Should a feasibility study of proactive community pharmacy take home naloxone supply vs. usual care be undertaken?

Jenny Scott

University of Bath

This final report presents research funded by Pharmacy Research UK (PRUK reference number: PRUK-2018-TB-L1-2-JS). The views expressed in this report are those of the author/s and not necessarily that of Pharmacy Research UK.
Research Development Bursary: Final Report

1.0 Learning that has come from this bursary

Three training courses were completed as part of this bursary. ‘Analysing Qualitative Interviews’ – Nuffield Dept of Primary Care Health Sciences, University of Oxford (12th and 13th December 2018). This course focused on thematic analysis, touched on conversation analysis. I learned that there is no ‘one way’ to approach qualitative coding and expanded my understanding of various ways analysis can be conceptualised and undertaken. I learned a two-stage approach, with coding distinct from interpretation and how to use NVivo-12 Pro. I also learned the OSOP (‘one sheet of paper’) method to aid interpretation. I used the learning to design my analysis plan.

‘Evaluating Complex Public Health Interventions’ DECIPHER, University of Cardiff (24th – 28th June 2019). The course drew heavily on the socio-ecological model of public health. It introduced me to complex systems perspectives. I saw various mixed methods approaches used to inform and refine intervention design and evaluation. New to me was the development of logic models. This was important learning as a logic model will be needed to explain my intervention and how it is thought to work (mechanisms). I learned some frameworks for intervention evaluation with discussion of pitfalls and benefits. I also learned more about process evaluation, pilot and feasibility studies. The importance of checking intervention fidelity in the community pharmacy setting became clear. The economic evaluation of complex interventions section gave key points to discuss with health economists.

‘Introduction to Randomised Controlled Trials’ School of Community and Social Medicine, University of Bristol (10th – 14th June 2019). I learned more about trial design, randomisation, sample size, feasibility and pilot study design, trial planning, PPI, recruitment, set up and conduct, how to deal with missing data, cluster trial design, which is very relevant to my potential trial design and health economics. Patient reported outcomes and process evaluation using qualitative methods was covered. I was able to make notes ‘live’ on application of what was being taught to my trial ideas for pharmacy take home naloxone.

2.0 Professional Development

2.1 Improvement to my research skills and confidence: My qualitative research skills, specifically analysis skills, have become more refined. I have examined in more depth the steps in qualitative analysis, which has given me increased clarity on how these steps can be executed and increased confidence in reading and considering various academic papers on qualitative methods. As an example, I have returned to a paper published by J Neale in 2016 on ‘Iterative Categorization’ (IC)
and been able to understand in more detail how a systematic approach to coded data supports interpretation and how it can be applied to my work.

2.2 Next steps in my research plan: To identify components relating to capability, opportunity and motivation that can be optimised in the intervention, secondary analysis using the theoretical domains framework (TDF) is being done. The TDF maps onto the COM-B and is helpful in identifying how and what to target/modify to change (pharmacists) behaviour (Cane, O’Connor and Michie, 2012). The domains of the TDF (v2) (Atkins et al, 2017) will be used as deductive codes, with IC and OSOP used to aid analysis and interpretation. This approach is a commonly used to inform intervention development and evaluation (Cane, O’Connor and Michie, 2012). Once this is complete, I will finalise the intervention and develop a logic model to explain how I think it will work. I will then discuss this with my mentor and the local Research Design Service, to design the protocol for a feasibility study that can be submitted to a research funder. I have already identified a supportive community pharmacy partner. I am piloting the modified intervention, including the training in March/April 2020. In Winter 2020, acceptability of the intervention to pharmacists, their staff and to people who have experienced it, will be explored in my final year pharmacy student group project.

3.0 Research report

3.1 Background

There is wide-spread concern about the escalation of opiate related deaths in the UK. Most recent figures are at the highest ever, with an average across England of 38.7 per million (ONS, 2019). Data for Scotland is even higher, with a death rate three times that of England (ISD, 2019). Data also shows that opiate related death rates vary across England, with the North East (96.3 deaths per million people) significantly higher than any other region or Wales. London had the lowest rate of any region in 2018, at 34.9 deaths per million (ONS, 2019).

A multi-pronged approach is needed, in which community pharmacy can play a role. One part of this role is facilitating the first aid approach of preventing overdose from being fatal when it happens. This is done using the medicine naloxone, which is safe and cost effective. Timing is critical to the success of naloxone, so having it on hand when an overdose happens, ahead of paramedic arrival, is important. Since 2015, it has been legal to provide intramuscular naloxone without prescription by those engaged in providing drug treatment. During the course of this study, an intranasal formulation became available and supply without prescription also became legal. Community pharmacies are one of several outlets involved in supply under ‘take home naloxone’ schemes (THN). Pharmacies are easily accessible on a drop-in basis, open long hours and weekends
and engage with people who use drugs (PWUD) frequently (Craine, 2010). However, introduction has been patchy (Carre, 2018), there is a lack of evidence to support involvement and the viability, suitability and impact of pharmacy THN remains unknown. It is also not clear how best to deliver it, in terms of intervention optimisation.

A scoping review by Neilson and Van Hout (2016), summarises the international literature on pharmacy naloxone supply to July 2015. The authors highlight five key themes: 'Pharmacists Perceptions of Naloxone: Facilitators and Barriers', 'Potential Patient Populations: Identification of at-risk people and recruitment', 'Supply Systems and Cost', 'Legal Issues' and 'Training of Pharmacists and Community Pharmacy Naloxone Recipients'. This review was used to inform data collection and interpretation. Since Neilson and Van Hout’s review, considerable literature has emerged on pharmacy naloxone supply, especially from North America, discussing federal legal frameworks. The majority of focus is on the impact of law change. Only one paper was found on intervention design. Grindrod and Beazley (2016) describe how following a law change to permit sale in Ontario, Canada, they expect pharmacists to prepare naloxone kits for sale. They present an infographic which they advocate be used by pharmacists in counselling recipients. However, no data is presented on its development and no further testing could be found. No study of intervention mechanisms or optimisation could be found in the literature. Finally, no trial of pharmacy naloxone versus usual care or other supply sources could be found.

Our long-term goal is to evidence what contribution pharmacy THN makes, possibly using a cluster randomised controlled design. However, before this can be done, there are several steps that need to be undertaken (Craig et al, 2006). There is no defined model of a pharmacy THN intervention. Anecdotally it is known there is variability in the extent to which pharmacies in THN schemes make supplies. It is important to try to unpick pharmacists’ behaviour and practice and identify the components that make pharmacy THN intervention successful, in terms of getting naloxone into the hands of potential users. It is also important to consider trial design in the pharmacy setting to explore what is likely to be possible and incorporating this into study design, prior to feasibility testing. My initial question was: Should a feasibility study of proactive community pharmacy take home naloxone supply vs. usual care be undertaken?

### 3.2 Study aims:

The primary aim of this study was to determine whether a feasibility study of pharmacy THN supply versus usual care should be undertaken. Secondary aims were (i) to identify factors relating to capability, opportunity and motivation of pharmacists that appear to make pharmacy THN successful, (ii) to explore experiences and factors that pharmacists feel are important in supply of THN, including
operational, educational and support matters, and (iii) to describe what pharmacists think about data collection for a future feasibility study of THN in the community pharmacy setting.

3.3 Methods:

A qualitative study was done because an exploratory approach was required. A grounded theory-informed approach was taken using thematic analysis. Potential participants were recruited using Local Pharmaceutical Committees (LPC) and THN scheme co-ordinators as gatekeepers. They approached pharmacists and returned contact details of those who consented. The researcher made contact by email or telephone. A snowball approach also recruited some. Those who agreed to take part were sent a Participant Information Sheet and gave informed consent at the start of the interview. It is unknown how many pharmacists were initially approached by gatekeepers, but from the 36 who shared their contact details, a convenience sample of 10 with no experience of supplying naloxone and 11 in THN schemes were interviewed. Fourteen were male and seven female. Appendix 1 summarises their characteristics. Reasons for declining to take part when contacted were being too busy, the trained pharmacist no longer working in the pharmacy, the pharmacy being staffed by locums and lack of experience of supply (THN group). Thirteen interviews were conducted face to face and eight by telephone. Telephone interview allowed for evening interview at the participants’ convenience and remote distance of participants from the researcher. Nine face to face interviews were conducted in the pharmacy consultation room or private office, three at the University of Bath and one at the participant’s home. No other person was present, although other staff came in and out of the room during pharmacy based interview. Recording was stopped to allow the pharmacist to attend to the other staff member’s needs.

A topic guide informed by Neilson & Van Hout (2016) and complex intervention evaluation guidance (Craig et al, 2006) was used. Prompts explored specific points. The guide was reviewed with the supervisor and pilot tested with one colleague. Following the first interview, it became clear that showing a naloxone kit would aid discussion with those not supplying, so this was done. Each participant was interviewed once. With consent, interviews were recorded and transcribed verbatim. Field notes were made to aid reflexivity and remind the researcher of context. Interviews varied in length, from 16 to 40 minutes, typically around 30 minutes. Transcripts were checked for omissions and re-read. Files were imported into NVivo version 12-Pro and coded. Deductive codes were based on the study aims, inductive codes identified as analysis progressed. Once coding was complete, codes were grouped under themes. Where possible, themes were further grouped, making them more overarching. Interpretation was aided by use of the OSOP method, undertaken by hand to sketch links with literature, theory and findings.
The study was approved by REACH (Research Ethics Approval Committee for Health), University of Bath (EP 17/18 248). Two subsequent amendments were approved, to allow recruitment beyond Wiltshire and to allow publicity of the study via Twitter.

3.4 Results:

Five themes were derived from the data. These are summarised without illustrative quotes, due to space limits. Quotes will be used in academic publication.

Components of success: This theme comprised factors that make Pharmacy THN successful. Proactive supply, the act of pharmacists and their staff offering naloxone rather than waiting for people to request it, was critical. This is contrary to many pharmacy services, including needle exchange (NX), which are reactive, provided in response to a request. There was considerable evidence from pharmacists who used proactive THN supply that reactive supply is less effective. They reported few requests made, except by people who had previously had naloxone, used it or seen it used. This ‘first hand experience’ was considered to promote requests. Conversely, there was evidence from pharmacists who had made no or few supplies and some not in a THN scheme that they expected the service to be reactive. This suggests importance to train pharmacists to deliver THN proactively.

A central mechanism of this proactive offer is the pharmacist/staff recognising an opportunity to supply naloxone, showing reflective motivation. Pharmacists described using a ‘hook’, usually the request for NX or a new presentation for opiate substitution therapy (OST) such as methadone. This hook engaged people in conversation about naloxone and considered an effective way to promote uptake. If naloxone was refused, some described ‘sowing the seed’ and then subsequently raising it again next time the person was seen. There was a little concern, though not widely shared, about the possibility of offending people on methadone who had stopped using drugs by taking this approach.

Staff involvement in naloxone supply was important. Pharmacists talked about supply by staff other than themselves as central to managing time and workload pressures. Unsurprisingly, participants were all motivated to supply naloxone. They could see the potential and felt it aligned with the role of community pharmacy. The importance of getting staff motivated, in terms of attitude towards and backing for THN, was considered vital. Including staff other than the pharmacist in training was seen as critical. Linked to this was the importance of confidence. Pharmacists who did not supply THN identified the need to feel confident in how to administer, in order to train others. This was considered critical before they would consider supplying. Those who were experienced in THN talked with confidence about their abilities to supply and challenge the reasons people give for not
accepting naloxone. In contrast, those in schemes who reported no or little supply seemed less confident in challenging refusals. Participants with busy schemes described how momentum had gathered. Once a person had used naloxone or seen it used, they were considered motivated to have it and more likely to request for more. Two participants had administered naloxone and both felt once ‘word got round’ about their actions, this also promoted engagement.

Relationships with PWUD were important. Having a good rapport was central to the success of engaging in discussion and a barrier to not. Participants often recognised the importance of being non judgmental and of having compassion and respect. This was felt to be critical in the success of THN schemes.

**Barriers to Naloxone supply from pharmacies:** Those who did not supply naloxone considered an acceptable time taken for THN as akin to that spent on a medicines use review (MUR) or emergency contraception (EHC). They envisaged sitting down with the person, undertaking a consultation according to a framework. Participants with experience talked about clients being in too much of a rush to engage in such supply. Some talked about having trimmed the intervention down to ‘two or three minutes’ or ‘less than five minutes’, focusing on key points, in order to address this and sometimes delivered at the counter. They recognised any request made to a person who has initially engaged for NX, to spend a further 10 to 15 minutes in the pharmacy, would not result in supply. These pharmacists prioritised getting naloxone into the community in need. For them, resupply did not necessitate the same level of advice as first supply. Some talked of checking the client was comfortable with the instructions instead of repeating all the intervention components. Pharmacists talked of how this adaptation resulted in greater uptake. Those who reported low uptake also highlighted lack of time of the client as a barrier to supply but felt supply had to adhere to a more lengthy consultation.

Pharmacist time pressures were seen as a barrier that meant an opportunity to supply was sometimes missed. Time pressures came from other workload, with a strong feeling that this was worsening. Time pressures were mitigated by having other staff trained to supply and by being efficient, for example, in data entry. Adequate remuneration was central to naloxone provision. It was clear that community pharmacy was a difficult environment to operate in at the time of study and that this climate was considered likely to influence pharmacists when taking on new interventions. Adequate remuneration could create the incentive needed to mitigate time pressures.

Little stigma towards PWUD was evident from participants, but they did report how the attitudes and stigmas believed to be held more widely within the pharmacy profession could be a barrier. Self stigma of clients was also identified. Some participants felt people refused THN because
they did not want to be seen as a drug user. However, it was also felt pharmacy can be a less stigmatising environment than a drugs service and this may facilitate THN uptake.

The fear of offending people on methadone was a barrier to offering naloxone, especially in those with no or little supply experience. There were however no accounts given of actually causing offence. Although people on high dose prescription opiates for pain were recognised by some as possible candidates to offer THN and could be identified through dispensing records, concerns about causing offence were expressed. It was considered much easier to offer to people requesting NX because their drug use was obvious and they were perceived to be already aware of risks of overdose. Confidentiality concerns were a barrier in offering to family members and carers. Although participants recognised this group as potential recipients they could identify, there were concerns about whether they would be aware of their loved one’s drug use. When the pharmacist could be confident they were aware, there was willingness to offer THN and some had done so.

**Operational issues for intervention design and delivery:** Several operational issues impacted or could impact on willingness to supply and the practicalities of THN. Much detail has been gathered to inform intervention design. In summary, data entry and payment claim have to be quick and simple. There were mixed views on online versus paper data collection, with more favour expressed for direct entry to online platforms. Pharmacy layout including adequate space and a confidential area to engage in naloxone conversations was needed, but not always used. Adequate support for locums was expressed by locums and those who manage.

**Training, education and support:** Both those who had supplied and those who had not, felt pharmacists could understand the medicine and conduct the intervention. Perceived capability to work with PWUD came across strongly. Participants saw it as their role although they identified other pharmacists may not. Those who had supplied naloxone felt capable of doing so. This was demonstrated in their descriptions of how they interacted with clients, their confidence and empathy in working with PWUD and their recognition of naloxone as a first aid response. Pharmacists who supplied described training received as effective and did not describe further needs. There was a strong emphasis on the need for adequate training ahead of supply from those in THN schemes and those not. It was important to them to feel competent to answer questions ahead of starting THN.

There was a lot of support for staff being involved in THN for the reasons discussed above, although not everyone agreed. Those who supported staff being involved highlighted the importance of them being trained. Some felt that staff would not want to be involved or did not have the background to be competent, seeing it as role that should be limited to pharmacists. Various models
of staff involvement were described including being fully involved in supply, to initiating the conversation then referring the person to the pharmacist.

**Pharmacy based trial of naloxone supply:** Participants were supportive of a trial of proactive pharmacy THN being undertaken. They recognised that evidence was important for both service commissioning and delivery. They endorsed the need for reimbursement for participation and recognised that in return it was critical that the required trial data was collected. When discussing models of payment there was no clear support for one model. Some advocated payment per recruit whilst others supported payment for trial set up, then at mid-way point(s) and completion. All endorsed the need for payment per transaction for intervention delivery but not for trial data submission. A central theme around trial data recording was the need for it not to be too extensive. Participants felt that in general a lot of the required data would already be collected and therefore the added burden of collecting extra would not be too challenging, as long as it was not too extensive. This was important not only for managing the burden placed on the pharmacy staff but also not to discourage PWUD. When extra data that may be required was discussed there was some who felt asking people about the drugs they used could intrusive or awkward. There were fewer concerns about asking people returning for a further naloxone supply about their experiences of using it. This may mean having a discussion involving death, participants accepted that this could be difficult, but were generally confident about this, highlighting they are experienced in talking sensitively to people who have experienced loss.

There were mixed views as to whether data should be entered directly into an online platform, captured on paper and transferred later or submitted in paper format. Several suggesting providing choice to pharmacists in the trial. Linking trial data collection with existing platforms used by commissioners was advocated for strongly to avoid duplication in data entry.

When participants not supplying THN were asked their view on being in a control group where NX and OST clients were asked if they had naloxone then if requested, referred on for supply, there was some concern. ‘Treatment as usual’ for NX and OST dispensing amongst those not supplying naloxone was not reported to involve discussions about overdose at present. Hence raising the issue of naloxone and referring on for supply elsewhere was not considered ‘treatment as usual’. One participant, in a rural area far from the drugs service, said he would not want to raise the issue if he could not respond with supply.

**3.5 Discussion**

The broad support for undertaking a feasibility study is encouraging. However, there needs to be more consideration given to the design of the comparator in a trial. The finding that discussion on
overdose is not common with NX and OST clients, unless the pharmacist supplied THN, echoes findings from a quantitative study ongoing within our department and raises wider concern.

This study reports factors relating to capability, opportunity and motivation of pharmacists that appear to make pharmacy THN successful, aiding understanding of how to increase naloxone supply. The COM-B framework was used as a model against which to understand and interpret the data (Michie, van Stralen and West, 2011). It was chosen because of its common application in intervention development and its recognised importance in public health intervention delivery. The participants extensive experience of providing services to PWUD, gave confidence to provide or consider THN supply. The analysis showed that pharmacists feel capable both psychologically and physically to deliver take home naloxone, with recognition that adequate training would enhance capability. Proactive approach was described as the mechanism by which to create opportunity for supply, linked with reflective motivation to distribute naloxone. Reactive supply, which reflects automatic motivation, was felt unlikely to create opportunity to supply naloxone by those with experience, but for some who did not supply or who had made few supplies, reactive supply was expected. This has not previously been reported in the literature regarding pharmacy THN but does reflect findings in other pharmacy practice areas (e.g. Alhusein, et al. in preparation). Participants felt that factors relating to physical opportunity, such as their frequent contact with PWUD and the informal, easily accessible environment of community pharmacy were conducive to providing THN. Time pressures, both from the community pharmacy workload and from PWUD wishing to spend little time in the pharmacy, were a barrier to supply (restrictions on physical opportunity), mitigated by reducing the time taken to a few minutes. Participants felt that the relationship and rapport they had with PWUD could or did create the social opportunity to deliver THN, although they recognised that stigma and judgement held by other pharmacists could limit naloxone scheme expansion. Similar findings are reported by Neilson and Van Hout (2016). Stigma from pharmacy staff is a known barrier to the provision of services to PWUD (Lloyd, 2013, Ibragimov et al. 2017, Paquette, Syvertsen and Pollini, 2018).

A lot of information has been gathered to inform both the optimisation of the intervention and the conduct of a feasibility trial. Some of these echo the findings from Neilson and Van Hout’s review (2016), such as concerns about staff attitude, time pressures, training and remuneration issues. Other barriers described by Neilson and Van Hout were not evident in this work, such as ethical objections or the fear of encouraging drug use. There was support for providing naloxone to some potential at-risk groups that Neilson and Van Hout identify, including people on methadone and family and carers, providing this could be done without breaching confidentiality. However, there were some uncertainties around supplying people on high dose prescription opiates. This requires more consideration, particularly around how they would be defined and how they could be
approached. There are structural advantages in community pharmacy, such as records of co-prescribing of medicines with cumulative effects that make community pharmacy an attractive setting in which to offer high dose opiate patients THN. It is advocated that more consideration needs to be given to developing a bespoke intervention for this at-risk group. Legal barriers include the current limitation of THN supply to addiction care. It was of surprise that participants did not highlight the need for or benefit of ongoing external support, for example a naloxone scheme coordinator. This contrasts with some of the earlier literature around pharmacy services to PWUD. Matheson and Bond (2003) talk about the value and importance of good support systems e.g. NX coordinators. However, the contrast found here may be because services for PWUD are now well established, so confidence may have grown. Such support roles have all but disappeared in England since commissioning moved to local authorities, so there may also be less expectation.

3.6 Impact:

The findings from this work have been used to optimise a proactive pharmacy THN model and inform the development of a logic model to guide the next steps in the evaluation. At local level, the learning from this study has been used to design pharmacy team training and roll out the intervention in Somerset. The revised intervention will be tested for acceptability. In Wiltshire, the training was put on hold due to Covid-19. I am exploring whether we can replicate the Somerset training model in Wiltshire, rather than delay launch.

3.7 Dissemination:

Academic dissemination will comprise two papers that will be submitted for publication, one on the components of successful pharmacy THN and one on COM-B/TDF and intervention development. These are in preparation.

Non-academic dissemination has been completed. A 4-page study summary was sent to the gatekeepers who supported this work, to forward as they see appropriate. A copy of this can be located on my profile page at the University of Bath (under Impact). The intervention model developed from this work has been rolled out in Somerset as part of the Covid-19 response from Turning Point, the drug and alcohol treatment provider in that county. I designed and delivered the training to Somerset pharmacists via Zoom and will conduct follow up evaluation in partnership with the LPC and Turning Point.

3.8 Conclusion

The study shows support for a community pharmacy-based THN feasibility study, with trial design and intervention optimisation to be further developed, using the information established. The
importance of proactively offering THN to achieve uptake by PWUD is essential. To do this, pharmacy staff need to use a ‘hook’ such as NX or OST, to lever the opportunity to raise discussion. The intervention needs to be quick, delivered in a few minutes to facilitate engagement, which may mean sometimes doing this on the shop floor. Those who did this prioritised getting naloxone into the hands of those who need it. The findings show pharmacists felt capable of supplying naloxone, can create the opportunity to do so and recognised that they work in an environment conducive to supply.
References


### Participant demographics

<table>
<thead>
<tr>
<th>Participant number</th>
<th>Experience of THN scheme?</th>
<th>Gender</th>
<th>Pharmacy type</th>
<th>Experience of services for PWUD</th>
<th>Comment on THN experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td>Extensive(^b)</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td>Extensive</td>
</tr>
<tr>
<td>3(^a)</td>
<td>Yes</td>
<td>F</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td>Extensive and has administered</td>
</tr>
<tr>
<td>4</td>
<td>Yes</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td>Extensive</td>
</tr>
<tr>
<td>5</td>
<td>Yes</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td>Extensive</td>
</tr>
<tr>
<td>6(^a)</td>
<td>Yes</td>
<td>M</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td>Extensive and has administered</td>
</tr>
<tr>
<td>7</td>
<td>Yes</td>
<td>M</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td>Extensive</td>
</tr>
<tr>
<td>8</td>
<td>Yes</td>
<td>M</td>
<td>Small multiple</td>
<td>OST(^c)</td>
<td>Offered not supplied</td>
</tr>
<tr>
<td>9</td>
<td>Yes</td>
<td>F</td>
<td>Supermarket pharmacy</td>
<td>OST</td>
<td>Offered not supplied</td>
</tr>
<tr>
<td>10</td>
<td>Yes</td>
<td>F</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td>Supplied once in current pharmacy and extensively in previous job</td>
</tr>
<tr>
<td>11</td>
<td>Yes</td>
<td>F</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td>Not offered but extensive supply in previous job</td>
</tr>
<tr>
<td>12</td>
<td>No</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>No</td>
<td>F</td>
<td>Large multiple</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>No</td>
<td>F</td>
<td>Independent</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>No</td>
<td>F</td>
<td>Independent</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>16(^a)</td>
<td>No</td>
<td>M</td>
<td>Locum</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>No</td>
<td>M</td>
<td>Locum</td>
<td>NX; OST</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>No</td>
<td>M</td>
<td>Locum</td>
<td>OST</td>
<td></td>
</tr>
<tr>
<td>19(^a)</td>
<td>No</td>
<td>M</td>
<td>Large multiple</td>
<td>OST</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>No</td>
<td>M</td>
<td>Small multiple</td>
<td>Superintendent</td>
<td>NX; OST</td>
</tr>
<tr>
<td>21</td>
<td>No</td>
<td>M</td>
<td>Independent</td>
<td>NX; OST</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Participant characteristics

\(a\) these pharmacists were qualified non-medical prescribers, one worked in addiction, the others worked in non-related clinical areas.

\(b\) Extensive experience for the purpose of this study was arbitrarily defined as self-reported supply of naloxone more than 10 times.

\(c\) in process of joining NX scheme but had not yet begun supply