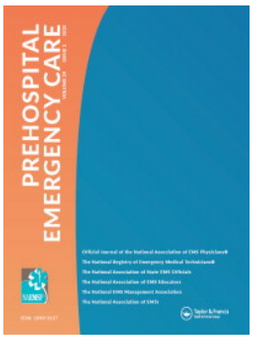

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Would provision of Take Home Naloxone Kits by Emergency Medical Services be perceived as acceptable to people at risk of opioid overdose? A qualitative study

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ABSTRACT

OBJECTIVES: Take home naloxone kits can reduce mortality, but we know little about how they are perceived by people with lived experience of opioid use. Provision of naloxone in the community has been shown to significantly reduce mortality from opioid overdose. Currently, this is predominantly through drug treatment support services but expanding provision through other services might be effective in increasing kit take-up and mortality reduction. This study aimed to examine participants' experiences of opiate overdose and acceptability of provision of naloxone kits through ambulance/paramedic emergency services (EMS) and hospital Emergency Departments (ED).

METHODS: Qualitative interviews were conducted with 26 people who had direct experience of opioid use. Participants were recruited at two substance-use treatment centres and a third sector support organisation in three large cities in the United Kingdom. Interviews examined respondents' experiences of opioid use and opioid overdose, access and personal use of naloxone kits, and opinions about kit provision from EMS and hospital ED staff. Interview data were thematically analysed using a constant comparative method.

RESULTS: Four key themes were identified during analysis: 1) High levels of overdose experience and knowledge of naloxone and naloxone kits; 2) naloxone kits were perceived as effective and easy to use 3) There were some concerns around the risks of administering naloxone, such as peer aggression during withdrawal. 4) Participants supported much wider personal, family and peer provision of naloxone kits from community support organisations as well as from EMS.

CONCLUSIONS: Participants felt naloxone kits were an important resource and they wanted increased provision across a range of services including EMS and hospital ED staff as well as community pharmacies and needle exchange centres. Participants wanted naloxone kit provision to be extended to peers, family and friends.

Keywords: Take Home Naloxone, Opioid, Emergency Medical Services, Emergency Department, Qualitative

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INTRODUCTION

Opioids are the most likely of all psychoactive substances to result in fatal overdose (1, 2). A fatal opioid overdose results in unconsciousness, respiratory depression, and ultimately death (3). Naloxone is an opioid antagonist that can reverse the effects of opioids, including respiratory depression, within minutes (4). World Health Organization guidelines recommend that access to naloxone includes people likely to witness an overdose, such as friends, family members and partners of people who use drugs (11). Take home naloxone programmes have been linked to a significant reduction in fatal overdoses (5,6,7). Take home naloxone kits in the United Kingdom (U.K.), are comprised of a pre-filled syringe with five doses of naloxone, needles, and an instruction leaflet. Distribution of these kits is usually accompanied by a short instructional training session is delivered when the kit is given out. Although take home naloxone distribution programmes have been implemented by drug services (community outpatient provision of health services to opiate users) in many countries, a significant proportion of people at risk of opioid overdose do not engage with these services (8). Moreover, in the U.K., the uptake of take home naloxone kits in at-risk populations remains low (9,10).

As evidence suggests that a significant proportion of those at risk of opioid overdose don't engage with drug services, who are often the main providers of take home naloxone kits, other avenues of provision need to be considered. Hospital Emergency Department (ED) and emergency medical staff do not currently provide take home naloxone kits to opiate users but do regularly come into contact with those at risk of opiate overdose. Hospital ED and ambulance/emergency medical services (EMS) staff could therefore, potentially be ideally placed to distribute take home naloxone kits at the point of care and improve outcomes in this high-risk population (16,17). Studies examining hospital staff attitudes regarding take home naloxone distribution in the ED concluded that although there was broad support, staff also outlined barriers to provision; these barriers included logistical considerations in the ED such as time, education and resourcing (18,19,20). Evidence from

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studies of those at risk of overdose, suggests that people using opioids themselves are supportive of take home naloxone programmes, with successful reversal of opioid overdose reported post-naloxone (21,22). Participants did report some concerns around police involvement as well as anxieties around administering kits, due to potential anger from recipients going into sudden withdrawal (23,24). In addition, those with naloxone kit training have been demonstrated to spread the knowledge they had gained to family, friends and peers, suggesting wider provision may reduce drug-related deaths even further (23). It is therefore important to explore other potential routes for the provision of take home naloxone, such as through hospital ED or EMS staff. There is currently little evidence on acceptability and benefit of providing naloxone kits and training within ED and EMS settings, particularly from the perspectives of current and past opioid users at risk of overdose.

The aim of this study was to explore the experiences, awareness and attitudes of people with lived experience of opioid overdose and naloxone treatment, specifically regarding provision of naloxone kits from EMS and the hospital ED.

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METHODS

Study design and setting

This qualitative study examined the experiences of opioid overdose, naloxone, and take home naloxone kits among people who use or have used opioids and who were either accessing treatment centres or attending third sector group counselling sessions. The study is part of a U.K. multicentre feasibility study [Take-home naloxone In Multicentre Emergency (TIME)] for a randomized controlled trial of take home naloxone distributed in emergency settings (25). People affected by opioid overdose were involved throughout the design, delivery and oversight process throughout the wider TIME Randomized Controlled Trial study, as detailed in the overall study protocol (25). The TIME study has been approved by the Health Research Authority (HRA), Confidentiality Advisory Group (CAG), University of Sheffield Ethics Committee and Research Ethics Committee (REC) 18/WA/0337.

Participant recruitment and data collection

A semi-structured interview guide, developed from existing literature, was developed to explore experiences of opioid overdose and emergency administration of naloxone (by clinical staff and others), as well as experience of and attitudes regarding naloxone kits for use in overdose situations by peer opioid users or family and friends. Opinions were sought on provision of naloxone kits by ambulance/paramedic staff and the hospital ED specifically (See Supplemental File).

A purposive, pragmatic sampling approach was adopted to ensure a broadly representative sample. Interviews were carried out in two addiction treatment community-based clinics and a third sector addiction organisation in three major cities in the U.K. Clinical staff identified potential participants for the study, referring those who met the inclusion criteria; aged over 18 with experience of opioid use. Caregivers (family or partners) could also participate. Those interested in taking part were given an information sheet and could then approach the interviewer if they wished to take part. Face-to-face interviews took place in a private room.

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The interviewers had extensive experience in interviewing people with health needs. All interviews were audio-recorded and transcribed verbatim to maintain data integrity and accuracy. Interviews lasted an average of 20-25 minutes. Participants received a £10 gift token for their time.

Data were collected in two rounds between July 2019 and January 2020. As data around the specific area of receiving naloxone kits in the ED was felt to be insufficiently addressed by participants during the initial set of 18 interviews, a further eight interviews were conducted in January 2020. In the additional interviews, interviewees were prompted to discuss any opinions or experiences of receiving take home naloxone in an ED setting, to ensure this area was fully investigated.

Data analysis

Data were organised using NVivo 12 ™. Audio-recordings were transcribed by designated, experienced university-employed transcribers verbatim, checked and then analysed by JL, JH and FS through an iterative process (26). Major themes for the initial coding were identified from the interview guide and from interviewers' notes made during and immediately after the interviews. Using a hybrid approach of reading the first few transcripts combined with using codes loosely defined *a priori* based on the research questions, an initial coding framework was developed which included additional thematic categories and sub-categories generated from the analysis (27). Throughout, an iterative process of coding, cross-checking and discussions was carried out to establish consensus around the final set of themes and reduce any researcher individual bias. As initial interviewees did not have experience specifically in ED provision, further interviews were conducted until a researcher consensus was reached on data collected.

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RESULTS

In total, 26 interviews took place (19 male and 7 female). One female carer was recruited, but also self-described as having past opioid use experience. Four key themes were identified during analysis: 1) Many participants had experienced overdose situations and were familiar with naloxone and kits; 2) Naloxone kits were perceived as effective and easy to use 3) There were some concerns around the risks of using naloxone kits, such as peer aggression during withdrawal. 4) Participants supported much wider personal, family, and peer provision of naloxone kits from community support organisations as well as from EMS and hospital ED staff (See Table 1).

Theme one – Many participants had experienced overdose situations and were familiar with naloxone and take home kits

Many interviewees in the study had experienced an overdose themselves and most had observed others overdosing at some point. In discussing their own overdose experiences, participants described a range of experiences of overdose situations;

> *"I was at my mum's and luckily my mum knew what was happening 'cause my mum knew about what I was doing at the time, and I was sort of not responsive…I was sort of quite ashamed of myself 'cause it was – at that time it was an accidental overdose". [H06]*

Participants demonstrated a high level of knowledge of how to respond to an overdose and recounted either observing or trying to help others who had overdosed. Participants described calling the ambulance, using resuscitation methods, trying to get the person conscious and moving, or putting them in the recovery position;

> *"So, I've gone up to him with another lad that I know and we picked him up and basically forced him to walk around the park. Which I – we thought was right". [H08]*
>
> *"Called the ambulance. Put them into recovery. At that time though, there wasn't Naloxone pens about. So, yeah, so I just called an ambulance". [B01]*

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Generally, there was a high level of knowledge overall about the existence of an overdose reversal drug with only one participant stating they were unaware. All were aware the drug worked instantly. Some participants described having received naloxone from paramedics and from peers;

> *"I've been using drugs since I was fourteen. I've gone over twice in that time…my friend gave me it the first time and brought me round. And I was quite ill after, and angry. But it brought me around. And the second time it was from the ambulance people". [B01]*
>
> *"I got found by a member of the public and obviously they phoned a paramedic, whatever. They came. And I think they gave me a nasal spray. It was naloxone of some description." [BR02]*

One participant who had been given take home naloxone by a peer described receiving all five shots of the kit in one go, rather than the recommended one or two shots initially;

> *"But there's five shots in naloxone and he ended up putting all five in me. But I woke up and I was like what's going on [clicks fingers], like why have you woke me up, why am I normal, do you know what I mean?" [B04]*

Several participants had experienced peers overdosing and had administered naloxone as they had been given take home naloxone kits themselves;

> *"I was on the stairwell of the [place] and I had my naloxone with me and my friend went over and I phoned the ambulance. They asked me if I had [naloxone kit] with me. I said I did and they told me to use it and I did."* [B02]
>
> *"And he's gone over and I've gone – I've looked round and I said, you alright and he went, er yeah. Next minute he went over, I thought, well. So, the next thing I know I've gone in my bag and stabbed him in the leg."* [S05]

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Some participants believed that ambulance crews used different, stronger drugs than the take home kits, commenting 'the naloxone that paramedics carry is different to the Naloxone that you give us' [B02] with one participant stating that he had been given 'ketamine' [H10] and another 'adrenaline' [H01]. Respondents valued naloxone and take home naloxone kits as a life-saving drug whilst acknowledging that their own, and others' behaviour at the point of overdose treatment, could be challenging due to the undesired effects of sudden withdrawal:

> *"You know, you're quite selfish, they've saved your life and then you throw it in their faces". [H04]*
>
> "*Sick. I was sick. I was like withdrawing, I was sick. I was pretty angry." [B02]*

Theme two: Take home naloxone was perceived to be an effective and easy to use intervention

As noted in the previous theme, respondents expressed and demonstrated willingness to take action in an overdose situation. They valued the opportunity to have access to a take home naloxone kit, with participants who had experienced or witnessed naloxone being used by their peers being particularly positive about its benefits and feeling encouraged to carry a kit themselves;

> *"If I knew somebody's life were at risk I would 100 percent use that without any shadow of a doubt". [S04]*
>
> *"So, my experience of take-home naloxone, it's dead handy, especially for if someone goes over, and I've actually witnessed it and used it, so yeah, it's good stuff". [B04]*
>
> *"An associate come round into the flat … overdosed and everybody's head fell off, but this was given to him. Now when this was given to him he was coming onto his hands and knees as the ambulance was coming through the door, so I seen it*

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actually work you see, so then that's what made me ask for this (take home naloxone kit)". [H01]

Some participants had received take home naloxone training in the past, with some carrying kits themselves or had a family member who was trained to use a kit. Those who had received the short training expressed confidence in being able to administer naloxone if necessary;

"I mean I've learnt it anyway but I mean you can read it from the leaflet but you have to do – it's quite easy you know. Nothing difficult about it." [S01]

Interviewees were positive about the size of the take home naloxone kit with many commenting on the clear, easy to follow instructions as well as the small size which meant it could be easily and discreetly/conveniently carried;

"Yeah, it's not a bad size, it is big enough to fit in your pocket, but at the same time, yeah, for what's in it I think, yeah, it's about the right size. " [H01]

Additionally, several participants felt that receiving the training and being able to carry a kit with them made them feel empowered.

"I kind of felt – with the naloxone there, I kind of felt in control. If she'd – if I'd given her the naloxone and it hadn't brought her round, the first thing I'd have done was ring an ambulance". [H05].

"And I think that the fact that addicts can treat each other. And like it doesn't have to be a healthcare professional. That's mega, isn't it? Do you know what I mean? Like 'cos if you've got to wait for an aftercare professional to come and do it, it might be too late. " [B02]

Theme three: There were some concerns around the risk of using take home kits, such as police involvement or peer aggression through withdrawal

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Some participants expressed concerns about calling emergency services for help for overdoses, particularly due to the involvement of the police and concerns around arrest for possession and supply of drugs.

> *"I didn't dare hang around and do it. Because, like I say, I had loads of drugs in my pocket". [H06]*

People with longer-term opioid experience recounted more negative police experiences in the past, but there was widespread agreement that police were now concerned with safety rather than issues around drug use;

> *"Well, we'd heard that in the past, that people were abandoning people and we'd heard that they'd changed the way they dealt with the people helping somebody because of that very reason, because they were getting abandoned. So, we kind of were led to believe that we wouldn't be held to any accountability for helping him". [H05]*

Participants described how some users would not want to wait for the ambulance for fear of reprisals, but most felt that the risk of repercussions was outweighed by the opportunity to save a life;

> *"The thing is there's a fear round drug users that if you start ringing 999, the police are going to come, but a life's a life, isn't it?" [H02]*

Many of the concerns raised stemmed from personal experiences of having been revived with naloxone following overdose and feeling anger and confusion at the first instance. Almost all respondents recounted the physical symptoms of rapidly losing the 'buzz' of the opioids' effect, effectively going into 'withdrawal'. This was described as frequently causing headaches, paranoia and confusion and anger;

> *"Yeah, I'm just like where has my buzz gone, what the f**k have you done like, do you know what I mean, where's my drugs? I thought he'd robbed me, I woke up and*

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I had no like no recollection of what was going on, I was just like what's going on, where's my drugs, why ain't I buzzing, do you know what I mean?" [B04]

These negative experiences also led some to express caution about administering naloxone to others, particularly if it was felt that the person might become combative or angry;

"My friend was a bit pissed off and that's because he had no opiates in his system and straight away he wanted to use drugs". [H01]

"I'd be more hesitant but at the end of the day like I'd still, you know, I'd value the person's life more than getting a bit of grief over them coming out of their high". [S08]

However, even though there was acknowledgement of how someone might behave after they have been given the naloxone, almost all interviewees felt they would still give naloxone;

"I think I'd still – knowing that, still use it [naloxone] because I think it's still more important to have someone confront you than potentially lose a life, so yeah, I'd still administer it knowing that." [H09]

"Any person, I'd rather them be violent than die. "(S04)

When asked if having a take home naloxone kit would encourage more risky drug use, there were differing opinions some participants felt there was a possibility that they might have been encouraged to take higher amounts of opioids;

"If I'm with someone taking drugs and I knew that person had naloxone would I take more to overdose? Probably, yeah". [B04]

Although some interviewees acknowledged that this was potentially a risk, very few felt they would personally take a higher dose with naloxone present, but beliefs were expressed that this might be a possibility for others;

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"I'm not joking, people enjoy overdosing, they are seeking oblivion. Not – like a lot of them want to be dead today but they don't want to be dead tomorrow kind of thing, if that makes sense." [BR05]

Despite the polarity in opinions regarding take home naloxone encouraging more risky use overall, the broad consensus was that quantities of drugs taken were more influenced by factors such as amount of money available or type of drugs available. Some participants commented that they would take as much as they could afford and were not in a position to increase this at will;

"You can only take what you can afford at the end of the day". [S08]

In addition, it was commonly stated that overdoses were something to be avoided at all costs, and therefore it was unlikely that people would take more drugs knowing it could increase overdose risk;

"if it was me personally I don't think I would, …cause I wouldn't want to ever be in that position of overdosing again anyway". [H01]

"Nobody wants to go over, nobody wants to go over because it's big rigmarole. You don't know what's going to happen, you don't know whether you're going to be here or not. And it's scary, it's a scary thing." [S04]

***Theme four* –Participants supported much wider personal, family and peer provision of take home kits from a range of community support organisations as well as from emergency services**

There was a common consensus that take home naloxone should be widely available, with almost all participants citing pharmacies, needle exchange centers and places like drug treatment services as examples of where take home naloxone kits could be given out. For those with kits, often these had been received from drug treatment services and third sector agencies;

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"Always from here [Third sector agency]. I've probably had – I'd say twelve, I guess, from here, that I've used. It's a fair few." [B03]

"I was given it in drug treatment, yeah." [S01]

Participants considered that pharmacies in particular, where some obtained methadone and therefore visited on a daily basis, would be a good place to get the take home naloxone kits and training;

"Oh, doctors, pharmacies that give out pills. Like, places that do needle exchange should be offering naloxone. If they're giving out bags of pins, they should give out naloxone, I think." [BR01]

"I think the chemist 'cos where are they going to get their pins from?" [S05]

In addition to widening the sources of take home naloxone kits and training, many participants expressed support for access for family, friends and partners as well as peers who may be users themselves.

"I think it's a good thing. I think people should be encouraged to have one, certainly if they're in a house where other people come to use there", [H05]

"I mean most people have got a family member who's worried about them, might have a mum who's worried about them, a sister or something like that. So obviously they might want to get some training and have this little pack just in case, you know. "[H04]

Overall, interviewees were overwhelmingly positive about widening access to take home naloxone training and provision, but there was less clarity when considering provision by EMS and ED staff specifically. In relation to the hospital ED, a common experience recounted was of being treated on scene for an overdose but not being willing to go in the ambulance to hospital due to the instant withdrawal caused by the opioid reversal;

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"People just don't like to go in the ambulance (to the hospital ED). So everybody that I've witnessed hasn't gone in the ambulance".[H06]

One participant, however, did feel that coping with withdrawal symptoms was a reason for being in the ED, due to concerns stated previously about being more at risk of an overdose after receiving naloxone, if more opiates are taken straight away;

"If you've got it IV'd [Intravenous administration of treatment] it will clear all the opiates out of you instantly and you'll be clucking [in withdrawal] and then you want more. And the risk is because you've got naloxone, you're not going to feel it, so you're going to go over again. So, it's best to take it with the hospital …. because they're going to try and use to get rid of the withdrawal symptoms... you can't get rid of that feeling. You've just got to ride it. Yeah". [B03]

Participants overall were ambivalent about ED provision of take home naloxone, as most stated they had no direct experience of this, and were therefore unable to comment on this area, despite additional interviews prompting specifically about any opinions or experiences in the ED setting. There was significantly more support expressed however, for take home naloxone provision by EMS staff attending overdose calls on scene. Participants felt there would be an opportunity for ambulance staff to give out kits and training at this point;

"Both the people that overdosed in my eyes didn't go in the ambulance. Because they probably wanted to go get more drugs they didn't go in the ambulance. People just don't like to go in the ambulance… it maybe would be ideal to give the five, ten minute training or whatever it is, show them, leave them one". H01]

"They come round and they want to go home. They normally will see an ambulance staff…even if they don't get in the ambulance." [S05]

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Overall, there was a high level of agreement around increased provision of take home naloxone kits but participants wanted them from a wider variety of providers, rather than limited to, emergency services and hospital ED's;

> *"The more they get out and the more they get it to circulate, the sooner the better, as far as I'm concerned". [H08]*

Linked to the instant withdrawal effects of naloxone, a few interviewees were sceptical about whether those just recovering from an overdose would be willing, at that particular point in time, immediately post-overdose, to receive training and a take home naloxone kit;

> *"If they've got it on the mind to get drugs. Drugs is all important to them and if it's the case that they don't hang about, it's the rattling." [S01]*
>
> *"I think is that once you've had the naloxone you want to go out and get more drugs." [B08]*

So, in this situation the state itself of being in recovery from an overdose, may mean that this is not an ideal time point for receiving the take home naloxone kit and training in any type of setting.

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DICUSSION

Participants in this study overall showed a high level of support for the widening of naloxone kit provision and this is in line with a several other U.K. and international studies in this population group (15,21-25). Experience of naloxone provision and access to kits varied across those interviewed. Some had been offered kits in the past from other areas and services, while others stated they would use them if these had been provided. This aligns with U.K. national statistics for kit provision which also indicate that access is patchy across and within areas and services (8,9,10,28,29). Increasing provision may be particularly important, given evidence from other studies, suggesting that access to naloxone kits may promote decreased opioid use and increased treatment engagement (30). Many participants felt that kits should be given out in a variety of settings with pharmacies and needle-exchanges considered ideal. A scoping review of naloxone distribution in community pharmacy settings concluded this method of distribution warranted further consideration and development (31).

Few studies have examined kit provision in the hospital ED or by EMS, particularly from the perspectives of those who have direct knowledge and experience of opioid overdose and treatment. A pilot study examining kit provision in the ED did not find evidence of a statistically significant drop in mortality from overdose over a year (32). However, they also concluded that this could be due to people using the kits on others in the community rather than themselves. This correlates with our findings with some participants in this study stating that they had already used kits on peers in the community. A recent review into how naloxone-based interventions work to reduce overdose deaths also concluded that peer-to-peer models of naloxone training could be beneficial (33). In this context, wider training of family and other peer users could contribute to reducing mortality. Inclusion of friends and family in training to use a naloxone kit was important to many participants in our study. Historic criticism of provision of naloxone kits has centred around views of risky behaviour, and studies on clinical staff attitudes highlight some concerns around increased risk of

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overdose (12, 20,30,33,34). We found mixed opinions on this in our study. Most participants felt they themselves would not take more drugs if kits were present, but many felt others might. This anomaly might be explained by the concept of 'othering' whereby people attribute more negative behaviours to others that they perceive as different to themselves (35). Overall, it is important to note however, that participants mostly viewed overdosing from opioid use as an accidental event to be avoided as much as possible. Participants were highly motivated to both help others in that situation and to avoid it for themselves.

LIMITATIONS

There is little research evidence to date regarding how those with lived experience of opioid use regard kit provision, particularly from hospital ED and EMS settings. This study may offer new insights into how this population group could benefit from the opportunity to access naloxone kit training and provision, both from ED and EMS but also more widely within the community. Our sample all had experience of opioid use and many had either witnessed opioid overdose amongst peers or had experienced an overdose themselves, suggesting results may be applicable to the wider community of people at risk of opioid overdose.

A limitation of the study is that while most of the participants had experience of EMS attending potential overdose events in the community, very few had experience of attending a hospital ED in relation to an opioid overdose. Many therefore could not comment on how acceptable this might be to them or others. In addition, this cohort was recruited within treatment services and therefore could differ from those who have not sought treatment or had other opportunities to acquire take home naloxone.

Training from EMS attending on scene was generally considered a good idea, but many acknowledged the drawbacks, in particular people going into instant withdrawal post-naloxone and wanting to either go home or re-use. This is widely reported in the literature and was a finding in our study. This may however provide further support for widening

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provision generally, from pharmacies and needle exchanges for example, where people might be more receptive to naloxone kit training.

Implications for policy and practice

Overall, those presenting to opioid treatment support services highly valued increased access to training and provision of naloxone kits to reduce mortality from overdose. In particular, participants highlighted access to kits through pharmacies and needle-exchanges as well as to a lesser extent from emergency services working in the community. Wider community provision may also be beneficial to hard-to-reach groups who do not access treatment services and therefore were not represented in our sample, but who will be accessing pharmacies, and needle-exchanges.

Recommendations for future research

A key finding from our research study is that participants want expanded access to naloxone kit training and provision themselves, but also for their wider peers and family/friend support networks. Expanding peer and family provision could also improve kit usage and potentially reduce mortality according to a recent review (36). More research should be considered around expanding overall community provision of naloxone kits (particularly for hard-to-reach groups) but also expanding the target population for training and distribution.

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CONCLUSIONS

People with opioid use experience want increased provision of naloxone kits in the community to themselves as well as peers and their family and friend networks. Naloxone kits were viewed as potentially providing life-saving opportunities. Support for provision of naloxone kits through hospital EDs was not well evidenced in this cohort, but provision from EMS who have regular interactions with patients who use opioids was felt to be worthwhile.

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Table 1: *Take Home Naloxone Provision Themes Table*

Main topic question themes	Themes	Sub-themes
Experience of overdose, naloxone or THN	Personal experience of an overdose/witnessed others	Experienced overdose themselves
		Witnessed others
		No experience of overdose situation
	Experience of Naloxone administration	Received Naloxone from EMS/ED staff
		Seen others receive Naloxone from EMS/ED staff
		Aware of Naloxone from media
		Not aware of Naloxone
	Awareness of THN	Aware of THN
		Have a THN kit
		Administered a THN kit to others
		Observed a THN kit being used
		No knowledge of THN kit
Facilitators to use of THN	Can save lives	Observed how effective it is in reversing OD
	Can treat each other not wait	Saves waiting for clinical staff
	THN kit design	Size discreet, easy to carry
		Clear, easy to follow instructions
		Easy to show others how to use it
	Can be given to friends and family/peers	Could save own life
		Could save peers lives
		Feel empowered to rescue others
		Believe it to be safe no side effects
		Police now do not penalise for carrying THN kits/needles
Barriers to use of THN	Others can be combative	Would not administer to some peers
		Would administer despite risks
	Instant withdrawal	Anger, self and others
		Wasted opioids as lose effects instantly
	Increases risky behavior	Might take more opioids/increased risk of OD
		Syringes could be misused in the kit
		May not want to be seen carrying kit around
		Too easy to give all five doses - bad withdrawal
		Might lead to emergency services not being called
		No use if participant is alone and overdoses
		Concern over police arresting participant with THN kit
Who should distribute naloxone	Drug services	Already received THN from drug services
		Feel drug services ideal distributor
	Chemist	Already supply needles so ideal place
		Visit regularly so ideal place
	other places	Any needle exchanges
		GP surgeries
		Distribute as widely as possible
Naloxone from EMS	Support for EMS distribution of THN	EMS have frequent contact with those at risk of OD
		EMS can give out to peers/others on scene
		EMS can give out on scene as most won't go to ED
	EMS distribution not favored	People do not want to stay on scene as in withdrawal or need to take more opioids

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		Person receiving naloxone in withdrawal will not want to receive training and THN kit
		Provision takes up valuable EMS time
Naloxone from ED	Support for ED provision	General wide provision from as many sources as possible including ED
		Good place to recover from withdrawal
	ED provision not favored	People do not go in the ambulance to ED so not effective place to distribute THN
		No experience of ED provision so cannot comment

THN = take home nalonxone. ED = emergency department. EMS = emergency medical services. OD = overdose. GP = general practitioner.

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