

Meeting	SPA Policing Performance Committee
Date	17 March 2022
Location	Video Conference
Title of Paper	Naloxone Test of Change Evaluation
Presented By	CI Anton Stephenson on behalf of ACC Ritchie, Partnership, Prevention and Community Wellbeing
Recommendation to Members	For Discussion
Appendix Attached	Yes – Appendix A – Naloxone in Police Scotland

PURPOSE

The purpose of this paper is to present and inform the board members on the content and recommendation of the independent academic evaluation of the Police Scotland Naloxone test of Change.

Members are invited to discuss the contents of this report.

1. BACKGROUND

1.1 The issue of police officers carrying Naloxone has been under review for some time in Police Scotland. DCC Fiona Taylor led a working group to explore the potential opportunities and implications for this and a position was presented to the Senior Leadership Board. Following some lengthy consideration it was decided that a Test of Change would be established to examine the effectiveness, opportunities and challenges related to the carriage of nasal Naloxone by police officers and to provide a strong evidence base to properly inform future policy direction.

1.2 A Naloxone Delivery Steering Group (NDSG) was established under the leadership of ACC Gary Ritchie to:

- Identify suitable Test Bed areas
- Establish policy and practice for the carriage of Naloxone by police officers
- Create a programme for training and rollout of Naloxone to officers in the test bed areas
- Address concerns raised around perceived issues related to police officers carrying Naloxone
- Commission an independent evaluation of the Test of Change to provide a sound evidence base.
- Monitor and co-ordinate the Test of Change once underway.

The Test of Change ran for 6 months in 2021 within test bed areas in Glasgow East, Dundee City, Falkirk, Stirling, Caithness and within the custody facilities in the test bed areas, which did not have 24hr medical provision on site.

1.3 In total **808** officers received training with **656** officers opting to take part (81%). Naloxone was administered by officers 51 times during the Test of Change. Multiple uses have occurred in every test bed area by officers of all trained ranks. Naloxone has been administered in a variety of different circumstances including:

- Calls for assistance from the public or patrolling officers being flagged down
- Officers identifying a casualty whilst on patrol
- Persons becoming unconscious in police custody in various settings
- Persons consuming drugs during siege/search incidents
- Deliberate overdose by suicidal missing persons.

Since the conclusion of the Test of Change officers have continued to carry and use Naloxone in the test bed areas with 64 known uses recorded to date. Every individual administered Naloxone by Police has survived their ordeal.

2. FURTHER DETAIL ON THE REPORT TOPIC

2.1 The evaluation of the Test of Change was commissioned by the Scottish Drugs Death Taskforce and resourced and co-ordinated by the Scottish Institute of Policing Research. The evaluation would focus on:

- Effectiveness of Naloxone carriage by police officers in respect of reducing harm and saving lives;
- Police officer attitudes towards drug use and people who are living with addiction;
- Police officer understanding and awareness of drug overdose incidents and Naloxone as a first aid intervention;
- Effectiveness of Naloxone training (considering knowledge/skills of officers both before and after training);
- Experience of Naloxone carriage and use by officers;
- The validity of concerns raised around the police carriage and use of Naloxone
- Feedback from local communities (including recovery communities, people who use drugs, their families and/or relevant support services) to include the effect on stigma;
- Public perceptions and attitudes towards Police officers, their role within the local community and their carriage of Naloxone.

2.2 The evaluation consisted of a blend of quantitative and qualitative feedback gathered through pre, post and three month follow up surveys, augmented with a series of one to one interviews and focus groups with officers who participated in the training, with a mixture of officers who did and did not opt to carry Naloxone. In addition to police officers, evidence was gathered from service providers, key strategic stake holders and people with lived or living experience and their families. There was broad support for the programme from all parties with the exception of the Scottish Police Federation (SPF).

2.3 The quantitative feedback was measured using a variety of techniques and scales and is outlined in the full evaluation. Data

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shows that the training programme was effective with an improvement in officer's attitudes and knowledge of opioids and Naloxone. The most improved scoring, as shown in the evaluation, was in officers' competence to respond to an overdose. Of note there was a substantial shift from pre to post training in officers feeling they were glad to be carrying Naloxone and could perform their role as a police officer better as a result, because they could respond better to an incident if they arrived ahead of other emergency services.

- 2.4 Based on the views of police officers and senior strategic stakeholders, positive aspects of the training included the presence of medical and legal experts, information about Naloxone administration, reassurance of Naloxone safety and the opportunity to have questions answered. The main barriers were the ongoing debate between the Police Service of Scotland (PSOS) and the SPF, the presence of senior officers being unnecessary (although other officers felt the opposite, considering the presence of local or national senior management to reflect commitment and support), legal liability and concerns regarding police filling gaps for other services.
- 2.5 Through the interviews with officers, a majority were supportive of the Test of Change, whilst some had concerns.
- 2.6 Examination of the incidents and officers usage of Naloxone during the Test of Change shows 8% of the total number of Naloxone kits had been used within the six month period, which is comparable to that of the public use of Naloxone.
- 2.7 A number of key themes were also identified throughout the training and feedback. SPF opposition and ambulance attendance were regularly noted. However, the data and incidents show ambulance attendance was within expectation and officers were never asked to attend in place of an ambulance. A number of other questions in this key question set also pointed to some areas of stigma within the workforce, with comments in the qualitative evidence highlighting stigmatising views. The evaluation team noted: *'There was evidence of a lack of understanding around problematic drug use. For example, many officers considered it to be a "lifestyle choice..." and: "Some attitudes towards drug use and people who use drugs may indicate either underlying stigma, or a failure to understand that Naloxone is simply a first-aid tool.'*

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- 2.8 Many officers taking part in the evaluation were of the view that any issues such as ambulance times or potential for aggression post administration did exist, but that was not a reason not to carry and use Naloxone. They viewed it as part of their core role to save lives and work to support other emergency services. This was across all Test of Change areas but even more notable in rural areas, where officers understood geography was an issue, not just for ambulances but for all emergency services and this allowed them to work more collaboratively with partners.
- 2.9 In summary, the evaluation shows through quantitative and qualitative analysis, that the training was impactful and effective, with a demonstrable improvement in officers' attitudes and knowledge of Naloxone. The 81% uptake and evidence from the interviews and focus groups shows broad and wide support for police carriage and use of Naloxone. The predominant positive aspect identified in interviews and focus groups with police officers is that a police officer's duty to preserve life is paramount and Naloxone will save lives. This fundamental point outweighed any remaining concerns which some officers might have about ambulance delay or legal liability (although many who supported Naloxone did not have these concerns).
- 2.10 The evaluation concluded with the following recommendations:
- 1) The police carriage of Naloxone programme should be rolled out Scotland-wide. In addition to personal issue it should be placed within police cars and custody facilities to widen access and ensure resilience.
 - 2) Naloxone training should be made compulsory for all Police Scotland officers and staff, including Police Custody and Security Officers (PCSOs).
 - 3) Naloxone training should be complemented by compulsory in-depth training/education to develop knowledge and understanding of problematic drug use and address stigmatising attitudes towards people who use drugs.
 - 4) Consideration should be given to issuing a written statement by Police Scotland, the Crown Office and PIRC with unambiguous information about any legal liability officers might (or might not) assume should they administer Naloxone.

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- 5) Consideration should be given to issuing a written statement by Police Scotland and expert medical practitioner(s) about the safety of administering Naloxone.
- 6) Police Scotland and the SPF must work together constructively towards a collaborative approach which best supports officers with the carriage of Naloxone.
- 7) Follow up initiatives involving partnerships with relevant agencies should be developed and evaluated.
- 8) Police Scotland should work with partners towards securing funding for further research on police and overdose prevention.

Many of these are already being addressed through ongoing work streams within Substance Harm Prevention, such as tackling stigma.

2.11 Based on the training, evidence found by the NDSG during the Test of Change and the formal evaluation, it is possible to draw the following conclusions:

- The carriage and use of Naloxone is in line with Police Scotland's values and rights based approach to policing. It is a reasonable and necessary measure to tackle the high number of drugs deaths in Scotland, it will help prevent unnecessary deaths among vulnerable communities and is entirely reflective of our public health approach to harm reduction.
- Naloxone is an extremely safe medication which medical evidence proves has virtually no effect on people who have not taken opioids. In Scotland, anyone can carry and use Naloxone and can administer it to anyone whom they may suspect of suffering an opioid overdose. Accordingly it is both legal and safe for police officers to carry and use Naloxone during operational duties.
- Naloxone can reduce operational demand through helping prevent drugs related deaths and therefore negating the need for subsequent investigation and evidence gathering. It also provides opportunities to refer vulnerable individuals to health and support services potentially reducing longer term demand.
- There is no evidence to suggest that police officers carrying and using Naloxone will replace the need for medical attention or

ambulance attendance at incidents where there is an unconscious casualty.

- The carriage of Naloxone by officers is an opportunity to positively influence officer attitudes to drug use and people who have a drug dependency, thereby reducing associated stigma. It also sends a positive message to vulnerable communities and improves trust and confidence in policing.
- There is no more risk of legal or misconduct repercussions for an officer in relation to the use of Naloxone than there is for any other first-aid measure they are trained to use.

Please find attached, the full evaluation report 'Naloxone in Police Scotland: Pilot Evaluation' at Appendix A.

On Wednesday 9 February 2022, the Chief Constable and members of the Strategic Leadership Board fully accepted the findings of the independent evaluation. On that basis the Chief Constable has approved a national roll out of intranasal Naloxone to Police Scotland. All operational officers up to and including the rank of Inspector will be trained and equipped with personal issue intranasal Naloxone.

A delivery plan is currently under development to ensure training and equipping of officers is completed over the course of the next 12 months.

3. FINANCIAL IMPLICATIONS

- 3.1 Police Scotland Finance Department is represented on the DSG and have been fully engaged throughout the development of this proposal.
- 3.2 Police Scotland Procurement Department have been consulted throughout the initial Test of Change and the current proposal.
- 3.3 During the 21/22 financial year Police Scotland received £0.1m of funding for two posts to support the Test of Change pilot. This funding will continue until April 2023 and has been confirmed by the Scottish Government. This funding will support the management of the roll-out of the programme.

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- 3.4 The recommended roll out would be an estimated incremental cost of £0.5m during 22/23 and is demonstrated below. This will equip between 12,500 and 13,300 front line officers nationally
- 3.5 For illustrative purposes, the cost of the Naloxone programme is shown for 5 financial years, taking into consideration the re-supply in Year 4, due to the shelf life of Naloxone and the contractual arrangements required.

Estimated cost of Naloxone roll out

	Estimated Unit Price	(Year 1) 22/23	(Year 2) 23/24	(Year 3) 24/25	(Year 4) 25/26	(Year 5) 26/27	Total cost over 5 financial years
<i>Officer Numbers</i>		<u>13,500</u>	<u>1,000</u>	<u>1,000</u>	<u>13,500</u>	<u>1,000</u>	
Naloxone - 2 Units	£26.00	£351,000	£26,000	£26,000	£351,000	£26,000	£780,000
<i>Officer Numbers</i>		<u>12,500</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	
Naloxone Pouch	£9.00	£112,500	£9,000	£9,000	£9,000	£9,000	£148,500
<u>Total Incremental Cost</u>		<u>£463,500</u>	<u>£35,000</u>	<u>£35,000</u>	<u>£360,000</u>	<u>£35,000</u>	<u>£928,500</u>

All costs are exclusive of VAT. Year 1 and Year 4 include an additional 1,000 units to cover replacements, probationer intakes and new recruits.

- 3.6 The total estimated cost currently includes both the Naloxone and the accompanying pouch. Product prices are indicative and will be subject to a procurement process if Police Scotland were to fund this fully.
- 3.7 At present, a number of funding scenarios are being developed that would reduce the incremental cost to Police Scotland, at least for the 22/23 financial year. Options 1 and 2 below will be explored first before fully committing to a budgetary pressure in the 22/23 financial year.

Option 1 - An opportunity to bid for additional funding through the Scottish Drugs Death Taskforce/Scottish Government where funding for both the Naloxone and pouches would be awarded to Police Scotland.

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Option 2 - There is an opportunity to draw down Naloxone stock from Scotland's Alcohol and Drug Partnership (ADP) locations through local health boards, managed by the local authorities. The additional funding would be awarded directly to the local authorities/NHS. This would ensure that Naloxone nearing its expiry is allocated to healthcare settings, where it is more likely to be used quicker, with Police Scotland receiving Naloxone from health stock, which has a longer expiry date. There would still be an incremental cost to Police Scotland of £0.1m for the cost of the Naloxone pouches, but this agreement would allow Police Scotland to move as close to zero waste as possible for the Naloxone itself.

Option 3 - Police Scotland fund the full incremental cost in the 22/23 financial year and subsequent financial years.

- 3.8 For the following financial years there would be an expectation that Police Scotland absorb the budgetary pressure, however if there was an opportunity to bid for additional funding, it would be explored further with the Scottish Government.
- 3.9 The distribution of Naloxone to the UK only happens twice a year, so there would be a requirement to hold high levels of stock either within the Police Scotland estate or within local Alcohol and Drug Partnership (ADP) locations. This outcome will be driven by ongoing conversations surrounding funding and the management of the roll out. Naloxone has a shelf life of around 3 years but there will be a proactive management of stock between Police Scotland, ADP's, NHS and the ambulance service, to reduce wastage, as outlined above.
- 3.10 Procurement estimate the delivery of the programme to be between 6-12 months.

4. PERSONNEL IMPLICATIONS

- 4.1 The Scottish Drug Deaths Taskforce provided funding for 2 additional posts (1xPS and 1xPC) within the Substance Harm Prevention Team, PPCW, throughout the Test of Change. This funding has since been extended. The post holders are currently responsible for the daily overview of Naloxone incidents and will continue in post for the national project.

- 4.2 The proposal has the potential involvement of approximately 12,500 – 13,000 front line officers, with 800 additional recruits annually.
- 4.3 The Scottish Police Federation and UNISON are represented on the NDSG and were engaged throughout the Test of Change.

5. LEGAL IMPLICATIONS

- 5.1 Police Scotland Legal Services is represented on the DSG and they have been fully engaged throughout the development of this proposal.
- 5.2 The Principal Solicitor with Police Scotland's Legal Services Department has stated that, *"the decision whether to administer Naloxone to an unconscious member of the public should be made in the same way as any decision to administer first aid treatment which police officers are trained to provide. In each case the officer will require to determine if the administration of Naloxone is appropriate, based on their assessment of the circumstances and the training which they have received. Police Officers are personally liable for the decisions they make whilst on duty. In terms however of Section 24 of the Police and Fire Reform (Scotland) Act 2012, the Chief Constable is liable in respect of any unlawful conduct on the part of a Constable. In addition the Scottish Police Authority must pay damages and expenses awarded against the Chief Constable in any action which is raised against the Force as a result of this Section"*.
- 5.3 Any administration of intra-nasal Naloxone by police officers is intended as an immediate first aid intervention to preserve life, in accordance with the Right to Life in terms of Article 2 of the European Convention on Human Rights and the Human Rights Act 1998. It is also aligned to the legal duty of all police officers detailed within the Police and Fire Reform (Scotland) Act 2012.
- 5.4 The administration of Naloxone by an officer will not routinely be considered for referral to PIRC. This is a policy decision made by PIRC that acknowledges the administration of Naloxone, to potentially save a life, will not be a causal or contributory factor in any subsequent harm to the recipient. Should a person suffer a fatal overdose, the presence, or not, of Naloxone will have no bearing on whether or not the matter is treated as a death following police

contact. Current policies and process will not be affected or require amendment.

- 5.5 In 2005, Naloxone was added to the limited list of drugs contained within Regulation 214(2) Schedule 19 of the Human Medicines Regulations 1968 that could be administered by anyone, for the purposes of saving a life. This legislative change was the impetus for the development of a number of local pilots in Scotland and formed the basis for the subsequent national 'Take Home Naloxone' (THN) programme. This has allowed a greater distribution of Naloxone via third sector organisations to members of the public without consent from the person at risk of overdose. Police officers are not exempt from this legislative framework.

6. REPUTATIONAL IMPLICATIONS

- 6.1 The carriage of Naloxone intranasal spray allows Police Scotland officers to have a potentially lifesaving option available to them in life threatening situations. The carriage has already had significant unintended impact with organisations such as shopping centre security companies, bus companies and individual members of the public requesting Naloxone as a direct result of the Test of Change.

7. SOCIAL IMPLICATIONS

- 7.1 Evidence submitted by charity, Scottish Families Affected by Drugs and Alcohol has already demonstrated that the police carriage has influenced the public to carry Naloxone. This has included members of the general public, police officers from various constabularies when off duty and private organisations expressing their desire to carry Naloxone. This approach is one tool officers will have at their disposal to support some of the most vulnerable members of society, thus challenging both barriers and stigma alike.

8. COMMUNITY IMPACT

- 8.1 It is evidenced in the evaluation that Naloxone can save lives and make a contribution as part of a wider programme of works to tackle drug related deaths, not only in the instance of saving a person from an overdose but in sign posting them to support and recovery.

9. EQUALITIES IMPLICATIONS

None.

10. ENVIRONMENT IMPLICATIONS

10.1 Development of a process to replace expiring naloxone from local health boards who will then distribute these kits to areas of highest use will work towards minimising waste and ensuring best use of this life saving tool.

RECOMMENDATIONS

Members are invited to discuss the contents of this report.

The Scottish Institute
for Policing Research

Edinburgh Napier
UNIVERSITY



SCLEPH

Scottish Centre for Law Enforcement & Public Health



Glasgow Caledonian
University

University for the Common Good

Naloxone in Police Scotland: Pilot Evaluation

Final Report

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February 2022

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Abbreviations

Assistant Chief Constable: ACC

Drug Deaths Task Force: DDTF

Lived / living experience of opioid use: LEOU

National Naloxone Programme: NNP

Opioid Overdose Knowledge Scale: OOKS

Opioid Overdose Attitudes Scale: OOAS

Police Custody and Security Officer: PCSO

Police Investigations and Review Commissioner: PIRC

Scottish Ambulance Service: SAS

Scottish Drugs Forum: SDF

Scottish Police Authority: SPA

Scottish Police Federation: SPF

Take Home Naloxone: THN

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Executive Summary

Introduction and background

This report describes the findings of an independent evaluation of a Police Scotland test of change (pilot) of the carriage and administration of intranasal naloxone as an emergency first aid measure to persons suspected of experiencing an opioid overdose. The pilot was conducted between March and October 2021 in three test areas in Scotland: Falkirk, Dundee City and Glasgow East, and subsequently extended to include Caithness, Falkirk and Glasgow custody and community police officers in Stirling.

Research aims and objectives

The evaluation focused on the implementation and processes of the pilot to allow elements of learning and best practice to be identified and to inform any potential future national implementation of naloxone carriage/administration within Police Scotland.

The evaluation assessed:

- Police officer attitudes towards drug use and people who use drugs;
- Police officer experiences of witnessing and responding to overdose;
- Police officer understanding and awareness of drug overdose incidents and naloxone as a first aid intervention;
- Effectiveness of naloxone training (considering knowledge/skills of officers both before and after training);
- Experience of naloxone carriage/administration by officers;
- Barriers/facilitators (actual or perceived) impacting on police carriage/administration of naloxone;
- Perceptions from local communities, including recovery communities, people who use drugs, their families and/or relevant support services.

Research design

This research was a mixed-methods process evaluation, including: a rapid literature review; pre-training, post-training and follow-up questionnaires; semi-structured interviews; focus groups; and collection of quantitative data regarding uptake and administration of naloxone and the number of overdoses encountered. A total of 346 police officers completed the questionnaires, 41 police officers took part in interviews or focus groups, 19 interviews were carried out with people with lived/living experience of opioid use, family members and support workers; and eight senior strategic stakeholders were interviewed.

Findings

The overall response to the pilot has been positive. By the end of the pilot, 808 officers had been trained in the use of naloxone, representing 87% of the workforce in the pilot areas. Uptake of naloxone packs by police officers at the end of training sessions was approximately 81% (656 packs). Between March and October 2021 there were 51 naloxone administration incidents where a suspected opioid overdose was treated. No adverse responses were reported. The 51 naloxone administrations during the pilot term equates to almost 8% usage rate of all kits supplied during the pilot, which is comparable to usage of 9% reported for take-home naloxone supplied in the community (McAuley et al., 2015). Scottish Ambulance Service (SAS) responses to these incidents was within a reasonable average timeframe within the context of the COVID-19 pandemic.

Impact of naloxone training

The quantitative data suggest that officers changed their attitudes and knowledge of opioids and use of naloxone because of the training. For example, there was an increase in average scores across all sub-scale and total scores from pre to post training on the validated *Opioid Overdose Attitudes Scale* (OOAS), strongly suggesting training had a positive overall effect. The total mean score of all officers who completed this data improved from 87.8 pre-training to 101.6 post-training (maximum score 130). The most improved OOAS sub-scale was officers' self-assessed 'Competence' to respond to an overdose, followed by their 'Concerns' about intervening, and lastly their 'Readiness' or willingness to intervene. Another indicator in favour of the training was the validated scale *Opioid Overdose Knowledge Scale* (OOKS), which showed an improvement in every knowledge domain compared with the corresponding pre-training scores. This was particularly evident in domains with biggest improvements made, i.e., for recognising 'Signs' of an overdose and for naloxone 'Use', which covers naloxone effects, administration and aftercare procedures. The post-training total score was 38.6 on average (maximum total score of 45), an increase of 6% on pre-training score of 35.8 and notable because the pre-training scores were already relatively good, indicative of an informed workforce.

It was also effective in increasing the acceptability of naloxone administration as part of a police officer's role. The training had some positive effects on police officers' attitudes towards people who use drugs and problematic drug use in the short-term. However, whilst some strong positive impacts were sustained with officers agreeing 'we have a responsibility to provide best possible care for people with drug dependence' (67% post-training vs 51% pre-training), there were other responses suggestive that future training needs more focus on improving officers' stigmatising attitudes towards people who use drugs and knowledge of problem drug use.

Based on the views of police officers and senior strategic stakeholders, positive aspects of the training included the presence of medical and legal experts, information about naloxone administration, reassurance of naloxone safety and the opportunity to have questions answered. Perceived as unhelpful was debate between senior leadership and Scottish Police Federation (SPF) representatives during the training.

After training, 40% of officers agreed that 'All Police Scotland officers should carry naloxone' a substantial shift in attitude compared with only 15% before the training. A considerable number of officers were unsure in answering this question both before and after training, and the corresponding percentage of officers who 'agreed or were unsure' was more than two thirds (68%) after training, compared with 45% pre-training. Similar substantial shifts in attitudes were also reported with officers indicating they were glad to be carrying naloxone, believing they could perform their job better with naloxone, and believing police should be able to respond if they are on scene before other emergency services.

Police officers' experiences of administering naloxone

Almost all police officers interviewed had experience of attending overdose situations and a majority had seen naloxone administered by healthcare staff or colleagues. Thirteen interviewees had personally administered naloxone, some on several occasions. Officers reported very positive experiences of naloxone being used effectively to save peoples' lives, despite occasionally poor communication with other services.

Police officers' views on naloxone in Police Scotland

A majority of officers who participated in an interview or focus group were supportive of the pilot and its roll out across Scotland.

Positive perspectives towards the pilot

- It was noted that police officers are frequently first responders to overdose incidents. Officers felt that it was appropriate that they could provide emergency first aid, including naloxone, until ambulance support arrives.
- A police officer's duty to preserve life is paramount and naloxone was seen by officers as an opportunity to save lives. Officers believed that naloxone carriage will save lives.
- If the ambulance service is unable to respond quickly, carriage of naloxone has added value as officers can provide more immediate first aid to members of the public. This added value is particularly the case in rural areas.
- Officers said that naloxone provides an opportunity to link people who have recently overdosed into support services.
- Officers said that intranasal naloxone is safe and easy to administer.
- Some officers who had administered naloxone reported prompt ambulance response.
- Many officers were not worried about legal repercussions from administering naloxone and believed that the legal concerns of other officers are unjustified.
- Many officers showed compassion and concern for people with problematic drug use.

Perceived barriers to the pilot

- Some officers stated that they have experienced ambulance delays and sometimes poor communication with other services (both historically and during the pilot).
- While some officers considered that naloxone carriage would lead to greater reliance on the police by ambulance services, others said this was not a reason to oppose naloxone carriage, indeed it made it more crucial.
- Officers were concerned by opposition to the pilot from the SPF and there was a lack of trust that either the SPF or Police Scotland will support officers in the event of an investigation or legal claim following naloxone administration.
- Some officers believed that after administering naloxone they would be required to stay with the individual until the effect of drugs had worn off (if the individual refused to go to hospital – or alternatively, if the ambulance refused to take the individual). This would increase police workload or, if they did not stay with the individual, risk a Police Investigations and Review Commissioner (PIRC) enquiry if the person subsequently came to harm.
- Some officers had concerns around the risk of repeated overdoses, and death after administrations due to lack of follow up support.
- A few officers had misconceptions about naloxone safety.
- Officers suggested that the majority of police time is spent responding to mental health incidents (including substance use). Officers are concerned that carrying naloxone will increase this workload and they were keen to have more support from other services.
- There was evidence from some officers of a lack of understanding around problematic drug use.

Recommendations from police officers

A majority of officers interviewed were supportive of the pilot, many strongly, although some expressed concerns and made various recommendations (see section 4.3.2.4 of final report).

Community stakeholders' views on naloxone in Police Scotland

Nineteen people with lived or living experience of opioid use, family members, or staff with experience of supporting people with experience of opioid use were interviewed about their views on the carriage and administration of naloxone by Police Scotland. All of the community stakeholders supported the pilot.

Positive perspectives towards the pilot

- Participants believed that the intervention was suitable for police officers as first responders.
- They also believed that the intervention fitted well with the police's duty to save lives.
- Participants viewed intranasal naloxone as a facilitator to the intervention due to its ease of administration and safety.
- Some participants saw the pilot as a positive step towards the normalisation of naloxone in Scotland.
- While participants shared a range of contrasting views around the attitudes of police officers towards people who use drugs, several participants shared positive accounts of police officers who were proactive and compassionate in their support of people who use drugs.

Perceived barriers to the pilot

- The majority of participants identified that some police officers had a negative attitude towards people who use drugs and that affected their willingness or ability to support them.
- Several participants acknowledged that police officers might face aggression from individuals who had been revived through receiving naloxone.
- A few participants recognised that naloxone carriage could be seen as adding to police workload (although it might have the opposite effect in avoiding the paperwork around a sudden death).
- While all participants supported the pilot, several participants highlighted that naloxone was only part of the solution of addressing drug-related deaths in Scotland.
- Several participants mentioned that individuals who had overdosed and were revived were at risk of repeated overdose and perhaps repeated administrations of naloxone. This pointed to the need for referral into treatment and support following near fatal overdoses.

Recommendations from community stakeholders

Police officers across Scotland should be required to carry naloxone and should receive training and education around administration of naloxone, drug use and addiction to address stigmatised views of people who use drugs.

Senior strategic stakeholders' views on naloxone in Police Scotland

Interviews were conducted with eight senior strategic stakeholders from a range of key organisations. All senior stakeholders were supportive of the pilot and its roll out across Scotland, apart from the SPF representative.

Most senior stakeholders believed that naloxone administration should be part of the police's role as a first aid tool and that this was entirely consistent with the police duty to preserve life, particularly as they are frequently first responders to the scene of an overdose. All senior stakeholders were confident that ambulance responses were fast.

The majority agreed that naloxone was of proven benefit and entirely safe; the Crown Office has confirmed that there would be no prosecution in relation to administration of naloxone by police in an emergency. The PIRC representative stated unequivocally that officers would not be investigated for naloxone administration whether the individual suffers harm either in police custody or following police contact. The proven safety of naloxone for first aid was confirmed by all senior stakeholders, including medical experts.

Recommendations from senior strategic stakeholders

The vast majority of stakeholders agreed that naloxone should be rolled out across Police Scotland. They proposed that wider access to naloxone should be seen as just one of a range of initiatives which were all needed to tackle the drug deaths crisis.

Conclusions

Scotland is facing an unprecedented number of drug-related deaths that is increasing year on year. Since opioids are implicated in 89% of drug-related deaths, naloxone is an essential intervention for saving lives (National Records of Scotland 2021). Naloxone is an evidence-based, safe, first aid intervention that has been promoted by the Scottish Government for over a decade to save lives (Scottish Government 2021b).

On the basis of these findings we make the following recommendations.

Recommendations for Police Scotland

- 1) Police carriage of naloxone programme should be rolled out Scotland-wide. In addition to personal issue it should be placed within police cars and custody facilities to widen access and ensure resilience.
- 2) Naloxone training should be made compulsory for all Police Scotland officers and staff, including police custody and security officers (PCSOs). Consideration should be given to:
 - a. Expanding and adapting the existing training content (outlined in 4.2.1) to incorporate simulation of naloxone administration, the routine inclusion of testimony from a person in recovery and specific guidance and information for follow up support.
 - b. How to avoid disruptive internal political debate. This may be de-escalated by allowing the training to be run by healthcare professionals or with more input from them.
- 3) Naloxone training should be complemented by compulsory in-depth training/education to develop knowledge and understanding of problematic drugs use and address stigmatising attitudes towards drug users. Training concerning problem drug use should adopt an integrated approach, taking multiple complex needs and co-occurring drug use and mental health issues into consideration.
- 4) Consideration should be given to issuing a written statement by Police Scotland, the Crown Office and PIRC with unambiguous information about any legal liability officers might (or might not) assume should they administer naloxone. For example, this could be a general statement on first aid and liability, since naloxone carries the same liability as first aid interventions such as giving CPR, i.e. if performed in good faith and in accordance with training, no claim will be investigated by PIRC or the Crown Office.
- 5) Although evidence about the safety of naloxone administration is clear, consideration should be given to ensuring this is clearly communicated by issuing a written statement by Police Scotland and expert medical practitioner(s) about the safety of administering naloxone.
- 6) Police Scotland and the SPF must work together constructively towards a collaborative approach which best supports officers with the carriage of naloxone.
- 7) Follow up initiatives involving partnerships with relevant agencies should be developed and evaluated. Minimum standards and rigorous processes should be implemented across all Police Scotland divisions.
- 8) Police Scotland should work with partners towards securing funding for further research.

1 Introduction

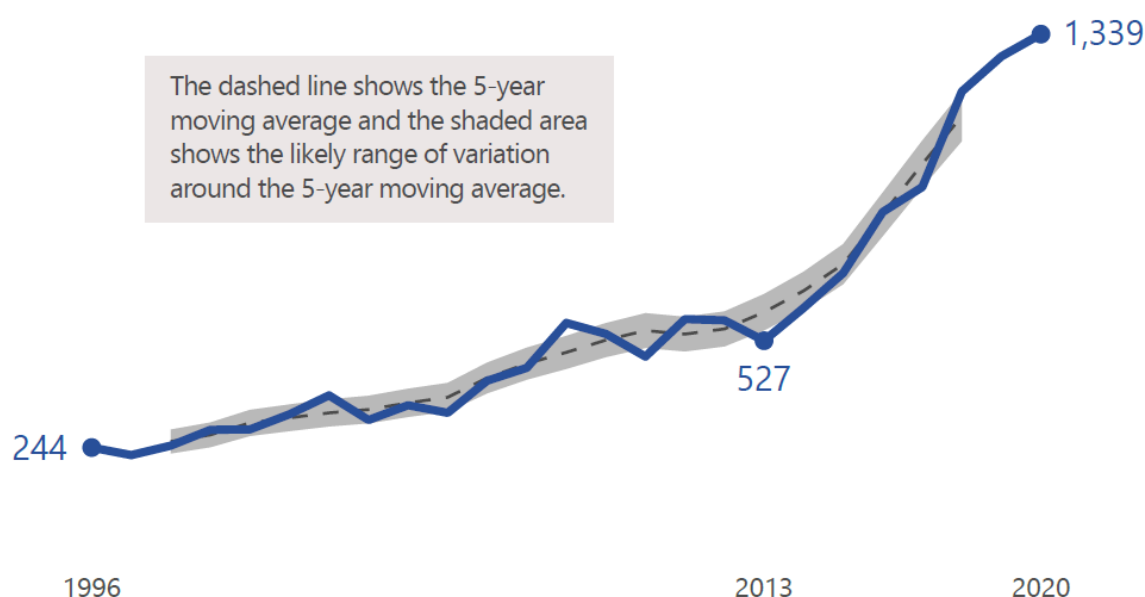
This report describes the independent findings of an evaluation of a Police Scotland test of change (pilot) of the carriage and administration of naloxone as an emergency first aid measure to persons suspected of experiencing an opioid overdose. The pilot was conducted between March and October 2021 in three test areas in Scotland: Falkirk, Dundee City and Glasgow East, and subsequently extended to include police officers in Caithness, custody officers in Falkirk and community officers in Stirling.

1.1 Drug related deaths in Scotland

Drug-related deaths in Scotland are at an all-time high. In 2020, there were 1,339 drug-related deaths registered in Scotland (National Records of Scotland, 2021); a rate 3.5 times higher than the UK average and amongst the highest in Europe (ibid). The total number of drug-related deaths in Scotland was 5% greater than those recorded in 2019 and has increased substantially over the last 20 years with 4.6 times as many deaths in 2020 when compared with the year 2000.

Figure 1.1: Drug related deaths in Scotland

Drug-related deaths, 1996 to 2020



Source: National Records of Scotland, 2021

In 93% of all drug-related deaths in 2020, more than one substance was found to be present in the body. Of all drug-related deaths in 2020, the following substances were implicated (National Records of Scotland, 2021):

- o opiates/opioids (such as heroin/morphine and methadone) - 1,192 deaths (89% of the total)
- o benzodiazepines (such as diazepam and etizolam) - 974 (73%)
- o gabapentin and/or pregabalin - 502 (37%)

- cocaine - 459 (34%)

In 2019, a *Drug Deaths Taskforce* was established by the Scottish Government to 'co-ordinate and drive action to improve the health outcomes for people who use drugs, reducing the risk of harm and death' (Scottish Government, 2019a).

1.2 Naloxone medication

Naloxone is an opioid antagonist first patented in 1961 and approved in the United States in 1971 for the reversal of opioid overdoses. It may be administered by intravenous or intramuscular injection, or by spraying into a person's nostril (intranasal). Naloxone is indicated for use as an emergency antidote to opioid-related overdose and works by reversing the suppression of the respiratory system.

Naloxone's value was recognised in the UK nearly 50 years ago, with Evans et al. (1974) applauding its superiority to predecessors and the absence of side effects. Naloxone's exceptional safety has been reported by experts many times over the years that it has been in common usage. For example: 'Naloxone is an extremely safe drug. Its profile is remarkably safe...It has essentially no agonist properties or abuse potential.' (Baca & Grant, 2005). Indeed, 'multiple doses daily of nine times the maximum recommended dose for opioid intoxication, produced no behavioural or physiological changes' (Du Pont Pharma 2001, quoted in Baca & Grant p.1826 *ibid*).

In other words, naloxone causes no harm if given to an individual who is mistakenly believed to have taken opioids. It is difficult to overdose on naloxone (a dosage nine times the maximum recommended had no adverse effect) and it is not addictive.

Naloxone's safeness, combined with its effectiveness in reversing opioid overdoses gave it a valuable role in strategies to reduce drug deaths and to its expansion to use by first responders who might not be healthcare professionals. A key barrier to usage by these groups was removed by the introduction of naloxone in intranasal form, avoiding the need to find a vein and eliminating the risk of needlestick injury. Robinson and Wermeling found that intranasal naloxone was just as safe and effective as injected naloxone in circumstances when the latter was not possible (Robinson & Wermeling, 2014). Both injectable and intranasal naloxone have been licensed for use in the UK for many years (DoH, 2017) and it is on the WHO List of Essential Medicines (WHO, 2021).

1.3 Naloxone for emergency use by non-healthcare professionals: international and UK context

Naloxone has been identified as a key first aid tool in the effort to tackle growing opioid crises in many countries internationally. In 1996 the concept of supplying naloxone to members of the community likely to witness overdose situations, typically people who use drugs, and to train them in its administration, was suggested by Strang and colleagues (Strang et al., 1996). This became known as Take-Home Naloxone (THN).

In 2011, the Scottish Government implemented the world's first National Naloxone Programme (NNP), providing THN kits to people who use drugs likely to witness an overdose (McAuley et al., 2012). Over time, the NNP programme has expanded to allow supplies of naloxone to be made available to friends, family and professionals likely to witness an overdose. THN has since been associated with reducing drug-related deaths (McDonald & Strang, 2016). In the US, a significant reduction in opioid-related deaths was recorded where naloxone was widely distributed relative to areas with no implementation (Walley, 2013). In Scotland, THN has been associated with halving the opioid-related death rate following release from prison (Bird & McAuley, 2019). A recent systematic

review from Australia refuted misconceptions that THN would lead to increased substance use, finding instead that it 'has a net benefit use in terms of drug use behaviours' (Tse et al., 2021).

As the drugs crisis worsened in the United States, with an opioid epidemic being declared in 2017 (US Department of Health and Human Services), some US police forces have implemented the carriage of intranasal naloxone among officers in an attempt to reduce deaths (Rando et al., 2015; Ray et al., 2015; Smyser & Lubin, 2018). Academic literature on US police attitudes discusses very positive views and receptiveness to naloxone training (e.g., Purviance, 2017; Ray et al., 2015), as well as evidence of stigma and negativity from frontline officers (e.g. Murphy & Russell, 2020). A survey by White et al in Arizona concluded that 'Officers accept this public health responsibility as part of their mission. Given that officers are frequently first on scene at overdoses...police-led naloxone programs will save lives' (White et al., 2021).

In the UK, a 'Nasal Naloxone Pilot' was run by West Midlands Police during 2019-2020 (West Midlands Police and Crime Commissioner (PCC), 2020), with the final report from the PCC recommending widening naloxone access to police officers across the region. Naloxone is now being introduced in police forces throughout the UK, including Cambridgeshire (Cambridgeshire Constabulary, 2021), Wales (North Wales Police and Crime Commissioner, 2021) and Northern Ireland (BBC News, 2021).

In response to the year-on-year increase in drug-related deaths, and the recommendation of the Drugs Deaths Taskforce, Police Scotland proposed a pilot project to test the carriage and administration of intranasal naloxone by officers.

1.4 Legal context

Naloxone has been legally authorised for medical use in the UK since the 1980s (Aitkenhead, 1989) and for use by members of the public in an emergency since 2005, without prescription since 2015.

The enabling legislation for administration of naloxone by the public in the UK was the Medicines for Human Use (Prescribing) (Miscellaneous Amendments) Order 2005. This Order updated the Medicines Act 1968 by adding naloxone to the list of drugs which could be administered by anyone (i.e. including non-health professionals) for the purpose of saving life in an emergency. This Order was consolidated by the Human Medicines Regulations 2012 (Para 238).

In 2015 The Human Medicines (Amendment) (No 3) Regulations 2015 made naloxone legally available to the public without prescription, opening the way to greater expansion of THN programmes. The regulation was amended in 2019 to include nasal naloxone (The Human Medicines (Amendment) Regulations 2019). Thus, members of the public have had legal authorisation to obtain naloxone without prescription and administer it in an emergency for many years.

The general right to life is protected by The European Convention on Human Rights Article 2, given effect in the UK by the Human Rights Act 1998: 'Everyone's right to life shall be protected by law.' For emergency services in Scotland, the Police and Fire Reform (Scotland) Act 2012 also specifies an obligation on Scottish police officers 'to protect life' (Section 20 (c)) and 'to improve the safety and well-being of persons, localities and communities in Scotland' (Section 32 (a)). Therefore, the duty to protect life is a priority responsibility for the police. However, although police officers are frequently first responders to an emergency, including suspected overdoses, they are under no statutory legal obligation to administer naloxone or any other type of first aid because they are not healthcare professionals. This is instead left to the discretion of the attending police officer. While rare, it is possible to bring a civil claim in common law against any emergency responder who provides first aid, (for example if it is claimed that CPR has been performed incorrectly, causing

injury). But such a claim would be unlikely to succeed where first aid is provided in good faith and according to guidelines (Resuscitation Council UK, 2018).

In the context of naloxone, we were unable to find any report of litigation either in the UK or internationally, successful or otherwise, brought by a patient or their family for alleged adverse impact of naloxone administration in an emergency.

1.5 Pilot background and context

Naloxone is considered by Police Scotland as part of first aid treatment, providing additional time for the ambulance service to arrive on scene and take over emergency medical treatment (Police Scotland, 2020). In 2020 Police Scotland established a Naloxone Delivery Steering Group, which included key health and policing stakeholders, e.g. Scottish Drugs Forum, Scottish Police Federation, NHS Scotland and the Scottish Ambulance Service (Scottish Police Authority, 2020).

Following discussion at the Strategic Leadership Board of Police Scotland, pilot projects were initiated in 2021 in three areas identified by Police Scotland's Naloxone Delivery Steering Group, one in each of the East, North and West local policing areas:

C Division – Falkirk

D Division – Dundee City

G Division – Glasgow East

Caithness (N Division), Falkirk and Glasgow custody (R/G Division) and Stirling community policing team (C Division) were added to the pilot at a later stage. The Drugs Deaths Taskforce funded two police officers to coordinate the naloxone pilot.

The naloxone pilot took place in a particularly challenging context. The COVID-19 pandemic remains ongoing and has put considerable pressure on policing and healthcare services in Scotland, including on the Scottish Ambulance Service (SAS) and other emergency healthcare providers.

Further demands on emergency services during the pilot came with preparations for Glasgow's hosting of the 26th United Nations Climate Change Conference of the Parties (COP26), held over two weeks (31 October-21 November 2021). The planning and training leading up to COP26 took place throughout the pilot.

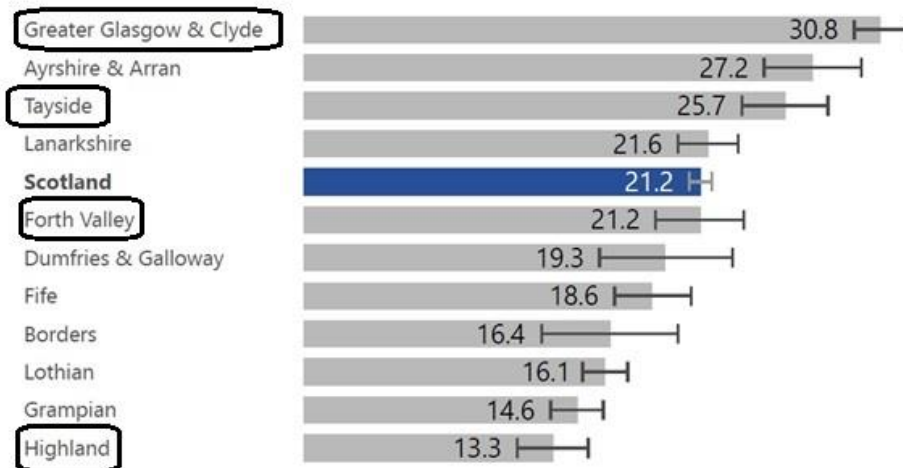
Another challenge has come from within the policing system itself. The Scottish Police Federation (SPF), a police staff association of 18,000 members (98% of all police officers in Scotland) (SPF website: <https://spf.org.uk/>) had previously expressed its opposition to police carriage of naloxone, although it accepted the decision to hold a pilot. On 5 March 2021, just as the pilot was beginning, the SPF issued a circular to its members (JCC Circular 6 of 2021) setting out its reasons for this opposition. These include arguments that there is no evidence base to support the benefit of naloxone administration by police officers, that it will result in additional workload pressures as other emergency services place greater reliance on the police, and that it will place officers 'in legal jeopardy' in the event of an adverse event or death. This circular was sent to all police officer members of the SPF, including those within the test bed areas. Police Scotland (Assistant Chief Constable Gary Ritchie) issued a formal response to this circular in a letter dated 23 April 2021 (Police Scotland, 2021), countering all of the SPF arguments and requesting a more constructive and involved approach to the pilot. The opposition of the SPF to the carriage of naloxone by police officers continued throughout the pilot.

1.6 Drug related deaths in the test bed areas

The divisions selected for the pilot are all in areas which have experienced high numbers of drug-related deaths. Although NHS board areas do not correspond directly to Division areas, latest figures suggest that police officers in these areas are likely to encounter suspected drug overdoses (See Figure 1.6).

Figure 1.6: Drug-related death rates by NHS board area

Drug-related death rates* by NHS Board area, 2016 to 2020



*Age-standardised rates per 100,000 population. Rates not shown for areas with fewer than 10 deaths

Source: National Records of Scotland, 2021 (pilot areas have been circled).

According to the latest National Records of Scotland report on drug-related deaths in 2020:

- Greater Glasgow and Clyde NHS Board area has seen the greatest increase in drug-related death rates over time, rising from a rate of 8.9 per 100,000 population in the period 2000-2004 to 30.8 per 100,000 population in 2016-2020. Tayside (rate up from 4.5 to 25.7) and Ayrshire and Arran (7.1 to 27.2) recorded the next biggest increases.
- Over time by local authority, the greatest increases in drug-related death rates have been in Dundee City, rising from 5.9 per 100,000 population in the period 2000-2004 to 43.1 per 100,000 population in 2016-2020. Inverclyde (rate up from 11.3 to 36.7) and Glasgow City (14.5 to 39.8) had the next biggest increases (National Records of Scotland, 2021a).

2 Research Aim and Objectives

2.1 Aim

The evaluation focused on the implementation and processes of the pilot to allow elements of learning and best practice to be identified and to inform any future national implementation of naloxone carriage/administration within Police Scotland.

2.2 Objectives

The evaluation assessed:

- Police officer attitudes towards drug use and people who use drugs;
- Police officer experiences of witnessing and responding to overdoses;
- Police officer understanding and awareness of drug overdose incidents and naloxone as a first aid intervention;
- Effectiveness of naloxone training (considering knowledge/skills of officers both before and after training);
- Experience of naloxone carriage/administration by officers;
- Barriers/facilitators (actual or perceived) impacting on police carriage/administration of naloxone;
- Perceptions from local communities, including recovery communities, people who use drugs, their families and/or relevant support services.

3 Research design

This research was a mixed-methods process evaluation of a pilot project for the carriage and administration of intranasal spray naloxone by Police Scotland officers in three pilot areas of Scotland. Research design included literature review, pre-training, post-training and follow-up questionnaires, semi-structured interviews, focus groups and collection of quantitative data regarding uptake and administration of naloxone and the number of overdoses encountered. The pilot period was between 1 March and 31 October 2021 and the evaluation was carried out between 1 March and 31 December 2021.

3.1 Permissions and Ethics

Permission to conduct this research was supplied by *Partnerships and Collaboration, Corporate Services Division* at Police Scotland.

Ethical approval was provided by Edinburgh Napier University's School of Health and Social Care Research and Integrity (SHSC Ethics) Committee. Where individuals from third sector organisations were interviewed, ethical permission was also supplied by their organisation.

All research data is managed and stored securely according to Edinburgh Napier University's Research Data Management Policy (ENU, 2015). All personal identifiable data has been anonymised in line with the Data Protection Act 2018 and the General Data Protection Regulation (EU) 2016/679 (GDPR).

3.2 Sampling and recruitment

A total of 808 police officers were involved in the naloxone pilot from across all pilot areas. This was 12% more than the planned 720 officers in the original pilot areas. All of these officers were invited

to complete three online surveys (pre-training, post-training, 3 months post training). Forty-one of the trained officers were recruited for interviews or focus groups. This included a focus group in each of the three original pilot areas, a focus group with trainers, and interviews with participants in each of the original test bed areas and additional areas which were added during the course of the pilot: Caithness N Division, Falkirk and Glasgow custody teams and Stirling community policing teams. Including these areas allowed the surplus supply of naloxone to be distributed. It was also felt that including these areas gave a broader perspective on policing in different types of areas (rural) and different type of policing (custody and community).

Nineteen people with *lived experience of opioid use* (LEOU), family members of people with LEOU, and staff with experience of supporting people with LEOU use were recruited for interviews. Eight strategic senior stakeholders were also recruited for interviews.

Qualitative inclusion criteria

- *Police officers:* All who had received naloxone training in the pilot areas.
- *People with LEOU:* Current or former problematic opioid use (problematic use as self-defined by participants); over 18 years of age; live in Scotland.
- *Family members of people with LEOU:* Have had family members who used opioids problematically in the past; over 18 years of age; live in Scotland.
- *Staff with experience of supporting people with LEOU:* Work in a specialist third sector service that supports people with LEOU; work in Scotland.
- *Strategic senior stakeholders:* Involved in high level policy and decision-making concerning naloxone delivery.

Qualitative exclusion criteria

- *Police officers:* Had not received naloxone training in the pilot areas.
- *People with LEOU:* lack of mental or cognitive capacity; more than 5 years in recovery; are under 18 years of age; do not live in Scotland.
- *Family members of people with LEOU:* Do not have family members who have used opioids problematically in the past; have family members who *currently* use opioids problematically; are under 18 years of age; do not live in Scotland.
- *Staff with experience of supporting people with LEOU:* Do not work in a specialist third sector service that supports people with LEOU; do not work in Scotland.
- *Strategic senior stakeholders:* Not involved in high level policy and decision-making concerning naloxone delivery.

Recruitment procedure

Police officers: A research invitation notice was supplied by the research team to the Police Scotland Naloxone Delivery Team, who then distributed it to the officers involved in the pilot through email or intranet. The notice included a hyperlink that took them to a dedicated online platform (*'Novi Survey'*) where they were able to read the project information sheet, privacy notice and consent form. They had the option to contact a member of the research team to ask any questions about the project. Once digital consent had been given by each officer, access was provided to complete pre-training questionnaires via another link. At the end of training and at three-month follow-up, they were invited to complete repeat questionnaires through the same process.

The information sheet included a second *Novi Survey* link which allowed officers to consent to further contact from the study team to participate in an interview and/or focus group. This link was also made available at the end of the pre-training questionnaires. Those who consented to contact from the research team for the interviews/focus groups were contacted by a researcher by telephone or email. At no time was personal identifiable information associated with questionnaire data collected via *Novi Survey*.

Community participants: A project invitation notice was supplied to relevant organisations and networks. The notice included a link to *Novi Survey* where they were able to read the project information sheet, privacy notice and consent form, tailored specifically for their use. Those interested in participating had the option to contact a member of the research team to ask any questions about the project. Potential participants supplied their name and phone number via *Novi Survey* and were then contacted by a researcher.

Strategic senior stakeholders: Invitation emails were sent directly to these individuals and included the information sheet, privacy notice and consent form.

3.3 Data collection

Outcomes

Quantitative: The primary outcome was change in police officer attitudes measured at pre-training, post-training and follow-up (using the Opioid Overdose Attitudes Scale (OOAS)) (Williams et al., 2013). Secondary outcomes were change in police officer knowledge on opioid overdose (using the Opioid Overdose Knowledge Scale (OOKS)) (ibid.), and the Naloxone-Related Risk Compensation Beliefs Scale (NaRRC-B) (Winograd 2020).

Qualitative: Interviews and focus group data aimed to ascertain barriers and facilitators to carrying naloxone and explore experiences of officer-reported overdose events requiring naloxone administration. Information from people working in the third sector, people with lived experience of opioid use and their families or friends was gathered to explore acceptability and experiences from community perspectives. Data from strategic senior stakeholders provided perspective at policy level.

Quantitative research: Questionnaires

Questionnaires gathered anonymised demographic data, including age, gender, length of service, test area, and rank, supplemented by three validated tools to complete at each stage. The standardised, validated scales have been designed to measure attitudes towards and knowledge of opioid overdose and naloxone administration (White et al., 2021; Williams et al., 2013; Winograd et al., 2020). These scales were designed for naloxone administered by injection and were adapted by the project team for intranasal naloxone. Additional information on the process and impact of the training was gathered as part of the survey after completion of training, with specific focus on what worked best, what did not, and why.

At follow-up, the three standardised questionnaires were supplemented by a tailored questionnaire that gathered quantitative data on the uptake and administration of naloxone and the number of overdoses encountered, along with relevant questions on impact and sustainability of the pilot training intervention. Questionnaires were distributed and completed online via *Novi Survey*. Statistical data collected by the Scottish Ambulance Service and Police Scotland on drug related overdoses and deaths was also collated and analysed for the evaluation.

Qualitative research: Semi-structured interviews and focus groups

Police officers from each of the test bed areas and Caithness were invited to participate in either focus groups or one-to-one semi-structured interviews. This allowed the research team to gather police officers' views on and attitudes towards people who use drugs and the carriage and administration of naloxone by police officers.

One-to-one interviews were also conducted with community participants and strategic senior stakeholders including:

- *People with lived experience of opioid use (LEOU)*
- *Family members of people with LEOU*
- *Staff with experience of supporting people with LEOU*
- *Strategic senior stakeholders*

These interviews allowed the research team to ascertain the views of people in the community with insight into the issues around problematic opioid use, overdoses and drug-related deaths. They also gave insight into how the pilot might impact community relations between police and people who use drugs. Interviews with strategic senior stakeholders provided perspectives into the delivery and emerging outcomes of the pilot. Interviews and focus groups were conducted in person or remotely using teleconferencing software.

Training observation

Two members of the research team attended one of the naloxone training sessions in Glasgow to observe. This provided a general impression of the process and content of the training. Attending further training sessions was not possible due to Scottish Government COVID-19 pandemic social restriction regulations and related restrictions on conducting research implemented by Edinburgh Napier University.

3.4 Data analysis

Quantitative data (questionnaires) were analysed using descriptive statistics to summarise questionnaire data on demographics, attitudes and knowledge of naloxone and impact of the training, including repeated measures analysis where relevant (unique identifier data permitting). All quantitative analysis was conducted using RStudio Team (2020) R4.1. Qualitative data (interview and focus group data) were transcribed by a secure transcription service contracted by Edinburgh Napier University. Transcripts were anonymised, coded and analysed thematically (Braun & Clarke 2008), supported by NVIVO software. Themes were identified in relation to the research objectives. Sub-themes were sorted and organised under key themes. All data were cross-checked and analysed by at least two members of the research team (ES, PH, IH, JM), before the whole research team worked together to consolidate the findings. This process facilitated high quality analysis of the research data.

4 Findings

4.1 Characteristics of the naloxone pilot

4.1.1 Training numbers and uptake of naloxone

A total of 808 police officers took part in the naloxone training between 1 March and 31 October 2021 (Table 4.1.1). The 808 officers trained represents a 12% increase of the workforce in original pilot areas (720). Approximately 87% of the workforce were trained within the final pilot areas.

Table 4.1.1: Police Officers trained, uptake of naloxone and administration incidents

Division / Area	Total workforce	Officers trained	Uptake of naloxone kits	% uptake	Administration incidents
G - Glasgow	350	304	247	81%	18
D- Dundee	300	279	253	91%	24
C - Falkirk	200	163	94	58%	3
C – Stirling community policing	14	14	14	100%	3
R - Falkirk custody	35	20	20	100%	1
N - Caithness	30	28	28	100%	2
Total	929	808	656	81%	51

4.1.2 Incidents of naloxone administration

There were a total of 51 recorded naloxone administration incidents by police officers during the pilot period (1 March-31 October 2021). Police records indicate that all the recipients of naloxone administration by police survived these overdose events and no adverse effects were reported. There may have been other unrecorded incidents after October as there was no formal requirement to document administrations once the pilot was completed.

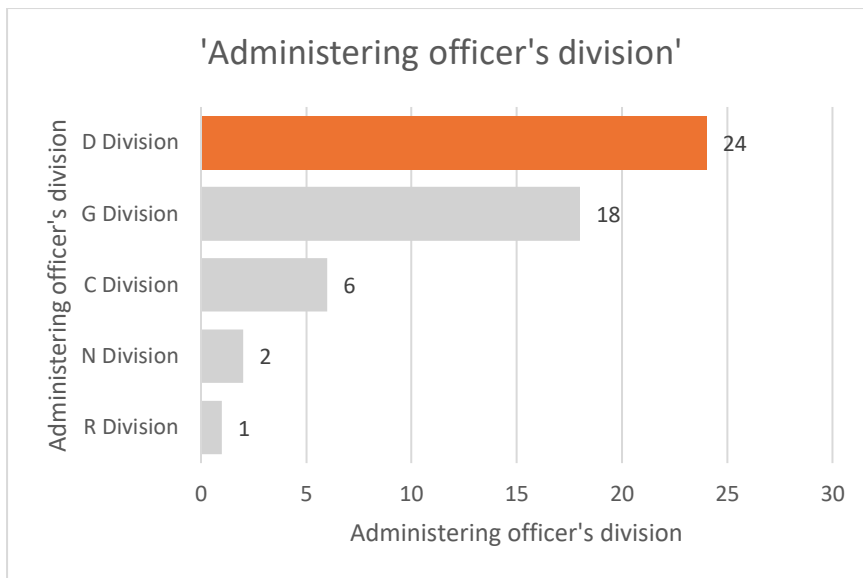
It is important to note that training took place over a period of months (March-October 2021)², with divisions being trained at different times and at different rates. Therefore, this was an evolving response and case administration data is illustrative only and not a formal outcome of the study.

Incident Divisions

Most of the administrations were carried out by officers in D Division, Dundee (24). The second highest number of administration incidents was by officers in G Division, Glasgow (18). All of these happened in Glasgow specifically, apart from one in Lanarkshire. There were six incidents in C Division, three of which were in Falkirk and three in Stirling. There were two incidents in N Division, Caithness and one in R Division, Falkirk Custody. This information is illustrated in Table 4.1.2a.

² The majority of officers were trained between March and July but some were trained until the end of October 2021.

Table 4.1.2a: Administering officer's division



Incident contexts

Each of the incidents happened under one of four circumstances: a response to an emergency call (26), attending a general incident (11), on general duty (9) or being flagged down by a member of the public (5).

The majority of incidents occurred in public spaces (i.e., on the street) (27) or in a private residence (12), a communal space (e.g., on a bus, in a doorway) (9), in a police vehicle (1), a police office (1), or in custody (1). More specifically, some of these incidents involved persons becoming unconscious in police custody, persons consuming drugs during siege/search incidents and deliberate overdose by persons who were reported as missing and at risk of suicide.

Incident responses and ongoing care

A total of 86 doses (1.8 mgs per dose) of naloxone were administered intranasally to 51 individuals who were assessed as being at risk of overdose. Individuals received on average between one and two doses (1.7).

Following the administration of naloxone 23 officers applied first aid techniques including putting the person in the recovery position (19) or applying CPR (cardiopulmonary resuscitation) (3). In one case off-duty medical personnel secured the person's airway prior to Scottish Ambulance Service (SAS) attendance. In the 28 remaining cases, applying other first aid techniques was not necessary as the person regained consciousness immediately or the SAS attended.

According to police records, 13 recipients were observed regaining consciousness, two assessed as being stable and two remained drowsy. One recipient responded aggressively and was restrained. After police officers administered naloxone, SAS attended 45 incidents; 41 were taken to hospital, while four refused further treatment, left the scene or were left in care of third party. In the other six cases, recipients refused further treatment (4) or were conveyed to hospital by police officers (2) (see Table 4.1.2b).

Table 4.1.2b: Ongoing care

Ongoing care	Number
SAS attended, taken to hospital by SAS	41
SAS attended, refused further treatment, left scene or in care of third party.	4
Refused further treatment, left scene	4
Police officers conveyed subject to hospital	2
Total	51

Method of call and SAS response

Twenty-five of the incidents were recorded as police control calls and 20 were 999/bureau calls. Police were already on the scene in six cases.

Calls were categorised by the SAS control room according to the Scottish Ambulance Service's *Clinical Response Model* (CRM) (Scottish Ambulance Service 2021, see Appendix A). The CRM categorises call according to a colour code which ranges from purple (for the most critically ill patients), through red and amber to yellow (lowest need of a life-saving intervention). Table 4.1.2c indicates how the incidents were categorised.

Table 4.1.2c: Incident categorisation and SAS response times

Category	Number
Purple	4
Red	40
Amber	1
Yellow	6
Total	51

Response times averaged 9.5 minutes with a range from 1 minute to 32.4 minutes (standard deviation 7 minutes). SAS data confirmed that all recipients arrived at hospital in a stable condition.

4.2 Naloxone training

4.2.1 Format and content

The naloxone training was conducted in person in Police Scotland offices around Glasgow, Dundee, Falkirk, Stirling and Caithness. The training was compulsory for officers in the test bed areas. The decision whether to carry naloxone following training was voluntary. The rationale for this was to identify stigmas and other barriers that would need to be addressed to support carriage and to involve officers more fully in the change processes.

The Assistant Chief Constable (ACC) for Partnership, Prevention and Community Wellbeing attended the majority of training sessions. The rationale for the presence of the ACC was to show commitment to the project because the voluntary nature of the pilot was unusual within Police Scotland with some officers suggesting that the voluntary nature indicated a lack of support from the force executive. Advocating for the pilot was believed to be particularly important given the opposition from the SPF.

Sessions were scheduled for two hours and were conducted under COVID-19 pandemic social distancing restrictions. Training was led by a team of police trainers which included a sergeant, a

constable and inspectors. The core training team was supplemented by a range of experts which included medical and legal professionals including representatives from NHS Scotland, the Scottish Drugs Forum (SDF) the Police Investigations & Review Commissioner (PIRC) and the Scottish Ambulance Service (SAS). The exact team varied from session to session depending on staff availability.

The training material consisted of a Microsoft Powerpoint presentation and a series of videos. The aim and learning outcomes of the training as set out in the presentation were stated as follows:

Aim:

To understand and demonstrate the administration of naloxone (Nyxoid) to a casualty suffering from an opioid-related drug overdose.

Learning Outcomes:

- Identify a potential opioid-related drug overdose
- Administer naloxone (Nyxoid) to a subject
- Deliver Basic Life Support to a subject
- Explain the operational procedures and processes for the storage and carriage of naloxone, along with the actions to be taken if used.

The presentation covered the following main topics:

- An overview of the naloxone pilot
- The Police and Fire Reform (Scotland) Act 2012
- Scotland's drug related deaths
- How opioid-related overdose leads to death
- Overdose signs and symptoms
- Basic first aid
- Naloxone/Nyxoid and how it works
- Administration of naloxone
- Post-administration considerations
- Operational actions and processes

In the early sessions, the training began with a question and answer session. This was subsequently moved to the end of the presentation as it was felt that most questions were addressed during the presentation. In the majority of cases this was conducted with the support with a medical or legal expert (as indicated above). In early sessions videos were shown to complement the Powerpoint. Due to the time devoted to discussion, these were not always shown during the training. Instead, they were made available on a dedicated police intranet site. The content of the videos consisted of:

- The Chief Constable introducing the pilot
- Police officers who had used naloxone prior to the pilot with a positive result.
- Canadian police officers talking about their naloxone project
- Someone with lived experience who had overdosed and survived due to naloxone and went on to rebuild her life.
- Someone who had lost her son to overdose who has been advocating for wider availability of naloxone and for police to have it made available.

At the conclusion of each session all officers were reminded that their participation in the pilot was voluntary. Those who volunteered to take part were given a personal issue pouch containing two intranasal naloxone (Nyxoid) packs. The ACC left the training before this point in order not to put pressure on officers given the voluntary nature the uptake of kits. Other members of the police training team remained in the training venue at the end of training. They did not take a formal record of who took the kits but the number of kits remaining after trainees had left was recorded.

4.2.2 Views of police officers on the training from the training questionnaire

A total of 141³ police officers responded to the survey questions on the training. The majority of respondents found the training relevant (71%), the trainers to be knowledgeable (83%) and relatable (73%), they believed that relevant topics were covered (79%), their questions were addressed (72%) and would recommend the training to others (62%) (see Table 4.2.2). On average, 73% of officers responded positively to the training questions.

Table 4.2.2a: Police officer responses to training questions

TRAINING QUESTIONS	Sum of 'Quite a lot' and 'A great deal'	'A little'	'Not at all'
Was the training relevant to your role?	71%	31%	5%
Were the training facilitators knowledgeable?	83%	16%	1%
Did the training facilitators relate to the group effectively?	73%	22%	4%
Did the training cover the topics it needed to cover?	79%	16%	4%
To what extent were questions arising fully addressed during the training session?	72%	23%	5%
Would you recommend this training to others?	62%	30%	8%
Total average	73%	23%	5%

While the majority had a positive view of the training, views were mixed on some issues. Thirty-six per cent felt that the training had little or no relevance to their role, and 38% were hesitant to recommend the training to others (see Appendix B for more detail).

Some police officers provided narrative data within the training questionnaire. Table 4.2.2a states the narrative questions and indicates the number of responses to each question. Sixty percent of those who completed the survey provided positive comments while 23% provided negative comments. Of those who provided a narrative comment, 72% were positive and 28% were negative. The majority of responses indicated that no change was required to the training with 32% making suggestions for improvement. The responses to this part of the survey suggest that, overall, the training was well received.

³ This was 98% of those who completed the post-training survey, n=144.

Table 4.2.2b: Number of responses to narrative training questions

Narrative training questions	Number of responses n=141 (%)
'What aspect of the training was the most helpful?'	85 (60%) (positive comments)
'Were there any negative consequences for you of this training?'	33 (23%) (negative comments)
'What changes would you make to improve the training?'	45 (32%)

Table 4.2.2c gives an indication of positive and negative comments by area. Given the different number of officers trained in each area, there did not appear to be a notable difference between areas in terms of the number of positive and negative comments.

Table 4.2.2c: Number of positive and negative responses to narrative training questions by area

Question	Glasgow N= 39	Dundee N=44	Falkirk N=32	Other area N=10	Area not stated N=16
'What aspect of the training was the most helpful?'	23	26	21	6	9
'Were there any negative consequences for you of this training?'	12	8	5	2	6

The following outline summarises key themes and some pertinent comments that emerged from the narrative training questions.

What aspect of the training was the most helpful?

- The input of experts (i.e., medical, ambulance service, PIRC, SDF).
- Authenticity of operational officers and medical professionals working together to provide the training.
- Information about the drug crisis, drug overdose, the effects of naloxone and how to administer it.
- Providing reassurance about the safety of naloxone.
- Providing reassurance that there would be no risk of liability if there were any adverse affects following the administration of naloxone.
- The trainers were knowledgeable and confident, approachable creating a relaxed environment.
- The 'question and answer' and discussion sessions allowed questions to be answered and officers to be put at ease.

Were there any negative consequences for you of this training?

- The disruption of 'political' debate between the Scottish Police Federation (SPF) and Police Scotland senior officers. This included suggestions of:
 - SPF representatives disrupting the training and putting pressure on colleagues not to take or administer naloxone.
 - Senior officers belittling SPF views.
 - Feeling conflicted by the two opposing strong stances.
- Lack of trust in both the SPF and Police Scotland leadership.

- Feeling uncomfortable or pressurised to take/not take naloxone due to the presence of senior leadership or SPF representatives.
- Feeling like the training was a 'guilt trip' and that they might be stigmatised for not carrying naloxone.
- Some officers stated that they came to the training having already decided not to take naloxone based on their support for the SPF position.
- Concerns about the impact of officers carrying naloxone on ambulance waiting times.
- Concerns about administering medication as a non-medically trained professional.
- Concerns about the impact on police workload.
- Views that administering naloxone encourages drug use or facilitates criminality.
- Views that the training was too long or not practical enough.
- Not enough time to watch the videos.

What changes would you make to improve the training?

- Removing senior leadership and media from training.
- Having an SPF representative present to provide the SPF's position. In contrast there were officers who stated the SPF should not be present.
- Better understanding of procedure and responsibility if person refuses or runs away post administration.
- Have more medical experts delivering the training.
- Opportunity to see naloxone administration and reversal of overdose in action (e.g. in a video)
- Make training voluntary / cancel the training.
- Leave questions to the end of the session.
- Include more practical elements to the training (e.g. How to identify overdose, practicing administration).
- Include information on other initiatives that address problem drug use.
- Remove the 'guilt trip'.

While there were some suggestions for improving the training, its format and content were well received overall. The main practical obstacle seemed to be the debate between Police Scotland leadership and the SPF. Other objections were less about the training, and more about general concerns about the initiative: concerns about the medicalisation of the police role, taking on the role of the SAS, increased workload, fear about the safety of naloxone and the threat of prosecution. These themes are reflected further in the views of police officers from interviews and focus groups.

4.2.3 Views of police officers on the training from interviews and focus groups

Police officers were also asked for their views on the training in interviews and focus groups. Most officers said that the presentation, duration and content of training was generally good. Themes included:

Presence of medical experts

Most training sessions included a medical expert to explain and answer questions on clinical issues. All police officers who expressed a view on this matter found this helpful and welcomed the presence of a medical expert.

'I don't know if it was a doctor or a nurse that came from university. She was really, really good and she fielded all the questions and it gave me a lot more confidence in

carrying it and using it.’ [PC12]⁴

‘I think bringing the doctor onboard to give us an input from an actual medical professional was really well done.’ [PC17]

‘I think the most powerful part of the presentations to the officers were the drugs working nurses who made it very clear, people are taking this home every day, people’s grannies are doing it, people’s children can administer it and we are giving it to all the housing officers. They all sat up and they were like, oh, right.’ [PC04]

Presence of legal experts and senior management

In interviews and focus groups, a majority of police officers felt that the presence of senior management and legal experts was unusual, unnecessary and in some cases counterproductive as, while indicating management support for the pilot, it was perceived by some as putting pressure on officers for what was intended to be a voluntary decision.

‘I’ve never been to a training course with an ACC, superintendent, four sergeants, two inspectors and it felt as if, what are you trying to sell me here? Now, I think a wee bit different as I’ve said before than some of my peers, but a lot of the other ones were like, you know, this is a bit suspicious. It seems like senior management team are ganging up to force an agenda when there really isn’t an agenda.’ [FG1]

‘Lots of nice bosses telling you this is an absolutely great thing, you’re like do you want to come and join us for a day then and see if it is such a great thing?’ [FG2]

‘I thought it was quite funny how they had somebody like a PIRC representative and an ACC, like someone so high up, to come and speak to us all about it and say how, you know, you’re not going to get in trouble. I would have just listened to the presentation and known that I wasn’t going to be in trouble...I didn’t think it was necessary. It was nice to see them, but I didn’t think it was necessary.’ [PC11]

‘[The presence of senior management at training] I think it’s down to the Federation, but I think it’s also just down to our bosses. You know, they need to step back and not be so heavy handed with these things, just let the normal training teams deliver the training. Because when you put someone of an ACC’s rank in a room with a bunch of PCs, you know, it’s pretty hostile.’ [PC13]

For some officers however, the presence of senior management and a legal expert was reassuring:

‘I want to know that if I carry this and I use this that I’m legally covered. The Federation had pretty much said they weren’t covering us. But when we were there, there was obviously a video from the Chief Constable and he pretty much said that we will legally cover you should something happen. And for me that was enough.’ [PC05]

‘I think it was the ACC that was doing our meeting, kind of, made it quite clear that we would be supported.’ [PC09]

‘People might find that reassuring, the head of PIRC coming in and telling us it’s okay.’

⁴ Quotes from police officers are either labelled as ‘PC’ for those interviewed, or ‘FG’ for those involved in a focus group.

Other people might think, you know, this is really serious because we've got the head of PIRC in the room...I thought it showed the commitment...I looked at it and said this is a commitment from the organisation...they don't usually come to these things, you know, so we're rolling out the big guns.' [PC18]

Scottish Police Federation presence at training

SPF representatives were invited to attend training sessions, and many did so. However, as the SPF circular opposing the pilot had immediately preceded the start of training, some stakeholders (officers, trainers and experts) felt that this created a negative atmosphere from the beginning.

Arguments between SPF representatives and trainers at several sessions were frustrating for some police officers who said they were left not knowing who to trust or believe. For example:

'I don't know if you've been made aware there was a back and forth between one of the police instructors and the Federation. The Fed said, no, I don't carry it and then the police instructor saying, why not? For me it just felt like bickering back and forth and it was, like, at the end of the day you're running this pilot scheme to see if it works, so why can't we just be on board with it and see if it works?' [PC06]

'The Federation officers who came to the naloxone training in X, I couldn't get them to articulate a rationale for the position. So, I find that really difficult, you know. I need, well explain to me and I will consider it and respond...the officers who came...they really, I don't think they knew why they were opposing it quite frankly.' [PC04]

'There was a Federation rep there. But they were just basically highlighting to say that there were certain things that weren't put in writing that they had asked to be put in writing. And they were still waiting for that to be clarified and it still hadn't been through. So there was a bit of to-ing and fro-ing.' [PC07]

Questions

Officers expressed different views on how questions were addressed in the training, with some saying they were answered clearly and well, and others feeling that the presence of senior officers impeded open discussion. According to police officers the most commonly raised questions were in relation to ambulance response times and legal concerns (addressed in section 4.3.2.3).

'The day we got our training or input, which could have been on Moodle, any time you tried to express anything negative, it was shot down, it wasn't heard.' [FG2]

'They answered all the questions everyone had and stuff like that and they seemed to know their stuff.' [FG3]

'There was one of the senior officers that was giving the talk had, sort of, said at the end, are there any questions, and, as you can imagine, all the questions were about the liability of Police Scotland and what support we were going to receive and things like that, and answered the question quite, yes, aggressively. The next thing it was, any more questions and everyone was like, absolutely not. But I can understand, his frustrations were coming from a place of how many times can I say this, you're not going to be held liable and trying to get it across to people who were not going to have their opinions changed.' [PC09]

Impact of training on decision to carry naloxone

The majority of officers interviewed said the training was reassuring and convinced them to carry naloxone. A few had gone into training already supportive of the pilot. Some officers said they remained undecided after training (although they may have taken a naloxone pack at the end of the session) and were persuaded by speaking to colleagues to either carry naloxone, or in a few cases, return naloxone packs. Several of the officers who chose not to carry naloxone chose not to do so because of their support for the SPF's position and reports of ambulance delay.

'The actual course, the information in that course was spot on and engaging as well, and it made me feel confident enough to take it and if I'd need to use it.' [PC06]

'I went to the training, like I said, very against it, was not planning on taking it at all and the training really changed my opinion. The fact that it was a nasal spray was, you know, one of the biggest issues, in my opinion, was that there's not much you can do wrong in that sense. You're not having to get a vein or anything like that. I think it was the ACC that was doing our meeting, kind of, made it quite clear that we would be supported. I think, ultimately, it comes down to, we are here to preserve life first and foremost, and at the end of the day if what you're trying to do is preserve that person's life, then you're justified because you're doing something to try and prevent that person from dying. So I did change my opinion and I took the naloxone and I think it was three days before I used it, two days, three days, something like that.' [PC09]

'After the training I felt much better about it and was quite happy to give it.' [FG1]

'I came into the training deciding I wasn't taking it and left the training deciding I wasn't taking it. I probably wasn't very open minded.' [PC17]

4.2.3 Views of senior strategic stakeholders and trainers on the training

Eight senior stakeholders were interviewed individually for this evaluation. All but one of these participants agreed to be identifiable. All work in different aspects of policing, healthcare and/or drug policy (Table 4.2.3). All were familiar with naloxone and some were involved in the design and implementation of the pilot, including the training. Police officers involved in the training were interviewed in a further focus group or individually for their perspective.

Table 4.2.3 Senior strategic stakeholders

ORGANISATION
Scottish Police Federation (SPF)
Scottish Drugs Forum (SDF)
NHS Scotland (NHS 1)
Police Investigations & Review Commissioner (PIRC)
Police Scotland (PS)
Scottish Ambulance Service (SAS)
Scottish Recovery Consortium (SRC)
NHS Scotland (NHS 2)

Almost all trainers and senior stakeholders who participated in the training thought the training had gone well, while recognising divisional differences. According to them, officers in Dundee and Caithness had seemed most receptive to the training, while those in Falkirk seemed least. This

impression was based on interest shown during the training and take up of packs at the end of sessions.

Presence of medical experts

Trainers found it helpful to have a medical expert on hand to provide authoritative answers to questions. Medical experts themselves found that sometimes their answers did not seem to be accepted.

'There was people that were concerned about, would there be side effects, what happens if I administer this to someone that hasn't taken an opioid overdose, what if it's a pregnant female, someone with a heart condition, diabetes, epileptic, there was all these questions, and there was a doctor that sat there and said, I've administered this on newborn babies. Now, that just quelled that whole argument of discussion right away, that was every question answered, I think, in that one statement' [FG4]

'Having people with a medical background, a proven medical background, people from medical backgrounds that the police officers knew. Like we did have a doctor from accident and emergency, we had all these people from the Scottish Ambulance Service and the Drug Deaths Taskforce and things like that, all speaking very, very well.' [PC03]

'My role there was obviously to support the police to answer any specific clinical questions around naloxone: what the drug is; how it operates; what its legal position is; basically, any non-police questions...I'm immersed in naloxone, but the questions were all the same..... Although you can provide all the reassurance and all the experience and the previous experience of naloxone, you just felt that it didn't matter what you say, they didn't really take that on board.' [NHS1]

Presence of legal experts and senior management

For senior stakeholders and trainers (with the exception of the SPF representative) the presence of senior management and PIRC's Head of Investigations at training sessions was a very positive factor. It was intended to show management support for the pilot and allay any legal concerns of officers.

'Ahead of the training there had been really heavy communication from the Scottish Police Federation...really, really heavy engagement, a lot of circulars that came out that caused a lot of concern and angst amongst officers, and I think that when a national association does that, it's only right that the senior management of Police Scotland are seen to say, absolutely not, to bunk the rumours, you do have our support. [FG4]

'We've had certainly some of the senior management from our team and also ACC Ritchie had been attending the vast majority of the sessions, I felt that was an incredible help. I know there was some feedback that thought maybe so many of the senior management might have been a bit overbearing and I'm sure that's maybe reflected but it was certainly said to me. But the vast majority of people that I spoke to after the training had said it was really good to see and hear it from the horse's mouth, so to speak.' [PC03]

'I think it was really helpful, and it showed that there was a clear commitment from them, and that they would be supported locally. Never at any point during the training

did I feel that anyone in senior management was trying to coerce anybody, or, you know, trying to force people to do something that they weren't comfortable to do. That was not the point of their presence in that training. It was to show that managerial support, because there had been so much negativity around the project. So police staff need to know that they are supported to take part in it, and that was all that they were there for. It wasn't to say, you have to take naloxone – it was really just to say, we will respect your decision either way, but we want you to know that we are supportive of this, going forward, and as an organisation, we support this. So I think it was really helpful to have them do that, and at no time did I see it as any negativity at all.' [SDF]

Scottish Police Federation presence at training

Trainers noted divisional differences as SPF representatives in some areas were quiet attendees, subsequently taking naloxone packs, while in other divisions they were considered to be a disruptive influence, possibly putting undue influence on officers not to carry naloxone.

'Some Federation reps had turned up and said, listen, my job is to sit here, I can speak to people, quite respectful, and didn't particularly interrupt at all, and other Federation reps...this is my feeling anyway is that they used it to push their own circular and their own personal views on it. Some Federation reps were quite supportive for it, I've got to say, probably one or two, they probably wouldn't come out publicly and say that, but they actually were. So if a Federation rep was there, we found certainly some of them, I found quite obstructive to the training. I can't comment if that was deliberate or not, but it was certainly obstructive.' [PC03]

'I've seen a Fed rep...push the naloxone across the table at the end of the session, stand up in front of the two officers and say, are you actually going to carry that, are you? And we've even had them in [the city] telling the officers that officers have already been charged with assault by using naloxone on somebody. Completely made up. Or the officers are administering naloxone and not knowing what to do with the person, so they're spending the night driving around with the naloxone person in the back of the car all night. Again completely made up.' [FG4]

'The Federation rep in the room waited until everybody left, then came back in and chose to carry himself, and I was in that input, and that was quite a telling moment, that I think organisationally there was a push, but within the organisation then, people had their own opinions and my opinion is that them choosing to carry was the right one, but probably they were being coerced by their own organisation to push an agenda, and didn't feel as though they had that free will to have that free choice themselves.' [FG4]

'I think it was problematic that the Federation circular had gone out beforehand to create a lot of negative vibes around the training before it even started, so you did feel like you were, sort of, fire-fighting at the very start of the training, and just, you know, against quite a difficult and stand-offish audience, to begin with. So that was not helpful.' [SDF]

'We had some of our representatives latterly were allowed into training...not particularly comfortable meetings. They were just...it was very much let's have a pile-on on the Federation, and try and pull their stuff apart, which they couldn't.' [SPF]

Questions

Senior stakeholders agreed with police officers that ambulance response times and concerns about legal liability were the questions raised most frequently. These were all issues which had been part of the SPF circular of 5 March 2021.

'Some people came in, they were worried about PIRC investigations in crime, they were worried about getting themselves out of trouble if the worst was to happen, if they administered naloxone, that person died. Other people weren't into injections, so once they found it was a nasal spray, minds were changed. Some people didn't like the Scottish Ambulance Service's response times.' [FG4]

'Sometimes we were out on that floor for over an hour getting absolutely peppered with questions about what if this happens, what if that happens. And it was quite intense.' [FG4]

'It was so obvious that all the questions were about the Police Federation stance, that was pretty much what anyone wanted to know about. Some of them knew about naloxone, some of them were all for saving people but they were just really, really concerned about the Federation's stance.' [PC03]

'The question you can't answer is...so why are the Federation opposed to it? And that's the question you just can't answer.' [NHS1]

Impact of training on decision to carry naloxone

Senior stakeholders and trainers agreed that the majority of police officers attended training initially either undecided or opposed to naloxone. However, they believed that as the sessions progressed, many officers changed their minds. Other officers, although perhaps still with some reservations, agreed to carry naloxone because they accepted the evidence base around naloxone as explained in the training.

'In one of the sessions I had two people walk in and go, listen, I'm not taking this. I know I've got to come and do my training, so just do what you've got to do and just let me out, and I'm like, alright. But within ten to 15 minutes, the people had turned round to me and go, listen, alright, I've changed my mind, you've convinced me otherwise. You know, they go, I don't understand why people are putting up so much of a fight as this, you know, so I could...honestly, you could probably go on all day with the amount of people that come up to us at the end of a session.' [FG4]

'Midway through the session you can almost hear a change in some of the body languages, and then people start asking questions, and you can see a few heads nod, and then by the end of the session, you've got people coming up to you going, do you know what, I came in here and I wasn't going to take this, but now I am going to take this.' [FG4]

'I'd say even the people that were maybe a bit sceptical were all quite respectful with it. For instance, if they didn't agree with where it was going, everyone was quite respectful for it and gave reasons for it and said I've not made my mind up. Some of those people have since come back over the coming months and said I've changed my mind. I met one the other week and they said I've seen it working now, I've done a little bit of my own research and I've done a complete U-turn on it. So I said that's fantastic, great, I'll meet

with you and I can supply you the kit because you've already been trained.' [PC03]

4.3 The views of Police officers on the pilot

4.3.1 Survey findings

Survey data and general approach

A total of 346 police officers participated in the survey questionnaires, representing 43% of the total number of 808 officers invited to participate⁵. The survey data were collected at three time-points: 'pre-training'; 'post-training'; and 'follow up' (three months after the training was completed)⁶. The number of officers who were eligible to complete the survey was initially 720 and this was increased to 808 as the training was expanded to other areas². Although 346 officers participated in the surveys, only thirty-four officers completed both the pre-training and post-training survey; eleven officers completed the pre-training and follow up survey; and six officers completed all three stages of the survey (see table 4.3.1a).

Table 4.3.1a: Survey responses

	Responses	Repeated measures (Stages 1-2)	Repeated measures (Stages 1-3)
Pre-training	167 (23% of 720)	34 (5% of 720)	6 (1% of 720)
Post-training	144 (20% of 720)		
Follow up	88 (11% of 808)		
Total	346 (43% of 808)		

Not all participants completed the survey at every time-point and therefore the response rate at each time-point ranged from 23%, 20% to 11% of the maximum number of participants possible (see Table 4.3.1a). In addition, one area (Falkirk) did not provide any participant data at the baseline stage. Therefore, the findings presented in this chapter are indicative of a minority of all possible officers and may not be generalisable to the population of all police officers who undertook the training. Accordingly, the data analysis approach was conservative, focussed on estimating differences between time-points of all data collected from officers who participated at each time-point, and checking that the direction of effect was in the expected direction. That is, if the training had an impact in favour of naloxone carriage, the corresponding outcome data would change accordingly. As the data were not generalisable to all police officers, inferential statistical tests to estimate whether differences between timepoints were statistically significant were not routinely done.

Demographics

In the pre-training survey, two thirds (67%) of officers identified as male and 45% belonged to the age category 25-34 years, 17% higher than the next highest category aged 35-44, (see Table 4.3.1b). This was reflected in the length of service, with the most common response (42%) less than 5 years, and most (80%) reporting as Constables. Officers responding mainly worked in Dundee (45%) or Glasgow (49%). Just over half (51%) had a higher education compared with 42% with further/ secondary education, and most (92%) identified as white ethnicity.

⁵ Survey dates, logins and excluded entries are indicated in Appendix C.

⁶ Officers were asked to complete the pre-training survey in advance of the training. They were asked to complete the post-training survey within two weeks of completing their training.

At post-training, demographic categories changed in the following ways: those identified as female increased from 30% to 37%; age distribution was slightly older, with relatively fewer officers aged 25-34 (39% compared with 45% pre-training) and more officers aged 35 and over (53% compared with 47%); this age difference was reflected with more officers having relatively longer years of service and slightly more officers being at the rank of Inspector or above. Ethnicity remained similar, and those with higher education decreased (46% from 51% pre-training).

The biggest difference was the geographical areas officers worked – officers from Falkirk did not participate in the pre-training survey but formed 26% of the respondents in the post-training survey. Similar sorts of small differences again appeared between post-training and final survey data collection points.

Table 4.3.1b: Demographics of survey sample

	Pre-training		Post-training		Follow up	
	Max N=167 ¹	(%)	Max N=144	(%)	Max N=88	(%)
Gender						
Male	111	67%	77	59%	58	66%
Female	49	30%	49	37%	27	31%
Other/ prefer not to say	5	3%	5	4%	3	3%
Age						
< 25	6	4%	7	5%	6	7%
25 - 34	75	45%	51	39%	34	39%
35 - 44	46	28%	42	32%	34	39%
45 +	31	19%	27	21%	11	13%
Other/ prefer not to say	8	5%	3	2%	3	3%
Location						
Dundee	74	45%	44	35%	35	41%
Falkirk	0	0%	32	26%	14	16%
Glasgow	80	49%	39	31%	27	32%
Other/ prefer not to say	9	6%	10	8%	9	11%
Education						
Secondary	34	20%	37	28%	17	19%
Further	37	22%	27	21%	13	15%
Higher	85	51%	60	46%	54	61%
Other/ prefer not to say	11	7%	6	5%	4	5%
Ethnicity						
White Scottish/ British/ Irish/ European	153	92%	125	96%	82	93%
Asian/ Black/ Mixed or Other/ Prefer not to say	14	8%	5	4%	6	7%
Length of service						
Service: < 5	70	42%	42	33%	31	35%
Service: 6 - 10	29	17%	23	18%	13	15%
Service: 11 - 15	28	17%	31	24%	16	18%
Service: 16 - 20	17	10%	19	15%	16	18%
Service: 21 +	14	8%	12	9%	11	13%
Other/ prefer not to say	9	5%	2	2%	1	1%
Rank						
Constable or special constable ²	133	80%	101	77%	63	72%
Sergeant	20	12%	17	13%	13	15%
Inspector or higher rank	7	4%	10	8%	6	7%
Other/ prefer not to say	7	4%	3	2%	6	7%

Footnotes: 1) % each variable is computed using the sub-total of completed responses for that variable, e.g., 167 completed the pre-training survey but 165 provided data for gender. 2) Fewer than five special constables responded and these were incorporated into one category to avoid disclosure due to sparse data.

Police officers' knowledge and attitudes

Police officers' knowledge of and attitude towards opioid overdose, naloxone and its administration were assessed using the *Opioid Overdose Knowledge Scale* (OOKS) and the *Opioid Overdoes Attitudes Scale* (Williams et al., 2013) (Appendices D and E). The original scales have been tested for internal reliability and content reliability⁷.

The OOKS items used a 'yes/no or don't know'; or 'true/false or don't know' response format. The OOKS total score ranged from 0-45. It was scored using four domains:

- Risk: risk factors for an overdose (9 items, score range 0-9)
- Signs: signs of an overdose (10 items, score range 0-10)
- Action: actions to be taken in an overdose (11 items, score range 0-11)
- Naloxone Use: naloxone effects, administration, and aftercare procedures (15 items, score range 0-15).

All pre-training scores were in the upper quartile of the maximum scores possible, except for the 'Naloxone use' domain (66% of the maximum possible score) (Table 4.3.1c). Therefore, officers were already knowledgeable on the domains 'Action', 'Risk', 'Signs', scoring 88%, 80% and 75% of the maximum possible scores. This was reflected in the pre-training total OOKS score of 35.8 and 80% of the maximum score of 45.

If the training had a positive impact on any domain, survey scores would increase in line with improvement. The training was observed post-training to impact on Officers' knowledge (OOKS) scores in the following ways:

- In every domain training led to an improvement, with an increase in all scores.
- The total score increased from 35.8 on average to 38.6 post-training, an increase of 6% of the maximum total score of 45.
- The biggest increases were observed in 'Signs' and 'Naloxone Use';
 - 'Signs' increased from 7.5 to 8.9, a 14% increase of the maximum domain score.
 - 'Use' increased from 9.9 to 11.2, a 9% increase of the maximum domain score.

The follow-up data demonstrated a persistent training effect, with all scores at follow-up greater than those observed pre-training. There were small reductions in scores observed for domain and total scores at follow-up compared with post-training, including 4% and 3% reductions of maximum possible domain scores for 'Signs' and 'Naloxone use', respectively. This may imply that although there is a sustainable impact of the training in the longer term, the officers may benefit from a periodic refresher course particularly around recognising overdose signs and use of naloxone. However, given that 88 and 144 officers completed the 'follow-up' and 'post-training' surveys, respectively, and the variability in demographic data observed between these groups (table 4.3.1c), conclusions are limited given the uncertainty in the comparisons between these two time-points.

⁷ As OOKS was originally designed for intravenous administration of naloxone, the questionnaire was adapted for intranasal administration. This did not affect the overall score (0-45) or the domain scores. OOAS was also adapted. Two questions were removed: one did not apply to police officers and one only applied to injecting naloxone. The adaptation changed the total score to 26-130 (28-140 originally) and the concern score to 6-30 (8-40 originally). The adapted versions have not been test for reliability.

Table 4.3.1c: Opioid Overdose Knowledge Scale (OOKS) scoring (independent observations)

Item	Pre-training (n=164) Mean (sd)	Post-training (n=144) Mean (sd)	Follow up (n=88) Mean (sd)	Change score Pre-training to post- training	Change score Pre-training to follow up	Change score Post- training to follow up
Risk	7.2 (2.1)	7.5 (1.7)	7.3 (2.2)	0.3	0.1	-0.2
Signs	7.5 (1.8)	8.9 (1.2)	8.5 (1.4)	1.4	1.0	-0.4
Action	9.7 (1.1)	9.9 (1.0)	9.9 (0.8)	0.2	0.2	0
Use	9.9 (2.0)	11.2 (1.5)	10.7 (1.6)	1.3	0.8	-0.5
Total	35.8 (4.7)	38.6 (3.2)	37.6 (3.9)	2.8	1.8	-1.0

The *Opioid Overdose Attitudes Scale* (OOAS) is a questionnaire designed to capture information on attitudes to opioid overdoses, with items grouped in three sub-scales relating to overdose management: competence (to respond to an overdose), concerns (about intervening) and readiness (willingness to intervene). The OOAS is scored using a 5-point Likert scale: completely disagree (1 point), disagree (2 points), unsure (3 points), agree (4 points) and completely agree (5 points). The OOAS was adapted from the original tool, with two questions removed: one that did not apply to police officers, and one that applied to injection of naloxone only. Therefore, the adapted OOAS had a total mean score and three sub-scale mean scores, with items and score ranges as follows:

- Competence (10 items; 10-50)
- Concerns (6 items; 6-30)
- Readiness (10 items; 10-50)
- Total score (26 items; 26-130)

The means and standard deviations for the sub-scales and total score were estimated for each time point (see table 4.3.1d). The change scores were computed between time points to assess the direction of effect was in favour of the training. An increase in mean change scores represented an improvement in attitudes and indicated the Naloxone training had a positive effect. The training was observed to have an impact in the following ways:

- From pre-training to post-training there was an increase in the OOAS mean scores across all sub-scale and total mean scores, strongly suggesting the training had a positive overall effect on police officers' attitudes to opioid overdoses.
- The OOAS total mean score improved from 87.8 pre-training to 101.6 post-training, a change score of 13.8 and an increase of 11% of the maximum score possible of 130.
- The OOAS 'competence' sub-scale showed the most improvement, followed by 'concerns' and 'readiness':
 - Competence (officers' self-assessed competence to respond to an overdose) had a mean change in score of 8.1 from pre-training to post-training, an increase of 16% of the maximum possible score of 50.
 - Concerns (about intervening) had a mean change score of 3.8, an increase of 13% of the maximum score of 30.
 - Readiness (willingness to intervene) had a mean change score of 2.0, an increase of 4% of the maximum score of 50.
- The scores from pre-training to follow up also demonstrated improvements across all sub-scales and total score, indicative of a sustainable effect of the training:

- The total score improved from 87.8 at pre-training to 100.7 at follow-up, an increase of 12.9, and 10% of the maximum possible score of 50, and consistent with sustainable effect of training.
- The mean change scores at follow-up all showed negligible reductions from post-training across the sub-scales of competence, concerns, and readiness (range 0% to -1% of the maximum possible scores).

Table 4.3.1d: Opioid Overdose Attitudes Scale (OOAS) scoring (independent observations)

Category	Pre-training Mean (SD) N=161	Post-training Mean (SD) N=143	Follow up Mean (SD) N=86	Change score Pre-training to post-training	Change score Pre-training to follow-up	Change score post-training to follow-up
Competence (to respond to an overdose)	31.2 (5.6)	39.3 (4.4)	39.4 (5.7)	8.1	8.2	-1.3
Concerns (about intervening)	17.8 (4.7)	21.6 (4.8)	21.4 (5.1)	3.8	3.6	-0.1
Readiness (willingness to intervene)	38.7 (4.2)	40.7 (4.6)	40.0 (5.8)	2.0	1.3	-1.1
Total score	87.8 (11.2)	101.6 (11.2)	100.7 (13.3)	13.8	12.9	-2.6

As a check, the data were re-analysed but restricted to only the 34 officers who completed pre-training and post training - this form of 'repeated measures' analysis is inherently more powerful as the same people completed the survey, and thereby controls for other factors (table 4.3.1d). NB This 'repeated measures' analysis was not routinely undertaken across the whole survey, as 34 is only 5% of the overall total of 720 who could have completed both pre-training and post-training measures.

In this group of 34 officers, their overall mean total OOAS score increased from pre-training at 92.4 to 103.3 at post-training, i.e., a change score of 11.0 (table 4.3.1e); this was statistically significant ($t=7.957$; $p<.0001$) and indicative of a positive training effect. This change score of 11.0 was less than the equivalent change score of 13.8 from the analysis of all officers (table 4.3.1d). In addition:

- The three OOAS sub-scales all had a net positive change score after training, again with competence having the most improvement, followed by concerns and readiness, consistent with the analysis of all officers' data, and consistent with a positive effect of training.
- The 'Competence' change score was 8.1, followed by 2.0 for 'Concerns' and 0.9 for 'Readiness'. Therefore, the ranking of the order of change score magnitude was the same in this 'repeated measures' group of 34 officers. In addition, the change score was identical to the analysis for all officers on the 'Competence' sub-scale, slightly less change on the 'Concerns' sub-scale and about the same for the 'Readiness' sub-scale.

The 'repeated measures' analysis demonstrated that the findings in the sub-set of 34 officers who completed both pre-training and post-training surveys reported statistically significantly increased total scores on the OOAS. The score changes were broadly comparable to the data from all officers who responded, in that the order and magnitude of change observed was consistent. The similar

findings from the two sets of analysis (all officers vs 34 officers) provide confidence to the findings of the impact of training on *all officers*' (all tables marked 'independent observations' e.g., table 4.3.1d).

Table 4.3.1e: Opioid Overdose Attitudes (OOAS) Scale scoring (repeated measures)

Category	Pre-training Mean (SD)	Post-training Mean (SD)	Change in mean score
Competence	32.6 (5.6)	40.7 (5.0)	8.1
Concerns	19.5 (4.9)	21.5 (4.8)	2.0
Readiness	40.2 (3.8)	41.1 (5.3)	0.9
Total score	92.4 (11.6)	103.3 (13.0)	11.0*

**statistically significant (t=-7.957; degrees of freedom=33; p<0.0001)*

Police officers' risk compensation beliefs

The Naloxone-Related Risk Compensation Beliefs (NaRRC-B) scale was adopted from Winograd et al. (2020) to understand the effect of the naloxone training on risk compensation beliefs. According to Winograd et al. (2020) risk compensation 'reflects a cognitive behavioural process by which people may engage in riskier behaviours when they perceive their environment to have greater safety measures in place to protect them from adverse consequences' (p. 245). NaRRC-B consists of five questions scored on a scale of 1-5 (strongly disagree to strongly agree). The total score ranges from 5-25. Higher scores on the NaRRC-B scale indicate greater endorsement of naloxone-related risk compensation beliefs, i.e. if the training has had its desired effect the post-training mean scores should be lower than those at pre-training. Table 4.3.1f presents the scoring for NaRRC-B based on independent observations from all officers who responded. The total score of the five questions observed pre-training was 13.6, post-training at 12.8 and follow-up at 13.4, corresponding to very small decreases from pre-training of -0.78 and -0.2, respectively. Although these were in the expected direction in favour of training, both these and the five individual sub-scale questions revealed very small differences between them from pre-training to post-training and follow-up.

Given the OOKS and the OOAS (above) demonstrated improvements between the survey stages, this suggests that either additional training needs around some of the questions in the NaRRC-B may be needed or that relatively speaking, the NaRRC-B tool lacked sensitivity to detect differences in the responses of this population of police officers.

Table 4.3.1f: Naloxone-Related Risk Compensation Beliefs (NaRRC-B) scale (independent observations)⁸

	Pre-training (n=158)	Post-training (n=142)	Follow up (n=83)	Pre to post-training	Pre-training to follow up
	Mean (sd)	Mean (sd)	Mean (sd)	Mean difference	Mean difference
1. opioid/heroin users will use more opioids/heroin if they know they have access to naloxone	3.0 (1.0)	2.9 (1.0)	2.9 (1.1)	-0.10	-0.08
2. opioid/heroin users will be less likely to seek out treatment if they have access to naloxone	3.0 (0.8)	2.9 (1.0)	2.8 (1.1)	-0.11	-0.22
3. providing naloxone to overdose victims sends the message that I am condoning opioid misuse	2.4 (0.9)	2.3 (1.0)	2.5 (1.2)	-0.09	0.14
4. there should be a limit on the number of times one person receives naloxone to reverse an overdose (refers to multiple overdose events, do not count repeated dose administrations during one overdose event)	2.4 (0.9)	2.1 (0.9)	2.4 (1.1)	-0.25	0.01
5. naloxone is enabling for drug users (i.e., it enables them to continue or increase drug use when they otherwise might not)	2.8 (0.9)	2.6 (1.0)	2.8 (1.1)	-0.21	-0.03
Total	13.6 (3.4)	12.8 (4.1)	13.4 (4.9)	-0.78	-0.20

Police officers' role and naloxone

The survey included several questions that addressed police officers' views of naloxone in relation to their role. These were adapted from White et al. (2021) and supplemented by additional questions (Table 4.3.1g). Officers were asked to rate statements from strongly disagree, disagree, unsure, agree, strongly agree. The answers were aggregated as follows: disagree = (strongly disagree + disagree); agree or unsure = (unsure + agree + strongly agree). Unsure was incorporated into the category of agree/ unsure as the overriding interest was a change in the proportion of officers who disagreed with the statements.

Findings are summarised as follows:

- 'All Police Scotland officers should carry naloxone': 15% officers agreed Police Scotland officers should carry naloxone before the training, compared with 40% who agreed after training (i.e. 2.7 times as many). Conversely, more than half (55%) of officers pre-training disagreed they should carry naloxone, compared with fewer than one third (32%) of officers who disagreed after training. Remaining officers at both time-points said they were unsure.

⁸ The number of completed questionnaires (n) is different to the overall survey numbers as not all officers completed this part of the survey.

- 'I look forward to/am glad to be carrying naloxone': At pre-training 19% officers agreed with this, compared with 46% after training (i.e. more than double or 2.4 times as many officers agreed).
- 'I am better able to perform my job with naloxone': 16% agreed pre-training compared with 37% post-training, (more than double (2.3 times) the number of officers who agreed).
- 'Police should have the ability to respond to overdose if they are on the scene before other emergency services': fewer than half (44%) agreed with this before training compared with the majority (70%) who agreed after training.
- 'I am worried about accidental exposure to opioids/heroin': a third (32%) agreed with this pre-training compared with a minority (14%) afterwards.
- The statement 'ambulance services should ideally be the first to respond to overdose', stayed the same with only 7% and 8% of officers disagreeing at pre- and post-training, respectively. However, this was not expected to change as the training was not intended to change this view.

Between pre-training and follow up there was an improvement across all items (table 4.3.1h), consistent with findings noted above and indicative of the training having its intended impact on officers' willingness to carry and use naloxone.

Table 4.3.1g: Police officer role questions (independent observations) ⁹

Item	Pre-training Disagree N=157 (%)	Pre-training Agree / unsure N=157 (%)	Post-training Disagree N=142 (%)	Post-training Agree/ unsure N=142 (%)	Change pre to post Agree/ unsure (%)	Follow up Training Disagree N=83 (%)	Follow up Training Agree/ unsure N=83 (%)	Change pre to final Agree/ unsure (%)
All Police Scotland officers should carry naloxone	87 (55%)	70 (45%)	46 (32%)	96 (68%)	23%	33 (40%)	50 (60%)	15%
I look forward to/am glad to be carrying naloxone	70 (45%)	85 (55%)	43 (30%)	99 (70%)	15%	24 (29%)	59 (71%)	16%
I am better able to perform my job with naloxone	73 (46%)	84 (54%)	54 (38%)	88 (62%)	6%	40 (36%)	53 (64%)	10%
I am worried about accidental exposure to opioids/heroin	81 (52%)	76 (48%)	111 (78%)	31 (22%)	-26%	66 (80%)	17 (20%)	-28%
Ambulance services should ideally be the first to respond to overdose	11 (7%)	146 (93%)	12 (8%)	130 (92%)	-1%	4 (5%)	79 (95%)	2%
Police should have the ability to respond to overdose if they are on the scene before other emergency services	34 (22%)	123 (78%)	17 (12%)	125 (88%)	10%	11 (13%)	72 (87%)	9%

Police officers' attitudes towards people with drug dependence

Seven further survey questions addressed police officers' attitudes towards drug dependence and reflect officers' 'sympathy and care'. These were adopted from Bryan, McGregor and Belcher's (2016) Scottish Government report on 'Public attitudes towards people with drug dependence and people in recovery'. The full tables are in Appendix F.

⁹ Police officer role questions are ranked strongly disagree (=1) to strongly agree (=5). An increase in percentage from pre-training to post-training represents a change in favour of a positive training impact on carriage of Naloxone. The exception to this is the question about being worried about accidental exposure to opioids/ heroin, where a % reduction is in favour of a positive impact of training. White et al.(2021) used a 4-point Likert scale in their version.

Key messages pre-training

This set of seven questions contained five positively framed questions and two negatively framed questions. Questions responded to with 'agree strongly or slightly' or 'disagree strongly or slightly' were combined into categories of 'agree' or 'disagree', respectively. The main findings from the pre-training survey were that (see Table 4.3.1h):

- The statement officers expressed most agreement over was 'People who become dependent on drugs are basically just bad people', with 88% disagreeing with this statement and only 2% agreeing.
- In order of strength of agreement, officers expressed agreement with the statements 'Virtually anyone can become dependent on drugs', with 75% agreeing and 12% disagreeing; 'People with drug dependence don't deserve our sympathy', with 68% disagreeing and 7% agreeing; and 'Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement', with 63% agreeing and 18% disagreeing.
- Statements with just over half of officers in agreement were 'Drug dependence is an illness like any other long-term chronic health problem' (55% agreed) and 'We have a responsibility to provide the best possible care for people with drug dependence' (51%).
- The statement with the least amount of agreement was 'We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society', with only 33% in agreement; however, 30% disagreed and 29% 'neither agreed or disagreed', reflecting a lack of certainty on average in answering this question (this was the joint highest 'unsure' response).
- The other statement with the joint highest response 'neither agree or disagree' of 29% was for 'We have a responsibility to provide the best possible care for people with drug dependence'.

Table 4.3.1h. Bryan et al. pre-training questions

Pre-training (N=157)	Agree	Neither agree or disagree	Disagree	Don't know / Prefer not to say	Sub-total
Drug dependence is an illness like any other long-term chronic health problem.	55%	16%	26%	3%	100%
People who become dependent on drugs are basically just bad people.	2%	8%	88%	3%	100%
Virtually anyone can become dependent on drugs.	75%	10%	12%	3%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	63%	14%	18%	4%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	33%	29%	30%	7%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	51%	29%	17%	3%	100%
People with drug dependence don't deserve our sympathy.	7%	20%	68%	6%	100%

Key messages pre to post

If the training had an impact in the expected direction, it was predicted that more agreement and less disagreement would occur with the positively framed questions, vice versa for the two negatively

framed questions, and reduced uncertainty with fewer responses in the 'neither agree or disagree' category. The following main findings were observed (see Table 4.3.1i):

- The biggest impact from the training was in answer to 'We have a responsibility to provide the best possible care for people with drug dependence' with an increase of 16% of officers in agreement, bringing the total of officers in agreement to two-thirds of officers (67%) from just over half (51%) before training. This was the question with the greatest reduction in uncertainty and 10% fewer responses to 'neither agree or disagree'.
- The next biggest differences observed were for 'Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement', with 7% increase in agreement and 7% fewer who disagreed. This was followed by 'We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society', with an 9% increase in those agreeing and 3% decrease in those disagreeing.
- The remaining questions had small differences towards agreement/ disagreement (5% change or less in either category) and these questions tended to be ones for which agreement was strong before training.

Table 4.3.1i Bryan et al. post-training questions

Post-training (N=142)	Agree	Neither agree or disagree	Disagree	Don't know / Prefer not to say	sub-total
Drug dependence is an illness like any other long-term chronic health problem.	57%	7%	31%	4%	100%
People who become dependent on drugs are basically just bad people.	4%	10%	86%	1%	100%
Virtually anyone can become dependent on drugs.	73%	10%	16%	1%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	70%	11%	11%	8%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	42%	29%	27%	3%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	67%	19%	12%	1%	100%
People with drug dependence don't deserve our sympathy.	6%	20%	71%	2%	100%

Key messages post to final (see Table 4.3.1j):

- At the final survey, there was further improvement observed for 'Drug dependence is an illness like any other long-term chronic health problem' (reduction of 7% who disagreed; this was down from 31% post-training to 24% at final).
- There were negligible differences on a further two questions 'Virtually anyone can become dependent on drugs' and 'We have a responsibility to provide the best possible care for people with drug dependence', implying a sustainability of the impact of training on these three statements (including the most improved).
The remaining four questions were answered relatively more negatively compared with the comparable post-training responses. The question with the most negative shift in response was 'People who become dependent on drugs are basically just bad people' with 12% more respondents disagreeing with this statement.

Table 4.3.1j. Bryan et al. follow up questions

Final (N=80)	Agree	Neither agree or disagree	Disagree	Don't know / Prefer not to say	sub-total
Drug dependence is an illness like any other long-term chronic health problem.	59%	14%	24%	4%	100%
People who become dependent on drugs are basically just bad people.	4%	15%	74%	8%	100%
Virtually anyone can become dependent on drugs.	72%	11%	14%	4%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	63%	19%	13%	6%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	39%	21%	36%	4%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	70%	11%	17%	3%	100%
People with drug dependence don't deserve our sympathy.	13%	19%	67%	3%	100%

As is often the case with follow-up surveys, the impact of training diminishes over time and the findings here were mixed, pointing to increased need for training in some areas. However, it should be noted that the number of officers who responded at the final survey were much reduced over the post-training survey (80 compared with 142, respectively) and that only a handful repeated the survey, meaning the variability associated with the findings will also be attributable to the different population of officers answering the final survey and their motivations for doing so.

Police carriage and administration of naloxone

In the follow-up stage of the survey there were four additional question that related to police officers' experiences of administering naloxone, seeing naloxone administered and their general opinion of the carriage and administration of naloxone by police officers. The scores for these questions are presented in table 4.3.9.

Of the 88 officers who completed the final survey, two thirds (67%, n=59) reported carrying naloxone on duty, 22% had personal experience of administering naloxone, and 22% had observed someone (either health professionals or colleagues) administering naloxone. Of the 88 officers who completed this final survey, 67% agreed (combined category of agreed or strongly agreed) that they supported police officers carrying and administering naloxone in Scotland.

Of the 59 officers in this final survey who carried naloxone on duty, 19 officers i.e., nearly one third (32%) administered naloxone, 12 officers i.e., one fifth (20%) observed naloxone being administered by someone else, and three officers (5%) reported both administering and observing its use. Naloxone was administered to 23 people by 59 officers who carried it; 19 officers administered naloxone once and four officers administered it twice.

The 59 officers who carried naloxone reported working in Glasgow (25%), Dundee (46%), Falkirk (14%), and 15% from other areas; had a gender split of 34% female to 63% male (compared with 31% and 66%, respectively, of 88 officers who completed the survey); 54% were aged 35+ (compared with 51% of 88 officers who completed the survey).

Most of the 29 officers who did not carry naloxone were constables (93%); this was a much higher proportion than the group of 59 officers who carried naloxone (61% constables). Constables represented 72% of all 88 participants in this final survey.

Table 4.3.1k: Police carriage and administration of Naloxone – Follow-up survey only

Question	Responses	N (%)
Do you or have you carried naloxone on duty?	I currently carry naloxone on duty	59 (67%)
	I do not carry naloxone on duty	28 (32%)
	I previously carried naloxone but returned it	0 (0%)
	I previously carried naloxone and hope to get more	0 (0%)
	Prefer not to say	1 (1%)
	Sub-total	88 (100%)
Do you have experience of administering naloxone on duty, or have observed someone administering it?*	I have administered naloxone	19 (22%)
	I have observed someone administering naloxone	19 (22%)
	I have neither administered naloxone nor observed someone administering it	52 (59%)
	Prefer not to say	1 (1%)
If you have administered naloxone on duty, how many people have you administered it to?	23 people (In this sub-sample of 59 officers who carried naloxone on duty, 19 officers administered naloxone once and 4 officers administered it twice)	
I support police officers carrying and administering naloxone in Scotland	Strongly disagree	19 (22%)
	Disagree	5 (6%)
	Agree	32 (36%)
	Strongly agree	27 (31%)
	Prefer not to say	5 (6%)
	Sub-total	88 (100%) #

*Does not add to 100% as officers could respond in more than one category; #does not add exactly to 100% due to round-up

4.3.2 Findings from interviews and focus groups

A total of 41 police officers were interviewed either individually (18) or in one of four focus groups (23). Demographics are presented in Table 4.3.2 below. Officers were based in the original testbed areas (Glasgow, n=14; Dundee, n=9; and Falkirk, n=10), the additional pilot areas (Caithness, n=3) and five officers were 'Scotland wide' (n=5), i.e. involved in nationwide operations, rather than being attached to any particular division. Five participants were involved in the development and/or implementation of the training programme and the other 36 participants had all undergone the naloxone training.

The majority of participants in both focus groups and individual interviews (34 of 41) had experience of attending an overdose. Of these, 26 had observed naloxone being administered (in most cases by ambulance personnel) and 13 had personal experience of administering naloxone themselves. A range of ages and ranks were represented, although the majority of participants were front line response constables (29 of 41).

Table 4.3.2: Demographics of police officers interviewed individually or in focus groups

	TOTAL
TOTAL PARTICIPANTS	41
MALE	30
FEMALE	11
AGE: under 25	2
25-34	19
35-44	13
45-54	7
WORKED FOR PS:	17
1-5 years	
6-10 years	8
11-15 years	5
16-20 years	4
21-25 years	3
Over 26 years	4
RANK:	29
Constable	
Sergeant	8
Inspector	1
Chief inspector or higher rank	3
Experience of attending an overdose	34
Experience of seeing naloxone administered	26
Experience of administering naloxone	13

A majority of officers who participated in an interview or focus group were supportive of the pilot and its roll out across Scotland (n=29), seven officers took a neutral stance while five did not support the pilot. The five officers who opposed the pilot were all based in Falkirk.

A number of officers expressed views on the voluntary nature of the pilot. Some believed that while naloxone training should be mandatory, the decision whether or not to carry naloxone should be voluntary. Others felt that giving officers a choice had unnecessarily complicated the pilot and created doubt (since in their view naloxone is a clearly beneficial first aid tool with no downsides). For these officers, if naloxone was to be rolled out nationwide, carriage should be mandatory since the decision whether an officer should administer naloxone will always be discretionary, as with any other first aid tool.

4.3.2.1 Experience of naloxone administration

Of 41 police officers interviewed individually or in focus groups, 26 had witnessed naloxone being administered, and 13 officers (from each of the three original pilot areas plus Caithness) had personal experience of administering naloxone during the pilot period.

Experiences of seeing naloxone administered by others

Police officers who had witnessed naloxone being administered, either by paramedics or by colleagues during the pilot, nearly all had positive experiences:

'I'd seen Naloxone being administered by paramedics, and it's amazing when you've actually seen if it you've actually seen it in person. They go from pretty much unconscious to completely awake. The downside to that sometimes is people get a bit angry with you because you've ruined their hit a lot of the time. It's pretty interesting to see actually. And it's thinking about in the future being able to do that myself, not intravenously, thankfully, but through the nasal spray I'm quite happy.' [PC01]

'I've been to calls where we've turned up and the person actually appears that they've passed away but then the ambulance has turned up, administered Narcan and the person came round.' [PC02]

'Narcan. I've seen that used lots of times and it is really effective.' [PC05]

'We went to one incident where a chap had been slumped over on his sofa and he had obviously taken an overdose of something. A big guy. We brought him...he got naloxone administered to him and he came round. He started to then, sort of, suffer the ill effects, but we were able to bring him round again until the paramedics got there.' [PC13]

There was one negative report which, while recognising the life-saving ability of naloxone, seems to evidence stigma towards people who use drugs:

'The duty sergeant calls in, oh potential drugs death, I walk up along with two cops and there we are, there's this guy, he's been out the jail the day before and he looked dead....The ambulance arrived pretty quickly and I'm expecting them to call it, but obviously they do a bit of work and they cut his shirt and administered the Narcan. No effect, Narcan, no effect, Narcan, a bit of effect. And then he's gone from basically dead to alive like that, so the Narcan worked. And then I can only describe his behaviour as deplorable. He was abusive to us and horrible to the ambulance staff who had just saved his life, no gratitude whatsoever, going mental at them because they had ripped his shirt... once they did leave we were like that, that's who we're saving, somebody who's just so ungrateful and probably away to offend again, to get his next hit and then cause more misery because he's not a nice individual.' [PC15]

It is of note that the interviewee quoted above was the only officer who expressed concern about an aggressive response to naloxone administration. In interviews, while officers acknowledged that aggression was possible, none saw it as a barrier to naloxone administration, saying they deal with aggressive individuals on a daily basis and are trained to handle such situations appropriately.

Personal experience of administering naloxone (intranasal)

Officers who had personally administered naloxone had positive reports of the administration itself, including in cases where it later transpired that no opioid had been taken. For example, officers said it went smoothly and it was amazing to see how it worked

'Staff let us into the property, found the person then unconscious, all the attributes that would show that there was an overdose happening, although there was no opioids or anything or, you know, empty packs or anything around. It was just my decision that I would try to use it, no harm in trying, it wouldn't hurt them if, from my training, you know, I've got no issues, I've got no thoughts that it's going to come back to me. After the second dose, he came through.' [PC11]

'I asked for the ambulance to expedite and it was only after I requested that that I remembered, oh actually I have got naloxone in my back pocket. I've been carrying it for months and if I'm honest, I have never even looked at it since I got it the first time. I can't remember if I was leaning up against a wall, I got my instructions out, read it through first, squirted the first dose up the nose. I then waited, I think the form said

three minutes but I think I waited about five minutes. Then he was starting to come to slightly but only very slightly and then I have administered the second dose and he came to a lot better after that.' [PC12]

'We were actually en route to something else and we just saw this female out of it on the pavement just opposite a park. So we tried to get a response out of her, nothing. And then I was going to phone an ambulance and...don't worry, I'll go and get the naloxone, just try that just to see if it would work. And then we gave her...and I checked the response and she, kind of, went...and then the ambulance was there and they took over, and that was it. So it was actually quite smooth to be honest, my first experience, which was quite nice.' [FG1]

'He would have died. He wouldn't...by the time the ambulance came, it would have been CPR and if that worked...which statistically it's probably not...luckily I was there at that time and went through the door at that time, 'cause I don't how long he was lying there.' [FG1]

'There was an unconscious male outside one of the local supermarkets and they were looking for some assistance. The ambulance wasn't nearby so I went along to see if I could be of any assistance. It turned out I assessed the male and it appeared that he was under the influence of opioids so I phoned the ambulance to let them know that I was there and that I had naloxone and I was going to administer it. I administered one dose and he didn't really come round straight away so I was a bit sceptical as to if it would actually work or not, and after kind of ten minutes or so he came round. It was quite amazing to see actually how it worked.' [PC02]

'I was about to start CPR because I couldn't establish if he was breathing or not and at that point, because of the signs of it potentially being an opioid overdose, I gave him a shot of the naloxone. Now, I, at the time, timed it because I wanted to see how long it took for him to come round so that I knew when to give him potentially a second dose...Eyes in the back of his head, in my opinion, not breathing. Gave him the naloxone and he had a pulse, very weak, and within 43 seconds he was breathing and sitting up... he would have died right there, 100 per cent. He wasn't breathing. After I gave it, it was a good 12 minutes, maybe longer, before paramedics got to us because they are just so short-staffed.' [PC09]

'A member of the public flagged us down and said there was a male slumped near a car...We've tried to speak to the male and he was unconscious as such. So we dragged him up and sat him against a wall and it was immediately apparent that he had suffered an apparent opioid overdose. So straight away myself and my colleague were like obviously we had got naloxone so we went and got that out the van...I went and got that and then obviously we rang 999 and did the procedure with them. Administered the first one and nothing really much changed, and then administered the second one and then nothing really much changed. At the time we were on the phone to the ambulance service speaking to them and they gave...we basically went through like that. His breathing was very laboured and not in any sort of rhythm so the paramedic advised to start CPR but as soon as I've done the first compression on his chest he pretty much woke up and made some sort of noise, so I knew it wasn't that. I think that was obviously me pressing on his chest has woken him up. Then a couple of seconds later the ambulance turned up and he was assessed in the ambulance and started to gradually wake up and was subsequently taken to hospital by the ambulance.' [PC10]

'I have used it, and within five minutes of me using it, paramedics arrived and supported my decision to use it fully. Now, the naloxone didn't have an effect on that person, it turns

out, it was a medical matter, fuller medical matter, despite what the appearance of the flat suggested. But I was fully supported by ambulance in that, and at no point have I ever felt under pressure from anybody of having to justify why I used it. It was clear to me in the circumstances that there was a possibility that this unresponsive male was having an overdose, and that when I have used it and made the ambulance aware, I have certainly got the response time that was necessary.' [FG3]

While all officers who had administered naloxone remained supportive of it, several mentioned communication issues with ambulance services:

'We came across an unconscious male that was in the middle of X Street. We knew of him before so we did know that he was a drug user. So we decided that administering naloxone would be the best course of action...my neighbour phoned the ambulance. So the male's unconscious at this point and she said, does he have a cough? Don't know, he's unconscious. Has he been in contact with anyone with COVID in the last five days? Don't know, we just came across him. Well...I mean, are you even on duty? You'll need to contact the control room, we're taking nothing to do with it... I had explained that I was administering Narcan, I was a police officer, I was at where I was. And I was asked for the telephone number that I was phoning from, I said that I was a police officer, I can give...it was a new works mobile phone we've all been provided with and I don't know the number off by heart. I was told, give me your number. I'm sorry, I don't have that to hand, I have administered naloxone and I got hung up on. And it was an intentional hang up. I was told that we will terminate the call.' [FG1]

4.3.2.2 Positive officer perspectives towards the pilot

It was noted by many participants that police officers are frequently first responders to overdose incidents, either in response to emergency calls or being flagged down in the street by members of the public. As such, officers felt that it is appropriate that they should be able to provide emergency first aid, including naloxone, until ambulance support arrives.

'We are like first responders to mostly everything. If I'm there and I'm the first person and I have the opportunity to spray something up their nose to bring them back to life, I'll do that.' [PC11]

'I think we deal so frequently with drug users that it would probably be ridiculous of us not to carry naloxone. We carry all sorts of other first aid equipment...My town centre guys walk that town centre all day every day. If anyone's going to collapse in the town centre with an overdose they're probably going to be on scene before an ambulance. It makes sense to me that we carry it.' [PC17]

'It is a paramedic's job and it should be paramedics that are doing it but paramedics are under a lot of strain and a lot of pressure themselves and we are often the first on scene at calls. As police officers, I would say that we are first on the scene at most traumatic events that paramedics will attend, stabbings, murders, you know, rapes, all these different things and we are always first there. It's unusual that we're ever there second so why not have us trained in it if we're first responders?' [PC09]

A police officer's duty to preserve life is paramount and naloxone was seen by officers as an opportunity to be proactive in this. For many officers this duty and opportunity to save a life overcame any other reservations or concerns.

'At the end of the day the police are there to save people's lives, as strange as it sounds. So I'm not going to stand around and watch someone die.' [PC10]

'Our core duty is the preservation of life and keeping people safe. If the organisation says you're going to carry something to assist in the preservation of life, it's hard to argue against that.' [PC17]

'All the ifs, buts and maybes flying around about, about not being legally backed, it's kind of horrible when you know that you're standing there...and certainly in my case, that person's going to die. I know if I don't administer it, that's what's going to happen.' [FG1]

In the event that the ambulance service is unable to respond quickly, officers felt this increases the benefit of officers carrying naloxone as they can come to the aid of members of the public. Officers said that the pilot has added value in rural areas where ambulance response is particularly limited.

'It's a nightmare here sometimes to try and get an ambulance so if you can actually do something to help in the meantime other than just standing there helpless waiting for an ambulance you might make a difference to the person.' [PC02]

'The ambulance service at the minute, even back when we were taking the naloxone course, were stretched. You can't guarantee an ambulance immediately. So for me if I have the option to save someone's life I'm going to take the tool in the first instance that I can take it on the street and use it, and if I need to use it I'll use it, so that was it for me.' [PC06]

'Here in the Highlands and Islands the response time for both ourselves and the other emergency services can be quite vast...you just muck in and everybody does everything here, and it is accepted that an ambulance might take a long time because it is remote and rural, so you would do everything you could.' [PC04]

Officers stated that naloxone carriage and administration will save lives in individual cases (although empirical evidence is needed to show whether it will have any appreciable impact on national drug death figures).

'Naloxone certainly has an impact on drugs deaths. I mean the amount of people that it is administered to and lived to fight another day or take another drug or whatever they choose to do.' [PC04]

'Five administrations, we don't know if those persons would have died. Something in the region of 1300-1400 drugs deaths last year. See if you can knock ten, 20 of them off, right, it's still going to be a massively high number, but that's the kind of impact.' [FG1]

'The evidence is all the administrations, the amount of cops that are carrying it, using it and there have been cops that have actually used it multiple times now, so that's the type of things you're dealing with. So to me it's definitely been worthwhile, definitely saving lives, no matter what the Federation stance is.' [PC03]

Officers acknowledged that while naloxone may only be a short-term solution to drug

problems, it provides an opportunity to link people who use drugs into support services.

'Naloxone isn't going to cure anything, I don't think, from here to here, but it might be just the thing that keeps somebody alive and gives them an opportunity for somebody to intervene to stop them becoming another casualty next week.' [PC18]

'I think it buys us time. So instead of people dying, it buys us time and so then an ambulance can come. You know, people might try and take their own lives and at that point it gives them an opportunity to think twice if they recover, you know, and there's people that come to our attention for overdoses who we've never met before, and genuinely they've never had any help because nobody knew they even existed. In those cases, you can keep them going until the paramedics come and then people, like at the hospital, the psychiatrist, actually, can get involved because they can see that these people are in crisis. It buys people a second chance.' [PC13]

Officers said that naloxone being in the form of a nasal spray is a particular benefit as it is easier for officers to administer, with no risk of needlestick injury.

'I was sceptical when I was first told about it because I thought I was going to be getting the injection stuff, but when I found out that I'm not having to give an injection and it's just nasal, I'd got no issues and no negativity about it.' [PC11]

'Certainly with it being a nasal spray, it's easy to administer. If it was, like, trying to find an artery and inject it into someone, then it would be different 'cause then what happens if you inject it into the wrong place and something goes wrong. But it's easy to use. It's easy to carry and the assurances that you can't cause an overdose, you can't cause any harm with it. My personal opinion and I'll never force this on anyone else is, why not?' [FG1]

'The fact that it was a nasal spray was, you know, one of the biggest issues, in my opinion, was that there's not much you can do wrong in that sense. You're not having to get a vein or anything like that.' [PC09]

Some officers who had administered naloxone reported prompt ambulance response.

'When I have used it and made the ambulance aware, I have certainly got the response time that was necessary.' [FG3]

'Any kind of incidents where we've administered Naloxone the ambulances have been really quite prompt at coming.' [PC02]

Many officers were not worried about legal repercussions from administering naloxone in an emergency and believed that the legal concerns of other officers are unjustified.

'I find that a lot of the, sort of, younger in service cops haven't really heard of the phrase, acting in good faith. And, you know, that seems to be a thing that's been lost in the police, that you're never criticised if you do something for the right reasons, you're acting in good faith, and you're fine. To them they see it as a legal minefield...they're going to lose their job. Doesn't work like that.' [FG1]

'We have a big metal stick that we can use, and powder and guns and tasers and stuff

like that, but nobody has an issue with doing that. So why do we have an issue? The liability with that is a lot greater than sticking a spray up somebody's nose.' [PC08]

'If we've got the assurance there that, you know, you can't overdose on it, there's no lasting effects, and that we're not going to be held responsible for anyone if there are ill effects of it then that's good enough for me. I mean, they've given me a baton, and I'll justify hitting somebody with a baton, you know, and if I hit them the wrong way or at the wrong time or in the wrong place then I'll have to justify that. So as long as you used it in accordance with your training then I was quite happy with the assurances given by the chief.' [PC18]

'Obviously people are concerned that anything you do is going to get investigated but as I've said the Assistant Chief Constable said exactly the same thing that you're not going to get looked at. I think at the end of the day, you know, you try... And other things you do – if you use a baton, if you use a spray, you know, you could use anything and it's going to get looked into...At the end of the day you're trying to save someone's life...You're not doing anything dodgy, you're trying to save someone's life so at the end of the day nobody's going to criticise you.' [PC10]

Many officers showed compassion and concern for people with problematic drug use. Some talked of having been affected by problematic substance use personally, including through family and close friends.

'When you actually talk to these people they have went through maybe something bad in their life that has caused them to reflect on taking drugs...you end up getting to know certain people and then you understand what they have went through, even at a young age. Some people actually have jobs and all that and they all of a sudden they just turn to drugs. To be honest, it is a shame, certainly they are trying their best and they just fall back and take drugs again.' [PC07]

'These are people they come across every day. There is one chap in particular who they are really worried about because he is going to be their next drugs death and they say it like they actually care that he is going to be the next drugs death.' [PC04]

'When they die it has an impact on us. You know we dealt with these people. We deal with a lot of the...certainly the sergeants that have been here the longest, we deal with these people from when, you know, they're young teenagers and after 12 years you see them going on to be adults, and then to see them dead and have to deal with their death is traumatic. It's horrible. You miss them.' [PC13]

4.3.2.3 Perceived barriers to the pilot

Many officers stated that they have experienced ambulance delays and sometimes poor communication between ambulance call handlers and attending police officers, including a lack of awareness of the pilot from ambulance personnel. Some officers felt that the police service were being unfairly required to fill gaps in other emergency services.

There were also a number of broader contextual factors that had an impact on how police officers responded to the pilot. These are outlined in this section.

There was a perception among some participants that the Scottish Ambulance Service (SAS) is unable to meet promised response time targets, and there can be poor coordination or

communication between the SAS and the police. Many officers said this was a long-standing problem of insufficient ambulance resources, and that it increased police workload.

Despite some officers reporting prompt ambulance responses, many others mentioned ambulance delays as a longstanding problem, and also in specific reference to incidents during the pilot. This conflicts with the SAS reported ambulance response for case administrations during the pilot, as well as with official SAS policy.

Historic delays and poor communication: though not a focus of the evaluation some officers were keen to highlight problems they had experienced, prior to the pilot, with ambulance responses (prioritisation, waiting times, communication) to police calls more generally. Though couched as barriers, given concerns that ambulance response would not be swift enough, some of these highlight a need for police access to naloxone to reverse overdose whilst awaiting ambulance response.

'I think there is a lack of communication generally between ourselves and ambulance, and I think it does lead to us not being prioritised where we should be prioritised. We've had unconscious males lying in the street without an ambulance for, you know, an hour, but they're not responding to us. But they have signed up to this that if you are using naloxone, that they will provide that level of service, that they'll have people out to you.' [FG3]

'Nine times out of ten unless it's a, let's just call it a normal routine medical matter, the police will be called up here anyway. And if it is an overdose or it is something related to drugs, then we will get called. But as I said, the ambulance might be 40 minutes away, the Wick ambulance might have had to go and help with an RTC or a cardiac arrest in Thurso which is 20 miles away or beyond and if they're tied up and to get one released. So it's like I say, waiting times can be 40 minutes plus for an ambulance.' [PC08]

'Previous overdoses years ago you might be waiting like two hours and sometimes people would say, oh, like, we'll take the person ourselves to hospital and then you've obviously got to risk assess depending on the circumstances because then you don't want someone taking unwell while we're transporting them because you don't obviously have the same facilities an ambulance has to monitor them en route and things like that, to give them any treatment.' [PC02]

There were perceptions and experiences of delays, poor communication and lack of ambulance awareness of police carriage during the pilot:

'A colleague...phoned and he was told by them a waiting time of one to two hours, after being told that naloxone had been administered by us.' [FG1]

'We were told if we used naloxone we would be priority for the next ambulance and we would get within a four or five minute timeframe, and the [officers] that used it yesterday, the day before, waited 50 minutes for an ambulance, I think.' [FG2]

'My partner took the decision to use it, it didn't make a difference. I phoned the ambulance...I spoke to them on the phone, because we phoned them directly, and the lassie had no idea what I was talking about. What I was expecting from her and what they were expecting from me, nothing.' [FG3]

'I think every single time I've used it and the paramedics have turned up, they've not

known about it [police carriage of naloxone].’ [PC09]

While some officers considered that naloxone carriage would inevitably lead to greater reliance on the police by ambulance services, others said this was not necessarily a reason to oppose naloxone carriage, indeed it made it even more crucial.

‘The ambulance service at the minute, even back when we were taking the naloxone course, were stretched. You can’t guarantee an ambulance immediately. So for me if I have the option to save someone’s life I’m going to take the tool in the first instance that I can take it on the street and use it, and if I need to use it I’ll use it, so that was it for me.’ [PC06]

‘The difficulty is the fears that people have in relation to the ambulance service are legitimate fears, and I get that. All the stuff in the media just now about how short they are of technicians for driving ambulances, wait times at hospitals, are just going to be fuelling that fire. Because police officers who are already concerned about when they get stuck at a call, maybe seeing that on the news isn’t going to help. We do see it locally...I know exactly what situation they’re in and I fully sympathise with the job they’re trying to do. To me it’s probably all the more reason that we’ve got the capability that we’ve got because if we can be trained, we’re already at the call, to me it’s unacceptable that we don’t assist while we’re there. And, you know, you can’t just let somebody die because the Federation have told you not to carry naloxone.’ [PC17]

Officers who were concerned by opposition to the pilot from the SPF had a lack of trust that either the SPF or Police Scotland will support officers in the event of an investigation or legal claim following an administration of naloxone where the recipient comes to harm. This was in contrast to the officers above who did not believe there would be such consequences.

‘The biggest barrier for me at the very start was the Federation turned round and saying they don’t support it and all that, and they’re not going to be there.’ [FG1]

‘If I thought I was a wee bit more supported by my Federation about taking it, then, yes, that would maybe change my opinion.’ [PC14]

‘Do you believe the Federation or the police service? Personally, I believe none of them.’ [FG3]

‘I think basically police officers have zero confidence in the Federation or the organisation they work for as a whole to back them up if something like that was to happen.’ [PC12]

Some officers expressed concern about the perceived ‘ever-increasing’ medical role played by police officers, particularly in responding to mental health emergencies. It was felt by some that naloxone carriage would worsen this situation of perceived ‘mission creep’, further increasing police workload. This was in contrast to the officers above who said they were keen to do all they could to assist as they were often to first on scene.

‘I just think where does it stop? Do we then start carrying tourniquets and all that sort of stuff in case we...because...we do go to violent incidents, we go to stabbings and things

like that, so where does it stop to what we are dealing with as first aiders?' [FG2]

'I don't see my role as the care side of it. That's for social workers, society in general, ambulance staff. Drugs are illegal and it's our job to enforce and try and get them off the streets and by taking them off the streets and catching people in possession of them, that's very much how I see the police role in it. Not this almost, kind of, namby pamby state where we are pandering to people who are deliberately breaking the law and make no effort not to break the law.' [PC15]

Some officers believed that after administering naloxone they would be required to stay with the individual until the effect of drugs had worn off (if the individual refused to go to hospital – or alternatively, if the ambulance refused to take the individual). There was a strong perception that this would increase police workload or, if they did not stay with the individual, risk a PIRC enquiry if the person subsequently came to harm. Despite guidance from both Police Scotland and PIRC in training sessions that there is no legal obligation to wait with an individual recovering from overdose until they are considered safe this was a very common belief expressed in focus groups and interviews.

A number of officers said that provision of a 'safe place' where individuals can be taken for observation and referral to substance abuse services, would be of great benefit both to the individuals and to the police services in allowing them to respond to other calls.

'I don't see an issue with having it; my issue is we need to make sure that there's an aftercare treatment as well, whereas we can't force somebody to stay with us - it's just a case of they might walk away and then collapse again in another twenty minutes. What happens if they then go and get something else and take something else straight away?' [PC05]

'I could give naloxone to somebody who was barely breathing...He could have said, I'm not going to hospital, signed the hospital's disclaimer. The hospital's fine, no problem. Well, my opinion would be, that person needs to be left in the company of somebody because they could go into secondary overdose. Oh, we don't have to do that now. They could be left on their own and two hours later be found dead. I'd be under inquiry from PIRC because it's a police contact death. Not to do with the naloxone because you've given that in order to try and save that person's life. It's justified but you're still under inquiry.' [PC09]

'If we had somewhere that we could take them, that would probably free up about 60 per cent of our time. And I don't think I'm exaggerating there at all, it's so much of what we do at the moment. And we go back to people not wanting to carry naloxone because it's a part of the NHS's job to deal with that, there's a perception that we're already doing so much of the NHS's job with all of the mental health stuff.' [PC17]

There were concerns from some participants around the risk of repeated overdoses, and death after administrations due to lack of follow up support. However, several officers said that would not stop them using naloxone.

'It's like fighting a fire because we're administering naloxone but the services aren't coming in behind us to back-fill that. So we're just constantly fighting a fire, fighting a fire, and we're not getting the back-up from the services coming in behind us.' [FG2]

'It is ultimately a sticking plaster. But, do you know, it's better than nothing and we're doing something.' [PC17]

'I think obviously this is to stop people dying from it, it doesn't resolve the whole problem. It maybe sounds cynical saying this but it is sort of true – we're solving the problem of people dying but we're not solving the problem of the drugs issue that we have, if that makes sense.' [PC10]

A few officers who refused to carry naloxone justified this decision on the basis of misconceptions about naloxone and incorrect information provided through SPF circulars, for example without understanding that it has a considerable evidence base as a safe medication which has been used by both the public and emergency services (including the police) for many years. Two interviewees believed that drug death figures are being inaccurately recorded and are not as high as stated – although the opposite is likely to be true.

'I personally think the reason our drug deaths are so high is because of how we record drug deaths. A lot of our drug deaths are recorded because somebody previously used drugs. That can still be classed as a drugs death; that might not have had anything to do with how they died.' [PC05]

'CPR, you don't really need to carry anything for that. You do it, it's a basic thing that people will do. It's a kind of known lifesaving treatment. Naloxone there are concerns about and the Federation issued a circular with concerns about its use down south, so it's a new thing to the market which is the concern...I don't think naloxone's been administered too much from what I'm aware.' [PC15]

'I would need to double check but I was told that there is a label on the naloxone that says it may have something to do with allergies and allergic reactions and things like that. I would need to double check that myself but again, it's just one of the other things that's an element now.' [PC16]

Officers in all divisions suggested that the majority of police time is spent responding to mental health incidents (including substance use) rather than on fighting crime, which was a source of frustration. Although not a focus of our study, officers raised this in the context of a concern that carrying naloxone may mean they spend more time responding to mental health related incidents and they were keen to have more support from other services. Many felt insufficiently resourced or trained for this mental health role.

'I joined knowing that I would have an element of mental health to deal with, I didn't think that would be the main part of my role is dealing with mental health issues.' [FG2]

'At the moment, there is very little crime which is crazy, but we're just responding to mental health issues, that is the majority of it. So yeah, I would say that every day there is definitely a call to the mental health hospitals, yeah, just a lot of mental health stuff, very little crime, very low crime...I didn't join the police to not fight crime...I would say that mental health is bigger, but drugs, especially in X, is a big part of it. I think they come part and parcel as well, mental health and drugs.' [PC11]

'I'm not mental health trained in any way apart from doing an online Powerpoint that

probably took not very long, so you've obviously just got to make the best of it in those circumstances and hopefully the outside agencies pick up what they're meant to do and we obviously take advice from them.' [PC10]

Relatedly, some officers felt there is a lack of follow up to address the long-term needs of people with mental health and drug use problems. This led to feelings of frustration among some police officers because they felt that they were not sufficiently trained to support people with mental health issues and they felt that mental health specialists should be taking on this role. This contributed to a sense of being overworked.

'A lot of the people we deal with have long-term, ongoing mental health issues. Some are genuinely in crisis in that moment but a lot of them are frustrated that they don't feel they're getting the support that they want and that's why they contact us. And because we're not trained mental health professionals, we then rely on the hospital who are already massively overworked and understaffed.' [PC17]

'I think it's beyond the capability of the police to in any meaningful way address this. We tie in with social work services. Obviously we're part of the scheme and whatnot. But I think ultimately addicts need help and the police are not the people to be able to give them that, other than the immediate, I'll give you naloxone, I'll do your chest compressions and I'll...if necessary, I'll stop you in the street and I'll take stuff off you. 'Cause I can never quantify how many drugs I've taken off from someone's last batch. I think it's beyond the police service to be realistic to cut the numbers massively.' [FG1]

There was evidence of a lack of understanding around problematic drug use. For example, many officers considered it to be a 'lifestyle choice'.¹⁰ Some attitudes towards drug use and people who use drugs may indicate either underlying stigma, or a failure to understand that naloxone is simply a first aid tool.

'Some of the responses from cops is, you know, why do I want to save a junkie? You're only saying that because you view them as criminals, not as people.' [FG3]

'We aren't seeing them as victims, they are often offenders and you see the result and the victims of these people's crimes. It is hard not to become cynical when you hear about the terrible things that happen. And it is the same people every single day and they keep doing it and you look at their records and they have done this all their lives...It is hard for people not to think, well why should we save that person's life? What good is that doing to society? That is the kind of attitude that I have heard.' [PC12]

'You're only, kind of, almost, like, delaying the inevitable with administering the Narcan or the naloxone for a lot of these people because ultimately at one point they will take too much and overdose... we've got loads of duties, it's not primarily to preserve life. We protect property, we investigate crime and maintain order.' [PC15]

4.3.2.4 Recommendations from police officers

A majority of officers interviewed were supportive of the pilot, many strongly. Although some of these participants still expressed concerns about ambulance response times or potential legal

¹⁰ This notion has been critiqued by the Scottish Drugs Forum as denying 'the extensive evidence that problem substance use is closely associated to varying degrees with poverty, adverse childhood experiences and trauma' (SDF 2020: 46).

liability, they stated that these concerns were overridden by the duty and opportunity to preserve life. Some suggested that naloxone should be part of the first aid kit carried in all police cars.

'When I was told it was being offered I said, I'll take it. Because when you look at the information on it and certainly when I went through the training I like the fact that if I was wrong and somebody wasn't taking an overdose this is not actually going to do anything to them. Because that was one of my fears was, what if I get it wrong? So the fact that nothing happens if I get it wrong...Then the only thing I could think of then is well it's a good thing then, if I don't get it wrong and I've administered it to someone then I've saved a life that day. I can't stop them from taking again, but I've saved a life right there and then. There can't be any better feeling than saving someone's life, knowing you've had that impact on someone.' [PC01]

'If I've got a tool that I can use to save someone's life I'll use that. And if I choose not to take that and I get into a situation where I needed to use it and I refused to take it I'd feel personally guilty for saying, I'm not carrying that because X, Y and Z. But my thought process was if I'm in a situation where I need to use naloxone and I don't have it, what am I then going to do, like, what options do I have? The ambulance service at the minute, even back when we were taking the naloxone course, were stretched. You can't guarantee an ambulance immediately. So for me if I have the option to save someone's life I'm going to take the tool in the first instance that I can take it on the street and use it, and if I need to use it I'll use it, so that was it for me.' [PC06]

'I don't think there is an issue in it whatsoever. At the end of the day, if you use it and you have got somebody that has taken benzodiazepines or haven't taken any opioid whatsoever, it has no side effects, so what difference does it make? You are better to try and do something than not do anything at all, 'cause at the end of the day if they're not telling you what they've taken, it's better to try than not to try. And there's no side effects there's no nothing. To me, I know that people were making issues about doing it against their will and everything else, there is no difference between using that and a defibrillator. And doing CPR you know full well that the chances are if you are doing CPR and you're doing it properly, you're going to break ribs and you're going to damage ligaments and there's no side effects with Narcan so to me it's a no brainer.' [PC08]

'My thought is, if I'm the first to respond to something and I have it, personally I can't watch someone pass away, or, you know, I just can't do that. Cops can be quite stubborn at times and not like change, so if they are given something, they'll not want to do it. But me personally, if there's somebody in that chair there passing away, I need to stop that, I need to help. People are different, but that's the way I see it.' [PC11]

'I didn't carry it for the first couple of weeks. It was through speaking to other colleagues with a lot more service than me that I kind of came to the realisation that it's not about internal politics, it's about the opportunity to save a life. And do you know what, if on the back end of that there was some sort of investigation, I'd rather be investigated knowing that I haven't let somebody die, than let somebody die knowing I haven't been investigated. And I think anyone who's joined the job wanting the latter is probably in the wrong job.' [PC17]

'We carry what they call throw ropes for people that are in the water. You know, we carry first-aid kits. We carry everything we can to help people, so why shouldn't we carry naloxone?' [PC13]

Officers requested greater support and recognition for their substantial role in dealing with mental health emergencies. A particular frustration is the amount of time spent waiting (often for several hours) with individuals who are recovering from the effects of drug or alcohol. Many officers felt they were likely to be in this position if they administer naloxone to an individual who then refused to attend hospital. Provision of a 'safe place' where individuals can be taken for observation by health professionals and referral to substance abuse services, would be of great benefit to the individuals. It would also release police from the obligation to remain with individuals for hours on end and allow them to respond to other calls.

'There needs to be a collaboration with the police and other services, and we're just not getting that... most of these services work Monday to Friday night at five. We're the 24/7 service that are just left to pick up the pieces and it's not happening. We need some sort of mental health trauma team more than Monday to Friday night at five that's going around, going to the calls that we shouldn't be going to.' [FG2]

Officers requested a clear written statement from Police Scotland and PIRC that there will be no legal repercussions against an officer who administers naloxone in good faith and in accordance with recommended practice. Some officers who currently refuse to carry naloxone said they needed this reassurance before they would be persuaded that their careers are not a risk from administering naloxone.

'If you could give the cops a piece of paper that says should you use naloxone and x, y, and z, happens, we will, absolutely, categorically, 100 per cent support you because you tried your best, then that would prevent a lot of issues.' [PC13]

'A clear statement from the Crown Office, PIRC and Police Scotland saying under no circumstances if you use naloxone will you be held back in your career, will there be any form of investigation, any form of disciplinary taken against you. We're all sensible enough in this organisation to know if you start stepping left or right of the boundaries that come with that, then you're going to be investigated.' [PC17]

Many officers are concerned by, or disagree with, the SPF's opposition to the pilot, and would like them to reconsider this position (while recognising that this may be difficult).

'I took that list of points from Federation, I went through it. Some of them I was happy with and some I wasn't happy with, and I sent them to one of our local Federation reps and said, explain that, explain that, explain that, and what I found when you scratch below the surface is most of what they were saying had absolutely been twisted in their favour, and I felt at that time what the Federation should have done is come out and said, as human beings we don't have an issue with carrying naloxone because you might be able to save a life, but you're asking us to put a sticking plaster on the ambulance service. This is a pay and conditions negotiation point, and we'll have this conversation next year when we're talking about a wage rise.' [FG3]

'I think the Federation needs to get their heads together and discuss why it is such a bad thing and if they've got to change it so that more people carry it in the other places, like you say, do that and support people in what they use. If they can support somebody using a big metal stick, a taser and something that causes physical injuries to people, then why does something that has no side effects at all be an issue? I just don't get that

whatsoever.’ [PC08]

‘It was an awful situation to be in because we had the Federation on one side telling us that we shouldn’t be picking up for the failing healthcare system, or, you know, a lack of ambulances and trained people. But then on the flipside you’ve got your own conscience and, you know, you need to go to incidents with the right tools. You know, you need to be in a position to help people.’ [PC13]

Officers felt there is an urgent need for better partnership working with other emergency services. Developing collaborative working between Police Scotland and the Scottish Ambulance Service is especially important in the success of initiatives, such as the naloxone pilot.

‘How many complaints come in because we’re not dealing with that person’s crime because we’re too busy back-filling for ambulance or nurses or mental health teams that, you know, people will phone 111, and ask to speak to the mental health nurse, and they go we’ve got concerns for this male, can you go out? It’s like, well, if you have got concerns for this male, why are you sending the police out to check on him? You should have a trauma car or an active team to go out and do these checks yourself, and yes, if they then become violent or whichever it is, we’re there, but we’re there for the criminal side of things.’ [FG2]

In the event that the pilot is expanded across Scotland, officers argued that there should be a longer-term evaluation of its operation in order to create an evidence base for its effectiveness.

‘If they...have said, right since Naloxone has come into the east end we have used this so many times, it has been effective so many times, there has been no complaints...if you saw some evidence that it is actually helping then that would maybe help...If they came out and said definitely this is what has happened, this is how it affected people, all about stats, I would say yes.’ [PC07]

4.4 The views of Community Stakeholders on the pilot

A total of 19 individuals from communities across Scotland were interviewed about their views on the carriage and administration of naloxone by Police Scotland (Table 4.4.1). The sample included:

- *People with lived or living experience of opioid use (LEOU)*
- *Family members of people with LEOU*
- *Staff with experience of supporting people with LEOU (SM)*

Table 4.4.1: Community participant by type and area

Area	People with LEOU	Family members ¹¹	Support staff	Total
Glasgow	4	(2)	1	5
Falkirk			2	2
Dundee		(1)	4	4
Argyll & Bute	1			1
Aberdeenshire	2		1	3
Aberdeen	1			1
Scottish Borders	1	(1)		1
Edinburgh			1	1
Scotland wide			1	1
TOTAL	9	(4)	10	19

Participants were based in areas across Scotland including Glasgow, Falkirk, Dundee, Argyll and Bute, Aberdeenshire, Scottish Borders and Edinburgh. The majority (16) of participants worked (paid or voluntary) for a range of third sector organisations that specialise in supporting people with drug problems.

The community stakeholders had a range of experience with drug overdose and naloxone, including personal experience of overdosing, observing people overdosing, observing naloxone being administered, administering naloxone (injectable), and/or being trained in the administration of naloxone. Some participants fell into more than one category, i.e., they had lived experience of opioid use, both personally and through family members, or they had this experience and now worked as a staff member of a support organisation.

4.4.1 Views on the carriage and administration of naloxone in Police Scotland

All of the community stakeholders supported the pilot, with some saying that all police officers and all services who come in contact with people who use drugs should carry naloxone. The following quotes from three participants illustrate the general perspective of the sample:

'I think all police officers should be carrying it in case obviously somebody in the street overdoses then they can save their life basically.' – Female with LEOU [LDE02]

'I think anybody involved in any of the services, the police, contact they've got with addiction. I just think everybody should have it. You know, anybody in close quarters that could even think about it...Yeah, I think it's a very, very positive thing. And the more the better.' – Female with LEOU [LDE04]

'I think it would be a good thing. I think it would be part of helping people with additions. I definitely think it would save lives. Even if it's only one life, then that's still one life.' – Male with LEOU [LDE05]

4.4.2 Positive community stakeholder perspectives towards the pilot

Participants believed that the intervention was suitable for police officers as first responders.

¹¹ Community participants were either people with lived/living experience of opioid use (LEOU) or support staff. Some of these individuals were also family members of people with LEOU. This is indicated by the brackets in the family members column.

'People who are using drugs or alcohol, the police are one of the services that are most likely to come in contact with that individual, whether it just be from day to day, walking a beat, or just...you know, just on routine patrol...just doing their, kind of, day to day work they're going to find individuals who are overdosed, you know, and if them having naloxone then buys enough time to get emergency services there to save a life.' Female support staff [SM02]

"I'm sure the police are obviously first responders if there's any sort of reports by neighbours and stuff, as to like noises and things. If they're breaking in and somebody's in a state of [overdose] that's saving lives, isn't it? So any life that can be saved and it gives somebody a chance of recovery, the more times the better. You know?" Female with LEOU [LDE04]

They also believed that the intervention fitted well with the police's duty to save lives.

'They are one of the emergency services, and I think because it is such a huge problem that the police have to deal with, I don't think it's the same as asking someone to add to the paramedics, I don't think it's in the same league at all. I think it should be something that is just part of your job, that if you want to be a policeman, policewoman, then it should be you want to help people, and part of helping people is saving their lives.' Female with LEOU [LDE07]

'It's about preserving life isn't it? It's not about, wait a minute I'll just check what my role is. ...I don't see it as a job. I see it as saving life and about support for somebody in the community if you had to and I don't understand why you would not do it.' Female with LEOU [LDE08]

'If somebody's there dying and that police take the choice of it's not my job well, then they aren't a very community minded and helpful person are they, so I wouldn't like them to be my local police officer.' Male with LEOU [LDE06]

Participants viewed intranasal naloxone as a facilitator to the intervention due to its ease of administration and safety.

'You can see where the police are coming from with the injectable kit of potential needle stick injuries...so that's my only thing that the Federation could possibly come back and go there's a risk to the officers' health here. With a plastic nasal sniffer, they've got absolutely no leg to stand on as far as I'm concerned. Just get it done.' Female support staff [SM02]

'Some people don't like giving people needles. Some people that have a fear of needles would be good with the nasal spray more than some people.' Female with LEOU [LDE08]

'I think nasal, fantastic, it's less intrusive than intramuscular, it's easier to give. I mean it's a skoosh, excuse the pun, you know, I mean it's, you know. So, I think it's great and I think it should have been getting done years ago.' Male support staff [SM07]

Some participants saw the pilot as a positive step towards the normalisation of naloxone in Scotland.
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'I think giving the police the confidence as well and kind of taking away...with it being a norm and the more the caring, wellbeing side comes into the police, it might have knock-on effects to the way, you know, if it's just a normal kind of thing...It's just kind of standard then and natural. Everybody'll be comfortable to go ahead and use it.' Female with LEOU [LDE04]

'It will really quickly, I think, become something that's just standard, and you wouldn't imagine a time when they didn't carry them.' Male with LEOU [LDE06]

While participants shared a range of contrasting views around the attitudes of police officers towards people who use drugs, several participants shared positive accounts of police officers who were proactive and compassionate in their support of people who use drugs. Some participants believed that police officer attitudes towards people who use drugs have improved over time, and that younger officers, in particular, had more positive attitudes. Community officers were also considered to have greater understanding than front line response officers.

'I would say the younger are definitely more tolerant and more understanding. And that's probably a lot to do now that the discussion around drug use now, it's not as stigmatised as it was...You know, the police now are getting an understanding, they're trauma-informed policing. We've got a long way to go...But yeah, they're understanding now that somebody didn't just wake up one morning and say, oh I want to be a drug user when I'm older. You know, that there's reasons.' Female support staff [SM01]

'A real mixed bag of experience with the police...I think over the last two or three years Police Scotland have made I think quite significant shifts into being a more caring organisation...So there is certainly, I think, from my experience been quite a significant shift over the last couple of years and I've probably got some really good examples where police have been really positive, really flexible, wanting to work together, pretty happy to share information with good levels of communication, so that's certainly been my experience in the last wee while.' Male support staff [SM07]

'We do an awful lot more with the police in prevention, and low level dealing and low level use is not criminalised as much as it used to be...not that it's tolerated, but it's understood a lot more about addiction and the reasons for people using...I'm not suggesting that we're at anywhere near where we need to be, but certainly going that way...Because at the end of the day, they're coming from a criminal aspect whereas we're coming from a therapeutic aspect, I think it just works so much better when we all work together.' Female support staff [SM09]

4.4.3 Perceived barriers to the pilot

The majority of the participants identified that some police officers had a negative attitude towards people who use drugs and that affected their willingness or ability to support them. These attitudes can be summed up as stigmatising, dehumanising and lacking compassion. Most saw these attitudes as a both symptomatic of criminalisation of drug use and also a lack of understanding about drug use and addiction.

'They see us as the scum of the earth, you know. But that's not their fault. That's people in the community's fault for stealing and shoplifting and maybe drink...standing drinking in the street, drunk. Most of them go, bloody hell, him again. I need to go and life him up and take him to the station and he actually pees himself when he goes in

but...you know, this sort of stuff. This is how it's got worse. It's not getting any better because there's no information there about it. There's not...you know, there's not a police officer going about the town saying, look...you know, making sure people are all safe, you know what I mean.' Male with LEOU [LDE01]

'It's like as soon as an opiate drug user's identified, they're automatically classed as a lower rung. Just feel that it's not a person anymore. It's an addict, you know?...Obviously, they're put in a position where it's illegal, you know. But, I just think some of the officers, maybe through bad experiences with addicts, I'm sure, but, em, they don't get any respect... just looked down on as if...you're less than. Just spoken down to. They're better than you. Yeah, it's just their kinda attitude.' Female with LEOU [LDE04]

Several participants acknowledged that police officers might face aggression from individuals who had been revived through receiving naloxone.

*'Look, this person might go bananas for five/ten minutes but obviously it's not them. It's just the way that we're built, it's our instincts. You know, it's fight or flight. So for somebody come out of a naloxone [overdose], their first instinct is, what's happened, where am I, fling a punch, fling a couple of punches, you know, who is this c**t that's in front of me, 'cause you don't know who it is. Although the police officer's got a uniform, they don't see that. They just see a shadows or...like, know there's somebody there that's harming me, so they start flinging punches. So maybe just say to the police, look after...about ten minutes after it, they'll go bananas, so maybe restraining them or...you know, just hold them down until somebody says, look, we just saved your life there. You were dead. And then the person could turn round and say, oh I'm sorry, right, I didn't know what I was doing there for a half an hour because it's like coming out a fit, you know.'* Male with LEOU [LDE01]

'Yeah, you can get aggressive people. But I suppose that's part and parcel of life, you know, just because somebody's aggressive, diabetics going into a hypo can be aggressive, it doesn't stop us administering glucose to bring them round, do you know what I mean?' Female support staff [SM09]

'If lives need to be saved they need to be saved and to me that's, you know, the number one thing. Okay, maybe the person will be aggressive, maybe they'll be a wee bit more aggressive. There again if the police are used to dealing with aggressive people every day, then, you know, unfortunately it's part and parcel of their job.' Male support staff [SM06]

A few participants acknowledged that police were burdened in terms of workload and stress, particularly when supporting vulnerable members of the public. These participants saw that the pilot could be seen as adding to police workload, although in fact it could have the opposite effect in avoiding the paperwork around a sudden death.

'I understand they are 100 per cent up against it when they go out to deal with an incident and they've got to deal with what's in front of them. And I think that's really important that we remember that as well...Very stressful, very heavy, you know, in terms of what they feel they've been able to achieve as well. So, I think there's a lot more support required for them, you know, in all aspects of their job, whether it be drug-

related or not. So, I think they have a huge task.’ Female support staff [SM03]

‘Probably the unions are having a field day because it’s extra work. And that might be a bit of a debate going on. Like, if you were then to give every police one of them to carry then it’s extra duties for the police...But if you think about if somebody dies, like if you manage a service... – and that sounds shocking – but that is, the paperwork, the debriefing for your staff, there’s loads of work.’ Female support staff [SM01]

‘You know, take it back to practicalities...when you look at it from a policing perspective, would [you] rather administer naloxone than deal with the paperwork of dealing with a sudden death...It’s like which one of these is going to give me less work. I’m going to intervene and save that person’s life if it causes me less work, and that’s the bottom line. That’s how you need to sell it to them. They need to know what the benefit for them is, not necessarily the benefit for the wider community, but all emergency services should carry it.’ Female support staff [SM02]

While all participants supported the pilot, several participants highlighted that naloxone was only part of the solution of addressing drug-related deaths in Scotland. This observation was in light of the prevalence of poly-drug use and particularly the high use of benzodiazepines in Scotland.

‘This is only one thing that we can do. You know, there needs to be other things as well. We’re not going to be able to save everyone because it won’t always be an opioid that they’ve used. So, yes, it’s got to make a difference somewhere. It has to because we are still seeing opioids in most drug-related deaths, but there’s so many other drugs out there that it’s quite scary. So, what I wouldn’t want then is that we kind of go, right, that’s it, job done, we’re all carrying naloxone now, we don’t need to think about that anymore. Because that won’t be the case.’ Female support staff [SM03]

‘I think it’s definitely in the right direction. I think we need more, like more stuff than that. I think we need safe injecting sites because the ones that are operating, the lives they’re saving are huge amounts. But, yes, I think there needs to be more than that but I think it should help.’ Female support staff [SM05]

Several participants also discussed that individuals who had overdosed and were revived were at risk of repeated overdose and perhaps repeated administrations of naloxone. This was not seen as an argument against naloxone, but rather pointed to the need for support following near fatal overdoses.

‘Whether you get saved ten times or not, until you’re ready, until you get the proper help, that won’t make one ounce of a difference...An addict will never have it in his head, oh I can just take...because they never take thinking they’re going to die. You actually don’t think like that.’ Female support staff [SM01]

‘We should be looking at prevention and intervention at every opportunity, absolutely every opportunity. It doesn’t matter what service, you know, preventing drug related death is a societal responsibility. It’s not the addiction services. It’s not criminal justice. Every single person, every human, in society and the community, has got a responsibility to try and prevent death...I think a huge thing is the availability of services, you know, so, and it is still very much a postcode lottery in Scotland where you live as to what level

of support you're going to get.' Female support staff [SM02]

4.4.4 Recommendations from community stakeholders

All police officers across Scotland should be required to carry naloxone.

'They signed up to serve and protect the community, it should be part of their job, you know, because they all have a duty that they must carry handcuffs, they must carry their baton. You know, they must carry all their equipment, so why is that not part of their mandatory equipment, that's my perception.' Female support staff [SM02]

'If it is decided that this is something that can save people's lives, then I'm not quite sure why it couldn't be just part of their role and it couldn't be that it wasn't voluntary, that it was just something that was, kind of, part of their job description as it were.' Male support staff [SM06]

Police officers should receive training in how to administer naloxone. Specifically, training should address how to respond to individuals who may react negatively after receipt of naloxone and how to recognise signs of overdose.

'Obviously they would get trained on how to use it and by the same token, they should be trained in how to...in knowing what people might react like after they've had it, and you know, how to deal with that. And just, you know, if they have to restrain somebody for a couple of minutes or whatever, maybe that's what they have to do.' Female with LEOU [LDE07]

'I'm hoping that they'll emphasise and really work through the training because you are not going to jump on somebody and start restraining them, but a lot of firm reassurance...Step back, let the person calm down, speak to them firmly but calmly...we know looking in that they were about to have a fatal overdose, but from the user's perspective, you've just ruined something that they have been trying to pursue and you can get quite a bit of a negative response from them and that takes a bit of training, that takes a bit of thinking and talking through.' Male support staff [SM07]

Police officers should receive training and education around drug use and addiction to address stigma and improve officers' ability to support vulnerable people who use drugs. This should incorporate:

- facilitating an understanding of the multiple factors influencing substance use;
- the relationship between trauma and drug use;
- supporting the families of vulnerable people who use drugs;
- and referring people who use drugs to addiction support services.

'Some sort of training, getting lived experience in and explaining about their ongoing addictions, how it came about and the way they felt they were treated by the police was quite unacceptable...They need more insight. I know it...sounds as if it is adding to the police's work...But at this moment in time the biggest...rate of drug deaths in Europe.' Male with LEOU [LDE03]

'For me there's something really significant about the training, you know, drug and alcohol awareness training, overdose prevention training within organisations. It should be the same within the NHS and other services as well, but if you start to talk about your

own attitude, your own prejudices and it really starts to challenge and change and things will start to improve, it takes the emphasis away from the law enforcement and it focusses on people's sort of life and health and wellbeing which can only be a good thing.' Male support staff [SM07]

'It goes back to that educating about seeing more than just the drug and a drug user, about who they are, what they've come from. People don't just use drugs to be annoying to the police, there's reasons behind addiction, it can happen to any one of us. So again it's education.' Female support staff [SM09]

4.5 The views of Senior strategic stakeholders on the pilot¹²

4.5.1 Views on the carriage and administration of naloxone in Police Scotland

All senior stakeholders were supportive of the pilot and its roll out across Scotland apart from the SPF representative who was opposed to it.

The following points were identified as key themes by senior strategic stakeholders:

4.5.2 Police Role

Most senior stakeholders discussed whether naloxone administration should be part of the police's role, with most saying that as a first aid tool, this was entirely consistent with the police duty to preserve life and particularly as frequent first responders to the scene of an overdose.

'Police Scotland is committed to the agenda of modern policing not only being about enforcement and public order but also recognising their role as a force in being first responders and being part of how our society responds to its most vulnerable citizens.' [SRC]

'Their job is not simply to arrest and enforce the law. Their job is also to support and improve public safety and enhance wellbeing and all that sort of stuff. I think sometimes people are looking at the police duties and responsibilities quite narrowly which is the police is to enforce the law, uphold the law, all that sort of stuff. But they are also there to support society, improve wellbeing, all these other things. The Chief Constable has put out a statement saying their duty goes beyond that. The mission statement of Police Scotland is keeping people safe and, therefore, anything that the police can do to keep people safe, which may include use of naloxone, is actually a policing function.' [PIRC]

4.5.3 Naloxone safety and legal risk

While all interviewees agreed that naloxone was of proven benefit and entirely safe, there was one dissenting view regarding the likelihood of legal investigation following naloxone administration. All interviewees apart from the SPF representative agreed that no legal claim could be brought since naloxone is entirely harmless, the Crown office had confirmed that there would be no prosecution and PIRC's Head of Investigations, Mr McSporrán stated in training that he was 'giving you a guarantee that I am not going to investigate'. However, the SPF representative considered naloxone administration by a police officer to be 'risky behaviour' (comparable to driving a car recklessly) which was the reason the SPF had decided to withhold financial support in the event of a legal claim. In their view this risk would only be removed in the event of a statutory exemption, a measure that other interviewees thought unnecessary since naloxone cannot cause harm.

¹² See Table 4.2.1 for the list of represented organisations.

The proven safety of naloxone for first aid was confirmed by all senior stakeholders, including medical experts:

'It's such a lifesaving medication. There are not many medications that work in such a similar way. And it has almost no side effects. So the benefit hugely, hugely outweighs any perceived risks of administering naloxone.' [SAS]

'The law says any member of the public can carry and administer naloxone. Naloxone cannot cause death. Naloxone can only prevent death...It is only going to have an effect on a person that is taking [opioids]. Either bring them round or buy time for ambulance or other services to get there.' [PIRC]

'It's a totally non-harmful intervention, and there can't be any harm done by it. If there was any question that there was a risk of severe harm, then I would have reservations.' [NHS2]

The SPF representative argued that if a person suffers harm after police contact there would automatically be a referral and an enquiry. Therefore, naloxone administration could be regarded as 'risky behaviour' comparable to driving in a reckless manner. The PIRC representative however, stated unequivocally that officers would not be investigated for naloxone administration whether the individual suffers harm either in police custody or following police contact.

'If there's a death or serious injury on police contact then that would be referred for investigation and it's not an option, it's a statutory remit...In terms of a death...there would be a fatal accident inquiry on, obviously, every occasion with that...Now, that fatal accident inquiry may turn out entirely of nothing wrong, but the stress and the sufferance on the individual is the issue here, so that if we could get to a position whereby, we were absolutely given a statutory exemption from prosecution, for these types of scenarios, then that would fix the problem...Our governing body took a view that we felt there was a lot of risk here, legal risk for officers, and if they chose to ignore that legal risk then the organisation shouldn't be financially responsible for that...you know, if somebody said that they were to drive in a reckless manner despite being told then of course we wouldn't give them legal protection. If we felt there was risky behaviours that people were participating in, we wouldn't give them protection, and that's entirely reasonable.' [SPF]

'If I administer naloxone trying to save this person's life am I going to be prosecuted? No. Crown said that. Okay. Next question. Is PIRC going to investigate me? No, because you are trying to save a life, nothing that you have done could have caused that death, therefore I am giving you a guarantee that I am not going to investigate you.' [PIRC]

'A person is only in police custody if they have been arrested. The police officer is finding a person in the street or in a house unconscious with a potential drugs overdose. They administer naloxone but the person still dies. So the person is not in police custody so it is not a Crown matter...They refer that matter to us as a death following police contact. I decide whether to investigate or not. But I have told them I am not investigating any of them.' [PIRC]

'The fact is Crown have said we will not prosecute, and I've said I won't investigate...You are not going to be prosecuted for administering naloxone and we are not going to

investigate you. To my mind it is a bit of a no brainer.’ [PIRC]

4.5.4 Ambulance response times

In marked contrast to the mixed views expressed by police officers, all senior stakeholders who expressed a view, were confident that ambulances were responding quickly to calls from police officers administering naloxone at the scene of a suspected overdose, or that delays were often due to call handlers getting inaccurate information from police callers so the call was not appropriately prioritised.

‘The Ambulance Service have a prioritisation system based predominantly on a telephone triage system, based on the information that the caller gives us, based on the priority signs and symptoms that the person has at that point in time. We do not downgrade calls based on any police attendance or what the police can or can't do. It's based on the information related to the person's condition at that point in time.’ [SAS]

‘The gap between police officer administration and ambulance attendance is actually very short. Which is really...you know, which is good, because it means that, you know, the prioritisation model is working and that's been welcome. Just anecdotally what we're getting from our officers is that, yes, they're arriving a few minutes after. The actual gap between them administering naloxone and ambulance arrival is very short.’ [SPF]

‘When police are having long waits, it's usually because they've told their call handler something, that call handler has gone to the ambulance service and are saying don't know, don't know, to most of the questions. So they get dropped down the priority list because the call system just doesn't recognise that it's an emergency.’ [SDF]

4.5.3 Recommendations from senior strategic stakeholders

The majority of stakeholders agreed that naloxone should be rolled out across Police Scotland. They proposed that wider access to naloxone should be seen as just one of a range of initiatives which were all needed to tackle the drug deaths crisis. This should be regarded as a public health issue, and experience had shown that further punitive action would have little or no impact.

‘I think the uses of Naloxone have actually exceeded expectations...To me, that's the reason, the rationale for rolling out. And in terms of drug-related deaths, we all know that there's a major problem in Scotland, more in specific, some cities than others. But one response won't answer, won't deal with this, it needs a whole community response. And police are part of that community.’ [NHS 1]

‘It is all part of the how does each bit of the public sector try to support the overall objectives of Scottish Government. Scotland has got the worst drug death rate in Europe. How do we reduce this? Some of the services are going to take a while to put into effect to support people. The rehabs, all this sort of stuff. What is the interim measures that we need to try and do to try and reduce that harm, one of them is naloxone.’ [PIRC]

‘Near-fatal overdose pathways are crucial for this naloxone work, so it's all very well police are administering naloxone, but we also want there to be a clear pathway for them to then refer people into services once they've experienced a near-fatal overdose, so that they can be followed up by a drugs service to provide appropriate supports.’ [SDF]

5 Discussion

The research team was commissioned by Scottish Government in January 2021 to independently evaluate Police Scotland's pilot of the training, carriage and administration of intra-nasal naloxone as an emergency first aid measure to person suspected of experiencing an opioid overdose. The pilot was conducted in three test areas, Glasgow East, Dundee City and Falkirk. The training was subsequently rolled out to Caithness and community police officers in Stirling who were also invited to participate, as it presented an opportunity to incorporate data from more rural outlying areas. Despite this change, the broad aims of the original evaluation were the same. There was also some slippage in time, with training starting later than intended in March 2021 instead of January 2021, and with the Covid-19 pandemic having an impact on ability to conduct research.

In this section we consider the main aims and objectives of the evaluation and how well these were addressed. The limitations of the evaluation are then considered, followed by the main recommendations from the evaluation.

5.1 Aim of the evaluation

The overall aim of this evaluation was to assess the types of impact from the pilot conducted by Police Scotland during March to October 2021. This included identification of elements of training, learning and best practice which could inform any potential future national implementation of naloxone carriage/administration within Police Scotland.

5.2 Effectiveness of naloxone training (considering knowledge/skills of officers both before and after training)

Both quantitative and qualitative elements of the evaluation broadly supported the view that training and equipping police officers in (voluntary) carriage of naloxone produced positive immediate and short-term impacts in different ways. The consensus was that the training was impactful, with a demonstrable improvement of officers' attitudes and knowledge of naloxone. This was supported by most officers (81%) electing to carry naloxone after training and corroborated by officers' views on the training given in interviews, focus groups and narrative text in the surveys. Findings were not unanimous however, with evidence of conflicting priorities for officers, much of which relating to unresolved tension between perceived stances adopted by Police Scotland and the SPF.

The impact of the training was assessed by three surveys of officers' self-reported knowledge and attitudes to opioids answered at three time points, before and after training, and at three months after training. Officers' personal views on the training were given in individual interviews, focus groups and in narrative text in the surveys.

Quantitative data

The quantitative data suggest that the majority of police officers were in favour of carrying naloxone. By the end of the pilot, 808 officers had been trained in the use of naloxone, 12% more than the planned 720 officers in the original pilot areas. In the final pilot areas, 87% of the workforce were trained. The voluntary carriage of naloxone packs at the end of training sessions was estimated at 81% of officers who attended the training in the test areas (equating to 656 packs).

Although the pilot was testing a new intervention of naloxone carriage, 51 naloxone administrations were made during the pilot term, equating to almost 8% of total packs carried by officers. There

were no adverse effects of naloxone use reported. The police pilot of naloxone carriage was comparable to usage of 9% recorded for take-home naloxone in the community (McAuley et al., 2015). According to Scottish Ambulance Service data (SAS), most (86%) of these incidents were categorised 'purple or red' responses, and ambulance response times to these incidents was less than ten minutes, with all recipients arriving to hospitals in a stable condition. Important context with this evaluation period is that it encompassed ambulance crews responding in August and September 2021 to an unprecedented number of calls, with almost double the immediate life-threatening incidents compared with comparable months in 2018, and Military Assistance to SAS being deployed (Scottish Government, 2021a).

After training, 40% of officers agreed that 'All Police Scotland officers should carry naloxone' compared with 15% before the training. A considerable number of officers were unsure in answering this question both before and after training, and the corresponding percentage of officers who agreed or were unsure was 68% after training, compared with 45% pre-training. Similar shifts in attitude were reported for other questions addressing police officers' views of naloxone in relation to their role (adapted from White et al 2021), with substantial improvements noted for officers being glad to be carrying naloxone, believing they can perform their job better with naloxone, and believing police should be able to respond if they are on scene before other emergency services. In these questions, there was perhaps a larger than expected response to the 'unsure' categories, suggesting further research is warranted enquiring why this was the case.

The quantitative data further suggest that officers changed their attitudes and knowledge of opioids and use of naloxone because of the training. For example, post-training scores on validated scales assessing knowledge *Opioid Overdose Knowledge Scale* (OOKS) suggested an improvement in every knowledge domain compared with the corresponding pre-training scores. This was evident in the domains where the biggest change scores suggestive of improvements were noted, i.e., for recognising 'Signs' of an overdose and naloxone 'Use' which covers naloxone effects, administration and aftercare procedures. The post-training total score was 38.6 on average from a maximum total score of 45, an increase of 6% on pre-training. Prior to training, officer knowledge was already very good for domains on 'Action to be taken in an overdose' and 'Risk factors for an overdose', with scores equating to 88% and 80% of the maximum possible before training. This implied that improving scores that are already very good before training is harder with a training intervention but nevertheless, training was effective in improving both these domains as well as 'Signs' and 'Use' domains. However, the OOKS change scores, while promising and in the expected direction, were achieved using mostly unrelated (independent groups) officers from pre-training to post-training, and therefore caution should be observed in using these data. For this reason, no formal statistical tests of significance were done.

Another indicator in favour of the training was the *Opioid Overdose Attitudes Scale* (OOAS), with an increase in average scores across all sub-scale and total scores from pre to post training, strongly suggesting training had a positive overall effect. The total mean score of all officers who completed this data improved from 87.8 pre-training to 101.6 post-training, with a maximum score possible of 130. The most improved sub-scale was officers' self-assessed 'Competence' to respond to an overdose, followed by their 'Concerns' about intervening, and lastly their 'Readiness' or willingness to intervene. Only 34 officers completed both pre- and post-training data, and a separate analysis using these matched data points corroborated the findings of all officers who participated, with consistent changes in the order and magnitude of improvements made. The improvement in the total OOAS scores from the 34 officers with matched data was statistically significant, providing further confidence in the findings from the analysis of all officers' data.

According to the NaRRC-B scale data (Winograd et al. 2020), police officers' risk compensation beliefs changed from pre- to post-training in the expected direction. However, these changes were very small or negligible. This could imply that more attention should be given to risk compensation beliefs in future training, including challenging notions that naloxone administration condones or enables drug use. Alternatively, it may also imply the NaRRC-B scale lacked sensitivity to detect change before and after training in comparison to the OOAS and OOKS scales.

Scoring for questions that addressed police officers' attitudes towards people with drug dependence (Bryan et al. 2016) indicated a positive effect for five out of seven self-rated statements at post-training, and negligible changes in the remaining two statements. The biggest impact from the training was in answer to 'We have a responsibility to provide best possible care for people with drug dependence' with 67% of officers agreeing after training compared with 51% before training. Modest improvements were noted for officers agreeing that drug dependence was a consequence of traumatic experiences and that more tolerant attitudes needed to be adopted. However, results were not unanimously positive with 4% officers agreeing with and 10% unsure about the statement 'People who become dependent on drugs are basically just bad people', suggesting further consideration to the training needs in both this area and in the other statements where there was a great deal of uncertainty in officers' responses is warranted.

Overall, the findings from the survey suggest that the training was effective in developing police officers' knowledge and attitudes about drug overdose and naloxone administration. It was also effective in increasing the acceptability of naloxone administration as part of a police officer's role. It is unclear whether the training impacted risk compensation beliefs and notions that naloxone administration condones or enables drug use. There were some positive effects on police officer's attitudes towards drug dependence in the short-term, the responses overall suggest that future training merits more focus on addressing any persistent stigmatising attitudes towards drug users and knowledge of problem drug use.

There are few studies in existence that evaluate the carriage of naloxone. This evaluation is in line with existing research, with findings broadly consistent with studies of the carriage of naloxone by police officers (Ray et al., 2015; Purviance et al., 2017; White et al. 2021).

Qualitative data

Based on the narrative questionnaire data and qualitative data from police officers and senior strategic stakeholders, some of the most positive aspects of the training were the presence of medical and legal experts, information about how to administer naloxone, reassurance about the safety of naloxone and having an opportunity to have questions answered.

The aspects of the training that provoked mixed views were the presence of senior management and/or SPF representatives. Many officers perceived that this was unnecessary or caused disruption to the training and led to distracting political debate.

Most other concerns were about the intervention more broadly (especially concerns about risk, investigation, SAS response time and workload). Misunderstandings about naloxone safety demonstrated by a few officers, even after undergoing a training course, indicate a need for further training in the history of naloxone usage and the evidence base for its safety.

Implications for naloxone training

The implications of the research findings are that future training should be adapted to give more attention to addressing police officers’:

- Police officers’ knowledge of and attitudes towards people who use drugs and problematic drug use.
- Risk compensation beliefs, incorporating perceptions that naloxone contributes to enabling or condoning drug use.

A solution also needs to be found to the perceived disruption of the presence of senior management and/or SPF representatives. A possible solution is that the training be delivered primarily by medical / drug experts rather than police officers. The views of senior management and the SPF could be shared through videos or other media at the naloxone training and/or the police intranet as appropriate. Further points for the development of the training are discussed below (5.5.1).

5.3 Experiences of administering naloxone

Almost all police officers interviewed (34 of 41) had experience of attending overdose situations and a majority (26 of 41) had seen naloxone administered by healthcare staff or colleagues. Thirteen interviewees had personally administered naloxone, with some having administered it on several occasions. Overall officers reported very positive experiences of naloxone being used effectively to save peoples’ lives, using terms such as ‘amazing’ and ‘really effective’ (section 4.3.2.1). The main challenge faced by some officers was a breakdown of communication with the ambulance call centre.

5.4 Evidence supporting the intervention

5.4.1 Police officer support

The predominant positive aspect identified in interviews and focus groups with police officers (section 4.3.2.2) is that a police officer’s duty to preserve life is paramount and naloxone will save lives. This fundamental point outweighed any remaining concerns which some officers might have about ambulance delay or legal liability (although many who supported naloxone did not have these concerns).

Police officers are frequently first responders to overdose incidents and naloxone is an opportunity to provide emergency first aid until an ambulance arrives. The value of being able to provide first aid is even greater where there might be ambulance delay, such as in rural areas.

Many officers felt that while naloxone may be only a short-term solution it does provide an opportunity to link people who use drugs into support services. Although community participants thought the risk of an aggressive response from individuals who have been administered with naloxone could be a barrier, only one officer raised this issue (in a possibly stigmatising context: see quote at section 4.3.2.1). Other officers said it would not deter them from naloxone administration.

5.4.2 Community support

All community participants who were interviewed, including those with lived experience, family members and support staff, were unanimous in their support for the pilot. All agreed it would have a positive impact in reducing drug deaths. Many also believed it would improve relations between the police and people who use drugs.

Community participants felt that naloxone should be much more widely available across Scotland. As part of the emergency services and frequent first responders, they believed it was entirely logical

that police officers should carry naloxone, a key first aid tool. They expressed that this should be standard practice and mandatory for all officers. There were encouraging examples of Police Scotland and individual officers working much more effectively with support services in recent years, with more emphasis on care than pure law enforcement. This needed to continue, particularly since there was still evidence of persistent stigma and lack of understanding from some officers.

5.4.3 Strategic senior stakeholder support

Strategic senior stakeholders (with the exception of the SPF representative) were strongly supportive of the pilot and, like the community participants, thought naloxone should be rolled out to police across Scotland. Both groups also agreed that naloxone could only be one part of the Scottish Government response to the drug deaths crisis. This response requires better partnership working and support from across the public sector and is consistent with Lowder et al. who argue that naloxone provision, while beneficial, can only be 'a single component of a larger community-based response to the opioid epidemic' (Lowder et al, 2020).

5.5 Addressing tensions

5.5.1 Scottish Police Federation

A clear and pervading barrier throughout the pilot was opposition from the SPF. This had been present before the pilot began and was reinforced by the SPF circular sent to all SPF members on 5 March 2021 just as the pilot started. SPF objections arose in training sessions, in survey responses and in interviews. As SPF opposition to the carriage and administration of naloxone by police officers is a key barrier there is an urgent need for constructive dialogue between all parties: Police Scotland, SPF and members of each of these organisations. SPF's perception of naloxone administration as 'risky behaviour' is contradicted by a large evidence base that it is exceptionally safe (e.g. Baca & Grant, 2005). This dialogue should be supported by expert medical practitioners.

5.5.2 SAS response and communication

According to SAS data (section 4.1.2), the majority of naloxone administration incidents (44 of 51) were given the highest prioritisation categories (red or purple), and response times averaged 9.5 minutes with a range from 1 minute to 32.4 minutes (standard deviation 7 minutes). Nevertheless, ambulance delays came up repeatedly as a concern of police officers although some interviewees reported prompt responses to calls. Some accounts of ambulance delay and miscommunication were from personal experience, others were reported second-hand. These accounts differed from official policy as represented by the Scottish Ambulance Service, and also from the views of senior stakeholders (including the SPF representative). It was beyond the scope of this research to further investigate ambulance response times and it may also be of limited value given the abnormal COVID-19 pandemic context at this time. However, it does indicate a need for further research in this area.

5.5.3 Workload

Many officers believe they are already carrying an unreasonable burden ('filling the gap') of shortfalls in other services, particularly in responding to mental health emergencies. While it may seem that this is unrelated to naloxone, mental health and drug use are interlinked and require a response from all services (Lowder et al, 2020). The lack of support both in response and follow up was cited as a source of frustration for some police officers. Equipping officers with naloxone gives them the capacity to save a life rather than having to deal with the death of an individual. In practice, this should reduce workload rather than increase it. However, officers still need to be supported through effective partnership working to deal with the ongoing burdens of supporting people who overdose.

5.5.4 Risks

Despite the generally supportive findings, the research indicated the persistence of two myths about naloxone use by police officers. Firstly, that naloxone is not safe. The reality is that naloxone is an extremely safe drug of proven benefit in reversing opioid overdose and saving lives. It has been in common use for decades and considered so exceptionally safe that members of the public have been able to administer it as first aid since 2005 (without prescription since 2015). It has been used to good effect by emergency services across the world for many years: in the US since at least 2014 (Dahlem et al, 2017; Davis et al, 2014; Fisher et al, 2016; Jacoby et al, 2020) and in the UK since 2019 (West Midlands Police and Crime Commissioner, 2020). Side effects are rare and far outweighed by its lifesaving benefit (Wampler et al. 2011), and naloxone overdose is not possible in the quantities supplied to the public and police forces. Intranasal naloxone is easy to administer and removes any risk of needlestick injury.

A second persisting myth is that administering naloxone could lead to investigation and prosecution. Naloxone is a licensed medication, regulated by the National Institute for Clinical Excellence (NICE). By law, it can be supplied to members of the public without prescription. Although the police mission is to protect life, there is no legal obligation on police officers to provide any particular form of first aid since they are not healthcare professionals. The Crown Office has stated that it will not be prosecuting police officers in relation to naloxone administration, and PIRC has publicly stated that *'you are not going to be prosecuted for administering naloxone and we are not going to investigate you'* [section 4.5.3]. These assurances are in relation both to deaths in police custody and deaths following police contact. To date there is no record of any legal claim (successful or otherwise) having been brought against any first responder who administered naloxone in an emergency.

These myths persist despite assurances about the evidence base for naloxone safety and effectiveness in saving lives, and despite legal assurances. These myths will need to continue to be addressed in any potential future roll out.

5.6 Key themes for development

5.6.1 Developing naloxone and drug training

While the findings from this evaluation indicated that the naloxone training was effective overall, some of the findings suggest that further training would be appropriate. Some of the language used by police officers in the interviews and focus groups suggest a lack of knowledge about problem drug use and indicated stigmatising attitudes towards drugs users. These notions were supported by the account of several community participants. There were also indications of stigma among police officers in the survey data. Community participants made particular recommendations that officers should receive more in-depth training to develop their understanding of problem drug use and to address stigma. While stigma is present in public attitudes in Scotland (Bryan et al. 2016), police officers may have a particular tendency to stigmatise people who use drugs and also be opposed to harm reduction strategies (Berardi et al. 2021; Murphy and Russell 2020; Selfridge et al. 2020). Developing a stigma training course in Police Scotland was indicated as a particular objective in the Scottish Drugs Strategy 'Rights, Respect and Recovery' (Scottish Government 2018) and the results of this evaluation lend support to this.

Developing ongoing education on problematic drug use may be particularly important as police officers are exposed to overdoses more frequently. Research by Murphy and Russell (2020) suggests that officers who are more frequently exposed to drug overdoses are less likely to endorse public funding for drug treatment, 'less likely to believe officers should play a role in referring drug users to treatment and less likely to believe drug treatment is effective' (p. 466). They suggest that these

negative attitudes are the result of compassion fatigue. Murphy and Russell (2020) also highlight the potential impact that police officers' views can have on community perspectives:

Police can also inadvertently serve as a negative influence if they hold stigmatising views of people who use drugs and communicate inaccurate information about drugs. Combatting the stigma around drug addiction is a crucial component of fighting the opioid epidemic and reduced stigma will lead to greater access to drug treatment for those who need it (p.467, 468).

The potential influence of police officers' views therefore highlights the importance of addressing stigmatising attitudes among police officers in order to impact other social factors that contribute to drug related deaths in Scotland.

The need for more extensive training around understanding problematic drug use is supported by research by Berardi et al. (2021). They explored implementation factors influencing police officer use of Narcan (naloxone) in the context of an opioid-related public health crisis in North America. They argue that to effectively implement naloxone in a police organization, officers must be sufficiently knowledgeable and concerned about the [opioid] situation to see it as a serious risk to be managed' (p. 269). While the context of this research is distinct from Scotland, the principle may hold true: ensuring that officers have a good understanding of the drug related deaths crisis in Scotland is likely to facilitate their motivation to use naloxone.

There is also an argument that the training could be more effective if it was supplemented by additional elements. Naloxone training for law enforcement officers (LEO) in the USA was evaluated by Dahlem et al. (2017). Information about overdose and naloxone administration was supplemented by a practice element: 'a simulated opioid overdose scenario where each LEO practiced assembling and administering [intranasal] naloxone on a mannequin.' (p. 517). Including a practice element was mentioned by some police officers and may be a beneficial addition to the existing training model. The training evaluated by Dahlem et al. (2017) also involved:

(1) instructions for LEOs to contact a case manager from a local substance use disorder treatment program to connect with the person rescued at the hospital for further assessment and treatment options, and (2) testimony from a person in long-term recovery who shared her personal story of the impact a LEO had in her decision to seek substance use treatment (p.517).

Dahlem et al's (2017) study followed up the individuals who had been referred for follow up support after receiving naloxone. They found that 20% entered substance use treatment and 'one out of four injection drug users sought treatment within 30 days post overdose and those who sought treatment were five times more likely to enter into treatment if someone talked to them about drug treatment after an overdose than those who did not seek treatment' (p.519). Other studies have indicated that individuals are more likely to seek treatment following an overdose if a police officer refers the person to treatment (Wagner et al. 2016) and when someone (including officers) talk to them about treatment after an overdose (Pollini et al. 2006). This evidence highlights the value of including guidance on follow up in naloxone training.

Police Scotland's naloxone training included a video of a person in recovery. The video was made available on the police intranet, but these were not shown systematically during the training sessions. Future training might incorporate these additional elements to increase the effectiveness of the training. Including guidance on follow up may be one of most important elements for

developing effective partnership working to improve outcomes for individuals who overdose. This would merit an outcomes based evaluation focusing on follow up and individuals' outcomes.

5.6.2 Problem drug use and multiple complex needs

It is also crucial that Police Scotland's engagement with vulnerable drug users does not treat problem drug use as an isolated issue (Rosengard et al. 2007, McCarthy et al. 2020). Several of the police officers interviewed for this project identified the relationship between problem drug use, broader mental health issues and social disadvantage. Taking an integrated approach to problem drug use and tackling drug related deaths in Scotland is support by the initiatives being developed by the Drug Deaths Taskforce's Multiple Complex Needs Sub-group (DDTF 2021). Their pilot approach includes for example, distress brief intervention, integrated mental health and substance use services and intermediate care centre linking physical healthcare between hospital and community. Public Health England (2017) has similarly developed a guide to improve care for people with co-occurring mental health and alcohol or drug issues. Police Scotland has made some headway in taking an integrated approach towards problem drug use through Custody Hubs:

This recognises that people who have alcohol and drug problems, and are in contact with the justice system, are likely to have a range of needs, such as mental health problems and homelessness, which cannot be met by treatment services alone (Scottish Government 2018).

If it is acknowledged that problem drug use may often be one factor within a range of multiple complex needs, partnership initiatives ought to have a broad scope. This may mean developing partnership working between police officers and mental health specialist. Alternatively, it may mean the provision of a 'safe space' for people who are under the influence of drugs to be supported (something suggested by police participants). In addition, police officers training in relation to problem drug use should also be comprehensive enough to allow them to support drug users with multiple complex needs.

5.6.3 Naloxone and police – developing follow up partnerships

The overall findings of this evaluation strongly support the implementation of naloxone carriage and use across Police Scotland. Police officers frequently encounter drug overdoses (Scottish Government 2021c) and should be equipped to save lives until ambulance services are able to respond. Equipping police officers with naloxone should be seen as one aspect of a comprehensive agency response to the drug deaths crisis in Scotland. This point was made by Lowder et al. (2020) in response to the opioid epidemic in the USA. They declared that naloxone 'provision alone does not constitute a comprehensive agency response to the opioid epidemic' (p. 1019). Their findings were based a two year outcomes study following naloxone administration by police officers or emergency medical services personnel. Their point is made clear in the following quote:

'Our findings underscore the reality that use of a harm-reduction tool like naloxone provision is only a single component of a larger community-based response to the opioid epidemic. Expanded access to naloxone in the absence of coordinated strategies to divert individuals who use opioids from acute (jail and hospital) settings will not automatically decriminalize opioid use or facilitate connections to substance use disorder treatment. Coordinated responses to drug overdose require not only buy-in from key criminal justice stakeholders, but also availability of community treatment providers to enable successful diversion' (p. 1030).

Scotland has already made progress in terms of diversion of people in possession of Class A drugs (COPFS 2021). Police have a key role in diversion, as set out in Scotland's drug policy:

Diverting those with problematic alcohol and drug use away from the justice system and into treatment support, and other interventions that reduce harm and preserve life, is essential. This approach needs to run through how the police lead the work to control the supply of drugs, sentencing, the provision of treatment and support in prison setting, as well as supporting continuity of care on release (Scottish Government 2018).

Police Scotland have developed a range of follow up initiatives including the 'Non-Fatal Overdose Pathway' in Dundee and the 'Positive Outcomes Project' in Glasgow. These projects facilitate follow up with people who have experienced a near fatal overdose through collaboration with specialist third sector agencies (e.g. Transform, Dundee Drug and Alcohol Recovery Service, Glasgow Health and Social Care Partnership, Aid and Abet). The roll out of naloxone across Police Scotland ought to be supported by similar partnership initiatives to ensure that vulnerable drug users receive appropriate follow up support. There should be a clear processes and minimum standards for follow up initiatives across Scotland. Further research and ongoing evaluation is required to assess the effectiveness of follow up initiatives.

6 Limitations

The qualitative research was extensive and while there may still have been elements of selection bias in the police officers who volunteered to be interviewed or participate in focus groups, we spoke to officers with a range of views (those supportive of the pilot, those critical of the pilot and sympathetic to SPF views) and experiences (including those who had agreed to carry and had not and those who had administered or witnessed naloxone administration).

The number of officers who responded to the survey limits the generalisability of the survey findings. Nix et al., (2019) note that the average response rate for web-based police surveys was 24.9% and is declining over time. Response rates for police surveys administered in-person are higher but this was not feasible for us given the COVID-19 pandemic. However, as Nix et al. (2019) conclude 'Given the weight of the evidence suggesting response rates are typically a poor predictor of nonresponse bias, we argue that a low response rate on its own is an insufficient reason to dismiss a study's merit'.

An unavoidable environmental limitation to the research is that it took place in an atypical context, with the COVID-19 pandemic putting considerable pressure on health and police services throughout the pilot period. In addition, COP26 put additional pressure on police resources over a period of months in the lead up to, and during, the event. These pressures may have impacted survey response rates for example. COVID-19 restrictions also meant that it was not possible for researchers to attend training sessions systematically for independent observation.

7 Conclusion and Recommendations

7.1 Conclusion

Scotland is facing an unprecedented number of drug-related deaths that is increasing year on year. Since opioids are implicated in 89% of drug-related deaths, naloxone is an essential intervention for saving lives (National Records of Scotland 2021). Naloxone is an evidence-based, safe, first aid intervention that has been promoted by the Scottish Government for over a decade to save lives (Scottish Government 2021b).

Police officers are often first responders to drug overdoses (Scottish Government 2021b). They are in a position to offer first aid to people who may be overdosing before ambulance services can attend. Administering naloxone in a timely fashion could help save a person's life. This imperative responsibility is expressed clearly in recent research by White et al. (2021):

[Police] officers' acceptance of this public health responsibility and their willingness to administer naloxone are critical prerequisites to an effective response to the opioid crisis...Police officer acceptance of this role will save lives. Officers are frequently the first on scene of an opioid overdose, and time is critical. Life or death can hinge on a matter of seconds (p. 8).

The findings of this report indicate that a majority of police officers who participated in the research held a positive view of the carriage and administration of naloxone by officers. The high uptake of naloxone kits by officers who attended the training (81%) presents a general indication of the acceptability of the intervention. The findings from the survey indicate that the naloxone training was effective in developing police officers' knowledge and attitudes about drug overdose and naloxone administration. It was also effective in increasing the acceptability of naloxone administration as part of a police officer's role.

In more in-depth work through interviews and focus groups, the main naloxone concerns relayed from police officers were around the threat of legal repercussions if a person was harmed, anxiety around the changing role of policing and the potential for increased workload as ambulance services are under considerable pressure.

Community participants overwhelmingly supported the pilot and saw no reason why it should not be compulsory for police officers to carry naloxone. The senior strategic stakeholders who were interviewed were also in support of the pilot, apart from the SPF representative. These individuals sympathised with some of the concerns of police officers around the changing role and workload. The medical experts confirmed the safety and suitability of naloxone as a first aid intervention for police officers. The legal expert from PIRC confirmed that there would be no legal repercussions for officers if naloxone was administered to save a life.

On the basis of these findings we make the following recommendations to Police Scotland and to the Scottish Government.

7.2 Recommendations for Police Scotland

- 1) Police carriage of naloxone programme should be rolled out Scotland-wide. In addition to personal issue it should be placed within police cars and custody facilities to widen access and ensure resilience.
- 2) Naloxone training should be made compulsory for all Police Scotland officers and staff, including police custody and security officers (PCSOs). Consideration should be given to:
 - a. Expanding and adapting the existing training content (outlined in 4.2.1) to incorporate simulation of naloxone administration, the routine inclusion of testimony from a person in recovery and specific guidance and information for follow up support.
 - b. How to avoid disruptive internal political debate. This may be de-escalated by allowing the training to be run by healthcare professionals or with more input from them.
- 3) Naloxone training should be complemented by compulsory in-depth training/education to develop knowledge and understanding of problematic drugs use and address stigmatising attitudes towards drug users. Training concerning problem drug use should adopt an integrated approach, taking multiple complex needs and co-occurring drug use and mental health issues into consideration.
- 4) Consideration should be given to issuing a written statement by Police Scotland, the Crown Office and PIRC with unambiguous information about any legal liability officers might (or might not) assume should they administer naloxone. For example, this could be a general statement on first aid and liability, since naloxone carries the same liability as first aid interventions such as giving CPR, i.e. if performed in good faith and in accordance with training, no claim will be investigated by PIRC or the Crown Office.
- 5) Although evidence about the safety of naloxone administration is clear, consideration should be given to ensuring this is clearly communicated by issuing a written statement by Police Scotland and expert medical practitioner(s) about the safety of administering naloxone.
- 6) Police Scotland and the SPF must work together constructively towards a collaborative approach which best supports officers with the carriage of naloxone.
- 7) Follow up initiatives involving partnerships with relevant agencies should be developed and evaluated. Minimum standards and rigorous processes should be implemented across all Police Scotland divisions.
- 8) Police Scotland should work with partners towards securing funding for further research.

7.3 Recommendations for further research

A longer-term outcomes evaluation is proposed to assess factors such as acceptability of naloxone to police officers, rate of administration, the effectiveness of partnership working (e.g. with SAS), the effectiveness of follow up interventions and impact of naloxone and related interventions on drug related deaths. Comparative studies with naloxone initiatives in Scotland, England and Wales would be valuable for sharing learning. Gathering the views of people who have overdosed and received naloxone would provide further insight. Future research should also investigate stigma among police officers and how this might be addressed.

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Appendix A: Scottish Ambulance Service Clinical Response Model

The Scottish Ambulance Service implemented the Clinical Response Model (CRM) for Emergency 999 calls in November 2016. The CRM aims to save more lives by more accurately identifying patients with immediately life-threatening conditions, such as cardiac arrest; and to safely and more effectively send the right type of resource first time to all patients based on their clinical need.

The model institutes a colour-coded system, which categorises 999 calls in terms of clinical need. Cases are coded purple, red, amber, yellow and green.

In less urgent cases, call handlers may spend more time with patients to better understand their health needs and ensure they send the most appropriate resource for their condition and clinical need.

The process is also designed to identify instances when an ambulance is not needed and instead the patient can be referred to an alternative pathway such as GPs, NHS24 or outpatient services. All calls are triaged into the following categories:

Purple: Our most critically ill patients. This is where a patient is identified as having a 10% or more chance of having a cardiac arrest. The actual cardiac arrest rate across this category is approximately 53%.

Red: Our next most serious category where a patient is identified as having a likelihood of cardiac arrest between 1% and 9.9%, or having a need for resuscitation interventions such as airway management above 2%. Currently the cardiac arrest rate in this category is approximately 1.5%.

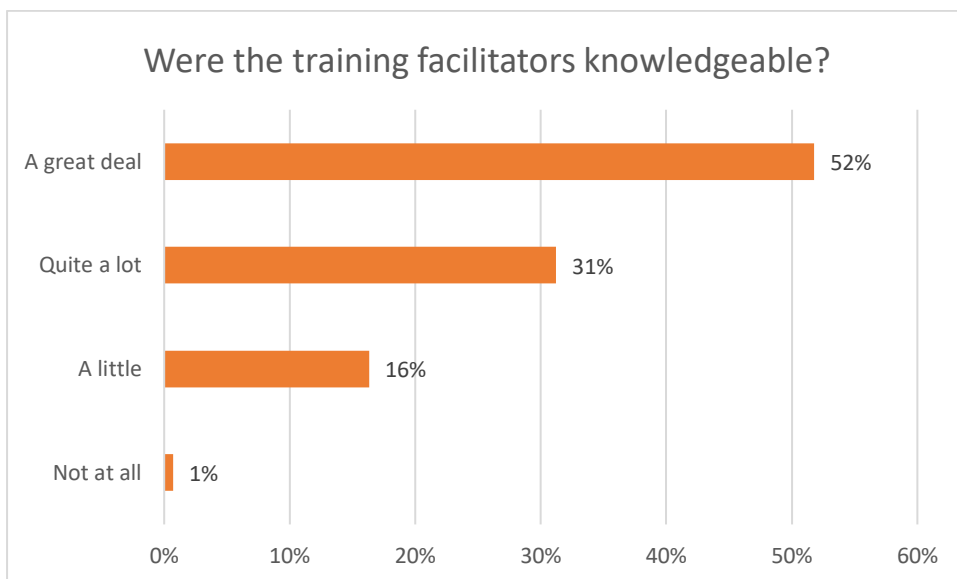
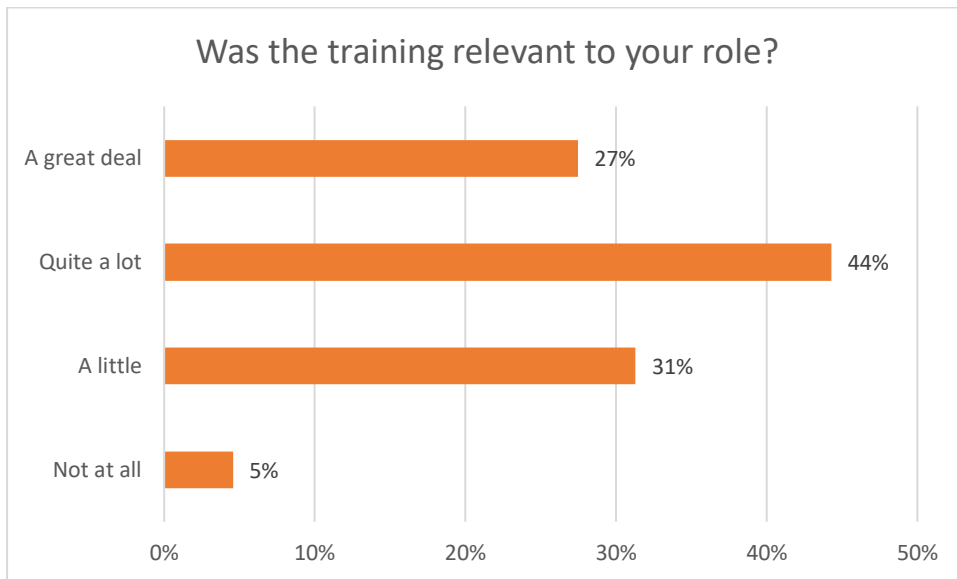
Amber: where a patient is likely to need diagnosis and transport to hospital or specialist care. The cardiac arrest rates for all of these codes is less than 0.5%

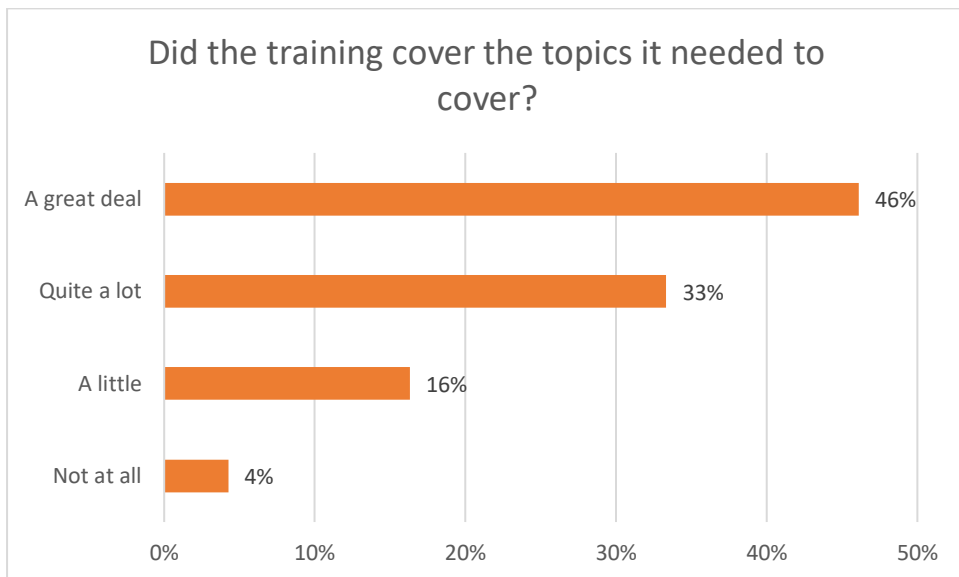
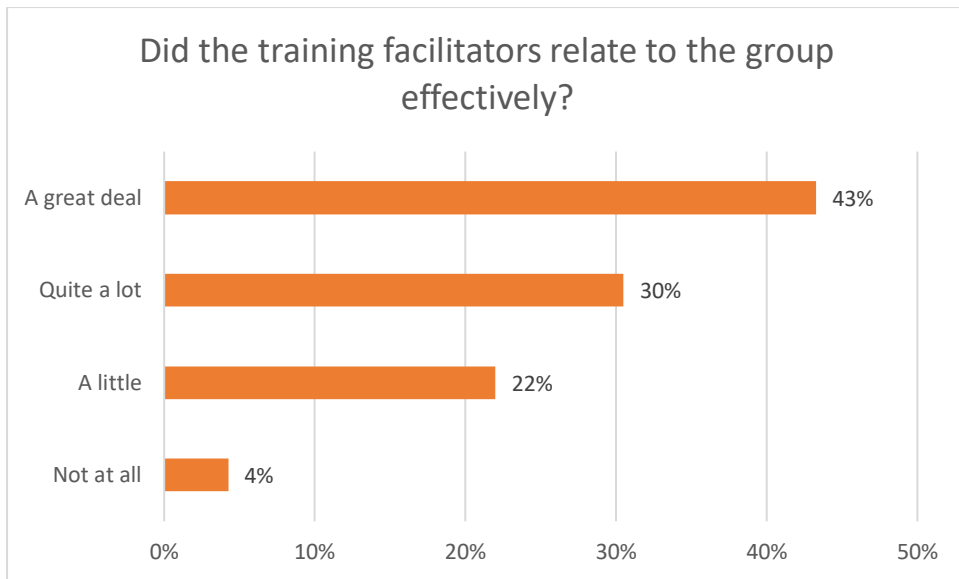
Yellow: a patient who has a need for care but has a very low likelihood of requiring life-saving interventions. For example, patients who have tripped or fallen but not sustained any serious injury.

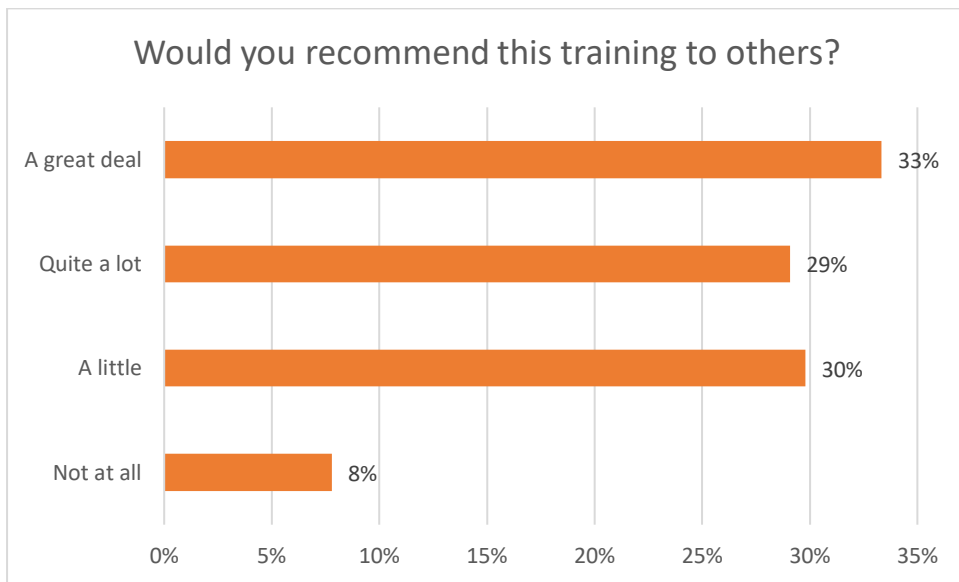
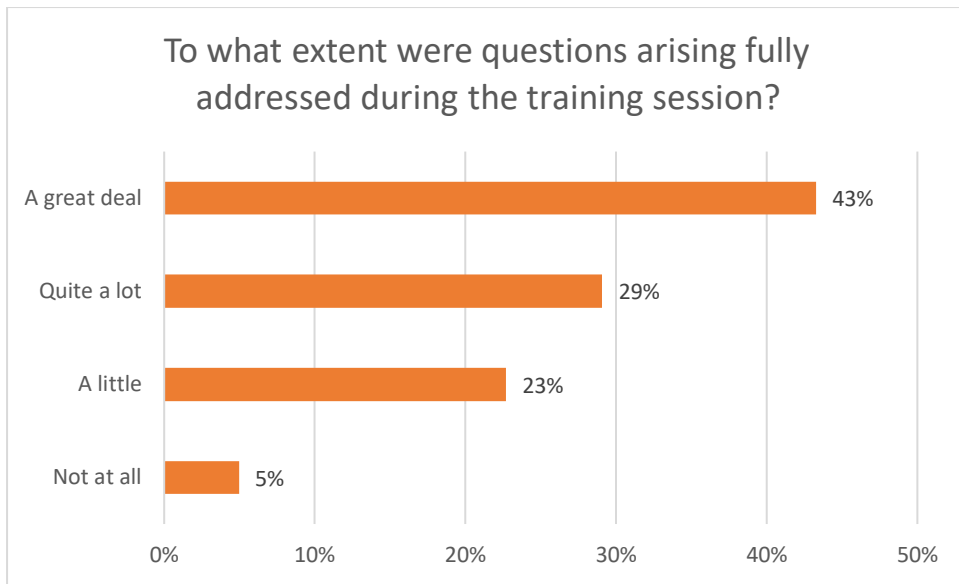
Please note: the response times show total time and do not factor in possible upgrading or downgrading that may occur depending on the patient condition. For example, a call may start out as a yellow call, subsequently be upgraded to a purple call some time later, but only the total time from the first call received is shown. The starting point is always set for the colour category first determined, not the final colour category assigned. Where delays occur, clinical advisors maintain contact with the patient, checking their condition on an ongoing basis, and upgrading when appropriate.

Appendix B: Training Questionnaire Responses

- N=141 responses







Appendix C: Survey Data

BASELINE SURVEY: 26.02.21-31.08.21 (First on 26.02.21, final on 03.08.21)

Recorded logins: **202**

Responses excluded: **35**

Duplicates: 4

No consent forms: 2

No responses beyond consent form: 21

No responses beyond consent form and demographic data: 8

Total Baseline Survey responses for analysis: **167** (23% of 720)

F1 POST TRAINING SURVEY: 11.03.21-31.08.21 (First on 11.03.21, final on 24.08.21)

Recorded logins: **154**

Responses excluded: **9**

No responses beyond consent form: 6

No responses beyond consent form and demographic data: 4

Total F1 Post Training Survey responses for analysis: **144** (20% of 720)

720 officers were trained up to and including 31st August 2021.

F2 FINAL SURVEY: 6.09.21-31.10.21 (First on 15.09.21, final on 29.10.21)

Recorded logins: **106**

Responses excluded: **18**

No responses beyond consent form: 11

No responses beyond consent form and demographic data: 7

Total F12 Final Survey responses for analysis: **88** (11% of 808)

808 officers were trained up to and including 31st October 2021.

Appendix D: Opioid Overdose Knowledge Scale (OOKS)

The scale was adapted from Williams et al. (2013) for intranasal naloxone.

NB: Domains: opioid overdose risk factors (A), signs of an opioid overdose (B), actions to be taken in an opioid overdose (C) and naloxone use (D-I). Answers (T = true; F = false) are indicated in parenthesis

- A. Which of the following factors increase the risk of a heroin (opioid) overdose?** Tick each correct answer
1. Taking larger than usual doses of heroin (T)
 2. Switching from smoking to injecting heroin (T)
 3. Using heroin with other substances, such as alcohol or sleeping pills (T)
 4. Increase in heroin purity (T)
 5. Using heroin again after not having used for a while (T)
 6. Using heroin when no one else is present around (T)
 7. A long history of heroin use (T)
 8. Using heroin again soon after release from prison (T)
 9. Using heroin again after a detoxification treatment (T)
- B. Which of the following are indicators of an opioid overdose?**
1. Having blood-shot eyes (F)
 2. Slow or shallow breathing (T)
 3. Lips, hands or feet turning blue (T)
 4. Loss of consciousness (T)
 5. Unresponsive (T)
 6. Fitting (F)
 7. Deep snoring (T)
 8. Very small pupils (T)
 9. Agitated behaviour (F)
 10. Rapid heartbeat (F)
- C. Which of the following should be done when managing a heroin (opioid) overdose?**
1. Call an ambulance (T)
 2. Stay with the person until an ambulance arrives (T)
 3. Inject the person with salt solution or milk (F)
 4. Give mouth to mouth resuscitation (T)
 5. Give stimulants (e.g. cocaine or black coffee) (F)
 6. Place the person in the recovery position (on their side with mouth clear) (T)
 7. Give naloxone (opioid overdose antidote) (T)
 8. Put the person in a bath of cold water (F)
 9. Check for breathing (T)
 10. Check for blocked airways (nose and mouth) (T)
 11. Put the person in bed to sleep it off (F)

D. What is naloxone used for?

1. To reverse the effects of an opioid overdose (e.g. heroin, methadone) (T)
2. To reverse the effects of an amphetamine overdose (F)
3. To reverse the effects of a cocaine overdose (F)
4. To reverse the effects of any overdose (F)

E. How can naloxone be administered?

Tick each correct answer

1. Into a muscle (intramuscular) (T)
2. Into a vein (intravenous) (T)
3. Under the skin (subcutaneous) (T)
4. Swallowing-liquid (F)
5. Swallowing-tablet (F)
6. Inside the nose (intra-nasal) (T)
7. Don't know

F. How long does naloxone take to start having an effect?

1. 2–3 minutes (T)
2. 6-10 minutes (F)
3. 11-20 minutes (F)
4. 21-40 minutes (F)
5. Don't know

G. How long do the effects of naloxone last for?

1. 20-30 minutes (F)
2. About 4 hours (T)
3. 6 – 12 hours (F)
4. 24 hours (F)
5. Don't know

H. Please tick each correct statement

1. If the first dose of naloxone has no effect a second dose can be given (T)
2. There is no need to call for an ambulance if I know how to manage an overdose (F)
3. Someone can overdose again even after having received naloxone (T)
4. The effect of naloxone is shorter than the effect of heroin and methadone (T)
5. After recovering from an opioid overdose, the person must not take any heroin, but it is OK for them to drink alcohol or take sleeping tablets (F)
6. Naloxone can provoke withdrawal symptoms (T)

Appendix E: Opioid Overdose Attitudes Scale (OOAS)

The scale was adapted from Williams et al. (2013) for intranasal naloxone and for use with police officers.

NB: reverse keyed items indicated with (R)

Completely Agree 5 Agree 4 Unsure 3 Disagree 2 Completely Disagree 1

A. *Competencies to manage an opioid overdose*

1. I already have enough information about how to manage an overdose.
2. I am already able to administer naloxone into someone who has overdosed.
3. I would be able to check that someone who has overdosed was breathing properly.
4. I am going to need more training before I would feel confident to help someone who has overdosed (R).
5. I would be able to perform mouth to mouth resuscitation to someone who has overdosed.
6. I would be able to perform chest compressions to someone who has overdosed.
7. If someone overdoses, I would know what to do to help them.
8. I would be able to place someone who has overdosed in the recovery position.
9. I know very little about how to help someone who has overdosed (R).
10. I would be able to deal effectively with an overdose.

B. *Concerns about managing an opioid overdose*

1. I would be afraid of giving naloxone in case the person becomes aggressive afterwards (R).
2. I would be afraid of doing something wrong in an overdose situation (R).
3. I would be reluctant to use naloxone for fear of precipitating withdrawal symptoms (R).
4. If I tried to help someone who has overdosed, I might accidentally hurt them (R).
5. I would feel safer if I knew that naloxone was around.
6. I would be afraid of suffering a needle stick injury (from the individuals injecting equipment and drug paraphernalia) if I had to administer nasal naloxone (R).

C. *Readiness to intervene in an opioid overdose*

1. Everyone at risk of witnessing an overdose should be given a naloxone supply.
2. I couldn't just watch someone overdose, I would have to do something to help.
3. If someone overdoses, I would call an ambulance but I wouldn't be willing to do anything else (R).
4. Family and friends of drug users should be prepared to deal with an overdose.
5. If I saw an overdose, I would panic and not be able to help (R).
6. If I witnessed an overdose, I would call an ambulance straight away.
7. I would stay with the overdose victim until help arrives.
8. If I saw an overdose, I would feel nervous, but I would still take the necessary actions.
9. I will do whatever is necessary to save someone's life in an overdose situation.
10. If someone overdoses, I want to be able to help them.

Appendix F: Bryan et al. (2016) training questions for police officers

	Agree strongly	Agree slightly	Neither agree or disagree	Disagree slightly	Disagree strongly	Don't know / Prefer not to say	Sub-total
Baseline (N=157)							
Drug dependence is an illness like any other long-term chronic health problem.	23%	32%	16%	10%	16%	3%	100%
People who become dependent on drugs are basically just bad people.	1%	1%	8%	8%	80%	3%	100%
Virtually anyone can become dependent on drugs.	29%	46%	10%	4%	8%	3%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	22%	41%	14%	8%	10%	4%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	9%	24%	29%	11%	19%	7%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	20%	31%	29%	9%	8%	3%	100%
People with drug dependence don't deserve our sympathy.	1%	6%	20%	14%	54%	6%	100%

	Agree strongly	Agree slightly	Neither agree or disagree	Disagree slightly	Disagree strongly	Don't know / Prefer not to say	sub-total
Post-training (N=142)							
Drug dependence is an illness like any other long-term chronic health problem.	24%	33%	7%	8%	23%	4%	100%
People who become dependent on drugs are basically just bad people.	0%	4%	10%	9%	77%	1%	100%
Virtually anyone can become dependent on drugs.	37%	36%	10%	4%	12%	1%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	29%	41%	11%	5%	6%	8%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	18%	24%	29%	10%	17%	3%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	27%	40%	19%	6%	6%	1%	100%
People with drug dependence don't deserve our sympathy.	0%	6%	20%	13%	58%	2%	100%

	Agree strongly	Agree slightly	Neither agree or disagree	Disagree slightly	Disagree strongly	Don't know / Prefer not to say	sub-total
Final (N=80)							
Drug dependence is an illness like any other long-term chronic health problem.	26%	33%	14%	5%	19%	4%	100%
People who become dependent on drugs are basically just bad people.	1%	3%	15%	6%	68%	8%	100%
Virtually anyone can become dependent on drugs.	39%	33%	11%	6%	8%	4%	100%
Drug dependence is often caused by traumatic experiences, such as abuse, poverty or bereavement.	30%	33%	19%	3%	10%	6%	100%
We need to adopt a far more tolerant attitude towards people with a history of drug dependence in our society.	15%	24%	21%	11%	25%	4%	100%
We have a responsibility to provide the best possible care for people with drug dependence.	25%	45%	11%	9%	8%	3%	100%
People with drug dependence don't deserve our sympathy.	5%	8%	19%	18%	49%	3%	100%

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