

Drug testing for better health outcomes

Know more. Treat better.



An evolving drug crisis

Globally, the use of illicit drugs is increasing in both total numbers and as a percentage of the population, yet only about 8% of those affected receive some form of substance use disorder treatment. Communities worldwide continue to be challenged by the lack of intervention and treatment; thus, the growing drug crisis remains a constant threat to public health.¹

Drug use disorders do not discriminate

Factors like race, socioeconomic status, age, gender, or location in the world do not inherently protect or exclude individuals from the possibility of developing a drug use disorder. However, we see significant differences in prevalence and misuse of certain drug classes from region to region. These varying differences make it much more complex, and while we all face similar challenges with substance use disorders, every country's story is slightly different.

331 million people who use drugs¹

↑ 34% over 10 years



cannabis
256
million



opioids
63
million



amphetamines
32
million



cocaine
25
million



"ecstasy"
21
million



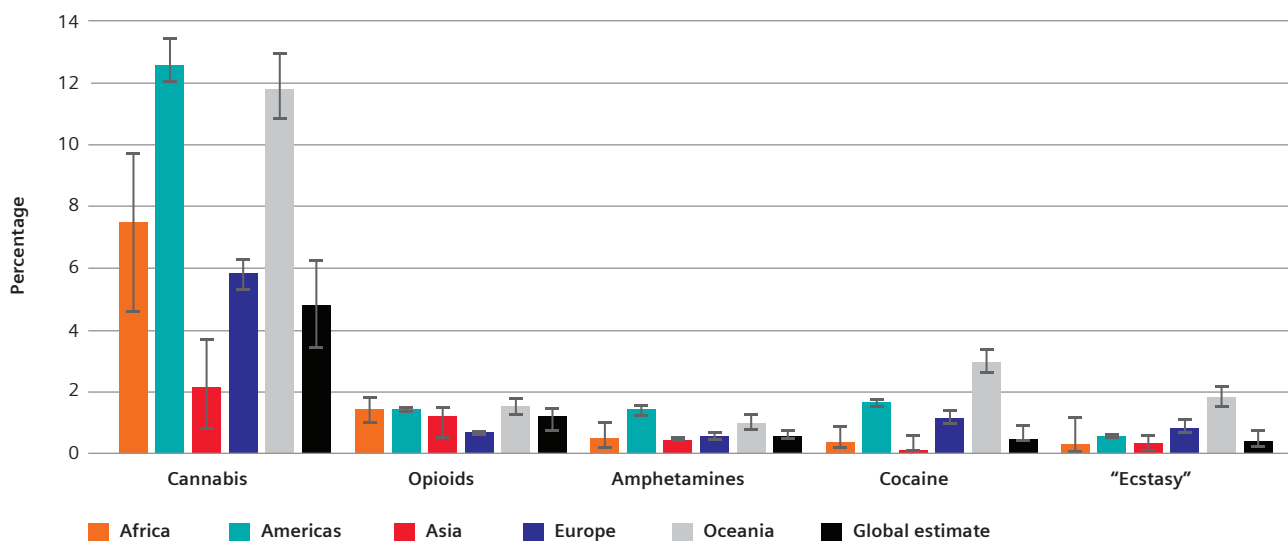
63 million people with drug use disorder¹

↑ 1 in 12 in treatment



8.2% population in treatment

Drug use in the past year, 2024¹



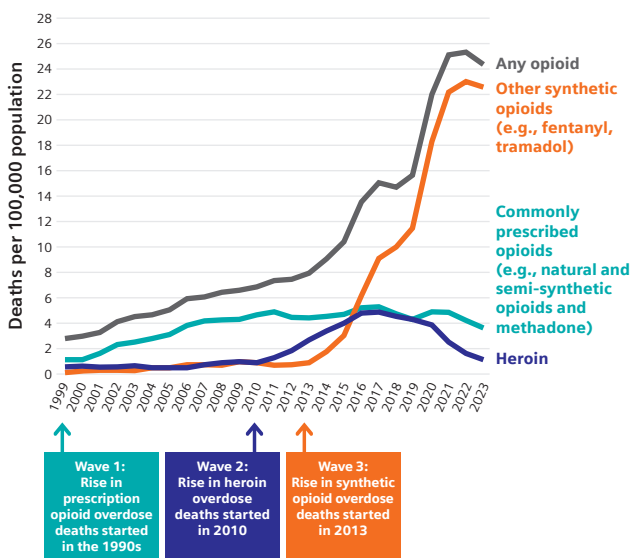
Source: World Drug Report 2026.

The opioid crisis

An estimated 63 million people used opioids, representing 1.2% of the global population.¹ Whether it is naturally derived opiates (opium and heroin) in Southwest and South Asia, or synthetic opioids (fentanyl and tramadol) in North America and Africa, respectively, opioids remain the most lethal group of drugs, accounting for approximately two-thirds of deaths related directly to drugs (mostly overdoses). And while treatment for opioid use is lacking globally with respect to availability and accessibility, one-third of all people in drug treatment cited opioids as their primary drug of use, according to data available from 140 countries.¹

So, how did we get here? Experts point toward the influence of pharmaceutical companies, inadequate regulation, over-prescribing by the medical profession, and increased use of illegal heroin and synthetic opioids. This can be explained in three waves.³

Three waves of opioid overdose deaths⁴



Source: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2024. <https://wonder.cdc.gov>.

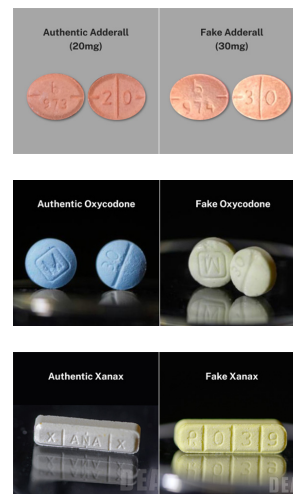
Key insight

Some experts argue that a fourth wave has emerged fueled by concurrent use of opioids with stimulants like ecstasy, cocaine, and amphetamines. Whether intentional or not, polysubstance use further complicates the opioid crisis, as outcomes are more unpredictable and sometimes deadlier.

Fentanyl contamination can lead to fentanyl poisoning

There is a significant risk that illegal drugs have been intentionally contaminated with fentanyl. Because of its potency and low cost, drug dealers have been mixing fentanyl with other drugs, including heroin, methamphetamine, and cocaine, increasing the likelihood of a deadly outcome.⁵

Additionally, drug traffickers use pill presses to press fentanyl into pills, punches, and dyes to imprint markings and logos on those pills, producing pills that look like legitimate prescription medication—oxycodone, Xanax, or Adderall—when the pills actually contain fentanyl, methamphetamine, and other deadly drugs.⁶

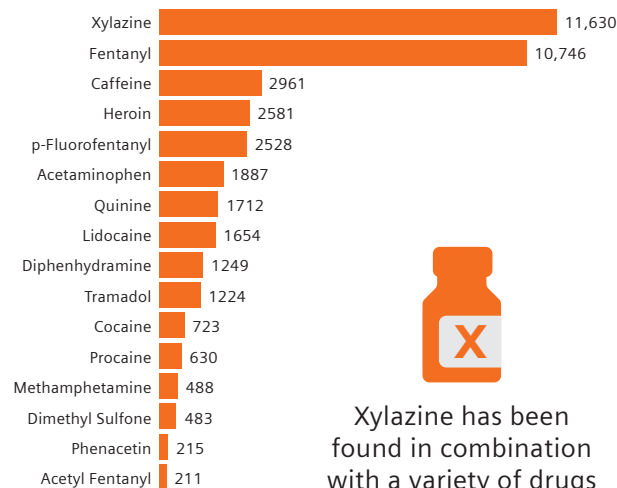


Source: www.dea.gov/onepill

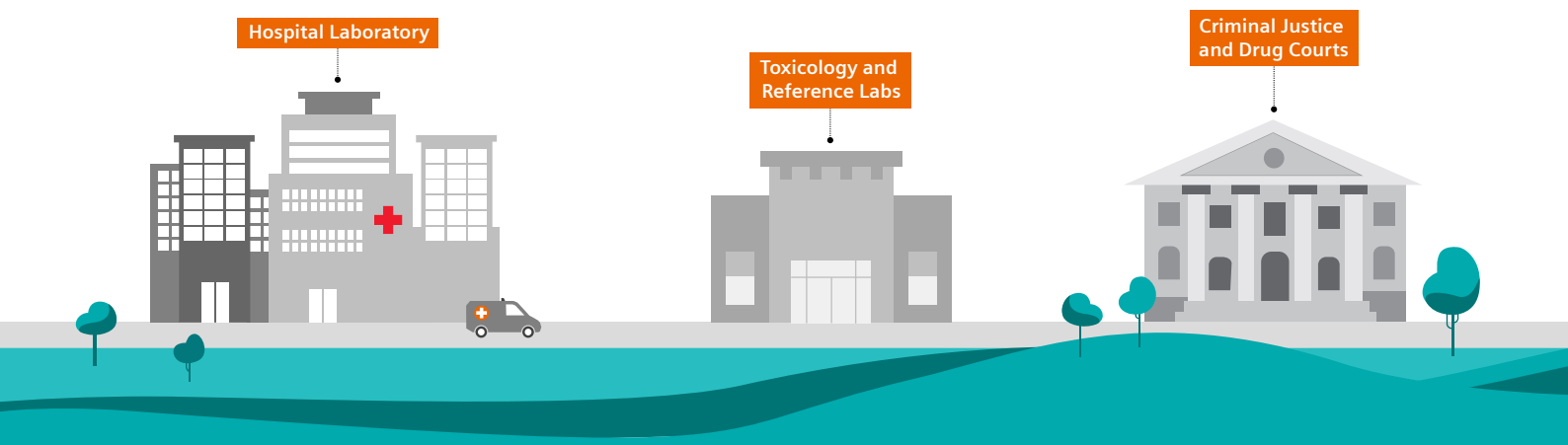
Xylazine: an emerging threat

Due to its impact on the opioid crisis, fentanyl mixed (adulterated) with xylazine (a non-opioid sedative for veterinary use) was declared an emerging threat by the White House's Office of National Drug Control Policy. On July 11, 2023, the White House released a national response plan to address the emerging threat of fentanyl mixed with xylazine.⁸

Top 15 drugs found with xylazine⁹



Xylazine has been found in combination with a variety of drugs



Siemens Healthineers is everywhere testing is needed, providing fast, reliable means to detect drugs of abuse, which can inform doctors, deter abuse, and help save lives

Accurate drug screening plays a key role in the fight against the global drug crisis. Siemens Healthineers is everywhere testing is needed: providing a reliable means to help identify substance-use disorders, facilitate evidence-based treatment, and ultimately save lives, one person at a time.



With a 60-year legacy, Syva from Siemens Healthineers is the trusted brand in drug-of-abuse testing, responding to the ever-changing needs of drug screening customers with innovative products in both the dedicated and clinical drug testing markets.



The enzyme-linked immunoassay technique EMIT is a proven method customers trust to deliver their drug screening results. Once EMIT was introduced to the market, it quickly became the blueprint for other screening assays in the industry.



Syva EMIT reagents are among the most widely used and extensively validated reagents in the industry.



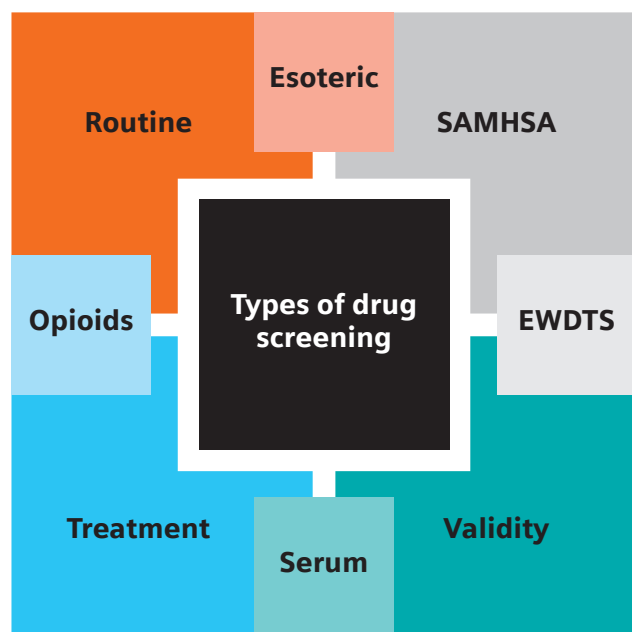
Did you know?

The EMIT method has been acknowledged by the U.S. Supreme Court as part of a highly accurate drug testing program.



Screening for all patient/client scenarios

Siemens Healthineers, your partner in drug testing, provides screening needs for identification and treatment purposes, whether for routine or esoteric testing, SAMHSA-certified lab testing, opioid and treatment testing, or specimen validity testing to validate sample integrity.



SAMHSA—Substance Abuse and Mental Health Services Association
EWDTs—European Workplace Drug Testing Society

Comprehensive drugs of abuse screening menu

Acetaminophen	Ecstasy	Methaqualone	Specimen validity testing
6-Acetylmorphine	EDDP*	Opiates	Creatinine
Amphetamines	Ethyl alcohol	Oxycodone	Nitrites
Barbiturates	Ethyl glucuronide (EtG)*†	Phencyclidine	Oxidants
Barbiturates, serum	Fentanyl*	Propoxyphene	pH
Benzodiazepines	Hydrocodone*§	AB-PINACA*‡	Specific gravity
Benzodiazepines, high sensitivity*,**	Ketamine*‡	UR-144/JWH-018*‡	
Benzodiazepines, serum	LSD	Salicylic acid	
Buprenorphine	Meperidine*††	Tramadol*	
Cannabinoids	Methadone	Tricyclic antidepressants	
Cocaine metabolite	Methamphetamine†	Xylazine*§‡	

Assay	Qualitative and/or semi-quantitative	Cutoff (ng/mL)
6-Acetylmorphine	Both	10
Amphetamines	Both	300, 500, 1000
Amphetamines d.a.u.	Both	300
Barbiturates	Both	200, 300
Benzodiazepines	Both	200, 300
Benzodiazepines, high sensitivity*,**	Both	100, 200
Buprenorphine	Both	5
Cannabinoids	Both	20, 50, 100
Cocaine Metabolite	Both	150, 300
Ecstasy	Both	300, 500
EDDP*	Both	100, 300
Ethyl alcohol	Quantitative	N/A
Ethyl glucuronide (EtG)*†	Both	500, 1000
Fentanyl*	Qualitative	1.0
Hydrocodone*§	Both	300

Assay	Qualitative and/or semi-quantitative	Cutoff (ng/mL)
Ketamine*‡	Both	50
LSD	Both	0.5
Meperidine*††	Both	100
Methadone	Both	150, 300
Methaqualone	Both	300
Opiates	Both	300, 2000
Oxycodone	Both	100, 300
Phencyclidine	Both	25
Propoxyphene	Both	300
Synthetic cannabinoids		
AB-PINACA*‡	Qualitative	5
UR-144/JWH-018*‡	Qualitative	10
Tramadol*	Both	100
Xylazine*§‡	Both	10

* Application manufactured by a third party, distributed by Siemens Healthcare Diagnostics, Inc.

† Detected by the EMIT II Plus Amphetamines Assay.

‡ Forensic use only in the United States.

§ Not available for sale outside the U.S.

** Not available for sale in the U.S.

†† Third-party, user-defined method that is neither validated nor approved by Siemens Healthineers.



Whether manufactured by Siemens Healthineers or a third party, we fully validate the performance of the applications and provide full support—from implementation to troubleshooting and needed materials.

Customer Care program

Our dedicated Siemens Healthineers team will partner with you to identify the right solution for your drug testing needs. Through our Customer Care program, we provide value-added solutions and services you can count on.



Implementation

Our Technical Application Specialists provide implementation support via assay validations and method correlations to get you up and running.



Training

From online training courses to on-site, system-specific, and classroom training, our programs include advanced educational opportunities provided by Siemens Healthineers experts.



Technical support

The Customer Care Center provides comprehensive support when you need it.



Continuing education

Selective learning opportunities, including webinars and education sessions, are hosted by key opinion leaders.



Online Document Library

Our online library provides a single point of access to technical documentation for our entire portfolio of systems and assays.

Services and support

We work closely with you to help your drug testing program reach new levels of clinical, operational, and financial excellence.

Grow your menu with validated and supported applications.

Siemens Healthineers offers applications across dedicated drug testing, chemistry, and integrated analyzers. Consolidated testing increases laboratory efficiency and system utilization by:

- 1 Reducing send-out costs**
- 2 Streamlining inventory management**
- 3 Simplifying supply chain**

At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably. As a leading medical technology company, we want to advance a world in which breakthroughs in healthcare create new possibilities sustainably. We partner with healthcare providers to address their most pressing challenges so that they can deliver high-quality, patient-centered care, efficiently.

We are active in the areas of imaging, diagnostics, cancer care, and minimally invasive therapies, augmented by digital technologies and artificial intelligence. With our unique combination of strengths in Patient Twinning,* Precision Therapy, as well as Healthcare AI, we take on the greatest challenges in healthcare. We help improve access to healthcare for underserved communities worldwide and overcome the most threatening diseases.

We are a team of around 74,000 Healthineers in over 70 countries passionately pushing the boundaries of what is possible in healthcare so that patients can live with hope, not fear of disease.

**Early detection, accurate diagnosis, individualized therapy selection, simulation and planning, continuous monitoring and aftercare.*

All trademarks are the property of their respective owners. Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

References:

1. Special points of interest. United Nations Office on Drugs and Crime. Available from: https://www.unodc.org/documents/data-and-analysis/WDR_2026/WDR26_Special_points_of_interest.pdf.
2. Key findings and conclusions. United Nations Office on Drugs and Crime. Available from: <https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2025-key-findings.html> [accessed 2025 Sep 19].
3. Opioid crisis: addiction, overprescription, and insufficient primary prevention. The Lancet. Available from: [https://www.thelancet.com/journals/lanam/article/PIIS2667-193X\(23\)00131-X/fulltext](https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(23)00131-X/fulltext) [accessed 2025 Sep 19].
4. Understanding the opioid overdose epidemic. CDC. Available from: <https://www.cdc.gov/overdose-prevention/about/understanding-the-opioid-overdose-epidemic.html> [accessed 2025 Sep 19].
5. Facts about fentanyl. DEA. Available from: <https://www.dea.gov/resources/facts-about-fentanyl> [accessed 2025 Sep 19].
6. Pill press resources. DEA. Available from: <https://www.dea.gov/resources/pill-press-resources> [accessed 2025 Sep 19].
7. DEA fentanyl seizures in 2025. DEA. Available from: <https://www.dea.gov/onepill> [accessed 2025 Sep 19].
8. Fentanyl adulterated or associated with xylazine implementation report. The White House. Available from: <https://www.whitehouse.gov/wp-content/uploads/2025/03/ONDCP-2024-FAAX-Implementation-Report.pdf> [accessed 2025 Sep 19].
9. Xylazine information. DEA. Available from: <https://www.dea.gov/xylazine-information> [accessed 2025 Sep 19].

Siemens Healthineers Headquarters

Siemens Healthineers AG
Siemensstr. 3
91301 Forchheim, Germany
Phone: +49 9191 18-0
[siemens-healthineers.com](https://www.siemens-healthineers.com)

Published by

Siemens Healthcare Diagnostics Inc.
Specialty Lab Solutions
511 Benedict Avenue
Tarrytown, NY 10591-5005
USA
Phone: +1 914-631-8000