OVERDOSE IN PLAIN SIGHT

Understanding the Challenge and Building the Case for Action

29 August 2025

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MENTAL HEALTH, ALCOHOL, SUBSTANCE USE AND TOBACCO RESEARCH UNIT

SANPUD
South African Network of People Who Use Drugs

AGENDA OVERVIEW

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05 Question and Answer

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STRUCTURE

Optimizing Overdose Surveillance: From Institutional Data to Peer Network Insights

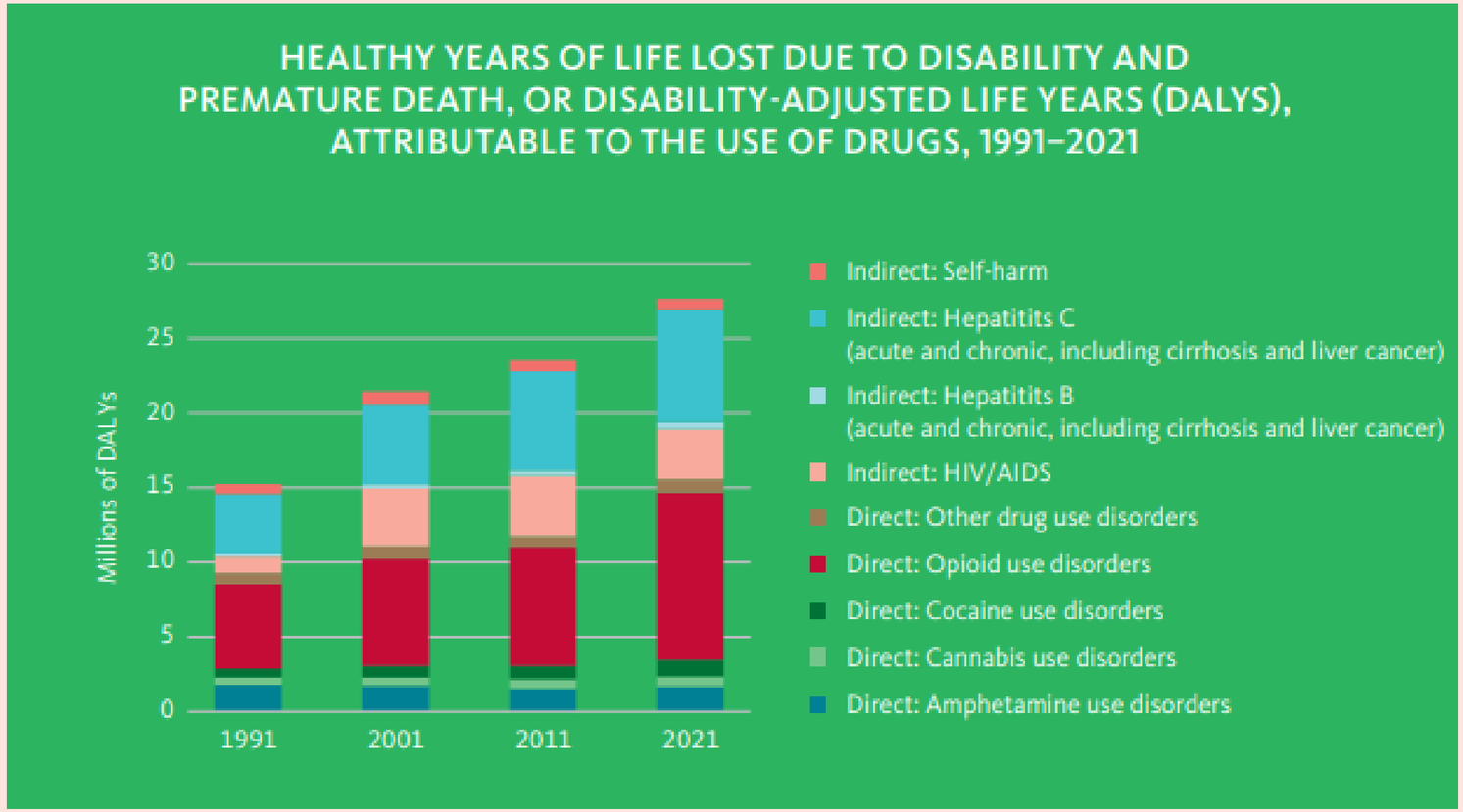
Explore the current formal overdose incidents information collection mechanisms, looking at aspects that are working, the gaps that exists and the work that is being done to plug these gaps to ensure the information is both comprehensive and inclusive.

INTRODUCTION

- Unintentional Drug overdose (fatal and non-fatal) is an important, yet inadequately understood, public health problem (Martins, Sampson et al. 2015).

- Global attention to unintentional drug overdose has been limited by comparison with the scope of the problem:
  - An estimated 27.7 million DALYs were attributed to drug use in 2021
  - Doubled over the past 2 decades.

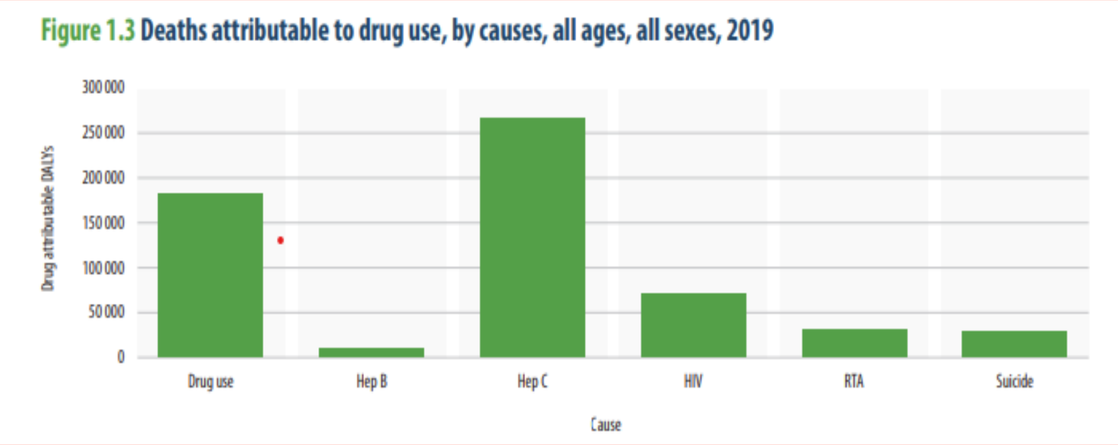
- Global Concerns:
  - development and introduction of ***new alternative synthetic opioids,*** such as nitazenes,
  - \+ market-wide shifts to other opioids such as fentanyl.
  - The sporadic emergence of potent synthetic opioids in longstanding heroin markets (World Drug Report 2025).



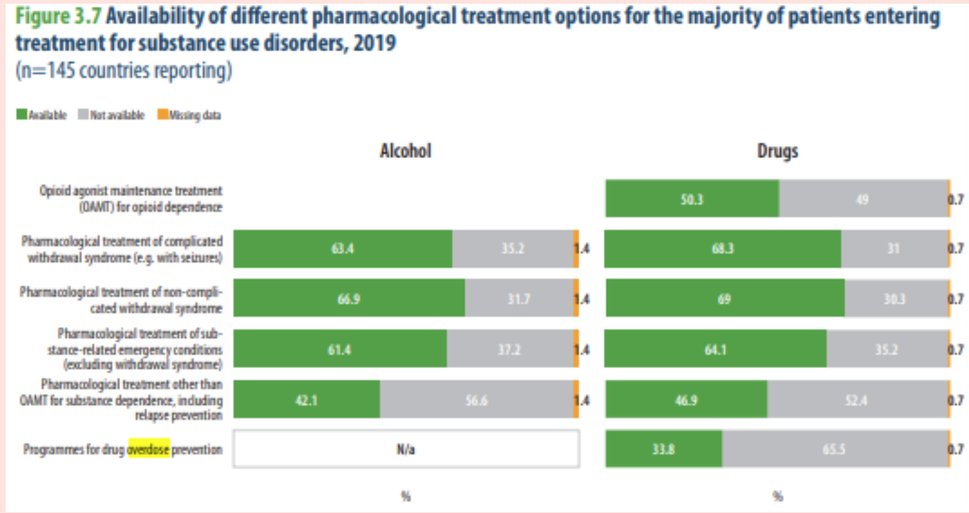
World Drug Report 2025

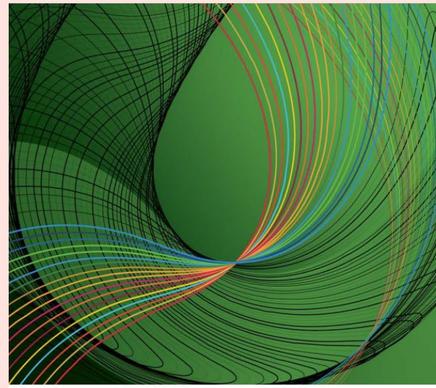
INTRODUCTION

- According to the latest WHO estimates, psychoactive drug use resulted in almost 0.6 million deaths in 2019, with infectious diseases (viral hepatitis, HIV), drug use disorders ***(including drug overdose).***
- Psychoactive drug use resulted in an estimated 36.7 million DALYs in 2019, largely due to overdose deaths and viral hepatitis, and mainly among persons who use opioids and men.
- About two-thirds (n=145 countries) of responding countries do not have programmes for drug overdose prevention.



World Drug Report 2025





Global status report
on alcohol and health and treatment of substance use disorders

World Health Organization

South African Network of People Who Use Drugs

AT RISK GROUPS

- Youth/young adults <25 years of age - patterns of use are more often explorative (UNODC,2025).
- PWIDs - with limited access to harm reduction services (Wilson, Brumwell et al. 2022)
- Socioeconomically marginalized (Homeless/destitute) - disproportionately high overdose rates (WHO, 2019)
- People who use polysubstances (mixing opioids with alcohol or benzodiazepines)
- Exposed to contaminated street drugs (World Drug Report, 2025)
- Association of substance use with suicidal behaviour – complex - suicidal intentions and behaviours may play a role in opioid overdose deaths (Oquendo and Volkow 2018).

OVERDOSE SURVEILLANCE MECHANISMS

- **Overdose Surveillance Systems** are structured systems and strategies used to **collect, analyze, and disseminate data** on drug overdose incidents—both fatal and nonfatal—to inform:

    - public health responses (timely data on overdoses (fatal and non-fatal).
    - anomalies or changes in trends,
    - Improve on prevention efforts, and
    - policy development

- In South Africa limited, fragmented data sources.
- The US has the most robust and comprehensive DOS, which includes multi-source data collection, real-time dashboards to allow for rapid detection of overdose + emerging substances, and integration of prevention, harm reduction, and care linkage- followed by Canada (national reporting), Australia (annual overdose reports).

INSTITUTIONAL DATA SOURCES IN SOUTH AFRICA

Several systems with data potential exist, but are challenged by varying factors e.g., misclassification of death, poor cause-of-death reporting, capacity/human resources, infrastructure, and reporting protocols**:**

District Health Information System (DHIS): overdose-specific data not routinely collected.

Vital Registration System - Overdose deaths are misclassified under “accidental poisoning” (Wilson, Brumwell et al. 2022). Deaths coded under ICD-10 codes X40–X49, encompass accidental poisoning by drugs, medications, and biological substances but are not disaggregated.

National Poison Information Centre: Some level of data is available.

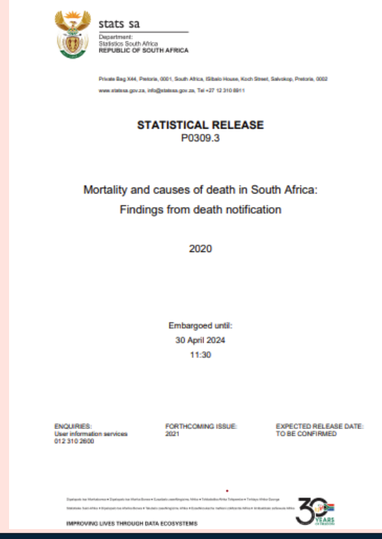
Integrated Disease Surveillance and Response (IDSR) – WHO-funded; minimal information is available.

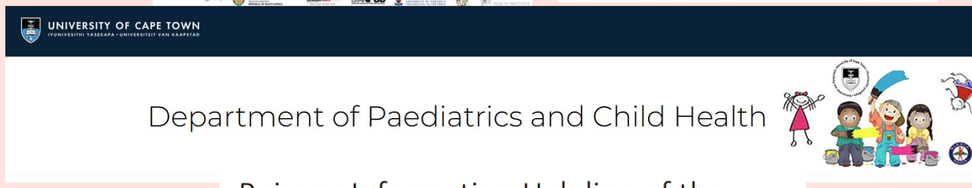
National Injury Mortality Surveillance System: Tracks and reports on fatal injuries, including those due to violence, transport, suicide, and poisoning (does not disaggregate drug overdose from poisonings).

STATSSA: Accidental Poisonings*

South African Community Epidemiology Network on Drug Use (SACENDU)

Institutional systems often miss community-level insights, especially from people who use drugs (PWUD) and people who inject drugs (PWID).





Poisons Information Helpline of the Western Cape (PIHWC) - Annual Review 2019

Research | Open access | Published: 11 February 2022

Personal experience and awareness of opioid overdose occurrence among peers and willingness to administer naloxone in South Africa: findings from a three-city pilot survey of homeless people who use drugs

Michael Wilson, Amanda Brumwell, M. J. Stowe, Shaun Shelly & Andrew Scheibe

Harm Reduction Journal **19**, Article number: 17 (2022) | Cite this article

5698 Accesses | **5** Citations | **20** Altmetric | Metrics

SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG USE (SACENDU)

South African Community Epidemiology Network on Drug Use (SACENDU)*:

- Mortality and Overdose-specific data BUT are in the early stages of routine collection.
- Collected from Community-Based Harm Reduction Service Providers Partners.
- Via Symposia - Data from community type surveys, are shared when available, e.g. (Wilson, Brumwell et al. 2022) in a cross-sectional study with PWUDs (n=66), 38% (25/66) reported overdosing in the past year. Most (76%, 50/66) knew at least one person who had ever experienced an overdose, and a total of 106 overdose events in peers were reported.

- Non-fatal overdoses + peer reporting networks are invisible in other institutional datasets – an opportunity for structured data collection.

*SACENDU is an alcohol and other drug (AOD) sentinel surveillance system operational in all 9 provinces in South Africa. The system monitors trends in AOD use and associated consequences on a six-monthly basis from data received from specialist AOD treatment programmes, community-based harm reduction, health service providers and the Services Quality Metrics (SQM) study.

OVERVIEW OF ALL CAUSE MORTALITY AND FATAL OVERDOSE BY DISTRICT (JANUARY-DECEMBER 2023 AND 2024)

Community-based harm reduction and health services for people who use drugs, including people who inject drugs (PWID) and sex workers who inject drugs, are provided in alignment with the World Health Organization's guidelines and the National Drug Master Plan (2019 – 2024).

In 2024, a total of 149 all-cause deaths were reported, with 2 fatal overdoses

In 2023, a total of 187 all-cause deaths were reported, with 7 fatal overdoses

Province	District	Deaths	Fatal overdoses
Eastern Cape	NMB	2	0
Gauteng	Ekurhuleni	10	0
	JHB	50	2
	Sedibeng	5	0
	Tshwane	77	3
	West Rand	0	0
KwaZulu-Natal	eThekwini	5	0
	UMG	2	1
Mpumalanga	Ehlanzeni	4	0
Western Cape	Cape Metro	31	1

JHB: Johannesburg, MP: Mpumalanga, NMB: Nelson Mandela Bay, UMG: uMgungundlovu

Province/District	Deaths	Fatal Overdoses
Eastern Cape (Buffalo City)	12	
Free State (Lejweleputswa)	0	
Gauteng		
Ekurhuleni	19	
Johannesburg	24	
Sedibeng	15	
Tshwane	23	
West Rand	11	
Kwazulu-Natal		
eThekwini	12	
uMgungundlovu	14	1
Mpumalanga	11	1
Western Cape	8	

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SHORT SURVEY:
SUBSTANCE USE TREATMENT SERVICE PROVIDERS (SACENDU NETWORK)

POOL OF 13 SUD TREATMENT SERVICE PROVIDERS

Past 12 months: Approximately **46 admissions** to the facilities because of overdose outside of the facilities.

Reported cases of overdose are mainly due to heroin use and prescription opioids.

- Themes iro overdose reporting:
  - Currently no formal procedures for collecting information on overdose.
  - Tracking of individuals or family to get information on overdose, requires resources that SU service providers do not necessarily have.
  - This is reported post admission (meaning overdose occurred before enrolment into the treatment programme).
  - Patients accessing care who are suspected of overdose OR are too intoxicated are referred to a hospital or detoxing facility.

NATIONAL POISONS INFORMATION HELPLINE (JANUARY-JUNE 2025)

The circumstances of poisoning were flagged as 'substance use' on the NPI database

SUBSTANCE MISUSE / (JAN - JUNE 2025)	NO.
Cannabis and Synthetic Analogues	4
Cocaine	1
Codeine phosphate	1
Ethanol - beverages	5
gamma-Hydroxybutyric acid	1
Hyoscine butylbromide	1
loprazolam	1
Methaqualone	1
Methylamphetamine hydrochloride	6
Methylphenidate hydrochloride	2
Mushrooms - Psilocybin	1
Mushrooms - Unidentified	2
Nicotine	1
Total	27

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GAPS/BARRIERS IN OVERDOSE SURVEILLANCE

Likely high prevalence of overdose, but Underreporting and Misclassification are concerns.
Overdose deaths are often misclassified under general categories like "accidental poisoning," limiting visibility. Improved cause-of-death reporting is needed.

No National Overdose Registry: South Africa lacks a centralized system to track both fatal and nonfatal overdoses

Limited Toxicology and Forensic Capacity
Many deaths are not investigated with sufficient toxicological testing to confirm the substances involved – overriding challenges to workforce capacity and challenges with data reporting**.**

Poor Integration of Community Data
Peer-informed data from harm reduction services and people who use drugs (PWUD) are not systematically captured, this could be strengthened via current systems, collect peer-informed data into exsting surveillance systems

Low Awareness and Access to Naloxone
In a three-city pilot survey, 64% of PWUD had never heard of naloxone, though 73% were willing to carry it once informed (Wilson, Brumwell et al. 2022)**.** Raise awareness of the risks associated with a drug overdose, how to respond in the event of a drug overdose, and to advocate for increased community access to naloxone for peers and first responders – in line with overdose response in other countries (HICs)

Many overdose events go unreported due to **stigma, criminalization, and lack of access** to emergency services.

SUD Service Provider Perspectives

- No formal reporting procedures
- Unclear protocols
- Confidentiality concerns
- Delay in receiving information on patient overdose
- No details of family members for tracking of the patient
- No further details on the patient when lost to follow-up
- No further details on the patient when transferred to another facility

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SUGGESTIONS TO STRENGTHEN REPORTING

STRENGTHEN THE EXISTING DATABASE

- *Develop a national reporting system – long-term
- **Optimise current surveillance systems** ‘low-hanging fruit’ (in progress) by capturing peer-informed data + improve on reporting via systematic 6-monthly data collection (treatment centres).
  - Develop a panel of experts/steering committee to **develop standardized protocols**
- *Improve cause-of-death reporting: Enhance the accuracy of cause-of-death reporting to ensure that overdose deaths are not misclassified.
- **Enhance integration** between harm reduction services and national health data systems: Improve the linkage and integration of data between harm reduction services + other data sources and national health data systems.
- **Raise awareness and access to naloxone**: Increase awareness of the risks associated with drug overdose and advocate for increased community access to naloxone for peers and first responders - in line with overdose response in other countries (HICs)
- **Training service provider** service providers and health facilities on overdose reporting and prevention strategies
- **Address stigma and criminalization**

Fatal overdose (site/region)	
	Number (n) reported deaths
	Number (n) missing gender data
	Number (n) male
	Percentage (%) male
	Number (n) female
	Percentage (%) female
	Number (n) TGW
	Percentage (%) TGW
	Number (n) TGM
	Percentage (%) TGM
	Number (n) PWUD < 20yrs
	Percentage (%) PWUD < 20yrs
	Number (n) PWUD >= 20 yrs
	Percentage (%) PWUD >= 20yrs
	Number (n) missing age
	Percentage (%) missing age
	Number (n) cause of death unknown
	Percentage (%) cause of death unknown
	Number (n) cause of death murder
	Percentage (%) cause of death murder
	Number (n) cause of death overdose [opioid-related]
	Percentage (%) cause of death overdose [opioid-related]
	Number (n) cause of death infectious disease [HIV, TB,VH]
	Percentage (%) cause of death infectious disease [HIV, TB,VH]
	Number (n) cause of death other causes
	Percentage (%) cause of death other causes
	Total overall number (n) reported deaths
	Total overall number (n) missing gender data
	Total overall number (n) gender: male, female, TGW, TGM (all sites/regions)
	Total overall percentage (%) gender: male, female, TGW, TGM (all sites/regions)
	Total overall number (n) age: PWUD <20yrs (all sites/regions)
	Total overall percentage (%) age: PWUD <20yrs (all sites/regions)
	Total overall number (n) age: PWUD >= 20yrs (all sites/regions)
	Total overall percentage (%) age: PWUD >= 20yrs (all sites/regions)
	Total overall number (n) missing age (all sites/regions)
	Total overall percentage (%) missing age (all sites/regions)
	Total overall number (n) cause of death unknown (all sites/regions)
	Total overall percentage (%) cause of death uknown (all sites/regions)
	Total overall number (n) cause of death murder (all sites/regions)
	Total overall percentage (%) cause of death murder (all sites/regions)
	Total overall number (n) cause of death overdose [opioid-related] (all sites/regions)
	Total overall percentage (%) cause of death overdose [opioid-related] (all sites/regions)
	Total overall number (n) cause of death infectiou disease [HIV, TB, VH] (all sites/regions)
	Total overall percentage (%) cause of death infectious disease [HIV, TB, VH] (all sites/regi
	Total overall number (n) cause of death other causes (all sites/regions)
	Total overall percentage (%) cause of death other causes (all sites/regions)

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