Public Health England

Protecting and improving the nation's health

Non-fatal overdose among people who inject drugs in England: 2017 report

Data from the Unlinked Anonymous Monitoring Survey of HIV and Hepatitis in People Who Inject Drugs

Health Protection Report
Volume 11 Number 39
3 November 2017

Non-fatal overdose among people who inject drugs in England: 2017 report

Overdose poses a significant risk among people who inject drugs (PWID) and is a major cause of mortality [1]. There has been a notable rise globally in overdose deaths, with the US reporting a tripling from 1999-2017 [2], alongside significant increases in Australia and Canada [3-6]. Whilst the UK has a lower rate of overdose deaths than the US, it is higher than the rest of Europe, and there have been similar increasing trends in overdose deaths in recent years [7-10]. Considerable investigation and response into the extent of these trends has occurred [11], however there is limited data available for non-fatal overdose in the UK. To address this, the Unlinked Anonymous Monitoring (UAM) Survey [12] included questions on overdose and naloxone use in 2013. This report presents the data from 2013-2016 on self-reported non-fatal overdose among PWID.

Background on overdose deaths

Opioid overdose, often heroin, can be due to the variety and limited awareness of the drug purity being consumed [8,13,14]. Overdose is also associated with polysubstance use where the additional use of alcohol or benzodiazepines alongside heroin increases the depressant effect [8]. Concurrent stimulant use (for example cocaine) can mask the depressant effect resulting in higher heroin use which increases the likelihood of overdose [1].

In 2016, the highest figure of 2,383 on record was registered of drug misuse deaths in England; a 3.6% increase on the previous year [15]. Since 2012 heroin related deaths in England and Wales have more than doubled. The largest increase in drug misuse death rates in England and Wales is among those aged 40-49 (73% increase from 2012-2016) [10], a trend consistent with the ageing population of PWID [15]. The ageing cohort of heroin users is one of the factors identified as a cause of the rise in drug related deaths, due to deteriorating general health and increased susceptibility to overdose [15].

Naloxone is an opioid-antagonist which temporarily blocks opioid receptors and reverses respiratory depression and sedation. With training, naloxone can be safely administered as the emergency antidote for opiate overdoses [8,16]. UK regulations in 2015 increased the

availability of naloxone to be supplied by drug treatment services without a prescription, and to extend to family, friends and peers of those at risk [17,18].

Non-fatal overdose among PWID 2013-2016

Among the participants who took part in the main Unlinked Anonymous Monitoring Survey across England in 2016 who had injecting during the preceding 12 months (recent injectors), 19% reported overdosing in the preceding year, which has increased significantly from 15% in 2013*. Overdose reporting increased significantly among those aged 25 to 34, from 13% in 2014 to 23% in 2016**; although it should be noted that the number of younger injectors are declining so this finding merits cautious interpretation. In 2016 there was no difference by gender in those reporting overdose (table 1).

There was a higher level of overdose reported among those who had recently initiated injecting (i.e. those who began injecting in the preceding three years) in 2013 than those who have been injecting for longer than three years (21% vs14%). However in 2016, overdose was similar among those who had been injecting for longer and those who had started in the preceding three years (19% vs 18%) (table 1).

Self-reported overdose in 2016 was lowest among those who were currently in treatment for their drug use (i.e. those being prescribed a detox or maintenance drug regime; 16%). Self-reported overdose was 21% among PWID who had never been in treatment in 2016, and was especially high among those who had previously been in treatment but were not currently (31%) (table 1)

* After adjusting for age and gender in a multi-variable analysis, the adjusted odds ratio for 2016 vs. 2013 was 1.4 [95% CI, 1.1-1.6]; indicating a significant increase in the level of self-reported overdose in England between these two years.
** After adjusting for gender in a multi-variable analysis, the adjusted odds ratio among those aged 25-34 years for 2016 vs. 2013 was 2.0 [95% CI, 1.5-2.7]; indicating a significant increase in the level of self-reported overdose in England between these two years.

Table 1. Self-reported overdosing in the last year among recent injectors[a] by gender, age, time since first injected and treatment status; England: 2013-2016

Year			2013	2014	2015	2016
All		**Proportion overdosing in preceding year**	**15%**	**17%**	**18%**	**19%**
		Number overdosing in preceding year	282	291	277	324
		Total number answering question	1,851	1,763	1,567	1,676
Gender	**Male**	**Proportion overdosing in preceding year**	**16%**	**16%**	**19%**	**19%**
		Number overdosing in preceding year	217	215	219	240
		Total number answering question	1,390	1,322	1,166	1,240
	Female	**Proportion overdosing in preceding year**	**14%**	**17%**	**15%**	**19%**
		Number overdosing in preceding year	64	75	58	82
		Total number answering question	449	437	399	432
Age	**Under 25**	**Proportion overdosing in preceding year**	**24%**	**23%**	**24%**	**23%**
		Number overdosing in preceding year	30	27	17	10
		Total number answering question	127	118	71	43
	25 to 34	**Proportion overdosing in preceding year**	**13%**	**19%**	**21%**	**23%**
		Number overdosing in preceding year	95	113	106	120
		Total number answering question	715	609	513	511
	35 to 44	**Proportion overdosing in preceding year**	**15%**	**15%**	**15%**	**16%**
		Number overdosing in preceding year	105	110	98	115
		Total number answering question	724	710	644	719
	45 and over	**Proportion overdosing in preceding year**	**17%**	**11%**	**17%**	**20%**
		Number overdosing in preceding year	45	35	55	75
		Total number answering question	263	306	330	384
Time since first injected	**≤3 years (recent initiates)**	**Proportion overdosing in preceding year**	**21%**	**20%**	**22%**	**18%**
		Number overdosing in preceding year	44	35	37	25
		Total number answering question	211	176	168	140
	>3 years	**Proportion overdosing in preceding year**	**14%**	**16%**	**17%**	**19%**
		Number overdosing in preceding year	221	243	235	290
		Total number answering question	1,580	1,541	1,359	1,495
Treat-ment[b] status	**Never in treatment/ not known**	**Proportion overdosing in preceding year**	**16%**	**13%**	**21%**	**21%**
		Number overdosing in preceding year	46	40	51	54
		Total number answering question	289	302	248	261
	Previously in treatment	**Proportion overdosing in preceding year**	**21%**	**25%**	**22%**	**31%**
		Number overdosing in preceding year	59	58	49	82
		Total number answering question	285	236	224	263
	Currently in treatment	**Proportion overdosing in preceding year**	**14%**	**16%**	**16%**	**16%**
		Number overdosing in preceding year	177	193	177	188
		Total number answering question	1,277	1,225	1,095	1,152

a People who reported injecting in the preceding 12 months

b Prescribed a detox or maintenance drug regime

Among recent injectors who had overdosed in the preceding year, half (49%) reported overdosing once, and two-fifths (42%) reported overdosing 2-4 times in the last year (table 2). 5% of those who had overdosed reported it occurring 5-9 times, and 4% reported that they had overdosed 10 or more times in the preceding year (table 2). Among survey participants who reported overdosing in the preceding year, 47% in 2016 reported having naloxone administered (table 2). This is indicative of the availability and use of naloxone but not of its protective value since there is no way to know what the outcome of an overdose would have been if naloxone had not been administered. In 2016 among those who were currently in treatment for their drug use and who reported overdosing in the preceding year, 43% reported having naloxone administered. Among those who had previously been in treatment and who reported overdosing, 53% reported having naloxone administered (table 2). Treatment status is that reported at the time of survey completion and it may have been different at the time of overdosing (event occurring during the preceding year).

Table 2. Self-reported naloxone administration by treatment status and frequency of overdosing among recent injectors[a] who reported non-fatal overdosing in the last year; England: 2013-2016

Year			2013	2014	2015	2016
All		**Proportion who had naloxone administered**	**42%**	**41%**	**50%**	**47%**
		Number who had naloxone administered	90	100	114	127
		Total number answering question	216	244	230	270
Treatment [b] status	**Never in treatment/ not known**	**Proportion who had naloxone administered**	**33%**	**44%**	**43%**	**51%**
		Number who had naloxone administered	12	14	18	20
		Total number answering question	36	32	42	39
	Previously in treatment	**Proportion who had naloxone administered**	**51%**	**46%**	**63%**	**53%**
		Number who had naloxone administered	25	22	27	37
		Total number answering question	49	48	43	70
	Currently in treatment	**Proportion who had naloxone administered**	**40%**	**39%**	**48%**	**43%**
		Number who had naloxone administered	53	64	69	70
		Total number answering question	131	164	145	161
Times overdosed in the last year *(proportion)*		1	54%	63%	50%	49%
		2-4	34%	32%	40%	42%
		5-9	7%	4%	7%	5%
		10 or more	5%	2%	4%	4%
		Total number answering question	264	278	268	308

a People who reported injecting in the preceding 12 months
b Prescribed a detox or maintenance drug regime

Non-fatal overdose is increasing in England, as well as overdose deaths. Half of those overdosing in the previous year were administered naloxone. Local areas should commission opioid substitution therapy (OST), needle and syringe programmes and take-home naloxone and increase efforts to support more people to engage with and benefit from these services and interventions. Older PWID, those who inject multiple drugs, those with a recent overdose, and those with co-existing alcohol and mental health problems are all known to be at higher risk [1,8]. Additionally, those who have recently been released from prison, discharged from hospital or stopped treatment have a lower opioid tolerance and are key risk groups to identify and engage in harm reductions interventions and overdose prevention initiatives [8].

References

1. O'Halloran C, Cullen K, Njoroge J, Jessop L, Smith J, Hope V, et al (2017). The extent of and factors associated with self-reported overdose and self-reported receipt of naloxone among people who inject drugs (PWID) in England, Wales and Northern Ireland. *International Journal of Drug Policy* **46**: 34-40.

2. United Nations Office on Drugs and Crime (2017). World Drug Report 2017.

3. Ciccarone D (2017). Fentanyl in the US heroin supply: a rapidly changing risk environment. *Int J Drug Policy* **46**: 107-11.

4. Dowell D, Noonan RK, Houry D (2017). Underlying factors in drug overdose deaths. *JAMA*.

5. Roxburgh A, Burns L (2015). Accidental drug-induced deaths due to opioids in Australia (National Drug and Alcohol Research Centre, Sydney).

6. Public Health Agency of Canada (2017). National report: apparent opioid-related deaths in Canada (January 2016 to March 2017), https://www.canada.ca/en/public-health/services/publications/healthy-living/apparent-opioid-related-deaths-report-2016.html.

7. [UK] Advisory Council on the Misuse of Drugs (2016). Reducing opioid-related deaths in the UK, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576560/ACMD-Drug-Related-Deaths-Report-161212.pdf.

8. DH (2017). Clinical Guidelines on Drug Misuse and Dependence: Update 2017, Independent Expert Working Group.

9. National Records of Scotland (2017). Drug-related deaths in Scotland in 2016, https://www.nrscotland.gov.uk/files//statistics/drug-related-deaths/drd2016/16-drug-rel-deaths.pdf.

10. ONS (2017). Deaths related to drug poisoning in England and Wales: 2016 registrations, https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2016registrations.

11. PHE [2016]. Understanding and preventing drug-related deaths: the report of a national expert working group to investigate drug-related deaths in England 2016, http://www.nta.nhs.uk/uploads/phe-understanding-preventing-drds.pdf.

12. PHE (2017). Unlinked Anonymous Monitoring Survey of People Who Inject Drugs: data tables, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/633204/UAM_Survey_of_PWID_data_tables_2017.pdf.

13. Unick G, Rosenblum D, Mars S, Ciccarone D (2014). The relationship between US heroin market dynamics and heroin-related overdose, 1992-2008. *Addiction*. **109**(11): 1889-98.

14. Pierce M, Bird SM, Hickman M, Marsden J, Dunn G, Jones A, et al (2016). Impact of treatment for opioid dependence on fatal drug-related poisoning: a national cohort study in England. *Addiction* **111**(2): 298-308.

15. PHE website. Preventing drug misuse deaths, https://www.gov.uk/government/publications/health-matters-preventing-drug-misuse-deaths/health-matters-preventing-drug-misuse-deaths.

16. Jordan MR, Morrisonponce D. Naloxone (2017). StatPearls. Treasure Island (FL): StatPearls Publishing.

17. PHE (2015). Take-home naloxone for opioid overdose in people who use drugs, http://www.nta.nhs.uk/uploads/phetake-homenaloxoneforopioidoverdosefeb2015rev.pdf.

18. Local Government Association (2017). Report of the Naloxone survey 2017, https://www.local.gov.uk/sites/default/files/documents/LGA%20Naloxone%20survey%202017.pdf.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

About *Health Protection Report*

Health Protection Report is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG
Tel: 020 7654 8000 www.gov.uk/phe
Twitter: @PHE_uk Facebook: www.facebook.com/PublicHealthEngland

Queries relating to this document should be directed to:
HIV and STI Department, National Infection Service, PHE Colindale, 61 Colindale Avenue, London NW9 5EQ
ellen.heinsbroek@phe.gov.uk / rachel.glass@phe.gov.uk

Published: November 2017
PHE publications gateway number: 2017488

PHE supports the UN Sustainable Development Goals