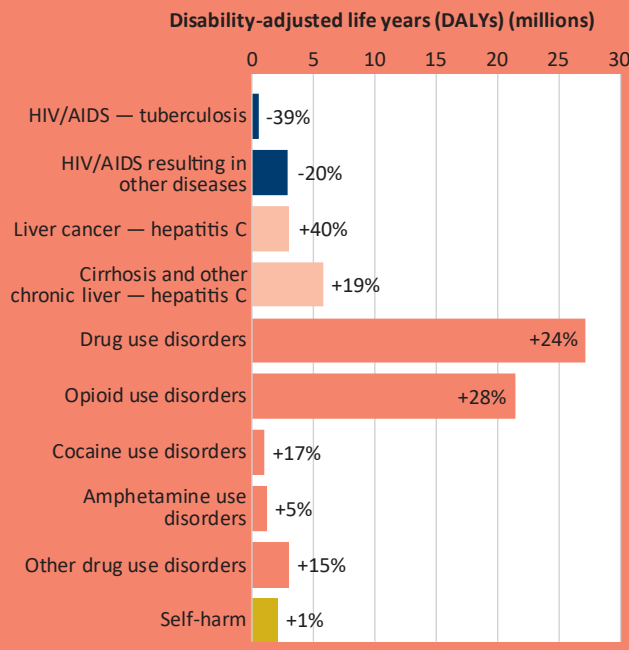
The Global Burden of Disease Study[a] provides an indication as to which substances and causes of injury and disease are responsible for the greatest negative health consequences of drug use[b] in terms of deaths and years of "healthy" life lost, also called "disability-adjusted life years" or DALYs. DALYs measure the burden of disease from the combination of both the number of years of life lost as a result of premature death and the number of years of life lived with disability (any form of impairment).

The Study estimated that globally, in 2017, there were 42 million years of "healthy" life lost as a result of disability and premature death and 585,000 deaths attributed to the use of drugs. Half of the DALYs were due to premature death and the other half to disability. Most of the burden of disease is among males, who account for 72 per cent of drug-related deaths and 70 per cent of DALYs. Opioid use disorders result in the highest burden of disease in terms of DALYs and account for half of the "healthy" years of life lost as a result of disability and premature death attributed to the use of drugs.

Globally, over the past decade (2008–2017) the number of DALYs attributed to the use of drugs has increased by 17 per cent, with a major increase seen in DALYs attributed to liver cancer resulting from hepatitis C (40 per cent increase), followed by opioid use disorders (28 per cent) and cirrhosis and other chronic diseases related to hepatitis C (19 per cent increase). The increase in DALYs attributed to liver cancer and cirrhosis is mainly the result of untreated hepatitis C among PWID, as observed in most subregions.

Of the estimated 585,000 deaths attributed to drug use in 2017, half are attributed to liver cancer, cirrhosis and other chronic liver diseases related to hepatitis C, which remains mostly untreated among PWID. Deaths attributed to drug use disorders (167,000) account for 28 per cent of all deaths resulting from drug use; 110,000 or 66 per cent of those deaths are attributable to opioids. Over

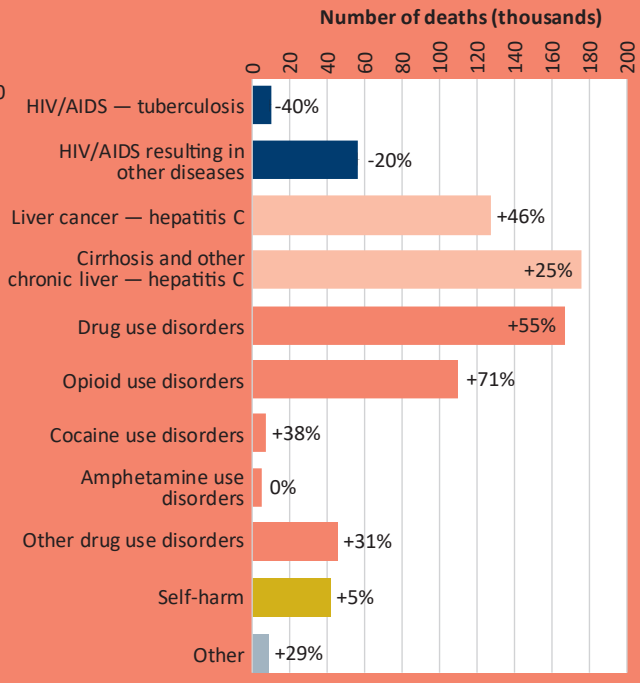
DALYs in 2017, and changes over the period 2008–2017



Source: Institute for Health Metrics and Evaluation, "Global Burden of Disease Study 2017 (GBD 2017) Data Resources: GBD Results Tools", 2018.

Note: DALYs for drug use disorders include all drugs.

Drug-related deaths in 2017, and changes over the period 2008–2017



Source: Institute for Health Metrics and Evaluation, "Global Burden of Disease Study 2017 (GBD 2017) Data Resources: GBD Results Tools", 2018.

Note: Deaths for drug use disorders include all drugs.

the past decade, the total number of deaths attributed to drug use has increased by a quarter, with a major increase in deaths caused by opioid use disorders (71 per cent increase), followed by cirrhosis and other chronic liver diseases (55 per cent increase) and liver cancer (46 per cent) resulting from hepatitis C.

The comparison of deaths attributed to drug use among men and women over the past decade shows that the number of deaths attributed to drug use disorders, in particular opioid use disorders, has increased disproportionately among women, with a 92 per cent increase in deaths attributed to opioid use disorders among women compared with a 63 per cent increase among men.

[a] Institute for Health Metrics and Evaluation, "Global Burden of Disease Study 2017 (GBD 2017) Data Resources: GBD Results Tools".

[b] In the study, the use of drugs is defined as dependency upon opioids, cannabis, cocaine or amphetamines, or a history of injecting drug use.

estimate of the number of PWID worldwide in 2018 is 11.3 million (range: 8.9 million to 15.3 million), corresponding to 0.23 per cent (range: 0.18 to 0.31 per cent) of the population aged 15–64. This estimate is based on the most recent information available and assessment of the methodologies of the different sources.[108]

There is no change between the 2017 and 2018 estimates of PWID; however, any trend data must be viewed with caution, as methodologies may have changed. The 2018 global estimate of PWID is based on 122 countries, representing almost 90 per cent of the global population aged 15–64, compared with 110 countries in 2017. Of all the available sources in 2018, the estimates for at least 74 countries (61 per cent) were based on a "class A methodology" such as indirect prevalence estimation methods (e.g., the capture-recapture method, network scale-up method and multiplier method).[109] Owing to the criminalization of drug use, punitive laws, stigma and discrimination against people who use or inject drugs in many parts of the world, conventional survey methods have been found to underestimate the actual population size because of the hidden nature of PWID;[110, 111, 112] therefore, only indirect methods have been shown to reflect the situation of PWID with greater accuracy. Overall, new or updated estimates of PWID were available for 40 countries in 2018.

Although the exact extent of injecting drug use is not known, estimates are more precise in some regions than others as a result of better data coverage and/or methodologies and the use of more recent data. Data on PWID vary between the regions in terms of coverage of the total population aged 15–64, with Asia having the highest coverage, at 95 per cent, and Africa having the lowest, at 68 per cent. At the subregional level, North America, South-West Asia, South Asia, Eastern Europe and South-Eastern Europe are fully covered, whereas data on PWID in the Caribbean only covers just over one third of the total population; therefore, data from that subregion must be interpreted with caution. Compared with 2017, coverage of the population in Africa increased substantially overall, from 58 to 68 per cent in 2018.

The prevalence of PWID aged 15–64 in 2018 continues to be the highest in Eastern Europe (1.26 per cent) and Central Asia and Transcaucasia (0.63 per cent). Those percentages are, respectively, 5.5 and 2.8 times higher than the global average. More than a quarter of all PWID reside in East and South-East Asia, although the prevalence itself is relatively low (0.19 per cent). The three subregions with the largest numbers of PWID (East and South-East Asia, North America and Eastern Europe) together account for over half (58 per cent) of the global number of PWID. It is noteworthy that, as in

108 See the online Methodology annex to the present report.

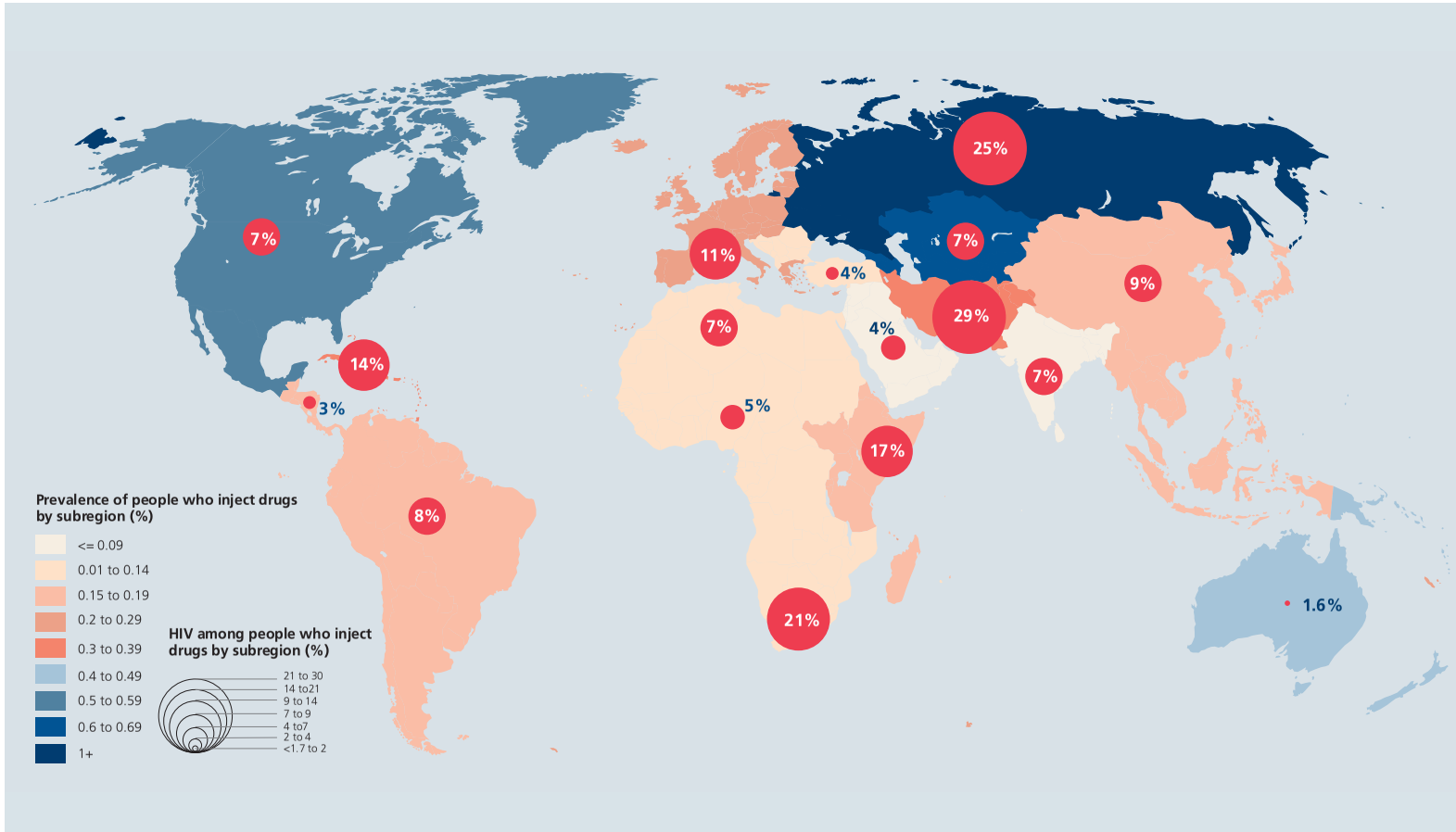
109 Ibid.

110 Bradley M. Mathers and others, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review", *Lancet*, vol. 372, No. 9651 (November 2008), pp. 1733–1745.

111 Matthew Hickman and Colin Taylor, "Indirect methods to estimate prevalence", in *Epidemiology of Drug Abuse*, Zili Sloboda, ed. (Boston, Massachusetts, Springer, 2005).

112 UNAIDS, *The GAP Report* (Geneva 2014).

MAP 3 Estimated subregional prevalence of people who inject drugs and HIV among them, 2018



Source: UNODC, responses to the annual report questionnaire, supplemented by other data sources.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

previous years, while three countries – China, the Russian Federation and the United States – account for just 27 per cent of the global population aged 15–64, they are home to almost half (43 per cent) of all PWID.

Worldwide, every eighth person who injects drugs is living with HIV

Injecting drug use is estimated to account for approximately 10 per cent of HIV infections worldwide and 30 per cent of all HIV cases outside Africa,[113] while in the eastern countries of the WHO European Region[114] more than 80 per cent of all HIV infections occur among PWID.[115] PWID are estimated to be 22 times more likely than people in the general population to be living with HIV.[116]

The 2018 joint UNODC/WHO/UNAIDS/World Bank estimate of the global prevalence of HIV among PWID is 12.6 per cent, amounting to 1.4 million PWID living with HIV. This estimate is based on reporting of the prevalence of HIV among PWID by 121 countries, covering 96 per cent of the estimated global number of PWID. Data on HIV prevalence were available for all PWID in North America, South-West Asia, South Asia, Eastern Europe and South-Eastern Europe, but only for 33 and 32 per cent of all PWID in Central America and the Caribbean, respectively. Of all the countries that provided details of the methodology used to collect their data and estimate the prevalence of HIV, almost three quarters (reports from 89 countries) could be graded as "class A methodology" (seroprevalence study).[117] In 2018, new or updated estimates of HIV among PWID were available for a total of 40 countries.

The subregional prevalence of HIV among PWID continues to be the highest by far in South-West Asia (29.5 per cent) and Eastern Europe (25.2 per cent), followed by Southern Africa (21.4 per cent). In Africa, the HIV prevalence among PWID aged 15–64 was estimated at 11.3 per cent, compared with 3.9 per cent among the general population (aged 15–49) for the same year. In Europe, the HIV prevalence among PWID was 20.2 per cent, compared with 0.4 per cent among the general population.[118] HIV prevalence in PWID in East Africa and the Caribbean was also higher than the global average, at 17.4 and 14.0 per cent, respectively.

The largest number of PWID living with HIV reside in Eastern Europe, East and South-East Asia and South-West Asia, which together account for 67 per cent of the global total. Although the prevalence of HIV among PWID (9.3 per cent) is below the global average, a fifth of the global number of PWID living with HIV reside in East and South-East Asia. A small number of countries continue to account for a large proportion of the total global number of PWID living with HIV. In 2018, for example, PWID living with HIV in China, Pakistan and the Russian Federation accounted for almost half of the global total (49 per cent), while PWID in those three countries comprise only a third of all PWID worldwide.

Coverage of interventions to prevent and manage HIV and hepatitis C among people who inject drugs

A systematic review undertaken in 2017 of the coverage of interventions to prevent and manage HIV and hepatitis C among PWID showed that needle and syringe programmes were available in only 52 per cent of countries where injecting drug use was reported, while opioid substitution therapy was confirmed to be available in 48 per cent of countries worldwide. In addition, only 34 countries were identified as providing HIV-testing programmes for PWID.[119] Besides providing an opportunity to

113 WHO, HIV/AIDS, "People who inject drugs". Available at www.who.int/hiv/topics/idu/en/.

114 These countries are: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

115 WHO, Regional Office for Europe, "People who inject drugs (PWID)".

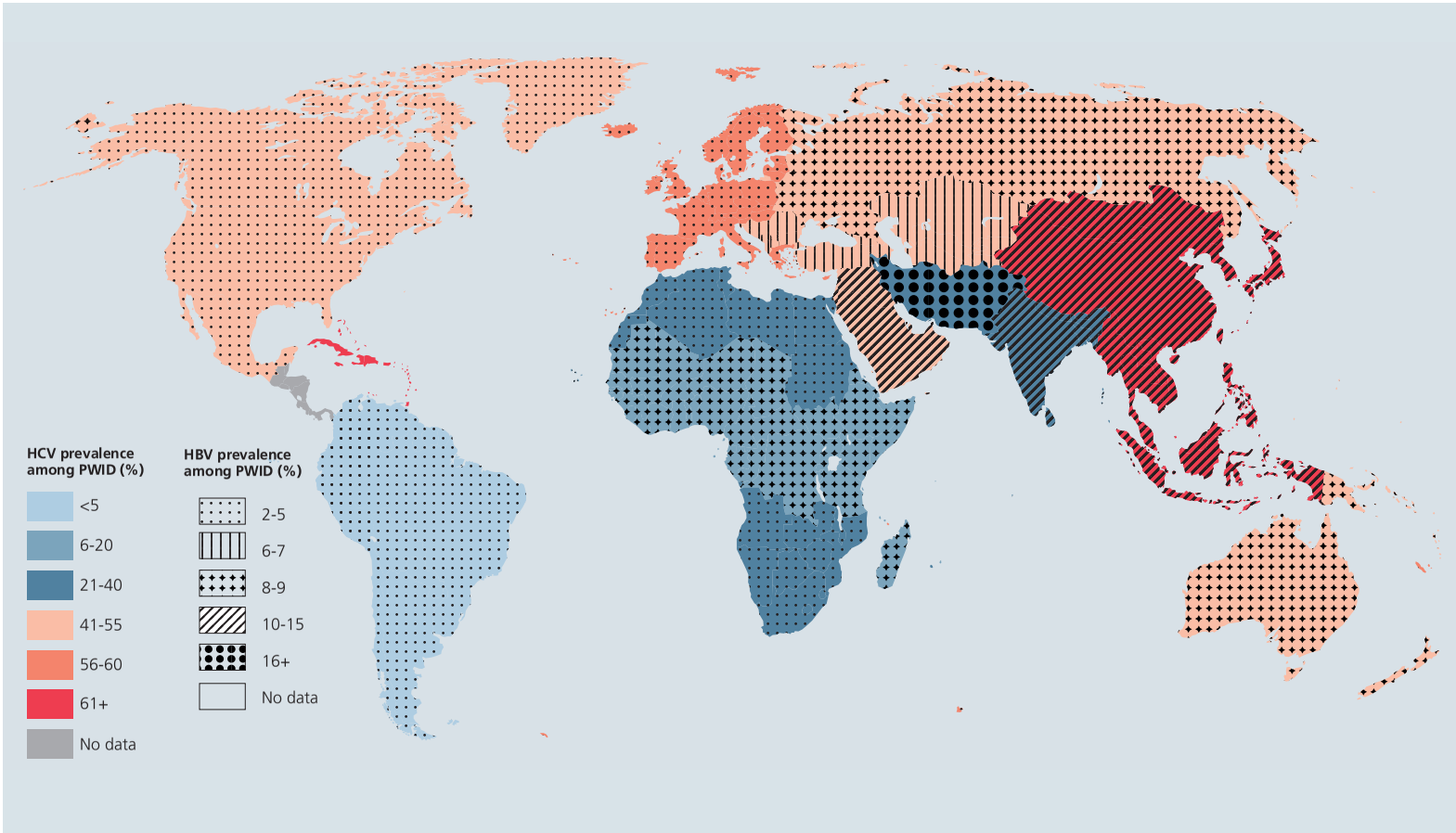
116 UNAIDS, "Injecting drug use IDU". Available at www.unaids.org/en/keywords/injecting-drug-use-idu.

117 Bradley M. Mathers and others, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review", *Lancet*, vol. 372, No. 9651 (November 2008), pp. 1733–1745.

118 WHO, Data, Global Health Observatory, Indicator Metadata Register List, "Prevalence of HIV among adults aged 15-49 (%)".

119 Sarah Larney and others, "Global, regional, and country-level coverage of interventions to prevent and manage HIV and hepatitis C among people who inject drugs: a

MAP 4 Estimated subregional prevalence of hepatitis C (HCV) and hepatitis B (HBV) among PWID, 2018



Source: UNODC, annual report questionnaire supplemented by other data sources.

Note: Subregional estimates are not presented if hepatitis B/hepatitis C data coverage is less than 20 per cent or if the represented total population of the countries providing data for hepatitis B/ hepatitis C is less than 10 per cent of the total subregional population.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

deliver prevention messages and connect patients to health-care and support services, HIV testing services are also a critical entry point to antiretroviral therapy and are therefore a crucial component of HIV prevention programmes. Global data on antiretroviral therapy coverage are scarce. Access to antiretroviral therapy varies considerably, but coverage is reported to be consistently low, with only 8 per cent of people in need receiving effective antiretroviral therapy in the WHO European Region and PWID only accounting for 20 per cent of people receiving that therapy.[120]

HIV testing in people who inject drugs

Historically, HIV testing has been low among PWID, resulting in late diagnoses of the infection and delays in the initiation of treatment. While there are no global data on overall testing, sporadically available information provides an indication of the challenge. In Europe, data from 2018 show that the CD4 count at the time of HIV diagnosis was lower than 350/mm³ (compared with >500/mm³ in immunocompetent people) in 53 per cent of the PWID tested, indicating the late presentation of those cases.[121] Similarly, between 2012 and 2016, in the Guangxi Zhuang Autonomous Region, a province in western China, which has the second highest number of reported new cases of HIV in the country,[122, 123, 124, 125] among 45,118 patients newly diagnosed with HIV, 55 per cent of men and 61 per cent of women who inject drugs were diagnosed at a late stage.[126]

Likewise, a study in Europe that summarized data from 33 cohorts across the region found late presentation in 58 per cent of men and 51 per cent of women who inject drugs between 2000 and 2011.[127] In general, late presentation was associated with a significantly increased incidence of AIDS or AIDS-related deaths, particularly in the year following HIV diagnosis, varying from an over 13-fold increase in Southern Europe to an over 6-fold increase in Eastern Europe.[128]

Although data on the age of PWID has not been collected systematically, there have been recent reports of increased risk behaviour resulting in higher HIV incidence in young PWID, who are also less likely than older PWID to test for HIV. In a study of 14,381 PWID recruited in several cities in the north-east and north/central regions of India, "emerging adults" (aged 18–24) were significantly more likely than PWID over the age of 30 to share needles, to have multiple sexual partners and to engage in unprotected sex, and also reported lower HIV testing rates.[129]

Almost half of all people who inject drugs, an estimated 5.5 million people worldwide, are living with hepatitis C

PWID are a key population affected by hepatitis C. Global estimates suggest that 71 million people worldwide were chronically infected with hepatitis C in 2017 and that 23 per cent of new hepatitis C infections and one in three hepatitis C-related deaths are attributable to injecting drug use.[130] Hepatitis

systematic review", *Lancet Global Health*, vol. 5, No. 12 (December 2017), pp. 1208–1220.

120 WHO, Regional Office for Europe "People who inject drugs (PWID)".

121 European Centre for Disease Prevention and Control and WHO Regional Office for Europe, *HIV/AIDS Surveillance in Europe: 2019–2018 Data* (Stockholm, 2019).

122 Jianjun Li and others, "HIV-1 transmissions among recently infected individuals in Southwest China are predominantly derived from circulating local strains", *Scientific Report*, vol. 8, No. 12831 (August 2018).

123 X. E. Ge and others, "Epidemiological characteristics of HIV/AIDS in Guangxi, 2009–2011", *South China Journal of Preventive Medicine*, vol. 39, (2013).

124 World Bank, East Asia and Pacific Region, Human Development Unit, *China: The Epidemiological and Behavioral Dynamos of the HIV Epidemic in Guangxi Province – Synthesis Report* (February 2007).

125 Xi Hu and others, "HIV late presentation and advanced HIV disease among patients with newly diagnosed HIV/AIDS in Southwestern China: a large-scale cross-sectional study", *AIDS Research and Therapy*, vol. 16. No. 1 (March 2019).

126 Ibid.

127 Amanda Mocroft and others, "Risk factors and outcomes for late presentation for HIV-positive persons in Europe: results from the Collaboration of Observational HIV Epidemiological Research Europe Study (COHERE)", *PLOS Medicine*, vol. 10, No. 9 (September 2013).

128 Ibid.

129 Lakshmi Ganapathi and others, "Young people who inject drugs in India have high HIV incidence and behavioural risk: a cross-sectional study", *Journal of International AIDS Society*, vol. 22, No. 5 (May 2019).

130 WHO, Access to hepatitis C testing and treatment for people who inject drugs and people in prisons: a global perspective – policy brief (WHO/CDS/HIV/19.6).

C-related morbidity and mortality continue to rise, mainly as a result of cirrhosis, hepatocellular carcinoma and death in cases of untreated hepatitis C.[131]

UNODC, WHO, UNAIDS and the World Bank jointly estimated the prevalence of hepatitis C among PWID worldwide in 2018 to be 48.5 per cent, or 5.5 million (range: 4 million to 7.8 million) people aged 15–64. This estimate is based on estimates in 108 countries, covering 94 per cent of the estimated global number of PWID. Data on hepatitis C prevalence were available for all estimated PWID in Eastern Europe, South-Eastern Europe, North America, South-West Asia, South Asia, Central Asia and Transcaucasia, but for none in Central America, and for only 31 and 32 per cent, respectively, of all PWID in the Caribbean and West and Central Africa. Overall, reports from 69 per cent of countries (74 out of 108 countries) could be graded as "class A methodology" (seroprevalence study), [132] and new or updated estimates for hepatitis C among PWID were available for 35 countries in total in 2018.

Although data coverage was low in the Caribbean, the highest prevalence of hepatitis C among PWID was found in that subregion, at 76 per cent, followed by East and South-East Asia, Western and Central Europe, North America, and Central Asia and Transcaucasia, where it ranged between 61 and 54 per cent. In North Africa, a hepatitis C prevalence of 25 per cent was found among PWID, compared with a combined prevalence in the general population (>15 years) in North Africa and the Middle East estimated at 3.1 per cent.[133] In Central Asia, a hepatitis C prevalence of 54 per cent was found among PWID, compared with a range of 0.5 to 13.1 per cent among the general population.

The 2018 UNODC/WHO/UNAIDS/World Bank estimate of the prevalence of hepatitis C among PWID in Central Asia is in line with the 52 per cent among PWID found in a recent meta-analysis in Central Asia.[134] The largest subregional number of PWID living with hepatitis C was found in East and South-East Asia, with 1.9 million overall, representing a third of the global total.

Almost one million people who inject drugs are infected with hepatitis B

The joint UNODC/WHO/UNAIDS/World Bank 2018 global estimate of the prevalence of hepatitis B among PWID is 8.3 per cent; in other words, an estimated 940,000 PWID are estimated to be living with an active hepatitis B infection.[135] This estimate is based on data for 93 countries, covering 71 per cent of all PWID aged 15–64 worldwide. Full data coverage was reached in Eastern Europe, South Asia and South-West Asia, whereas in Southern Africa, the Near and Middle East, East and South-East Asia, West and Central Africa, South America, the Caribbean and Central America, data on hepatitis B among PWID were more limited.

The prevalence of hepatitis B was highest in South-West Asia (19.2 per cent), whereas the three countries in that subregion, Afghanistan, Iran (Islamic Republic of) and Pakistan, accounted for less than 16 per cent of all hepatitis B cases among PWID globally. By contrast, a prevalence of 4.3 per cent was reported among the general population in Pakistan.[136] Similarly, the prevalence of hepatitis B among PWID was as high as 14.6 per cent in the Near and Middle East.

131 Jeffrey D. Stanaway and others, "The global burden of viral hepatitis from 1990 to 2013: findings from the Global Burden of Disease Study 2013", *Lancet*, vol. 388, No. 10049 (September 2016), pp. 1081–1088.

132 Bradley M. Mathers and others, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review", *Lancet*, vol. 372, No. 9651 (November 2008), pp. 1733–1745.

133 Erin Gower and others, "Global epidemiology and genotype distribution of the hepatitis C virus infection", *Journal of Hepatology*, vol. 61, No. 1 (November 2014), pp. S45–S57.

134 Botheju S. P. Welathanthrige and others, "The epidemiology of hepatitis C virus in Central Asia: systematic review, meta-analyses, and meta-regression analyses", *Scientific Reports*, vol. 9, No. 1 (February 2019).

135 The HBV prevalence estimate is intended to refer to active infection (HBsAg), rather than anti-HBc, which indicates previous exposure. However, it is not always possible to differentiate that in the data reported to UNODC.

136 Muhammad Ali and others, "Hepatitis B virus in Pakistan: a systematic review of prevalence, risk factors, awareness status and genotypes", *Virology Journal*, vol. 8, No. 102 (March 2011).

TABLE 1 Annual prevalence of the use of cannabis, opioids and opiates, by region and globally, 2018

Region or subregion	Cannabis						Opioids (opiates and pharmaceutical opioids)						Opiates					
	Number (thousands)			Prevalence (percentage)			Number (thousands)			Prevalence (percentage)			Number (thousands)			Prevalence (percentage)		
	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper
Africa	**45,010**	**26,720**	**60,600**	**6.32**	**3.75**	**8.51**	**7,440**	**6,190**	**11,800**	**1.04**	**0.87**	**1.66**	**3,490**	**1,410**	**7,690**	**0.49**	**0.20**	**1.08**
East Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Africa	7,450	6,200	7,500	5.08	4.23	5.11	1,550	1,040	2,060	1.06	0.71	1.40	1,550	1,040	2,060	1.06	0.71	1.40
Southern Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West and Central Africa	25,630	14,070	29,380	9.27	5.09	10.63	-	-	-	-	-	-	500	140	950	0.18	0.05	0.34
Americas	**58,880**	**57,900**	**61,290**	**8.80**	**8.65**	**9.16**	**12,470**	**10,990**	**15,210**	**1.86**	**1.64**	**2.27**	**2,530**	**1,840**	**3,260**	**0.38**	**0.27**	**0.49**
Caribbean	960	500	2,650	3.39	1.77	9.38	-	-	-	-	-	-	-	-	-	-	-	-
Central America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North America	46,990	46,820	47,160	14.56	14.51	14.62	11,760	10,670	12,600	3.64	3.31	3.90	2,270	1,680	2,790	0.70	0.52	0.87
South America	10,030	9,750	10,460	3.49	3.39	3.64	530	240	2,200	0.19	0.08	0.76	210	130	300	0.07	0.04	0.10
Asia	**56,340**	**19,200**	**93,950**	**1.86**	**0.63**	**3.10**	**33,550**	**13,620**	**44,670**	**1.11**	**0.45**	**1.47**	**21,290**	**8,890**	**29,210**	**0.70**	**0.29**	**0.96**
Central Asia and Transcaucasia	1,510	450	2,480	2.58	0.77	4.24	570	500	650	0.97	0.85	1.12	570	490	650	0.97	0.83	1.11
East and South-East Asia	14,740	3,940	23,180	0.91	0.24	1.43	3,320	2,250	4,080	0.21	0.14	0.25	3,320	2,250	4,080	0.21	0.14	0.25
South-West Asia/ Near and Middle East	10,690	7,480	13,250	3.38	2.37	4.19	8,380	7,080	10,030	2.65	2.24	3.17	5,590	4,020	7,890	1.77	1.27	2.50
South Asia	29,410	7,330	55,040	2.82	0.70	5.27	21,280	3,800	29,910	2.04	0.36	2.86	11,820	2,140	16,590	1.13	0.21	1.59
Europe	**29,400**	**27,990**	**31,300**	**5.39**	**5.13**	**5.74**	**3,730**	**3,450**	**4,020**	**0.68**	**0.63**	**0.74**	**3,050**	**2,880**	**3,240**	**0.56**	**0.53**	**0.59**
Eastern and South-Eastern Europe	4,600	3,330	6,360	2.04	1.47	2.81	1,790	1,710	1,880	0.79	0.76	0.83	1,490	1,410	1,570	0.66	0.62	0.69
Western and Central Europe	24,800	24,660	24,940	7.76	7.72	7.80	1,930	1,740	2,140	0.60	0.54	0.67	1,560	1,470	1,670	0.49	0.46	0.52
Oceania	**2,810**	**2,770**	**2,880**	**10.57**	**10.42**	**10.83**	**660**	**580**	**740**	**2.47**	**2.17**	**2.78**	**40**	**40**	**70**	**0.16**	**0.14**	**0.27**
Australia and New Zealand	2,050	2,050	2,050	10.64	10.64	10.64	-	-	-	-	-	-	36	36	42	0.18	0.18	0.22
Melanesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polynesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GLOBAL ESTIMATE	**192,440**	**134,580**	**250,010**	**3.86**	**2.70**	**5.01**	**57,850**	**34,820**	**76,430**	**1.16**	**0.70**	**1.53**	**30,410**	**15,050**	**43,460**	**0.61**	**0.30**	**0.87**

TABLE 2 Annual prevalence of the use of cocaine,[a] amphetamines[b] and "ecstasy", by region and globally, 2018

Region or subregion	Cocaine[a]						Amphetamines[b] and pharmaceutical stimulants						"Ecstasy"					
	Number (thousands)			Prevalence (percentage)			Number (thousands)			Prevalence (percentage)			Number (thousands)			Prevalence (percentage)		
	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper	Best estimate	Lower	Upper
Africa	**1,900**	**510**	**4,140**	**0.27**	**0.07**	**0.58**	**2,930**	**690**	**5,810**	**0.41**	**0.10**	**0.82**	**1,840**	**100**	**8,030**	**0.26**	**0.01**	**1.13**
East Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Africa	399	305	474	0.27	0.21	0.32	-	-	-	-	-	-	-	-	-	-	-	-
Southern Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West and Central Africa	418	69	937	0.15	0.02	0.34	1,000	50	1,810	0.36	0.02	0.66	-	-	-	-	-	-
Americas	**9,990**	**9,240**	**10,680**	**1.49**	**1.38**	**1.60**	**8,710**	**8,190**	**9,460**	**1.30**	**1.22**	**1.41**	**3,550**	**3,440**	**3,680**	**0.53**	**0.51**	**0.55**
Caribbean	180	80	320	0.63	0.29	1.15	260	10	700	0.90	0.05	2.48	60	30	100	0.23	0.10	0.36
Central America	210	110	320	0.66	0.34	1.02	310	190	440	0.98	0.61	1.41	50	20	100	0.17	0.07	0.33
North America	6,860	6,720	7,000	2.13	2.08	2.17	7,380	7,330	7,420	2.29	2.27	2.30	2,880	2,880	2,880	0.89	0.89	0.89
South America	2,750	2,330	3,040	0.96	0.81	1.06	770	650	900	0.27	0.23	0.31	560	520	600	0.19	0.18	0.21
Asia	**1,820**	**1,160**	**2,620**	**0.06**	**0.04**	**0.09**	**12,670**	**11,430**	**13,690**	**0.42**	**0.38**	**0.45**	**11,370**	**1,890**	**20,860**	**0.37**	**0.06**	**0.69**
Central Asia and Transcaucasia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
East and South-East Asia	580	90	1,080	0.04	0.01	0.07	9,940	9,100	10,570	0.62	0.56	0.65	4,940	1,240	8,640	0.31	0.08	0.53
South-West Asia/Near and Middle East	160	30	440	0.05	0.01	0.14	640	350	920	0.17	0.11	0.29	2,130	400	3,850	0.67	0.13	1.22
South Asia	1,040	1,040	1,040	0.10	0.10	0.10	1,880	1,880	1,880	0.18	0.18	0.18	-	-	-	-	-	-
Europe	**4,870**	**4,670**	**5,070**	**0.89**	**0.86**	**0.93**	**2,550**	**2,230**	**2,870**	**0.47**	**0.41**	**0.53**	**3,330**	**2,780**	**4,510**	**0.61**	**0.51**	**0.83**
Eastern and South-Eastern Europe	510	330	690	0.22	0.14	0.31	-	-	-	-	-	-	660	200	1,730	0.29	0.09	0.77
Western and Central Europe	4,360	4,350	4,380	1.36	1.36	1.37	2,010	1,880	2,130	0.63	0.59	0.67	2,670	2,580	2,770	0.84	0.81	0.87
Oceania	**440**	**410**	**440**	**1.64**	**1.56**	**1.67**	**360**	**310**	**380**	**1.35**	**1.16**	**1.41**	**440**	**410**	**460**	**1.67**	**1.55**	**1.71**
Australia and New Zealand	420	410	430	2.20	2.15	2.23	260	250	270	1.34	1.30	1.38	420	410	430	2.17	2.12	2.23
Melanesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polynesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GLOBAL ESTIMATE	**19,020**	**16,000**	**22,950**	**0.38**	**0.32**	**0.46**	**27,220**	**22,850**	**32,220**	**0.55**	**0.46**	**0.65**	**20,540**	**8,620**	**37,530**	**0.41**	**0.17**	**0.75**

Source: UNODC estimates based on annual report questionnaire data and other official sources.

[a] *Cocaine includes cocaine salt, "crack" cocaine and other types such as coca paste, cocaine base, "basuco", "paco" and "merla".*
[b] *Amphetamines include both amphetamine and methamphetamine.*

TABLE 3 Estimated number and prevalence (percentage) of people who inject drugs and those living with HIV among this group, by region, 2018

Region or subregion	People who inject drugs							HIV among people who inject drugs				
	Estimated number			Prevalence (%)			Data coverage of population aged 15-64	Estimated number			Prevalence (%) Best estimate	Data coverage of estimated number of people who inject drugs
	Low	Best	High	Low	Best	High		Low	Best	High		
Africa	**560,000**	**930,000**	**2,700,000**	**0.08**	**0.13**	**0.38**	**68%**	**48,000**	**105,000**	**514,000**	**11.3**	**83%**
East Africa	80,000	270,000	1,650,000	0.05	0.15	0.88	59%	10,000	47,000	342,000	17.4	88%
West and Central Africa	270,000	340,000	500,000	0.10	0.12	0.18	77%	13,000	16,000	29,000	4.7	89%
Southern Africa	90,000	140,000	170,000	0.09	0.14	0.17	63%	19,000	30,000	60,000	21.4	59%
North Africa	110,000	170,000	380,000	0.08	0.12	0.26	66%	6,000	12,000	84,000	6.7	84%
America	**1,910,000**	**2,380,000**	**2,970,000**	**0.28**	**0.36**	**0.44**	**87%**	**111,000**	**176,000**	**272,000**	**7.4**	**93%**
North America	1,560,000	1,800,000	2,030,000	0.48	0.56	0.63	100%	93,000	124,000	159,000	6.9	100%
Caribbean	40,000	100,000	220,000	0.15	0.34	0.78	31%	4,000	14,000	27,000	14.0	32%
South America	290,000	470,000	690,000	0.10	0.16	0.24	82%	13,000	38,000	84,000	8.1	83%
Central America	10,000	20,000	30,000	0.04	0.06	0.09	58%	300	600	1,400	3.4	33%
Asia	**3,900,000**	**5,220,000**	**6,630,000**	**0.13**	**0.17**	**0.22**	**95%**	**384,000**	**604,000**	**866,000**	**11.6**	**98%**
Central Asia and Transcaucasia	350,000	370,000	400,000	0.59	0.63	0.68	94%	23,000	26,000	31,000	7.0	94%
East and South-East Asia	1,980,000	3,040,000	4,060,000	0.12	0.19	0.25	95%	137,000	284,000	460,000	9.3	99%
South-West Asia	610,000	780,000	950,000	0.30	0.38	0.46	100%	165,000	229,000	297,000	29.5	100%
Near and Middle East	40,000	90,000	260,000	0.03	0.08	0.23	42%	1,800	3,300	10,300	3.8	56%
South Asia	930,000	950,000	960,000	0.09	0.09	0.09	100%	57,000	62,000	67,000	6.5	100%
Europe	**2,400,000**	**2,630,000**	**2,900,000**	**0.44**	**0.48**	**0.53**	**90%**	**508,000**	**530,000**	**568,000**	**20.2**	**100%**
Eastern Europe	1,700,000	1,730,000	1,750,000	1.24	1.26	1.27	100%	427,000	435,000	443,000	25.2	100%
South-Eastern Europe	80,000	100,000	140,000	0.09	0.11	0.16	100%	2,800	3,900	6,000	4.0	100%
Western and Central Europe	620,000	800,000	1,010,000	0.19	0.25	0.32	83%	78,000	91,000	119,000	11.4	100%
Oceania	**100,000**	**100,000**	**110,000**	**0.37**	**0.38**	**0.41**	**73%**	**1,300**	**1,600**	**1,900**	**1.6**	**73%**
Global	**8,860,000**	**11,260,000**	**15,310,000**	**0.18**	**0.23**	**0.31**	**90%**	**1,050,000**	**1,420,000**	**2,220,000**	**12.59**	**96%**

Source: Responses to the annual report questionnaire; progress reports of the Joint United Nations Programme on HIV/AIDS (UNAIDS) on the global AIDS response (various years); the former Reference Group to the United Nations on HIV and Injecting Drug Use; published peer-reviewed articles; and government reports.

Note: Prevalence of people who inject drugs is the percentage of the population aged 15–64 years.

GLOSSARY

amphetamine-type stimulants — a group of substances composed of synthetic stimulants controlled under the Convention on Psychotropic Substances of 1971 and from the group of substances called amphetamines, which includes amphetamine, methamphetamine, methcathinone and the "ecstasy"-group substances (3,4-methylenedioxymethamphetamine (MDMA) and its analogues).

amphetamines — a group of amphetamine-type stimulants that includes amphetamine and methamphetamine.

annual prevalence — the total number of people of a given age range who have used a given drug at least once in the past year, divided by the number of people of the given age range, and expressed as a percentage.

coca paste (or coca base) — an extract of the leaves of the coca bush. Purification of coca paste yields cocaine (base and hydrochloride).

"crack" cocaine — cocaine base obtained from cocaine hydrochloride through conversion processes to make it suitable for smoking.

cocaine salt — cocaine hydrochloride.

drug use — use of controlled psychoactive substances for non-medical and non-scientific purposes, unless otherwise specified.

fentanyls - fentanyl and its analogues.

new psychoactive substances — substances of abuse, either in a pure form or a preparation, that are not controlled under the Single Convention on Narcotic Drugs of 1961 or the 1971 Convention, but that may pose a public health threat. In this context, the term "new" does not necessarily refer to new inventions but to substances that have recently become available.

opiates — a subset of opioids comprising the various products derived from the opium poppy plant, including opium, morphine and heroin.

opioids — a generic term that refers both to opiates and their synthetic analogues (mainly prescription or pharmaceutical opioids) and compounds synthesized in the body.

problem drug users — people who engage in the high-risk consumption of drugs. For example, people who inject drugs, people who use drugs on a daily basis and/or people diagnosed with drug use disorders (harmful use or drug dependence), based on clinical criteria as contained in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) of the American Psychiatric Association, or the *International Classification of Diseases and Related Health Problems* (tenth revision) of WHO.

people who suffer from drug use disorders/people with drug use disorders — a subset of people who use drugs. Harmful use of substances and dependence are features of drug use disorders. People with drug use disorders need treatment, health and social care and rehabilitation.

harmful use of substances — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a pattern of use that causes damage to physical or mental health.

dependence — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a cluster of physiological, behavioural and cognitive phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

substance or drug use disorders — referred to in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) as patterns of symptoms resulting from the repeated use of a substance despite experiencing problems or impairment in daily life as a result of using substances. Depending on the number of symptoms identified, substance use disorder may be mild, moderate or severe.

prevention of drug use and treatment of drug use disorders — the aim of "prevention of drug use" is to prevent or delay the initiation of drug use, as well as the transition to drug use disorders. Once a person develops a drug use disorder, treatment, care and rehabilitation are needed.

REGIONAL GROUPINGS

The *World Drug Report* uses a number of regional and subregional designations. These are not official designations, and are defined as follows:

- East Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania and Mayotte
- North Africa: Algeria, Egypt, Libya, Morocco, Sudan and Tunisia
- Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe and Reunion
- West and Central Africa: Benin, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo and Saint Helena
- Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Anguilla, Aruba, Bonaire, Netherlands, British Virgin Islands, Cayman Islands, Curaçao, Guadeloupe, Martinique, Montserrat, Puerto Rico, Saba, Netherlands, Sint Eustatius, Netherlands, Sint Maarten, Turks and Caicos Islands and United States Virgin Islands
- Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama
- North America: Canada, Mexico and United States of America, Bermuda, Greenland and Saint-Pierre and Miquelon
- South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela (Bolivarian Republic of) and Falkland Islands (Malvinas)
- Central Asia and Transcaucasia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
- East and South-East Asia: Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Viet Nam, Hong Kong, China, Macao, China, and Taiwan Province of China
- South-West Asia: Afghanistan, Iran (Islamic Republic of) and Pakistan
- Near and Middle East: Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, United Arab Emirates and Yemen
- South Asia: Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka
- Eastern Europe: Belarus, Republic of Moldova, Russian Federation and Ukraine
- South-Eastern Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia, Romania, Serbia, Turkey and Kosovo[137]
- Western and Central Europe: Andorra, Austria, Belgium, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, Faroe Islands, Gibraltar and Holy See

Oceania (comprised of four sub-regions):

- Australia and New Zealand: Australia and New Zealand
- Polynesia: Cook Islands, Niue, Samoa, Tonga, Tuvalu, French Polynesia, Tokelau and Wallis and Futuna Islands
- Melanesia: Fiji, Papua New Guinea, Solomon Islands, Vanuatu and New Caledonia
- Micronesia: Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Guam and Northern Mariana Islands

137 All references to Kosovo in the *World Drug Report* should be understood to be in compliance with Security Council resolution 1244 (1999).

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Presented in six separate booklets, the *World Drug Report 2020* provides a wealth of information and analysis to support the international community in implementing operational recommendations on a number of commitments made by Member States, including the recommendations contained in the outcome document of the special session of the General Assembly on the world drug problem, held in 2016.

Booklet 1 provides a summary of the five subsequent booklets by reviewing their key findings and highlighting their policy implications. Booklet 2 focuses on drug demand and contains a global overview of the extent of and trends in drug use, including drug use disorders, and its health consequences. Booklet 3 deals with drug supply and presents the latest estimates and trends regarding the production of and trafficking in opiates, cocaine, amphetamine-type stimulants and cannabis. Booklet 4 addresses a number of cross-cutting issues, including the macrodynamics that are driving the expansion and increasing complexity of the drug markets, and describes some of the rapidly evolving drug-related concerns: the latest, multifaceted global opioid crisis; rapid market changes; the market for new psychoactive substances; the use of the darknet for supplying drugs; and developments in jurisdictions that have measures allowing the non-medical use of cannabis. Booklet 5 looks at the association between socioeconomic characteristics and drug use disorders, including at the macro-, community and individual levels, with a special focus on population subgroups that may be impacted differently by drug use and drug use disorders. Finally, booklet 6 addresses a number of other drug policy issues that all form part of the international debate on the drug problem but on which in-depth evidence is scarce, including access to controlled medicines, international cooperation on drug matters, alternative development in drug cultivation areas, and the nexus between drugs and crime.

As in previous years, the *World Drug Report 2020* is aimed at improving the understanding of the world drug problem and contributing to fostering greater international cooperation in order to counter its impact on health, governance and security.

The accompanying statistical annex is published on the UNODC website:
wdr.unodc.org

ISBN 978-92-1-148345-1