

Manuscript Title: Barriers and facilitators of naloxone and safe injection facility interventions to reduce opioid drug-related deaths: A qualitative analysis.

Authors:

Nicole M. Miller ^a, Claire Campbell ^b, Gillian W. Shorter ^c

^a School of Psychology, Ulster University, Coleraine (ORCID: 0000-0002-5937-1629)

^b School of Psychology, Ulster University, Coleraine, United Kingdom (ORCID: 0000-0003-3098-9326) c.campbell2@ulster.ac.uk

^c Drug and Alcohol Research Network & Centre for Improving Health Related Quality of Life, School of Psychology, Queen's University Belfast, Belfast, UK (ORCID: 0000-0001-5752-2297) g.shorter@qub.ac.uk

Corresponding Author: Dr Nicole M. Miller¹

Email : miller-n1@ulster.ac.uk

Alternative email : Nicole.miller08@gmail.com

¹ Present address: University of West London, Paragon House, Boston Manor Road, Brentford, TW8 9GA,

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Abstract

Background: Opioid drug-related deaths continue to be a significant public health concern in the Republic of Ireland (ROI) and Northern Ireland (NI). While both regions have implemented naloxone to reduce drug related deaths, there remains a gap in the implementation of a supervised injection facility (SIF). This study aimed to identify barriers and facilitators to implementing naloxone and a SIF to reduce opioid drug-related deaths in ROI and NI.

Methods: Semi-structured interviews (n=23) were conducted in ROI and NI with experts by experience (n=8), staff from low threshold services (n=9), and individuals involved in policy making (n= 6). Data were analyzed using coding reliability Thematic Analysis and were informed by the Risk Environmental Framework.

Results: The findings illustrated that stigma within the media, health centers, and the community was a significant barrier to naloxone distribution and SIF implementation. Policing and community intimidation were reported to hinder naloxone carriage in both the ROI and NI, while threats of paramilitary violence towards people who use drugs were unique to NI. Municipal government delays and policy maker apathy were reported to hinder SIF implementation in the ROI. Participants suggested peer-to-peer naloxone delivery and amending legislation to facilitate non-prescription naloxone would increase naloxone uptake. Participants recommended using webinars, Town Halls, and a Citizens' Assembly as tools to advocate for SIF implementation.

Conclusion: Local and regional stigma reduction campaigns are needed in conjunction with policy changes to advance naloxone and a supervised injection facility. Tailoring stigma campaigns to incorporate the lived experience of people who use drugs, their family members and the general community who have interventions to reduce overdose in their local area can aid in educating the public and change negative perceptions. This study highlights the need for ongoing efforts to reduce stigma and increase accessibility to evidence-based interventions to address opioid drug-related deaths in the ROI, NI, and internationally.

Introduction

The Republic of Ireland (ROI) and Northern Ireland (NI) are striving to use evidence-informed policies to reduce opioid drug-related deaths (Comiskey, 2020; European Monitoring Centre for Drugs and Drug Addiction, 2017). The health sectors in both jurisdictions offer evidence-based interventions such as assertive community outreach, needle exchange, opioid substitution treatment (OST), and naloxone for people who use drugs (PWUD) (Clarke & Eustace, 2016; Department of Health [DOH], 2017; DOH, 2018). However, both jurisdictions have failed to adapt their programs to match new evidenced based models of naloxone distribution and supply such as peer-to-peer diffusion and the provision of naloxone without a prescription (European Network of People Who Use Drugs, 2019; McClellan et al., 2018; Miller et al., 2022; Waye et al., 2019). While the supervised injection facility (SIF) is part of the national strategy in Republic of Ireland, it's implementation has been delayed due to an appeal by a local school to relocate the proposed site (DOH, 2017). In Northern Ireland, use of SIFs is not currently part of national policy. This inconsistent implementation of evidence informed approach reflects a research-to-practice gap in both contexts (Cheetham et al., 2022; Connery et al., 2020; DOH, 2017; DOH, 2018; Horvitz-Lennon, 2019). Factors that contribute to this gap include the social (e.g., public attitudes), policy (underfunding, restrictions of access, lack of political will), and health care environment (fragmenting care, lack of medical training) in which interventions are implemented (Connery et al., 2020; Horvitz-Lennon, 2020; Madras et al., 2020). Examining the barriers and facilitators in the social and policy environment may advance implementation of these interventions.

Qualitative research examining the environmental barriers to the use of naloxone have identified that fear of arrest, community drug-related stigma, and stigma from health care professionals are common micro social barriers (Antoniou et al., 2021; Bardwell et al., 2019; Mclean, 2016; Wallace et al., 2018). Similar micro-level barriers have been identified for SIFs, including fear of being labeled a drug user, drug-related stigma, and policing (Clua-García et al., 2020; Kosteniuk et al., 2021; Shaw et al., 2015; Southwell et al., 2022; Urbanik & Greene, 2021). Micro social facilitators for naloxone include private and direct access to training and integrating harm reduction education within pharmacies and shelters. Macro policy enablers for naloxone include normalizing the intervention as an emergency medication, providing naloxone over the counter or without a prescription, and client advocacy (Antoniou et al., 2021; Bardwell et al., 2019; Mclean, 2016; Wallace et al., 2018).

The micro social environment of an SIF is perceived to be a non-stigmatising safe place to access medical care, social and legal aid, and to escape drug related violence in the community (Clua-García et al., 2020; Kosteniuk et al., 2021). However, few studies have explored the interaction between the macro and micro level barriers and facilitators and their relevance to the research-to-practice gap.

In the Republic of Ireland and Northern Ireland, stigma and negative stakeholder opinions are common micro social barriers to naloxone implementation (Clarke & Eustace, 2016; Shorter & Bingham, 2016). Similar challenges are found around SIFs; public stigma towards people who use drugs in ROI is a key barrier in securing a location to open a SIF (Atkin-Brenninkmeyer et al., 2017; O'Shea, 2007). In NI, political opposition is a barrier, with the Minister of Justice and Crime disregarding requests to include SIFs in national policy despite evidence supporting the effectiveness of SIFs in reducing drug-related deaths (*Hansard*, 22 March 2021). UK wide drug policy echoes this position, despite evidence that supports the successful implementation of SIF from a recent unsanctioned site (Holland et al., 2022; Shorter et al., 2022). However, less is known about the barriers and facilitators within the community, general public (social environment) and local and national government (policy environment). In addition, little is known about how such barriers and facilitators may relate to the research-to-practice gap, and what can be done to advance policy implementation.

A qualitative study was conducted to gain an understanding of the social and policy factors relating to the research-to-practice gap in these contexts. The research questions for this study were: (1) What are the perceived barriers and facilitators of naloxone in the ROI and NI?; 2) What are the perceived barriers and facilitators to SIF implementation in ROI and placement of SIFs into policy in NI?; and 3) How can perceptions be changed toward these interventions?

Methods

Participants and procedures

Opportunistic and snowball sampling methods (Sadler et al., 2010) were used to recruit experts by experience, low threshold service staff, and policy makers based in ROI or NI who had access to a smart phone/personal computer for online interviews. In terms of specific inclusion criteria, experts by experience had skills and knowledge of opioid overdose strategies and experience providing feedback on policy initiatives relevant to their health.

Low threshold service staff provided services such as needle exchange, naloxone training, assertive outreach based in the harm reduction model, and needed an understanding of naloxone and SIF to take part. Policy makers needed to be involved in implementing national/local policy or be a member of a relevant policy steering group such as a being a member of a statutory agency (Department of Health or Health Service Executive), community agency, or cross-sector Task Force network (e.g., local Drug and Alcohol Task force). Participants answered demographic questions (e.g., age, gender etc.) using a Qualtrics link. A random draw for a £20 voucher was offered to staff and policy makers, with a £20 gift voucher given to every expert by experience.

Data Analysis

23 semi structured one-to-one interviews (experts by experience n=8; staff n=9; and policy makers n=6) were conducted. All interviews were audio recorded and lasted between 30-45 minutes (See Supplement #1 for the interview schedule). Interview questions explored the environmental barriers and facilitators of naloxone and SIF implementation. The interviews were transcribed in Microsoft Word and then placed into NVivo 12 for analysis. The data was analysed using coding reliability Thematic Analysis (TA) (Braun & Clarke, 2021a). The TA analytical process underwent hybrid coding using deductive *a priori* codes based on the Risk Environmental Framework (REF) depicting the environment (social, policy), level (micro and macro) (Rhodes, 2002; Rhodes, 2009), and inductive coding (Fereday & Muir-Cochrane, 2006). Coding was sequential; deductive, followed by inductive. Each code was given a label, a description, and an example (Boyatzis, 1998; Crabtree & Miller, 1992). Development of the codebook included a review of ten percent of coded transcripts by a member of the research team (BWB, see acknowledgements), review of a subtheme of coded data (NMM, BWB, OMB, see acknowledgements), and one-to-one discussions (BWB, GWS). An analytic consensus was accomplished through discussion of the codes. The study was reported using the COREQ guidelines as outlined in Tong et al., (2007) (See Supplement #2). NMM recruited participants, collected data, developed the codebook, and analysed the data. NMM had an established relationship with several gatekeepers from the expert by experience groups in ROI and NI and had no connection to other participants. Saturation was based on information redundancy or where no new codes or information was found in the data (Braun & Clarke, 2021b). A research diary was used to reflect on personal assumptions (Nadin & Cassell, 2006).

Ethics

The study received ethical approval through Ulster University (FCPSY-21-016-A) prior to commencement.

Results

Participant characteristics

Half of the sample identified as male (50%; n=12) with 30% (n=8) identified as female, and the remainder chose not to say. Half of the participants were aged between 30-44 (50% or n=12), most were from ROI (58% or n=14) and living in urban areas (79% or n=12).

Findings

The data is reported based on the participant sample (experts by experience, staff of low threshold service, and policy makers), a participant number, and their location (ROI or NI). In alignment with triangulation of data, notation of divergence and convergence are discussed when relevant. There were four major themes identified within the data and a set of negative cases.

Naloxone enablers: Direct access, empowerment, community training, and multimodal campaigns.

Direct access and Empowerment

Participants perceived that existing macro level policies were vital to naloxone provision in ROI and NI. This included drug services being able to train and supply naloxone to PWUD and their family members, and tailor training to meet service users' needs (e.g., location and duration of training sessions). Training in doctor surgeries near the client's residence, or at home with multiple family members present, provided easy and direct access. Staff appreciated the versatility of the length of training as some clients did not have the time for long sessions:

“Wouldn't it be great to sit down and run a lovely group on overdose prevention and naloxone, but it can also be great just to have a three-minute chat at the boot of a car or with a backpack on. You have to be flexible around that.” (Staff 5 ROI)

Naloxone training provided a feeling of control over an overdose death which reduced feelings of helplessness. Naloxone was perceived to reduce stigma towards PWUD which

empowered family and friends to intervene. Staff reported naloxone changed negative attitudes in the community and policy makers also noted it challenged prejudice:

“...it doesn't just benefit the service user, it benefits the wider community and changing those perceptions and that stigma that's been built up.”
(Staff 1 NI)

“Doctors are starting to understand a bit better. Politicians are starting to understand a bit better...younger people have a better outlook on addiction.” (Staff 1 ROI)

“It gives them some kind of a role and responsibility and an acknowledgement that they matter.” (Policy maker 4 ROI)

Expansion of naloxone access and training

Amending naloxone legislation to provide naloxone without a prescription was a macro policy facilitator mentioned by participants. A staff member reported:

“Well, I would definitely have it as like a non-prescription drug. I think that would make it a lot easier.” (Staff 5 ROI)

Some participants reported community members and people who owned businesses where overdose commonly occurred (city centre) were interested in training. Healthcare settings, such as Emergency Departments, were perceived to be a potential avenue of distribution. Enhancing naloxone training through interagency collaboration between drug treatment, health services, and pre-existing harm reduction services such as OST, methadone clinics, and community pharmacies were enablers for naloxone, particularly for NI. Last, a peer-to-peer training model was identified as a method to increase naloxone distribution as opposed to a single point of access through drug treatment centres. A peer-to-peer model was thought to inspire confidence based on shared identity between peers, and provided quicker access to naloxone for PWUD at risk for overdose:

“You are more likely to feel confident that you know, now what to do.”
(Expert by experience 4 ROI)

“Uh, it's a massive thing. I mean, if we could give it out peer-to-peer it would even better, but the fact that we have to go to certain places to get it.” (Expert by experience 3 NI)

Micro level multimodal campaigns

Webinars on naloxone provided by local drug treatment services (micro level) were perceived to be a cost-effective method for advocating a health-led approach within the

community. Murals in a city centre location in ROI was reported to be a useful tool to promote and educate the public on naloxone use. One participant shared their experience collaborating on a mural with a local artist and drug treatment agency. This mural conveyed quick and easy information on naloxone:

“We did a piece of work with a local artist, um, where we got a mural, like a giant mural painted on the side of a building in the city centre...it says “Carrying Naloxone, it could save a life” and then we had a QR code to access it and things like that. So it's reaching people that would have known nothing about addiction services normally or know nothing about naloxone.” (Expert by experience 5 ROI)

Barriers to naloxone: Macro policy-to-practice in the health and accommodation sector.

Barriers among General Practitioners, High threshold services, Emergency Departments, and Opioid Substitution clinics

Negative attitudes towards PWUD in the macro health sector was a barrier to the health-based approach to drug policy and naloxone availability in ROI and NI. Staff members noted a lack of naloxone prescribers in ROI; General Practitioners (GPs) appeared to get involved if they personally cared about PWUD. Staff expressed concern about naloxone availability if these GPs were no longer available and the implications for naloxone delivery to reduce overdose deaths:

“Most doctors don't prescribe naloxone. It's only really social inclusion doctors who care about people who use drugs, who already work for people who use drugs...So what happens in real life is that there's a few doctors around the country, like four that I know of who will just prescribe us 50 naloxone at a time.” (Staff 2 ROI)

“So, yeah, that's a big barrier, you know, if he left in the morning for another role or another job, what would happen? I don't know what the backup plan would be.” (Staff 5 ROI)

Experts by experience reported experience of stigma by GPs and health care workers which led to a fear of asking for naloxone “... stigma being acted out by our health care workers ...there's loads of prejudice.” (Expert by experience 4 ROI). Outreach workers using GP offices for training had mixed experiences. Although GPs were perceived to be accepting of naloxone (outlined in theme 1), some GPs were not accepting of drug use. This was attributed to negative stereotypes such as perceiving PWUD as blameworthy. Other environments, like emergency departments (ED/A&E) or OST services were perceived to be stigmatizing which prohibited PWUD to ask for naloxone training. Participants stated:

“Everywhere we go we think we are going to be looked down on. You know? If I was to go into A&E now, I would just think they were looking down on me.” (Expert by experience 3 NI)

“...if I was to go in and say, can I have Naloxone just in case...I think there's a lot of room for a person to feel embarrassed, intimidated... I'm going to ask him this ...if somebody is on takeaways instead of supervised, I think that may be a worry for them that their takeaway amount will be reduced because they've asked for this.” (Expert by experience 5 ROI)

The health focused policy approach did not appear to fully reflect pragmatic realities across the health care sector. Some participants perceived high threshold abstinence-based programs did not incorporate the reality of drug relapse, which was perceived to leave clients less prepared for current drug trends, and potential overdose situations. A staff member stated:

“But I think a lot of drug workers struggle with that...In your high threshold service should still be able to talk about a bad batch of heroin without thinking it will be triggering to relapse... you know, a little bit more of a mature kind of health information... but I think workers who are maybe staunchly entrenched in their beliefs about addiction, maybe don't give the full info to people.” (Staff 2 ROI)

Other discussions included the ongoing separation of mental health and addiction treatment in the macro health care environment. This was perceived as a barrier to identifying PWUD at risk for overdose and subsequent naloxone provision:

“There's also the clear link of, you know, drug related deaths and mental health and dual diagnosis.” (Staff 3 NI).

Micro level hostel accommodation

Participants reported drug free hostels in the ROI accommodation sector banned possession and use of naloxone on site. One participant reported a hostel staff member discouraged them from using their naloxone training when attempting to help someone who appeared to be overdosing. Tragically, the person in the hostel died. Participants who used their naloxone in drug-free hostels were also afraid of eviction. Participants stated:

*“There's a big difference there. I found a fellow dead in the bed...and he was right on the end of the bed and I knew there was something wrong because he looked white. I said to the guy is he ok? The guy said just get your f** stuff out of the locker and get out of the room. I said, I'm just checking on him and he said get the f** out. The man was dead up in the*

bed that night... That guy lost his job over there because of it.” (Expert by experience 1 ROI)

“Here’s another one, uh, came back yesterday actually and told us that they were living in a hostel accommodation. Someone had overdose they used naloxone, they sent for an ambulance and then they got evicted from their hostel for having naloxone and using it, um, which was quite shocking.” (Staff 5 ROI)

Barriers to naloxone and SIF in NI and ROI: Stigma, policing, community intimidation, violence, and lack of political will.

Stigma

Participants reported that stigma was related to a lack of naloxone carriage by PWUD within local communities (micro social environment) in ROI and NI. Naloxone was described as *“demonized so badly.”* (Policy maker 1 ROI). A staff member stated:

“So, it’s really just the sorta stigma towards it that way, you know, they don’t want they don’t want people thinking, what is that ?...Or, you know, they just are labelled then as an injecting user. And that’s what they don’t want people to know that as well.” (Staff 4 NI)

Stigma towards drugs operated as a barrier to implementation of SIFs in both contexts. This was fuelled by popular myths of SIFs including what the participants called the *“honeypot effect”* (Policy maker 5 ROI); a belief that the existence of a SIF would have negative social and economic impact in an area by attracting drug use. Another myth involving SIFs was the fear that PWUD would create more drug litter and disrupt the general social environment. For example, a staff member reported common fears that clients would *“...start harassing people and begging and leave dirty needles in the area”* (Staff 1 ROI). In addition, *“nimbyism”* was a barrier (Expert by experience 2 NI), which described a community’s resistance to having the SIF within proximity to local schools and places of business. Negative attitudes towards drug use, desire for social distance, and fears fuelled this perception that PWUD are dangerous. One stated:

“I mean, people say you’re letting somebody go in and they’re going to be injecting drugs. They’re going to come out and be off their heads. They’re going to create mayhem and difficulties. My children are going to be at risk, or my family members are going to be at risk because of this. So, there is a bit of not in my backyard, which happens when you, you actually go to do it.” (Policy maker 5 ROI)

Participants in NI reported that stigmatized beliefs inherent or “entrenched” (Staff 4 ROI) within the public reinforced lack of support for SIF. For example, it was perceived that an SIF was a “*hard sell*” (Staff 3 NI). The national media’s negative framing of drugs was also perceived to reinforce negative perceptions of PWUD in the micro social environment. A policy maker stated,

“They have strong views about drug use they probably got from national media and a general prejudice against drug users.” (Policy maker 1 NI).

However, these attitudes varied depending on prior contact with PWUD, whereby prior contact led to less negative attitudes, and less contact was associated with more resistance to a SIF. One participant noted:

“I was saying some about some people when they come into contact with drug use in their own personal life, they are very open about how to fix this. But other people in the same community, um, may just react the opposite way.” (Policy maker 1 NI)

Policing

Aggressive policing was perceived to interfere with naloxone carriage, SIF implementation, and perpetuated stigma towards PWUD. Historical macro level policies advocating for a criminal justice approach towards drug use were perceived to have a lasting psychological impact on PWUD. To illustrate, some PWUD risked not calling for an ambulance during the scene of an overdose to avoid any experience with the police. Local police practices were thought to reinforce stigma in the ROI. For example, participants reported that the local police in ROI shut down vital access points where people used drugs, such as public toilets and alleyways, to reduce public drug use. This was perceived to exclude PWUD from the micro environment. Participants noted:

“Service users will probably use the naloxone and may have to use CPR, but when the person comes around, they very rarely call in the ambulance because when the ambulance is alerted the police come. And then they risk themselves and that other person of being charged with having drugs.” (Staff 2 NI)

“You can see the gates that have been put on laneways to stop people injecting down there... it’s because people use drugs and use down these laneways, and then suddenly there are no toilets in Dublin and no public toilets. One of the reasons is because people injected in them, you know, that this is suddenly your environment is, changed dramatically because people have nowhere safe to go.” (Policy maker 3 ROI)

Community intimidation and threats of violence

Threats of violence within the community from paramilitary groups, or unofficial organised vigilante groups in NI, were a barrier to current naloxone distribution in environments where training was beneficial (e.g., homes of PWUD). Participants voiced concerns that naloxone training in the community could lead to intimidation and the possibility of being forcefully removed from their homes by the vigilante groups. To illustrate, paramilitary groups were reported to use threats of violence and intimidation towards local needle exchange services – a pathway to support naloxone distribution. In addition, some participants suggested these groups used their political networks in local government to close the needle exchange. These political groups were considered to use the media to subvert views towards the needle exchange, influencing the community to support their view. Participant accounts included:

“I don't know how familiar you are with the paramilitary, over here. Um, so that would be another big barrier to clients that we would visit in big housing estates...the client feels that they just don't want anybody to see it because of, you know, what they can be labelled as but yeah, it's usually the paramilitary.” (Staff 4 NI)

“They can get very vocal and get their political representatives on to the news and complain about visible drug use in the area. They tend to respond very negatively to any sort of progressive harm reduction, sort of response to that. Certainly, needle exchanges they wouldn't allow one to open or they get closed down once they do get open.” (Policy maker 1 NI)

This perception that political power was used to reinforce paramilitary viewpoints was also discussed as an additional barrier to the implementing of a SIF in NI. One participant stated:

“Yeah. If it was located in one place paramilitaries would get involved and rally around the community and everyone's scared of paramilitary, so they do what they say.” (Expert by experience 3 NI).

In ROI, community representation on local taskforce groups was perceived as a pathway for community change and advocacy for SIFs. However, as in NI, members of the community- more vigilante groups in this case- were perceived as a barrier to community representation. People who took part in or promoted change in the community could be viewed as a “rat” (Policy maker 2 ROI). An ROI policy maker expands:

“Well, no, we have community reps but we don't have as many as we used to have. You can see a downturn...There is a fear of putting yourself out there, you know...I think the landscape has changed the level of violence

and intimidation in communities has changed...the fear and intimidation that's, is actually a barrier to people participating in local government and local community stuff.” (Policy maker 2 ROI)

Paramilitary groups in Northern Ireland are illegal, sectarian groups who have continued to hold disproportionate power within their communities and in Northern Irish society (Northern Ireland Office, 2015; Wilson, 2016). Police statistics show that paramilitary-style attacks have persisted since the Good Friday Peace Treaty (Police Service of Northern Ireland, 2022), and research has documented the impact that paramilitary intimidation and violence have on drug users and the professionals that seek to help (Higgins & Kilpatrick, 2005).

Lack of political will

Participants viewed macro level policy makers as apathetic and possessing a lack of political will as evident by delays in changing naloxone legislation to make it available without prescription. In addition, local politicians who disagreed with this proposed policy were perceived to use their political power to slow these efforts:

“Then there might be people within public service who don't agree with the policy, and they can take slow things down too. That's not often talked about street-level politicians in that regard, public servants.” (Policy maker 3 ROI)

Participants described several policy level barriers to securing a SIF site in ROI at both the macro and micro level. For example, participants reported that implementation of national policy was delayed by a legal challenge posed to the local planning board by politicians and other community members (e.g., businesses and a local school). National policy makers did not intervene in this case and as a result were perceived to lack the political will to help implement the national policy. The macro policy environment associated with NI was also discussed as a barrier to placing SIF provision into policy. Political parties who advocated for a criminal justice approach to drug use in national government were reported to wield their political power to reinforce their views, which in turn, blocked discussions regarding SIF provision. Participants give their accounts:

“I think perceptions mainly ...prejudice on the part of policy makers. I think that's literally all it is- if you actually think about like the resistance to injection sites and like supervised injection facility who had the same reaction to like needle exchanges who had the same reaction to any harm reduction strategies... I think what has to change is this idea, which is based on stigma, that like, if you deny people any safety or proper hygiene or dignity, they're going to stop using. That's like based on stigma, it's not true.” (Expert by experience 4 ROI)

“Yeah. Um, I mean, obviously we've had the Tory party in power in Westminster for 11 years or something... There's also a libertarian wing who are in favour of decriminalizing, at least some drugs. Um, and you know, but their core voter base is not going to accept decriminalization or things like supervised injection sites.” (Policy maker 1 NI)

Environmental enablers to SIF implementations: Safety, flexibility, community consultation, advocacy, science, and public support.

Safety and flexibility

SIFs were perceived as non-stigmatising environments supporting vulnerable disclosure of health issues encountered by PWUD and a valuable community asset to reduce overdose. This intervention was framed to have a potential positive impact in the micro social environment by reducing street drug use and drug-related litter. Two participants advocated for flexible SIF location. For example, it was suggested that a mobile site would provide more access to PWUD in rural areas and help PWUD avoid community intimidation (outlined in theme 3). They stated:

“I think it would definitely have a mobile. It would have to be an ambulance or something like that where people come and shoot up do their thing and leave. So it's not set up a particular area.” (Expert by experience 3 NI)

“The benefit well is you can travel to each different district where the drugs have been sought and used...you could bring the van and then you could park in different areas and in different times.” (Staff 1 ROI)

Community consultation, advocacy, scientific evidence, and public support

Town Hall meetings, and a Citizens' Assembly were perceived as a tool for the community to facilitate open discussion about how to implement a SIF site in ROI. A Town Hall was perceived to facilitate dialogue with key local community stakeholders and to hear a variety of community views. Integrating service users, and community members experience of harm reduction services, such as OST and naloxone, within the Town Hall was perceived to reduce stigma:

“...once they got up and running, then, uh, we were able to bring people from the areas where we had established them to the areas where we were going to establish them and say, well, listen, it's actually help things...That helped, to establish services elsewhere. I really think something similar, uh, in relation to the supervised injecting facility will occur.” (Policy maker 5 ROI)

“Possibly lived experienced service users. Being in forums within their community. You know, people who have come through the journey or maybe on substitute programs and possibly them discussing and enlightening their community hubs or forums.” (Staff 2 NI)

A Citizens’ Assembly was proposed as a method to engage with national policy makers. This, like a Town Hall, was described as a consultation process to reduce apathy and denial around drug use problems. When applied to NI, a participant suggested that the UK government should devolve decision making on health policies to the NI assembly as a method to bypass political opposition in Westminster:

“Um, I’m very clear that what it takes is legislative change in Westminster. ...or devolve that decision-making to one of the devolved assemblies to make that decision.” (Policy maker 1 NI)

Community advocacy efforts were perceived to be a key component in creating an optimal environment for a SIF in NI. People with firsthand experience of being affected by overdose, and family members of PWUD, were thought to be the most suitable people to lead such campaigns. An expert by experience also described a desire to inspire voting amongst their peers to guarantee their opinions on health policy will be considered:

“So, it’s a bit about advocating for those service users or whether their families involved to advocate for them, or to advocate for friends or anyone like that, they might know that have, you know, either died of an overdose or have been affected by overdoses or affected by drug use.” (Staff 1 NI)

“I’d love to run a campaign, to get people out, to vote and people who are homeless and people who use drugs and stuff like that, just so that they, um, maybe the politicians will represent them because currently there’s a very few that will represent for that community.” (Expert by experience 2 NI)

Using scientific evidence was thought to change community perceptions about naloxone and SIFs and provide political leverage to help implementation. Micro social environment actors, such as local business and the community, were perceived as vital advocates for this type of policy change:

“It’s the people that live in the area to people in other businessmen in the area. They are the people that have put their hand up and say, yeah, look, we look really agreed that it should be here.” (Staff 1 ROI)

Negative cases: Naloxone use

Some participants’ accounts did not fully align with the Risk Environmental Framework associated with the deductive analysis. This included data where facilitators and

barriers were attributed to individual characteristics versus the environment. For example, skillset and memory was an individual facilitator. Lack of confidence, being unfamiliar with the medication, and lack of understanding were individual barriers to naloxone. Other barriers to naloxone use included service user's perception of overdose risk based on mode of administration (e.g., smoking versus injection), the type of drugs being used (crack cocaine vs tablets), mental health issues, and outright refusal to use naloxone:

"We'll have people who say, oh, I'm just smoking. I don't need it. You know? Um, I'll never overdose, you know, you might have that kind of response." (Staff 5 ROI)

*"Then there are other people who don't want it because their state of mind, and their mental health, like they want to die or something like that."
(Expert by experience 1 ROI)*

"I've definitely been there myself and mean like, I didn't want it, I don't need it and stuff." (Expert by experience 4 ROI)"

Discussion

The findings identified common macro and micro, social, policy barriers and facilitators that are known contributors to a research-to-practice gap for implementing evidence-based interventions. Specifically, barriers identified were fragmentation of care, lack of political will (Connery, et al., 2020; Madras, et al., 2020) and negative attitudes (Horvitz-Lennon, 2020). Evidence for separation of addiction and mental health treatment services persist in the findings, despite repeated calls for integration of health-led approaches in ROI and NI (Campbell et al., 2017). Policy barriers included a perceived lack of political will to amend naloxone legislation and policy delays in implementing the SIF in ROI.

Stigma was perceived to motivate efforts to block municipal level policy processes. Likewise, national policy maker's lack of help with SIF implementation was attributed to prejudice. Threats of vigilante paramilitary violence was a unique form of discrimination within NI and a policy barrier as these groups were perceived to hold considerable political power to block interventions (e.g., needle exchange programs) in NI. This finding persists in NI, with implications for people who inject drugs and their health (Harris et al., 2021). The local community surrounding the proposed location of a SIF was perceived to have considerable stigmatized attitudes and myths that SIFs will increase crime, drug use, and drug litter. These are all common arguments against SIFs that are often unfounded. (West Midlands PCC, 2020). A review by Levengood et al. (2021), for example, reported no increases in crime between areas with a SIF and comparison areas. Potier et al., (2014)

similarly noted that SIFs do not increase drug use or drug related litter. Although advocacy and multimodal campaigns were discussed as a tool to change perceptions found in this study, it is still unclear how myths regarding the negative impact of SIF can be overcome. Research exploring this suggested mock-ups or videos of potential or existing sites (Kryszajtyś et al., 2021) and messaging that addresses public concerns (Sumnall et al., 2020; Trayner et al., 2021).

Some important enablers were also identified. Empowerment, control, and hope were at the heart of naloxone implementation. Offering training to members of the community who are not directly at risk for overdose extends this empowerment (Young et al., 2019). Similarly, a SIF was perceived to be a vital community asset. This was echoed by recent evidence of SIF effectiveness in Scotland, the only UK SIF to date (Shorter et al., 2022). Some suggested a mobile SIF could counteract violence and intimidation in the community. However, any SIF should be tailored to local PWUD needs including location (Southwell et al., 2022). Among participants from the ROI community, using a Town Hall and a Citizens' Assembly were perceived to be policy enablers to secure a SIF site. In NI, devolving drug laws to the NI assembly was thought to be helpful. Using scientific evidence, public support, and advocacy may also be helpful facilitators.

This study adds to the current research on the environmental facilitators and barriers to naloxone and SIF implementation in several ways. Direct access of nonprescription naloxone through pharmacies was perceived to be an important enabler in prior studies with advances worldwide such as vending machines for naloxone (Allen et al., 2022; Antoniou et al., 2021; Bardwell et al., 2019). Changing the prescription status of naloxone would normalize the medication and reduce negative attitudes towards PWUD. An outline of macro and micro social and policy interactions was missing in the existing literature on environmental barriers to naloxone and an SIF. Data from this study revealed how macro level policy changes do not reduce stigma in the micro level health sector. Stigma campaigns across environments (social and policy) and levels (macro and micro) are needed in tandem to policy changes to help bridge the research- to-practice gap.

Recommendation for social and policy change

The following is a list of recommendation for social and policy change in the ROI and NI with mention of its international relevance:

- 1) **Expansion of naloxone distribution: Nonprescription naloxone, peer-to-peer, police, community and emergency department naloxone training and distribution schemes.** Naloxone access laws, which include possession of naloxone without a prescription, are associated with reduced overdose mortality within the United States (Smart et al., 2020). This current study supports campaigns aimed at changing the scheduling across all the states within the United States (Davis & Carr, 2020; Jawa et al., 2022) and locally in ROI and NI. Greater emphasis on naloxone peer-led schemes would be helpful in ROI and NI (Miller et al., 2022) as naloxone peer schemes in Rhode Island, USA have demonstrated increased distribution of naloxone and referral to treatment (Samuels et al., 2021; Waye et al., 2019). Police training and use of naloxone is associated with reduction of overdose deaths (Rando et al., 2015). There is evidence that community members can be trained in naloxone administration (Eggleston et al., 2018), all of which support expanded access proposed by participants for ROI and NI. Naloxone training and distribution in emergency departments would be advantageous for ROI and NI as recent evidence demonstrates high uptake of naloxone across 9 hospitals in Michigan (Dora-Laskey et al., 2021) and another program found success in providing naloxone with counselling and referrals for treatment (Eswaran et al., 2020).
- 2) **Supervised injection facilities, reduction of drug litter, and crime.** Participants perceived that a SIF would reduce drug deaths, drug litter, crime and be a safe place for PWUD. This holds true, as evidence shows that a SIF is related to significant reduction in overdose deaths with no increase in crime (Kennedy et al., 2017; Levensgood et al., 2021; Marshall et al., 2011; Milloy et al., 2008) and is cost-effective with Anderson and Boyd (2010) estimating savings at 6 million CAD dollars per year. Such evidence is useful for both ROI, NI and internationally where SIFs are yet to be implemented.
- 3) **Multimodal and contact-based stigma reduction programs, Town Halls, and Citizens' Assembly.** Using multimodal campaigns, such as a naloxone community mural, was perceived to be effective as it could target community members whilst giving direct access to information on naloxone using a QR code. A recent multimodal anti-stigma intervention using PhotoVoice, a photo elicitation method involving photographs of participants and narrative accounts, was associated with a reduction in stigmatized attitudes towards people with mental health and substance use disorders (Tippin et al., 2022). In addition, a campaign using photos of PWUD in

the UK with adjoining narratives involving the use of naloxone was successful in 2021 (Bernard & Garius, 2021). Campaigns using direct experience of PWUD would be advantageous across the ROI, NI, and internationally. Participants reported that one way to reduce negative attitudes towards SIFs would be to get experts by experience and people who are not drug users to give personal accounts of their positive experiences of these interventions at Town Halls or Citizens' Assemblies. Contact-based stigma reduction programs, whereby interactions occur between PWUD and those who do not use drugs, are also supported in the literature (Livingston et al., 2011; Tostes, 2020). However, it is imperative to adapt these programs to a society transitioning to peace after civil war and where groups reminiscent of the conflict period still operate (e.g., paramilitary style community level intimidation) such as in NI. Indirect contact methods (e.g., learning about other people's positive contact experiences with PWUD) with the outgroup may be a potential pathway to reduce negative attitudes without furthering conflict in these cases (Ramiah & Hewstone, 2013). Further research examining the motivations for maintaining paramilitary group membership in a post-conflict society (Flack & Ferguson, 2021) and how this relates to perceptions of drug use as either a symbolic threat or a realistic threat to social and political power (Ramiah et al., 2013) may be advantageous for programs in NI. In addition, if perceptions vary by the types of drugs used and their administration (e.g., smoking versus injection) (Harris et al., 2020; Higgins & Kilpatrick, 2005). Other post-conflict environments where stigma campaigns might be implemented such as Colombia, where social stigma and paramilitary violence towards PWUD is prevalent (Zea et al., 2013), may benefit from adapting anti-stigma programs in this way.

Strengths and limitations

The current study examined a range of stakeholder viewpoints across the policy making continuum (expert by experience, staff, and policy makers) in two locations (Northern Ireland and Republic of Ireland), which ensured an insider view to the challenges with implementing these interventions. Data triangulation of these viewpoints also ensured credibility, alongside showcasing negative cases. In addition, NMM monitored values and beliefs throughout data collection and analysis with a diary and debriefings with research team members.

It must, however, be acknowledged, that by exploring barriers to supervised injection facilities, we cannot draw broader conclusions regarding supervised consumption sites where other routes of drug administration (e.g., smoking and injection) may take place. In addition, the use of specific stakeholders may have biased perceptions regarding the benefits of naloxone and SIFs as they supported a health approach to drug policy. Some stakeholders also had prior experience with PWUD which hold greater empathy which may have influenced the findings. Future research may wish to incorporate additional stakeholder viewpoints across the health care sector.

Conclusions

We propose several policy recommendations such as making naloxone available without a prescription, expanding naloxone training to involve peer-to-peer training and distribution, expanding legislation to allow for community training, and integration of naloxone into harm reduction services across the entire health care sector in the ROI and NI. This may be cost effective as naloxone training can empower PWUD, reduce stigma and lead to a reduction in drug-related deaths. Stigma is a major factor contributing to the barriers found in this study and the research-to-practice gap (Cheetham et al., 2022; Connery et al., 2020). Macro, and micro level anti-stigma campaigns that involve experts by experience and community members are therefore key to changing attitudes. They may help to extend naloxone provision, and place SIFs into policy and practice on the island of Ireland, as well as internationally where stigma and drug-related deaths are prevalent. Considering the evolving social dynamics and social norms, their impact on drug use, and views towards harm reduction is imperative for stigma campaigns placed in post conflict societies experiencing high rates of overdose.

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References

1. Allen, S. T., O'Rourke, A., Johnson, J. A., Cheatom, C., Zhang, Y., Delise, B., Watkins, K., Reich, K., Reich, R & Lockett, C. (2022). Evaluating the impact of naloxone dispensation at public health vending machines in Clark County, Nevada. *Annals of Medicine*, 54(1), 2692-2700.
<https://doi.org/10.1080/07853890.2022.2121418>
2. Andresen, M. A., & Boyd, N. (2010). A cost-benefit and cost-effectiveness analysis of Vancouver's supervised injection facility. *International Journal of Drug Policy*, 21(1), 70-76. <https://doi.org/10.1016/j.drugpo.2009.03.004>
3. Antoniou, T., Pritlove, C., Shearer, D., Martins, D., Tadrous, M., Munro, C., & Gomes, T. (2021). A qualitative study of a publicly funded pharmacy-dispensed naloxone program. *International Journal of Drug Policy*, 92, 103146.
<https://doi.org/10.1016/j.drugpo.2021.103146>
4. Atkin-Brenninkmeyer, E., Larkan, F., & Comiskey, C. (2017). Factors concerning access to a potential drug consumption room in Dublin, Ireland. *Cogent Social Sciences*, 3(1). <https://doi.org/10.1080/23311886.2017.1398207>
5. Bardwell, G., Fleming, T., Collins, A. B., Boyd, J., & McNeil, R. (2019). Addressing intersecting housing and overdose crises in Vancouver, Canada: opportunities and challenges from a tenant-led overdose response intervention in single room occupancy hotels. *Journal of Urban Health*, 96(1), 12-20. <https://doi.org/10.1007/s11524-018-0294-y>
6. Bernard, J & Garius, L. (2021, August 04). National Overdose Awareness and Naloxone campaign launches in the UK. <https://www.release.org.uk/blog/national-overdose-awareness-and-naloxone-campaign-launches-uk>
7. Braun, V., & Clarke, V. (2021a). Conceptual and Design Thinking for Thematic Analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>
8. Braun, V., & Clarke, V. (2021b). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative research in sport, exercise and health*, 13(2), 201-216.
<https://doi.org/10.1080/2159676X.2019.1704846>
9. Boyatzis, R. E. (1998). Transforming qualitative information: Thematic analysis and code development. Sage Publications.

10. Campbell, A., Neill, N. O., & Higgins, K. (2017). Health and social care workers' perceptions of NPS use in Northern Ireland. *International Journal of Drug Policy*, 40, 93-101. <https://doi.org/10.1016/j.drugpo.2016.11.003>
11. Cheetham, A., Picco, L., Barnett, A., Lubman, D. I., & Nielsen, S. (2022). The Impact of Stigma on People with Opioid Use Disorder, Opioid Treatment, and Policy. *Substance Abuse and Rehabilitation*, Volume 13(January), 1–12. <https://doi.org/10.2147/SAR.S304566>
12. Clarke, A., & Eustace, A. (2016). External Evaluation of Naloxone Demonstration Project. Health Service Executive. <https://www.hse.ie/eng/services/publications/socialinclusion/addiction/naloxonedemo/project.pdf>
13. Clua-García, R. (2020). Managing pleasures and harms: An ethnographic study of drug consumption in public spaces, homes and drug consumption rooms. *Salud Colectiva*, 16, 1–18. <https://doi.org/10.18294/SC.2020.2481>
14. Comiskey, C. (2020). Reducing Harm, Supporting Recovery: A partnership and evidence-informed approach to developing the new Irish health led, National Drug Strategy. *Harm Reduction Journal*, 17(1), 1–8. <https://doi.org/10.1186/s12954-019-0348-9>
15. Connery, H. S., McHugh, R. K., Reilly, M., Shin, S., & Greenfield, S. F. (2020). Substance use disorders in global mental health delivery: epidemiology, treatment gap, and implementation of evidence-based treatments. *Harvard review of psychiatry*, 28(5), 316. doi: 10.1097/HRP.0000000000000271
16. Crabtree, B. F., & Miller, W. F. (1992). A template approach to text analysis: Developing and using codebooks. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research* (pp. 93–109). Sage Publications, Inc.
17. Davis, C. S., & Carr, D. (2020). Over the counter naloxone needed to save lives in the United States. *Preventive Medicine*, 130, 105932. <https://doi.org/10.1016/j.ypmed.2019.105932>
18. Department of Health. (2017). *Reducing harm, supporting recovery. A health-led response to drug and alcohol use in Ireland 2017 – 2025*. Department of Health, Dublin. <https://www.drugsandalcohol.ie/27603/>

19. Department of Health. (2018). *National Strategic Direction for Alcohol and Drugs Phase 2. Final Review- October 2018*. Department of Health, Northern Ireland. <https://www.health-ni.gov.uk/publications/alcohol-and-drug-misuse-strategy-and-reports>
20. Dora-Laskey, A., Kellenberg, J., Dahlem, C. H., English, E., Gonzalez Walker, M., Brummett, C. M., & Kocher, K. E. (2022). Piloting a statewide emergency department take-home naloxone program: Improving the quality of care for patients at risk of opioid overdose. *Academic emergency medicine*, 29(4), 442-455. <https://doi.org/10.1111/acem.14435>
21. Eswaran, V., Allen, K. C., Cruz, D. S., Lank, P. M., McCarthy, D. M., & Kim, H. S. (2020). Development of a take-home naloxone program at an urban academic emergency department. *Journal of the American Pharmacists Association*, 60(6), e324-e331. <https://doi.org/10.1016/j.japh.2020.06.017>
22. European Monitoring Centre for Drugs and Drug Addiction. (2017). Health and social responses to drug problems a European guide. https://www.emcdda.europa.eu/system/files/publications/6343/TI_PUBPDF_TD0117699ENN_PDFWEB_20171009153649.pdf
23. European Network of People who Use Drugs.(2019). Peer-to-peer distribution of naloxone (P2PN): Technical briefing. <https://naloxone.org.uk/2019/06/01/peer-to-peer-distribution-of-naloxone-technical-briefing/>
24. Eggleston, W., Podolak, C., Sullivan, R. W., Pacelli, L., Keenan, M., & Wojcik, S. (2018). A randomized usability assessment of simulated naloxone administration by community members. *Addiction*, 113(12), 2300-2304. <https://doi.org/10.1111/add.14416>
25. Fadanelli, M., Cloud, D. H., Ibragimov, U., Ballard, A. M., Prood, N., Young, A. M., & Cooper, H. L. (2020). People, places, and stigma: a qualitative study exploring the overdose risk environment in rural Kentucky. *International Journal of Drug Policy*, 85, 102588. <https://doi.org/10.1016/j.drugpo.2019.11.001>
26. Flack, P., & Ferguson, N. (2021). Conflict Transformation: Relinquishing or Maintaining Social Identity Among Former Loyalist Combatants in Northern Ireland. *Political Psychology*, 42(2), 185–200. <https://doi.org/10.1111/pops.12694>

27. Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>
28. Green, T. C., Grau, L. E., Blinnikova, K. N., Torban, M., Krupitsky, E., Ilyuk, R., Kozlov, A., & Heimer, R. (2009). Social and structural aspects of the overdose risk environment in St. Petersburg, Russia. *International Journal of Drug Policy*, 20(3), 270–276. <https://doi.org/10.1016/j.drugpo.2008.07.002>
29. *Hansard* HC Deb vol 691 (22 March 2021) [Electronic version]. <https://hansard.parliament.uk/Commons/2021-03-22/debates/6C85A41F-D6E1-419B-8F79-164199233BD7/MisuseOfDrugsAct>
30. Harris, J., Shorter, G. W., Davidson, G., & Best, P. (2020). Risk perception, changing social context, and norms prevent transition to regular injection among people who smoke heroin. *Drug and alcohol dependence*, 208, 107878. <https://doi.org/10.1016/j.drugalcdep.2020.107878>
31. Higgins, K., & Kilpatrick, R. (2005). The impact of paramilitary violence against a heroin-user community in Northern Ireland: A qualitative analysis. *International Journal of Drug Policy*, 16(5), 334-342. <https://doi.org/10.1016/j.drugpo.2005.06.009>
32. Holland, A., Harris, M., Hickman, M., Lewer, D., Shorter, G. W., Horsley, J., Powell, M., & Rae, M. (2022). Overdose prevention centres in the UK. *The Lancet Public Health*, 7(3), e196-e197. [https://doi.org/10.1016/S2468-2667\(22\)00038-X](https://doi.org/10.1016/S2468-2667(22)00038-X)
33. Horvitz-Lennon, M. (2020). Evidence-Based Practices or Practice-Based Evidence: What Is the Future?. *The Palgrave Handbook of American Mental Health Policy*, 603-638. https://doi.org/10.1007/978-3-030-11908-9_21
34. Jawa, R., Murray, S., Tori, M., Bratberg, J., & Walley, A. (2022). Federal Policymakers Should Urgently and Greatly Expand Naloxone Access. *American Journal of Public Health*, 112(4), 558-561. <https://doi.org/10.2105/AJPH.2021.306699>
35. Kennedy, M. C., Karamouzian, M., & Kerr, T. (2017). Public health and public order outcomes associated with supervised drug consumption facilities: a systematic review. *Current Hiv/aids Reports*, 14(5), 161-183. <https://doi.org/10.1007/s11904-017-0363-y>

36. Klimas, J., Egan, M., Tobin, H., Coleman, N., & Bury, G. (2015). Development and process evaluation of an educational intervention for overdose prevention and naloxone distribution by general practice trainees. *BMC medical education*, *15*(1), 1-9. <https://doi.org/10.1186/s12909-015-0487-y>
37. Kosteniuk, B., Salvalaggio, G., McNeil, R., Brooks, H. L., Dong, K., Twan, S., Brouwer, J., & Hyshka, E. (2021). “You don’t have to squirrel away in a staircase”: Patient motivations for attending a novel supervised drug consumption service in acute care. *International Journal of Drug Policy*, *96*, 103275. <https://doi.org/10.1016/j.drugpo.2021.103275>
38. Kryszajtys, D. T., Rudzinski, K., Chan Carusone, S., Guta, A., King, K., & Strike, C. (2021). Do Mock-Ups, Presentations of Evidence, and Q&As Help Participants Voice their Opinions During Focus Groups and Interviews About Supervised Injection Services?. *International Journal of Qualitative Methods*, *20*. <https://doi.org/10.1177/1609406921103334>
39. Levensgood, T. W., Yoon, G. H., Davoust, M. J., Ogden, S. N., Marshall, B. D., Cahill, S. R., & Bazzi, A. R. (2021). Supervised injection facilities as harm reduction: a systematic review. *American Journal of Preventive Medicine*, *61*(5), 738-749. <https://doi.org/10.1016/j.amepre.2021.04.017>
40. Livingston, J. D., Milne, T., Fang, M. L., & Amari, E. (2012). The effectiveness of interventions for reducing stigma related to substance use disorders: a systematic review. *Addiction*, *107*(1), 39-50. <https://doi.org/10.1111/j.1360-0443.2011.03601.x>
41. Madras, B. K., Ahmad, N. J., Wen, J., & Sharfstein, J. S. (2020). Improving access to evidence-based medical treatment for opioid use disorder: strategies to address key barriers within the treatment system. *NAM Perspect.* 2020; 2020. <https://doi.org/10.31478%2F202004b>
42. Marshall, B. D., Milloy, M. J., Wood, E., Montaner, J. S., & Kerr, T. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *The Lancet*, *377*(9775), 1429-1437. [https://doi.org/10.1016/S0140-6736\(10\)62353-7](https://doi.org/10.1016/S0140-6736(10)62353-7)
43. McClellan, C., Lambdin, B. H., Ali, M. M., Mutter, R., Davis, C. S., Wheeler, E., Pemberton, M., & Kral, A. H. (2018). Opioid-overdose laws association with opioid use and overdose mortality. *Addictive Behaviors*, *86*(August 2017), 90–95. <https://doi.org/10.1016/j.addbeh.2018.03.014>

44. McLean, K. (2016). “There’s nothing here”: Deindustrialization as risk environment for overdose. *International Journal of Drug Policy*, 29, 19–26.
<https://doi.org/10.1016/j.addbeh.2018.03.014>
45. Miller, N. M., Waterhouse-Bradley, B., Campbell, C., & Shorter, G. W. (2022). How do naloxone-based interventions work to reduce overdose deaths: a realist review. *Harm Reduction Journal*, 19(1), 1-13. <https://doi.org/10.1186/s12954-022-00599-4>
46. Milloy, M. S., Kerr, T., Tyndall, M., Montaner, J., & Wood, E. (2008). Estimated drug overdose deaths averted by North America's first medically-supervised safer injection facility. *PLoS One*, 3(10), e3351.
<https://doi.org/10.1371/journal.pone.0003351>
47. Nadin, S., & Cassell, C. (2006). The use of a research diary as a tool for reflexive practice: Some reflections from management research. *Qualitative Research in Accounting & Management*, 3(3), 208–217.
<https://doi.org/10.1108/11766090610705407>
48. Northern Ireland Office. (2015). Paramilitary groups in Northern Ireland. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/469548/Paramilitary_Groups_in_Northern_Ireland_-_20_Oct_2015.pdf
49. O’Shea, M. (2007). Introducing safer injecting facilities (SIFs) in the Republic of Ireland: “Chipping away” at policy change. *Drugs: Education, Prevention and Policy*, 14(1), 75–88. <https://doi.org/10.1080/09687630600911684>
50. Police Service of Northern Ireland. (2022). Police recorded security situation records 1 April 2012 to 31 March 2022. <https://www.psn.police.uk/sites/default/files/2022-09/Security%20Situation%20Statistics%20to%20March%202022v2.pdf>
51. Potier, C., Laprévote, V., Dubois-Arber, F., Cottencin, O., & Rolland, B. (2014). Supervised injection services: what has been demonstrated? A systematic literature review. *Drug and alcohol dependence*, 145, 48-68.
<https://doi.org/10.1016/j.drugalcdep.2014.10.012>
52. Ramiah, A. Al, & Hewstone, M. (2013). Intergroup contact as a tool for reducing, resolving, and preventing intergroup conflict: Evidence, limitations, and potential. *American Psychologist*, 68(7), 527–542. <https://doi.org/10.1037/a0032603>

53. Rando, J., Broering, D., Olson, J. E., Marco, C., & Evans, S. B. (2015). Intranasal naloxone administration by police first responders is associated with decreased opioid overdose deaths. *The American journal of emergency medicine*, 33(9), 1201-1204.
<https://doi.org/10.1016/j.ajem.2015.05.022>
54. Rhodes, T. (2002). The 'risk environment': a framework for understanding and reducing drug-related harm. *International-Journal-of-Drug-Policy*. 13, 85–94.
[https://doi.org/10.1016/S0955-3959\(02\)00007-5](https://doi.org/10.1016/S0955-3959(02)00007-5)
55. Rhodes, T. (2009). Risk environments and drug harms: A social science for harm reduction approach. *International Journal of Drug Policy*, 20(3), 193–201.
<https://doi.org/10.1016/j.drugpo.2008.10.003>
56. Sadler, G. R., Lee, H. C., Lim, R. S. H., & Fullerton, J. (2010). Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy. *Nursing & health sciences*, 12(3), 369-374. <https://doi.org/10.1111/j.1442-2018.2010.00541.x>
57. Samuels, E. A., Wentz, A., McCormick, M., McDonald, J. V., Marshall, B. D., Friedman, C., ... & Alexander-Scott, N. E. (2021). Rhode Island's opioid overdose hospital standards and emergency department naloxone distribution, behavioral counseling, and referral to treatment. *Annals of Emergency Medicine*, 78(1), 68-79.
<https://doi.org/10.1016/j.annemergmed.2021.02.004>
58. Shaw, A., Lazarus, L., Pantalone, T., LeBlanc, S., Lin, D., Stanley, D., Chepesiuk, C., Patel, S., Tyndall, M., (2015). Risk environments facing potential users of a supervised injection site in Ottawa, Canada. *Harm Reduction Journal*, 12(1), 1.
<https://doi.org/10.1186/s12954-015-0083-9>
59. Shorter, G. W., Harris, M., McAuley, A., Trayner, K. M., & Stevens, A. (2022). The United Kingdom's first unsanctioned overdose prevention site; A proof-of-concept evaluation. *International Journal of Drug Policy*, 104, 103670.
<https://doi.org/10.1016/j.drugpo.2022.103670>
60. Shorter, G. W., & Bingham, T. (2016). *Service Review: Take Home Naloxone programme in NI Consultation with service users and service providers*. Report for Public Health Agency Northern Ireland.
https://www.drugsandalcohol.ie/25353/1/PHANI_Naloxone-service-evaluation-final-report.pdf

61. Smart, R., Pardo, B., & Davis, C. S. (2021). Systematic review of the emerging literature on the effectiveness of naloxone access laws in the United States. *Addiction*, *116*(1), 6-17. <https://doi.org/10.1111/add.15163>
62. Southwell, M., Scher, B., Harris, M., & Shorter, G. (2022). *The Case for Overdose Prevention Centres: Voices from Sandwell*. Drug Science.
63. Sumnall, H. R., Atkinson, A. M., Trayner, K. M. A., Gage, S. H., & McAuley, A. (2020). Effects of messaging on public support for drug consumption rooms in Scotland, UK. *International Journal of Drug Policy*, *83*, 102855. <https://doi.org/10.1016/j.drugpo.2020.102855>
64. Tippin, G. K., & Maranzan, K. A. (2022). Photovoice as a Method to Reduce the Stigma of Mental Illness Among Health Care Students. *Health Promotion Practice*, *23*(2), 331-337. <https://doi.org/10.1177/1524839921105715>
65. Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349–357. <https://doi.org/10.1093/intqhc/mzm042>
66. Tostes, J. G. D. A., Dias, R. T., Reis, A. A. D. S., Silveira, P. S. D., & Ronzani, T. M. (2020). Interventions to reduce stigma related to people who use drugs: systematic review. *Paidéia (Ribeirão Preto)*, *30*. <https://doi.org/10.1590/1982-4327e3022>
67. Trayner, K. M., Palmateer, N. E., Hutchinson, S. J., Goldberg, D. J., Shepherd, S. J., Gunson, R. N., Tweed, E.J., Priyadarshi, S., Sumnall, S., Atkinson, A., & McAuley, A. (2021). High willingness to use drug consumption rooms among people who inject drugs in Scotland: findings from a national bio-behavioural survey among people who inject drugs. *International Journal of Drug Policy*, *90*, 102731. <https://doi.org/10.1016/j.drugpo.2020.102731>
68. Urbanik, M. M., & Greene, C. (2021). Operational and contextual barriers to accessing supervised consumption services in two Canadian cities. *International Journal of Drug Policy*, *88*, 102991. <https://doi.org/10.1016/j.drugpo.2020.102991>
69. Wallace, B., Barber, K., & Pauly, B. (Bernie). (2018). Sheltering risks: Implementation of harm reduction in homeless shelters during an overdose emergency. *International Journal of Drug Policy*, *53*, 83–89. <https://doi.org/10.1016/j.drugpo.2017.12.011>
70. Wayne, K. M., Goyer, J., Dettor, D., Mahoney, L., Samuels, E. A., Yedinak, J. L., & Marshall, B. D. (2019). Implementing peer recovery services for overdose prevention

in Rhode Island: An examination of two outreach-based approaches. *Addictive behaviors*, 89, 85-91. DOI: [10.1016/j.addbeh.2018.09.027](https://doi.org/10.1016/j.addbeh.2018.09.027)

71. West Midlands Police and Crime Commissioner. (2020) Out of harm's way. Drug consumption rooms, benefits and challenges. Birmingham: West Midlands Police and Crime Commissioner.
72. Wilson, R. (2016). Northern Ireland peace monitoring report number four. Community Relations Council <https://niopa.qub.ac.uk/bitstream/NIOPA/3890/1/NIPMR-Final-2016.pdf>
73. Young, S., Williams, S., Otterstatter, M., Lee, J., & Buxton, J. (2019). Lessons learned from ramping up a Canadian Take Home Naloxone programme during a public health emergency: a mixed-methods study. *BMJ open*, 9(10), e030046. <http://dx.doi.org/10.1136/bmjopen-2019-030046>
74. Zea, M. C., Reisen, C. A., Bianchi, F. T., Gonzales, F. A., Betancourt, F., Aguilar, M., & Poppen, P. J. (2013). Armed conflict, homonegativity and forced internal displacement: implications for HIV among Colombian gay, bisexual and transgender individuals. *Culture, health & sexuality*, 15(7), 788-803. <https://doi.org/10.1080/13691058.2013.779028>

