

Drug Associated Deaths

Dr. Caryl Beynon

Reader in Substance Use Epidemiology

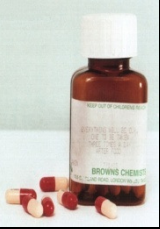
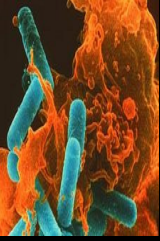
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Overview

1. Define 'drug related deaths': what type of deaths are considered drug related deaths.
2. Discuss 'drug associated deaths'; what they are, quantify their occurrence.
3. Demonstrate that deaths of non drug users can be included in official drug related death figures.
4. Discuss the enhanced death monitoring system being rolled out in Merseyside.

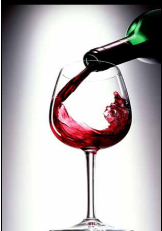
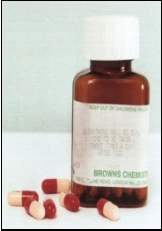




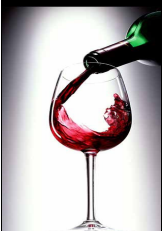
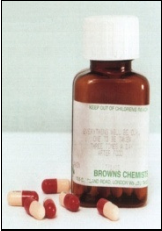
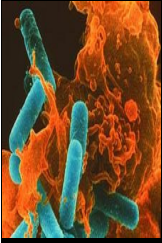
Deaths from drug use

Acute causes
(e.g. drug toxicity)

Non acute causes
(e.g. hepatitis C related hepatocellular carcinoma)



What exactly is a drug related death?

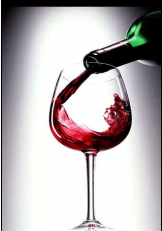
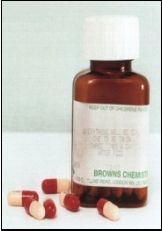
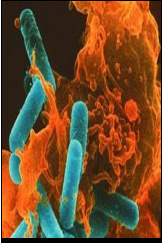


Drug Related Deaths

1. ONS Standard Definition:

- Mental and behavioural disorders associated with drug/medicine use.
- Drug/medicine poisoning (intentional, accidental, undetermined intent).
- Assault with drugs/medicines.

Includes prescribed and other-the-counter preparations (e.g. anti-depressants, paracetamol).

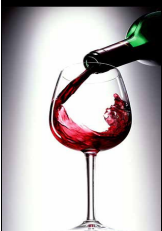
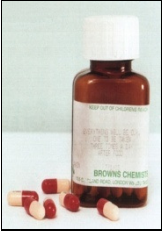
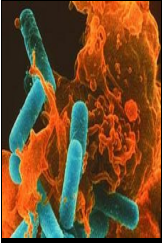


Drug Related Deaths

2. National Drug Strategy Definition:

- Underlying cause is mental and behavioural disorders associated with the use of drugs*.
- Drug* poisoning (intentional, accidental, undetermined intent).
- Assault with drugs*.

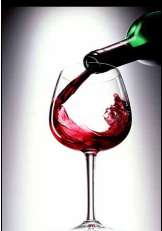
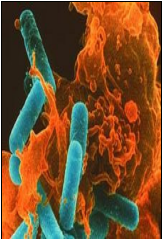
*Drugs scheduled under the Misuse of Drugs Act (1971).



Drug Related Deaths

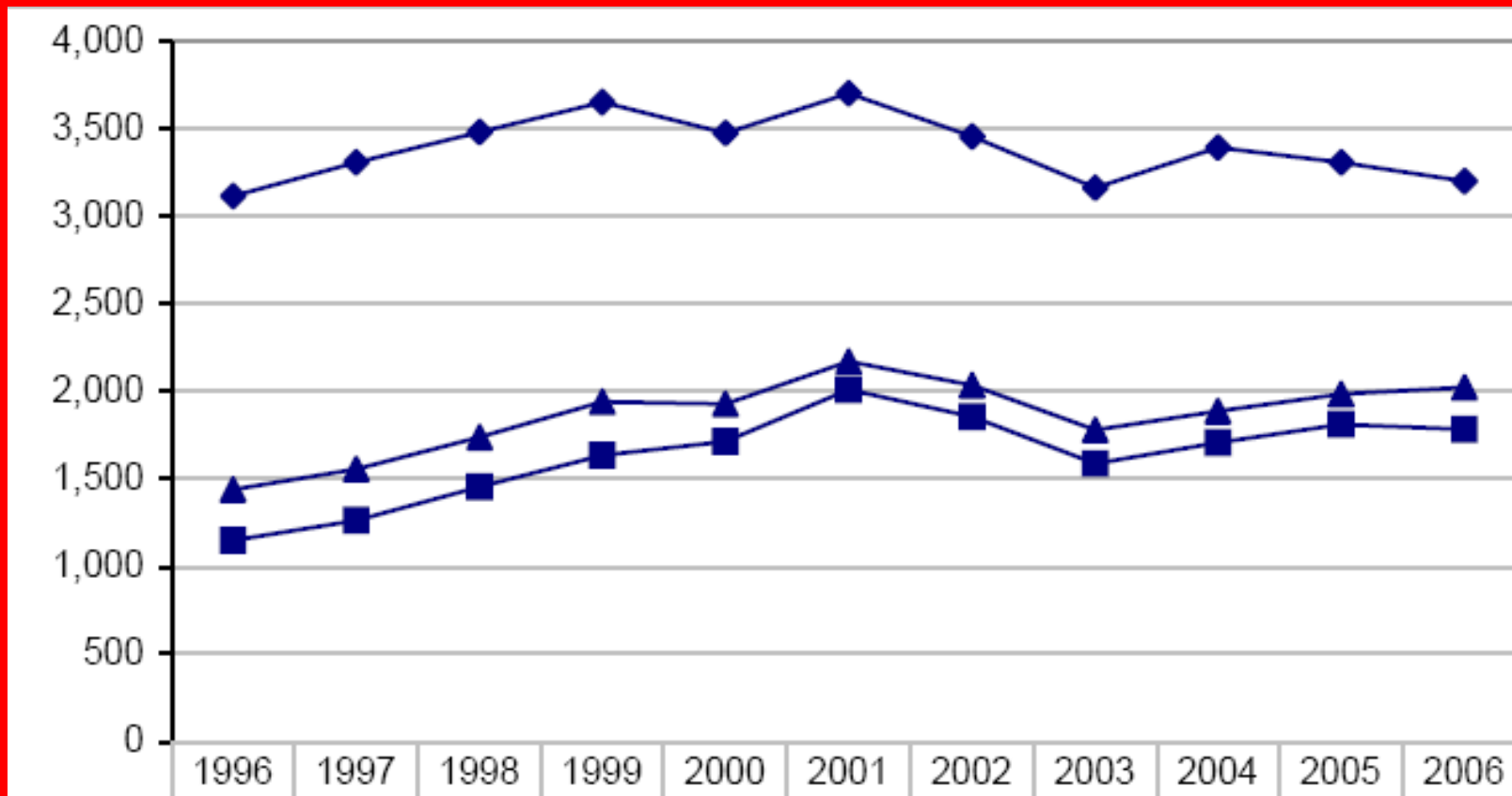
3. European Definition (EMCDDA):

Refers to deaths happening shortly after consumption of one or more psychoactive drugs, and directly related to this consumption. Often these deaths are referred to as 'overdoses', although equivalent concepts are also 'deaths directly related to drug use', 'poisonings' or 'drug-induced deaths'.



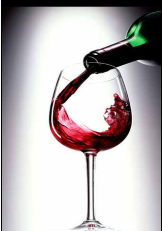
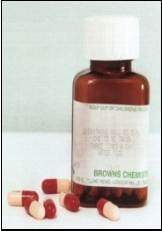
Drug Related Deaths in the UK by Definition

- ◆ ONS 'Standard'
- EMCDDA DRD
- ▲ UK Drug Strategy



Concept 1

The reported number of drug related deaths depends upon which definition you use.






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Public Health

None of the
definitions for a drug
related death include
deaths from non
acute causes..?!?





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graph TD; A[Deaths from drug use] --> B[Acute causes]; A --> C[Non acute causes]
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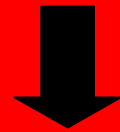
Deaths from drug use

Acute causes

Non acute causes

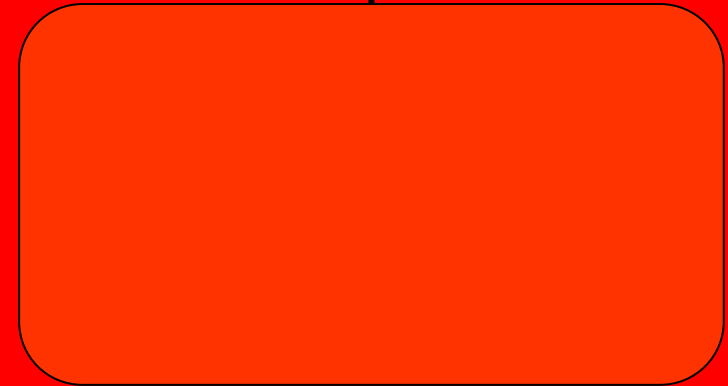


Drug
related
deaths



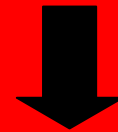
Acute causes

Deaths from
drug use

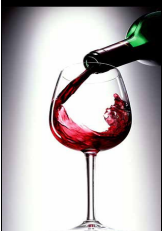


Deaths from
drug use

What
about
these
deaths?

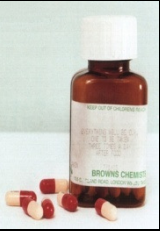
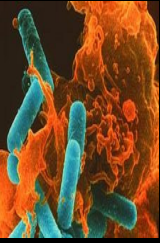


Non acute
causes



Concept 2

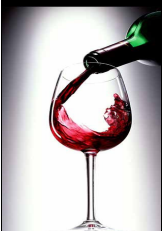
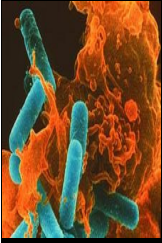
Deaths from non acute causes
are not counted as drug related
deaths.

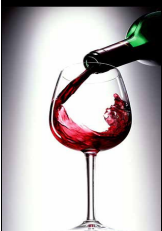
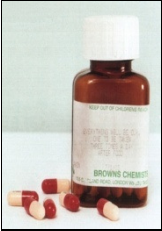
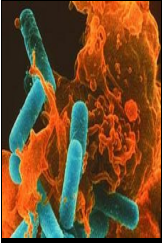


Deaths from
drug use

Drug
associated
deaths

Non acute
causes





Drug Associated Deaths

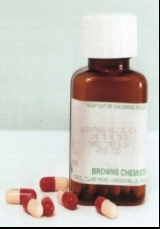
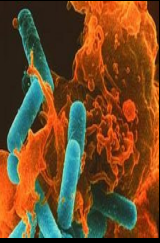
1. What are these deaths?
2. How many of these types of deaths occur?

2004, Centre for Public Health initiated a research study:
Deaths of drug users, not drug related deaths.

5 years: 504 deaths

176 (35%) were drug related deaths

328 (65%) were not drug related deaths



Deaths from Liver Disorders

Hepatitis C

- 11 (plus 37 as secondary cause)

Liver diseases

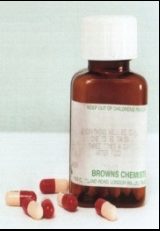
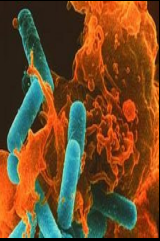
- 59 (47 from alcohol related liver diseases)

Neoplasm of the liver

- 8 (5 had hepatitis C as a secondary cause)

Total

- 78 (15% of all deaths)



Deaths from Respiratory Disorders

Pneumonia and other acute lower respiratory infections

- 20 (18 due to pneumonia)

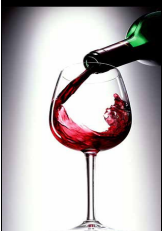
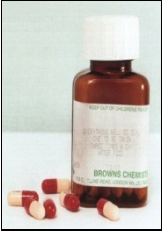
Chronic lower respiratory infections

- 24 (19 chronic obstructive pulmonary disease)

Smoking related???

Total

- 44 (9% of all deaths)



Deaths from Circulatory Disorders

Heart disease

- 15 ischaemic heart disease, 13 other forms of heart disease, 6 endocarditis

Disease of veins and lymphatic system

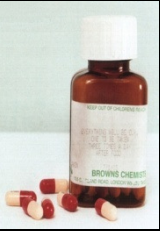
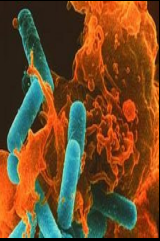
- 3 (all from deep vein thrombosis)

Cerebrovascular disease

- 18 deaths

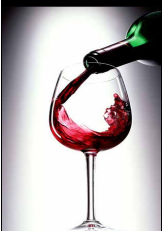
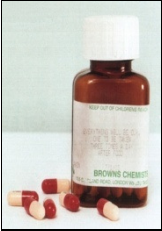
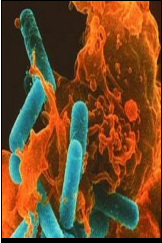
Total

- 55 deaths (11% of all deaths)

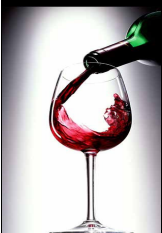
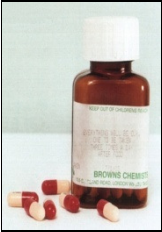


Drug Associated Deaths

- High number of drug associated deaths.
- Currently, drug associated deaths are not being included in figures on deaths from drug use.
- Very difficult to define exactly which deaths should be counted as drug associated deaths.
- As drug users age drug associated deaths will become more numerous.
- Highlights the need for good general health screening and interventions.



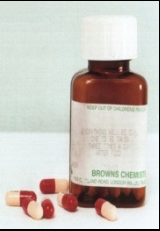
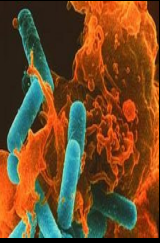
National Programme on Substance Abuse Deaths (np-SAD)

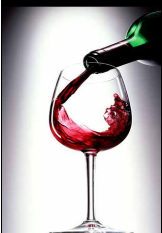
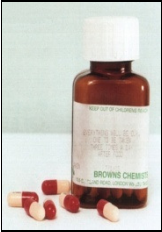


| | Drug abuser/dependent | Non drug abuser/dependent | P value |
|-------------------|-----------------------|---------------------------|---------|
| Number | 38 | 12 | |
| Mean age at death | 38.23 | 53.59 | <0.001 |
| Heroin/morphine | 22 (57.9%) | 3 (14.3%) | 0.001 |
| Methadone | 12 (31.6%) | 1 (4.8%) | 0.022 |
| Alcohol | 15 (39.5%) | 11 (52.4%) | 0.339 |
| Cocaine | 16 (42.1%) | 0 | <0.001 |
| Treatment contact | 12 (31.6%) | 0 | 0.005 |
| Drug CJS contact | 7 (18.4%) | 0 | 0.043 |
| Death; toxicity | 19 (50.0%) | 19 (90.5%) | 0.002 |

Concept 3

Drug related deaths figures include deaths of people who are not drug users.





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Public Health

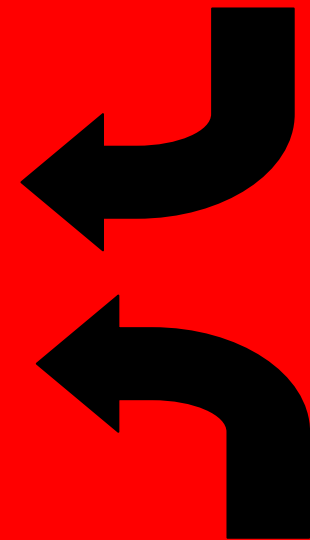
Is it a drug
related
death?

Is it a drug
associated
death?

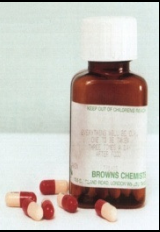
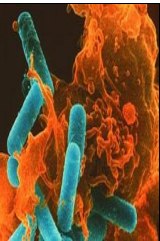
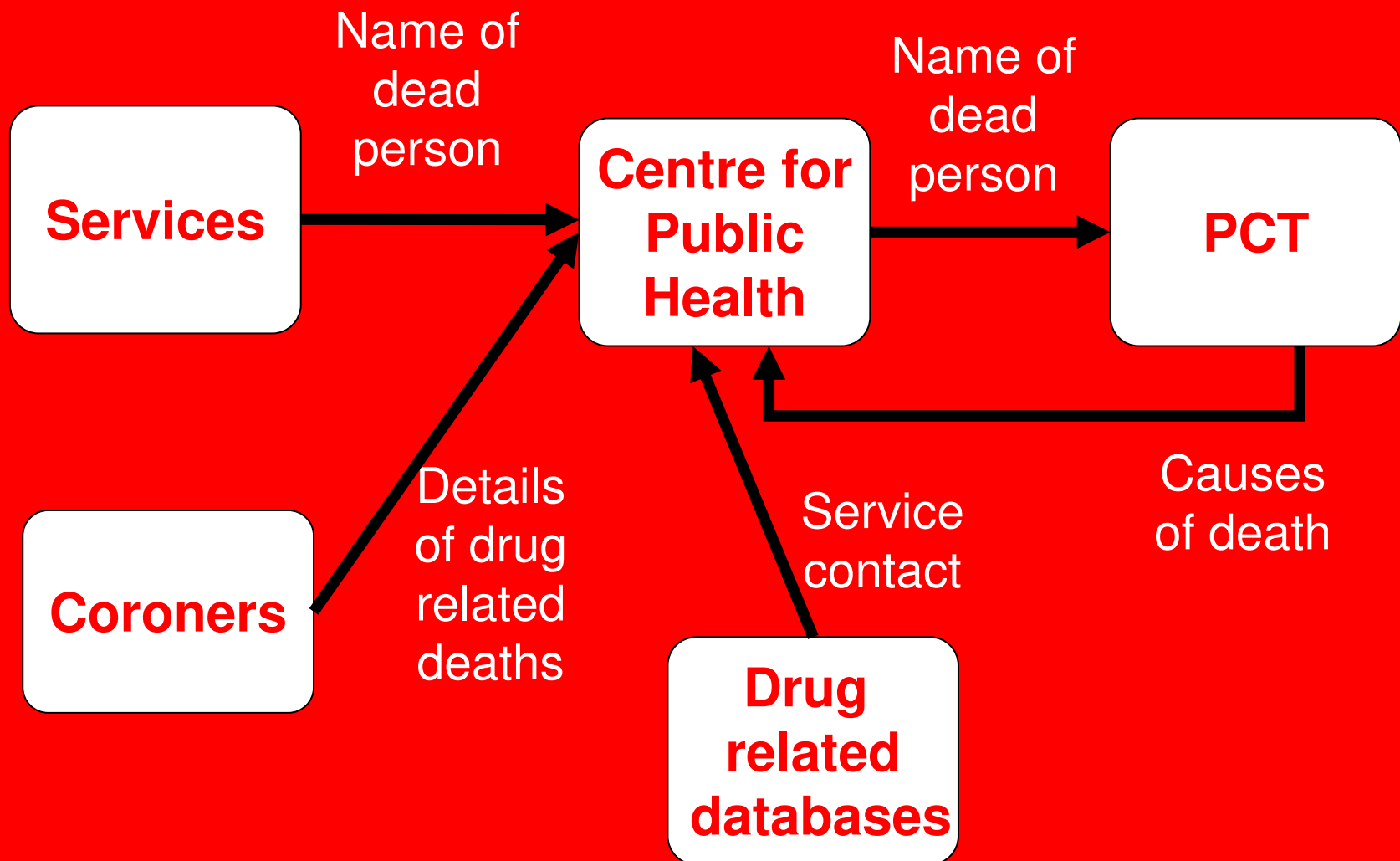
Death

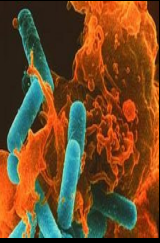
Is it a death
related to
drugs at all?

Is it a death
of a drug
user?



A Different Approach in Merseyside

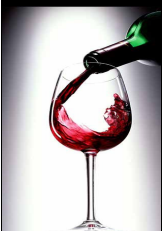
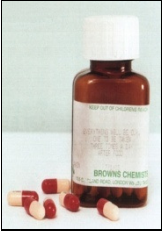




Every Three Months... Review Every Death

- Causes of death.
- Toxicological data.
- Living arrangements.
- Recent contact with drug-related services.

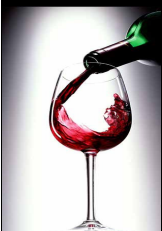
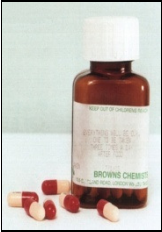
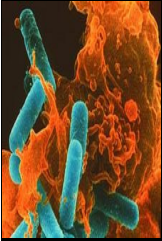
- Primary care information (PCT).
- Drug treatment case notes (treatment providers).



Case Study 1

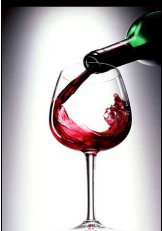
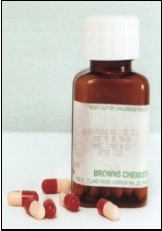
- Man, aged 41.
- Contact with pharmacy needle exchange, drug treatment and criminal justice interventions.
- Cause of death: endocarditiis.
- Toxicology: methadone.

- Outcome: no further action.



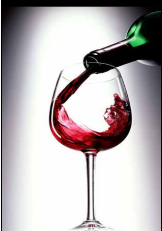
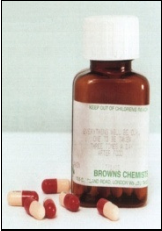
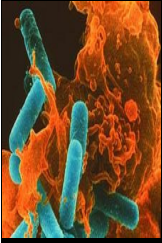
Case Study 2

- Woman, aged 31.
- Contact with drug treatment.
- Cause of death: intentional self harm.
- Review of case notes: mental health issues, evicted from a hostel for non payment of rent.
- Outcome: review housing protocols.



Case Study 3

- Man, aged 43.
- In contact with pharmacy needle exchange and drug treatment.
- Cause of death: multiple organ failure.
- Toxicology: heroin and methadone.
- Prescription: buprenorphine transdermal patches and methadone.
- Outcome: gather further information about circumstances surrounding transdermal patches being prescribed.

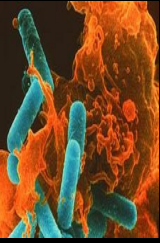


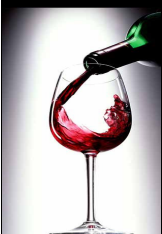
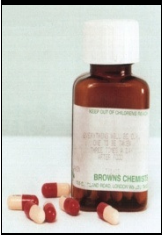
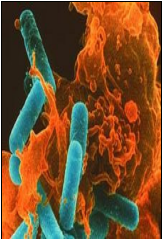
Case Study 4

- Man, aged 64.
- No contact with any drug related service.
- Cause of death: intentional self harm (poisoning with prescribed dihydrocodeine, non prescribed diazepam and alcohol).
- Outcome: no further action (non drug user).

Conclusions

- There are different definitions for the term 'drug related death'.
- What definition you use determines the number of deaths counted.
- Whatever definition you use, the term 'drug related death' does not capture all deaths associated with drug use.
- The term 'drug associated death' has been invented to capture those deaths from non acute causes.
- Some deaths of non drug users are included in drug related death figures.
- Alternative approach; review all deaths of drug users and where appropriate, initiate action.





**Thanks to everyone
involved with helping me
with this work**

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