

**RETHINKING
'WITHDRAWAL'
AFTER AN
OVERDOSE
REVERSAL**

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- Principal Investigators: Professor Neil McKeganey; Professor Suzanne Fraser; Professor Sandy Comer
- All study participants, co-investigators & co-authors

BACKSTORY

- Qualitative study of non-fatal overdose conducted in Scotland (1997-1999)
- People seemed terrified of naloxone
- At this time, John Strang was advocating for take-home naloxone in England & internationally
- In 2013, I moved to the National Addiction Centre to work with John Strang
- John argued that we need a better understanding of how people experience emergency naloxone to inform dosing
- So, I retrieved the 1990's data to look at it again...



PAPER 1

- Location: Scotland
- Date: 1997-1999
- 200 qualitative interviews
- 153/200 participants had personally overdosed
- Nearly all had witnessed an overdose

Naloxone—does over-antagonism matter? Evidence of iatrogenic harm after emergency treatment of heroin/opioid overdose

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ABSTRACT

Aim To analyse drug users' views and experiences of naloxone during emergency resuscitation after illicit opiate overdose to identify (i) any evidence of harm caused by excessive naloxone dosing ('over-antagonism'); and (ii) implications for the medical administration of naloxone within contemporary emergency settings. **Design** Re-analysis of a large qualitative data set comprising 70 face-to-face interviews conducted within a few hours of heroin/opioid overdose occurring

PAPER 1: KEY FINDINGS

- Few participants knew naloxone by its generic or trade name
- Nearly all understood street terms, e.g. 'the jag', 'adrenaline', or 'the reverse', or recognized naloxone from the researcher's description
- Participants described feeling 'horrible' or unwell, & reported acute withdrawal symptoms post naloxone administration
- Participants reported going 'mad' or 'crazy' or losing their temper & becoming aggressive or violent because of withdrawal symptoms
- Participants frequently reported that they had discharged themselves to find & use more drugs after naloxone administration

IMPLICATIONS

- Negative reactions (including anger & acute withdrawal syndrome) are widely reported following overdose reversal with naloxone
- Negative reactions following overdose reversal with naloxone can result in medical self-discharge, additional use of substances & potential risk of death

PAPER 2







- Location: Australia
- Date: 2017-2018
- 28 qualitative interviews
- All participants used opioids
- All participants had administered take-home naloxone

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ORIGINAL ARTICLE

Conflict and communication: managing the multiple affordances of take-home naloxone administration events in Australia

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ABSTRACT

Opioid overdose is a growing issue in Australia. Programs to provide opioid consumers with 'take-home' naloxone to reverse overdose exist internationally and in some Australian cities, but uptake remains inconsistent. As an opioid antagonist, naloxone has the capacity to stimulate distressing withdrawal symptoms. These sensations are shaped by complex factors – including the quantity and inter-

ARTICLE HISTORY

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KEYWORDS

PAPER 2: KEY FINDINGS

- Participants expressed concerns about, & described experiences of, conflict during take-home naloxone administration
- Participants also identified positive interactions which emerged during & after revival with take-home naloxone
- Participants reported using specific techniques to reduce the likelihood of conflict & to increase positive responses during naloxone administration:
 - i. Titrating the dose of naloxone
 - ii. Communicating with a person who had overdosed

IMPLICATIONS

- Negative reactions following overdose reversal with naloxone are not inevitable
- Anger (with the associated risk of conflict) following overdose reversal with naloxone can potentially be managed by dose titration & good communication with the person who has overdosed

PAPER 3

- Location: New York
- Date: 2016-2018
- 46 qualitative interviews with people who used opioids
- All participants had administered naloxone (some on multiple occasions)

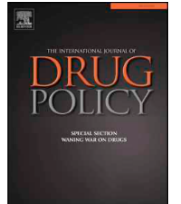
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Research Paper

Opioid overdose reversals using naloxone in New York City by people who use opioids: Implications for public health and overdose harm reduction approaches from a qualitative study



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PAPER 3: KEY FINDINGS

- People who use opioids identified three outcomes following a successful opioid overdose reversal with intramuscular or intranasal naloxone:
 - i. 'rage'
 - ii. 'withdrawal symptoms'
 - iii. 'not rage, not withdrawal'
- Rage and withdrawal symptoms did not always occur together
- When rage and withdrawal symptoms did occur together, they did not always follow the same sequential order

IMPLICATIONS

- Withdrawal symptoms & rage following naloxone administration may be unrelated phenomena

PAPER 4

- Location: New York
- Date: 2014-2019
- RCT of overdose education & naloxone prescribing to people with opioid use disorder & qualitative interviews with trial participants who responded to an overdose
- Analyses of 47 overdose events
- Naloxone had been administered at all events

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Factors associated with withdrawal symptoms and anger among people resuscitated from an opioid overdose by take-home naloxone: Exploratory mixed methods analysis



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ARTICLE INFO

ABSTRACT

PAPER 4: KEY FINDINGS

- Anger & aggression following naloxone administration for opioid overdose do not seem to be associated with withdrawal symptoms
- Withdrawal symptoms are *potentially* associated with receiving more than one dose of naloxone
- People who had overdosed were *significantly* more likely to display anger if the person resuscitating them criticized, berated or chastised them during resuscitation
- People were *significantly* less likely to display anger if the person resuscitating them communicated positively with them

IMPLICATIONS

- Withdrawal symptoms & anger following naloxone administration may be unrelated
- Withdrawal following overdose reversal with naloxone can potentially be managed by dose titration
- Anger following overdose reversal with naloxone can potentially be managed by good communication with the person who has overdosed

SUMMARY AND CONCLUSIONS

- Negative reactions are widely reported following overdose reversal with naloxone
- These negative reactions can result in medical self-discharge, additional use of substances & potential risk of death
- Negative reactions following overdose reversal with naloxone are not inevitable
- Contrary to common assumptions, withdrawal symptoms & anger following naloxone administration may be unrelated
- Withdrawal following overdose reversal with naloxone can potentially be managed by dose titration
- Anger following overdose reversal with naloxone can potentially be managed by good communication with the person who has overdosed
- **Take-home naloxone programmes may be strengthened by including training in how to titrate naloxone dosage & adopt a positive communication style when administering naloxone**

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Thank you

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