Advocacy for take-home naloxone programmes: reverse overdoses, save lives

Executive summary

Overdose deaths have reached a record high in Europe, with the majority attributed to opioid drugs such as heroin and prescription opioid painkillers. Despite being largely preventable, opioid overdoses remain a major cause of death in Europe and continue to rise.[1]

Since most overdoses occur in the presence of others, ensuring people likely to witness or experience an overdose have immediate access to naloxone, an opioid-overdose antidote, is key to reducing opioid-related mortality.[2]

This can easily be achieved through take-home naloxone (THN) programmes, which are set up in locations frequented by people who use opioids and their peers, in order to distribute naloxone to them and provide overdose education and training.[2]

THN programmes significantly reduce fatal overdoses, and are safe and cost-effective. However, few countries in Europe have implemented them, with many restricting naloxone use to ambulance and emergency medical services.[2]

This advocacy brief presents information and evidence that support the implementation of THN programmes as an effective strategy to reduce opioid overdose deaths. It addresses the commonly raised questions and concerns that advocates may face when championing THN programmes.

What is naloxone?

Naloxone is an opioid-antagonist medicine that has the ability to reverse an opioid overdose. It is listed by the WHO as an "essential medicine".[3]

Opioids can shut down a person's respiratory system (a process known as respiratory depression) and lead to low blood-oxygen levels, unconsciousness, organ failure and death. Naloxone binds to opioid receptors in the brain, replacing the opioids that have activated these receptors. This stops opioids from shutting down the respiratory system, thus reversing an overdose and preventing death.[2]

In some cases, naloxone administration during an overdose can induce sudden withdrawal symptoms (the severity and duration of which are determined by the dose of naloxone administered). However, adverse events are extremely rare. In addition, naloxone has no effect when opioids are not present, and there is no risk of it being used recreationally.[2–4]

Several kinds of naloxone formulations exist, including injectable formulations available in THN programmes as a liquid for intramuscular use. Naloxone nasal sprays are not currently licensed in Europe but may be licensed in the future.[2]

Take-home naloxone programmes are needed

Opioid drugs, such as heroin and some prescription painkillers, are associated with the majority of overdose deaths. These are on the rise in Europe, with a record high of 8,440 reported in 2015. Figures from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) show 1.3 million people are currently at high risk of overdosing on opioids and dying as a result.[1]

Heroin accounts for the majority of overdose deaths, although some European countries report a larger number of deaths associated with prescription opioids than with heroin. Furthermore, recent reports have shown an alarming emergence of highly potent synthetic opioids across Europe, including fentanyl and its derivatives.[1,5]

Over the years, several harm-reduction interventions have been proposed and implemented to reduce overdose mortality rates. Among them, THN programmes have been key to reducing opioid overdose deaths in several communities.[2]

Take-home naloxone programmes work

THN programmes are an effective strategy to reduce overdose deaths. Comprehensive reviews of almost 20 years' worth of accumulated data have demonstrated significant and consistent reductions in overdose deaths across a wide range of settings and geographical locations.[6,7]

Furthermore, communities with THN programmes have reported additional benefits, including decreased drug use, participants entering treatment and participants willing to be tested for human immunodeficiency virus (HIV) and hepatitis C virus (HCV). Therefore, THN programmes are also an effective method for reaching populations that may not otherwise engage with healthcare systems.[6]

Although there have been concerns that people who use drugs may not be able to retain knowledge from overdose training, several studies have refuted this, showing significant improved knowledge among people who use drugs when followed up in the short and long term, and when compared with people who use drugs that have not been formally trained.[2]

In addition to being effective, THN programmes are safe. Adverse event rates are consistently low and are mostly related to the unpleasant symptoms of withdrawal, which can be induced by naloxone in a dose-dependent manner.[6]

Take-home naloxone programmes are feasible

Introducing THN programmes is feasible as long as local laws permit naloxone distribution. THN programmes have been successfully implemented across a wide range of settings, from prisons and treatment centres to open drug scenes, and across countries with different cultures and socioeconomic statuses.[6]

THN programmes are also cost-effective as naloxone is inexpensive, has the potential of saving a life and can minimise the hospital and emergency medical services costs incurred with overdoses. Modelling studies have found naloxone distribution to be cost-effective, even under conservative settings where naloxone's price increases and witnessed overdoses decrease. The same studies found THN to be cost-saving in some scenarios.[6,8,9]

In addition, interviews with individuals involved in take-home naloxone programmes have consistently shown that they are relatively easy and inexpensive to set up and run, as long as people are willing to be involved, and adequately supported and supervised at a local level.

Who should naloxone be distributed to?

THN programmes should distribute naloxone and provide overdose training to anyone at risk of experiencing an overdose or likely to witness an overdose.

Often, these groups overlap: people who use drugs are both at risk of experiencing an overdose and likely to witness a peer experiencing an overdose, as people tend to use drugs with others. These individuals should therefore be the primary audience of THN programmes, especially those at increased risk of overdosing. Some factors indicating an increased risk include opioid use, opioid dependence (or a history of one), injecting drug use, reduced tolerance after leaving prison or hospitalisation, and having experienced an opioid overdose in the past. Furthermore, people not receiving opioid agonist treatment (OAT) are at an elevated risk of overdosing compared with people receiving OAT.[1,3]

In addition, family members and friends of people who use drugs are also likely to witness an overdose, as are people who work closely with them or potential first-responders, such as healthcare professionals, drug workers, police officers, ambulance staff, prison officials and hostel workers.[2]

Naxolone does not encourage people to keep using opiods

There is no evidence that THN programmes encourage opioid use and overdose; on the contrary, there are reports of decreased drug use among naloxone recipients.[6]

The programmes are a unique opportunity to engage individuals who have often faced stigma and judgement within the healthcare system. There is evidence that the THN programmes, by building trust, can increase willingness among people who use drugs to enter treatment and be tested for common infectious diseases, such as HCV and HIV.6

In addition, the withdrawal symptoms triggered by naloxone after an overdose can be extremely unpleasant. People who use opioids may have experienced withdrawal or at least are likely to be familiar with it and will be keen to avoid it.[10]

Take-home naloxone programmes have international backing

Improving access to naloxone through THN programmes is supported by prominent international organisations, and several national and regional governments.

The WHO lists naloxone as an "essential medicine" and strongly recommends distributing naloxone with training. Naloxone distribution and training is included in the 2017 EU Action Plan as a strategy to prevent drug-related deaths, and is supported by the UK government, among others.[3,11,12]

In 2017, the UN Office on Drugs and Crime and the WHO also launched the Stopping Overdose Safely (S-O-S) initiative to increase access to naloxone and provide overdose training to potential overdose witnesses, including people who use drugs. They also aim to ensure more people carry naloxone with them or have the kit close by.[13]

The legal framework for take-home naloxone programmes

Several countries restrict the use of an injectable medication to healthcare professionals and the individuals to whom the medications have been prescribed. In the case of overdoses, self-administration of naloxone is not physically possible, as the individual will be unconscious and, if lay bystanders do not have access or are not permitted to use naloxone, they will have to wait for ambulance staff to arrive. These unnecessary barriers delay the time to naloxone administration and, in many cases, may increase the likelihood of death.[4]

To address restrictive legal technicalities, certain countries have passed unambiguous legislation to ensure people who use naloxone in an emergency are not penalised, equating naloxone to other life-saving antidotes, such as adrenaline for treating severe allergic reactions. Examples include the Good Samaritan laws introduced in the US, which eliminate liability for anyone who uses naloxone in an overdose emergency. Other countries, such as the Netherlands and the UK, have passed similar legislation. Some countries, such as Germany, have duty-to-rescue laws, which may technically deem using naloxone during an overdose emergency a public duty.[2]

In addition, Scotland explicitly authorises healthcare professionals to distribute naloxone to anyone likely to witness an opioid overdose (e.g. family members), protecting prescribers from prosecution.[2]

Expanding access has also been facilitated by countries allowing naloxone to be kept in non-medical facilities where people are at risk of overdosing (e.g. shelters), and to be distributed without a physician present or without a prescription. For example, naloxone was made a non-prescription medication in Italy and can be distributed over the counter in pharmacies. The development of non-injectable naloxone formulations, such as nasal sprays, may be another way to overcome the legal barriers associated with injectable naloxone.[2]

In conclusion, many countries have successfully overcome legal barriers to widespread naloxone distribution. In jurisdictions where these remain, a range of feasible strategies can be used to facilitate THN programmes.

Where should take-home naloxone programmes be set up?

THN programmes should be set up where they are most likely to reach key populations: people at risk of overdosing and people likely to witness an overdose. They can be integrated into established facilities, such as treatment centres, which may improve a programme's sustainability; they can also be run independently.[2]

THN programmes have been successfully implemented in a wide range of settings, including treatment centres, prisons, pharmacies, low-threshold drug facilities, and the "open drug scene" (public areas frequented by people who use opioids). The scale of THN programmes range from those implemented nationally, such as Scotland, to smaller-scale regional- or city-specific schemes, such as Catalonia's regional programme.[2]

Next steps

Urgent action is needed to address the rise in overdose mortality, and THN programmes are an effective, safe, feasible and widely supported strategy to reduce opioid overdose deaths.

In light of the evidence, key stakeholders should work together to campaign for policy changes where necessary and set up THN programmes in their communities.

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