The case for the wider distribution of naloxone in Australia

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Long history as safe, reliable and effective medication.

For over 40 years naloxone has been used in medicine to reverse the effects of heroin and other opioids. In this capacity it has been shown to be safe, reliable and effective.[1] Naloxone is an opioid antagonist. It does not produce any intoxication and has no effect on people who don't have opioids in their system. [1]

In Australia, as elsewhere, naloxone is widely used in hospital emergency departments and most ambulance services as a key response to opioid overdose.[2]

Case for wider distribution of naloxone to reduce overdose deaths and harm.

In 1992 Professor John Strang from Kings College London argued for the wider distribution of naloxone to those who come into contact with people who inject drugs in order to help prevent overdose mortality and morbidity. This argument was subsequently endorsed by Australian researchers and academics from the mid 1990s.[3-5] In 2009, the case for the wider distribution of naloxone was reiterated on the basis of findings emerging from (primarily 'peer') naloxone distribution programs running overseas. [2 6]

The argument for the wider distribution of naloxone stems from findings that show that:

- People who inject drugs commonly experience overdose[7-8]
- Overdoses are often witnessed by people who can respond[9-10]
- Peers, family members and others can successfully respond to assist in the management of overdoses among people who inject drugs[11-12]
- Peers and family members are keen to respond to overdoses if they occur[10 12-13]

In response to these findings a series of 'peer' and other wider naloxone distribution programs were established overseas with clear evidence that:

- Peers and non-medically trained professionals can be trained to administer naloxone for overdose reversal[12 14-18]
- People who come into contact with people experiencing opiate overdose can recognise the signs of overdose and administer naloxone appropriately[14]
- Naloxone that has been administered in the context of these programs has successfully reversed the effects of overdose [12 15-17 19 20]
- Having naloxone as part of overdose response training assists those present to respond to overdose[19] and helps engage otherwise hard to reach polulations of drug injectors to contact service agencies. [15]

Criteria for effectiveness of interventions

Whilst there is clear evidence that naloxone is an effective drug for reversing the effects of opiate overdose, there is some scepticism about its utility in the non-medical setting. Sceptics argue that the evidence of the effectiveness of naloxone in these settings is weak, as it is largely observational and does not include randomised controlled trials which are common in determining the efficacy of drug therapies in medical research. However, as suggested by Michael Rawlins, head of the National Institute of Clinical Effectiveness in the UK, there are times when observational evidence should be seen as sufficient [even]for the implementation of therapeutic interventions.[20]

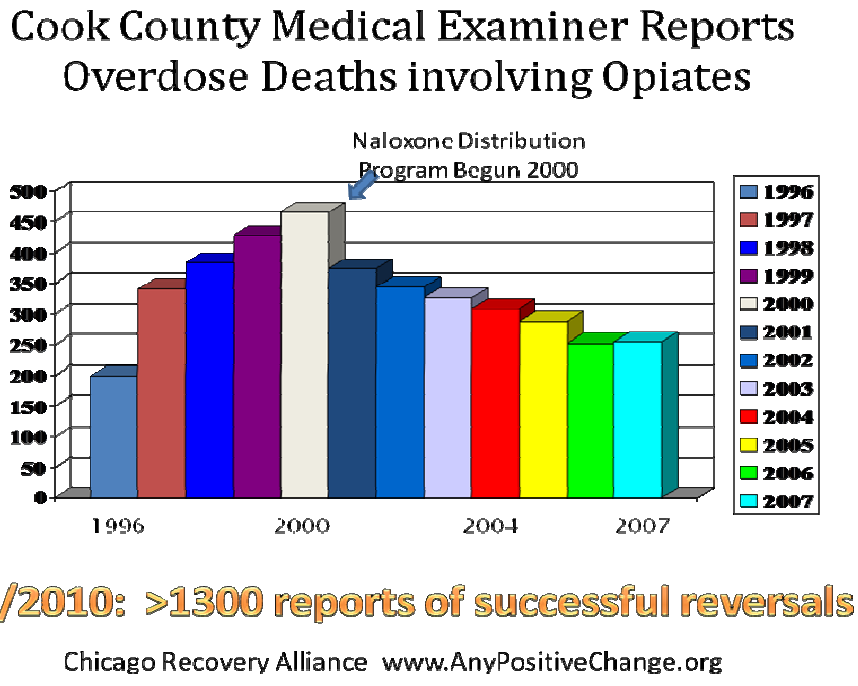
Many public health interventions are not amenable to evaluation though randomised controlled trials. Indeed, some of the most effective interventions in the field of injecting drug use, such as needle and syringe programs, rely on observational evidence of effectiveness. [21-22] Similarly, for practical and ethical reasons, the impact of naloxone distribution outside the medical setting is best understood through observational evidence.

Growing evidence of successful implementation.

To date there is good evidence of peer naloxone programs being implemented and many observational case reports of naloxone being effectively used to assist in saving lives of people who have overdosed.

Programs distributing naloxone to drug users their peers, family members and others operate in the U.K., the U.S., Canada, Germany, Georgia, Russia, Spain, Norway, Afghanistan, China, Kazakhstan, Tajikistan and Vietnam. It has been available across the counter in Italy since 1995. A 2010 survey identified 155 programs operating in 16 U.S. states with 53,339 naloxone kits having been dispensed and 10,194 overdose reversals reported.[23] There are examples of governments being directly involved in programs such as in New Mexico, San Francisco, and Massachusetts.[24] Governments in New York, New Mexico, the U.K and elsewhere have enacted new legislation to support access to the drug outside the medical setting and/or protect prescribers and members of the public who administer naloxone in an overdose emergency.[2 23]

Observational research shows there been reductions in overdose fatalities noted in areas where naloxone distribution programs have been established (see, for example, http://www.wbur.org/2010/12/08/opioid-deaths). The following figure, provided by Sarz Maxwell of the Chicago Recovery Alliance, demonstrates the situation in Chicago from 1996-2010.



While the figure is compelling, it is not possible to definitively attribute this decline to naloxone distribution programs because this not a controlled study. However, local experts suggest that no other interventions or changes have taken place in Chicago that present as possible explanations

for this. Yet it is true that possible confounding from other unmeasured factors cannot be ruled out.

The way forward

In the context of continuing overdose deaths in Australia, there is a strong case to be made for the wider distribution of naloxone. It is clear that:

- These programs empower people who witness overdoses to respond;[19]
- Overseas experience suggests that overdose reversals are likely to occur as a result of the implementation of these programs;
- Prompt reversal has the potential to minimise morbidities such as hypoxic brain injury; and that
- These reversals are likely to contribute to reduce mortality and morbidity among people who inject drugs.

In recognition that the evidence base for wider distribution of naloxone is developing it is important that implementation of such programs in this country should incorporate rigorous evaluation.[2] Such evaluations can be informed by protocols which have been used in other countries.

The continued mortality among people who inject drugs highlights that our current overdose prevention strategies are not sufficient. Treatment programs, such as Opioid Substitution Therapy, are not primarily aimed at overdose prevention and, although they should be expanded, cannot provide sufficient coverage to reach all of those most at risk of overdose all of the time. Other abstinence-based treatments create changes in tolerance that may well increase the risk of overdose if the client relapses. Distributing naloxone to people who come into contact with people who inject drugs is totally consistent with expanding access to drug treatment, and is one mechanism by which we can at little cost enhance our capacity to reduce opioid overdose deaths in the community.

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