

fáith SEEKING UNDERSTANDING

CHARLES SIGLER, D.PHIL.

2014 World Drug Report Summary

Globally, an estimated 243 million people, about 5.2% of the world population aged 15-64 used an illicit drug in 2012. There has been an increase in opioid and cannabis use since 2009, while opiates, cocaine and amphetamine-type stimulants (ATS) have either remained stable or decreased. New psychoactive substances (NPS) are now found in most of Europe and North America, as well as Oceania, Asia, South America and several African countries. The number of NPS rose from 251 in July of 2012 to 348 in December of 2013. This compares to 234 psychoactive substances controlled at the international level. “The use of new psychoactive substances is thus emerging as a truly global phenomenon.”

Polydrug use, using two or more substances at the same time is a common occurrence in all regions. Three distinct patterns are evident. One pattern is where users seek a complementary or cumulative effect. Some examples of this are individuals who use heroin and benzodiazepines; or cannabis users who drink alcohol. A second pattern of polydrug use is when one drug is used to offset the adverse effects of another, such as with speedballs (cocaine and heroin) or using cocaine when drinking alcohol. The third pattern is when a drug is gradually replaced or substituted by another drug for various reasons. The main risks of polydrug use continue to be the possibility of increased toxicity, overdose and death.

The UN Office on Drugs and Crime estimated that there were an estimated 183,000 drug-related deaths in 2012, corresponding to a mortality rate of 40 death per million persons aged 15-64. Overdoses are the main factor in drug-related deaths, and opioids (heroin and the non-medical use of prescription opioids) are the primary drug type implicated in these deaths. Most overdose cases occur when substances such as opioids are mixed with other sedating substances, like alcohol and benzodiazepines.

Cannabis remains the most widely used illicit drug in the world, with an estimated 177.6 million users. This was a minor increase over previous estimates in 2009. The use of amphetamine-type stimulants (ATS) remains widespread globally, and seems to be increasing in most areas. The presence of ecstasy was lower than in 2009. There have been indications in recent years that the cocaine market has been shifting beyond the previous regions typically associated with either trafficking or use. Significant increases have been seen in Asia, Oceania and Central and South America (Brazil) and the Caribbean. Limited data suggests that the use of prescription opioids has gone up in parts of Asia and Africa. However, the use of opiates (heroin and opium) has remained stable. See Table 1 for a comparison of global drug use by drug type.

Table 1
Global Drug Use by Drug Type

	Cannabis	Amphetamine-like stimulants		Cocaine	Opiates (heroin, opium)	Opioids (opiates and synthetics)
		Amphetamines	Ecstasy			
Users in millions	177.6	34.4	19.36	17.20	16.40	33.00
% of global population 15-64	3.80%	0.70%	0.40%	0.40%	0.40%	0.70%

This table and all following tables were produced from data within the World Drug Report 2014

Opiates and Opioids

Opioid use has increased in parts of Asia and Africa since 2009, while global opiate use has remained stable. North America, Oceania the Near and Middle East/South-West sections of Asia have a prevalence of opioid use above the global average. The high Asian prevalence rate is primarily from users in Afghanistan, Iran, and Pakistan. There is evidence in Europe that heroin use is declining, as the user population ages and the heroin supply is limited.

Historically, data from the *World Drug Report 2006* suggested above average prevalence rates existed in Iran (2.8%), the Russian Federation (2.0%), Afghanistan (1.4%), the United Kingdom (.9%), Pakistan (.8%), and Italy (.8%). Drug prevalence data from the *World Drug Report 2012* indicated that the top ten countries by opiate usage were: Afghanistan (2.7%), Iran (2.3%), Azerbaijan (1.5%), Russia (1.4%), Puerto Rico (1.2%), Macao (1.1%), Malaysia (.9%), Mauritius (.9%), Ukraine (.9%), and Kazakhstan (.9%).

Table 2
Opium Production in Selected Countries by Tons

Country	1999	2007	2011	2013
Afghanistan	4,565	7,400	5,800	5,500
Pakistan	9	43	9	N/A
Laos	124	9	25	23
Myanmar	895	460	610	870
Columbia	88	14	8	N/A
Mexico	43	150	250	N/A
Global	5,764	8,091	6,983	6,883

The global area under opium poppy cultivation in 2013 was the highest level since 1998, when estimates first became available. Increases were again evident in Afghanistan and Myanmar, with Afghanistan having a 36 percent increase in cultivation. The southern and western parts of the country, especially Helmand and Kandahar provinces were the main areas of cultivation. The opium production in Afghanistan accounts for 80 percent of the global opium production.

In the early 1990s, opium poppy cultivation was primarily in South-East Asia. After a significant decrease in that region, cultivation in Afghanistan increased dramatically, reaching a record high level in 2013 of 209,000 hectares (516,439 acres). Global cultivation levels reached a low in 2005, but has returned to a level comparable to that of 1991. It seems that high levels of opium production in Afghanistan are related to an increase in the use of opiates in the area. About one fifth of global users of illicit

opiates live in Near East, Middle East and South West Asian regions. This is in spite of the fact that the area accounts for only 6 percent of the global population aged 15-64.

The availability of heroin in the United States has continued to increase, most likely due to high levels of heroin production in Mexico and Mexican traffickers expanding into “white heroin” markets. However, there was no available data for opium production in Mexico for 2012 or 2013; or Columbia for 2013. Anecdotal evidence is that Mexican drug cartels are switching from growing marijuana to opium poppies due to the lower demands for marijuana in the United States. See “The Economics of Heroin” on this website for more information on this topic. Eighty per percent of the world’s opium was produced in Afghanistan; 12.6% in Myanmar; and 7.34% in the rest of the world. See Table 2. These figures could likely change if accurate data for opium poppy cultivation was available for Mexico, Central and South America.

In the United States there has been a shift in the opioid market towards heroin and away from prescription pain relievers, driven by the lower price and greater availability of heroin than prescription drugs. “Given the variable levels of heroin purity, the replacement of heroin with prescription opioids is also fraught with risks of overdose.” These changes have been concurrent to more efforts nationally to control the misuse of prescription drugs. For example, in 2010, OxyContin was modified to a controlled-release formula, making it difficult to crush, snort or inject. A U.S. study of individuals undergoing treatment before and after the formulation change found that it led to a decrease in OxyContin misuse (from 35.6% to 12.8%). But fentanyl and hydromorphone use went up and heroin use doubled.

In contrast, the declining availability of heroin in parts of Europe seems to have led to an increase in the use of prescription opioids. In Estonia, 87.5% of the clients in treatment listed fentanyl as their primary drug. Between 2011 and 2012, there was a 38 percent increase in overdoes deaths in Estonia—80 percent related to fentanyl. The International Narcotics Control Board (INCB) now reports that fentanyl and buprenorphine have replaced heroin in Estonia and Finland. A similar trend is evident in Australia and New Zealand. In recent years, the misuse of tramadol (a lower potency opioid) has been evident in parts of Africa, the Middle East and Asia. See Table 3 for data on global opiate use.

Table 3
Global Opiate Use

Geographic Area	Opiate Users in Millions	population % 15-64 years	Opioid Users in Millions	population % 15-64 years
Europe	3.00	0.50	4.01	.70
West & Central Europe	1.12	0.30	1.21	.40
East & South-East Europe	1.89	0.80	2.80	1.20
North America	1.42	0.50	13.46	4.3
South America	0.11	0.04	.83	.30
Asia	9.86	0.30	11.92	.40
Oceania	0.04	0.20	.74	3.0
Africa	1.84	0.30	1.93	.30
Global	16.40	0.40	33.00	.70

Cocaine

Coca bush cultivation remains limited to Bolivia, Columbia and Peru. Efforts in recent years have led to a decline in the net area under coca bush cultivation to the lowest levels since the beginning of available estimates in 1990. “That decline was driven mainly by a 25 percent decline in coca bush cultivation in Columbia. However, the Columbian government decided in May of 2015 to suspend the aerial fumigation of illegal coca plants in light of a number of studies linking the herbicide used, glyphosate (Roundup), to cancer. This decision will also suspend the similar attempt to eradicate opium poppies with spraying. Stay tuned to see what happens to Columbian cultivation levels for both coca and opium in the future.

Global indicators for the cocaine market suggest that the availability of cocaine has fallen. However, cocaine use remained stable in 2012, with an estimated 17.2 million global users. Cocaine use in North and South America remained high, with 1.8% and 1.2% annual prevalence rates respectively. Oceania had a prevalence rate of 1.5%

Beginning in 2006, the U.S. experienced a significant drop in cocaine availability, leading to decreased levels of use. According to the DEA, it appears that in addition to the decrease in levels of cocaine manufacturing, the law enforcement efforts against Columbian traffickers may have contributed to the reduced availability in the US. The above noted decrease in coca bush cultivation also seems to have contributed to the shortage of cocaine in North America. “Cultivation of coca bush in Columbia halved between 2007 and 2012.”

South America has seen an increase in the consumption of cocaine, including crack. The number of past-year users of cocaine in South America increased from around 2 million in 2004 to 3.35 million in 2012. Brazil remains an attractive target for cocaine consumption, because of its large urban population, and trafficking because of its geographic position, making it a convenient staging area for cocaine trafficked to Europe. Brazil contains about half the population of South America.

According to a study conducted among college students in Brazil, the annual prevalence of cocaine use was 3%. With its linguistic ties and cultural ties to Portugal, Brazil is a logical transit point for cocaine consignments trafficked to West and Central Africa and Europe; notably the Iberian peninsula of Spain and Portugal.

In Western and Central Europe, there seems to be a rebound in the availability of cocaine in 2012. This was concentrated in a few important transit countries, like Belgium and Spain, while major consumer countries such as France, Germany and Italy registered decreases. One suggestion is that the cocaine entering Europe is destined for emerging markets outside of Europe, such as Oceania. Prices are higher there and use seems to be increasing. Past year use of cocaine among the general population of Australia aged 14 and over rose from 1.6% in 2007 to 2.1% in 2010.

The extent of drug trafficking and consumption in Africa is hard to assess. Seizures remain below 3 tons, but trafficking to Europe through West Africa continues to thrive. See “The Double-Edged Sword of Narco-Terrorism” on this website. Algeria registered a spike in cocaine seizures in 2012, reporting that the cocaine had been transited

through countries in West and Central Africa. See Table 4 for data on global cocaine use.

Table 4
Global Cocaine Use

Geographic Area	Population of Cocaine Users in Millions	% of population 15-64 years
Europe	3.67	0.70
West & Central Europe	3.14	1.00
East and South-East Europe	0.54	0.20
North America	5.58	1.80
South America	3.34	1.20
Asia	1.33	0.05
Oceania	.38	1.50
Africa	2.59	0.40
Global	17.20	0.40

Cannabis

Cannabis remains the most widely used illicit substance, with an estimated 3.8 percent of the global population aged 15 to 64 who have used it in the past year. It continues to dominate the global drug market in terms of pervasiveness of cultivation, volume of production, and number of consumers. Almost two thirds of the reporting countries ranked cannabis as their primary substance of abuse. The various kinds of cultivation, from personal growing to large-scale farms and indoor warehouse operations make it difficult to estimate global levels of cannabis cultivation and production.

In major consumer markets, treatment enrollment related to cannabis use has been increasing. In the US, between 2006 and 2010, there was a 59% increase for cannabis-

related ER visits and a 14% increase in cannabis-related treatment admissions. According to the Potency Monitoring Project of the University of Mississippi, levels of THC in seized marijuana increased from 8.7% in 2007 to 11.9% in 2011. “Because of the relationship between increased potency and dependence, that trend may be contributing to the increased risk of drug use disorders and dependence.” This phenomenon of increased harm with cannabis is not confined to one specific region either. Nearly two thirds of those enrolled in drug treatment in Africa listed cannabis as their primary drug of use.

The global prevalence rates are highest in North America, followed by Oceania, Africa, West & Central Europe and South America. The highest rates in Africa are found in the countries of West and Central Africa (12.4%), and the countries of southern Africa (5.0%). While Asia has the lowest prevalence rate, it has the largest number of estimated users at 54.6 million.

There have been recent policy changes for cannabis in Uruguay, as well as several states in the US. Colorado, Washington, Alaska and Washington D.C have all passed legislation making recreational use of marijuana legal. Several other states (23 as I write this) have legalized medical marijuana. The INCB expressed concern that several countries are considering legislative proposals to allow recreational cannabis use. It urged all governments to carefully consider the negative impact of these actions. “The likely increase in the abuse of cannabis will lead to an increase in related public health costs.”

Research has not conclusively established the impact of more lenient laws on cannabis consumption. However, an increase in cannabis use is expected. As production costs drop, consumption should increase further. It is estimated that for every 10% drop in price, there will be a 3% increase in the total number of users, and a 3% to 5% increase in young users. Among youth and young adults, more permissive regulations correlates with a lowered perceived risk of use. A lowered risk perception has been found to predict increases in use.

There are a number of potential health issues to look out for, including lung problems, memory impairment, mental health problems, and poorer cognitive performance associated with early initiation and persistent use between the early teenage years and adulthood. See “Marijuana Research Findings” on this website for

more information on potential medical and psychological problems with cannabis use. See Table 5 for data on global cannabis use.

Table 5
Global Cannabis Use

Geographic Area	Population of Cannabis Users in Millions	% of population 15-64 years
Europe	24.00	4.30
West & Central Europe	18.53	5.70
East and South-East Europe	5.47	2.40
North America	35.23	11.20
South America	15.22	5.70
Asia	54.61	1.90
Oceania	2.65	10.80
Africa	44.56	7.50
Global	177.60	3.80

Amphetamine-Type Stimulants (ATS)

ATS, excluding ecstasy, constitute the second most used group of illicit substances worldwide, with 34 million estimated users. While ATS use had remained stable in 2010 and 2011, it increased in 2012. There was a reported decrease in Western and Central Europe, but an increase in North America. Although treatment admissions for methamphetamines were down in the US, the prevalence of other types of stimulants increased.

“For the second year, ATS seizures reached an all-time high of 144 tons, up 15% from 2011.” Over the past five years methamphetamine seizures have almost increased

400%—about half of that in North America. East and South-East Asia in another geographic area of the globe with a high incidence of methamphetamine use and seizures, 25% of the remaining methamphetamine seizures occurred in that region. Not surprisingly, there has been an increase in the number of meth labs seized (from 11,116 in 2011 to 12,857 in 2012) and dismantled (from 57 in 2011 to 84 in 2012) in the US. Methamphetamine accounted for 80% of the global seizures of ATS. In the past five years, the amount of methamphetamine seized in Mexico increased dramatically from 341 kg in 2008, the 44 tons in 2012. US seizures are up from 9.5 tons in 2008 to 29 tons in 2012.

Table 6
Global ATS Use

Geographic Area	Population of ATS Users in Millions	% of population 15-64 years
Europe	2.8	0.50
West & Central Europe	1.95	.60
East and South-East Europe	.85	0.40
North America	4.41	1.40
South America	1.41	0.50
Asia	19.52	0.70
Oceania	0.51	2.10
Africa	5.20	0.90
Global	34.0	0.70

The misuse of prescription stimulants for ADHD is not just confined to North and South America, as the reported data on misuse would suggest. With the exception of

Indonesia, all the countries reporting misuse were from North and South America. This skewed data is likely the result of better monitoring of the problem in those countries. The top five countries, with their annual prevalence rate of misuse in parentheses, are: El Salvador (3.28); United States (1.6); Costa Rica (1.3); Canada (.7); Brazil (.7). See Table 6 for data on global ATS use.

New Psychoactive Substances

The term “new psychoactive substances” (NPS) refers to substances that are not under international control, but pose a public health threat. The term “new” refers to “newly misused” substances and not necessarily newly invented ones; many of the current NPS were first created many years ago. Generally, NPS refers to unregulated, new, psychoactive substances or products intended to mimic the effects of controlled substances. They have become a major concern not only because of their increasing use, but also because a lack of knowledge about the substances themselves and their adverse effects.

Table 7
New Psychoactive Substances Reported 2009-2012

NPS, 2009-2012	Number of new substances	Percentage of NPS reported by mid-2012
Synthetic cannabinoids	60	23%
Plant-based substances	20	8%
Synthetic cathinones	44	18%
Ketamine-like	5	2%
Phenethylamines	58	23%
Piperazines	12	5%
Tryptamines	25	10%
Miscellaneous others	27	11%

The number of NPS rose to 348 by December 2013. This is an increase of 97 new NPS over the 251 reported as of July of 2012. This increase was mostly due to new

synthetic cannabinoids (50% of the newly identified NPS), followed by new phenethylamines (17%), other substances (14%) and new synthetic cathinones (8%). The number of NPS clearly exceeded the number of substances under international control (234). The development of NPS seems to be accelerating with time. At the end of 2009, there were 166 known NPS. This increased by 85 in the next 2½ years and 97 over the next 1½ years. See “The New Frontier of Synthetic Drugs” on this website for more information on NPS.

Categories of NPS sold on the global market

- 1) Synthetic cannabinoids, cannabinoid receptor agonists that produces effects similar to delta-9-tetrahydrocannabinol (THC), the principle psychoactive ingredient in marijuana. Synthetic cannabinoids are often laced with herbal products and sold as Spice, K2, Moon Rocks, Yucatan Fire, Skunk, and others. They tend to be more potent than the THC contained in the natural cannabis plant.
- 2) Plant-based substantives with psychoactive properties; the most frequently reported are: Kratom, a plant indigenous to south-East Asia that is a stimulant at low doses and sedative at high doses; *Salvia divinorum*, a plant indigenous to the forests in Oxaca Mexico, which contain salvinorin A, a potent hallucinogenic; and Khat, a plant native to the horn of Africa and the Arabian peninsula. The leaves are chewed, releasing the stimulants cathinone and cathine.
- 3) Synthetic cathinones (bath salts), analogues and derivatives of cathinone, one of the active components of the khat plant. Generally they have stimulant effects and are frequently included with mephedrone and methylenedioxypropylone (MDPV). Currently the most problematic group of NPS.
- 4) Ketamine, a human and veterinary anaesthetic that acts like a stimulant at low doses and a hallucinogen at high doses. It is widely used in Asia. In the US, it is being researched as a fast-acting antidepressant. Chronic Ketamine use has been linked with lasting memory and cognitive dysfunctions.
- 5) Phenethylamines, substances related to amphetamine and methamphetamine; generally producing stimulant effects. But modification of these substances can lead to powerful hallucinogens, such as Bromo-Dragonfly. Other substances in this category already subject to international control include: MDMA (ecstasy) and mescaline.

6) Piperazines, these substances are frequently sold as “ecstasy” because of their central nervous system stimulant properties. The most commonly reported substances in this group are N-benzylpiperazine (BZP) and 1-(3-chlorophenyl) piperazine (mCPP).

7) Tryptamines, are used for their hallucinogenic effects. Psilocybin (found in “magic mushrooms”) is an already controlled substance within this group. While tryptamines can be synthesized, they also exist in plants, fungi and animals. Use may be especially problematic for individuals already having symptoms of depression or schizophrenia.

Summary

North America continues to be a major market for illicit drug use. It has the largest percentage of opioid users, cocaine users and cannabis users. It was second in percentage of ATS users.

Cannabis continues to be the most widely used illicit drug worldwide in terms of overall users and percent of the world’s population between 15 and 64. There seems to be an increase in treatment-related concerns and ER visits with cannabis in the US. One conjecture is this is due to the increased potency of marijuana.

ATS are now the second largest group of illicit substance worldwide. There are indications the cocaine market is shifting beyond its traditional regions.

While opiate use seems to have remained stable, opioid use has increased. But the stability of opiate use is likely to change, with the highest level of opium poppy cultivation reported since 1998, when estimates first became available. In the US, there has already been a noticeable shift towards heroin and away from prescription pain relievers. Afghanistan remains far and away the largest producer of opium in the world.

Eradication efforts led to a decline in coca bush cultivation in Columbia. However, the Columbian government decided to suspend aerial fumigation efforts out of concern the chemical used was linked to increased rates of cancer.

As of December of 2013, there were 348 known NPS, an increase of over 200% since 2009. There are more NPS than substances under international control (234). The meteoric rise of new psychoactive substances (NPS) has been a global phenomena and presents unique difficulties in controlling their spread and addressing their adverse

effects. The Commission on Narcotic Drugs has called for Member States to monitor trends in NTS and their patterns of use; to share that information with others; and then adopt appropriate measures to reduce the supply and demand for NPS.

You can review the original [2014 World Drug Report](#) for a more detailed discussion of the regional and global trends for each type of drug. There is an extensive report on the attempts to control precursor chemicals, those substances used in the manufacture of drugs. You can access previous publications of the *World Drug Reports* from there as well.