

# Synthetic opioids in Germany - Are we prepared?

## Proposals for a national council

Two annual opium harvests in Afghanistan have largely failed. According to current news, the stocks of opium and heroin in the country itself and in the warehouses of the retail chains will last until at least the end of 2024, at which point heroin exports to Europe could gradually dry up. The price per kilo for opium is already rising steadily in Afghanistan, which will have an impact on the European heroin market sooner or later. Replacement supplies from Myanmar are unlikely. Mexican and Guatemalan poppy farmers have largely stopped growing poppies because they could not compete with the cheaper fentanyl. The Chinese government does not seem seriously willing to stop the export of chemical precursors for the production of fentanyls.

The economics of the illegal drug market will provide substitutes; the demand for opioids is there. Drug cartels could fill this gap in the market with fentanyls, nitazenes and xylazine. This could lead to a situation in Germany and other countries that is very similar to that in North America: a rapid increase in overdoses with fatal consequences, distribution battles between old and new drug cartels, overloading of the healthcare system and drug aid, an increase in drug-related crime and social impoverishment of users.

The key actions arising from the experience in North America and other countries where synthetic opioids (SO) play or have played a role are incorporated in the publication *SO-PREP - Toolkit on key responses to the negative consequences related to synthetic opioids*

[https://www.frankfurt-university.de/fileadmin/standard/Hochschule/Fachbereich\\_4/Forschung/ISFF/Publikationen/2022/SO-PREP\\_Toolkit-D4-2\\_A4\\_spreads\\_1.pdf](https://www.frankfurt-university.de/fileadmin/standard/Hochschule/Fachbereich_4/Forschung/ISFF/Publikationen/2022/SO-PREP_Toolkit-D4-2_A4_spreads_1.pdf)

<https://www.akzept.eu/wp-content/uploads/2023/07/BroschüreA4SO-PREPInternetfassung.pdf>

of 2023, which resulted in seven key strategies:

- + Early warning systems
- + Internet monitoring
- + e-Health
- + Drug checking
- + Drug consumption rooms
- + Naloxone
- + Opioid agonist therapy

This outline is intended to provide an overview along the SO-Prep toolkit and the four pillars of drug policy of the measures that could contribute to a concept in the sense of a national emergency plan. It also contains various components of a comprehensive early warning system and supplementary proposals.

It is time for German drug policy to take action at federal, state and local level. Measures that have already been initiated should be continued: For two central components, RaFT (**R**apid **F**entanyl **T**esting in consumption rooms) and Naltrain

(training in the use and advertising of take-home naloxone distribution), continuation is not assured.

### **Prevention:**

- + Education of consumers, dissemination of information material in the scene, to relatives and peers. Expansion or repetition of naloxone training courses.
- + Extended dispensing options for naloxone sprays in counselling centres, prisons, clinics, surgeries and pharmacies.
- + Basic information for adults (universal prevention) and specific target groups (e.g. staff in the healthcare system, people in multiple problem situations, pain patients, people with an affinity for the hip-hop scene) with a focus on imparting knowledge about the opioid substance group.
- + Expansion of e-health services (information on substances, harm reduction, drug-checking and consumption rooms)

### **Therapy:**

- + Involvement of the hospital authorities in order to prepare the admission wards for a possible increase in overdoses. This includes training on the special properties of the above-mentioned synthetic opioids and offers for substitution treatment to be initiated in the clinics as well as referral to the local outpatient drug help system.
- + Development of strategies for the synthetic opioids withdrawal (homologous withdrawal, possibly with fentanyl patches, gradual switch from new synthetic opioids to less potent authorised substitution medication).
- + Prepare emergency services for new forms of opioid overdoses. Comprehensive equipment with naloxone spray.
- + Expansion of substitution capacities, including low-threshold and mobile services. Securing the financing of new forms of substitution treatment by the health insurance funds.
- + Expansion of substitution capacities in pharmacies as well, establishment of appropriate remuneration for under-the-counter dispensing in pharmacies.
- + Reform of §5a of the BtMVV [*the German prescription regulations for narcotics*] (substitution with diamorphine).
- + Authorisation of Dia(mor)phin tablets in the public interest with subsequent post-authorisation study.
- + Authorisation of naloxone spray as a non-prescription drug. Pharmacies would certainly be the right places when it comes to explaining the use of the drug. This would provide low-threshold access to this life-saving medication, especially for non-substituted users and above all their relatives/friends/acquaintances, and in this context pharmacies could pass on information on coping with addiction to those affected. It could also make it much easier for facilities that offer naloxone training to provide consumers with naloxone.
- + Expansion of e-health services (provision of counselling and therapy services)

### **Repression:**

- + Decriminalisation of consumers.
- + Exhaustion of the BtMG [*German narcotics act*] for commercial trade.

- + Training the police in the use of naloxone and equipping the police and other law enforcement officers with naloxone spray in regions with hotspots of drug use. Considering the possible risk of occupational exposure.
- + Preparation of prisons for the effects of synthetic opioids, expansion of substitution capacities in prisons. Naloxone training for staff. Provision of naloxone spray on release from prison and referral to opioid substitution treatment.

### **Harm reduction:**

- + Drug testing close to the scene (drug checking). Expansion of services to all consumption rooms and suitable and willing drug help centres.
- + Distribution of self-tests - distribution of fentanyl test strips to consumers for testing outside of consumption rooms and counselling centres.
- + "safe supply" (the provision of substances in pharmaceutical quality and with a controlled composition as a form of low-threshold substitution).
- + Compassion Clubs (self-help groups that provide access to heroin without synthetic opioids or to opioids of known composition and strength).
- + Extension/expansion of overdose prevention services/drug consumption rooms.
- + Naloxone training courses.
- + Promotion of harm-reducing forms of consumption ("safer-use") and provision of utensils.
- + Expansion of e-health offerings.
- + Expand emergency sleeping centres and day services.
- + Expand mobile and low-threshold social work and medical assistance.

### **In addition:**

Early warning system:

- + Scene-related tests (drug checking).
- + Systematic wastewater monitoring.
- + Inclusion of laboratories that analyse body substance samples from opioid substituted persons and drug users.
- + Inclusion of poison centres.
- + Extend tests to synthetic opioids in clinics in cases of overdoses.
- + test bogus purchases or police seizures for synthetic opioids.
- + Extend autopsies and toxicological examinations in the event of fatal overdoses.
- + Internet monitoring on darknet and clearnet: Search behaviour, exchange about drugs, user experiences, drug markets and drug supply.
- + Expand accompanying monitoring/trend spotting by the *Institute for Therapy Research* IFT Munich (Reitox national focal point). Consolidation of data from an early warning system at the IFT.
- + Strengthen European co-operation (EMCDDA, national drug help associations).
- + Cross-border exchange of information (EMCDDA, Europol, conferences).

Other:

- + Local and nationwide monitoring of available outpatient and inpatient drug help services.

- + Development of an SO information service based on the results of a national council.
- + Establishment of a red alert system for the rapid dissemination of warnings.
- + Development of an app for opioid users.
- + Adaptation of the BtMG and the BtMVV for the use of fentanyl in withdrawal treatments or for substitution. Clarification of whether safe-supply programmes are possible, e.g. with hydromorphone.
- + Guidelines must be reviewed and accompanying scientific research promoted in order to close evidence gaps. Collaboration with research institutions/universities.
- + Evaluation of the political and practical consequences in North America for possible application to the situation in Germany
- + Translation of this outline and the results of a national council into English and forwarding to the EMCDDA for appropriate use and dissemination.

### **Conclusion:**

"The highly potent and pharmacologically diverse synthetic opioids create a complex and unpredictable market where users often lack information and other means to protect themselves. Pooling innovative approaches and concerted action are needed to curb this threat to public health. (...) As SOs are not yet a significant problem in Europe, it is important to be well prepared. As soon as the new highly potent SOs come onto the market, we can only run after the momentum." (SO-PREP toolkit, 2023)

"It sounds naive, but we need to collaborate if we truly want to reduce the suffering that we are seeing and the deaths we are experiencing." Lisa Lapointe, Former Chief Coroner of British Columbia (Canada), 2023.

"Heroin has been the opioid most associated with harm in Europe; however, this may be changing. Recently there are signals that synthetic opioids could play a more important role in the future creating a need to be better prepared to respond to any significant changes in patterns of opioid consumption (...) In the short term, a potential heroin shortage may require us to increase treatment provision, a worst-case scenario, however, is that in the longer term, we may also need to respond to new challenges posed by the increased availability and use of potent synthetic opioids." (Paul Griffith, EMCDDA, 21.12.2023)

"We should prepare for a new kind of opioid wave" - Hannes Strasser and Marc Vogel from the University Psychiatric Clinics Basel (Switzerland). "So it's getting closer, and I see no reason why it shouldn't pick up speed." (primenews.ch, Switzerland, 10.01.2024)

"Although we are seeing a decline in opium poppy cultivation in Afghanistan, close monitoring of the supply chain and the diversification of the market is paramount, as criminal networks are known to be business-oriented, flexible and always on the lookout for new opportunities." (Catherine De Bolle, Executive Director Europol, 24.01.2024)

"I assume that fentanyl will be an even bigger issue in Germany, and therefore also in Cologne, in twelve to 18 months' time," says Daniel Deimel, Professor of Clinical Social Work at the Catholic University of Applied Sciences Cologne. "It can't be about having a box of rapid tests in the drug consumption room. The tests should be used to set up effective monitoring so that we can react if heroin contaminated with fentanyl spreads." (Kölner Stadtanzeiger, 06/03/2024)

"We are currently in the fortunate position of still having time to take precautionary measures. But we have to do it now, we're running out of time," says Claudia Schieren, Managing Director of "Vision", a Cologne-based organisation for drug self-help and member of the federal board of JES - Junkies, Former Users, Substituted People. (Kölner Stadtanzeiger, 06/03/2024)

Thanks to the annual consumption room documentation, the biennial scene survey in the railway station district and the continuous exchange with drug help centres, street work and the police, the City of Frankfurt's Drug Department has a very precise overview of what is being consumed on the scene and which substances are in circulation in Frankfurt. "We can adapt our harm reduction, medical and psychiatric care and counselling services very flexibly to the requirements," emphasises Schroers. (Artur Schroers, Head of the Drugs Department of the City of Frankfurt/Main, note) (...)

Last but not least, Schroers is calling for drug checking to finally be implemented - including in consumption rooms. In June 2023, the federal government issued an ordinance paving the way for states and cities to legally authorise the testing of illegal substances. The state government of Hesse has not yet issued any respective implementing regulations. "This would be an important instrument for health protection," says Schroers. "The danger of unknown extenders and contamination of street heroin or high-dose opioids could be prevented by drug checking." (frankfurt.de, 27.03.2024)

"In sum, there is no guarantee that illegally manufactured fentanyl or other synthetic opioids will rise in Europe even if the new Taliban opium ban is sustained. Drug markets are too unpredictable to make guarantees. However, it is plausible. Since the costs of "over-reacting" to a threat that does not emerge are modest, and the costs of failing to act pre-emptively are high, expanding treatment and overdose prevention services now can be seen as a prudent precaution. " (The Baltic and Nordic responses to the first Taliban poppy ban: Implications for Europe & synthetic opioids today. Caulkins JP, Tallaksen A, Taylor J, Kilmer B, Reuter P., Int J Drug Policy. 2024 Jan 4;124:104314. doi: 10.1016/j.drugpo.2023.104314. epub ahead of print. PMID: 38183860.

<https://www.sciencedirect.com/science/article/pii/S0955395923003614>)

### **Which steps could lead to a national strategy?**

+ akzept e.V. proposes to the Federal Ministry of Health and the Federal Drug Commissioner that a national council be convened in the second quarter of 2024. Organisations and providers of drug help, self-help groups, the German Medical Association, hospital authorities, police authorities, laboratories, IFT-Munich and other scientific institutes, public health services, manufacturers of substitution drugs, health insurance companies, etc. should be involved.

+ akzept e.V. informs the drug help associations and asks for support for the proposal to organise a national council.

+ akzept e.V. publishes this outline on <https://www.akzept.eu/>

+ Symposia/workshops at addiction conferences (STT-Hamburg, NaSuKo, Munich Congress, German Addiction Congress, DGS Congress)

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Sources:

SO-PREP - Toolkit on key responses to the negative consequences related to synthetic opioids  
Technical Report, July 2023

Heino Johann Stöver and Babak Moazen

This text is a translation of the project report of SO-PREP - Toolkit on key responses to synthetic opioids, translation on behalf of the editors: Magali Karee, Berlin

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DOI: 10.13140/RG.2.2.23168.81926

<https://www.akzept.eu/wp-content/uploads/2023/07/Brosch%C3%BCreA4SO-PREPInternetfassung.pdf>

<https://www.researchgate.net/publication/372560174>

Synthetic opioids in the European drug market - Seven key strategies to prepare for an opioid crisis,  
Heino Stöver, konturen.de, 2023

<https://www.konturen.de/fachbeitraege/synthetische-opioide-auf-dem-europaeischen-drogenmarkt/>

Unprecedented 85% reduction of opium poppy cultivation in Afghanistan

Our high-resolution satellite imagery analysis of 2023 poppy cultivation in Afghanistan reveals a massive 85% reduction across the country.

We have already reported that in Helmand Province poppy cultivation plummeted by a staggering 99%-from 129,000 hectares in 2022 to just 740 hectares in 2023. (Alcis, UK, 05.06.2023)

<https://www.alcis.org/poppy>

Inside the Taliban's war on drugs - opium poppy crops slashed

In April 2022, Taliban supreme leader Haibatullah Akhundzada decreed that cultivation of the poppy - from which opium, the key ingredient for the drug heroin can be extracted - was strictly prohibited. Anyone violating the ban would have their field destroyed and be penalised according to Sharia law.

A Taliban spokesman told the BBC they imposed the ban because of the harmful effects of opium - which is taken from the poppy seed capsules - and because it goes against their religious beliefs. Afghanistan used to produce more than 80% of the world's opium. Heroin made from Afghan opium makes up 95% of the market in Europe. (BBC, UK, 05.06.2023)

<https://www.bbc.com/news/world-asia-65787391>

Truly Unprecedented: The Taliban Drugs Ban v2.0.

With the Taliban having exceeded expectations and reduced poppy cultivation to levels not seen since 2001, there is now a real need to understand the potential effects of the drugs ban on Afghanistan, the region, and further downstream. (...)

It is important to note that the last time the Taliban imposed a ban in July 2000 it took 18 months before there was a significant drop in the quality of heroin in UK markets, and two years for purity to fall from 55% to 34%. It is difficult to determine whether the same kind of time lag would apply this time round. After all, the 2000/01 ban was imposed for only one season and collapsed in the wake of 9/11. (David Mansfield in: Alcis, UK, 07.06.2023)

<https://www.alcis.org/post/taliban-drugs-ban>

Uncharted Territory: Does the Taliban's new edict signal a crackdown on the drugs trade is looming?

The 2023/24 poppy season is already upon us, and most indicators including market prices suggest that the Taliban regime is going to press for a ban for an unprecedented second consecutive year. Even more unprecedented is the growing pressure the Taliban appear to be applying on the drugs trade just as the planting season begins. Were the Taliban to continue its ban on cultivation, as well as engage in a robust effort against the trade - particularly if they move against inventory and processing - it would be a real game changer with significant ramifications both downstream in Europe and for the political-economy of Afghanistan; not least for an estimated 6.9 million people who were denied the ability to earn an income from growing poppy in 2023 (see Figure 1). (David Mansfield in Alcis, UK, 02.11.2023)

<https://www.alcis.org/post/taliban-drug-crackdown>

"Gold Never Gets Old": Opium stores are critical to understanding the effects of the current Taliban drug ban (i)

"With the banning of opium, the price went up to the sky: my life is better with this order of Shaikh Sahib".  
(D.Mansfield in Alcis, UK, 18.04.2024)

<https://www.alcis.org/post/understanding-taliban-drug-ban>

UNODC. Afghanistan opium survey 2023 - Cultivation and production after the ban: effects and implications  
United Nations Office on Drugs and Crime, 2023

[https://www.unodc.org/documents/crop-monitoring/Afghanistan/Afghanistan\\_opium\\_survey\\_2023.pdf](https://www.unodc.org/documents/crop-monitoring/Afghanistan/Afghanistan_opium_survey_2023.pdf)

No leniency with poppy farmers: The Taliban enforce their opium ban for a second year

Before the start of the winter sowing season, the regime in Afghanistan has significantly tightened the penalties for the cultivation and trafficking of opium and heroin. This is causing great hardship for many small farmers. (NZZ - Neue Zürcher Zeitung, Switzerland, 14.11.2023)

<https://www.nzz.ch/international/afghanistan-taliban-setzen-drogenverbot-ein-zweites-jahr-durch-ld.1764375>

The Baltic and Nordic responses to the first Taliban poppy ban: Implications for Europe & synthetic opioids today.  
Caulkins JP, Tallaksen A, Taylor J, Kilmer B, Reuter P.

Int J Drug Policy. 2024 Feb;124:104314. doi: 10.1016/j.drugpo.2023.104314. Epub 2024 Jan 5. PMID: 38183860.

<https://www.sciencedirect.com/science/article/pii/S0955395923003614>

Fentanyl Flow to the United States

DEA - Drug Enforcement Administration USA), DEA-DCT-DIR-008-20 (unclassified), January 2020

[https://www.dea.gov/sites/default/files/2020-03/DEA\\_GOV\\_DIR-008-20%20Fentanyl%20Flow%20in%20the%20United%20States\\_0.pdf](https://www.dea.gov/sites/default/files/2020-03/DEA_GOV_DIR-008-20%20Fentanyl%20Flow%20in%20the%20United%20States_0.pdf)

The U.S. Fentanyl Boom and the Mexican Opium Crisis: Finding Opportunities Amidst Violence?

Wilson Centre - Mexico Institute, USA, 2019

By Romain Le Cour Grandmaison, Nathaniel Morris & Benjamin T. Smith

<https://www.wilsoncenter.org/publication/the-us-fentanyl-boom-and-the-mexican-opium-crisis-finding-opportunities-amidst-violence>

[https://www.wilsoncenter.org/sites/default/files/media/documents/publication/the\\_u.s.\\_fentanyl\\_boom\\_and\\_the\\_mexican\\_opium\\_crisis.pdf](https://www.wilsoncenter.org/sites/default/files/media/documents/publication/the_u.s._fentanyl_boom_and_the_mexican_opium_crisis.pdf)

'The Last Harvest? From the US Fentanyl Boom to the Mexican Opium Crisis'

Le Cour Grandmaison, R., Morris, N. and Smith, B. (2019)

Journal of Illicit Economies and Development, 1(3), p. 312-329. Available at: <https://doi.org/10.31389/jied.45>.

<https://jied.lse.ac.uk/articles/10.31389/jied.45>

Mexico. Opium in Oaxaca - The seed in the fog

(Oaxaca, October 2022, Pie de Página) - Poonal publishes here a German translation of the introduction to the mini-website Sembradores en la Niebla ("Sowers in the Fog") by the independent research portal Pie de Página. The project includes maps, photos, documents, reports and short chronicles from three regions where poppies are grown in the Mexican state of Oaxaca. (npla - Newspool Latin America, Germany, 22.11.2022)

<https://www.npla.de/thema/umwelt-wirtschaft/opium-in-oaxaca-die-saat-im-nebel/>

Fentanyl made in Mexico: how two drug cartels are fuelling the opioid crisis in the US

The fentanyl business has revolutionised organised crime in Mexico. It produces the substance on an industrial scale and floods the USA with it, where tens of thousands die every year. (NZZ - Neue Zürcher Zeitung, Switzerland, 01.10.2023)

<https://www.nzz.ch/international/fentanyl-aus-mexiko-drogenkartelle-treiben-us-opioid-krise-an-ld.1750219>

How Fentanyl Laid Waste to Guatemala's Time-Worn Opium Trade

Reshaping the drug war in one of Central America's most lawless corners, the fentanyl boom has devastated the trade in opium poppies used to make heroin. (New York Times, USA, 28.04.2024)

<https://www.nytimes.com/2024/04/28/world/americas/guatemala-fentanyl-opium-poppy.html>

USA/China. Drug crisis in the USA: In the clutches of Fentanyl

For years, China has been supplying the raw materials for a drug that has killed hundreds of thousands of Americans. Xi Jinping has promised his US counterpart Joe Biden that this will now come to an end. Wait and see, say sceptics. (FAZ, 17.11.2023)

<https://www.faz.net/aktuell/wirtschaft/mehr-wirtschaft/usa-mit-fentanyl-krise-rohstoff-lieferung-aus-china-soll-enden-19321452.html>

China/USA. U.S., China officials to meet on curbing fentanyl supply

After a long freeze and political tensions, Washington and Beijing are moving forward on countering illegal narcotics trafficking. (Washington Post, USA, 28.01.2024)

<https://www.washingtonpost.com/national-security/2024/01/28/china-us-fentanyl-drugs/>

THE CCP'S ROLE IN THE FENTANYL CRISIS

UNITED STATES CONGRESS - THE SELECT COMMITTEE ON THE STRATEGIC COMPETITION BETWEEN THE UNITED STATES AND THE CHINESE COMMUNIST PARTY, USA, 2024

<https://selectcommitteeontheccp.house.gov/sites/evo-subsites/selectcommitteeontheccp.house.gov/files/evo-media-document/The%20CCP%27s%20Role%20in%20the%20Fentanyl%20Crisis%204.16.24%20%281%29.pdf>

China's government is helping fuel the U.S. fentanyl crisis, House panel reveals

China's communist government is complicit in the U.S. fentanyl epidemic, subsidising the manufacturing of fentanyl materials, according to a new House report.

Why it matters: The bipartisan investigation uncovers fresh details about the Chinese Communist Party's pivotal role in the illicit fentanyl trade as overdoses in the U.S. continue to surge. (axios.com, USA, 16.04.2024)

<https://www.axios.com/2024/04/16/china-fentanyl-crisis-us-house-investigation>

Opioid problems are changing in Europe with worrying signals that synthetic opioids may play a more significant role in the future.

Griffiths PN, Seyler T, De Morais JM, Mounteney JE, Sedefov RS.

Addiction. 2023 Dec 21. doi: 10.1111/add.16420. Epub ahead of print. PMID: 38129293.

<https://onlinelibrary.wiley.com/doi/10.1111/add.16420>

New report - Heroin and other opioids pose substantial threat to health and security in Europe

2024 EU drug markets analysis from the EMCDDA and Europol

Publication date 24.01.2024

EMCDDA, Lisbon, News release No 1/2024

[https://www.emcdda.europa.eu/news/2024/1/new-report-heroin-and-other-opioids-pose-substantial-threat-health-and-security-europe\\_en](https://www.emcdda.europa.eu/news/2024/1/new-report-heroin-and-other-opioids-pose-substantial-threat-health-and-security-europe_en)

Europol. New report: Heroin and other opioids pose substantial threat to health and security in Europe

What are the latest changes in the EU opioids market? How are global geopolitical developments impacting supply? Are heroin trafficking routes changing? To what extent do synthetic opioids pose a threat to Europe?

These are among the issues explored in a new analysis, titled EU Drug Market: Heroin and other opioids, released today by the EMCDDA and Europol. (Europol, The Hague, 24.01.2024)

<https://www.europol.europa.eu/media-press/newsroom/news/new-report-heroin-and-other-opioids-pose-substantial-threat-to-health-and-security-in-europe>

European Monitoring Centre for Drugs and Drug Addiction (2023), European Drug Report 2023: Trends and Developments,

[https://www.emcdda.europa.eu/publications/european-drug-report/2023\\_en](https://www.emcdda.europa.eu/publications/european-drug-report/2023_en)

The Global Synthetic Drug Situation: what we know, what we think we know, and what we don't know (Video)

Global Initiative Against Transnational Organised Crime (GI-TOC), Geneva, 22.03.2024, Video, 50:00

<https://gitoc.heysummit.com/talks/global-synthetic-drug-cnd-67-side-event>

Global Coalition to Address Synthetic Drug Threats

Illicitly-manufactured synthetic drugs such as fentanyl, tramadol, methamphetamine, captagon, MDMA, and ketamine threaten the health, security and wellbeing of people around the world. No one country can tackle this issue alone: we must join forces as a global community. Synthetic Drug Threats cut across both public health and criminal justice; within a country no single agency can provide the solution: law enforcement, regulatory, commercial, and public health entities must work together both within their borders and around the world.



The United States is calling upon the global community to come together to collectively combat this shared challenge. (US Department of State, accessed 24.03.2024)

<https://www.state.gov/globalcoalition/>

What is Fentanyl?

National Institute of Drug Abuse, USA, 12/05/2022

<https://nida.nih.gov/research-topics/trends-statistics/infographics/what-fentanyl>

Fentanyl topic page from Drug Science (UK)

<https://www.drugscience.org.uk/drug-information/fentanyl>

USA. DEA topic page on fentanyl: "One pill can kill"

<https://www.dea.gov/onepill>

USA. CDC topic page on fentanyl

Fentanyl is a synthetic opioid pain reliever. It is many times more powerful than other opioids and is approved for treating severe pain, typically advanced cancer pain<sup>1</sup>. Illegally made and distributed fentanyl has been on the rise in several states. (CDC - Centers for Disease Control and Prevention, USA)

<https://www.cdc.gov/opioids/basics/fentanyl.html>

Fentanyl - Information for addiction specialists - Fact sheet,

Publisher: Infodrog, Swiss Coordination and Specialist Centre for Addiction, Bern, 2023

[https://www.infodrog.ch/files/content/factsheets/2023-08\\_infodrog\\_faktenblatt\\_fentanyl\\_de.pdf](https://www.infodrog.ch/files/content/factsheets/2023-08_infodrog_faktenblatt_fentanyl_de.pdf)

Fentanyl

Fentanyl is an opioid analgesic and is primarily used to treat severe and chronic pain and as an anaesthetic in anaesthesia. (Yellow list, accessed on 03/05/2024)

[https://www.gelbe-liste.de/wirkstoffe/Fentanyl\\_1686](https://www.gelbe-liste.de/wirkstoffe/Fentanyl_1686)

Complicating the Opioid Epidemic: The Many Faces of Fentanyl

Expanded library of known variants, new research efforts aid the fight against fentanyl. (PNNL - Pacific Northwest National Laboratory, USA, 10.02.2022)

<https://www.pnnl.gov/news-media/complicating-opioid-epidemic-many-faces-fentanyl>

Category Fentanyl in Forum Substitution Practice:

<https://www.forum-substitutionspraxis.de/substanzen/opioide/fentanyl>

Systematic review on intentional non-medical fentanyl use among people who use drugs.

Tsang VWL, Wong JSH, Westenberg JN, Ramadhan NH, Fadakar H, Nikoo M, Li VW, Mathew N, Azar P, Jang KL, Krausz RM.

Front Psychiatry. 2024 Feb 13;15:1347678. doi: 10.3389/fpsyt.2024.1347678. PMID: 38414500; PMCID: PMC10896833.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10896833/>

Fentanyl preference among people who use opioids in New York City.

Urmanche AA, Beharie N, Harocopos A.

Drug Alcohol Depend. 2022 Aug 1;237:109519. doi: 10.1016/j.drugalcdep.2022.109519. Epub 2022 Jun 6. PMID: 35714532; PMCID: PMC10089663.

<https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/35714532/>

Nitazenes represent a growing threat to public health in Europe.

Giraudon I, Abel-Ollo K, Vanaga-Arāja D, Heudtlass P, Griffiths P.

Lancet Public Health. 2024 Apr;9(4):e216. doi: 10.1016/S2468-2667(24)00024-0. Epub 2024 Feb 23. PMID: 38408464.

[https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(24\)00024-0/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(24)00024-0/fulltext)

Xylazine in the illicit opioid supply

Peter E. Wu MD MSc, Emily Austin MD

CMAJ 2024 February 5;196:E133. doi: 10.1503/cmaj.231603

<https://www.cmaj.ca/content/cmaj/196/4/E133.full.pdf>

The Appearance of Xylazine in the United States as a Fentanyl Adulterant.

Leconte CE, Sethi R.

Prim Care Companion CNS Disord. 2023 Oct 31;25(6):22nr03473. doi: 10.4088/PCC.22nr03473. PMID: 37923548.

<https://www.psychiatrist.com/pcc/appearance-xylazine-united-states-fentanyl-adulterant/>

UK. Synthetic opioids. More cases of Nitazene overdoses in the UK

The misuse of the synthetic opioid fentanyl leads to many avoidable deaths. Now there are increasing reports of life-threatening poisoning from a new, still little-known class of synthetic opioids, the nitrazines. (Pharmazeutische Zeitung, 13.10.2023)

<https://www.pharmazeutische-zeitung.de/mehr-faelle-von-nitazen-ueberdosierungen-in-grossbritannien-142980/>

N-desethyl isotonitazene detected in polydrug users admitted to hospital in Birmingham, United Kingdom.

Pucci M, Singh Jutley G, Looms J, Ford L.

Clin Toxicol (Phila). 2024 Jan;62(1):19-25. doi: 10.1080/15563650.2024.2309321. Epub 2024 Feb 14. PMID: 38353737.

Abstract

<https://www.tandfonline.com/doi/full/10.1080/15563650.2024.2309321>

Nitazenes: SDF Launch Alert and Information Resources for People at Risk of Overdose

Scottish Drugs Forum has worked with service providers and other stakeholders to develop information resources for people at risk of overdose due to the introduction of synthetic opioids, including nitazenes into the drug supply. (SDF - Scottish Drugs Forum, UK, 15.12.2023)

<https://sdf.org.uk/nitazenes-sdf-launch-alert-and-information-resources-for-people-at-risk-of-overdose/>

Understanding the Opioid Overdose Epidemic

The number of people who died from a drug overdose in 2021 was over six times the number in 1999. The number of drug overdose deaths increased more than 16% from 2020 to 2021. Over 75% of the nearly 107,000 drug overdose deaths in 2021 involved an opioid. (CDC - Centers for Disease Control and Prevention, USA)

<https://www.cdc.gov/opioids/basics/epidemic.html>

More Than 40 Percent of Americans Know Someone Who Died of Drug Overdose; 13 Percent Say Deaths Have Disrupted Their Lives

More than 40 per cent of Americans know someone who has died of a drug overdose and about one-third of those individuals say their lives were disrupted by the death, according to a new RAND study.

Analysing a national representative survey of American adults, researchers found that the lifetime exposure to an overdose death is more common among women than men, married participants than unmarried participants, U.S.-born participants than immigrants, and those who live in urban settings as compared to those in rural settings.

"The experiences and needs of millions of survivors of an overdose loss largely have been overlooked in the clinical and public health response to the nation's overdose crisis," said Alison Athey, the study's lead author and a behavioural scientist at RAND, a nonprofit research organisation. "Our findings emphasise the need for research into the prevalence and impact of overdose loss, particularly among groups and communities that experience disproportionate rates of loss." (Rand Corporation, USA, 21.02.2024)

<https://www.rand.org/news/press/2024/02/21.html>

USA: Fentanyl poisonings in young children have increased sharply

Portland/Oregon - The opioid crisis in the USA is not sparing even the youngest residents. According to a report in the New England Journal of Medicine (2024; DOI: 10.1056/NEJMc2313270), calls to the country's poison control centres have increased by a factor of almost 100. (aerzteblatt.de, 21/03/2024)

<https://www.aerzteblatt.de/nachrichten/149854/USA-Vergiftungen-durch-Fentanyl-bei-Kleinkindern-haben-stark-zugenommen>

Opioids: Fentanyl & Co. have arrived in Germany

RaFT federal model project by Deutsche Aidshilfe identifies synthetic opioids as a dangerous admixture in heroin. Federal states and local authorities must now take precautions and strengthen drug help.

Heroin is already being laced with life-threatening synthetic opioids in Germany too. Last year, 3.6 per cent of 1,401 heroin samples were tested positive for the admixture in the RaFT federal model project run by Deutsche Aidshilfe (DAH). The federal model project, funded by the Federal Ministry of Health, is publishing key results today. (DAH - German AIDS Service Organisation, 15.02.2024)

<https://www.aidshilfe.de/meldung/opioide-fentanyl-co-deutschland-angekommen>

"We're running out of time" - The "zombie drug" fentanyl is also on the rise in Cologne

There are still few cases, but experts estimate that fentanyl could soon lead to more drug emergencies in Cologne. The city is also preparing. (Kölnischer Stadtanzeiger, 06/03/2024)

<https://www.ksta.de/koeln/koeln-zombie-droge-fentanyl-ist-auf-dem-vormarsch-748244>

Number of drug-related deaths in NRW rises to record high

Düsseldorf. The number of drug-related deaths in NRW rose by 24 per cent to a record high in 2023: 872 people died from the use of illegal drugs.

With the number of drug-related deaths in North Rhine-Westphalia reaching a new high, addiction researchers are becoming increasingly concerned. According to the NRW Ministry of the Interior, the number of deaths related to the use of illegal drugs rose by 24 per cent last year to 872. Since 2015 (181 drug deaths), the number has thus increased almost fivefold. (WAZ - Westdeutsche Allgemeine Zeitung, 23.04.2024)

<https://www.waz.de/region/rhein-und-ruhr/article242160900/Zahl-der-Drogentoten-in-NRW-steigt-auf-Rekordhoch.html>

Switzerland. "We should prepare ourselves for a new type of opioid wave" - Hannes Strasser and Marc Vogel from the UPK on the "horror drug" fentanyl, the Basel drug scene and the new outpatient addiction centre.

Around 70,000 fentanyl deaths in the USA alone in 2022: this is the bitter outcome of the escalating opioid crisis in North America. In Switzerland, only isolated cases of the "horror drug", which is 50 times more potent than heroin, are known to date. For example, fentanyl was detected in a supposed heroin sample in Basel drug checking at the end of last year. (primenews.ch/, Switzerland, 10.01.2024)

<https://primenews.ch/articles/2024/01/wir-sollten-uns-auf-eine-neuartige-opioid-welle-vorbereiten>

Fentanyl - killer drug on America's streets (video and interview)

The dangerous drug fentanyl is becoming increasingly widespread in the USA. It is 50 times stronger than heroin. The production of the drug alone can be extremely harmful to health and even fatal. Is this wave of fentanyl also reaching us?

With interview: Franziska Schneider, German Monitoring Centre for Drugs and Drug Addiction. (ZDF Nano, 05.03.2024, Video, 07:39-12:50 minutes of 28 min.)

<https://www.zdf.de/3sat/nano/240305-sendung-fentanyl-killer-auf-amerikas-strassen-nano-100.html>

UNODC. EWA - Early Warning Advisory

The UNODC Early Warning Advisory (EWA) was launched in June 2013 as a response to the emergence of new psychoactive substances (NPS) at the global level. The EWA aims to monitor, analyse and report emerging trends on NPS, as a basis for effective evidence-based policy responses. It also serves as a repository for information/data on NPS and a platform for providing technical assistance to Member States.

Since 2017, the EWA [Tox-Portal](#) expands the scope of data collection to NPS identified in toxicology cases. The EWA Tox-Portal is an innovative tool to collect, analyse and share data on toxicology and harm related to the use of NPS at a global level. (UNODC, EWA, accessed 27.03.2024)

<https://www.unodc.org/LSS/Page/About>

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). (2019). EMCDDA operating guidelines for the European Union Early Warning System on new psychoactive substances.

Luxembourg: Publications Office of the European Union.

[https://www.emcdda.europa.eu/system/files/publications/12213/EWS\\_guidelines\\_final.pdf](https://www.emcdda.europa.eu/system/files/publications/12213/EWS_guidelines_final.pdf)

How to improve the surveillance of the Taliban ban's impact on European drug markets.

Giommoni L.

Int J Drug Policy. 2024 Feb;124:104320. doi: 10.1016/j.drugpo.2024.104320. Epub 2024 Jan 13. PMID: 38219675.

<https://www.sciencedirect.com/science/article/pii/S0955395924000057>

"Waste Not, Want Not" - Leveraging Sewer Systems and Wastewater-Based Epidemiology for Drug Use Trends and Pharmaceutical Monitoring.

Erickson TB, Endo N, Duvallet C, Ghaeli N, Hess K, Alm EJ, Matus M, Chai PR.

J Med Toxicol. 2021 Oct;17(4):397-410. doi: 10.1007/s13181-021-00853-4. Epub 2021 Aug 16. PMID: 34402038; PMCID: PMC8366482.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8366482/>

Scaling Up Point-of-Care Fentanyl Testing - A Step Forward

Brian S. Barnett, M.D., Peter R. Chai, M.D., M.M.S., and Joji Suzuki, M.D.

NEJM, October 28, 2023, DOI: 10.1056/NEJMp2308525

Abstract

<https://www.nejm.org/doi/full/10.1056/NEJMp2308525>

Fentanyl Concentration in Drug Checking Samples and Risk of Overdose Death in Vancouver, Canada

Kennedy, Mary Clare et al.

American Journal of Preventive Medicine, Volume 0, Issue 0

Abstract

[https://www.ajpmonline.org/article/S0749-3797\(23\)00342-2/fulltext](https://www.ajpmonline.org/article/S0749-3797(23)00342-2/fulltext)

NRW examines introduction of drug quality control for addicts

Düsseldorf - The Ministry of Health in North Rhine-Westphalia (NRW) says that it is currently examining whether so-called drug checking should be introduced in the state's drug consumption rooms. Addicts could then have their drugs analysed on site. This is intended to protect them from overdoses or contamination. (aerzteblatt.de, 18.03.2024)

<https://www.aerzteblatt.de/nachrichten/150023/NRW-prueft-Einfuehrung-von-Drogenqualitaetskontrolle-fuer-Suechtige>

Ending the overdose epidemic by ending the war on drug users: Can this work?

Leyton M, Krausz RM.

J Psychiatry Neurosci. 2024 Feb 21;49(1):E77-E80. doi: 10.1503/jpn.240003. PMID: 38383036; PMCID: PMC10890790.

<https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/38383036/>

Urgent and Long Overdue: Legal Reform and Drug - Decriminalisation in Canada.

Gruben, V., Hyshka, E., et. al, Royal Society of Canada. 2024

[https://rsc-src.ca/sites/default/files/HR%20PB\\_EN.pdf](https://rsc-src.ca/sites/default/files/HR%20PB_EN.pdf)

Canada. Success or failure? Canada's drug decriminalisation test faces scrutiny

Last year, British Columbia (BC) became the first province in Canada to decriminalise the use of hard drugs as part of its efforts to tackle a deadly opioids crisis. But the policy is facing pushback, leaving its future uncertain. (BBC, 31.03.2024)

<https://www.bbc.com/news/world-us-canada-68621012>

USA. OVERDOSE EPIDEMIC REPORT 2023 - Physicians' actions to help end the nation's drug-related overdose and death epidemic-and what still needs to be done.

This is an executive summary of highlights from the 2023 report on physicians' actions to help end the nation's drug-related overdose and death epidemic-and what still needs to be done.

The American Medical Association Substance Use and Pain Care Task Force continues to advance evidence-based recommendations for policymakers and physicians to help end the nation's drug-related overdose and death epidemic. In recent years we have witnessed positive actions from physicians, growth in harm reduction services, and policy advancements.

Tragically, these positive strides are hindered by a lack of meaningful implementation and enforcement of policies that support affordable, accessible and evidence-backed care for patients with substance use disorders, pain or those needing harm reduction services like naloxone, syringes and fentanyl test strips. Specifically, Black and Brown communities, pregnant individuals, and youth are disproportionately dying at increasing rates compared to other population groups.

We urge all stakeholders to come together to help reverse this national epidemic. (AMA - American Medical Association, USA, 09.11.2023)

[https://end-overdose-epidemic.org/wp-content/uploads/2023/11/23-894446-Advocacy-2023-overdose-report\\_FINAL.pdf](https://end-overdose-epidemic.org/wp-content/uploads/2023/11/23-894446-Advocacy-2023-overdose-report_FINAL.pdf)

Exploring the contextual risk factors and characteristics of individuals who died from the acute toxic effects of opioids and other illegal substances: listening to the coroner and medical examiner voice.

Thompson T, Rotondo J, Enns A, Leason J, Halverson J, Huyer D, Kuo M, Lapointe L, May-Hadford J, Orpana H.

Health Promot Chronic Dis Prev Can. 2023 Feb;43(2):51-61. doi: 10.24095/hpcdp.43.2.01. PMID: 36794822; PMCID: PMC10026607.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10026607/>

Fentanyl isn't just causing overdoses. It's making it harder to start addiction treatment - Doctors are reporting a troubling trend when it comes to fentanyl.

The powerful drug, they say, isn't just causing overdoses - it's also making it more difficult to begin addiction treatment. In particular, fentanyl appears more likely to cause severe withdrawal symptoms for patients put on buprenorphine, a key medication used to treat opioid use disorder. (Stat News, USA, 16.11.2022)  
<https://www.statnews.com/2022/11/16/fentanyl-isnt-just-causing-overdoses-its-making-it-harder-to-start-addiction-treatment/>

Case report: acute care management of severe opioid withdrawal with IV fentanyl.

Azar P, Westenberg JN, Ignaszewski MJ, Wong JSH, Isac G, Mathew N, Krausz RM.

Addict Sci Clin Pract. 2022 Apr 5;17(1):22. doi: 10.1186/s13722-022-00305-6. PMID: 35382882; PMCID: PMC8980769.

<https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/35382882/>

Impact of fentanyl use on initiation and discontinuation of methadone and buprenorphine/naloxone among people with prescription-type opioid use disorder: secondary analysis of a Canadian treatment trial.

Socias ME, Wood E, Le Foll B, Lim R, Choi JC, Mok WY, Bruneau J, Rehm J, Wild TC, Bozinoff N, Hassan A, Jutras-Aswad D; OPTIMA Research Group within the Canadian Research Initiative in Substance Misuse.

Addiction. 2022 Oct;117(10):2662-2672. doi: 10.1111/add.15954. Epub 2022 Jun 17. PMID: 35712892; PMCID: PMC9969999.

<https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/35712892/>

Adapting methadone inductions to the fentanyl era.

Buresh M, Nahvi S, Steiger S, Weinstein ZM.

J Subst Abuse Treat. 2022 Oct;141:108832. doi: 10.1016/j.jsat.2022.108832. Epub 2022 Jun 27. PMID: 35870437.

Abstract

[https://www.jsatjournal.com/article/S0740-5472\(22\)00114-3/abstract](https://www.jsatjournal.com/article/S0740-5472(22)00114-3/abstract)

Buprenorphine use in the emergency department safe for people who use fentanyl

Researchers found that buprenorphine can be safely started in the emergency department by people who use fentanyl either alone or with other drugs.

Wider use of buprenorphine could help reduce the growing number of overdose deaths caused by fentanyl.

NIH - National Institute of Health, USA, 11.04.2023

<https://www.nih.gov/news-events/nih-research-matters/buprenorphine-use-emergency-department-safe-people-who-use-fentanyl>

Overview of best practices for buprenorphine initiation in the emergency department.

Hughes T, Nasser N, Mitra A.

Int J Emerg Med. 2024 Feb 19;17(1):23. doi: 10.1186/s12245-024-00593-6. PMID: 38373992; PMCID: PMC10877824.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10877824/>

Factors associated with frequent buprenorphine / naloxone initiation in a national survey of Canadian emergency physicians.

MacKinnon N, Lane D, Scheuermeyer F, Kaczorowski J, Dong K, Orkin AM, et al. (2024)

PLoS ONE 19(2): e0297084. doi.org/10.1371/journal.pone.0297084

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0297084>

Call for better help for drug addicts

Berlin - Users of hard drugs such as crack cocaine and fentanyl need more low-threshold support services. Health and addiction experts have now called for this in an expert discussion of the Bundestag's Health Committee. (aerzteblatt.de, 21.03.2024)

<https://www.aerzteblatt.de/nachrichten/150134/Forderung-nach-besseren-Hilfen-fuer-Drogenabhaengige>

Opioids: Fentanyl & Co. have arrived in Germany

RaFT federal model project by Deutsche Aidshilfe identifies synthetic opioids as a dangerous admixture in heroin. Federal states and local authorities must now take precautions and strengthen drug help. (German AIDS Service Organisation, 15.02.2024)

<https://www.aidshilfe.de/meldung/opioide-fentanyl-co-deutschland-angekommen>

RaFT federal model project: Results

For six months, rapid tests for the life-threatening addition of fentanyl to heroin were offered in drug consumption rooms as part of the RaFT federal model project organised by Deutsche Aidshilfe in order to determine the spread of the substance. Users received counselling and were thus able to reduce their risk immediately. (German AIDS service organisation, February 2024)

[https://www.aidshilfe.de/sites/default/files/documents/2024-02-15\\_raft\\_ergebnisse\\_zusammenfassung.pdf](https://www.aidshilfe.de/sites/default/files/documents/2024-02-15_raft_ergebnisse_zusammenfassung.pdf)

Fentanyl: Why it will replace heroin use in Europe and how we can limit the risk of overdoses

A deadly wave of fentanyl is rolling towards Europe. The opioid, which is 50 times stronger than heroin (and 100 times stronger than morphine), will worsen the situation in the drug scenes of all countries as its synthetic alternative.

Because heroin will soon be in short supply. A good 80 per cent of the opiate sold on the European black market comes from Afghanistan. The Taliban in power there have now banned raw materials and production.

(...)

How is fentanyl detected?

Consumption can be easily detected with fentanyl test strips in under 10 minutes. Thanks to a cut-off of 10ng/mL, even the use of low-dose medical products such as fentanyl patches is indicated. (nal von minden blog, 14/03/2024)

<https://nal-vonminden.com/deu/inside-diagnostics/fentanyl.html>

Naloxone - the lifesaver in your rucksack - Your action in a drug emergency can save lives.

<https://www.naloxontraining.de/>

The thousandth nasal spray for opioid overdoses

The interim results of the federal model project NALtrain are positive - despite the reluctance to prescribe naloxone.

Naloxone cancels the respiratory paralysing effect of opioids within a few minutes. In the USA, the emergency medication could soon even be freely available as a nasal spray at petrol stations and supermarkets - without a prescription. In Germany, naloxone has been authorised since 2018 and the costs are covered by statutory health insurance. Nevertheless, the drug is still being prescribed hesitantly in this country. This is shown by the interim results of the federal model project NALtrain. (DAH, 27.04.2023)

<https://www.aidshilfe.de/meldung/naloxon-nasenspray-gegen-opioid-ueberdosierungen>

Frankfurt/Main. Vigilant with fentanyl and other synthetic opioids - Drug department head Schroers promotes naloxone training in drug help centres as first aid for overdoses. (frankfurt.de, 27.03.2024)

<https://frankfurt.de/de-de/aktuelle-meldung/meldungen/wachsam-bei-fentanyl-und-anderen-synthetischen-opioiden/>

USA. The War on Recovery: How the U.S. is sabotaging its best tools to prevent deaths in the opioid epidemic  
The opioid overdose epidemic has burned through the U.S. for nearly 30 years. Yet for all that time, the country has had tools that are highly effective at preventing overdose deaths: methadone and buprenorphine.

These medicines are cheap and easy to distribute. People who take them use illicit drugs at far lower rates, and are at far lower risk of overdose or death. By beating back the cravings and agonising withdrawal symptoms that result from trying to quit opioids "cold turkey," methadone and buprenorphine can help people addicted to opioids escape an existence defined by drugs and achieve stable, healthy lives.

But a yearlong investigation by STAT shows that virtually every sector of American society is obstructing the use of medications that could prevent tens of thousands of deaths each year. Increasingly, public health experts and even government officials cast the country's singular failure to prevent overdose deaths not as an unavoidable tragedy but as a conscious choice. (Stat News, USA, 06.03.2024)

<https://www.statnews.com/2024/03/05/opioid-addiction-treatment-methadone-buprenorphine-restrictions>

The impact of an unsanctioned compassion club on non-fatal overdose.

Kalicum J, Nyx E, Kennedy MC, Kerr T.

Int J Drug Policy. 2024 Feb 22;104330. doi: 10.1016/j.drugpo.2024.104330. Epub ahead of print. PMID: 38395656.

<https://www.sciencedirect.com/science/article/pii/S095539592400015X>

Prescribed safer supply during dual public health emergencies: a qualitative study examining service providers perspectives on early implementation.

McCall, J., Hobbs, H., Ranger, C. *et al.*

*Subst Abuse Treat Prev Policy* **19**, 19 (2024). doi.org/10.1186/s13011-024-00598-7

<https://substanceabusepolicy.biomedcentral.com/articles/10.1186/s13011-024-00598-7>

"Safer supply" alternatives to toxic unregulated drug markets  
Holland A, Brothers T D, Lewer D, Maynard O M, Southwell M.  
BMJ 2024; 384 :q6 doi:10.1136/bmj.q6  
<https://www.bmj.com/content/384/bmj.q6>

Changes in harm reduction service providers professional quality of life during dual public health emergencies in Canada.  
Taha S, King S, Atif S, Bate E.  
Harm Reduct J. 2024 Feb 22;21(1):48. doi: 10.1186/s12954-024-00966-3. PMID: 38388932; PMCID: PMC10882723.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10882723/>