ACMD
Advisory Council on the Misuse of Drugs

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Kit Malthouse MP
Minister of State for Crime Reduction and Policing
2 Marsham Street
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17th June 2022

Dear Minister,

Re: ACMD Review of the UK Naloxone Implementation

We are pleased to enclose the Advisory Council on the Misuse of Drugs (ACMD) report on UK naloxone implementation. This self-commissioned report has reviewed the evidence on the provision and availability of naloxone in the UK and made recommendations to optimise the use of naloxone to reduce drug-related harms. The ACMDs Recovery Committee led this work, with support from co-opted national experts.

An initial rapid evidence review of the literature published since 2012 was conducted. The review identified literature that examined implementation as well as the effects of naloxone programmes in the UK and elsewhere. The ACMD Recovery Committee also issued an appeal for evidence submissions and convened three public evidence-gathering days in 2021, conducted via both face-to-face and online meetings due to COVID-19 restrictions.

The ACMD has reached the following conclusions:

- The importance of naloxone is apparent, with evidence showing an association between administration of naloxone and a reduction of opioid overdose-related deaths.

- There has been an increase in the number of people who have been administered naloxone over the last ten years. Although data from Scotland, Northern Ireland and Wales provides a clear overview of naloxone supply, there are challenges in understanding the level of naloxone supply in England, mainly because data are not being collected in a uniform fashion.

- More work is needed to widen the access to, and increase the uptake of, naloxone in community partnerships across the UK.

- Pharmacies are a key provider of take-home naloxone, and a UK agreement on the specific role of community pharmacies in distributing naloxone would promote collaborative working across the four nations.

- Further research is needed to consider the efficacy of peer-to-peer naloxone within a range of contexts.

- Evidence suggests that the supply of take-home naloxone on release from prison is fragmented across the UK, with only a small proportion of opioid-dependent prison leavers currently being provided with naloxone, even though studies find that a high percentage of these people would willingly accept take-home naloxone upon prison release.

- There are multiple police service pilot programmes across the UK which currently deliver intranasal naloxone (Nyxoid) as a more convenient method as opposed to intramuscular devices.

- Overall, it is apparent that a national joined-up approach to promote the delivery of take-home naloxone across different sectors is necessary, supported by rigorous data recording to measure progress. Interventions are needed across a range of different sectors, ranging from delivery of take-home naloxone within community pharmacies, promotion of peer-to-peer take-home naloxone programmes, police training, and increasing take-home naloxone supply amongst prison leavers.

The ACMD has made the following recommendations:

Recommendation 1

To improve the quality of data/information on take-home naloxone, particularly in England. Local Authority commissioners to include completion of National Drug Treatment Monitoring System questions, including on naloxone, within their service specifications and as a condition of their contracts with drug treatment providers.

Recommendation intended for: Local Authority commissioners in England.

Measure of implementation: Completion of National Drug Treatment Monitoring System questions on naloxone.

Metric for assessing intended effect: Percentage of service users at risk of overdose who have been trained and supplied with take-home naloxone using an agreed time frame.

Recommendation 2

To explore evidence-based ways in which the carriage of naloxone can be increased by those at risk of overdose and their families. This can be done using formal research studies as well as methodologically robust evaluations of take-home naloxone programmes.

To initiate a formal UK government funded call for research on the carriage and availability of naloxone.

Recommendation intended for: National Institute for Health Research.

Measure of implementation: Research activity in this area leading to an improved evidence base to inform practice.

Metric for assessing intended effect: Revised national practice guidance. Peer-reviewed publications.

Recommendation 3

Good examples of partnership working should be used to encourage organisations, in those areas in the UK which do not currently have extensive peer-to-peer take-home naloxone programmes, to establish them as soon as possible.

Recommendation intended for: Commissioners (Local Authorities, Health and Social Care Trusts, and service providers), Office for Health Improvement and Disparities, Scottish Government, Public Health Wales, Public Health Agency Northern Ireland.

Measure of implementation: Service specifications should specifically reference peer-to-peer naloxone.

Metric for assessing intended effect: Number (%) of Local Authority areas, Health and Social Care Trusts (and other in Scotland, Northern Ireland and Wales) where peer-to-peer naloxone programmes are available.

Recommendation 4

The prison service in each of the four nations should ensure complete coverage of take-home naloxone by those people who leave prisons at all times (with specific emphasis on weekend departures).

Recommendation intended for: Prison health commissioners (currently NHS England) prison governors and prison pharmacists.

Measure of implementation: Number of people leaving prison with take-home naloxone. Policy guidance.

Metric for assessing intended effect: Number of police service areas which have local arrangements to ensure people who use drugs do not have naloxone removed on arrest or stop and search. Service user's knowledge/understanding of that policy assessed by local surveys.

Findings from formal evaluation of police-controlled peer-to-peer naloxone projects.

Numbers provided with naloxone on release from prison.

Recommendation 5

There should be additional national support and training for police in the holding and administration of take-home naloxone. This should include guidance on encouraging service users to carry intranasal or intramuscular naloxone. Where available, police services should register to gain required exemptions to supply take-home naloxone.

Recommendation intended for: Police, Police and Crime Commissioners, National Police Chiefs Council, prison services in England, Scotland and Wales and Northern Ireland.

Measure of implementation: Policy Guidance.

Metric for assessing intended effect: Service user's knowledge/understanding of that policy assessed by local surveys.

Findings from formal evaluation of police-controlled take-home naloxone programmes.

Recommendation 6

Acute trusts (including emergency departments), mental health trusts and ambulance services should issue take-home naloxone and associated training to those at risk of opioid overdose. Relevant National Institute for Health and Care Excellence guidance should be updated to include appropriate recommendations on naloxone provision.

Recommendation intended for: Acute, mental health and ambulance trusts and, health commissioners. Department for Health and Social Care, Public Health Agency (Northern Ireland), Scottish Government. Relevant National Institute for Health and Care Excellence

Measure of implementation: Policy guidance for acute, mental health and ambulance trusts.

Metric for assessing intended effect: Number of take-home naloxone kits issued by acute, mental health and ambulance trusts. Drug-related deaths figures (Office for National Statistics).

Recommendation 7

That there should be contractual arrangements across the UK which allow community pharmacies to issue take-home naloxone and an associated brief intervention on opioid overdose management.

Recommendation intended for: Commissioners of pharmacy services (Local Authorities/NHS England/Clinical Commissioning Groups). Royal Pharmaceutical Society. Area pharmaceutical committees. Health boards.

Measure of implementation: Presence of a robust contractual arrangement for community pharmacy to deliver take-home naloxone.

Training for pharmacists and pharmacy staff on how to provide brief interventions related to take-home naloxone and how to administer both intranasal and intramuscular naloxone (this could be virtual, or resource-based).

Metric for assessing intended effect: Number of pharmacies across the UK who are contracted to deliver take-home naloxone. Number of kits issues.

Yours sincerely,

Professor Owen Bowden-Jones
Chair of the ACMD

Dr Anne Campbell and Dr Emily Finch
Co-Chairs of the ACMD Recovery Committee

ACMD

Advisory Council on the Misuse of Drugs

Review of the UK Naloxone Implementation: Availability and Use of Naloxone to Prevent Opioid-Related Deaths

June 2022

Contents

1. Introduction and Scope

1.1. Naloxone is a medicine which can temporarily reverse the effects of opioids (for example heroin, methadone, or morphine). When a person experiences an opioid overdose, their breathing becomes suppressed and there is a risk of death. Naloxone is commonly used as an emergency treatment for people who overdose on opioid drugs. If naloxone is administered immediately, it can reverse an overdose in a very short period.

1.2. In 2012, the Advisory Council on the Misuse of Drugs (ACMD) recommended that naloxone be made more widely available for use in reversing opioid overdose (ACMD, 2012). In 2015, the government introduced legislation to expand availability. Since then, measures have been taken to increase its use in all four countries of the UK. For example, the recently updated guidance from Public Health England (PHE) on *Widening the Availability of Naloxone* (Department of Health and Social Care, 2016).

1.3. Nevertheless, opioid-related deaths have generally continued to rise, and widespread availability of naloxone across the UK has not yet been achieved. For example, only 12% of people released from English prisons who are assessed as having a problem with opioids leave prison with naloxone. Data from Release have suggested that only 16 take-home naloxone (THN) kits were distributed in England for every 100 estimated opioid users in 2017-18 (Carre and Ali, 2019). However, it must be noted that the provision of naloxone is not the only solution to drug related deaths. Rather, it should be viewed as a crucial intervention as part of an adequately funded treatment and support system, including funding, distribution, education, carriage and legal changes.

1.4. This report, prepared by the ACMD Recovery Committee has aimed to:

- review evidence on the provision and availability of THN to people who may need it to reverse opioid overdose, and
- recommend optimising the use of THN in reducing drug-related harms, where gaps are found.

1.5. On 3 August 2021, the Department for Health and Social Care (DHSC) initiated an independent UK-wide consultation seeking views on amending legislation to expand the use of THN by increasing the list of services and individuals that can supply it without a prescription or other written instruction. The results of the consultation have been recently published and most of the respondents agreed that the individuals and services consulted on should be able to supply naloxone and THN without prescription. The consultation also highlighted that most respondents believed the supply of THN without prescription would help to reduce overdoses and drug-related deaths.

1.6. An ACMD working group was created, which included ACMD members and co-opted members, and a Project Initiation Document (PID) was drafted. Subsequently, an initial rapid evidence review of the literature published since 2012 was conducted by the working group (Appendix F). The review identified literature that examined implementation as well as the effects of naloxone programmes in the UK and elsewhere. The ACMD Recovery Committee (2021) also issued an appeal for evidence submissions and convened three public evidence-gathering days, conducted both face-to-face and via online meetings due to COVID-19 restrictions. Findings collected were assessed in accordance with the ACMD's standard operating procedure (SOP) on the quality of evidence. The combined evidence base helped to inform the recommendations and is detailed in Appendix F.

2. Previous ACMD advice

2.1. The 2012 naloxone report by the ACMD provided the following recommendations which have been considered and addressed throughout the different areas in the UK:

- **Recommendation 1**: Naloxone should be made more widely available, to tackle the high numbers of fatal opioid overdoses in the UK.

- **Recommendation 2**: Government should ease the restrictions on who can be supplied with naloxone.

- **Recommendation 3**: Government should investigate how people supplied with naloxone can be suitably trained to administer it in an emergency and respond to overdoses.

2.2. At the time of the 2012 ACMD report, only one preparation of naloxone had been licensed for use in the UK. The Government response to the 2012 ACMD report (15 July 2014) expressed support to the ACMD's recommendation to make naloxone more widely available. New regulations came into effect on 1 October 2015 (The Human Medicines Amendment Regulations, 2012) to enable patient group directions to allow drug services to provide naloxone without prescription. A further amendment in 2019 included the introduction of intranasal (IN) naloxone.

2.3. The ACMD's 2016 report on *Reducing Opioid-Related Deaths in the UK* recommended consideration of over-the-counter availability when an IN preparation was licensed for use. Although prescription rights of IN naloxone has been extended to wider groups, this remains a prescription only medicine.

2.4. Furthermore, the 2019 ACMD report on *Custody-Community Transitions* stated that it was the responsibility of the national NHS bodies to ensure that all people who have an assessed problem with opioid use should be given the opportunity to receive THN when they leave prison or police custody (ACMD report: *Custody-community Transitions*, 2019).

2.5. The UK government did not agree with this recommendation and responded that the NHS is responsible for commissioning naloxone in custodial settings, and local authorities are responsible for commissioning in the community. It is therefore a joint local commissioning decision as to whether naloxone is provided to those leaving prison or police custody. Currently, local community substance use service providers agree a pathway in partnership with other stakeholders about which prisoners receive naloxone before they leave the prison, and which will receive a supply after they leave via community-based services (Her Majesty's Prison and Probation Service, October 2019).

3. Provision and supply of Naloxone for people in drug treatment services in the UK

3.1. Naloxone supply is part of a harm reduction approach in reducing drug-related deaths. Substance use service providers have successfully provided naloxone alongside training to those people engaged in non-drug treatment services. This section will discuss the provision of naloxone across the four nations with a focus on administration, carriage, and partnership approaches to the supply of THN.

3.2. Provision of naloxone to individuals in non-drug treatment a via partner agencies has proved more challenging. Positive steps towards reaching these groups have been seen through various initiatives, across the four nations (McAuley, 2020; Scottish Drugs Forum (SDF), 2021; Scottish Families Against Drugs (SFAD), 2021; Public Health Agency (PHA) Belfast, 2020; PHA Wales, 2020; Northern Ireland Alcohol and Drug Alliance, 2020; Smith, 2020; and Strang *et al*, 2019). This is not an exhaustive list as new programmes were being planned or initiated across the UK at the time of the publication of this report.

3.3. Most service provider strategies aim to increase both the penetration and impact of naloxone supply through distribution systems, which are easily accessible and utilised by opioid users and those who may encounter them. While there are sufficient data to demonstrate naloxone supply, there is little data about carriage of naloxone kits once they have been supplied. Scottish data suggests that those in possession of naloxone at any one time is as low as 13% (Health Protection Scotland, 2019). It is difficult to compare information across Scotland and England as the latter does not have a national system of gathering data in relation to THN.

3.4. Results from the Unlinked Anonymous Monitoring Survey (UAMS) study (Public Health England, 2020) indicate that among those who had reported an overdose in the last year, there had been an increase from 44% to 56% of people who had administered naloxone between 2013 and 2019 (see Table 1 below).

Table 1. Use of Naloxone (2013-19, England, Wales and NI)

Naloxone use		2013	2014	2015	2016	2017	2018	2019
Among those who report an overdose in the last year	**Proportion who had Naloxone administered**	**44%**	**44%**	**54%**	**48%**	**49%**	**55%**	**56%**
	Number who had Naloxone administered	111	129	161	148	130	164	176
	Total number answering question	254	292	300	309	263	298	317
Among those who report an overdose in the last year who are currently or previously in treatment	**Proportion who had Naloxone administered**	**45%**	**44%**	**55%**	**48%**	**50%**	**56%**	**55%**
	Number who had Naloxone administered	94	109	138	127	119	153	152
	Total number answering question	210	249	250	265	238	271	274

The Unlinked Anonymous Monitoring Survey of people who inject drugs (with participants from England, Wales and Northern Ireland) includes figures for use and carriage of naloxone (Public Health England, 2020).

England

3.5. England is the only one of the four nations where there is not a specific funded national naloxone programme. Across England, naloxone provision is funded via local authority commissioning and delivered by third sector and NHS providers. Cuts of 37% in funding to drug and alcohol treatment budgets have resulted in a reduction in the size of commissioned drug treatment contracts, which may have impacted the budget available to deliver naloxone. Data from the National Drug Treatment Monitoring System (NDTMS) has indicated that whilst the number of people in treatment for opioid use disorder has decreased slightly, the percentage of those receiving THN has increased from 10.3% to 26.0% from 2017-18 to 2019-22 (see Table 2 below). However, the rise could be partly due to the gradual improvements in better reporting as it was still a relatively new data item (introduced in 2016). Ideally, the target for those receiving THN should be 100% rather than the 26% reported below for 2019-20.

Table 2. Summary of National Drug Treatment Monitoring System data (2017-20) on number of people receiving THN and overdose training compared to the number in treatment for opioids

Year	Number in treatment for opioids	Number receiving THN and overdose training	Percent (%)
2017/18	141,189	14,490	10.3%
2018/19	139,845	26,215	18.7%
2019/20	140,599	36,541	26.0%

3.6. New data items which have been introduced to the NDTMS in 2020, but will not be reported until 2022, included:

- Has the client been issued with naloxone at episode start, or in the last six months?
- Has the client ever been administered with naloxone to reverse the effects of an overdose/has the client been administered with naloxone to reverse the effects of an overdose in the last six months?

3.7. These data items should, over time, improve the quality of data collected in England.

3.8. Widening opportunity for naloxone provision has been achieved by the efforts of community and statutory services across the UK. The efforts of a range of organisations ensure that naloxone is offered at the point of entry into services and at any interaction with the workforce, with naloxone champions in position to make the increase of provision of naloxone a priority. There have been good examples of engagement with external stakeholders such as pharmacies, shared care GPs, hospitals, and police services to improve accessibility for people not accessing structured drug treatment.

3.9. Outreach has been invaluable in taking naloxone to people with whom drug treatment services may not usually have contact. An example of this is an opt-out approach which has been utilised in one community-based service in England, where previously, people were more likely to reject, rather than accept, naloxone. Individuals are provided with naloxone when they have an interaction with the service, rather than waiting for them to opt-in, and naloxone is promoted in every interaction (community service provider submission, Appendix E i).

3.10. Despite some of the efforts to make naloxone widely available, findings from research by Carre and Ali (2019) highlight that this has still not been achieved in England. Nationally, the estimated coverage of THN among people who use opioids was as low as 16% in 2017-18. The study also found in 58% of cases local authorities THN was not available to clients accessing community pharmacies, including those providing opioid substitution treatments and needle syringe programmes.

Scotland

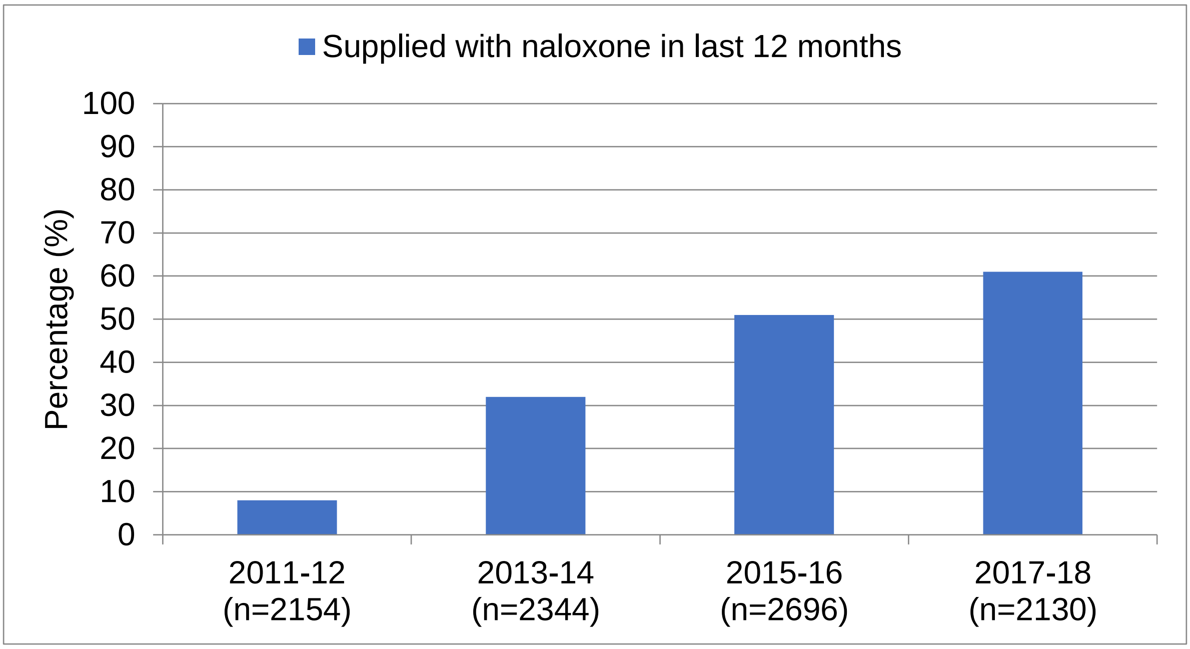
3.11. Scotland's National Naloxone Programme (NNP) was formally launched in 2010 and implemented in 2011 as the first centrally coordinated and funded programme of its kind internationally (McAuley *et al*, 2012).

3.12. Central funding for the national programme ceased in 2016 when funding responsibility was assumed by NHS Boards. Since its inception, the NNP in Scotland has supplied over 99,516 injectable kits, the majority of which are to people who use drugs (PWUDs) and primarily persons at risk of opioid overdose (Public Health Scotland (PHS), 2021).

3.13. Since it became available in February 2019, Nyxoid nasal supplies have gradually increased with a widening of the programme across Scotland between 2020-21 (McAuley, 2020).

3.14. A study of people who inject drugs (PWIDs) indicated that over 60% were supplied with a naloxone kit in the previous 12 months, a trend which has consistently increased over time (Figure 1) (Glasgow: Health Protection Scotland, April 2019).

Figure 1. Naloxone supplies among people who inject drugs in Scotland, 2011-18



Source: Needle Exchange Surveillance Initiative (Health Protection Scotland, 2019)

3.15. If we look more closely at the data, specifically at the cumulative number of kits distributed as a first supply to people at risk of overdose, almost 1-in-3 problem drug users (PDUs) (59%) had been supplied a kit by March 2021 (PHS, 2021).

3.16. Throughout the phase one and two lockdown periods, a Scottish advocacy organisation worked together with the SDF to develop and implement a naloxone administration service. The 'click and deliver' service which began in May 2020 showed that they had delivered 348 kits over a one-year period; 48 to PWUDs; 129 kits to families and friends and 158 kits to professionals. The majority of these were requested through the online portal (SFAD, 2021).

3.17. In Scotland, a nationwide marketing campaign to raise public awareness of the signs of a drug overdose and the life-saving medication naloxone was launched to mark International Overdose Awareness Day. The Scottish Government and SDF worked collaboratively to help inform the public of naloxone and its success in reversing the effects of an opioid-related overdose. The eight-week campaign included TV and radio adverts, billboards at transport hubs and shopping centres. It also encouraged people to go to the 'Stop the Deaths' website to learn how to identify when someone is experiencing an overdose and how to obtain a naloxone kit and be trained to use it. The campaign aimed to inform the public how to respond to an overdose and provide an early intervention that could save a life. It directed people to the SFAD 'click and deliver' service which saw more than 3000 kits provided during the campaign. A booster campaign was conducted during the winter months of 2020 and the campaign will now be formally evaluated (SFAD, 2021).

Northern Ireland

3.18. The THN programme has been available in Northern Ireland since 2012. It was largely administered through community addiction teams under a patient group direction (including prisons). However, since 2015, it has been available through the PHA funded low threshold services. Service user representatives have played a major role in providing advice, support and training (Table 3).

Table 3. Supply of Naloxone in Northern Ireland 2012-19 (PHA Northern Ireland (2020))

Year	No. of times Naloxone was supplied
April 2012-March 2013	139
April 2013-March 2014	163
April 2014-March 2015	188
April 2015-March 2016	247
April 2016-March 2017	271
April 2017-March 2018	847
April 2018-March 2019	1,332
Total	3,187

3.19. A community-based organisation in Northern Ireland has provided training to more than 600 people involved in supporting over 20,000 people per year across Ireland through drug and alcohol support services, homelessness services, family services, and training and professional development services. It provides two types of training:

- Naloxone administration for people who may witness an overdose.
- 'Training for Trainers' for people supplying naloxone (Appendix E).

3.20. Currently, there is a combined partnership between Belfast City Council, the Ambulance service in Northern Ireland and the Police Service of Northern Ireland to ensure that there is a timely response to overdoses (Appendix E).

3.21. Table 4 below highlights the number of times naloxone has been used to reverse an overdose in Northern Ireland and the outcome. Prior to 2014, the number of naloxone kits used in an overdose was less than 5 with an increase to 240 in 2018-19.

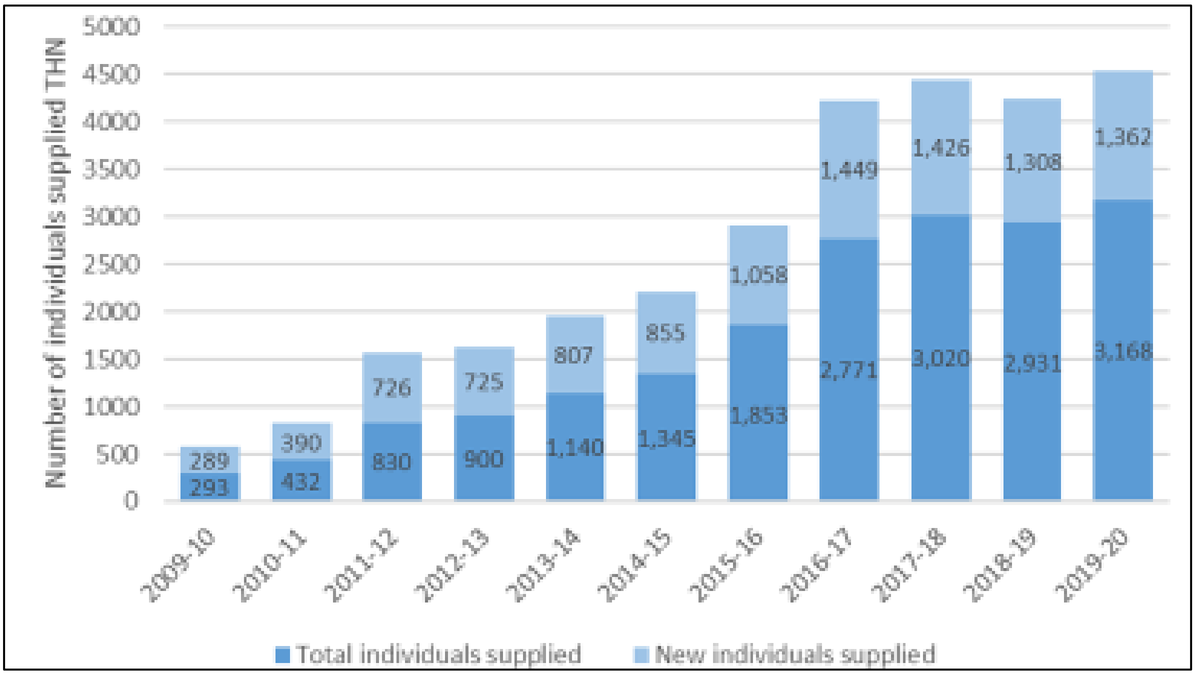
Table 4. Administration of Naloxone in Northern Ireland 2012-19 (PHA Northern Ireland (2020))

Year	No. of times Naloxone was used to counteract an overdose	No. of cases where patients survived
April 2012-March 2013	<5	<5
April 2013-March 2014	<5	<5
April 2014-March 2015	16	15
April 2015-March 2016	34	31
April 2016-March 2017	59	47
April 2017-March 2018	127	121
April 2018-March 2019	240	221

Wales

3.22. The THN programme in Wales is fully funded by the Welsh Government and provision is through substance use services, prisons, criminal justice services, homelessness/housing services and first responders. Between 2019-20, 61 registered sites provided naloxone. Like numbers reported by Northern Ireland, numbers of individuals supplied THN rose from 293 in 2009-10 to 3,168 in 2019-20 (Figure 2) (PHA Wales, 2020).

Figure 2. Provision of THN in Wales 2009-10 to 2019-20



Source: Josie Smith (2020), Head of Substance Misuse Programme, Public Health Wales

3.23. Prenoxad and Nyxoid (nasal naloxone kits) are both available within the Welsh Government Substance Misuse Delivery Plan. The plan emphasised working with partners, for example, police services, to establish the need for Nyxoid with carers and services on the periphery of opioid use. Since implementation of the THN programme, there have been 36 deaths, 2,346 non-fatal events and 242 cases where the outcome was unknown (Smith, 2020). Of all first-time recipients of naloxone each year, around 60% have poly-drug use as a risk factor (Smith, 2020).

Summary Points:

- Data from the four nations indicate that, in general, there has been an increase in the numbers of people who have been supplied with naloxone over the last ten years.
- More work needs to be completed in relation to widening access to and increasing the uptake of naloxone in the UK. There should also be an increased policy and practice focus on the gaps in carriage and use.
- There are excellent examples of strong community partnerships which deliver naloxone and adjunct training in some areas of the UK.

- Data from most of the UK reflects a comprehensive data gathering and analysis framework, which captures aspects of the supply use and consequences for PWUDs and the community.

- The data extracted from agencies based in England highlighted that it had not been gathered in a uniform fashion despite the excellent input from all agencies involved with the ACMD data gathering exercise. Therefore, it was difficult to present a representative picture on Naloxone supply in England.

4. Provision and supply of Naloxone for non-drug treatment services in the UK

4.1. Regulations to allow supply of naloxone by people working in or for drug treatment services have been effective in increasing naloxone provision to those who are in treatment. Further relaxation of the regulations to allow supply of naloxone from drug services to organisations who work closely with opioid-dependent people would widen the opportunity to provide naloxone to those at risk who are not in structured treatment. The subsections below outline the positioning of naloxone supply within a range of services in the UK, including community pharmacies, hostels, homeless organisations and outreach. There is also a consideration of the role of peers and bystanders in the administration of naloxone.

5. Community pharmacies

5.1. There are many advantages to pharmacies being able to supply naloxone, particularly as a core group of people using drugs will visit pharmacies to access opioid substitution.

5.2. Pharmacies are a key provider of THN in several regions of England, with 3,768 naloxone kits supplied since 2015 by pharmacies contracted to supply naloxone by a community-based organisation in England. A total of 717 (19%) kits supplied by pharmacies have been administered in an overdose situation, compared with 4% provided by the drug treatment service. This suggests that in some parts of England, pharmacies are reaching those encountering overdose situations more often than drug treatment services (community service provider submission, Appendix E ii).

5.3. A pilot scheme for pharmacies in Somerset distributes naloxone alongside a 2-3-minute intervention to people at risk of having an opioid-related overdose, or likely to witness someone else experiencing an overdose (community service provider submission, Appendix E iii). Findings from a research evaluation noted that shorter interventions were critical to effectively engage with people and pharmacists (Scott, 2019). Similar schemes in Suffolk and Wiltshire had not provided the same number of interventions as Somerset, which achieved 49 interventions in May 2020, largely because of the shorter intervention time (Robinson, 2020). A quick intervention appears to be desired by the recipient, but a balance needs to be reached in delivering the right amount of information to ensure the recipient feels confident use the naloxone.

5.4. An example of effective partnership with community pharmacies was highlighted in Liverpool, through which several community pharmacies were trained to supply people released from prison with naloxone when they collect their opioid substitution treatment (OST) script. While this partnership has worked well, the process is reliant on localised commissioning (community service provider submission, Appendix E i).

5.5. In Scotland, it is recommended that all pharmacies stock naloxone for use in an emergency, and to supply to those who may witness an overdose (Scottish Drugs Forum, 2020).

5.6. In Wales, it is recommended that THN is provided on an opt-out basis through community pharmacy needle and syringe programme (Public Health Agency, Wales 2020).

5.7. The Royal Pharmaceutical Society (RPS) reported that community pharmacy teams are in a great position to carry out these vital interventions and recommended that they should be able to offer naloxone to anyone they believe to be at risk of an overdose or to anyone who may witness an overdose. Interventions can also be offered at times when patients are particularly vulnerable to overdose, for example, during the initial stages of treatment or upon release from prison or hospital.

5.8. In addition, there are occasions when the normal emergency supply routes for obtaining medicines cannot be offered safely in other circumstances, such as holiday periods or other related closures. A new structured service with clear referral pathways should be established to enable prisons and hospitals to refer to an appropriately trained and resourced community or primary care-based pharmacist, people who are at risk and require medication at a time when addiction services are not available (RPS, 2021).

Summary Points:

- Pharmacies are a key provider of naloxone in several areas in the UK.
- There are some region-specific examples of community-based organisations working collaboratively with pharmacies to supply naloxone.
- Pharmacies provide a good opportunity for the pharmacist to conduct a brief intervention with people who use the service.
- UK-wide agreement on the specific role of community pharmacies in supplying naloxone would be a useful way of promoting collaborative working in all areas of the UK.

6. Hostels, Homeless Organisations and Outreach

6.1. The work of homeless organisations has become increasingly important to the provision of naloxone to those most in need throughout the UK. Outreach also provides an opportunity to reach those who are not accessing services. There is evidence of outreach programmes and initiatives across the UK, and these were particularly central to the work with vulnerable drug users during the two major lockdown periods.

Northern Ireland

6.2. A homeless service in Northern Ireland collaborates with Drug Outreach Teams (DOTs), drug accommodation support projects, alcohol housing support project services and street injecting support services. The homeless service became the first statutory organisation outside of the health sector in Northern Ireland to respond to opioid overdose and stated that they will continue to be steadfast in their commitment to help respond to vulnerable people who present at their offices (community service provider submission, Appendix E iv).

6.3. Housing services have a statutory duty to deal with homelessness and people can present with mental health issues, drug dependency and offending history. Overdose incidents have occurred in Northern Ireland Housing Executive (NIHE) offices resulting in emergency services being called.

6.4. The NIHE, responsible for assessing needs for social housing provision, works closely with hostel providers and drugs/alcohol support services. Front-line NIHE staff requested training in the administration of naloxone and in October 2019, 23 members of staff volunteered to undertake a one-day training course. They became the first statutory organisation outside of the health sector to be trained and supplied with naloxone to allow them to respond to opioid overdoses (NIHE, 2020).

6.5. As in the remainder of the UK, people in Northern Ireland present to housing services with multiple needs and naloxone carriage is a growing priority for services in this sector (NIHE, 2020).

England

6.6. Several organisations work with hostels and homeless shelters to approve premises for provision of naloxone as an engaged partner. This can be expanded to other organisations to allow naloxone penetration beyond geographical/commissioned boundaries to people who would normally not be reached.

6.7. A Police and Crime Commissioner (PCC) -funded project, delivered by a community organisation in York, distributes naloxone to opioid users through the York drug and alcohol service, provides harm reduction advice, and wider training on naloxone to local hostels, homelessness services, and allied outreach teams (community service provider submission, Appendix E).

6.8. One major community-based organisation reported that supply of naloxone increased at the start of COVID-19 from 53% on 23 March 2020 to 70% on 21 July 2020. This represents an additional 7,418 people issued with kits, the majority of which were provided by outreach due to service closure (community service provider, Appendix E ii).

6.9. A project based in Bristol delivered THN alongside needle and syringe programmes and Medication Assisted Treatment (MAT) to people self-isolating or shielding during the pandemic. Kits were supplied through outreach by service staff and by pharmacies upon collection of medication (community service provider submission, Appendix E v).

Summary Points:

- There is evidence of drug outreach programmes and low threshold services, which focus on the supply of, and widening of access to, naloxone within communities.

- Similarly, the work of homeless organisations has become central to the provision of naloxone to people who use drugs throughout the UK.

7. Peers and Bystanders

7.1. The key to effective peer-to-peer naloxone programmes is that they are underpinned by a drug user's 'privileged access' to places where people use drugs, local drug supply networks, and the people who use them. Peer education therefore uses this social context of drug use as the vehicle for intervention. The European Network of People Who Use Drugs (EuroNPUD)' (2020) technical briefing on peer-to-peer naloxone features several programmes operating in the UK and internationally, and concluded that:

"Peer to peer naloxone provides an effective, affordable, and efficient method of putting the life-saving opioid overdose reversal drug Naloxone into the hands of those most likely to be present when a drug user overdoses on opioids. Peer to peer naloxone contributes to ensuring that enough Naloxone is available in the drug using community to achieve the saturation levels required to deliver consistent reversals." (EuroNPUD, 2020).

7.2. Several regional projects have initiated and developed successful schemes throughout the UK and a few examples are cited below.

England

7.3. Peer provision of naloxone is an effective collaborative approach, where people with lived experience of substance use can train other people and relevant organisations in the community in the use of naloxone. This has shown to increase naloxone awareness and provision and can also positively impact the lives of the peers involved in the work by aiding their recovery (community service provider submission, Appendix E iii).

7.4. In 2019, a community service project issued 909 THN kits and this project incorporated naloxone training into a weekly quiz event attended by people who inject drugs. There is a small financial incentive for attending and it was reported anecdotally that people are more receptive to accepting naloxone when training is provided in a less obvious manner (community service submission, Appendix E v).

7.5. Another community service conducted the first pilot project of peer-to-peer naloxone in Cleveland and Redcar. They achieved success in reaching people via an outreach service and there was an additional benefit in empowering peers to supporting their own and others' recovery journeys. The project resulted in 43 naloxone kits being provided to people who use opioids. January 2020 saw a 40% increase compared to an average month in the service; 60% of the people who received a kit were not known to the service, and 81% were introduced to naloxone for the first time (community service provider submission, Appendix E i).

7.6. One third sector provider introduced a peer-to-peer programme utilising naloxone peer educators, who are active service users, to distribute naloxone. The peer educators were enabled to connect with people who had previously refused naloxone training and supply. The programme supplied 265 kits between November 2019-January 2020. One hundred and eighty-five (70%) of people were issued with their first kit, 42% of whom were not in structured treatment. Of the people who received a kit, who were in structured treatment, 20% had previously refused the offer of a naloxone kit (community service submission, Appendix E ii).

Scotland

7.7. The Scottish Drugs Forum (SDF) launched a naloxone peer educator initiative in 2012 which highlighted that peer educators can engage hard-to-reach groups with significant increases in training and naloxone supply to those at risk of opioid overdose in the first year. Between September 2017 and August 2018, over 1300 naloxone kits were supplied by peer educators. A recommendation by SDF was made for all health board areas to introduce and support naloxone peer networks (SDF, July 2020). SDF received funding from the drug deaths taskforce innovation fund to develop peer naloxone supply programmes which would recruit and pay peers as sessional workers to supply kits in the community and in prison. In addition, the unique and innovative peer-led project in Glasgow prisons has enabled peers to supply intranasal naloxone kits to people prior to their release (SDF, 2021).

Wales

7.8. The proportion of peer administration of THN in 2016-17 was 11% of all recorded overdose events, a figure which increased to 20% in 2019-20. Recommendations from substance misuse programmes in Wales, regarding the provision of THN, included the development of peer supply networks especially during COVID-19 (Public Health Wales, 2020).

Northern Ireland

7.9. In discussions about possible peer-to-peer supplies in Northern Ireland, some service providers suggested that there was less need for peer-to-peer provision in Northern Ireland because of the outreach nature of the low threshold services. Service providers reported that in other parts of the UK where peer supply has been successful, this was driven by the lack of an outreach service which supplied naloxone. That this has not happened in Northern Ireland is partly due to a lack of capacity among service users and because the Regional Service User Network has had other priorities (Public Health Agency, Submission to Recovery Committee, 2022).

Summary Points:

- Peer-to-peer naloxone is an effective method of distributing the reversal drug to those people who are in most need and by those who are in closest contact with their fellow drug users.

- Peer educators are in the position to connect with people who have previously refused naloxone training and supply.

- In Scotland, peer educators have been paid as sessional workers in prisons and communities.

8. Carriage and Barriers to uptake

8.1. The following section of the report reflects on several anecdotal and evidence-based barriers to the carriage and uptake of naloxone, including service user reports of the size and colour of pack, misgivings about being stopped and searched by police and coming out of a 'hit' in a rapid fashion thus negating the 'high'. The effectiveness of naloxone in saving a life may be dependent on the person receiving appropriate medical care, however there may be reluctance in calling emergency services due to fear of arrest. In some areas of support services, there have been reports of the reluctance to use, what is perceived as an invasive, intramuscular (IM) route, and a lack of training on methods of administration and dosage (Khatiwoda *et al*, 2018; Neale *et al*, 2021; and Neale and Strang 2015).

8.2. In the United States, forty states and the District of Columbia have enacted some form of a 'Good Samaritan' law. These laws generally provide immunity from arrest or prosecution for certain controlled substances if individuals are experiencing an opioid-related overdose or require medical attention (National Conference of State Legislature, US, 2021). In the UK, individuals can be arrested and prosecuted if they experience a drug-induced overdose. However, police officers may use their powers of discretion when dealing with such incidents. The 2005 amendment to the Medicines for Human Use legislation also permits anyone, including police officers, to administer naloxone in an emergency.

8.3. Results from the Unlinked Anonymous Monitoring Survey (UAMS) study (Public Health England, 2020) showed that there had been an

11% increase in the proportion of individuals in the survey who carry naloxone between 2017 and 2019 (Table 5).

Table 5. Carriage of Naloxone (2017-19, England, Wales, and NI)

	2017	2018	2019
Proportion of survey respondents who carried Naloxone	54%	65%	65%
Number who carry Naloxone	894	1,172	1,267
Total number answering question	1,655	1,809	1,946

Source: The Unlinked Anonymous Monitoring Survey of people who inject drugs (with participants from England, Wales, and Northern Ireland) includes figures for use and carriage of Naloxone (Public Health England, 2020).

8.4. The table above denotes carriage among people who inject drugs (PWID) based on the question, "Are you carrying naloxone with you today?" at time of interview (the indicator used in England in the UAMS study is slightly different hence the higher percentage). There are no other indicators of carriage in Scotland.

8.5. In Scotland, results from the recent Needle Exchange Surveillance Initiative (NESI) survey showed for PWID and attend injecting equipment provision services in Scotland, there has been an increase in the carriage of THN from 5% (n=745) in 2013-14, to 21% (n=1554) in 2019-20 (Table 6) (Public Health Scotland, 2022). This is currently the only data relating to THN carriage in Scotland.

Table 6. Carriage of Naloxone in those surveyed as part of the Scotland Needle Exchange Surveillance Initiative *(*among those prescribed THN)*

Scotland		2008-09	2010	2011-12	2013-14	2015-16	2017-18	2019-20
Number of study respondents		N=2563	N=3100	N=2154	N=2344	N=2696	N=2130	N=2435
Carrying any THN with you today*		N/A	N/A	N=175	N=745	N=1383	N=1299	N=1544
	Yes	N/A	N/A	27 (15%)	39 (5%)	85 (6%)	172 (13%)	318 (21%)
	No	N/A	N/A	142 (81%)	702 (94%)	1295 (94%)	1125 (87%)	1223 (79%)
	No response	N/A	N/A	6 (3%)	4 (1%)	3 (0%)	2 (0%)	3 (0%)

8.6. On an individual level, people who use drugs may be wary of the possibility of acute withdrawal syndrome when naloxone is used (Neale and Strang, 2015). Other barriers reported by individuals include the size of naloxone packets (being too large to fit in a pocket) and overly lengthy training. Likewise, results from a study by Khatiwoda *et al* (2018) considered the views of (n=100) users at an opioid treatment centre, which focused on the carriage and the barriers to the use of naloxone in North Carolina. Over half of female and male respondents reported carrying the kit on some or most occasions. Reasons for not carrying a kit included cessation of drug use, forgetting to carry the kit and the difficulty of carrying it on the person due to the large size of the packaging.

8.7. However, the barriers to widespread naloxone provision are largely structural or systemic. Most can be addressed through training, awareness-building, reducing stigma, and public health commissioners 'building in' to the system a requirement and resource for naloxone provision through their tender documents (Strang *et al*, 2019; Mc Donald *et al*, 2021; Fomiatti *et al*, 2020; and Bennett, 2020). The report *Saving Lives* (Release, 2019) provided advice on how to overcome barriers at the individual, collective and structural levels. These focused on:

- pathways to access THN for family and friends of people who may be at risk which does not require disclosure;
- offering a choice between IM and intranasal;

- working with key stakeholders to make carriage discrete;
- normalising the administration of naloxone in all relevant services; and
- encouraging positive messages about carriage and use (Release, 2019).

8.8. Two cross-sectional studies considered the substantial gaps in carriage of naloxone within two cohorts of opioid users. Tobin, *et al* (2019) applied the cascade of care concept to the identification of gaps in the carriage of naloxone. A cross-sectional survey was used to gather data from n=353 service users who reported lifetime use of heroin. Of the 218 (62% of the cohort) who reported that they had received naloxone on at least one occasion, 26% always carried naloxone, 38% rarely or sometimes, and 36% reported never carrying naloxone. The authors concluded that there was a gap in carriage of naloxone for almost three quarters of those who had received naloxone on previous occasions. The lack of consistency in carriage was also reflected in a study by Heavy (Heavy, *et al*, 2018) who highlighted that whilst participants felt that it was an important resource, not all respondents were inclined to carry naloxone or use it appropriately.

8.9. Conversely, results from a multi-site cross-sectional study of naloxone carriage in Norway indicated that 43% of the opioid using sample from seven cities carry naloxone. This represented a cumulative supply rate of 495 per 100,000 population: a substantive saturation in a sample of high-risk opioid users (Madha- Amiri, *et al*, 2019).

Summary Points:

- According to the UAMS survey (2020) there was an 11% increase in the proportion of survey participants who carry naloxone between 2017 and 2019 in England, Wales, and Northern Ireland.
- Most of the research evidence indicates a low carriage rate by people who use drugs in the UK with slightly higher reports of carriage in other countries. However, the results must be interpreted with caution, due to methodological limitations.
- Carriage may be hampered by the individual’s awareness of Acute Withdrawal syndrome.
- Carriage may also be impeded by a fear of police intervention.

- The reluctance to carry naloxone could also be further exacerbated by the size and colour of the naloxone pack.

9. Effectiveness of Naloxone

9.1. There is a dearth of research evidence which considers the causal link between THN and opioid overdose mortality, location of supply, including prisons, and appropriate dosage of naloxone. Below we outline the efficacy of naloxone in a range of settings, for example post-hospital discharge, post-prison release and within the emergency department. However, the majority of the results reported below should be treated with some level of caution. The use of pre-post-test design, non-randomised cohorts, heterogeneity within some of the included systematic reviews and cross-sectional survey designs indicated a risk of selection and performance bias.

9.2. In a study which assessed the effectiveness of Scotland's THN policy, the authors utilised a pre-post design to compare data from 2006-10 with a period post-implementation (2011-13) of the Scottish Naloxone programme in January 2011. The study determined the proportion of overdose-related deaths which, in the four weeks before, had been either released from prison or discharged from hospital. Results showed a statistically significant decrease of 3.5% in the numbers of opioid related deaths in the post-release period when comparing the periods 2006-10 and 2011-13. Applying Bradford Hill's criteria for causality, Bird, *et al* (2016) found a 36% decrease in Scotland (Bird *et al*, 2016).

9.3. A systematic review to assess the effectiveness of THN selected nine studies for inclusion in a Bradford Hill analysis. Evidence extracted from non-randomised studies showed that there was a link between THN and a reduction in opioid-related overdose mortality and indicated a low frequency of adverse events (Mc Donald and Strang, 2016). A similar study published in 2018 also indicated, based on Bradford Hill criteria, that there is an association between reduced deaths from overdose and the implementation of THN programmes (Olsen, *et al*, 2018).

Efficacy of Intramuscular and Intranasal Naloxone

9.4. There is increasing evidence of the efficacy of routes of intranasal (IN) and intramuscular naloxone administration (IM), although results of current studies generally indicate that nasal administration is as effective as intramuscular, dependent on dosage. This section considers the efficacy of IM and IN naloxone and user preferences.

9.5. In the last few years nasal spray products have been developed that have 40-50% bioavailability (Strang, *et al*, 2019). In pharmacology, bioavailability is the amount of an administered dose of unchanged drug that reaches the system's circulation. When a medication is administered intravenously, its bioavailability is 100%. Intramuscular devices can provide therapeutic doses in a single step, and hence are suitable for carriage by people who use drugs (PWUDs), bystanders, police and other services who are uncomfortable using intramuscular products. However, administration via the nasal passage is less invasive and this allows easier administration by people who are already familiar with the use of nasal sprays. However, as advised by the Electronic Medicines Compendium (EMC), IN absorption may be less effective, if the nasal route is blocked with blood or mucus, or damaged as a result of nasal drug use (EMC, 2021).

"Four concentrated nasal spray products have now reached the stage of regulatory approval, with several already introduced in some countries globally: Narcan® 4 mg (USA, Canada, approved and introduced in 2016–2017), Nalscue® 1 mg (approved and introduced in France in 2017), Nyxoid 2 mg (European Medicines Agency approval in 2017, introduced across much of Europe from 2018 onwards) and Ventizolve® 1.4-mg spray (developed in Norway and approved for 12 European countries in June 2018)". (Strang, et al 2019).

9.6. Since it became available in February 2019, Nyxoid supplies have gradually increased with a widening of the programme across Scotland between 2020-21 (McAuley, 2020). In the first quarter of 2021, just under 500 Nyxoid kits were supplied across Scotland, the majority (401 of 499, 80%) within the community and the remainder to prisoners on release (Public Health Scotland, 2021).

9.7. In 2020, a pilot scheme conducted by North Wales Police have paved the way for a discussion of a roll out of intranasal naloxone across north Wales. Similarly, in Northern Ireland, a pilot study commenced in August 2021 to provide IN naloxone in several hostels for people who are homeless (Public Health Agency, Northern Ireland, 2021).

9.8. Some evidence has suggested that people who use opioids generally prefer nasal spray over injectable naloxone (Kerr, *et al*, 2008; Neale, *et al*, 2021). Results from an analysis of qualitative data from one study (Neale, *et al*, 2021) indicated that there was a general preference for nasal administration. The benefits of nasal administration focused on the accessibility, usability, and safety of the devices. In addition, IM products have been criticised by some PWIDs for their large packaging and their triggering of an acute withdrawal, causing agitation and leading to further opioid use to ameliorate the effects of the naloxone reversal (Neale and Strang, 2015).

9.9. A narrative synthesis of some of the evidence, which considered the effects of the administration route and dosing on mortality and overdose reversal, showed that a higher concentration IN naloxone preparation (2 mg/ mL) has efficacy like that of IM naloxone for reversal of opioid overdose. However, this was based on limited evidence (Chou, *et al*, 2017). This result was challenged by a recent randomised control trial (Dietze, *et al*, 2019) which found that that those randomised to a higher concentration of IM naloxone were less likely to require a rescue compared with clients who received IN naloxone administration.

Summary Points:

- Results from current studies show that that IN administration is as effective as IM, dependent on dosage.

- Effectiveness of IN naloxone may be compromised if the nasal passages are blocked with blood or mucus or are damaged because of drug use.

- Since 2019, supply of IN has expanded in some areas across the UK. There has been a noticeable expansion in the supply of naloxone via several police services across the UK.

10. Emergency Department attendance and Ambulance service provision

10.1. Hospitals, in particular emergency departments (EDs), are likely to provide medical assistance to people who have overdosed and who are at high risk of repeated overdose. Providing THN to individuals before they are discharged is likely to be an important intervention in reducing the risk from repeated overdose on leaving hospital.

10.2. In one reported case from an ED in Bristol, THN was provided to opioid users but there was a reported low uptake (community service provider, Appendix E v).

10.3. In Wales, there is the recommendation that THN should be available on an opt-out basis through secondary care settings (Public Health Wales (PHW), 2020).

Paramedics

10.4. Emergency services are usually called in the event of an opioid overdose and therefore potentially have a key opportunity to provide naloxone to someone at risk and/or someone who may refuse hospital admission.

10.5. In Wales, the THN services and training have been extended to frontline staff and first responders including St Johns Ambulance (PHW, 2020).

10.6. Several international studies and reviews, largely US-based, considered systems for the administration of naloxone, outcomes, and the views of medics and patients who were discharged from EDs (Kestler, *et al*, 2017; Lai, *et al*, 2020; Koh, *et al*, 2020; and Dwyer, *et al*, 2013). Kestler, *et al* (2017) issued a survey and offered THN to patients attending an ED. There was an 83% response rate and almost two-thirds of survey respondents (n=137) accepted THN. Several factors, including witnessing an overdose, concern about the danger of overdose to self and injecting drug use were associated with the willingness to accept THN. Results from a qualitative study (Lai, *et al*, 2020) showed that participants accepted ED-based naloxone supply programmes and passive tracking technologies, but had concerns regarding hypothetical continuous monitoring systems, problematic interactions with first responders and law enforcement personnel.

10.7. Several studies have also considered the safety of patient's refusal of transport to hospital after naloxone administration and have indicated minimal mortality rates, ranging from 0-0.48% in the 24-28 hours after refusal (Levine, *et al*, 2016; and Rudolph, *et al*, 2011). However, Olson (2021) suggests that most of the research findings consider mortality rates and do not highlight morbidities, for example, anoxic brain injuries or pulmonary complications.

Summary Points:

- There is little UK evidence as regards the administration and up-take of naloxone in ED settings and its use by paramedics.

- International evidence indicates that the ED is an optimal setting for providing THN, although training should be tailored to local needs.

- Refusals of transport to hospital after administration of naloxone at overdose site does not appear to have a significant effect on mortality rates in the immediate post-refusal stage.

11. Prisons

11.1. People who have recently been released from prison are at high risk of overdose primarily likely due to reduced tolerance because of increased abstinence during incarceration. Findings from a meta-analysis underline that there is an increased risk of drug-related death during the 14 days after release from prison and that the risk remains high up to four weeks post-release (Merrall, *et al*, 2010). The latest UK government statistics show that in 2018-19 only 17% of opioid-dependent people leaving prison in England were given THN compared to 12% in the previous year (Public Health England (PHE), 2020). The section below will discuss several examples of partnership working in the UK between the criminal justice system and naloxone providers. It also describes some of the evidence as regards the success of THN programmes upon prison release.

England

11.2. In England, several Police and Crime Commissioners (PCCs) have funded naloxone provision projects in custody suites, however, due to restrictions in the regulations this has required use of patient group directions or patient specific directions. A PCC-funded project delivered by a community service provider saw the supply of naloxone to opioid users through the York Drug and Alcohol Service along with provision of harm reduction advice and wider naloxone training to hostels, homelessness services and allied outreach teams. Naloxone provision is now embedded as part of treatment provision in York, and there is wider awareness and provision of naloxone in allied services. This initiative has drawn in PCC funding, which will allow continued focus on naloxone provision (community service provider submission, Appendix E iii).

11.3. There is also evidence of successful joint working in naloxone provision between a community service provider and prison healthcare to train and issue naloxone kits on release. The programme provides opportunities for successful partnership working (community service provider submission, Appendix E ii).

Scotland

11.4. Following the introduction of Scotland's National Naloxone Programme, opioid related deaths within four weeks of prison release decreased by 50% between 2011-17 (Bird and McAuley, 2019). The Scottish prison services recommend increasing uptake of naloxone on release through:

- strong leadership and adjustments to current practice;
- provision of overdose awareness and naloxone training to prison officers;
- Naloxone availability to all prison officers for use in an emergency when nurses are unavailable; and
- provision of intranasal naloxone for prisoners to keep in their personal possession.

Northern Ireland

11.5. The Public Health Agencies in Northern Ireland originally endorsed the use of THN supplied through a Healthcare Trust which provides prison healthcare to all three prisons in Northern Ireland. Prior to 2015, this was provided via a patient group direction. The necessary training was provided by a third sector organisation with the supply provided by the Trust, showing the importance of partnership working (community service provider, Appendix E iv).

11.6. Since 2013, naloxone has been provided to prisoners upon release from three Northern Ireland prisons. The training aspect is delivered by Start 360 staff and the naloxone supplied by the SE Trust healthcare team. Upon a planned release, the person collects the naloxone along with their possessions on exit from prison. However, as referred to above, the problem has always been and remains when release is from court (i.e., ‘unplanned’). No naloxone is available to the person released in these circumstances (community service provider submission, Appendix E iv).

11.7. One pilot randomised control trial (RCT) involving prisoners and naloxone administration for opioid overdose was retrieved following a scoping review search (Palmar, *et al*, 2017). However, The N-ALIVE pilot trial stopped early due to confounding of the non-treatment control group by the increasing number of community-based naloxone supply schemes. However, it was clear from the pilot that large-scale trials of public health interventions are feasible within prisons and indeed, the prisoner consent rate was excellent at 72%. In addition, researchers asked participants if they were willing to complete a follow-up survey if they returned to prison within six months of their release date. The response rate was 14% (218 of 1557); over 50% (n=112) were naloxone on release (NOR) recipients and 43% (n=93) were control group participants. 71% of the NOR group (n=80) carried naloxone and of that number, 92% (n=74) carried naloxone all or most of the time. In terms of usage, 5% (n=5) of the NOR group self-administered to reverse overdose. whist 14% (n=16) provided naloxone to others in an overdose situation (Palmar, *et al*, 2017).

Summary Points:

- There are very good examples of partnership working between community-based organisations, Trusts and Prison services to ensure that THN is available to people on release from prison. However, coverage appears fragmented across the UK.

- Statistics indicate that in England, only 17 % of opioid dependent-prison leavers are provided with THN (PHE, 2020) and in some areas it was anecdotally reported that the figure may be much lower.

- The research findings (primarily using cross-sectional surveys) indicate that a high percentage of people leaving prison would willingly accept naloxone upon release.

- One study reported that most opioid users leaving prison would not actively seek naloxone prior to release.

12. Police Services and Criminal Justice

12.2. Across the four nations there are several varying initiatives to provide officers with naloxone. The discussion below focuses on several successful schemes initiated by police services in the UK.

Wales

12.3. In Wales, there is currently a programme which allows Welsh police services to carry intranasal (IN) naloxone for use in overdose situations, with the intention to gradually roll this out across Wales (Policing Partnership Board for Wales, 2021).

England

12.4. In England, West Midlands police conducted a pilot project to enable them to carry and administer IN naloxone (West Midlands Police and Crime Commissioner, 2020). A training template for individual officers has been created which includes advice and contact cards. These are provided to anyone who has been administered naloxone.

Scotland

12.5. Police Scotland commenced a pilot programme of IN naloxone in three regions, one in each of the East, North and West local policing areas. Police Scotland initiated the project in the context of ongoing partnership working with several organisations and third sector groups as part of a sustainable approach to tackling the issues of problematic drug use in Scotland. Officers were permitted to carry and use naloxone from that point (Crown Office & Procurator Fiscal Service, 2020). In the official six-month period, 808 officers have attended training inputs, with 656 officers volunteering to take part in the pilot (81%). The test of change is subject to a full and independent evaluation which is expected to be published shortly and recommendations will then be presented to the Chief Constable of Police Scotland. In the test of change period there were 51 uses of naloxone by officers. All persons administered naloxone by officers survived their ordeal (Hillen, *et al*, 2022).

12.6. North Wales Police and Police Scotland are trialling having patrol officers carry IN naloxone and West Midlands police have extended their pilot scheme, with a rollout announced in the Spring of 2021 (Police Scotland, 2021).

Northern Ireland

12.7. More recently in Northern Ireland, 30 officers were trained on the use of IN naloxone in April 2021 and supplies were made available in May 2021. The officers are all based in the city centre of Belfast and have frequently attended overdoses as first responders.

12.8. Police Service of Northern Ireland (PSNI) and Northern Ireland Ambulance Service were due to meet in July 2021 to resolve some outstanding governance issues before the PSNI was permitted to administer the IN naloxone.

Summary Points:

- There are several police service pilot programmes across the UK which are currently delivering naloxone across the four nations.

- Police services are using IN naloxone (Nyxoid) as there were some concerns expressed about the use of intramuscular devices.

- Rollout of the initial pilots are being extended both in scale and location.

13. Conclusions

The importance of naloxone is apparent, with evidence showing an association between administration of naloxone and a reduction of opioid overdose-related deaths. However, this benefit is not entirely understood by people who use drugs as studies find a low carriage rate, hampered by various factors including the individual's lack of awareness of Acute Withdrawal Syndrome, a fear of police intervention and a lack of convenience due to the size and colour of the naloxone packs.

There has been an increase in the number of people who have been administered naloxone over the last ten years. Although data from Scotland, Northern Ireland and Wales provides a clear overview of naloxone supply, there are challenges in understanding the level of naloxone supply in England, mainly because data are not being collected in a uniform fashion.

Although there are excellent examples of strong community partnerships which provide take-home naloxone in some areas of the UK, more work is needed to widen the access to, and increase the uptake of, naloxone in multiple initiatives, spanning across the UK.

Pharmacies are a key provider of take-home naloxone in several areas within the UK, providing a good opportunity to conduct a brief intervention to promote education and increase adherence to naloxone. A UK agreement on the specific role of community pharmacies in distributing naloxone would promote collaborative working across the four nations.

Peer-to-peer naloxone also appears to be a beneficial method of supply as peer educators are in a great position to connect with people who have previously refused naloxone training and supply. However, research is needed to consider the efficacy of this method within a range of contexts.

Prisons also pose an effective location to provide interventions, training and to distribute take-home naloxone to prison leavers, as these people are most at risk of overdose due to low tolerance upon leaving prison. Evidence suggests that the supply of take-home naloxone on release from prison is fragmented across the UK with only a small proportion of opioid-dependent prison leavers currently being provided with naloxone, even though studies find that a high percentage of these people would willingly accept take-home naloxone upon prison release.

There are multiple police service pilot programmes across the UK which currently deliver intranasal naloxone (Nyxoid) as a more convenient method as opposed to intramuscular devices. Rollout of the initial pilots are being extended both in scale and location.

Overall, it is apparent that a national joined-up approach to promote the delivery of take-home naloxone across different sectors is necessary, supported by rigorous data recording to measure progress. Interventions are needed across a range of different sectors, ranging from delivery of take-home naloxone within community pharmacies, promotion of peer-to-peer take-home naloxone programmes, police training, and increasing take-home naloxone supply amongst prison leavers. This approach would ensure a UK-wide, joined-up approach of widening the access to and, increasing the uptake of, take-home naloxone.

14. Recommendations

Recommendation 1

To improve the quality of data/information on take-home naloxone, particularly in England. Local Authority commissioners to include completion of National Drug Treatment Monitoring System questions, including on naloxone, within their service specifications and as a condition of their contracts with drug treatment providers.

Recommendation intended for: Local Authority commissioners in England.

Measure of implementation: Completion of National Drug Treatment Monitoring System questions on naloxone.

Metric for assessing intended effect: Percentage of service users at risk of overdose who have been trained and supplied with take-home naloxone using an agreed time frame.

Recommendation 2

To explore evidence-based ways in which the carriage of naloxone can be increased by those at risk of overdose and their families. This can be done using formal research studies as well as methodologically robust evaluations of take-home naloxone programmes.

To initiate a formal UK government funded call for research on the carriage and availability of naloxone.

Recommendation intended for: National Institute for Health Research.

Measure of implementation: Research activity in this area leading to an improved evidence base to inform practice.

Metric for assessing intended effect: Revised national practice guidance. Peer-reviewed publications.

Recommendation 3

Good examples of partnership working should be used to encourage organisations, in those areas in the UK which do not currently have extensive peer-to-peer take-home naloxone programmes, to establish them as soon as possible.

Recommendation intended for: Commissioners (Local Authorities, Health and Social Care Trusts, and service providers), Office for Health Improvement and Disparities, Scottish Government, Public Health Wales, Public Health Agency Northern Ireland.

Measure of implementation: Service specifications should specifically reference peer-to-peer naloxone.

Metric for assessing intended effect: Number (%) of Local Authority areas, Health and Social Care Trusts (and other in Scotland, Northern Ireland, and Wales) where peer-to-peer naloxone programmes are available.

Recommendation 4

The prison service in each of the four nations should ensure complete coverage of take-home naloxone by those people who leave prisons at all times (with specific emphasis on weekend departures).

Recommendation intended for: Prison health commissioners (currently NHS England) prison governors and prison pharmacists.

Measure of implementation: Policy guidance.

Metric for assessing intended effect: Number of police service areas which have local arrangements to ensure people who use drugs do not have naloxone removed on arrest or stop and search. Service user's knowledge/understanding of that policy assessed by local surveys.

Findings from formal evaluation of police-controlled peer-to-peer naloxone projects.

Numbers provided with naloxone on release from prison.

Recommendation 5

There should be additional national support and training for police in the holding and administration of take-home naloxone. This should include guidance on encouraging service users to carry intranasal or intramuscular naloxone. Where available, police services should register to gain required exemptions to supply take-home naloxone.

Recommendation intended for: Police, Police and Crime Commissioners, National Police Chiefs Council, prison services in England, Scotland and Wales and Northern Ireland.

Measure of implementation: Policy Guidance.

Metric for assessing intended effect: Service user's knowledge/understanding of that policy assessed by local surveys.

Findings from formal evaluation of police-controlled take-home naloxone programmes.

Recommendation 6

Acute trusts (including emergency departments), mental health trusts and ambulance services should issue take-home naloxone and associated training to those at risk of opioid overdose. Relevant National Institute for Health and Care Excellence guidance should be updated to include appropriate recommendations on naloxone provision.

Recommendation intended for: Acute, mental health and ambulance trusts and, health commissioners. Department for Health and Social Care, Public Health Agency (Northern Ireland), Scottish Government. National Institute for Health and Care Excellence

Measure of implementation: Policy guidance for acute, mental health and ambulance trusts.

Metric for assessing intended effect: Number of take-home naloxone kits issued by acute, mental health and ambulance trusts. Drug-related deaths figures (Office for National Statistics).

Recommendation 7

That there should be contractual arrangements across the UK which allow community pharmacies to issue take-home naloxone and an associated brief intervention on opioid overdose management.

Recommendation intended for: Commissioners of pharmacy services (Local Authorities/NHS England/Clinical Commissioning Groups). Royal Pharmaceutical Society. Area pharmaceutical committees. Health boards.

Measure of implementation: Presence of a robust contractual arrangement for community pharmacy to deliver take-home naloxone.

Training for pharmacists and pharmacy staff on how to provide brief interventions related to take-home naloxone and how to administer both intranasal and intramuscular naloxone (this could be virtual, or resource-based).

Metric for assessing intended effect: Number of pharmacies across the UK who are contracted to deliver take-home naloxone. Number of kits issues.

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16. Appendix A- ACMD Membership at the time of publication

Dr Ann Sullivan	Consultant physician in HIV and sexual health.
Dr Anne Campbell	Reader in substance use and mental health and co-director of the Drug and Alcohol Research Network at Queens University Belfast.
Dr Carole Hunter	Lead pharmacist at the alcohol and drug recovery services at NHS Greater Glasgow and Clyde.
Dr David Wood	Consultant physician and clinical toxicologist, Guys and St Thomas' NHS Trust.
Professor David Taylor	Professor of psychopharmacology, King's College, London.
Dr Derek Tracy	Medical director of West London NHS Trust.
Dr Emily Finch	Clinical director of the Addictions Clinical Academic Group and a consultant psychiatrist for South London and Maudsley NHS Trust.
Professor Graeme Henderson	Professor of pharmacology at the University of Bristol.
Mr Harry Shapiro	Director – DrugWise.
Dr Hilary Hamnett	Senior lecturer in forensic science, University of Lincoln.
Professor Judith Aldridge	Professor of criminology at the University of Manchester.

Dr Kostas Agath	Consultant psychiatrist (addictions), Change Grow Live Southwark
Mr Lawrence Gibbons	Head of drug threat – National Crime Agency Intelligence Directorate – Commodities.
Mr Mohammed Fessal	Chief pharmacist, Change Grow Live.
Professor Owen Bowden-Jones	Chair of Advisory Council on the Misuse of Drugs, Consultant psychiatrist, Central North-West London NHS Foundation Trust.
Dr Paul Stokes	Senior clinical lecturer in mood disorders, King's College, London.
Mr Rob Phipps	Former head of Health Development Policy Branch, Department of Health, Social Services and Public Safety, Northern Ireland.
Dr Richard Stevenson	Emergency medicine consultant, Glasgow Royal Infirmary.
Professor Roger Knaggs	Associate professor in clinical pharmacy practice at the University of Nottingham.
Ms Rosalie Weetman	Public health lead (alcohol, drugs and tobacco), Derbyshire County Council - (currently on secondment to Office for Health Improvement and Disparities, as programme manager, Drug and Alcohol Improvement Support Team).
Professor Sarah Galvani	Professor of social research and substance use at Manchester Metropolitan University.
Professor Simon Thomas	Consultant physician and clinical pharmacologist, Newcastle Hospitals NHS Foundation Trust and

	professor of clinical pharmacology and therapeutics, Newcastle University.
Professor Tim Millar	Professor of substance use at the University of Manchester.

17. Appendix B- ACMD Recovery Committee at the time of Publication

ACMD Members:

Dr Anne Campbell	Reader in substance use and mental health and co-director of the Drug and Alcohol Research Network at Queens University Belfast, Co-chair of the ACMD Recovery Committee
Dr Carole Hunter	Lead pharmacist at the alcohol and drug recovery services at NHS Greater Glasgow and Clyde.
Dr Emily Finch	Clinical director of the Addictions Clinical Academic Group and a consultant psychiatrist for South London and Maudsley NHS Trust, Co-chair of the ACMD Recovery Committee
Professor Graeme Henderson	Professor of pharmacology at the University of Bristol.
Dr Kostas Agath	Consultant psychiatrist (addictions), Change Grow Live Southwark
Mr Mohammed Fessal	Chief pharmacist, Change Grow Live.
Mr Rob Phipps	Former head of Health Development Policy Branch, Department of Health, Social Services and Public Safety, Northern Ireland.
Ms Rosalie Weetman	Public health lead (alcohol, drugs and tobacco), Derbyshire County Council - (currently on secondment to Office for Health Improvement and

	Disparities, as programme manager, Drug and Alcohol Improvement Support Team).
Professor Sarah Galvani	Professor of social research and substance use at Manchester Metropolitan University.
Professor Tim Millar	Professor of substance use at the University of Manchester.

Naloxone Report Co-opted Members:

Dr Desiree Eide	Norwegian Centre for Addiction Research, University of Oslo.
Ms Kirsten Horsburgh	Strategy coordinator, Scottish Drugs Forum.
Dr Andy McAuley	Senior research fellow, Glasgow Caledonian University; principal scientist, Public Health Scotland.
Dr Rebecca McDonald	Norwegian Centre for Addiction Research, University of Oslo.
Mr Chris Rintoul	Drugs and Alcohol Consultancy Service, Extern.
Ms Josie Smith	Head of Substance Misuse Programme, Health Protection, Public Health Wales.
Professor Sir John Strang	Head of Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London.
Mr Steve Taylor	Drug Treatment and Recovery, Public Health England.

Many thanks to Jacqueline Thompson for assistance with the review of the literature (University of Birmingham).

18. Appendix C- Evidence Gathering Days Presenters and Written Submissions

Belfast Evidence Gathering Day:

Mr Iain Cameron	Project Manager, Harm Reduction Services, Extern.
Mr Jeremy Cowen	Emergency Planning Officer, Northern Ireland Ambulance Service.
Inspector David Gibson	Central Neighbourhood Team, Belfast City Policing District.
Mr Brian O'Kane	Belfast Housing Solutions & Support Team, Northern Ireland Housing Executive.
Mr Eoin Ryan	The Northern Ireland Alcohol and Drugs Alliance.
Mr Davis Turkington	Health and Social Wellbeing Improvement, Public Health Agency.

Scotland Evidence Gathering Day:

Ms Kirsten Horsburgh	Strategy Coordinator, Scottish Drugs Forum.
Dr Andy McAuley	Senior Research Fellow, Glasgow Caledonian University; Principal Scientist, Public Health Scotland.

England and Wales Evidence Gathering Day:

Ms Claire James	Associate Director of Nursing, Change Grow Live.
Ms Josie Smith	Head of Substance Misuse Programme, Health Protection, Public Health Wales.

Call for Evidence Written Submissions:

In addition to oral evidence at three ACMD evidence gathering days in 2020-21, the ACMD welcomed written submissions on naloxone from organisations throughout the UK. The data gathered from those events is presented within the report alongside information from peer reviewed research.

Professor Sheila Bird	MRC Biostatistics Unit, University of Cambridge.
Dr Ed Day	Associate Professor in Psychiatry**,** School of Psychology, University of Birmingham.
Dr Andrew McAuley	Glasgow Caledonian University; Principal Scientist, Public Health Scotland.
Professor Sir John Strang	Institute of Psychiatry, Psychology & Neuroscience, King's College London.
We Are With You	Drug and Alcohol Use Charity
Bristol Drugs Project	Drug and Alcohol Use Charity
Collective Voice	National Alliance of Drug and Alcohol Treatment and Recovery Charities

19. Appendix D- Naloxone Administration Case Examples

Case example 1.

An interview with a Street Impact worker, Bristol. She describes her experience of attending an overdose by chance and administering naloxone:

“I spotted a man just slumped on a bench on the street, looked at him and then I think I need to walk back and check on them… I walk back and try to kind of get this person, this male, awake. So he was like slumped in a really strange position on the bench… I was kind of like shaking him trying to get him to respond.”

A passer-by stops and agrees to call an ambulance.

“So we managed to get him off the bench and onto his back - he was still breathing, and at this point there was a lot of older people started gathering around and saying, ‘Oh, he's a known drug user’, ‘Him and his brother - we always see them around’, and kind of really dismissive. Yeah, not helping. The little crowd starts forming. And obviously, I'm, like, listening to the person who's on the telephone. I'm opening his airway, trying to get making sure he's got good air coming in - he's still breathing at this point, everything's fine, but there's definitely something kind of wrong.”

Overdoses occurring in public places bring opportunities such as potentially multiple rescuers but can also increase noise and reduce the space available, both making it more difficult for rescuers to correctly assess breathing.

“I was checking for any signs of overdose, but there was obviously lots of mention of ‘Oh, him and his brother...’, ‘Where's his brother?’, ‘We need to get his brother back’ or ‘I reckon he might have smoked Spice’. And then all of a sudden, it kind of went a bit crazy. So I think the person on the end of the phone said, I think we need to try and get a defibrillator. So at this point, I sent people down to Asda to go and get the defibrillator from there.”

A woman pushing a pram stops and introduces herself as a doctor and offers assistance. The casualty’s breathing deteriorates and the worker decides to administer naloxone.

“So I think I probably did a first dose of Naloxone prior to the defibrillator being used and waited. I think it was kind of while they were doing the defibrillator - that was like the kind of the two minutes.

“And then it was after I administered another dose. I tried to do the right doses, but bear in mind, it's like raining, freezing cold. I'm shaking. It was pretty terrifying because at this point, there's obviously a crowd because now the person comes from Asda, and then more people. Everybody going, ‘Can I help?’, ‘Can I help?’ Yeah, I think we cut the T shirt off this guy and it was after I did the second dose of Naloxone - that seemed to be the catalyst and

then he reacted to that quite quickly - just as the ambulance and the paramedics were arriving. That's when it's kind of like, 'That has worked' because he just jumped up at that point. Yeah, I was kind of like, obviously, you know, I was remembering...'He's gonna act aggressively, may go into immediate withdrawal, he's probably not going to go with ambulance staff.' As soon as the paramedics arrive, the crowd kind of dispersed. He was kind of going 'Where's my brother?' and shouting and I kind of stepped away from it and I think I handed over the syringe to the paramedics just to show them how much I'd administered and it was it was probably far too much. It wasn't an exact dose - just like 'Get it in him!' So that seemed to be the thing that worked. Like the reaction from him. And then in another minute, everybody had dispersed again.

"He refused to go with the ambulance staff and then it was just like me."

The worker describes emotions in the aftermath of the overdose and talking events through later on with a family member and a worker from Bristol Drugs Project the following day (Bristol Drug Project).

"I'm not a very emotional person, but I literally saved somebody's life – it's a really big thing. It's incredible to completely reverse the effects of an overdose."

Case example 2.

An interview with an adult male heroin user, living in Bristol. He has administered naloxone to peers on four occasions, all successfully preventing a fatal outcome. He has also been given naloxone by peers and ambulance staff. Speaking of the latter he reports:

"There's a marked difference between what the service users inject into you and what the ambulance service do – the doses are completely different.

"When I got revived by my friends, they gave me a line each (one mark on the pre-filled syringe) and that was enough – I didn't need any more, and I didn't feel particularly ill from it.

"Both times I had it administered by the ambulance service – one time was at the back of Trenchard St. car park, and they thought I'd gone over on Fentanyl – there was packet after packet after packet of it everywhere – they said they'd never put so much Naloxone into a person. They were squirting it up my nose, injecting it in me – they just kept putting it in me. As soon as it wore off, I just kept going over. That went on for nearly an hour. I reckon I should've died there and then – but I didn't, and I felt out of whack with the world for a good two or three weeks. It was a really bizarre feeling – I just felt out of sync.

"The other time they just threw a dose in me – I woke up, jumped up, swore at them a bit (and left)."

This highlights the different subjective experiences after being administered naloxone to by peers and ambulance staff, reporting that he feels less unwell after being given naloxone by his peers. He goes on to discuss his experiences administering naloxone to his peers and them administering to him:

"When I gave it to my friends they were mainly pissed off that I'd ruined their buzz. One of the people was Gary – I had to Naloxone him, and then I've gone over and he's had to Naloxone me!"

Carrying naloxone so as to ensure it is available in the immediate vicinity is recommended, especially if using opioids alone:

"'What's the point of having Naloxone if you're using on your own?', but there is a point to it, because if someone finds you they can administer it."

On increasing access points to naloxone supply:

"There still isn't enough places giving it out – it doesn't need to be a healthcare professional – you just need to be able to go in somewhere, say you're a user, and be able to get one. If you're picked up by the ambulance they should be able to give you one."

The consequences of administering naloxone to others were considered, highlighting that there are concerns and some anxiety involved but that these are outweighed by the desire to prevent loss of life:

"It's no small thing sticking a big blue needle in someone and pushing some liquid in. My first thought is always 'They're going to have a fucking go at me!' but I wouldn't be put off using it on someone because they're gonna have a go at me. The times that I have used it, the people have been grateful…eventually!"

The injectable product supplied to opioid users in the area have some limitations, some depending on the circumstances of individuals:

"The packaging could do with being a bit more sturdy when you're street homeless – the cellophane come off easily, the boxes break quite easily and they get quite dirty. Also the needles should be different from the needles that we use – people are always breaking open the boxes to get the long blues out."

Needles being removed from an intramuscular pack suggests the need for needle and syringe services to provide adequate needles with syringes given out without fixed needles. Providing needles to syringes at a ratio of 2:1 would prevent the removal of the naloxone needles as well as reduce reuse or sharing of previously-used needles.

Case example 3.

A submission provided by a social worker in Belfast, working in a service for people who are homeless:

“Two males in their early twenties entered our premises in city-centre Belfast mid-afternoon in late 2019. Both had used heroin in the vicinity of the service. Shortly afterwards both became heavily sedated and one displayed signs of opioid overdose such as being unresponsive to stimuli, reduced breathing and turning a pale pallor. Both were known to the service to be daily heroin users by injection, and commonly used other drugs alongside which also suppress breathing. Both at that time were rough sleeping in the city centre area.

“The young man who remained conscious disclosed that they had made a ‘suicide pact’ earlier that afternoon, intending to overdose with heroin and to die together. At some point soon after injecting they had made their way to the support facility, perhaps having changed their minds and in an attempt to avoid fatal overdose.

“The overdosed casualty was placed in the recovery position with his airway fully open, intramuscular Naloxone was given and emergency services called. Naloxone was administered again every few minutes. He showed signs of recovery after the 3rd dose. Within a few further minutes he was aware enough for us to explain what had just happened and this was further reinforced by testimony from his friend he had arrived with. The recovering casualty showed mild signs of agitation, stating that he did not want an ambulance to attend when he was made aware that it was en-route.

“The 2 young men left the building after staff encouraged them not to use more drugs for at least 2/3 hours. Two staff then remembered to offer a resupply of Naloxone to the young men and caught up with them on the street a short distance away, to make the offer. The offer was declined by the man who had been overdosed.”

This case example highlights not only the effectiveness of naloxone but also the sometimes-opportunistic nature of responding to overdose. Had the two men not made their way to the service, one may have died, causing huge distress to his friend. It also highlights that some heroin users, particularly those with multiple needs including homelessness, may from time-to-time be ambivalent to remaining alive. Engaging in higher-risk behaviours for overdose (such as actively trying to overdose) may be an example of this. The example also highlights that where there are accessible and trusted services in the vicinity, these may be sought out at times of high risk and crisis as a way to mitigate those risks.

Case Example 4.

A naloxone trainer’s views on naloxone administration, working with specialist groups and working in a pandemic in Northern Ireland.:

Adjusting for COVID-19:

“Current Resuscitation Council UK advice recommends compression only CPR rather than chest compressions and rescue breaths. Wearing of PPE especially masks and gloves, covering the face with a cloth and performing a breathing assessment form a safe distance. However opioid overdose is

primarily a respiratory problem rather than a cardiac one. The gold standard for CPR even in cardiac arrest (where there is a higher residual level of oxygen in the lungs/body) remains the combination of compressions and breaths. After 5 minutes of compression only CPR the cardiac arrest patient's chances of survival drop swiftly. More so the opioid overdose casualty. Chest compressions do deflate the lungs to a limited extent which will help but not as effective as a well performed rescue breath. In training I give [training] attendees pocket face masks which offer a good standard of protection (mainly to the casualty) of transmission of infection. I do not say they are 100% effective as I do not know that to be the case. However armed with a face mask I find we greatly improve the willingness of rescuers to consider giving rescue breaths even though no one can mandate them to do so. I still advise not giving rescue breaths if there are fluids around the mouth such as vomit, blood etc. Simple bits of advice like remembering to tie back long hair, remove scarves/pendants etc. stops rescuers having to put their hands anywhere near their face after they have started CPR. Ideally they would direct someone else to make the 999 call after touching the casualty (putting onto their back on a hard surface or placing in recovery position) as this means the rescuer isn't subsequently putting their hand near their face to make the call. Finally putting a face covering on the casualty after they come round and encouraging them to keep it there reduces the chance of Covid transmission especially given the risks of sneezing in withdrawal."

Working with specific groups:

"Training issues such as contraindications and specific groups. There are no contraindications to administering Naloxone but in some cases you may administer with caution. It always comes down to the balance of risks i.e. is the risk of not administering Naloxone greater than that of doing so to a specific group. There are 3 relevant groups: Pregnant women in 3rd trimester, people with known, pre-existing cardiac issues, and terminally ill cancer patients. For all 3 groups the 'administer with caution' advice is only relevant to those who are opioid dependent and therefore at risk of abrupt withdrawal. It's unlikely the last group are relevant as usually resident in hospitals/hospices. I advise that where a rescuer knows the casualty is heavily pregnant or has a cardiac issue they inform ambulance control when ringing for help and again when the crew arrive. Generally I'd have to say a lot of the 'what ifs' dissipate when Naloxone use is common and by those not working in organisations which are generally risk-averse. Of course the obvious point could be made that we perhaps should be using high-flow oxygen (with or without a bag mask depending on breathing) in the 1st instance with people in opioid overdose and Naloxone if required as the 2nd line defence. However because of risk of fire/explosion, governance around storage and administration of oxygen etc. this is not permitted in the likes of hostels. Administering with caution is something I think is useful in all opioid overdoses rather than just for the specific groups mentioned. Being cautious with dosing and dosing intervals is advantageous since it minimises the

severity of the abrupt withdrawals. There are challenges in practice depending on the scenario e.g. lighting, space, eyesight, panic, trembling hands etc.”

20. Appendix E- Written submissions

i) We are with you

Written submission from We Are With You:

Prevalence and nature of naloxone provision, carriage and use:

Our services have seen a significant increase in the prevalence, distribution, carriage and use of naloxone. At With You we have seen success when we take a proactive approach, reaching people in the spaces they already use. In Redcar and Cleveland, we were the first national treatment provider to run a pilot project of Peer-to-Peer naloxone. Focusing on using communities and going to where people are, not expecting them to come to us, has meant that we can better reach people who need our help, and help save lives. At the same time, it empowers the peers and supports their own recovery journey. However, there are areas of concern. The provision of naloxone for people released from prison is a particular concern. The latest UK government statistics show that in 2018/19 only 17% of opioid dependent people leaving prison were given take-home naloxone. In Scotland, a pilot study1 found that providing naloxone to people leaving prison reduced drug-related deaths by 36% in the weeks following their release. The funding landscape for drug and alcohol treatment since 2012 has also limited the availability of treatment services to distribute naloxone. Funding for naloxone provision is not ring-fenced in local authority commissioning contracts and the reduction in the size of commissioned drug treatment contracts has ultimately limited the ability of treatment services to purchase the level of naloxone packs required to be distributed. Increasing drug and alcohol treatment budgets and mandating a specific spending requirement on naloxone per localised need, could be effective in increasing naloxone prevalence.

Evidence of effectiveness of naloxone:

The clinical effectiveness of naloxone as an intervention to block the effects of opioids is well known. However, the effectiveness of naloxone in saving a person's life can be dependent on emergency services being immediately called to ensure appropriate medical interventions can be provided while the naloxone is in effect. People who use drugs can still be reluctant to call emergency services if they remain in possession of illegal substances due to a fear of arrest. Further steps taken to ensure people who use drugs are not hesitant to call the emergency services could further enhance the effectiveness of naloxone as an intervention. However, naloxone isn't a panacea. Many of our services across the UK, particularly in Scotland, are continuing to see an increase in poly-drug involving both opiates and benzodiazepines which presents an additional range of challenges in reversing the rising trend in overdose deaths. Therefore, while naloxone remains a vital tool, it should be noted that it isn't a comprehensive solution and we'd encourage the [Advisory Council on the Misuse of Drugs] to continue to look at the feasibility of flumazenil around countering *benzodiazepine overdoses and provide additional guidance where possible. Lastly, the effectiveness of naloxone is dependent on the quality of training which can vary greatly, and services must continue to strive and provide the highest quality of training to ensure naloxone is being used most effectively.*

Evidence of who is administering naloxone (police, voluntary services, etc.):

The regulations that came into force in October 2015 allowing people who work in or for drug treatment services to supply naloxone to others was very effective in increasing the distribution of people carrying and administering naloxone in the community. However, these regulations could be relaxed further in order to allow the wholesale distribution of naloxone from drug services to organisations and services that work closely with opioid dependent people, such as in hostels. Allowing for a more wholesale model of naloxone distribution where possible, would significantly increase the supply and distribution among people at a high-risk of experiencing an overdose. Regulations in Scotland have recently been relaxed during the covid-19 pandemic allowing our services to provide bulk naloxone to multiple organisations. As noted in a case study below, we have been utilising the 'training the trainer' model, whereby people are trained and who can in turn, train their peers in the community. This has been very effective in ensuring access and distribution to people in the community most at-risk.

Barriers to uptake of naloxone (both intramuscular and intranasal naloxone):

There remain barriers to improving the uptake of naloxone, and several have been mentioned previously, including the fear of arrest, regulations around how naloxone can be distributed, and the funding landscape for drug treatment services from local authority commissioning. However, there are several additional barriers we'd like to raise. Provision remains extremely localised and often determined by the commissioner's demands/priorities, often aimed primarily at people who are injecting and people who are new into services. Unfortunately, in some areas it's not possible to extend provision beyond these groups to family and friends, often because services just don't have the resources. Regulations that came into force in 2015 allowing people who work in or for drug treatment services to supply naloxone to others was very effective. Further relaxing regulations to allow a more wholesale distribution of naloxone model from drug services to organisations/services that work closely with opioid dependent people, would improve the uptake of naloxone to people that are at risk of having, or are likely to witness someone having an opioid-related overdose. Research has shown that intramuscular naloxone requiring an injection can be a barrier to its wider uptake, especially among people who do not inject drugs. There is a stigma attached to carrying needles and evidence has shown that people remain hesitant to carry and use them. Anecdotal evidence has also indicated that the size of packaging of naloxone can be a barrier, as packs can be inconvenient to carry and can often be larger than people's pockets. The training process required to distribute naloxone, though vital, can also act as a barrier to uptake. Our *services in Cornwall increased the take-home naloxone acceptance rate by over 50% by shortening the training process, training people on the spot, making people opt-out rather than opt-in, and promoting naloxone in every interaction rather than waiting for people to come to us. Lastly, issues around supply and cost of intranasal naloxone remains a significant barrier to widening its uptake, especially to those who are hesitant to carry intramuscular naloxone. If this was more widely manufactured, it is likely that some of these issues around limited supply and its high cost in comparison to intramuscular naloxone would be less significant.*

Evidence of collaborative approaches to provision:

An example of effective collaborative approaches to providing naloxone is how we have worked with community pharmacies. Our services in Liverpool have been working in close collaboration with several community pharmacies to train and supply people released from prison naloxone when they pick up their [Opioid Substitution Treatments] script. While this partnership has worked well, the process is reliant on localised commissioning, and it would be beneficial if there was a clear national agreement on the specific role of community pharmacies in distributing naloxone to further promote collaborative partnership working in other parts of the UK.

Case studies of note:

Peer to peer in Redcar and Cleveland Involving people with lived experience of substance misuse has been a very effective way to distribute naloxone. With You in Redcar and Cleveland ran a successful Peer to peer naloxone project, training people in the community as well as key organisations and businesses such as cafes, pubs, hostels, and a young person's housing charity. The peer to peer distribution model ensures we are able to access those most at-risk and who aren't engaged with services. We found that while our services in buildings might be able to distribute around ten naloxone packs in a day, the distribution volume by the peers was significantly greater. As a result of the pilot, 43 Naloxone kits were issued in Redcar and Cleveland in January 2020 alone. This was a 40% increase in packs given out when compared with an average month in the service, and 60% of people who received a naloxone pack were not known to With You, and 81% were introduced to naloxone for the first time. The project also had a very positive impact on the recovery and personal development of the peers themselves.

Working with housing organisations

Despite many overdoses taking place in people's homes or accommodation, many housing organisations still do not supply naloxone onsite. In order to address this issue, we developed strong relationships with multiple housing organisations, training staff and making sure they always have naloxone on-site in case of an emergency. We also make sure that a client's next of kin are always offered naloxone as they are often the first people who respond to an overdose.

HMP Lincoln

With You delivers the drug treatment service in HMP Lincoln and have improved the distribution of naloxone by utilising the role of 'naloxone champions'. In the weeks prior to a person's release, our recovery workers and peers who've been identified as 'naloxone champions' offer naloxone training. If this is at first refused, they are regularly reminded of its importance in order to encourage them to take the training. Nurses on reception are also trained to offer naloxone and are able to train people at the last moment before their release. Having a team of peers as 'naloxone champions' has been key to persuading and increasing the number of people carrying naloxone once released and the harnessing of people's personal stories of using naloxone has been vital in improving the training uptake.

Opt-in distribution in Cornwall in our services

In Cornwall, we found that people were much more likely to reject carrying naloxone than accept it. To change people's behaviour, we put naloxone at the forefront of everything we do. Previously once seen as added extra to treatment, now anyone who's at risk of an opioid overdose, or knows someone who is, is given naloxone when they interact with us, rather than waiting for them to 'opt in'. Furthermore, we learned that you cannot wait for people to come to you. Cornwall is a huge geographical area and people often struggle to travel long distances to come to naloxone training events. We now promote naloxone in every interaction, both inside and outside of treatment. Our services in Cornwall now have the highest acceptance rates of receiving naloxone across any of our services.

ii) Change Grow Live

Text from a presentation submission from Change Grow Live:

Slide 1- Overview

- *Change Grow Live (CGL) is committed to making the Every Life Matters vision part of the core offer to all service users whether in structured or non-structured treatment.*
- *From 2015 to date, our strategy has focused primarily on distribution for those within structured treatment. This has been successful, with naloxone supply a significant element of the harm minimisation approach.*

Slide 2- How have we done so far?

Nationally

- *There were 265,857 people in structured treatment of which 140,096 people were opiate users in the last 12 months (Public Health England).*

Change Grow Live

- *Over the last 12 months there have been 107,567 people in structured treatment with CGL, 49,592 of whom were opiate users.*
- *On 19 March 2020, 16,043 people on our current caseload (52%) had been issued with Naloxone .*

Slide 3- How have we achieved this?

- *Naloxone champions in every service.*
- *Embedding it into our organisational strategy.*
- *A priority throughout the organisation up to board level.*
- *A fundamental in our harm reduction approach.*
- *We are open to all innovations that can increase the penetration of naloxone into every community.*

Slide 4- Nyxoid

- *1,722 Nyxoid kits were issued in 2019, accounting for 8.5% of total kits supplied.*
- *CGL conducted a Nyxoid pilot project from Aug 2019 - Jan 2020.*

Findings:

- *97% (141) of service users preferred nasal Naloxone preparation.*
- *Staff preferred nasal Naloxone as easier to administer.*
- *Each of the three pilot projects showed increases in Naloxone distribution during the pilot, which was statistically significant in two projects (91% in HMP Risley and 100% in Manchester).*

Concerns identified:

- *Worries about losing the dose from accidental priming.*
- *Worries about the efficacy.*
- *This has been a positive addition to the current take-home Naloxone (THN) offering.*

Slide 5- One-third of Naloxone offers are refused - Why?

- *"I don't inject anymore."*
- *"I don't associate with people who use drugs."*
- *"I don't want people to know I use."*
- *"I only use alone."*
- *"I don't want needles in the house."*
- *"I don't want to help someone who has overdosed."*
- *"I'm insulted, I no longer use illicit drugs."*
- *"The needle in the kit might tempt me to use."*
- *"I only use prescribed opiates."*
- *"I don't need my own kit they have them in my hostel."*
- *"My hostel won't let me have one."*
- *"I'm homeless and will lose it."*

Slide 6- What do we do about this?

- *Many of the reasons given for not accepting a Naloxone kit are misinformed.*

We need to make sure to:

- *Educate & Encourage.*
- *Challenge misconceptions with compassion.*
- *Positively reinforce.*
- *Raise profile & remove stigma.*
- *Provide solutions to identified barriers.*
- *Revisit.*

Slide 7- Make every contact count

Target individuals in both structured and non-structured treatment:

- *Entry into services.*
- *All interactions with our workforce.*
- *Needle exchange interactions.*
- *Pharmacy interactions.*
- *Outreach.*
- *GP shared care.*
- *Hospital liaison.*
- *Detox/rehab units.*

Slide 8- Reaching those not in structured treatment - So far

- *Until recently, Naloxone provision has primarily been provided to those with whom we have regular contact i.e. those using drug treatment services.*
- *Of course, there is a cohort of people who would benefit from Naloxone who we cannot easily reach.*

How have we reached those people so far?

- *Pharmacies.*
- *Naloxone Peer Educators (NPEs)/ Peer-to-peer (P2P).*
- *Outreach.*

Slide 9- Pharmacies

- *3,768 kits have been given out since 2015.*
- *717 of these kits were used in an overdose situation.*
- *The amount of kits used in this period is around 19 compared to four of those issued by CGL services.*

Slide 10- NPEs/P2P

Active service users who engage with peers to distribute Naloxone by:

- *Engaging with current service users who have previously refused Naloxone kits.*
- *Identifying people not actively engaged in treatment.*
- *Employing an outreach approach targeting local areas favoured by opiate users.*
- *Utilizing lived experience to effectively penetrate hard to engage cohorts.*

Slide 11- P2P St Helens

265 kits given out in the period 4 November 2019 to 4 January 2020. Of these:

- *70% (185) of people were issued with their first kit.*
- *58% (154) were issued to people in service.*
- *111 of people issued a kit were not in structured treatment.*
- *22% (58) were issued to people not in service.*
- *20% (53) were issued to professionals, staff, volunteers and service user reps.*
- *20% (30) of people issued a kit in structured treatment had previously refused a kit.*

Slide 12- Outreach - An approach during Covid

- *Target individuals who don't access services.*
- *Penetration of Naloxone by CGL has risen from 53% of our caseload on 23 March to 70% on the 21 July which represents an additional 7,418 service users issued kits (mainly through outreach).*
- *We took Naloxone to the person rather than the person coming to us.*
- *Pharmacy drop-off kits.*

Slide 13- How might we reach more people in future?

- *Community pharmacies.*
- *Hospitals.*
- *Ambulance service.*
- *Other emergency services coastguards, lifeguards, police.*
- *Approved premises.*
- *Hostels.*
- *Prisons.*

Slide 14- Supporting external organisations to deliver Naloxone through effective training.

- *Bespoke e-learning module.*
- *Accessible to all online.*
- *Supplemented by face-to-face or virtual training/support.*
- *Covers both Prenoxad and Nyxoid.*
- *Refresher training.*

Slide 15- Barriers to widening Naloxone availability

1. Funding

- *No national THN program in England.*
- *Dependent upon commissioned service.*

2. Stigma

- *Perceptions about people who use drugs.*

3. Legislation

- *Prescription-only medicine(POM) status.*
- *Non-prescription provision by drug treatment services only.*

4. Product availability

- *Nyxoid nasal spray not manufactured in UK.*

5. Awareness

- *Who knows Naloxone exists?*

Recommendation:

1.Ring fence funds to encourage a joined-up approach across the country.

2.Promote Naloxone as a lifesaving intervention in line with other health promotion campaigns.

3.Deregulate Naloxone to allow simpler distribution (POM to prescription).

4.Nasal Naloxone manufactured in the UK.

5.Establish a multi-agency partnership approach, widen accessibility through schools, universities, festivals…

Slide 16- Summary

- *There is a very fragmented approach to drug and alcohol treatment in England compared to Scotland and Wales, ultimately there needs to be a cohesive national delivery model.*
- *We have demonstrated that we can deliver an efficient and successful THN service, and activity so far has potentially saved many lives.*
- *We acknowledge that there is a long way to go, and hope to share and apply what we have learnt from delivering THN in drug treatment services around effective Naloxone provision to other organisations. Ongoing, focus needs to be on reaching those who are not in structured treatment. Ultimately our goal is to prevent another person from dying of an opiate overdose. But some may not even realise they need it so we can't wait for them to come to us.*

iii) Collective Voice

Written submission from Collective Voice:

Prevalence and nature of Naloxone provision, carriage and use:

Collective Voice believes, as do so many others in our field, that effective Naloxone provision is an essential element of any approach to drug treatment and recovery. There has been substantial progress in this area in recent years, but there is still a long journey ahead to ensure that Naloxone provision is – as it should be – widespread and commonplace around people who use opioids. Below we provide an overview of evidence and conclude with some case studies of effective approaches to Naloxone provision.

Our overall recommendations are that:

A. *Every effort is made to ensure Naloxone is available in the places where it is most needed. This means 1) consolidating the areas where there is growing awareness and availability, particularly drug and alcohol treatment providers and closely allied areas, such as hostels and 2) promoting naloxone as an important element of a wider public health approach to reducing harm in public spaces and protecting the most vulnerable, by widening the scope of individuals, agencies and environments that Naloxone is supplied to, from police to those routinely working in train stations, etc.*

B. *Naloxone provision is not seen as just a 'bolt-on' to treatment services. It should be understood as a fundamental harm reduction measure sitting within a wider treatment and recovery landscape, with commissioners helping to drive this change by specifying the provision of Naloxone in their tenders.*

C. *Awareness raising and cultural change around Naloxone provision continues to be pushed. There remains some misinformation and stigma around the use of Naloxone across a range of individuals and services.*

There has been a substantial push for several years to ensure wider provision across substance misuse services, emergency services – including the police – and allied areas of support, from hostels to food banks. The supply of Naloxone to be administered by people who use drugs (PWUD) has also expanded, in order to ensure that the people who are most likely to be present when someone overdoses are able to administer life-saving treatment. Much of this positive progress has been pushed forward by third sector organisations through local campaigns about the life-saving effects of Naloxone.

Changes to the law in 2015 mean that people working in drug treatment services are now able to supply people using their services with Naloxone, as well as a wider range of people who work with, or frequently come into contact with people who use opiates. This group can include outreach workers, as *well as friends or family of a PWUD. Crucially, Naloxone provision in these circumstances does not require a prescription. Initially, this provision applied to intramuscular (IM) administration of Naloxone, but since 2019 also applied to intranasal (IN) naloxone.*

Nevertheless, there are some significant gaps in the national provision of Naloxone, many of which are underpinned by the prolonged disinvestment in local drug and alcohol treatment budgets in recent years, which has resulted in a real-terms cut in funding of 37%. PWUD and are leaving prison are particularly vulnerable to overdose. However, in 2018/19, just 17% of opioid dependent people leaving prison received take-home naloxone (THN).

There are also questions about the role of pharmacies in the supply of Naloxone, particularly as a core group of people using drugs will visit pharmacies to access opioid substitution treatments. Some areas have demonstrated effective distribution through community pharmacies, but if this is to be expanded it would likely require a national agreement on their role, instead of relying on local commissioning arrangements.

However, at this point, the barriers to widespread Naloxone provision do appear, in the main, to be structural or practical and, while not insignificant in some areas, they can be addressed through training, awareness-building, reducing stigma, and public health commissioners 'building in' to the system a requirement of – and resource for – Naloxone provision through their tender documents. Release's recently published best practice guidance is a vital starting place for this next phase of widening naloxone provision.

Evidence of effectiveness of Naloxone:

Naloxone is an opiate antagonist, which effectively blocks the effects of opiates like heroin that can cause respiratory depression. For at least 20 years, it has been the best emergency tool when faced with the possibility of fatal overdose.

The change to the law in 2015 effectively widened the supply and provision of Naloxone to the people most likely to witness an opioid-related overdose. There have also been efforts to 'train the trainer' in the use of Naloxone, to further widen knowledge and access.

These THN programmes are widely understood as being effective components of a strategy to reduce drug-related deaths, combining educational and training interventions with Naloxone provision.

Evidence of who is administering Naloxone (police, voluntary services, etc.)

As above, the changes to the law in 2015 and 2019 widened the provision of Naloxone to a greater number of people likely to witness an opioid-related overdose, including hostel managers, other PWUD, and drug treatment and recovery workers and volunteers. At a minimum, there should be an expectation that all drugs workers are equipped and trained in the use of Naloxone.

Some Police and Crime Commissioners (PCCs) have also funded Naloxone provision projects in custody suites for their forces. However, these projects fall outside the scope of the 2015 and 2019 regulations and require patient group directions or patient specific directions signed by a prescriber. In this way, police doctors can stock supplies of Naloxone for officers to administer to people using opiates, particularly in custody suites. There may also remain cultural barriers around police officers' carriage of Naloxone, with some viewing it as 'mission creep' outside the scope of policing.

The latter point about PCC-funded projects falling outside the scope of the Naloxone regulations raises some of the concerns about remaining ambiguities in the law with respect to who can stock and supply Naloxone. For example, we have heard of difficulties for providers in supplying NHS staff with Naloxone without a patient group direction in place.

There also remain barriers to providing Naloxone to family members of people using opiates, despite evidence that this approach can save lives and increase opioid overdose-related knowledge and competence.

Barriers to uptake of Naloxone (both IM and IN naloxone):

Despite an increase in recent years in Naloxone provision to a point where it is available in most local authorities, overall coverage for people using opiates remains patchy. In 2018, Release estimated that just 16% of people using opiates had access to THN distributed in the previous year. Even taking into account Naloxone provision for the previous three years, this proportion only rose to 34%.

There are several reasons that Naloxone has not been taken up more widely and not reached the areas where it is most needed. Some of these reasons are structural, while others are more practical and frontline.

At a structural level, overall funding for substance misuse treatment services as part of the wider public health budget has seen several years of cuts, which has stripped some of the system capacity that would otherwise help to ensure widespread provision of Naloxone. This is complicated by the fact that funding models for Naloxone provision vary from area to area, and some areas may have complicated funding streams, whilst in others funding for Naloxone may not be earmarked at all.

At a practical level, there are still cultural and awareness barriers around Naloxone provision. Some frontline workers may, quite understandably, be fearful or wary of having to react in the case of an overdose. This wariness may fuel a hesitancy to fully grasp Naloxone's powerful role in saving lives. We have also heard that there remains a level of stigma or fear attached to the use of Naloxone as an injection among people who may be required to administer it. Greater distribution of IN Naloxone is therefore an important step towards greater uptake.

Some PWUD may be wary of the possibility of Acute Withdrawal Syndrome when Naloxone is used. Other barriers at the ground level include the size of

Naloxone packets (being too large to fit in a pocket) and overly-lengthy training.

However, some of the most significant barriers to widespread provision of Naloxone, particularly to the people and areas most in need, are the same barriers that affect treatment services' ability to reach people who are not in treatment. People who are not in treatment are at the highest risk of overdose, and it is therefore critical that, at a minimum, the structural barriers preventing treatment providers from distributing Naloxone to a wider range of environments are removed. Innovative approaches that focus on community penetration, engagement and Naloxone dispersal should be prioritised.

Evidence of collaborative approaches to provision:

Peer provision of Naloxone is an effective collaborative approach, where people with lived experience of substance misuse can train other people and relevant organisations in the community in the use of Naloxone. Not only does this increase Naloxone awareness and provision, but it can also positively impact the lives of the peers involved in the work by aiding their recovery. Crucially, peer provision is one of the more effective ways to distribute Naloxone to people who currently not in treatment.

The key to effective Peer-to-Peer Naloxone (P2PN) programmes is that they are underpinned by a drug user's 'privileged access' to places where people use drugs, local drug supply networks, and the people in them. Peer education therefore uses this social context of drug use as the vehicle for intervention. The European Network of People Who Use Drugs' 2019 technical briefing on P2PN features a number of programmes operating in the UK and internationally, concluding:

"P2PN provides an effective, affordable, and efficient method of putting the life-saving opioid overdose reversal drug naloxone into the hands of those most likely to be present when a drug user overdoses on opioids. P2PN contributes to ensuring that enough naloxone is available in the drug using community to achieve the saturation levels required to deliver consistent reversals."

iv) Extern

Written submission from Extern:

Management of 'postvention' issues:

"Severity of temporary abrupt withdrawal seems to be moderated in practice by intramuscualr route of administration, dosing accuracy, dosing interval frequency, as well as total amount given.

Other things that help reduce severity of abrupt withdrawal include being in (or brought to) a low-stimulus environment with minimal onlookers and noise and clear explanation of the following – the person had an overdose, you administered Naloxone, the 'sickness' will pass in around 30 mins 'you'll get *your stone (opioid effect) back', don't use anything else and there's no point using opioids because the Naloxone will block them too (for a while).*

Common for people to refuse to go with an ambulance crew to hospital, usually not a huge issue, requires observation of response level for two hours. Re-overdose is rare unless more opioids are taken despite clear advice.

Good practice to offer more Naloxone before the person leaves where possible or advise person to get a resupply ASAP"

Training issues:

"The 'what ifs' such as likelihood of being successfully sued by a recovered casualty and use with caution in particular patient groups.

2 people in UK tried to sue their rescuers after cardiac arrest and subsequent chest compressions. Broken ribs. Judges looked at the preliminary evidence for the cases before court dates set. Both declined to hear the cases as the casualties would have had to be left in a worse condition than when they were found. When found, in cardiac arrest. I don't have the reference for these cases but was told by an experienced Resuscitation Officer in Northern Health and Social Care Trust when we co-delivered training some years ago. No specific Good Samaritan Law in UK but the Good Samaritan principle is very strong, giving a very high standard of protection to the public who intervene to help someone. However there remain concerns from drug users if police attend overdoses even though it is solely in a lifesaving capacity rather than law enforcement. On occasion we hear of police searching and even arresting rescuers irrespective of that. Whether or not there is truth to these reports, if word of these actions gets out to drug users it is very difficult to get them to agree to call 999 in future overdose scenarios. Police must later attend if there are children at the address or if there has been a death (to investigate circumstances) and can attend if ambulance crew ask (a red flagged address where previous threats/violence to the ambulance staff or if there is aggression or violence after they arrive).

Under 18's. In [Northern Ireland] we're working on protocols to supply naloxone and recommending administration to those 15+. Particular concern is the LAC population or have been and still below 18.

Training issues such as contraindications and specific groups. There are no contraindications to administering naloxone but, in some cases, you may administer with caution. It always comes down to the balance of risks i.e., is the risk of not administering naloxone greater than that of doing so to a specific group. There are 3 relevant groups: Pregnant women in 3rd trimester, people with known, pre-existing cardiac issues, and terminally ill cancer patients. For all 3 groups the 'administer with caution' advice is only relevant to those who are opioid dependent and therefore at risk of abrupt withdrawal. It's unlikely the last group are relevant as usually resident in hospitals/hospices. I advise that where a rescuer knows the casualty is heavily pregnant or has a cardiac issue, they inform ambulance control when *ringing for help and again when the crew arrive. Generally, I'd have to say a lot of the 'what ifs' dissipate when naloxone use is common and by those not working in organisations which are generally risk-averse. Of course, the obvious point could be made that we perhaps should be using high-flow oxygen (with or without a bag mask depending on breathing) in the 1st instance with people in opioid overdose and naloxone if required as the 2nd line defence. However, because of risk of fire/explosion, governance around storage and administration of oxygen etc. this is not permitted in the likes of hostels. Administering with caution is something I think is useful in all opioid overdoses rather than just for the specific groups mentioned. Being cautious with dosing and dosing intervals is advantageous since it minimises the severity of the abrupt withdrawals. There are challenges in practice depending on the scenario e.g. lighting, space, eyesight, panic, trembling hands etc."*

Adjusting for COVID. Current Resuscitation Council UK advice recommends compression only CPR rather than chest compressions and rescue breaths. Wearing of PPE especially masks and gloves, covering the face with a cloth and performing a breathing assessment form a safe distance. However opioid overdose is primarily a respiratory problem rather than a cardiac one. The gold standard for CPR even in cardiac arrest (where there is a higher residual level of oxygen in the lungs/body) remains the combination of compressions and breaths. After 5 minutes of compression only CPR the cardiac arrest patient's chances of survival drop swiftly. More so the opioid overdose casualty. Chest compressions do deflate the lungs to a limited extent which will help but not as effective as a well performed rescue breath. In training I give attendees pocket face masks which offer a good standard of protection (mainly to the casualty) of transmission of infection. I do not say they are 100% effective as I do not know that to be the case. However, armed with a face mask I find we greatly improve the willingness of rescuers to consider giving rescue breaths even though no one can mandate them to do so. I still advise not giving rescue breaths if there are fluids around the mouth such as vomit, blood etc. Simple bits of advice like remembering to tie back long hair, remove scarves/pendants etc. stops rescuers having to put their hands anywhere near their face after they have started CPR. Ideally, they would direct someone else to make the 999 call after touching the casualty (putting onto their back on a hard surface or placing in recovery position) as this means the rescuer isn't subsequently putting their hand near their face to make the call. Finally putting a face covering on the casualty after they come round and encouraging them to keep it there reduces the chance of Covid transmission especially given the risks of sneezing in withdrawal."

v) Bristol Drugs Project

Written submission from Bristol Drugs Project:

Prevalence and nature of Naloxone provision, carriage and use:

Prevalence and Provision

Take-home naloxone (THN) in Bristol is mainly provided by Bristol Drugs Project (BDP). Bristol's emergency department provide Naloxone to opiate users but report low take-up. THN distributed is in the form of Prenoxad for intramuscular (IM) injection. Intranasal (IN) Naloxone (Nyxoid) is not provided.

All BDP staff and volunteers are trained in administering Naloxone. All staff carry THN when on BDP outreach activities.

The Unlinked Anonymous Monitoring Survey (UAMS) 2019 records 21% of respondents reporting overdose in the previous 12 months.

In 2019, BDP issued 909 THN kits.

Distribution of THN to heroin users is offered both routinely and opportunistically. Routinely as part of a stabilisation period of opioid substitution treatments (OST). Opportunistically, with staff offering THN when identifying overdose risk i.e. through relational insight and an understanding of behaviour patterns and context. This is largely done by identifying those at risk 'in the moment' when opioid users engage for other reasons (e.g. to use needle syringe programmes (NSP)) rather than by systematically identifying at risk service users to whom THN should be offered.

Carriage

67.8% of BDP respondents to the UAMS 2019 reported carrying Prenoxad.

Feedback from service users about barriers to carriage include:

- *For homeless people and street sex workers the size of the Prenoxad kit is a deterrent to carrying it.*
- *Many service users leave their THN at home/hostel where they inject. They do not carry it with them at all times.*
- *People who are homeless often lose their THN when they discard belongings or have them stolen. Nasal naloxone applicators, once taken out of the box, would be easier to carry in a pocket or purse and increase likelihood of carriage by individuals.*

Concerns about use of IN Naloxone are:

- *That only one applicator would be carried by opioid users rather than the two supplied and may be insufficient to prevent an overdose becoming fatal if the emergency services are delayed.*
- *In contrast with Prenoxad, IN Naloxone cannot be administered in incremental doses. This increases the risk of precipitated opioid withdrawal with consequent reduced likelihood of the overdose casualty going to hospital with paramedics.*

IN Naloxone would be easier for family members, hostel workers and police officers (i.e. people who are not accustomed to injecting drugs) to administer in overdose situations.

Our conclusion is that it is desirable to offer a choice of IM or IN Naloxone as different groups indicate preference for each.

Use

From self-report by service users being re-supplied with THN by BDP, 73 of 909 Prenoxad kits supplied in 2019 (8% of those issued), were used in overdose situations. 8% of Prenoxad kits supplied in in 2018 were also self-reported to have been used in overdose situations. Capturing data about the circumstances of peer administration of THN through existing mechanisms (i.e. at the point of THN being replaced) is difficult to achieve in all cases e.g. service users visiting NSP often do so immediately prior to injecting and do not want to engage in further questioning.

Recommendation 1

Both IM and IN Naloxone should be available. To avoid a reduction in Naloxone coverage, this requires additional financial resources as Nyxoid is twice the cost of Prenoxad.

Recommendation 2

Consideration to be given to breaking the packs of IN Naloxone supplied and issuing only a single applicator, reducing cost and promoting carriage. Specifically address whether this would be lawful if agreed by local substance misuse governance structures.

Evidence of effectiveness of Naloxone:

BDP workers report that THN is an essential and effective tool in their ability to effectively reduce drug deaths. It is a simple, accessible and practical intervention. The effectiveness of THN is very clear to staff who have attended an overdose situation and administered or observed administration of Naloxone.

BDP is situated in an area of Bristol where drug injection is common, staff are frequently requested by service users to attend an overdose nearby. Staff are also equipped to recognise and respond to an overdose in their community, the most recent occasion occurring on 23 September 2020 where a BDP Shared Care worker attended an individual who had collapsed and administered Naloxone.

Service users who have administered THN also confirm its effectiveness and ease of administration. This is described in detail in the case study included from Marc.

The need for widespread distribution of THN is particularly relevant within the context of an ageing population of opioid users who have often experienced a number of overdoses. This increases their risk profile and susceptibility to a fatal incident.

Evidence of who is administering Naloxone (police, voluntary services, etc.):

Naloxone is being administered through the drug treatment workforce, with some peer injector distribution. BDP trains a wide variety of organisations who are working with, or accommodating, people using opioids, to administer Naloxone in response to overdose. Becca's case study provided as part of this submission describes a complex needs worker's experience of administering naloxone following training received from BDP. Avon and Somerset Constabulary are considering police officers carrying IN Naloxone but are keen for the cost to be covered by NHS England rather than from their budget.

Recommendation 3

That funding is identified to enable police services to equip frontline officers with IN Naloxone.

Barriers to uptake of Naloxone (both IM and IN Naloxone)

Key insights in relation to barriers to uptake of THN by individuals are:

- *Packaging of Prenoxad is often perceived as too bulky by street homeless people and street sex workers to carry at all times.*
- *Some people are concerned that carrying THN identifies them as drug users if stopped by the police.*
- *People are sometimes worried that THN will be used on them when they are very intoxicated rather than overdosing.*
- *Many people who smoke, rather than inject, opioids wrongly believe they are not at risk of overdose.*
- *People who have been using opioids for some time believing that they have sufficient tolerance to prevent overdose.*
- *Some service users engaged with OST are worried that accepting Naloxone might be seen as an admission of using heroin and lead to increased pharmacy supervision or being prescribed a higher dose of methadone.*
- *Some service users are also reluctant to accept Naloxone because family members may see this as 'evidence' that they are using heroin 'on top' of OST.*

The main structural barrier to increasing uptake of Naloxone is current legislation. There would be significant benefit in extending eligibility to dispense THN to include support workers who work directly with those at risk of opioid overdose. This would be of particular benefit for the workforce at homeless hostels or agencies working with street sex workers, who would be able to train residents/service users and dispense THN directly, without the requirement for drugs service involvement.

Recommendation 4

That the Human Medicines (Amendment) (No. 3) Regulations 2015 be amended to include organisations working directly with people at risk of opioid *overdose, and consideration also be given to including staff at key contact points in a community e.g. post office, to dispense THN.*

Recommendation 5

Extend online dispensing of THN to family members and concerned others as introduced by Scottish Families Affected by Drugs.

Recommendation 6

Paramedics should be able to dispense THN when they have responded to an overdose where the person declines to go to hospital with the ambulance.

Evidence of collaborative approaches to provision

BDP has an established programme of Naloxone training and provision for other organisations. In 2018/19 we trained 330 individuals from a broad range of agencies including:

- *Police.*
- *Housing & homelessness agencies.*
- *Department orf Work & Pensions.*
- *Statutory & voluntary sector drug & alcohol services.*
- *Faith organisations.*
- *Mental health services.*
- *Sex worker services.*
- *The Big Issue.*
- *Neighbourhood community groups.*
- *Modern day slavery/People trafficking Services.*

Attending an overdose and administering Naloxone can be a very distressing experience, especially on the first occasion. This is very clearly described in the case study describing complex needs worker Becca's experience of administering Naloxone in a public setting.

BDP's Naloxone training also encourages staff from organisations who are trained, to report use of Naloxone to BDP and to seek support after responding to an overdose. Becca's case study describes the value of seeking support from the Naloxone lead at BDP.

If you have evidence and practice examples to share which don't fit into one of the categories above, please add detail here.

Responses to COVID-19 Pandemic. BDP Shared Care workers who are delivering OST in partnership with GPs including a THN kit along with the OST prescription left at the pharmacy for collection.

Home deliveries by BDP staff of THN alongside both needle exchange and OST medication to people self-isolating or shielding. Novel form of increasing awareness of THN.

At BDP we have had success in incorporating Naloxone training into our weekly 'Shooting Stars' injecting quiz attended by People Who Inject Drugs (PWID). There is a small financial incentive for attending. This quiz is aimed at ensuring that PWID are aware of best practice to reduce harms when injecting. Questions about Naloxone are included to increase awareness. We have found that PWID were more receptive to taking and carrying THN when training was provided in this less overt manner.

Prenoxad kit needles.

Needles are often removed from the Prenoxad kit for use in drug injection. These cannot be replaced by low dead space needles which are supplied through Bristol's NSP, as they do not fit the Naloxone-filled syringe.

BDP has asked the pharma producer Ethypharm Group Company (formerly Martindale Pharma) to consider changing the Naloxone syringe to accommodate low dead space needles. Martindale's response was that a new intact kit should be issued.

To mitigate the risk of having a Prenoxad kit without a useable needle, as part of our Low Dead Space Project, BDP designed a poster to advertise to PWID that low dead space needles do not fit Naloxone syringes.

Recommendation 7

That Ethypharm Group Company (formerly Martindale Pharma) adapt the syringe used in the Prenoxad kit to accommodate a low dead space needle.

Ambulance call handlers' response to opioid overdose.

Ambulance call handlers follow a scripted response and will not deviate from the script even when it is clear that the casualty is experiencing an opioid overdose and that Naloxone is available.

It often becomes very difficult to administer the Naloxone and follow the instructions of the call handler which can cause confusion and anxiety in the person responding to the overdose, resulting in delays in the patient receiving the first dose of Naloxone. This confusion is clearly described in Becca's case study. Some staff reported having to put down the phone in order to respond to the casualty effectively.

vi) Public Health Agency

Text from presentation submission from the Public Health Agency (PHA):

Slide 1- Take-home Naloxone (THN) Programme Northern Ireland.

- *Annual report on the supply and use of THN to reverse an overdose.*
- *April 2018 - March 2019.*

Slide 2- Take Home Naloxone

- *Available in Northern Ireland since 2012.*

- *Through Community Addiction Teams under a patient group direction (including prisons).*
- *Since 2015, available through PHA-funded low threshold services.*
- *The programme is coordinated by the PHA, with support from the Health and Social Care Board.*
- *Service user representatives have played a major role in providing advice, support and training.*

Slide 4- THN is supplied by:

Community Addiction Teams:

- *Low threshold services.*
- *Belfast Drug Outreach Team.*
- *Belfast Inclusion Health Service.*

Slide 5- THN Naloxone is supplied to:

- *People at risk of overdose.*
- *Family/friends.*
- *Individuals working in an environment where there is a risk of overdose for which the Naloxone may be useful.*

Slide 6- Supply of Naloxone

Staff supplying Naloxone provide training to the recipient in how to use the Naloxone. The service user receives either one or two Naloxone packs and is advised on how to get replacement supplies if they use their Naloxone, or if it goes out of date.

Slide 7- Information collection

Staff making supplies of Naloxone provide information to the PHA. The PHA requests only minimal information on supply so that clients cannot be identified. Where supply is made to an individual working in an environment where there is a risk of overdose, the name of the individual and the organisation they work for is also recorded.

Slide 8- Information collection

When Naloxone is resupplied to someone who has used it to reverse an overdose, the PHA requests additional information about the overdose, in order to build a better picture of how Naloxone is used e.g. Did an ambulance attend? Did the patient attend A&E? What drugs had the patient used?

Slide 9- Number of times Naloxone was supplied, by year:

- *April 2012-March 2013 139*
- *April 2013-March 2014 163*
- *April 2014-March 2015 188*
- *April 2015-March 2016 247*
- *April 2016-March 2017 271*

- *April 2017-March 2018	807*
- *April 2018-March 2019	1,332*
- *Total supplied	3145*

Slide 10- Number of times Naloxone has been reported used to reverse an overdose:

Year	No. times has a pack been used to reverse an overdose	No. cases in which patient survived
April 2012-March 2013	<5	<5
April 2013-March 2014	<5	<5
April 2014-March 2015	16	15
April 2015-March 2016	34	31
April 2016-March 2017	59	47
April 2017-March 2018	127	121
April 2018-March 2019	240	221

Slide 11- Poly-drug use

Number of cases where substances additional to heroin had been taken, by substance 2018-19:

- *Benzodiazepines	55*
- *Pregabalin	37*
- *Alcohol	15*
- *Other opioids	13*
- *NPS	7*
- *Cocaine	3*
- *Methadone	2*
- *MDMA	1*

Slide 12- Future challenges

- *Increasing the availability of Naloxone in the community.*
- *Ensuring Naloxone is available to 'hard to reach' groups.*
- *Overcoming barriers to carrying Naloxone.*

21. Appendix F- Quality of Evidence

Range of evidence

21.2. Evidence gathered was considered in line with the Advisory Council on the Misuse of Drugs (ACMD)'s 'Standard Operating Procedure (SOP) for using evidence in ACMD reports' (ACMD, 2020). This report drew on three areas of evidence: qualitative synthesis, stakeholder evidence submissions and Snapshot survey on Naloxone provision data in England.

Qualitative synthesis

21.3. The peer-reviewed literature (UK and international publications) identified using an electronic search of the following database:

- MEDLINE (MEDLINE and MEDLINE In-Process and Other Non-Indexed Citations, OvidSP, via OVID).
- CINAHL (Cumulative Index to Nursing and Allied Health Literature) (via EBSCO).
- Cochrane Central Register of Controlled Trials (CENTRAL), Wiley.
- PsycINFO (via EBSCO).
- EMBASE (via OVID).
- Web of Science.
- Campbell.
- PubMed.

21.4. Relevant articles were retrieved using keywords and mesh terms for Naloxone, opioid overdose and outcomes. Outcomes considered included the effectiveness of treatment in reducing mortality, drug-related harms or drug-related death. No restrictions to publication status or language were applied to the search strategy. Details of the search strategy are available in Appendix F.

21.5. From this pool, studies that met the following conditions were selected for consideration for this report:

(1) Randomised controlled trials (RCTs), quasi-experimental, longitudinal, cohort, qualitative and case-control, cross-sectional survey.

(2) Examined a psychological or pharmacological treatment for substance use disorders. Other outcomes considered include the availability, coverage, supply, community coverage and personal carriage of Naloxone kits.

21.6. Articles with the following features were excluded from consideration:

(1) Animals were studied.

(2) Full-text records were not available.

(3) Participants were under 18 years.

(4) Articles were grey literature (e.g. unpublished reviews).

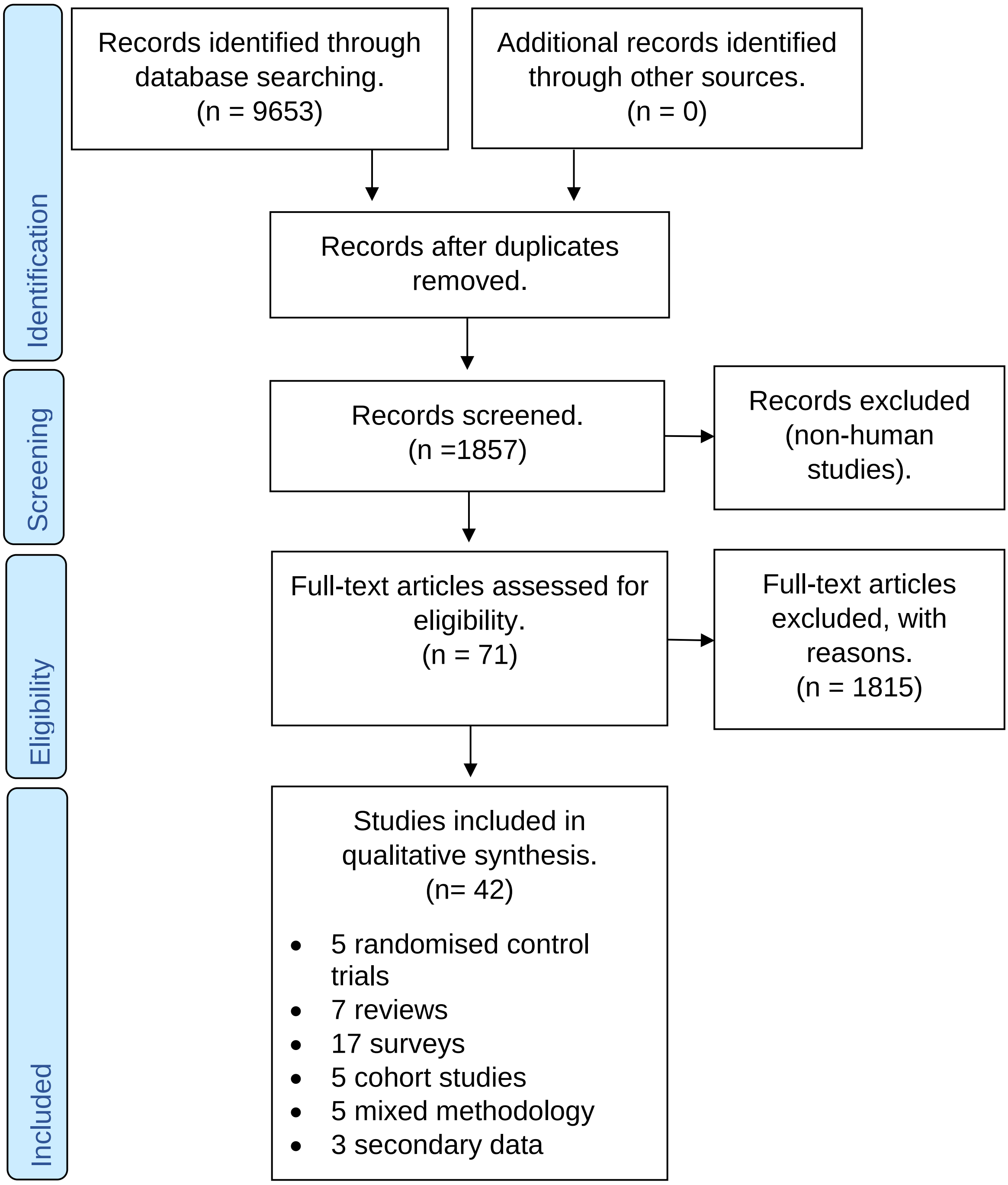
(5) Studies used statistical data of opioid use or epidemic not related to reducing mortality.

21.7. Articles identified were retrieved using a reference manager (EndNote) and uploaded into Rayyan, a systematic review software for screening studies (Ouzzani, *et al*, 2016). Review authors screened articles retrieved by the electronic searches to identify potentially eligible publications using a pre-specified inclusion criteria. Full-text papers for eligible studies were retrieved and assessed for eligibility. Figure 1 below shows the PRISMA flow diagram of studies included in the report (Moher, *et al*, 2009). One review author extracted data from included studies and performed data synthesis.

21.8. For this update, the search retrieved 9,653 records, of which 4,262 were duplicates and 3,544 were ineligible. We reviewed the titles and abstracts of 1,857 records and obtained full texts for 71 records, 42 of which fulfilled the inclusion criteria. Five were RCTs, seven were reviews, 17 were surveys, five were cohort studies, five were mixed methodologies, and three were secondary data analysis.

21.9. Data via the snapshot survey has been summarized above, however this cannot be used as an exhaustive list of naloxone providers in England, nor as an accurate representation of the number of naloxone kits provided and used in England. Many services do not record the supply and the subsequent use of naloxone kits and we see a wide variation of recording across our multiple services, as such data will be missing.

PRISMA flow diagram



22. Appendix G- Stakeholder evidence submissions

Snapshot survey on Naloxone provision data in England

18.1. To identify the level of coverage across England the Advisory Council on the Misuse of Drugs conducted a snapshot survey on naloxone supply, use and training among treatment providers in England. The survey included a request for the following information:

- Number of naloxone kits supplied and reported as used.
- Details of naloxone supplies made through partner agencies (such as pharmacies).
- Information on the method and numbers of individuals completing training.

22.2. This was submitted to contacts at two key provider networks in England: Collective Voice and the NHS Addictions Providers Alliance. These two groups further disseminated the request to their members. Responses were received over the from providers listed below:

- Westminster Drug Project
- Cranstoun
- Greater Manchester Mental Health Trust
- Central and Northwest London NHS Foundation Trust- Club Drug Clinic
- Turning Point
- Phoenix Futures
- Birmingham and Solihull Mental health Trust
- Changing Lives service (York)

23. Appendix H- List of Abbreviations used in this Report

ACMD	Advisory Council on the Misuse of Drugs
DHSC	Department for Health and Social Care
DOT	Drug Outreach Teams
ED	Emergency Department
EMC	Electronic Medicines Compendium
IM	Intramuscular
IN	Intranasal
MAT	Medication Assisted Treatment
NDTMS	National Drug Treatment Monitoring System
NESI	Needle Exchange Surveillance Initiative
NIHE	Northern Ireland Housing Executive
NHS	National Health Service
NNP	National Naloxone Programme
NOR	Naloxone on Release
NSP	Needle Syringe Programmes

ORD	Opioid Related Deaths
OST	Opioid Substitution Treatment
PCC	Police and Crime Commissioner
PDU	Problem Drug Users
PID	Project Initiation Document
PHA	Public Health Authority
PHE	Public Health England
PHS	Public Health Scotland
POM	Prescription-Only Medicine
PSNI	Police Service of Northern Ireland
PWID	People Who Inject Drugs
PWUD	People Who Use Drugs
RCT	Randomised Control Trial
RPS	Royal Pharmaceutical Society
SDF	Scottish Drugs Forum
SFAD	Scottish Families Against Drugs

THN	Take Home Naloxone
UAMS	Unlinked Anonymous Monitoring Survey