Public Health England

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Take-home naloxone for opioid overdose in people who use drugs

Advice for local authorities and local partners on widening the availability of naloxone to reduce overdose deaths from heroin and other opiate drugs.

Local authorities can prevent premature deaths from heroin and other opioid use by ensuring that naloxone is widely available. A recent survey showed that most local authorities provide naloxone: mostly through drug treatment services to drug treatment service users.[1] All local authorities are advised to consider whether their local arrangements are effective at getting naloxone to where it is needed most. This guidance supports that advice.

Naloxone can be supplied by a drug service to any individual needing access to it. This could be to:

- an individual currently, or with a history of, using opiates
- a carer, family member or friend liable to be on hand in case of overdose
- a named individual in a hostel or other facility where drug users gather and might be at risk of overdose e.g. the manager or another staff member

Drug services in this context are commissioned by a local authority or the NHS and understood to include:

- specialist drug treatment services
- primary care drug services
- needle and syringe programmes, including those provided from pharmacies
- a pharmacy providing supervised consumption of opioid substitute medication

Naloxone can also be supplied on prescription to an individual currently – or with a history of – using illicit opiates, including someone leaving prison or receiving opioid substitution therapy. With the agreement of someone to whom naloxone can be prescribed, it can also be provided to their family members, carers, peers and friends.

What is naloxone and why widen its availability?

Naloxone is an emergency antidote to opiate overdose. It blocks opioid receptors to counteract the effects of opioid drugs such as heroin, methadone, fentanyl and morphine. It reverses the life-threatening effects of an overdose such as depressed breathing. Naloxone itself has no psychoactive properties and has "no intoxicating effects or misuse potential".[2] It is injected directly into the body so is quick to take effect.

Naloxone can induce rapid onset of withdrawal symptoms, such as nausea, vomiting and sweating. In a small number of cases, severe but short-term complications have been reported, including cardiac problems and risk of death.[3] A relatively low first dose of naloxone (typically 400 micrograms) will have a treatment effect but reduce the risks. Additional low naloxone doses can then be given every few minutes for as long as needed to achieve and maintain its overdose blocking effects ie, until breathing is restored.[4] Evidence on higher dosing of naloxone for higher potency opioids is inconclusive, and advice on higher dosing in acute care does not apply to take home naloxone in the community.

Naloxone is currently available in ampoules, pre-filled syringes and a two-piece ampoule and syringe (called a Minijet), and in concentrations of 400 micrograms (0.4mg) per ml or 1mg per ml. Pre-filled syringes and Minijets are simpler for emergency use by non-medics and recommended by UKMi.[5]

Martindale's Prenoxad product is licensed specifically for use in the community but other naloxone products may be suitable depending on local and individual circumstances (eg, where tailored information and training on those products has been provided).[4]

Current position in England

Almost all local authorities now commission the provision of take-home naloxone to people who use drugs, as part of their efforts to prevent heroin overdose deaths, which doubled from 2012 to 2015.[1] [6] Those that do not are strongly encouraged to take action to widen its availability.

Local monitoring of the extent of distribution into the population of past and present opiate users, and their carers and families, and of uses of naloxone or reissued supplies will assist local areas to understand whether potential need is being adequately met.

Evidence and recommendations for take-home naloxone

The 2017 clinical guidelines say "Systematic reviews conclude that pre-provision of naloxone to heroin users can be helpful in reversing heroin overdoses. There is also evidence for the effectiveness of training family members or peers in how to administer the drug."[7]

World Health Organization (WHO) 2014 guidelines on ‘Community management of opioid overdose’ recommend that access to naloxone includes “people likely to witness an overdose in their community, such as friends, family members, partners of people who use drugs, and social workers.”

A 2013 study found that distribution of naloxone to heroin users was “cost-effective in all deterministic and probabilistic sensitivity and scenario analyses, and it was cost-saving if it resulted in fewer overdoses or emergency medical service activations”.[8]

Evaluation of the take-home naloxone programme for people being released from Scottish prisons demonstrated significantly reduced deaths in this group.[9]

Introducing take-home naloxone – a checklist for local areas

1. Identify local naloxone champions – this may be you
2. Organise an initial ‘informing the managers’ or ‘training the trainers’ session
3. Consider who will receive naloxone supplies and how: users and carers, hostels and pharmacies, etc
4. Consider who will pay for naloxone supplies in different locations
5. Agree how you will re-supply people when naloxone is used or expires. Will you have a system that flags approaching expiry dates to keyworkers, pharmacies, etc?
6. Hold regular meetings for local naloxone champions – including people who use drugs – to encourage progress, discuss any barriers or concerns, and learn from each other
7. Explore the products and prices available, speaking to local pharmaceutical representative(s), and decide together with local service providers which to purchase
8. Inform and liaise with the police, local coroners, ambulance service clinical lead, hostel managers and pharmacies
9. Purchase the naloxone kits, and make the necessary arrangements for stocking and distributing them, and for re-supply when naloxone held by an individual has been used or expires
10. Provide training to all drug keyworkers, all opioid substitution treatment (OST) prescribers locally, dispensing pharmacists, and local service user groups – all of whom can contribute to the onward dissemination of information

11. Arrange for training to be provided to people who use drugs, patients and clients, and their families and friends (see next section). Consider who is best positioned to deliver this training. Offer training to as many people as possible

12. Consider whether and how you will record the numbers of kits dispensed and the reported number of times that naloxone has been used to reverse overdoses

What to cover in overdose and naloxone training

Administering naloxone is as easy as ABC(N) – see box. It is important to first call an ambulance, check the person is breathing and put them in the recovery position. Then simply attach a needle (if not already fitted) to a pre-filled syringe or MiniJet and inject the overdosed person in a large muscle (thigh, buttock or top of the arm). There is a simple video at www.harmreductionworks.org.uk/2_films/overdose_and_naloxone.html. It can be ordered on DVD at www.harmreductionworks.org.uk/6_booklets/overdose.html

Ambulance
Breathing
Re**C**overy position
Naloxone

The provision of naloxone should usually be accompanied by training in overdose prevention and management. This does not need to be complex or long[10] but should highlight the need for individuals to seek medical attention even if naloxone has been administered, because of its relatively short duration of action.

Training will usually cover:

- overdose risks: polydrug (especially benzodiazepines) and alcohol use, getting older, post-detox/rehab/prison
- what naloxone can and can't do: it just reverses opiate overdose. If someone has also taken too many other drugs or too much alcohol, it won't reverse their effects
- how to identify an opiate overdose – lack of consciousness, shallow or no breathing, 'snoring', and blueing of the lips and fingertips
- steps to take in responding to an overdose*
- how to use naloxone, including addressing any fears about needles and injecting
- how to get naloxone replaced when it has either been used or is approaching its expiry date

***Having identified an overdose:**

1. Call an ambulance
2. Give rescue breaths if the person is not breathing
3. Put them in the recovery position
4. Inject the initial recommended small amount of naloxone (usually 400mcg), wait (2-3 minutes). If unresponsive, inject another small amount. Repeat as necessary
5. Stay with the person at least until the ambulance arrives

Recording

Local areas and their services will want to make suitable arrangements to record the supply of naloxone for the following purposes:

- to demonstrate that supply has been made appropriately for use in emergency
- to monitor who has received training and naloxone supplies, and ensure equitable provision to different groups
- to understand when and how naloxone is used in overdose situations and to arrange re-supply when naloxone has been used or is approaching expiry
- for contract and performance management

Things to remember

1. Naloxone cannot be abused – it has no psychoactive properties and so has no direct misuse potential.[2]

2. Naloxone does not encourage overdose or risky behaviour – it works by inducing rapid withdrawal from opioid drugs which is something that people who use these drugs are keen to avoid.[11]

3. Administering naloxone in the community is easy. Overdose training will help to ensure it is used effectively. See the section on ‘What to cover in overdose and naloxone training’.

4. Naloxone is cost-effective, “even under markedly conservative assumptions”[8]

5. Take-home naloxone supports recovery – it is a safeguard for people still using opiate drugs (including those on opioid substitution treatment) and for those currently abstinent who are at risk of relapse and overdose, including those leaving prison or treatment services.

Naloxone-alone is not enough

Naloxone is just one way to try to reduce drug-related deaths. A whole package of measures needs to be considered to prevent overdoses and other causes of drug-related deaths. See the report of the PHE/LGA-supported national inquiry into DRDs.

Other resources

- Drug Misuse and Dependence: UK Guidelines on Clinical Management: www.gov.uk/government/publications/drug-misuse-and-dependence-uk-guidelines-on-clinical-management
- PHE's Turning Evidence into Practice briefing on preventing drug-related deaths
- The ACMD's 'Consideration of naloxone': www.gov.uk/government/uploads/system/uploads/attachment_data/file/119120/consideration-of-naloxone.pdf
- The Scottish Drugs Forum's www.naloxone.org.uk, which has lots of resources itself
- Harm Reduction Works overdose and naloxone DVD (HRDVD6N): www.harmreductionworks.org.uk/6_booklets/overdose.html
- The World Health Organization's 2014 guidelines on 'Community management of opioid overdose': www.who.int/substance_abuse/publications/management_opioid_overdose
- SMMGP's e-learning, 'Naloxone saves lives': www.smmgp-elearning.org.uk
- An international website supporting naloxone distribution with free resources: www.naloxoneinfo.org

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References

[1] LGA (2017) Naloxone survey 2017. London: Local Government Association

[2] ACMD (2012) Consideration of naloxone

[3] NHS England (2014) Patient Safety Alert. Stage One: Warning – Risk of distress and death from inappropriate doses of naloxone in patients on long-term opioid/opiate treatment. NHS/PSA/W/2014/016

Note: This alert focused on the use of naloxone in patients prescribed opioids for pain. This was clarified in: NHS England (2015) Stage Two: Resources – Support to minimise the risk of distress and death from inappropriate doses of naloxone, https://improvement.nhs.uk/uploads/documents/psa-naloxone-stage2.pdf

[4] An open letter from Professor John Strang (2015) Naloxone – preliminary advice from the working group updating Drug Misuse and Dependence: UK Guidelines on Clinical Management

[5] UKMi (2016) In use product safety assessment report: naloxone products for emergency opiate reversal in non-medical settings, www.ukmi.nhs.uk/filestore/ukmiaps/Naloxone product safety review_FINAL.pdf

[6] ONS (2016) Deaths Related to Drug Poisoning in England and Wales: 2015 registrations

[7] Clinical Guidelines on Drug Misuse and Dependence Update 2017 Independent Expert Working Group (2017) Drug misuse and dependence: UK guidelines on clinical management. London: Department of Health, www.gov.uk/government/publications/drug-misuse-and-dependence-uk-guidelines-on-clinical-management

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[9] Strang J, Bird SM, Parmar MKB. Take-home emergency naloxone to prevent heroin overdose deaths after prison release: rationale and practicalities for the N-ALIVE randomized trial. J Urban Health. Oct 2013; 90(5):983-996

[10] Behar E, Santos G-M, Wheeler E, Rowe C, Coffin PO. Brief overdose education is sufficient for naloxone distribution. Drug and Alcohol Dependence Mar 2015; 148:209-12

[11] Seal KH, Downing M, Kral AH, Singleton-Banks S, Hammond J-P, Lorvick J, Ciccarone D and Edlin BR. Attitudes about prescribing take-home naloxone to injection drug users for the management of heroin overdose: a survey of street-recruited injectors in the San Francisco Bay Area. J Urban Health. Jun 2003; 80(2):291–301

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