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▶ The NTA overdose and naloxone training programme for families and carers.

National Treatment Agency for Substance Misuse.
National Treatment Agency for Substance Misuse, 2011.

Up to 18 lives were known (and more perhaps unrecorded) to have been saved after the National Treatment Agency in England piloted training for the carers of opiate users on how to administer the overdose-reversing drug naloxone. But how does catering for relapse in this way square with the optimism of the recovery movement?

Summary This account also draws on the appendices to the study.

Naloxone is a medication administered usually by injection which rapidly reverses the effects of opiate-type drugs such as heroin, including the respiratory depression which can cause what are normally referred to as 'overdose' deaths. In the UK naloxone-based overdose prevention programmes were hampered by the prescription-only status of the medication, but in 2005 the law was amended to permit emergency administration by any member of the public. A prescription is written for the opiate user at risk but the drug can then be kept for them by other people who can legally use it in an emergency, and not just for the named patient. The first people to find overdosing drug users are often family members, partners and other carers (who may themselves be drug users), many of whom are willing to carry naloxone.

Given this context, in 2009 the UK National Treatment Agency for Substance Misuse (NTA) – a special authority within the National Health Service dedicated to monitoring and improving addiction treatment – launched an overdose and naloxone training programme for families and carers of opiate users. The pilots ran at 16 sites in England from July 2009 to February 2010 and were evaluated by the NTA through questionnaires to be completed by carers before and immediately after training and three months later (to check among other things on the use made of the naloxone the carers had been provide with), and by focus groups with carers and interviews with trainers and project leaders at the pilot schemes. Of 495 trained carers, 425 completed at least one questionnaire, but few completed the three-month follow-up version, meaning that focus groups and interviews were the main sources of information.

Main findings

The 16 pilot projects trained 495 carers to respond to an overdose using basic life support techniques, and all but one also trained them to administer naloxone.

After the training and up to August 2010, trained carers had deployed naloxone to reverse 18 overdoses and in two cases administered basic life support. All the drug users survived. Most incidents were 'opportunistic' interventions, during which the carer used naloxone on someone other than the person named on the prescription.

Pilot leads and carers both felt it made sense to train people most likely to be present when users were taking drugs and running the risk of an overdose – often family members, but also other users. Several sites trained pairs of mutual carers (partners, close friends, or housemates), who both received a naloxone supply. Some were former service users no longer at risk of overdose themselves, but who cared for somebody at risk.

It was more difficult to recruit carers for training than expected, but sites remained committed to running the training. Every site was able to train at least some carers. Most carers responded positively to the initial approach for training, but not all felt ready for training. Some, including a few with long histories of contact with carer support groups, found the subject too distressing to confront. Others whose adult children had overdosed (fatally and non-fatally) could clearly see naloxone's potential for saving lives.

One site targeted people exiting inpatient detoxification. Despite their high risk of overdose, this site found it difficult to engage them, possibly because the stigma around drug use in their community (ethnically diverse, with a large Asian population) meant the offer of training would have exposed their drug use to families who up to then had been unaware. Also detoxification was seen as the doorway to a new non-drugtaking life, so it was difficult to persuade users and their carers that the training was necessary. Despite this, the site worked with nine carers, showing them how the training could fit into a recovery plan for the user.

At three sites it was also challenging to provide training to carers of users about to leave prison. At one, family members were reluctant be trained while visiting as this took time away from the visit. At another, health and safety concerns prohibited the supply of injecting equipment to prisoners before release (prisons have different rules on possession and transfer of property, including needles and syringes). Some prisoners and family members worried that the training would imply the prisoner was using drugs in prison or would after leaving, possibly affecting the length of their sentence or eligibility for parole. However, pilot sites successfully promoted training as a step towards recovery on release and a means of encouraging the drug user to keep away from drugs, with overdose being an unexpected but potential occurrence.

Commenting on the training, many carers felt it had clarified the causes of overdose and dispelled myths about how to respond. Several said that even if they forgot all else, they would remember how to use the naloxone. Parents said the training had increased their knowledge about overdose, as well as feelings of empowerment and confidence. Now they felt able to intervene in an overdose when previously they had felt powerless. Training also meant they were more willing to intervene in overdoses, partly because they were less concerned about using needles and about triggering withdrawal symptoms

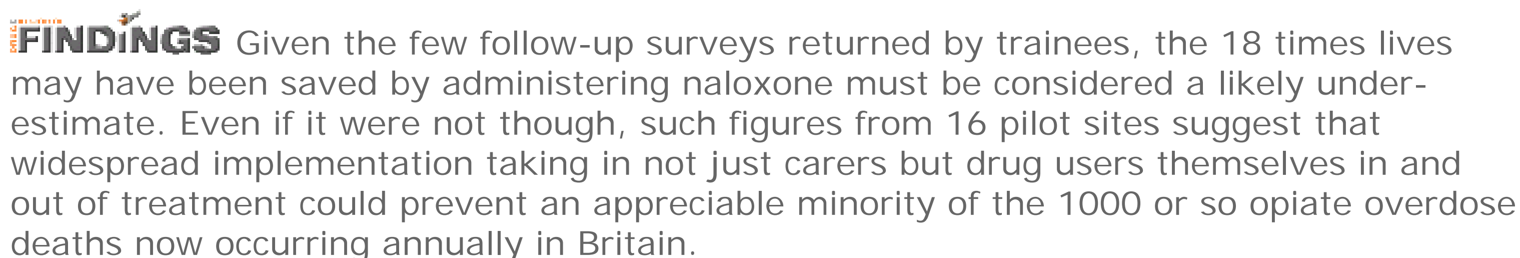
in revived users.

Other benefits included promoting contact between service users and treatment services, and more open dialogue between users and carers about opiate misuse. Some also said their attendance on the course had, in part, caused the user they cared for to reduce their drug use or even stop.

Pilot sites found the training worked well when provided alongside their other day-to-day treatment services. All pilot leads who were interviewed said that – subject to local funding and governance arrangements – they wanted to continue training carers. While recognising the value of training carers, they said that next time they would also include service users.

The authors' conclusions

Despite difficulties with recruitment, and limited evidence that carers are the best people to receive the training, the project seems to have helped save lives. Carers who were trained said they found it valuable. A wider impact on overall fatal and non-fatal overdose rates may be possible if the training is offered to all service users at risk of opioid overdose. Further detailed guidance is available in the appendices to the study.



FINDINGS Given the few follow-up surveys returned by trainees, the 18 times lives may have been saved by administering naloxone must be considered a likely under-estimate. Even if it were not though, such figures from 16 pilot sites suggest that widespread implementation taking in not just carers but drug users themselves in and out of treatment could prevent an appreciable minority of the 1000 or so opiate overdose deaths now occurring annually in Britain.

Like many initiatives however, and especially those reliant on voluntary effort, real-world impact is limited less by the potential of the intervention than by the impediments to its being widely implemented. For treatment services and especially those with a recovery orientation, catering for the likelihood that their patients will *not* recover but relapse to life-threatening opiate use may be a hard pill to swallow, and swallowing it in the form of training clients and families may seem to counter-therapeutically undermine the optimism at the heart of the recovery movement.

Similarly for patients looking forward to a new life where they have escaped drugs and as part of this, drugtaking social circles, learning how to use a substance whose use is predicated on continued contact with (largely) injecting drug use may seem undermining and irrelevant. Another issue exposed by the NTA study is that when opiate users are highly vulnerable to overdose – when they have stopped using in a protected environment which they are leaving – is also the time when they and their families may be least receptive to anti-overdose training. Families and carers of active users who are aware they are using, and active users themselves, especially those out of treatment, will be less subject to these concerns, but harder to reach and possibly harder to train than those more stable and/or in treatment.

Such problems are, it seems from the featured study and others, not insurmountable, and services found ways of accommodating to similar apparent contradictions when many years ago it became important to counsel drug users leaving treatment about the risks of HIV transmission due to sharing of injecting equipment – a warning predicated on

the recognition that even treatment 'successes' often relapse. However, surmounting such difficulties might require a reprioritisation of the anti-overdose part of the harm reduction agenda. More detailed commentary below.

In recent years satisfaction in the UK at meeting addiction treatment targets has been tempered by concern about rising drug-related deaths. In England and Wales drug poisoning deaths totalled 2747 in 2010, of which 1784 were linked to drug misuse and 791 to heroin/morphine, in all three cases slight reductions from the peaks of 2008. Scotland in 2010 recorded 485 drug-related deaths, of which 312 were considered to have been caused by drug abuse and 254 involved heroin/morphine. These were all appreciable downturns from the peak figures of respectively 574 (in 2008), 380 (in 2009) and 324 (in 2008). However, analyses of trends revealed by averaging annual fluctuations suggested that it was too soon to be confident that long-term upward trends had reversed. A more detailed analysis highlighted the fact that 60% of cases had been in contact with drug treatment services, nearly 40% in the past six months, suggesting there had been chances to intervene which for these patients had been insufficient to avoid death.

Since the relaxation of prescribing restrictions in 2005, naloxone, has been the main new hope for curbing the death rate. The first large-scale UK follow-up study of naloxone-based overdose prevention training found that this can successfully be delivered by treatment services to their patients, resulting in substantially improved knowledge and competence. Among the 239 trainees, 10 of the 172 who responded to this question had in the next three months used naloxone to reverse an overdose suffered by another person, mostly encountering little difficulty during the administration and no unexpected adverse effects.

A later report from the study followed up a subsample of 70 trainees (nearly all from Birmingham) for six months after the training. The 46 recontacted at this time and three months earlier had retained much of what they had been taught. They had witnessed 16 overdoses since the training and generally responded appropriately, but none were known to have administered naloxone. For many this was because they were reluctant to carry the pre-loaded syringe around with them, partly due to fear of being identified as a drug user, and partly because some had completed treatment intended to divorce them from drug use and by extension, drug using associates, including those who might overdose.

This finding highlights an inherent contradiction between treatment which the patient hopes and expects to divorce them from drug use and drug using circles, and being provided with training and medication of direct use only if they stay sufficiently involved in such circles to witness an overdose. The featured study found analogous concerns among families, who wanted detoxification and a spell in prison to signal to the drug user and to others that their relative was starting a new drug-free life. Similar concerns were found among homeless drug users in England interviewed about using naloxone.

Another target group for training are workers in drug services, who are then equipped to deal with overdoses at the service and to train other staff, patients, carers and families, as well as (if they are qualified to do so) prescribing the required naloxone. When this was tried by the National Addiction Centre in London, the centre's three trainers trained 100 clinicians in four sessions, who over the following year trained a further 119 clinicians. The 219 trained clinicians trained 239 drug users. The magnitude of this training 'cascade' was considered modest. Staff resource issues in terms of time and caseloads were found by all services to be a major barrier to the training, a reflection of the priority given to overdose prevention in the form trialled by the study.

For these and other reasons, while naloxone certainly can contribute to reducing deaths, it is not the whole solution. Other limitations include the fact that fatal overdoses in particular tend to happen when the person is alone and/or out on the street. One concern is that naloxone might displace rather than supplement routine resuscitation techniques which remain important in the period before naloxone takes effect. Studies suggest too that despite training, having naloxone available might offer a further excuse for drug users who witness an overdose to avoid contact with the authorities by calling for an ambulance. There is also the prospect that

people revived by naloxone might be unhappy about having an expensive heroin high reversed and/or withdrawal precipitated, deterring its use. Though such concerns cannot be dismissed, most can be addressed in volunteer recruitment and training programmes, and they do not threaten the potential for such programmes to on balance save very many lives. See these background notes to an earlier Findings analysis for details and relevant studies.

For the public in particular the need to inject the drug is a barrier to its use. There is however a nose spray which seems equally effective and could help extend the use of the medication (1 2).

Though the literature on naloxone provision by the public is new and still scarce, it is unanimous in its support, while also highlighting issues which need to be addressed in training programmes. In 2005 a review found only "anecdotal, although promising" evidence. Published in 2008, a review of literature on overdose prevention conducted for the Scottish government found in respect of naloxone "a consensus among the reviewed papers that there is a potential to prevent many opiate overdose deaths" and recommended its inclusion among the interventions offered to people who might witness an overdose.

Further guidance is available in the appendices to the featured study. In 2008 staff from one of the English NHS trusts which piloted naloxone training for families and carers produced a UK-focused practical guide to naloxone prescribing, training and use. A UK web site offers advice to professionals on take-home naloxone. Guidance on overdose prevention in general with an emphasis on the role of naloxone has been produced by the Eurasian Harm Reduction Network. In the USA the Chicago Recovery Alliance has produced a freely available training video. For more Findings analyses on naloxone in overdose prevention run this search, and for more on overdose prevention in general see this 'hot topic' entry.

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