GIG CYMRU NHS WALES
Iechyd Cyhoeddus Cymru
Public Health Wales

SUBSTANCE MISUSE PROGRAMME

Harm Reduction Database: Fatal and Non-Fatal Drug Poisonings 2016

About Public Health Wales

Public Health Wales exists to protect and improve health and wellbeing and reduce health inequalities for people in Wales. We work locally, nationally and internationally, with our partners and communities.

The Substance Misuse Programme works to address both the current and emerging public health threats in Wales and in line with the overarching strategic objective to '**reduce health inequalities, and prevent or reduce communicable and non-communicable disease, wider harms and premature death related to drugs and alcohol**'.

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1. Executive summary

The review of fatal and non-fatal drug poisonings was initiated in Wales following implementation of guidance by Welsh Government in June 2014. The Harm Reduction Database (HRD): Drug Poisoning Database was developed in order to support both the collection and analysis of data relating to such reviews, and as such has provided a mechanism in which trends in both fatal and non-fatal drug poisonings can be monitored both locally and nationally in Wales. This report provides data on the implementation of fatal and non-fatal drug poisoning reviews in Wales as recorded on the HRD: Drug Poisoning Database from 1st January to 31st December 2016.

Implementation of Drug Poisoning Reviews:

- From implementation of guidance in June 2014 to 31st December 2016, a total of 196 fatal and 330 non-fatal drug poisoning reviews have been conducted in Wales
- By the beginning of 2016 all APB regions had implemented a review process for fatal drug poisoning. In addition, two regions have fully implemented review mechanisms for non-fatal drug poisonings.
- Comparisons with Office of National Statistics (ONS) data in relation to Drug Misuse Deaths in Wales indicates that the proportion of Fatal Drug Poisoning cases being reviewed in Wales has increased from 32.1% in 2015 to 58.8% in 2016
- The mean number of information requests sent by the Case Review Coordinator via the HRD to local services was 12 notifications per case for fatal poisonings and 10 notifications per case for non-fatal poisonings

Fatal Drug Poisonings

- 113 Fatal Drug Poisoning cases were reviewed in 2016. Over 80 per cent were male, with median age of 37 years, and over 35 per cent were reported as living in non-secure housing or having no fixed abode (NFA) at the time of death
- In over 85 per cent of cases the drug poisoning incident occurred within a private residence, with less than 15 per cent of incidents occurring within a hostel facility or public place.
- In nearly 85 per cent of cases death was pronounced at scene, and where reported, resuscitation was attempted in nearly 65 per cent of cases
- Where reported, substances and/or paraphernalia were found at scene in 65 per cent of cases. Of which evidence of polydrug use was reported in nearly 65 per cent of cases. Where paraphernalia was found at scene, paraphernalia associated with injecting was identified in 83 per cent of cases
- In nearly a third of cases reviewed 'no known contact' was reported between the deceased and local services within a six month period prior to death
- Where any service contact was reported within 6 months prior to death, 74 per cent were reported to have been poly-drug users, and 67 per cent having had a history of injecting drug use

Non-fatal drug poisonings

- 157 Non-Fatal Drug Poisoning cases were reviewed during 2016
- Whilst both gender and housing status profiles of non-fatal drug poisonings remain consistent with those observed within the fatal drug poisoning cases, the age profile of non-fatal cases appeared younger (median = 35 years)
- A greater number of cases under age 25 years was reported amongst non-fatal drug poisonings compared to fatal cases, 12 per cent and 9 per cent respectively
- Similarly to Fatal Drug Poisonings reviewed, a little under a third of non-fatal cases had not received contact with local services within six months prior to incident
- Where service contact was reported within 6 months prior to incident, 61 per cent were reported as poly-drug users

RECOMMENDATIONS

1. Welsh Government and Area Planning Boards to work to develop a standardised national information sharing protocol to strengthen and formalise notification mechanisms between local Coroners, Police, Serious Untoward Incident (SUI) Accountable Officers and Drug Poisoning Case Review Coordinators. This will ensure all suspected drug poisonings are identified and reviewed in a timely manner. The development of such partnerships should aim to achieve consistency, sharing of findings and minimise duplication of effort between Coroner's inquest, SUI and drug poisoning reviews.
2. Area Planning Boards to explore expansion of first responder schemes within all homelessness services and where possible within local businesses / facilities identified as drug poisoning hotspots e.g. public toilets, restaurants, cafes, and community spaces.
3. Services should work to encourage all individuals using within private residences to adopt simple harm reduction steps[10] to prevent fatal drug poisonings (see *Recommendation 3 – Page 15*)
4. Drug Poisoning Leads and Case Review Co-ordinators to continue to expand and ensure a wide range of services are included and engaged as part of drug poisoning information sharing networks, especially Primary Care such as GP, and Mental Health services. This will maximise both quality and accuracy of information returned, and support identification of gaps in service provision and contact.
5. Welsh Government and Public Health Wales to work to establish a consensus seminar to better develop information sharing mechanisms between fatal drug poisoning review processes and coroners / toxicologists in Wales and work to agree standardised toxicology test requests. The seminar to include APB Drug Poisoning Leads, CRCs, Coroners, Police Coroner's Officers, toxicologists, pathologists, and SUI Investigating Officers.
6. APBs should ensure that all recommendations generated during drug poisoning multi-disciplinary reviews are recorded on the HRD: Drug Poisoning Database. These should be clearly listed within sections 'Summary and Conclusions' and 'Recommendations and Actions' so that they may be used to support the National Implementation Board for Drug Poisoning Prevention (NIBDPP), national reports, policy, and guidelines in relation to Drug Poisoning Prevention.

2. Guidance on fatal and non-fatal drug poisoning reviews

In June 2014 Welsh Government published guidance outlining the framework and procedures in relation to the review of fatal and non-fatal drug poisonings in Wales[1]. The guidance, developed in line with the key aims of the Welsh Government Substance Misuse Strategy Delivery Plan 2013-15 (Outcome 3.1)[2], provides guidance for all stakeholders within Wales who have a remit for reducing fatal and non-fatal drug poisonings related to substance misuse. This encompasses all stages for effective review including, initiation, multidisciplinary working and data collection, and the identification, implementation and dissemination of recommendations and lessons learned.

Implementation of the guidance supersedes the previous confidential review process[3] where fatal drug poisonings were reviewed post coroner's inquest. Under the new guidance 'case reviews' are undertaken locally and initiated as soon after the fatal drug poisoning as possible. Thus providing more timely information in relation to circumstances related to death and where best evidence indicates lessons could be learned (see *Figure 1*). The confidential review process highlighted the requirement for Drug Related Death Review Panels, where community and partnership working can support the identification of recommendations aimed at reducing both fatal and non-fatal drug poisonings locally and nationally.

Unlike the historic guidance, the new stipulates not only the review of fatal drug poisonings but also the addition of non-fatal drug poisonings (case definitions of which are defined within the guidance). Responsibility for the review of both poisoning types sits with a nominated Case Review Co-ordinator (CRC) as identified by the local Area Planning Board's (APB) Harm Reduction Group. The CRC co-ordinates partnership and collaborative working, between the Coroners service and support services within the locality in order to underpin circumstances related to death and ensuring accurate information is available for analysis. This includes the dissemination and collation of information requests, and establishment of multi-agency review meetings to assess evidence, and establish lessons learned.

In order to monitor progression of the guidance across Wales the National Implementation Board for Drug Poisoning Prevention (NIBDPP) was established and provided with responsibility for ensuring that Health Boards / APBs and all other stakeholders progress to full implementation of both existing and emerging recommendations as per the reviews. Furthermore it is the NIBDPP's role to work alongside professional membership bodies e.g. Royal Collage of General Practitioners Wales, and liaising with other relevant UK and European bodies with a remit for reducing drug related deaths and non-fatal poisonings.

To ensure both timely and accurate collection of data in relation to fatal and non-fatal drug poisoning reviews, both Welsh Government and Public Health Wales have supported the development of a robust database via the Harm Reduction Database (HRD) Wales (see *Appendix 1* for more information). The HRD provides a central system for the secure storage and collation of data, along with a mechanism in which information can be requested by the CRC from all stakeholders involved in the review of a drug poisoning event.

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[1] Welsh Government. (2014) Guidance for undertaking fatal and non-fatal drug poisoning reviews in Wales. Available at: http://gov.wales/docs/dhss/publications/140701substanceen.pdf

[2] Welsh Government. (2013) Working Together to Reduce Harm Substance Misuse Delivery Plan 2013–2015 (Outcome 3.1). Available at: www.wales.gov.uk/docs/substancemisuse/publications/130219StrategyDeliveryPlan13-15en.pdf

[3] Welsh Assembly Government. (2005) Guidance on developing local confidential reviews into drug related deaths in Wales. Available at: www.wales.gov.uk/dsjlg/publications/commmunitysafety/guidancedrugdeaths/guidancee?lang=en

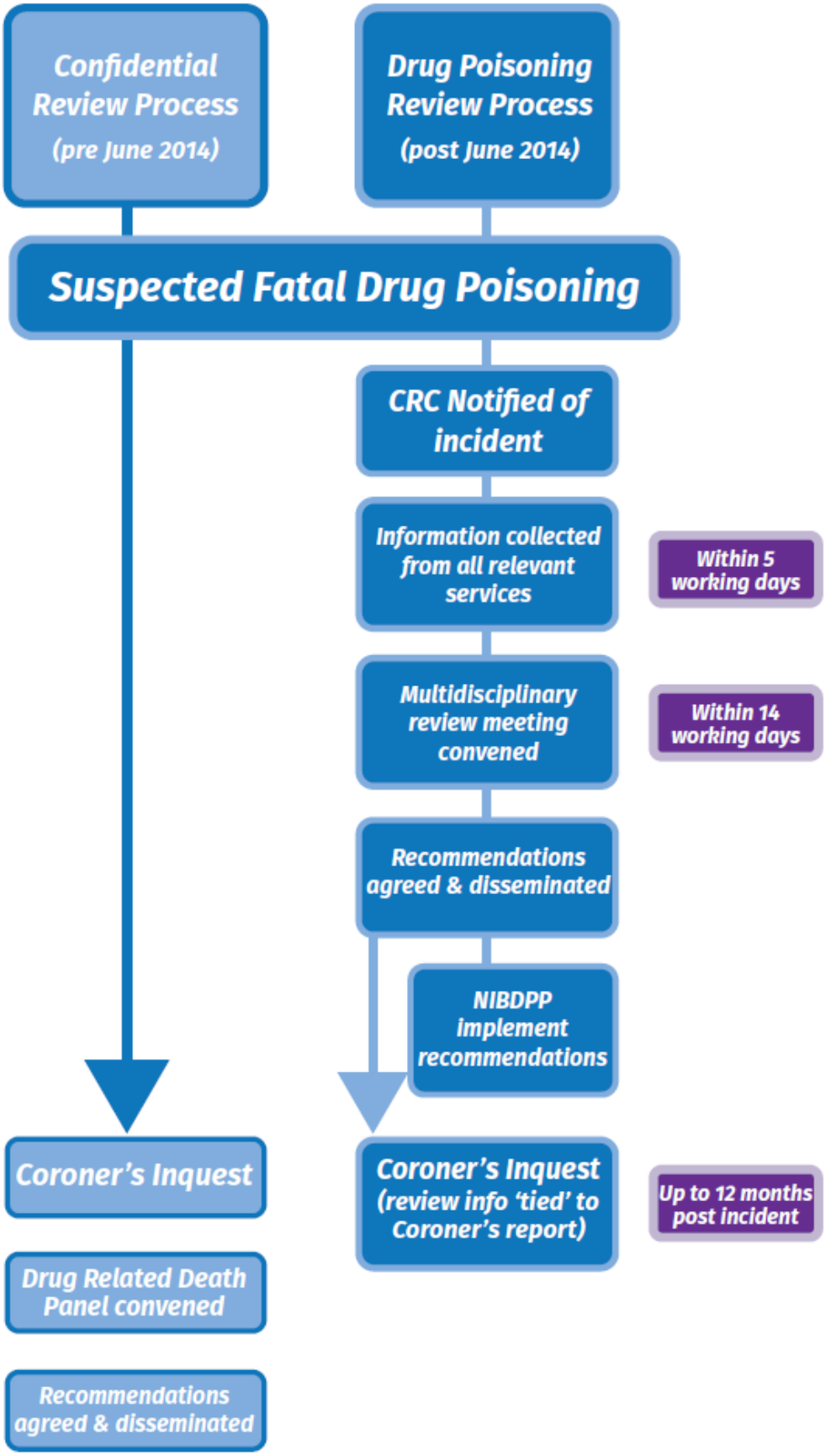


Figure 1: Comparisons of process and timeline between Confidential Review Process (pre June 2014) and the new Drug Poisoning Review Process (post June 2014)

3. Implementation of drug poisoning reviews in Wales

Following publication of the new guidance in June 2014 local APBs in Wales have worked to establish and implement mechanisms in which multidisciplinary reviews are conducted immediately following notification of a drug poisoning event. This work has included the appointment of local Drug Poisoning Case Review Coordinators and relevant support; identification of multidisciplinary review network; and the development of information sharing protocols and pathways. By the beginning of 2016 all APB regions had implemented a review process for fatal drug poisoning (see *Table 1*). This has since resulted in 196 fatal drug poisoning reviews having been conducted Wales wide since publication of Guidance (June 2014) up until December 2016.

In addition to fatal drug poisonings two APBs (ABMU & Cwm Taf) have implemented processes for the review of non-fatal cases (see *Table 1*). This work has resulted in the review of over 330 non-fatal drug poisoning across the two regions since publication of guidance up until December 2016.

This report provides data in relation to the fatal and non-fatal drug poisoning reviews conducted in Wales as recorded on the Harm Reduction Database Wales (HRD) during the period 1st January 2016 to 31st December 2016 (as per *Table 1*).

During this reporting period, pilot projects were conducted within Cardiff and Vale and Aneurin Bevan APB regions designed to test information sharing structures for non-fatal drug poisoning reviews. As such few cases were reviewed as part of these pilots. For the purpose of this report these cases have been excluded from analysis.

Table 1: Total Fatal and Non Fatal Drug Poisoning Reviews Conducted (June 2014 – December 2016)

Health Board	Fatal DP Reviews	Non-Fatal DP Reviews
ABMU*	31	277
Aneurin Bevan†	37	-
BCU*	7	-
Cardiff and Vale†	26	-
Cwm Taf	64	54
Hywel Dda	30	-
Powys Teaching	1	-
Total	**196**	**331**

* Fatal Drug Poisoning review process implemented in 2016
† Non Fatal Drug Poisoning review pilot conducted in 2016

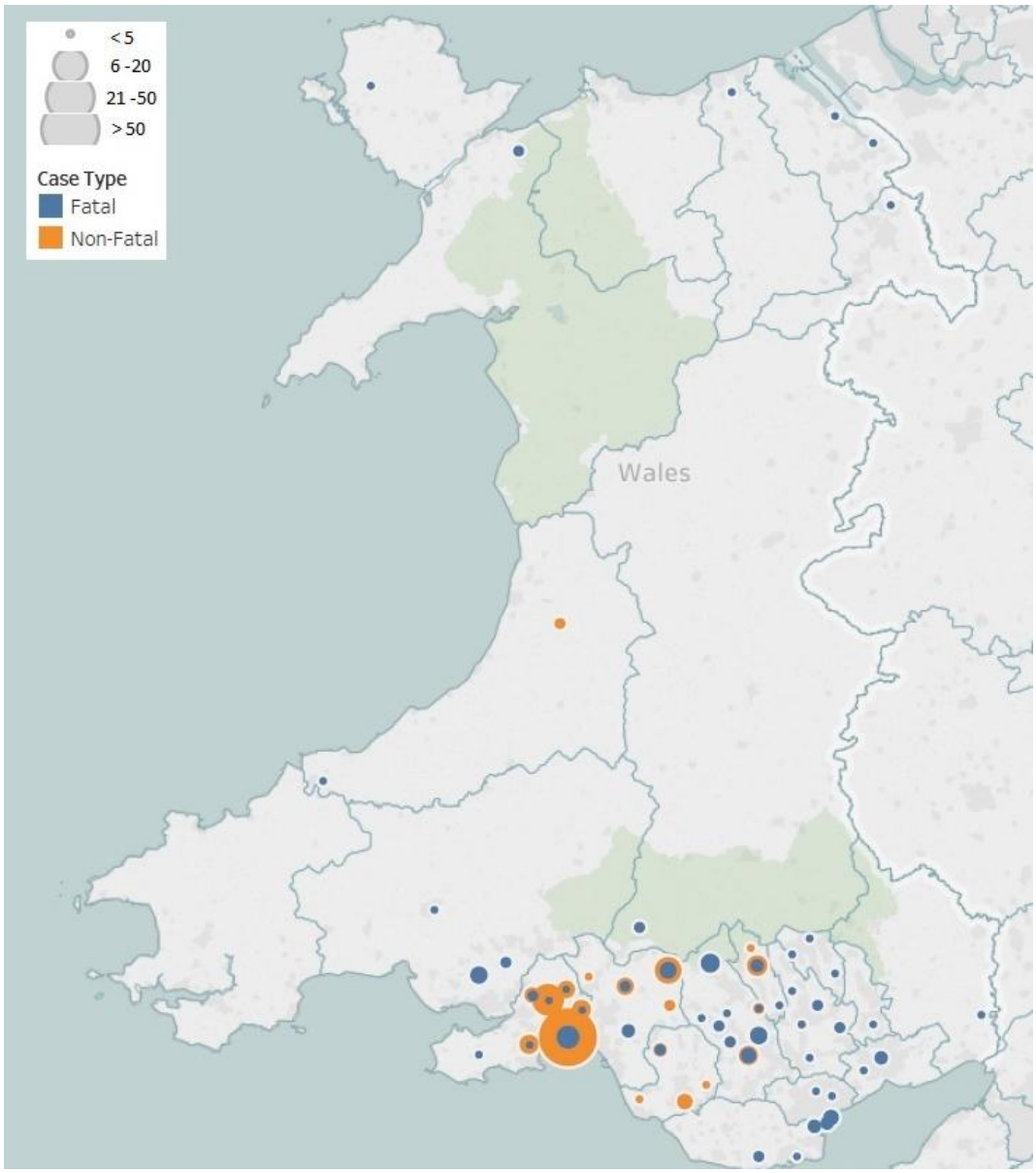


Figure 1: Postcode of residence - locations of fatal and non-fatal drug poisoning cases (January - December 2016)

Table 2: Total Fatal Drug Poisoning Reviews and ONS Drug Misuse Deaths, by Year

	2014	2015	2016
Fatal drug poisoning case reviews	29	54	113
Drug Misuse Deaths reported by ONS[4]	113	168	192
% Case reviews vs. reported by ONS	**25.6%**	**32.1%**	**58.8%**

[4] Office for National Statistics. (2017) Deaths related to drug poisoning in England and Wales: 2016 registrations

Comparisons with Office of National Statistics (ONS) data in relation to Drug Misuse Deaths in Wales indicates that the proportion of Fatal Drug Poisoning Cases being reviewed in Wales has increased over the three years since the new guidance was implemented (see *Table 2*). Given the parameters of the review process (i.e. all cases reviewed are unconfirmed suspected drug poisoning), it is expected that the number of cases reviewed annually should exceed the number of Drug Misuse Deaths reported by ONS. **As such further work needs to be completed to ensure all drug poisonings are reported to all relevant parties in a robust and timely manner.**

Recommendation 1

Welsh Government and Area Planning Boards to work to develop a standardised national information sharing protocol to strengthen and formalise notification mechanisms between local Coroners, Police, Serious Untoward Incident (SUI) Accountable Officers and Drug Poisoning Case Review Coordinators. This will ensure all suspected drug poisonings are identified and reviewed in a timely manner. The development of such partnerships should aim to achieve consistency, sharing of findings and minimise duplication of effort between Coroner's inquest, SUI and drug poisoning reviews.

4. Fatal drug poisoning reviews

Demographics

The demographic profiles for the 113 fatal drug poisoning reviews conducted across Wales in 2016 can be viewed in *Table 3*.

Table 3: Demographics: All Wales

	2016 (*N*=113)
% Male	81.4%
Median Age (range)	37 years (19-56 years)
% < 25 years	8.8%
% BAME †*	< 5%
% Non-secure housing / NFA*	36.2%

***** Where data was available
† BAME: Black and Asian Minority Ethnic groups

The most frequent age band reported was 35-39 years, representing 30.1 per cent (n=34) of cases reviewed. This differed between genders where over half of female cases were aged 35 years or younger at time of death, compared to less than 30 per cent of male cases (see *Figure 3*).

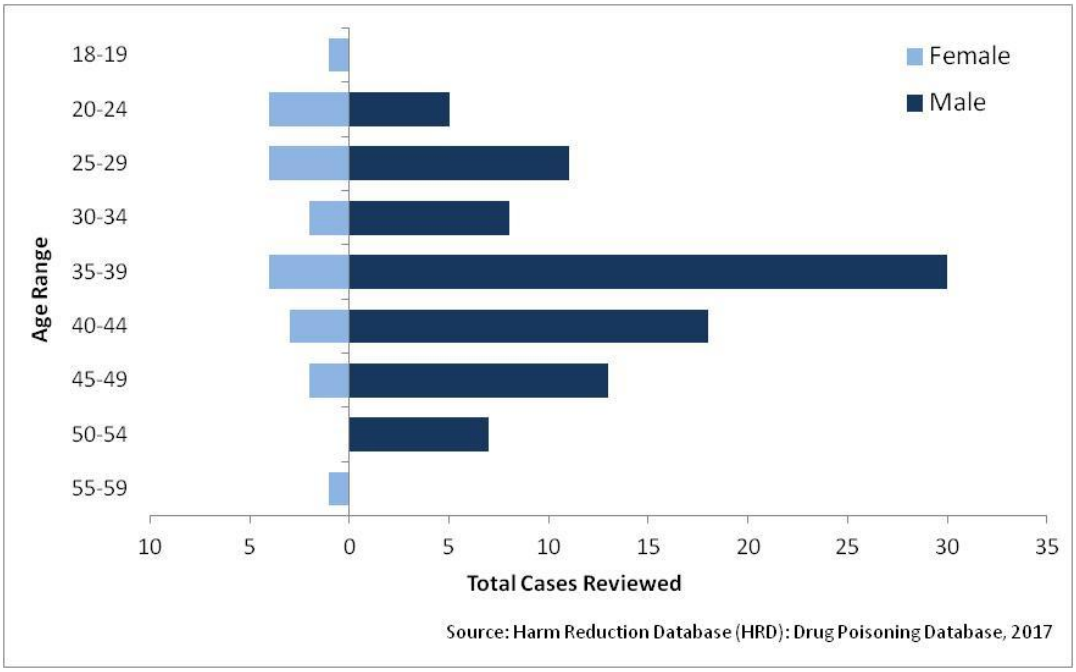


Figure 3: Gender and Age Range at Time of Death for Fatal Drug Poisoning Cases Reviewed in Wales (January - December 2016)

When compared with the key demographics of the 192 drug misuse deaths reported by ONS, there appeared to be consistent pattern in recorded age ranges[5]. However, overall representation of male cases appeared to be greater amongst those reported within the fatal drug poisoning case reviews when compared to ONS.

Housing status information was sought for all cases reviewed in 2016. Where reported (61.1 per cent; n=69) over a third of cases were listed as living in non-secure (e.g. hostel accommodation) or having no fixed abode (e.g. street homeless, 'sofa surfing').

[5] Public Health Wales, Health Protection Division. (2017) Data Mining Wales: The Annual Profile of Substance Misuse in Wales 2016-17

Circumstances and nature of death

Location of fatal drug poisoning

Location of death was recorded for 78.7 per cent (n=89) of all fatal drug poisonings reviewed during 2016. For the majority of fatal drug poisonings reviewed death occurred within a private residence (see *Figure 4* for detail). This highlights the need for further exploration to best identify methods to encourage harm reduction measures and maintaining safety are followed whilst use is conducted within a private residence.

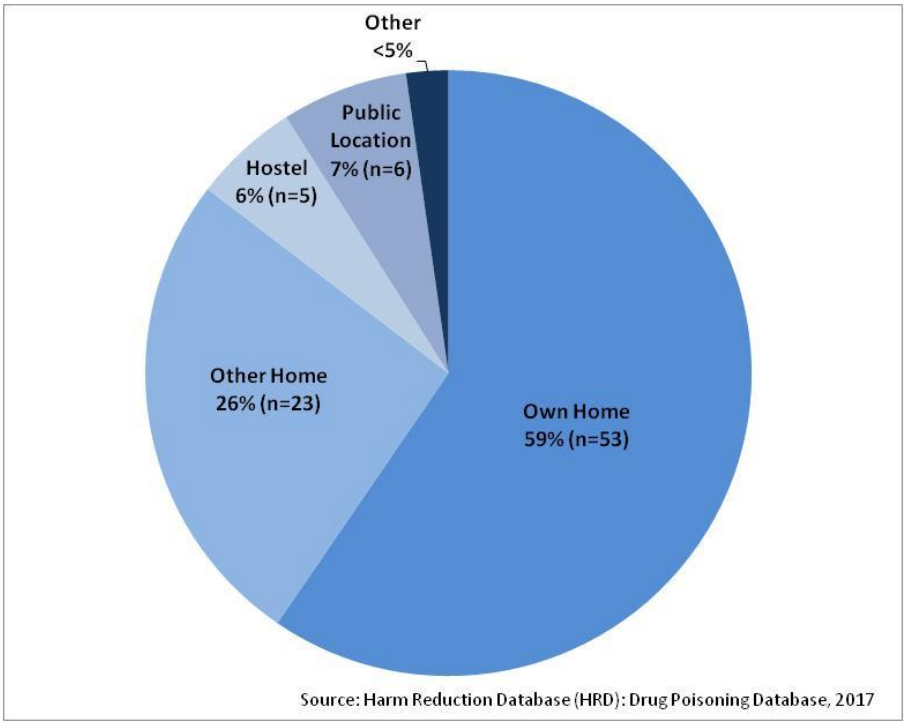


Figure 4: Location of death for fatal drug poisoning cases reviewed (January - December 2016

Whilst the housing status of over a third of cases was reported as non-secure or homeless, **less than 15 per cent of deaths occurred within a hostel or public location**. Research has previously indicated that lifetime and 12 month drug poisoning rates are highest amongst those users attending a hostel environment[6]. Change to the Medicines Act 1968 in October 2015[7] have facilitated the ability for hostel staff to access carry Take Home Naloxone for use in a life saving situation. In addition, a select number of hostels have progressed in implementing first responder schemes alongside local ambulance services designed to prevent fatal drug poisoning both on and off site. The expansion such first responder schemes are essential within all hostel environments in addition to the continuation of Take Home Naloxone training and distribution programmes (see *Recommendation 2*).

[6] Holloway K R, Bennett T H, & Hills R. (2016) Non-fatal overdose among opiate users in Wales: A national survey. *Journal of Substance Use*; 00 (00)
[7] The Human Medicines Act (Amendment) (No.3) Regulations (2015) www.legislation.gov.uk/uksi/2015/1503/made

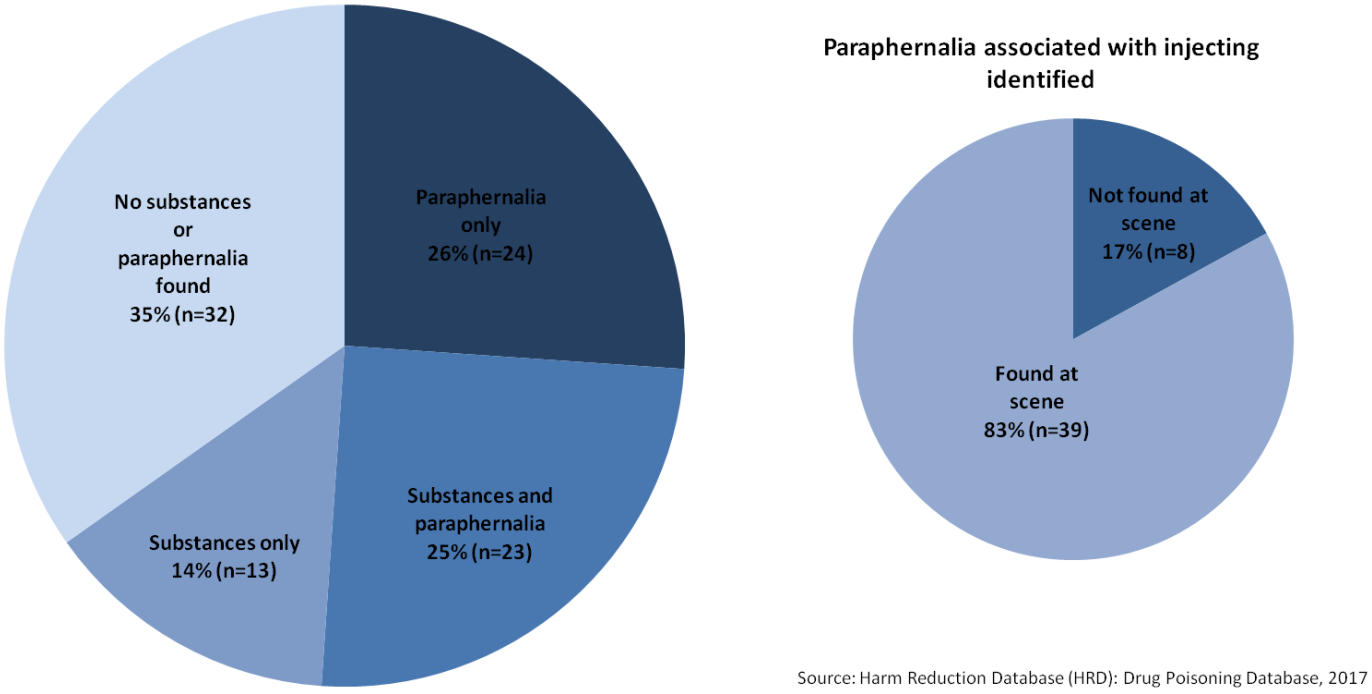
Where recorded, **83.7 per cent (n=77) of fatal drug poisoning cases were pronounced dead at scene**. Fewer than 16 per cent of cases were pronounced dead in a secondary location such as A&E or in hospital. Currently no standardised recording mechanism is used to identify whether such fatal drug poisoning cases occurred whilst using substance alone or in the company of others.

Recommendation 2

Area Planning Boards to explore expansion of first responder schemes within all homelessness services and where possible within local businesses / facilities identified as drug poisoning hotspots e.g. public toilets, restaurants, cafes, and community spaces.

Substances found at scene

Where information was available, 81.4 per cent (n=92), both substances and/or paraphernalia were found at scene in 65.2 per cent (n=60) of fatal drug poisoning cases (see *Figure 5*). Where substances were found at scene, **multiple substances were reported in 63.9 per cent (n=23) of events indicating poly-drug use.**



Source: Harm Reduction Database (HRD): Drug Poisoning Database, 2017

Figure 5: Fatal drug poisoning review cases where paraphernalia and/or substances found at scene

Substances found at scene included cannabis, unconfirmed heroin samples and white powders, benzodiazepines, a wide range of prescription only medicines (including gabapentinoids), and opiate substitution medication e.g. methadone, buprenorphine . Where substances were found at scene, prescription only medicines were listed in 61.1 per cent (n=22) of cases. This data should be treated

with caution as compared to illicit drugs the identification of POMs can often be supported by the availability of packaging found at scene e.g. blister packs and boxes.

Resuscitation attempts

Information related to whether resuscitation was attempted was listed in 47.8 per cent (n=54) of fatal drug poisoning cases reviewed. In cases where details were not listed (n=59), over half (n=33) had been pronounced dead at scene, indicating that resuscitation attempts may have been beyond effective at time of discovery.

Where information was recorded, resuscitation was attempted in 62.9 per cent of cases (n=34). In those cases where resuscitation was not provided (n=20) death was pronounced at scene. Currently no standardised recording mechanism is used to identify whether such fatal drug poisoning cases occurred whilst using substance alone or in the company of others. As such no information can be provided as to whether such fatal poisoning could have been prevented. Past surveys have indicated that a large proportion of non-fatal drug poisonings events occur in the company of others[8], which has acted as a protective factor in order to reduce death. However, barriers preventing successful use of THN and life saving actions continue to be presented e.g. use of substances within isolated and difficult to reach locations, alone, or in company of heavily intoxicated others[8].

Where resuscitation was provided, Take Home Naloxone use was reported in 23.5 per cent (n=8) of cases. Current evidence continues to emphasise the willingness of non-paramedic bystanders to perform life-saving actions and that when used THN has proven to be highly effective intervention in preventing fatal drug poisonings[9] [10].

Recommendation 3

Services should work to encourage all individuals using within private residences to adopt simple harm reduction steps[10] to prevent fatal drug poisonings:

1. Use only when in sight of someone capable of identifying and responding to a drug poisoning.
2. Adopt a 'designated smoker' approach - where an individual smokes a small amount rather than injects so that they are better able to respond in the event of a drug poisoning.
3. If insistent on using out of sight, let someone know where you are going, leave the door unlocked and make sure the door cannot be blocked

[8] Holloway, K. & Hills, R. (2017) A Qualitative Study of Fatal and Non-Fatal Overdose Among Opiate Users in South Wales

[9] Holloway K R, Bennett T H, & Hills R. (2016) Non-fatal overdose among opiate users in Wales: A national survey. *Journal of Substance Use*; 00 (00)

[10] Public Health Wales, Health Protection Division. (2017) Harm Reduction Database Wales: Take Home Naloxone 2016-17

5. Non-fatal drug poisoning reviews

The demographic profiles for the 157 non-fatal drug poisoning reviews conducted in 2016 can be viewed in *Table 3*.

Table 3: Demographics: All Wales

	2016 *(n=157)*
% Male	71.9%
Median Age (range)	35 years (18-57 years)
% < 25 years	11.5%
% BAME* †	nil
% Non-secure housing / NFA*	48.3%

***** Where data was available
† Black and Asian Minority Ethnic groups

Whilst there were similarities in gender, housing status, and most commonly reported age range (35-39 years) between fatal and non-fatal drug poisoning cases, the median age of non-fatal cases was typically younger. Furthermore, a greater prevalence of cases under the age of 25 years was reported amongst non-fatal drug poisonings when compared to fatal cases. Research indicates that on average, the rate of non-fatal drug poisonings amongst individuals who had lifetime history of drug poisoning events was 2 survived events per year[11]. As such fatal drug poisoning cases would likely have a preceding history of non-fatal drug poisonings events.

Much like fatal drug poisonings, analysis indicates that female cases were typically younger than male counterparts, with 25-29 years age group making up the most commonly reported age range (see *Figure 6*).

[11] Holloway K R, Bennett T H, & Hills R. (2016) Non-fatal overdose among opiate users in Wales: A national survey. *Journal of Substance Use*; 00 (00)

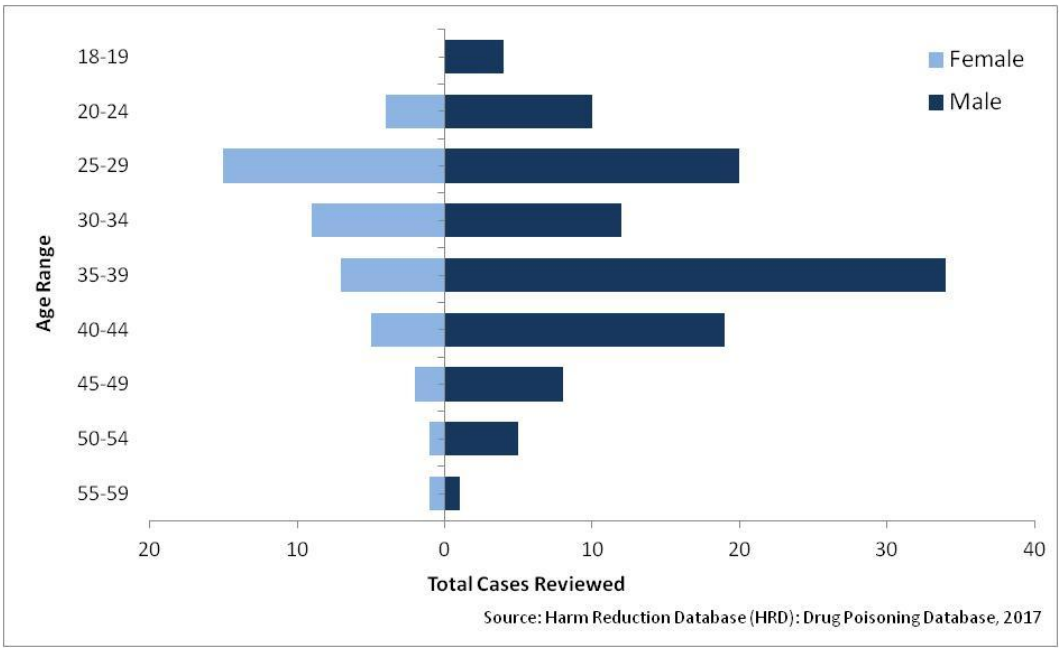


Figure 6: Gender and Age range at time of incident for Non-Fatal Drug Poisoning cases reviewed in Wales (January – December 2016)

6. Information from services – Fatal & non-fatal drug poisonings

The development of the HRD: Drug Poisoning Database in June 2015 provided a unified platform throughout Wales for information to be collected from local services in relation both fatal and non-fatal drug poisonings (see *Appendix I*). The aims of this function; to identify level of contact with local services prior to incident, and obtain information that may be pertinent to the review process.

The type of services receiving information request included; voluntary and statutory sector substance misuse services, young people's substance misuse services, community mental health teams, CAMHS, Integrated Offender Intervention Scheme (IOIS), HM Prisons, probation (National Probation Service & Community Rehabilitation Company), police, social services, local authority housing, homelessness support (including hostels), and A&E.

Figure 7: Example of services engaged in multidisciplinary review of Fatal and Non-Fatal Drug Poisonings in Wales

The following section provides summary of key findings in relation to the information returned by services as part of the reviews conducted in 2016.

Feedback from Services

For those drug poisonings reviewed via the HRD, the mean number of information requests sent by the CRC via the HRD to services was 12 notifications per case for fatal poisonings, and 10 notifications per case for non-fatal poisonings. This is an increase on the mean number of notifications per case listed in previous years. However, the number of information requests sent by CRCs to services continues to vary across APB regions (see *Table 6* for detail).

At the time of writing this report only one APB, Aneurin Bevan, had successful received information from Primary Care services such as GP practices following request. Ensuring GP engagement as part of the review process is pivotal in obtaining information in relation to an individual's physical and mental health, and prescribing history.

Table 6: Mean number of information request per case sent via the HRD to services by APB

	Fatal DP *M (range)*	**Non-Fatal DP** *M (range)*
Aneurin Bevan	**23** (20-28)	-
ABMU	**11** (7-14)	**11** (6-15)
BCU	**11** (9-13)	-
Cardiff and Vale	**19** (16-20)	-
Cwm Taf	**7** (4-8)	**6** (5-9)
Hywel Dda	**5** (4-6)	-
Powys Teaching	-	-
Wales	**12** (4-28)	**10** (5-15)

Recommendation 4

Drug Poisoning Leads and Case Review Co-ordinators to continue to expand and ensure a wide range of services are included and engaged as part of drug poisoning information sharing networks, especially Primary Care such as GP, and Mental Health services. This will maximise both quality and accuracy of information returned, and support identification of gaps in service provision and contact.

Fatal Drug Poisonings

Known service contact: For those fatal cases reviewed, 64.6 per cent (n=73) had been in contact with any service in the 6 months prior to death. Of which, 76.7 per cent (n=56) had been in contact within a month prior to death. This indicates that in nearly **a third of cases reviewed 'no known contact' was reported between the deceased and local services within at least six months prior to death** (see *Figure 7*). Further analysis indicates that of those known to local services nearly two thirds of cases (n=63) had received contact with a statutory and voluntary sector substance misuse services (including Integrated Offender Intervention Scheme (IOIS)) in the 6 months prior to death.

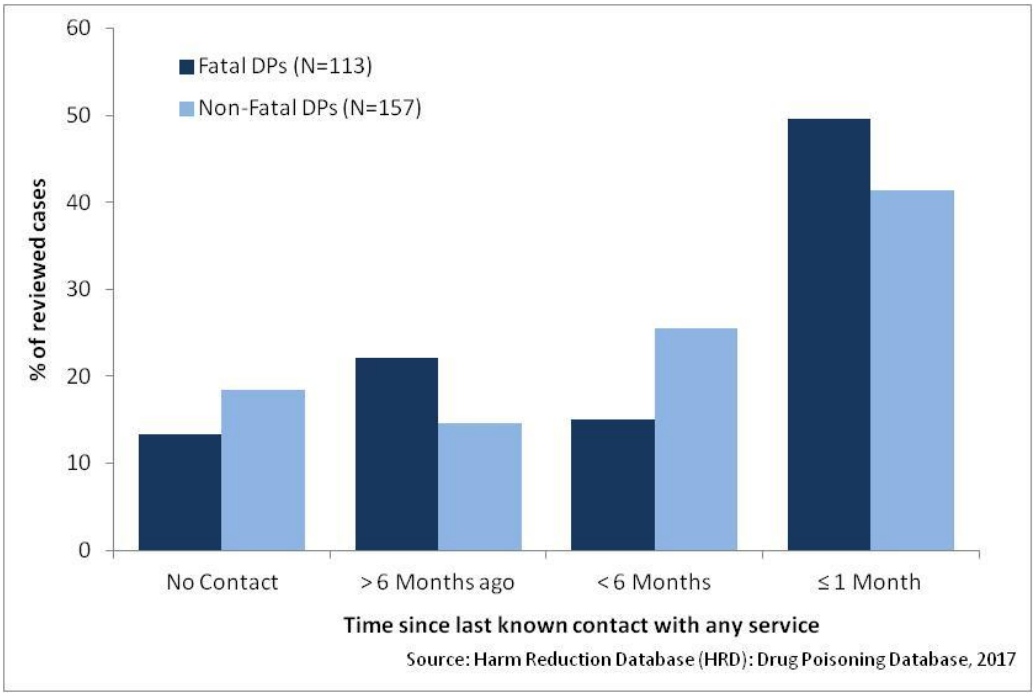


Figure 7: Length of time since last known contact with any service for fatal and non-fatal drug poisoning cases

Known substance history: Substance use was known and reported in 83.6 per cent (n=61) of fatal cases in contact with services six months prior to death. Of which 73.8 per cent (n=45) were reported to have been polydrug users and having used two or more substances. Furthermore, 67.2 per cent (n=41) had a history of injecting. Heroin/ Morphine use and history of hazardous/dependant alcohol use was reported in 77.1 per cent (n=47) and 39.3 per cent (n=24) of cases respectively (see *Figure 8*).

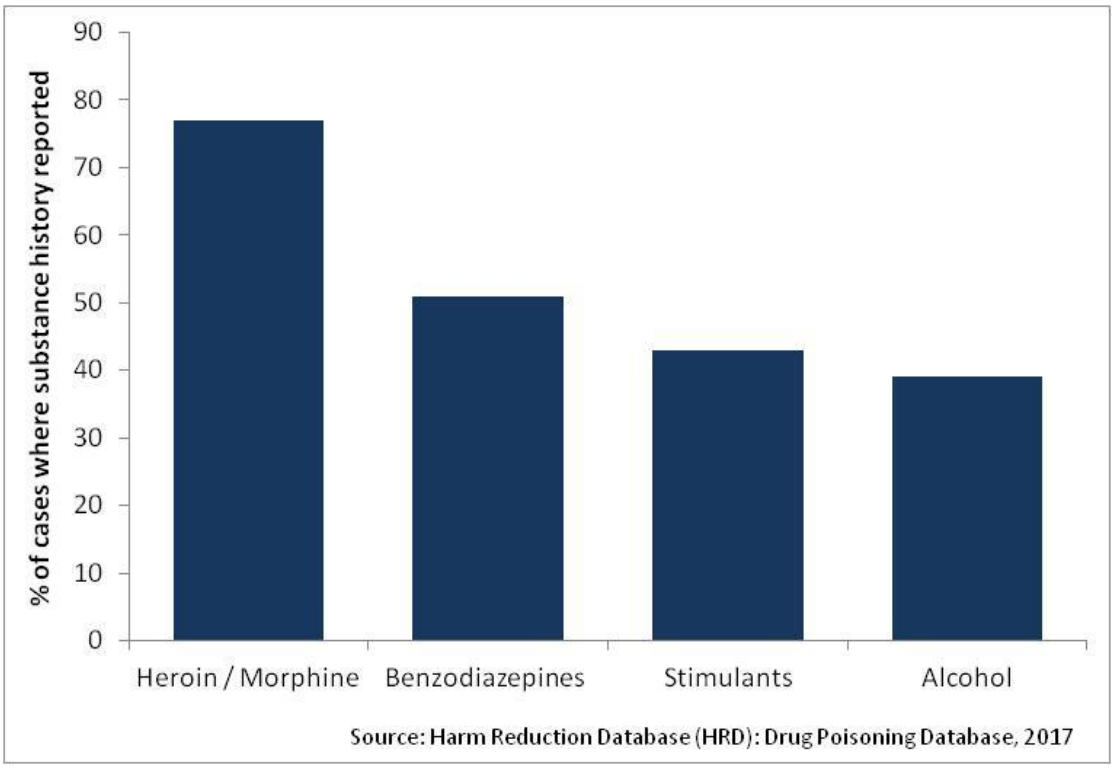


Figure 8: Proportion of fatal drug poisoning cases where substance history reported, by substance (n=61)

Mental Health: Information in relation to mental health was reported in 100 per cent (n=73) of fatal cases in contact with services six months prior to death. Of which 54.6 per cent (n=40) were reported as having history of mental health illness or suicidal/self-harming behaviour. Unfortunately, the quality of information and level of detail pertaining to mental health histories varied between services and as such no further detailed analysis could be conducted.

Non-Fatal Drug Poisonings

Known service contact: Contact with any service 6 months prior to incident was reported within 66.9 per cent (n=105) of cases. A further 14.6 per cent (n=23) were known to services but had not received contact for at least 6 months prior to incident, and 18.5 per cent (n=29) were not known to any service (see *Figure 7*). Similarly to those fatal cases reviewed, this indicates a little under a third of non-fatal cases had not received contact with local services within six months prior to incident.

Amongst those non-fatal cases in contact with services, over two thirds (n=88) of cases had received contact with at least one statutory and voluntary sector substance misuse service (including Integrated Offender Intervention Scheme (IOIS)) in the 6 month period prior to incident. Whilst history of contact with SMS services appears to be similar between both fatal and non-fatal drug poisoning cases, no numerical data is currently captured to ascertain frequency of contacts or gaps in treatment.

Individuals in regular contact with support services are likely to benefit from greater exposure to harm reduction advice and information, including access to fatal drug poisoning preventative measures such as Take Home Naloxone provision.

Known substance history: Substance use was known and reported in 80 per cent (n=84) of non-fatal cases whom had been in contact with services six months prior to incident. Of which 60.7 per cent (n=51), were reported to having used two or more substances, and 61.9 per cent (n=52) had known history of injecting drug use. Heroin / Morphine was the most frequently reported substance, with nearly 90 per cent of cases (n=75) having a known history of use (see *Figure 9*).

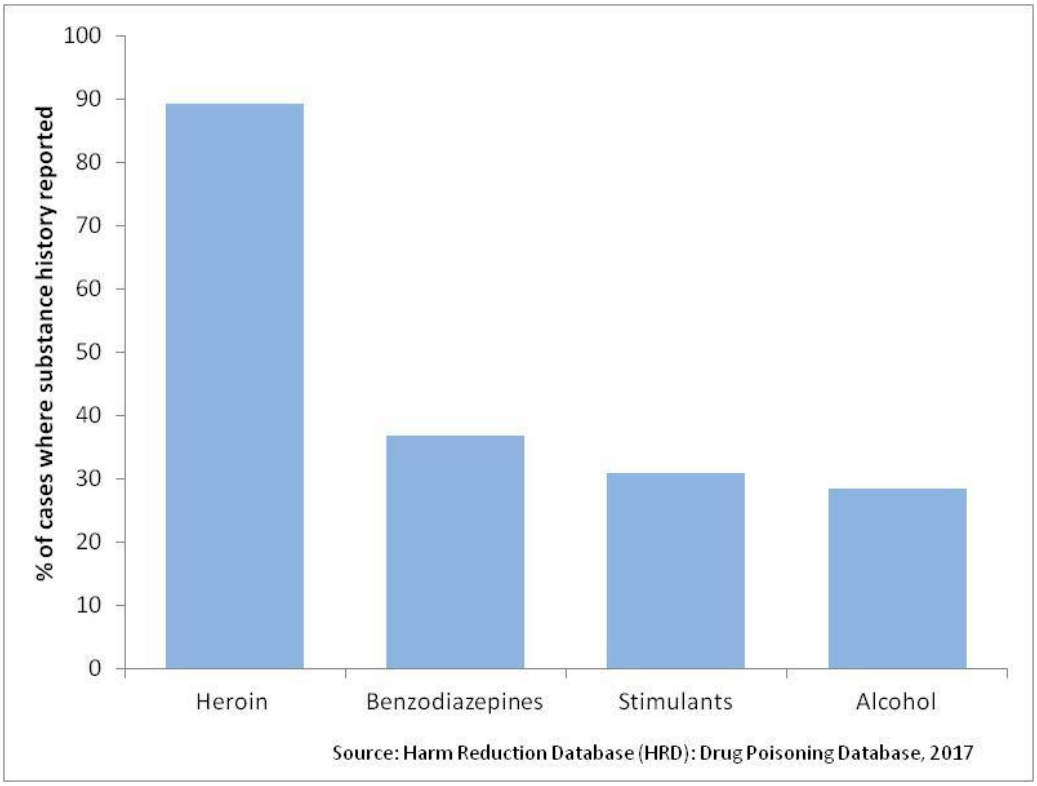


Figure 9: Proportion of non-fatal drug poisoning cases where substance history reported, by substance (n=84)

Mental Health: Information in relation to mental health was reported in 100 per cent (n=105) of fatal cases in contact with services six months prior to death. Similarly to fatal drug poisoning cases, 54.2 per cent (n=57) of non-fatal drug poisoning cases in touch with services were reported as having history of mental health illness or suicidal/self-harming behaviour. Unfortunately, both the engagement and participation of mental health services e.g. CMHT as part of the multidisciplinary review process was low throughout Wales, as such no further information can be ascertained regarding the level of contact that occurred prior to incident (see *Recommendation 4*).

7. Toxicology and inquest findings

In line with the guidance published by Welsh Government, the HRD: Drug Poisoning Database provides functionality for the recording of both toxicology and coroner's findings as part of the review of fatal and non-fatal drug poisonings.

Since all drug poisoning reviews are initiated immediately following notification of an incident (before any toxicology and coroner's findings are available), each case should be treated as a 'suspected drug poisoning' until confirmed. The availability of toxicology and coroner's findings are therefore an integral part in the closure of case reviews and solidifying the development of associated recommendations.

At the time of writing this report few areas had established robust mechanisms which provided toxicology findings for use during multidisciplinary reviews and in which could be recorded on the HRD: Drug Poisoning Database. In addition, information relating to outcome of inquest and cause of death (with the inclusion of ICD-10 codes) were listed for only a small number of reviews in Wales. The limited availability of such information makes it difficult to draw information from cause of death and generate final conclusions in relation to the suspected drug poisoning being reviewed. As such this continues to pose a challenge to those responsible for the development of recommendations relating to fatal and non-fatal drug poisonings in Wales. Whilst it is recognised that statutory restrictions may prevent the release of information used as inquest evidence prior to completion, consensus must be achieved surrounding information sharing processes in order to ensure toxicology and inquest findings are made available to the appropriate CRC as soon as is reasonably practical.

Recommendation 5

Welsh Government and Public Health Wales to work to establish a consensus seminar to better develop information sharing mechanisms between fatal drug poisoning review processes and coroners / toxicologists in Wales and work to agree standardised toxicology test requests. The seminar to include APB Drug Poisoning Leads, CRCs, Coroners, Police Coroner's Officers, toxicologists, pathologists, and SUI Investigating Officers.

8. Recommendations and actions following Reviews

The following recommendations and actions have been established following the multi-disciplinary drug poisoning reviews for fatal and non-fatal drug poisonings occurring in 2016. Whilst nearly all APBs conducted thorough and systematic drug poisoning reviews during this time period, the availability of clear recommendations for each case as recorded on the HRD was limited.

Recommendation 6

APBs should ensure that all recommendations generated during drug poisoning multi-disciplinary reviews are recorded on the HRD: Drug Poisoning Database. These should be clearly listed within sections 'Summary and Conclusions' and 'Recommendations and Actions' so that they may be used to support national reports, policy, and guidelines in relation to Drug Poisoning Prevention.

Partnership working, pathways and best practice

1. The availability of toxicology findings for use during multidisciplinary reviews was often hard to obtain or delayed. Furthermore, where use of novel and new psychoactive substances (NPSs) were suspected there appeared to be a disjoint between information ascertained at scene / uncovered as part of review process and those substances listed as part of toxicological screening. Further work should be completed to better develop information sharing mechanisms between fatal drug poisoning review processes and coroners / toxicologists in Wales and work to agree standardised toxicology test requests.

2. Drug poisoning in relation to unplanned or sudden discharge from residential treatment / detox has been identified as an area of concern within individual drug poisoning multidisciplinary reviews. Individuals leaving residential treatment / detox are at elevated drug poisoning risk due to reduced tolerance levels should they relapse into previous patterns of use. Further work should be completed in order to ensure relevant harm reduction advice, and where possible Take Home Naloxone is provided prior to discharge.

3. APBs should ensure joint working between local substance misuse services and community pharmacy based NSP providers in order to better promote and ensure open and equal access to harm reduction, psychosocial support and clinical interventions.

Drug Poisoning Prevention Messages and Take Home Naloxone Provision

1. Services should ensure further promotion and delivery of first aid/naloxone training for partners, family and carers of individuals experiencing non-fatal drug poisoning events.

2. Services should continue to promote and raise awareness of issues relating to poly-drug use (including prescribed medication) and potential contra-indications, and dangers of using alone to all clients – including those entering a period of abstinence.

Access and engagement

1. Service providers should aim to offer outreach and engagement programmes in order to ensure services are accessible and equitable to hard to reach groups, including; the homeless, young people, individuals only in contact with pharmacy services, BAME and rural communities.

2. Services offering Needle and Syringe Programmes (NSPs), including community pharmacy providers, should ensure harm reduction advice and information is offered in relation to all substances used by the client and promote route transition options (including provision of foil) where appropriate.

9. Appendix 1- Harm Reduction Database: Drug Poisoning Database

What is the Harm Reduction Database?

In 2010 Public Health Wales, supported by Welsh Government, introduced the Harm Reduction Database (HRD). The HRD is a web-based tool for recording anonymised demographic, substance use, risk and outcome data on a range of interventions including needle and syringe programmes, Take-home Naloxone, blood borne virus testing and long-acting reversible contraception. The implementation and use of such modules has resulted in the HRD being used in over 263 NSPs, and 49 Take Home Naloxone registries Wales wide. Current stakeholders include statutory and third sector substance misuse services, community pharmacy, Integrated Offender Intervention Services (IOIS), homelessness and housing support, prisons, and police. As such the HRD has been recognised as an effective data recording system in Wales.

HRD: Drug Poisoning Database

To better support the collection, recording and management of data relating to the review of both fatal and non-fatal drug poisonings in Wales the HRD was developed during 2014/15 to include a distinct and separate module known as the HRD: Drug Poisoning Database. The development of which has provided a robust mechanism in data collection, enabling a better understanding of the circumstances underpinning drug poisonings and processes/interventions required to prevent future events.

Configuration and access to the HRD: Drug Poisoning Database is securely managed by Public Health Wales, with area specific recording and reporting permissions issued to Case Review Co-ordinators (CRCs) and drug poisoning leads across the 7 Area Planning Boards in Wales. The HRD: Drug Poisoning Database provides CRCs with the following functionality:

- **Disseminate electronic information requests** as per the Welsh Government guidance to sentinel contributors and local services via the system's secure network
- **Development of local service networks** for the review of drug poisonings and manage/support/audit services in responding to information requests
- **Review key milestones** e.g. multi-disciplinary review meeting dates
- **Record findings** relating to toxicology, pathology, histology, and final coroners verdict
- **Consolidate and collate information** provided by services to support development of recommendations and lessons learnt for APB and NIBDPP review
- **Generate time defined local aggregate reports**

Implementation of HRD: Drug Poisoning Database

The HRD: Drug Poisoning Database was implemented by Public Health Wales in full in June 2015 following system configuration and development in line with the Welsh Government Guidance for the undertaking of fatal and non-fatal drug poisoning reviews.

Previous reports detailing drug poisoning reviews conduced throughout Wales can be obtained from: www.publichealthwales.org/substancemisuse

Data captured

The data captured via the HRD: Drug Poisoning Database can be categorised by the means in which it is entered onto the database; either via the CRC, or via local services. As such the following data items can be recorded:

By the Case Review Co-ordinator:

The following information is collected and populated on the HRD: Drug Poisoning Database by the reviewing APB CRC from notification of a drug poisoning incident up until close of review.

1) Case Details

The 'case details' section is a profile of a case individual's demographic information and key contacts as indicated by the Case Review Coordinator following notification of a drug poisoning incident, as such it includes:

- **Individual details** including – NHS number, home address, home postcode, and registered GP
- **Demographics** including – age at time of incident, gender, ethnicity
- **Incident details** including – date of incident, location of incident, coroner (if fatal)

2) Circumstances and nature of death (fatal drug poisonings only)

The 'circumstances and nature of death' section provides an overview of information relating to early findings and circumstances surrounding a fatal drug poisoning as reported to the Case Review Coordinator, as such it includes:

- **Location details** including – location individual was discovered, location individual was pronounced dead
- **Items found at scene** including – substances and paraphernalia found at scene
- **Resuscitation attempts provided**

3) **Investigative tests** including – Toxicology (samples taken and result), pathology, and histology findings

4) **Coroners verdict (fatal drug poisonings only)** including – medical cause of death, outcome of inquest, and date of inquest

By local services:

Information is collected and populated onto the HRD: Drug Poisoning Database by the local services following the issue of an information request by the reviewing CRC of a drug poisoning incident. Upon receipt of the information request, local services are given the opportunity to state whether the case individual was 'known' or 'not known' to the service. Where 'known', the service is asked to provide further details surrounding the reason for contact and key information relating to the individual in order to aid the multidisciplinary review and support the development of lessons learnt. As such the following information may be provided:

- **Contact details** including – date of first contact, date of last contact, reason for contact
- **Mental health and physical/medical conditions**
- **Substances used (non-prescribed)** including – substance (drugs and alcohol), frequency, route of administration, length of use
- **Opiate prescribed medication** including – type of medication, dose, frequency, date issued, prescribed by
- **Other prescribed medication** including – type of medication, dose, frequency, date issued, prescribed by
- **Custodial history (Prison and Police services only)** including – custody within one month prior to incident, location, duration, date of discharge
- **Interventions offered**
- **Onward referrals made by the service, and other known service contacts**
- **Known barriers to support**

Figure 10: Types of information fed into Multidisciplinary Review Panels for development of local and national recommendations