

# National Update: Scotland

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LJMU Drug-Related Deaths Conference

23 April 2026

# National Update: Scotland

Drug-Related Death (DRD) trends in Scotland

PHS-led responses to 3 key themes

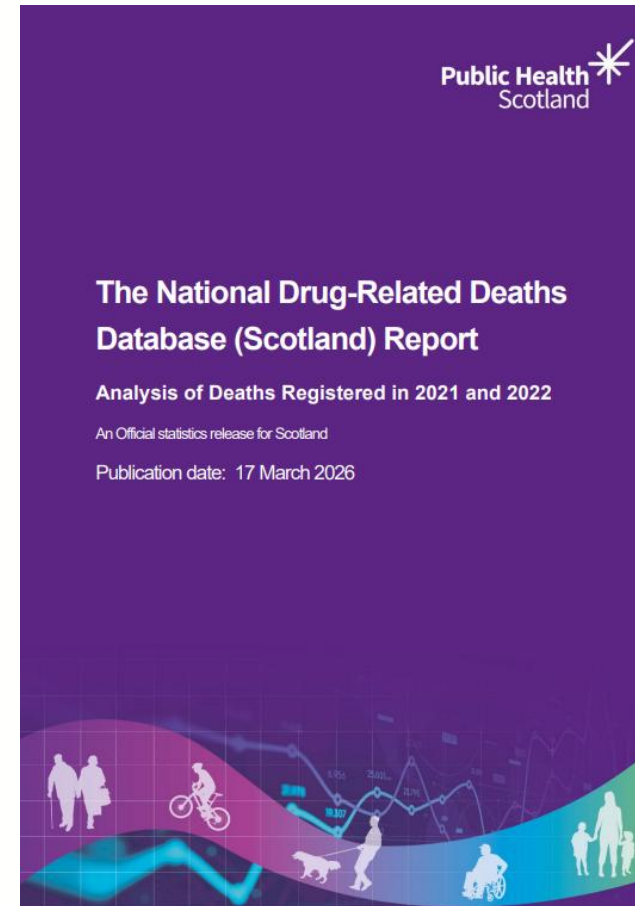
1. Emergence of novel synthetics in Scotland
2. Ongoing role of opioids in DRDs
3. Increase in cocaine-related deaths



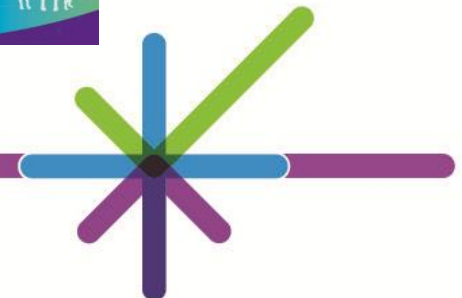
# Sources of Scottish DRD data



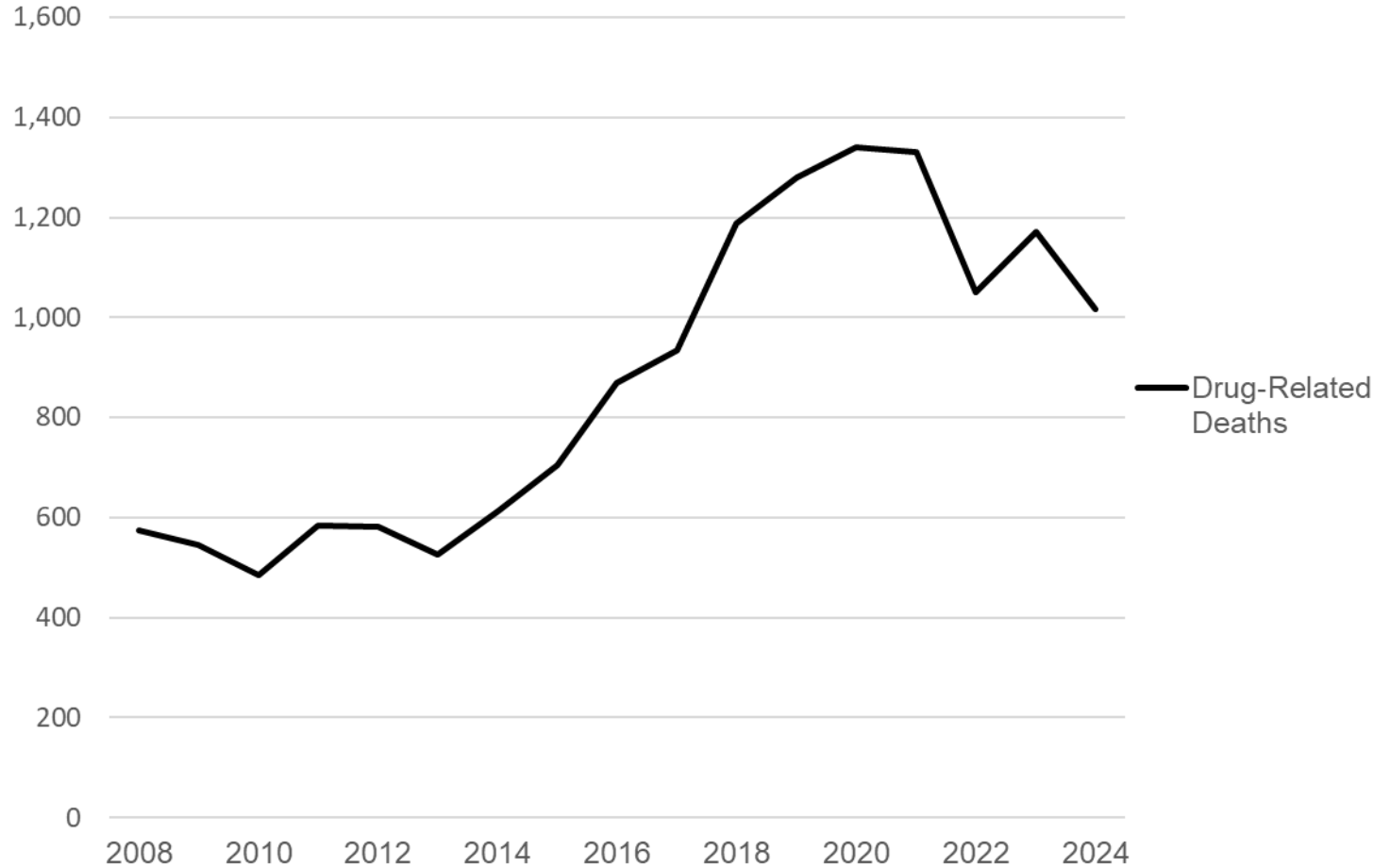
The screenshot shows the National Records of Scotland website. The header includes the logo and navigation tabs: Registration, Records and archives, Statistics and data, and Learning and events. The breadcrumb trail is Home > Publications > Drug-related deaths in Scotland, 2024. The main title is 'Drug-related deaths in Scotland, 2024', with sub-categories 'Statistical publications', 'Statistics and data', and 'Cause specific deaths'. It features an 'OFFICIAL STATISTICS Accredited' badge. The publication date is 02 September 2025, and the frequency is annually. A link to 'Download the data for this publication' is provided. Under 'Contents', there is a link to 'Open'. The 'Main Points' section states: 'In 2024, there were 1,017 drug misuse deaths registered in Scotland, a decrease of 13% (155 deaths) compared with 2023.'



The cover of the report is purple with the Public Health Scotland logo in the top right. The title is 'The National Drug-Related Deaths Database (Scotland) Report'. Below the title is the subtitle 'Analysis of Deaths Registered in 2021 and 2022'. Further down, it says 'An Official statistics release for Scotland' and 'Publication date: 17 March 2026'. The bottom of the cover features a graphic with silhouettes of people (a couple, a cyclist, a person with a dog, a person in a wheelchair, and a family) overlaid on a grid and line graph.



# DRDs in Scotland

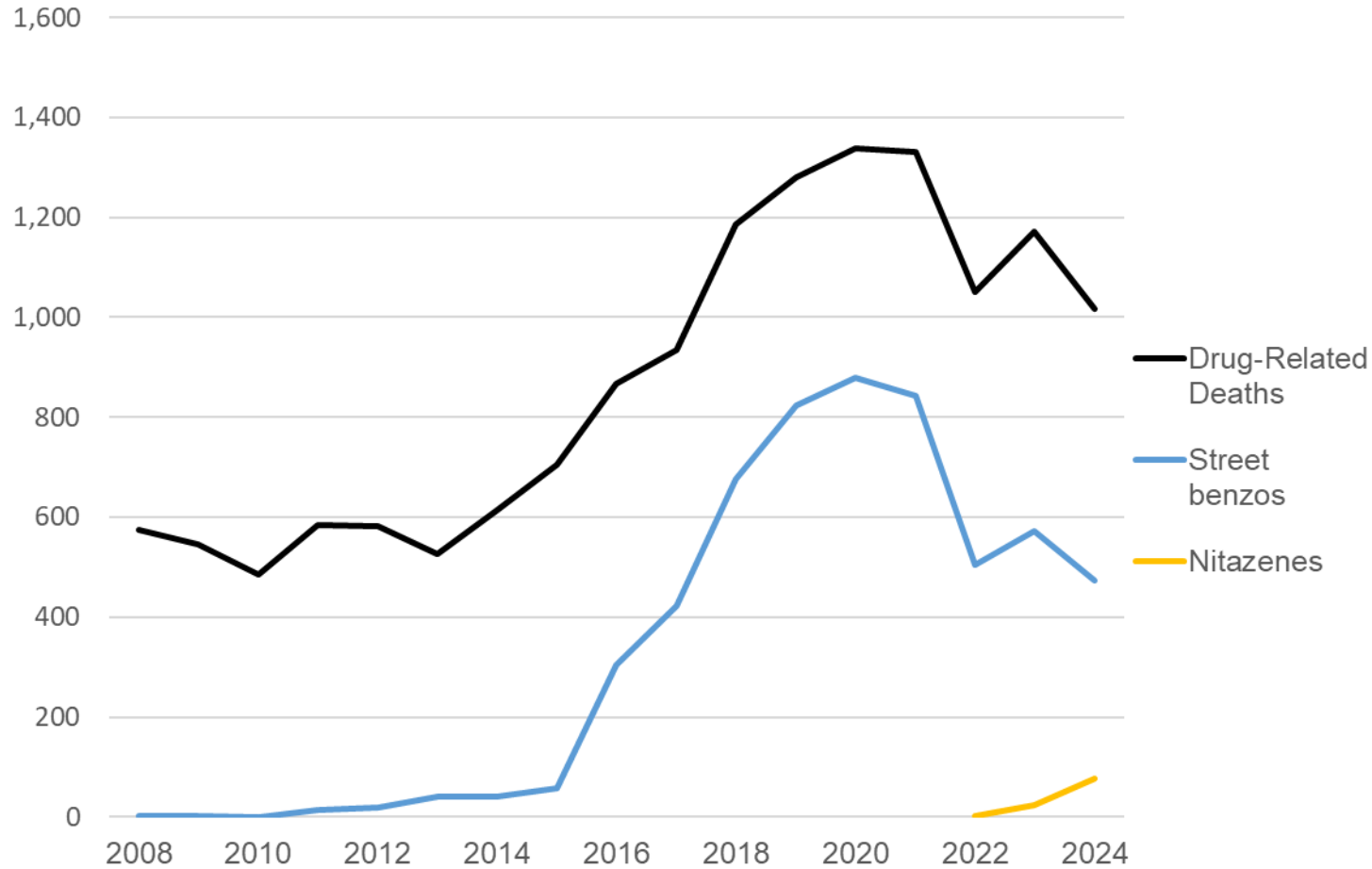


Source: National Records of Scotland

- Year-on-year increase throughout 2010s
- Peaking at 1,339 in 2020
- Down to 1,017 in 2024
- Remains highest DRD rate in UK/Europe
- Major public health issue

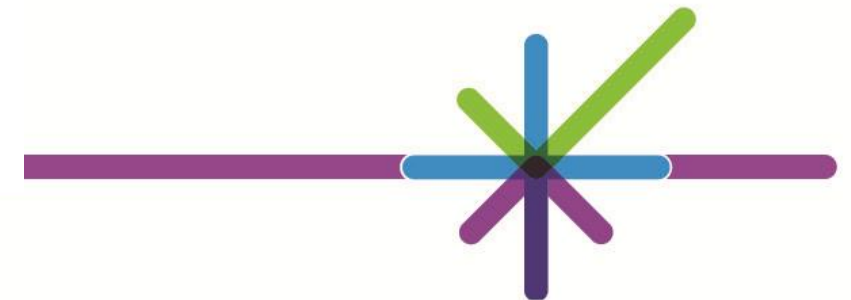


# Emergence of novel synthetics in Scotland



Source: National Records of Scotland

- Street benzos emerged in early 2010s
  - 2015: 8% of DRDs
  - 2020: 66% of DRDs
  - 2024: 47% of DRDs
- Nitazenes emerged in 2022
  - 2024: 7% of DRDs



# Widening access to timely data for DRD prevention

Reflections on emergence of street benzos led to:

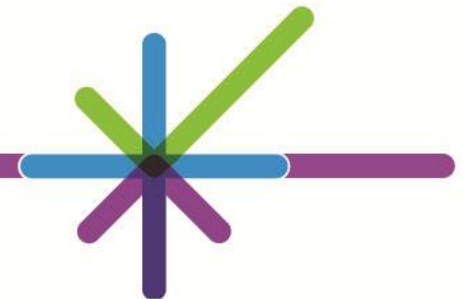


Development of early warning system

- Developed from COVID impact report (2020)
- Rapid Action Drug Alerts and Response (RADAR) launched in 2022

## [Drug Death Reporting SLWG \(2021\)](#)

- Multi-disciplinary assessment of NDRDD reporting
- High latency in local DRD review/reporting due to:
  - Inconsistencies in NHS Board access to data
  - Slow pace of data flows to NHS Boards
- National DRD Data Co-Ordinator appointed in 2022



# Improving toxicology data flows

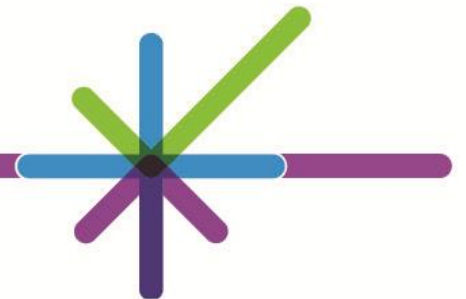
Rapid access to post-mortem toxicology data identified as key priority

Benefit:

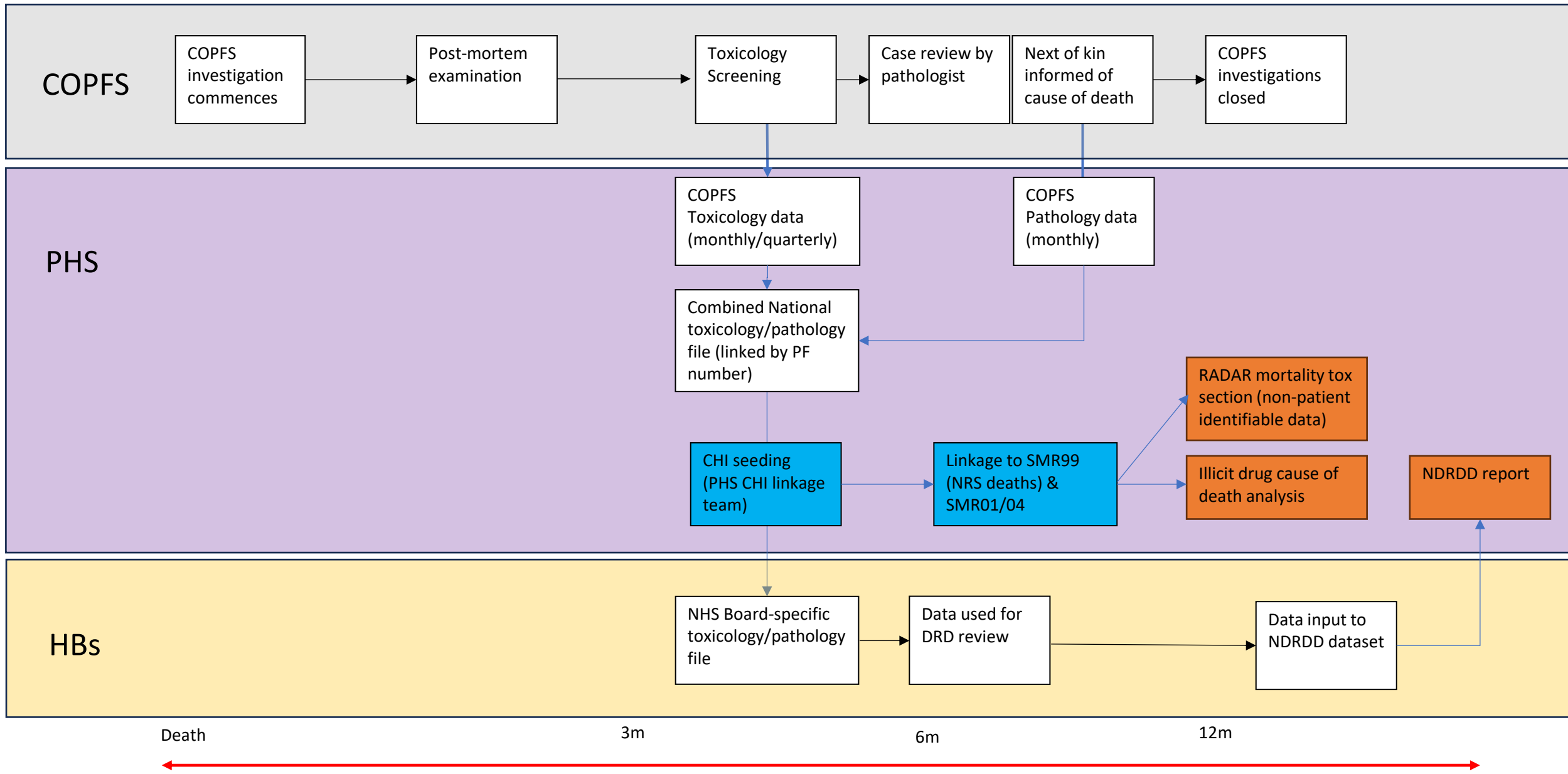
Improved understanding of how drug toxicity and polysubstance use contribute to risk environment in as real time as possible to inform preventative actions

Enablers:

- Routine process for all suspected DRDs
- Comprehensive standard 'panel' of drug tests
- Centrally commissioned by Crown Office
- Two centres (Glasgow, Aberdeen)
- Positive stakeholder relationships

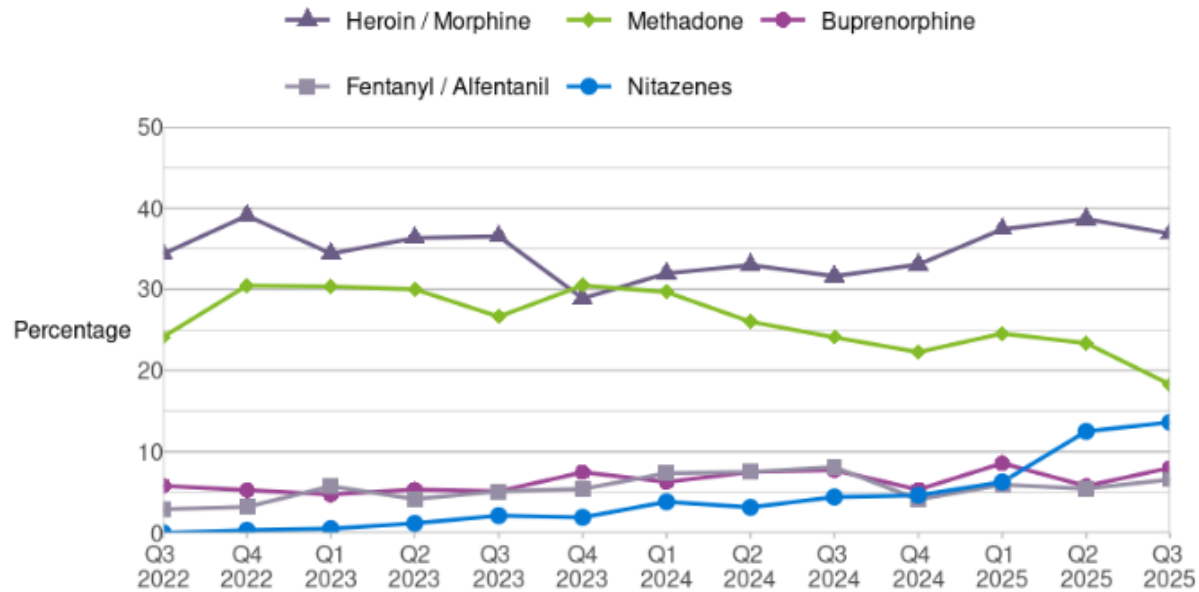


# Crown Office and Procurator Fiscal Service data on Drug-Related Deaths – Data Flow Diagram



# RADAR early warning system

Forensic toxicology cases testing positive for specific opioids



Source: Scottish Police Authority Forensic Services and other UK laboratories  
Forensic Medicine and Science (University of Glasgow)  
Department of Clinical Biochemistry at NHS Grampian

## Alert

### New benzodiazepines (benzos)



**Scotland's benzodiazepine market is changing - the strength and contents are highly unpredictable, increasing the risk of overdose.**

Detections of bromazolam have decreased, while other street benzos, such as ethylbromazolam and clonazolam, have increased.

Street benzos are commonly found as white, yellow or blue circular tablets. They may be sold as fake medicines: unregulated drugs designed to look genuine in counterfeit packaging.

New tablet types are also emerging, including jelly capsules.

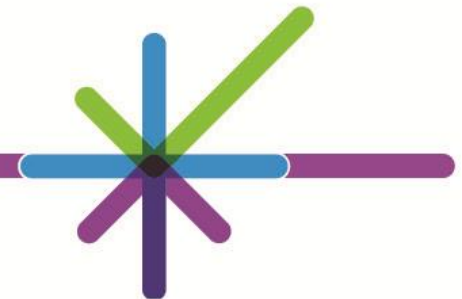
There is a further risk of contamination, as non-benzos, including nitazenes (opioids) and medetomidine (a depressant), have been detected in drugs sold as benzodiazepines.



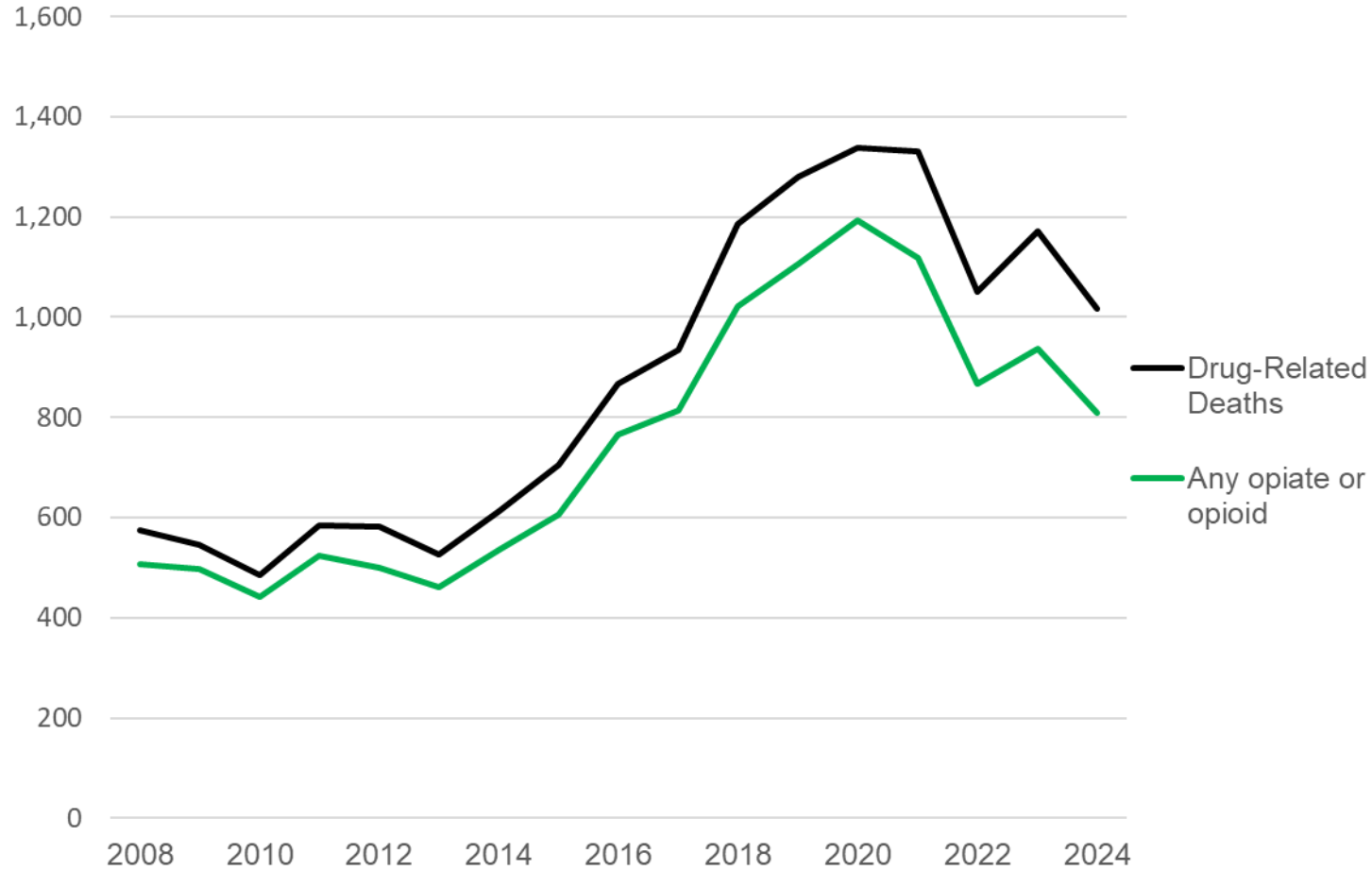
Ethylbromazolam mis-sold as diazepam.



Etizolam mis-sold as temazepam.

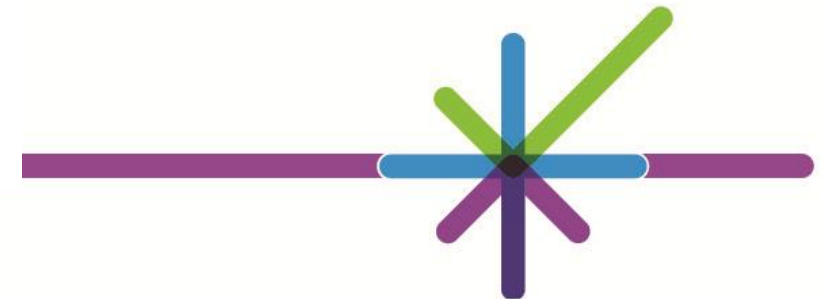


# Ongoing role of opioids in DRDs



## Opiate/opioid implication

- 2008 to 2020: 85% to 91%
- 2021 to 2024: <85%
- 2023 & 2024: 80%



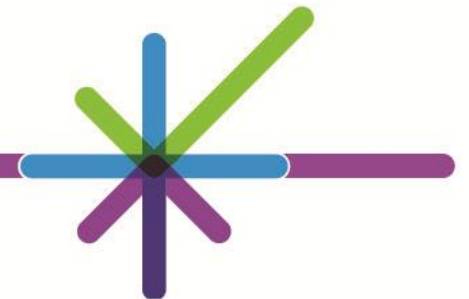
# Expanding the evidence base for DRD prevention

- 2017: ISD data linkage for SDF-led project on senior drug dependants
- 2019: PHS began work on linked data asset for problematic drug use



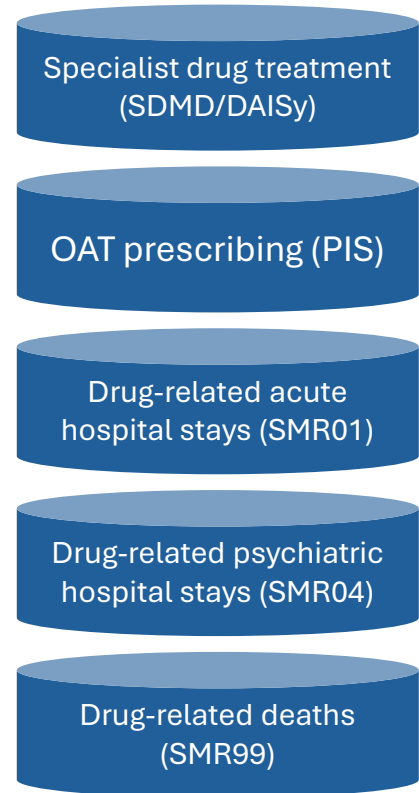
## Purposes:

1. Estimating size and composition of the population with problematic drug use
2. Understanding morbidity and mortality among people with problematic drug use
3. Assessing the impact of specialist drug treatment and care

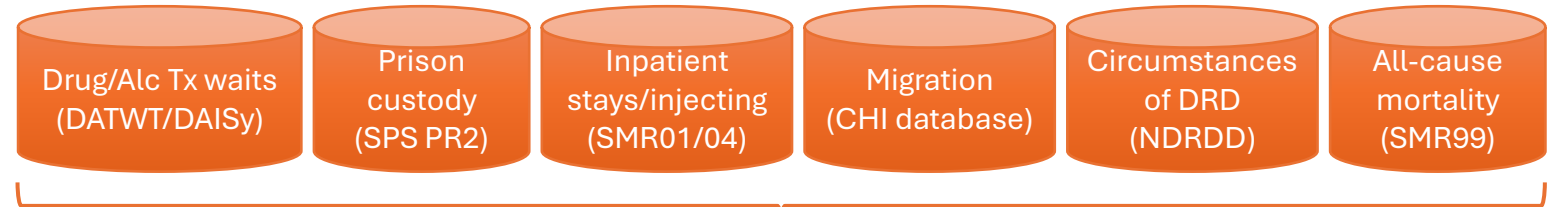


# Substance Use and Health Intelligence Linked Dataset (SHieLD)

Drug-related healthcare events from PHS datasets



Outcome/covariate data from PHS datasets

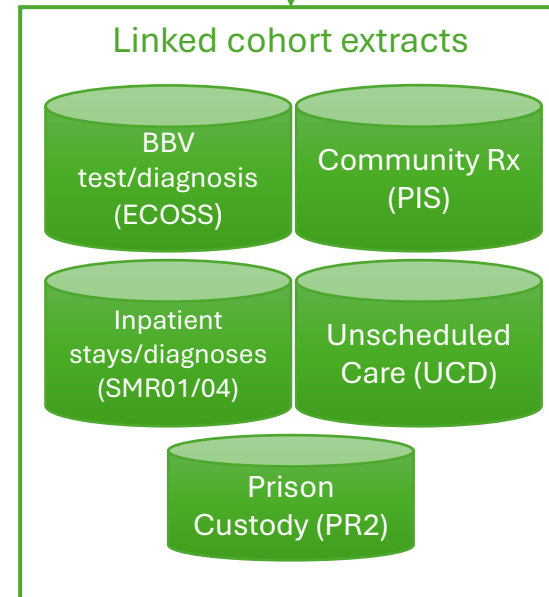


**Base cohort file:**

- CHI number
- Index number
- Demographics
- Location data
- Activity data

Linkage of base cohort file to outcome/covariate data

Removal of patient identifiable information



**Pseudonymised cohort file:**

- Index number
- Demographics
- Location data
- Activity data
- Generic outcome/covariate data
- Bespoke outcome/covariate data

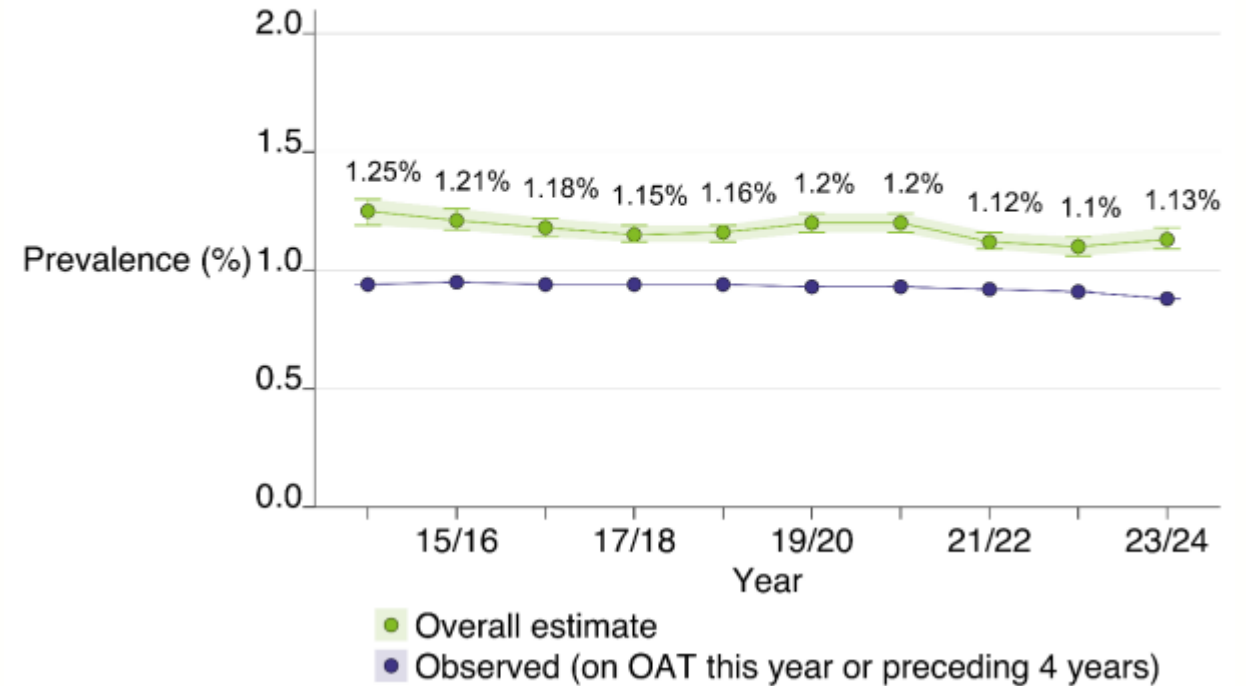
Statistical analysis

Outputs on aims and objectives

# Opioid prevalence

- PHS/UoB/GCU collaboration
- Bayesian MPEP statistical model ([Markoulidakis et al, 2024](#))
- Annual period prevalence estimate
- Based on linkage of:
  - OAT prescribing data
  - Drug-related hospital admissions
  - Drug-related deaths
  
- Slight reduction in opioid dependence from 14/15 (47.7K) to 23/24 (43.6K)

Figure 1: Estimated prevalence (%) of opioid dependence among the population aged 15-69 years in Scotland; 2014/15 to 2023/24



# **Evaluating the impact of Public Health interventions in reducing harms related to Substance Use in Scotland (EPHeSUS)**

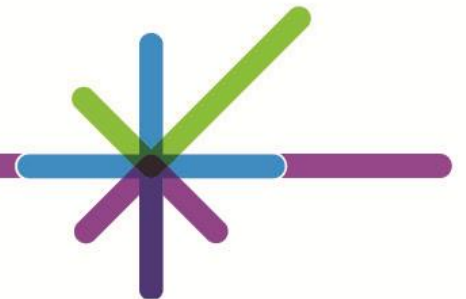
- Led by Glasgow Caledonian University, in collaboration with University of Bristol and PHS
- 2019 to 2024

## **Aim:**

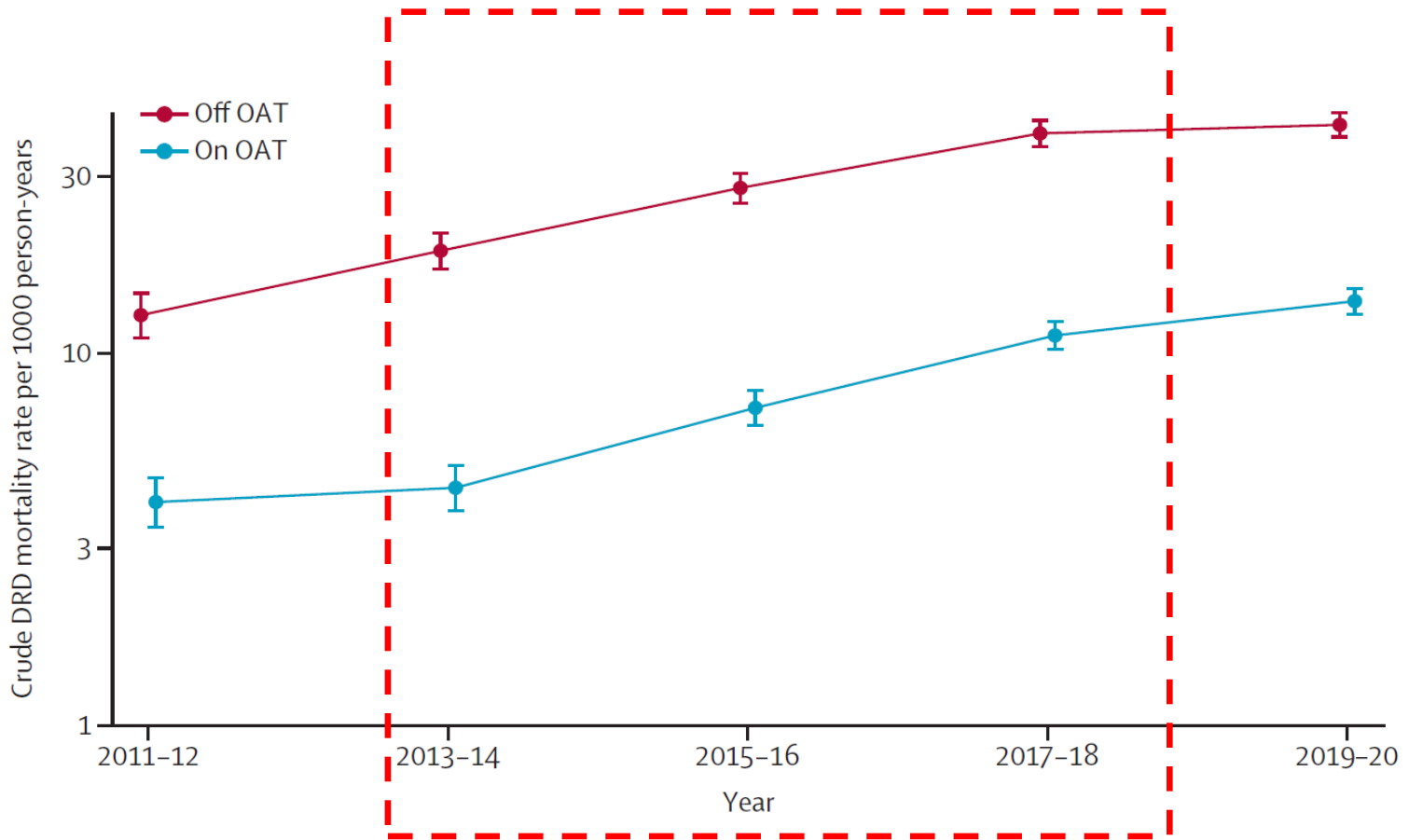
- Use linked and unlinked administrative data to measure the risks of mortality related to problem drug use in Scotland and determine to what extent specific interventions are protective against drug-related deaths.

## **Initial focus:**

- Evaluate impact of Opioid Agonist Therapy (OAT) in period when Scotland's DRDs more than doubled
  - OAT mortality study
  - Impact of COVID-19
  - Co-prescribing



# Crude drug-related death rates (log scale) among those prescribed OAT in Scotland by OAT status, 2011-2020

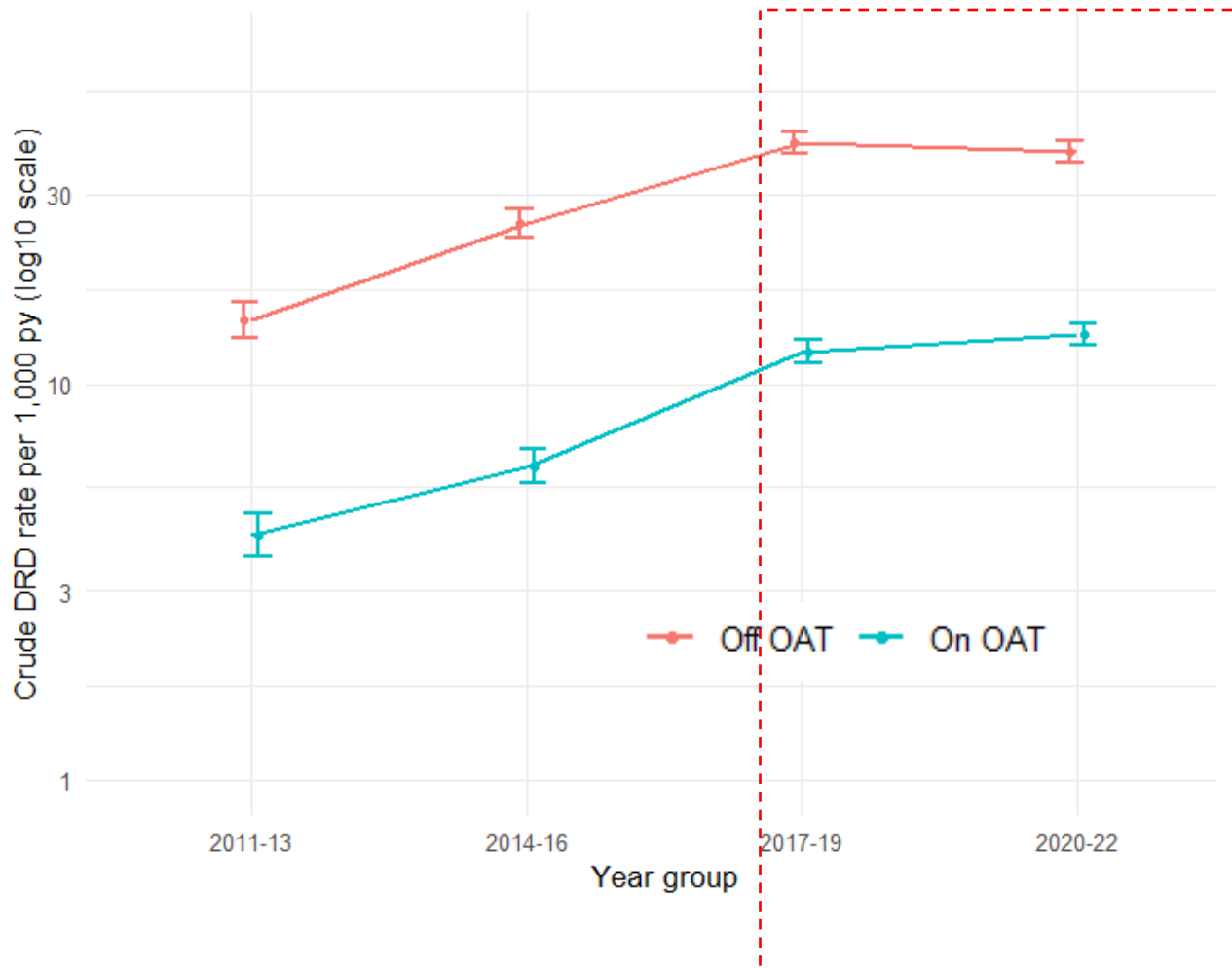


- **Overall DRD rates were 3.4 times higher for those off OAT relative to those on OAT**
- However, DRD rates increased over calendar time for both those on OAT as well as off OAT

**DRD rates were almost three and a half times higher** (hazard ratio 3.37; 95% CI 1.74–6.53) **for those off OAT compared with those on OAT** after adjustment for confounders.

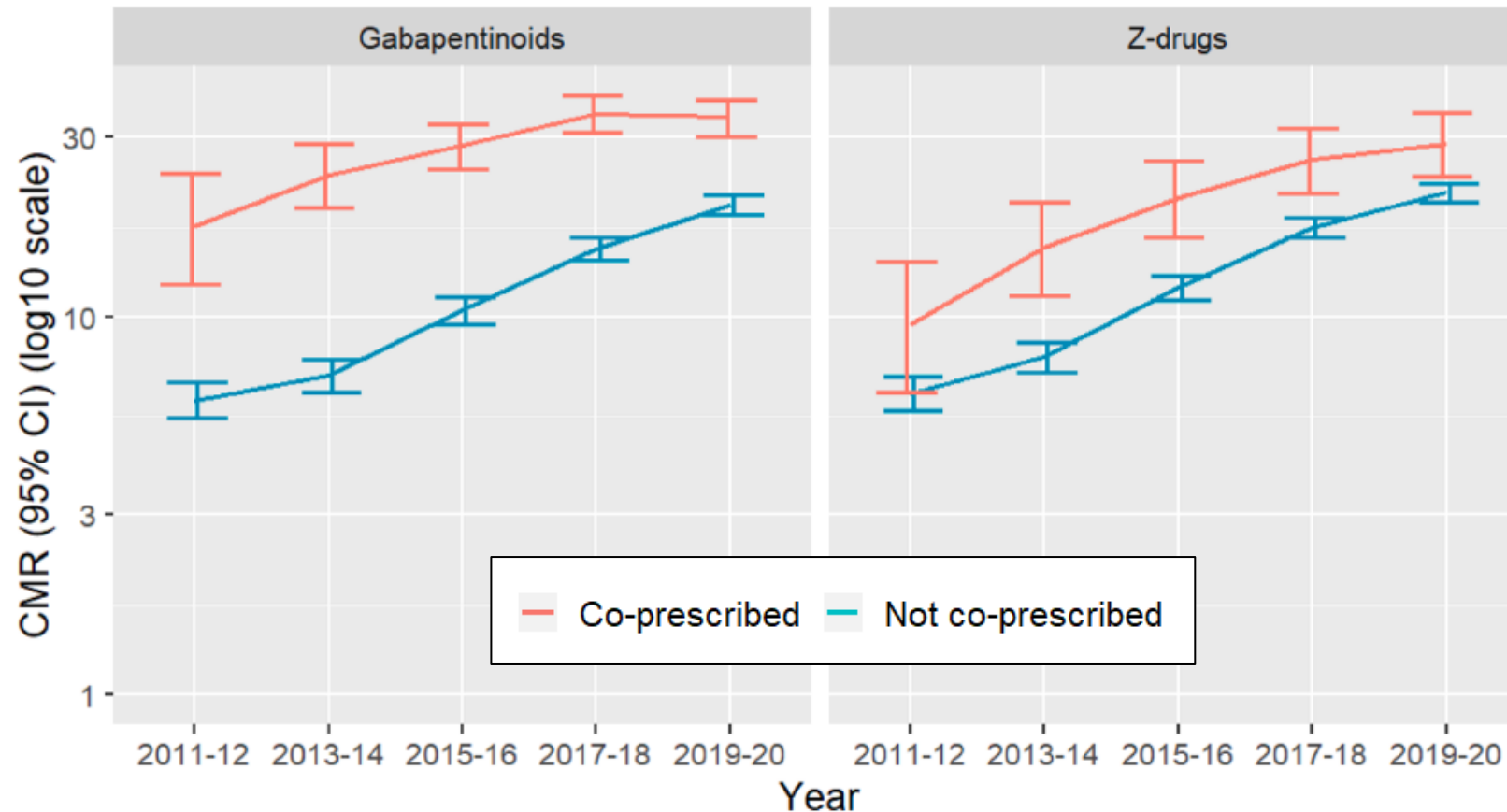
Prescription dates were not available for all patients; periods on/off OAT were instead based on reimbursements dates which were available for all prescriptions. **On OAT referred to the period from –60 days to –12 days of each reimbursement date**, given a) reimbursements dates were aggregated at the end of the month relating to when prescription is fully dispensed, b) the average number of days between prescription and reimbursement dates was 40 days and b) the duration between consecutive prescription dates was 28 days.

# DRD rates remained stable during pandemic



- Overall crude DRD rate was 14 per 1,000 person years
- OAT was protective: **lower DRD rates among those on treatment** after adjustment (aIRR=3.47, 95 % CI=2.98, 4.05)
- DRD rates **increased both on and off OAT** between 2011-13 to 2017-19 (pre-pandemic)
- DRD rates **remained stable during pandemic** (2020-2022), compared to 2017-2019 (aIRR=0.96, 95 % CI=0.80, 1.15)

## Drug-related mortality rates higher during co-prescription compared to periods without



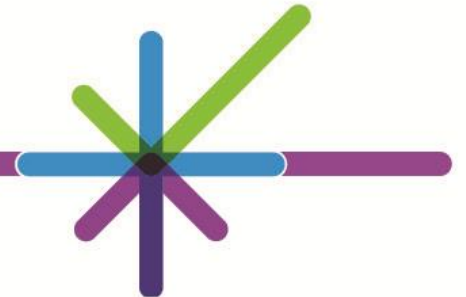
- Crude drug-related mortality rates **increased over time among exposed and unexposed**
- **Rates were higher among those co-prescribed gabapentinoids or Z-drugs**
- **Two-fold higher risk associated with co-prescription with gabapentinoids** after adjustment; Moderately increased risk associated with co-prescription with Z-drugs

# Findings so far

- In period 2010-2020, DRD rates increased for people on and off OAT
- Mortality consistently higher among people off OAT
- Protective effect of OAT maintained during pandemic

## Why did DRDs increase?

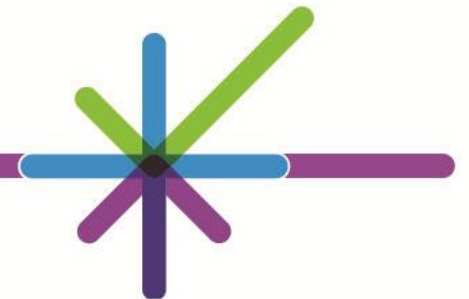
- Not increase in population (N opioid users stable/decreasing)
- Not just ageing cohort (mortality increase occurred across age groups)
- Not due to other risks among opioid users (e.g. suicide) ([Fraser et al, 2024](#))
- Increased risk of polydrug use



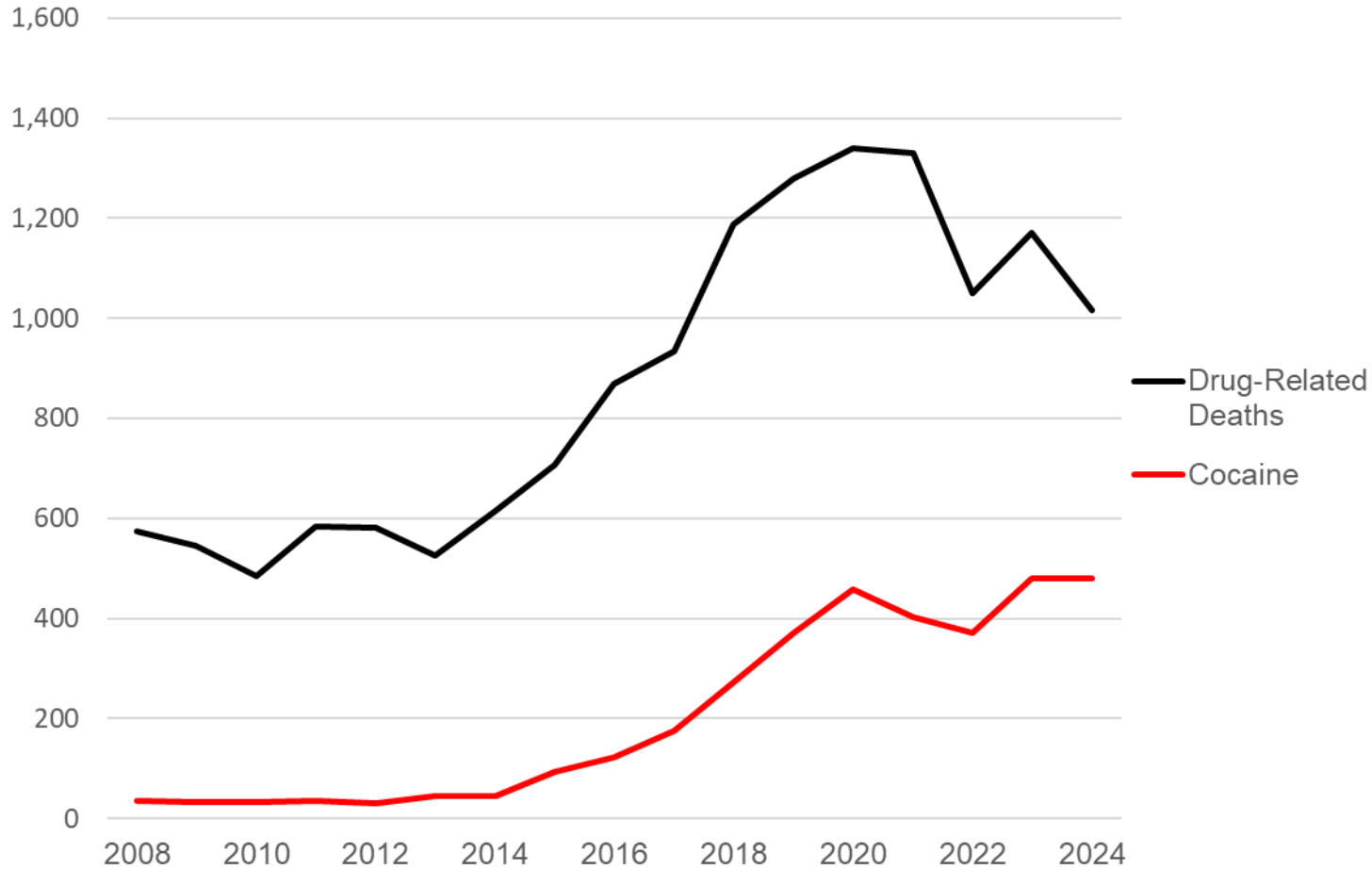
# EPHeSUS 2



- NIHR funded
- Led by University of Bristol, in collaboration with GCU, PHS and others
- 2024 to 2028
  
- Topics
  - Role of Benzodiazepines (prescribed and illicit) in elevating risk
  - OAT retention thresholds for preventing DRDs
  - 'High-risk periods' during OAT prescribing
  - Impact of Long-Acting Injectable Buprenorphine on DRD mortality
  - Impact and cost-effectiveness of naloxone provision



# Increase in cocaine-related deaths



Source: National Records of Scotland

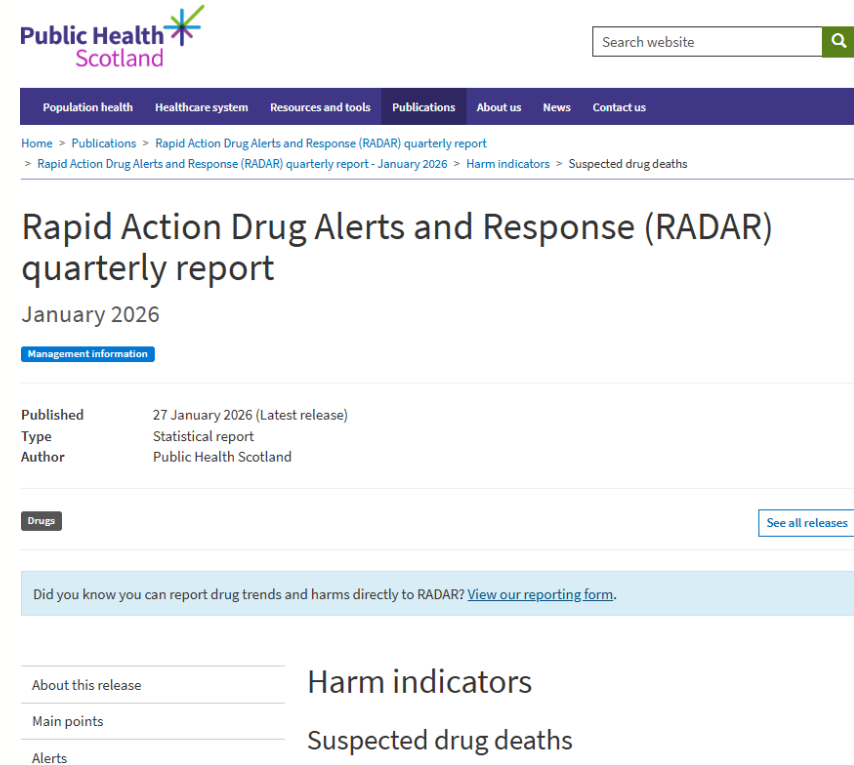
## Cocaine implication

- 2008 to 2014: <10%
- 2024: 47% (n=479)
- 2020 to 2024: approx. 440 deaths per year

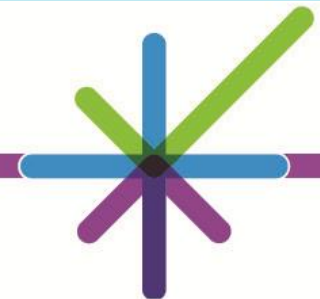


# RADAR developments

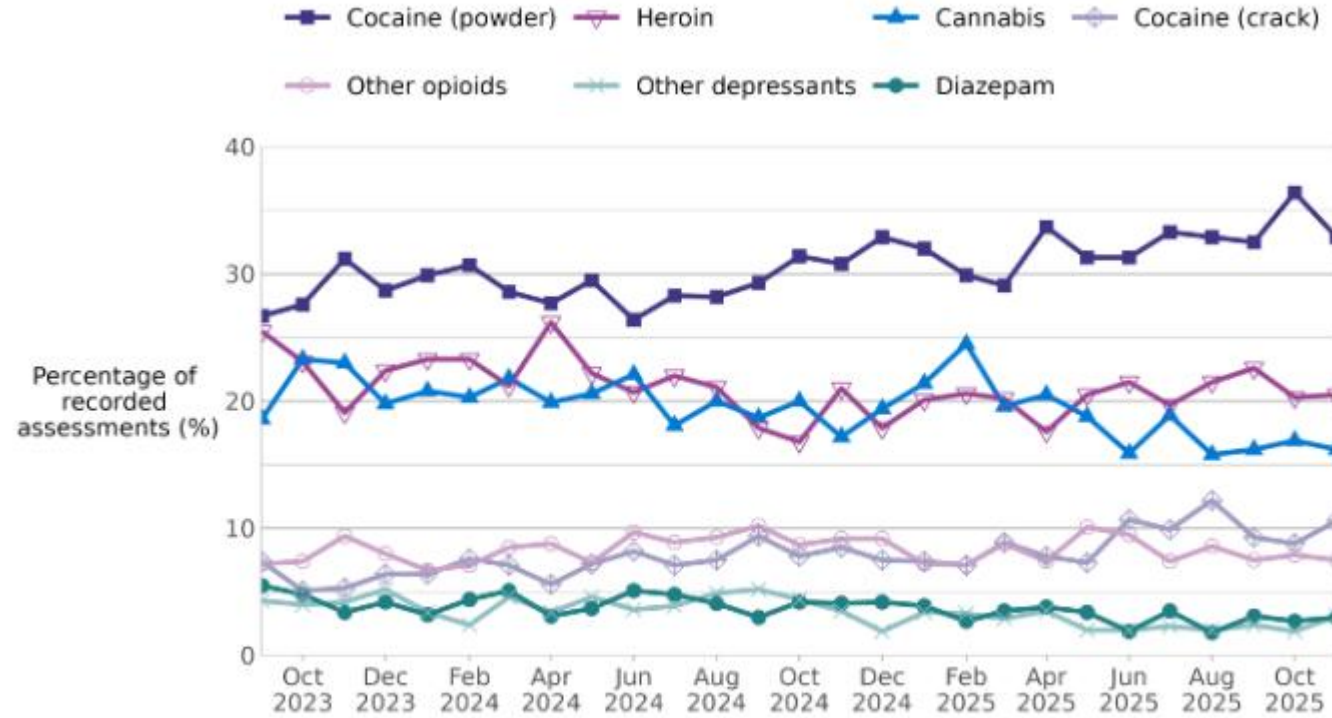
- Cocaine-specific measures in existing indicators:
  - ED attendances
  - ED toxicology (ASSIST)
  - Hospital admissions
  - Post-mortem toxicology
- New indicators
  - Drug treatment toxicology testing
  - Main drug at specialist drug treatment assessment



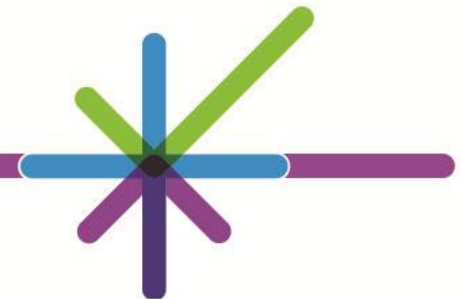
The screenshot displays the Public Health Scotland website interface. At the top, the logo for Public Health Scotland is visible alongside a search bar. A navigation menu includes links for Population health, Healthcare system, Resources and tools, Publications, About us, News, and Contact us. The breadcrumb trail indicates the current page is 'Rapid Action Drug Alerts and Response (RADAR) quarterly report - January 2026' under the 'Harm indicators' section. The main heading is 'Rapid Action Drug Alerts and Response (RADAR) quarterly report January 2026'. Below this, a 'Management information' section provides details: Published on 27 January 2026 (Latest release), Type is Statistical report, and Author is Public Health Scotland. A 'Drugs' filter is present with a 'See all releases' button. A light blue banner asks if the user knows they can report drug trends and harms directly to RADAR, with a link to 'View our reporting form'. At the bottom, there are links for 'About this release', 'Main points', and 'Alerts', and a large graphic for 'Harm indicators' and 'Suspected drug deaths'.



# RADAR – Main drug reported at assessment, by month

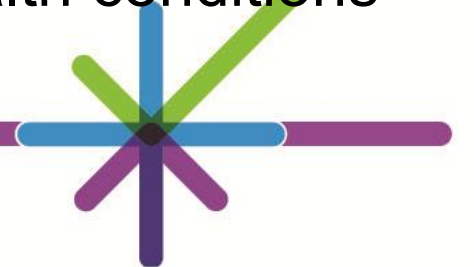


Source: Public Health Scotland



# Estimating problematic cocaine use and harms

- PHS aiming to apply MPEP prevalence estimation approach to cocaine
- Examining
  - ‘Problematic use’ cohort based on drug treatment data in SHleLD
  - Cocaine-related mortality using linked toxicology/pathology data
  - Cocaine-related urgent care journeys (SHleLD)
  - Cocaine-related hospital admissions (SHleLD)
- Cocaine-related mortality is poorly captured by DRD definition
- Improved awareness of suicide risk and association with health conditions



**Thank you!**

# DRD investigation and review processes

## Crown Investigation

- Police Scotland report suspected DRD to Crown Office
- Crown Office investigate suspected DRD via:
  - Standardised PM toxicology screening
  - Pathology investigation
- Crown Office conclude investigation and inform partners of outcome

## Death registration

- Pathologists inform National Records of Scotland of causes of death
- Clinical review of potential DRDs registered in year
- Deaths confirmed as DRD

## NHS Board review

- Police inform NHS Board DRD co-ordinators of suspected DRDs
- Local information gathering
- NHS Board DRD review
- For confirmed DRDs, enter details on National Drug Related Death Database (NDRDD)

