

**General Practitioner Engagement
with the Scottish National
Naloxone Programme:
A Needs Assessment Project**

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Ms Christiane Pflanz-Sinclair,
Dr Catriona Matheson, and
Dr Lorna Aucott ;
University of Aberdeen
On behalf of The GP Naloxone
Research Team

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Abbreviations

ADP	Alcohol and Drug Partnerships
BLS	Basic Life Support
CPR	Cardio Pulmonary Resuscitation
DRD	Drug-Related Death
ER	Emergency Room
GP	General Practitioner
ISD	Information Services Division
NES	NHS Education for Scotland
NFDRD	National Forum on Drug Related Deaths
NHS	National Health Service
PI	Principal Investigator
PG	Post Graduate
QOF	Quality and Outcomes Framework
RCGP	Royal College of General Practitioners
R & D	Research and Development
SDF	Scottish Drugs Forum
SPCRN	Scottish Primary Care Research Network
SPSS	Statistical Product and Service Solutions

Executive Summary

Background

The Scottish National Naloxone Programme was launched in November 2010 following successful pilots in Scottish sites. The aim of the programme is to reduce Scotland's high number of drug-related deaths (DRDs) caused by opiate overdose. The national programme is currently being implemented through specialist drug services. However, there may be drug users who are not using such services or have limited access to such services. General Practitioners (GPs) are likely to have direct contact with drug using patients who are on opiate replacement treatment or receiving general medical care. Thus, GPs are in an ideal position to either, direct these patients to Naloxone training and supply schemes, or to provide this service themselves. Additionally, they will often be in contact with friends and family of drug users who may be registered at the same practice; this group is a vital part of the national programme as they potentially would be the ones to administer Naloxone, thus 'buying' time for an ambulance to arrive.

This needs assessment was commissioned to ensure GPs' views and knowledge are considered to maximise engagement of GPs in the Scottish National Naloxone Programme.

Aims and objectives

The overall aim of this project was to identify at a national level the best ways to enable GPs to engage effectively with the Scottish National Naloxone Programme. The specific objectives were:

1. To determine current GP knowledge, awareness and attitudes in relation to take-home Naloxone through a nationally representative survey;
2. To describe the needs of GPs in relation to take-home Naloxone and their involvement in the national programme through qualitative interviews;
3. To identify barriers to the delivery of current/proposed models of care from survey and interview responses;
4. To identify enablers to the delivery of current/proposed models of care from survey and interview responses;
5. To highlight the perceived workforce development requirements from survey and qualitative responses;
6. To identify and report on the policy implications of the study overall.

Method

The study used mixed methods comprising a quantitative, postal survey and qualitative telephone interviews. The postal survey was sent to a representative sample of 500 GPs across Scotland. An initial mailing of the four page questionnaire was followed by a postal reminder. A reduced one page questionnaire containing key questions was posted as a final reminder. Telephone interviews were conducted with a purposive sample of GPs across Scotland covering a range of experience of working with drug users and involvement with Naloxone.

Summary of key results

The survey achieved a response rate of 55% (240/439): 183 GPs completed the long questionnaire and a further 57 completed the short questionnaire (61 questionnaires did not reach intended addresses).

This research identified some awareness of the Naloxone programme but very low current levels of involvement by GPs sampled (3.3%), 9% currently provided routine overdose prevention, there was little involvement in distributing information (<20%) and few survey respondents knew who their local Naloxone lead was (8%). However there was tentative willingness to be involved in Naloxone prescribing with half of respondents willing to provide this to drug users or their friends/family.

Further analysis found those with some specialised drug treatment training would be more willing to prescribe Naloxone to drug users.

When asked what might enable the expansion of the national programme into primary care, the respondents rated the following factors as 'very important': 'having supporting evidence' 89.7%; 'appropriate GP training' 82.8%; 'it must be on the local formulary' 67.2%; that 'practice nurses should be trained' 52.3%; 'GPs should be paid' 43.5%; 'it should be part of the Quality and Outcomes Framework' 14.7%. From interviews it became apparent that GPs were not really aware of what primary care Naloxone provision may involve.

The preferred mode of training GPs on DRD prevention was locally delivered (45.8%) followed by online resources (32.3%).

Models of DRD prevention for GPs, including Naloxone prescribing, were explored in interviews and the possibility of opportunistic intervention seemed to be "off their radar". Almost as a default response, many GP respondents considered that current practice of specialist services delivering Naloxone as part of current shared care arrangements seemed to be the preferred choice. Further comments made in interviews and written comments as to why some people are not prepared to prescribe Naloxone suggested attitudinal barriers towards drug users more generally.

Discussion and conclusion

Both interviews and the survey indicated that GPs did not currently feel sufficiently skilled or knowledgeable to be involved in Naloxone training and provision. There was a strong need evident for information on DRDs and associated risk factors, and on the prescribing and use of Naloxone, which should be evidence based. A key barrier identified was the typecasting of Naloxone prescribing as a specialist service that only specialists should provide. Negative attitudes to drug users generally were evident and this potential stigmatisation of drug users as a patient group should be reviewed.

In conclusion, this research identified minimal awareness among GPs of the national programme. GPs tend to classify Naloxone distribution as a specialist service and therefore assume it is not part of their remit. Even those with higher involvement or specialist training in substance misuse considered this a service that is not necessarily relevant to them. However, there were tentative and encouraging signs that GPs would be willing to be more involved in Naloxone distribution if certain enablers were addressed. Most important of these was training, which should be evidence based, and which was recognised by GP respondents as essential.

Issues for consideration

Training for GPs is essential prior to expanding the national programme into General Practice.

Specific training Issues

1. A range of training and information resources should be available to meet the mixed needs of GPs. Both online resources and local evening training sessions are essential.
2. Targeted training through visits by national programme trainers to practices that are not part of a shared care scheme, but situated in areas of known drug use, may be required.
3. Negative attitudes towards drug users generally must be addressed to overcome the potential stigmatisation of this group. Further research is required to test novel approaches to changing entrenched negative attitudes.
4. **All training should:**
 - a. assume a low level of knowledge of illicit drug use generally and Naloxone distribution and administration in particular,
 - b. cover practical aspects of Naloxone administration (who, how, where),
 - c. cover risk factors for DRDs,
 - d. address expressed concerns (risky use of Naloxone/not phoning for an ambulance).

Models of care

5. Enhanced care of substance misuse should include running Naloxone training sessions for known drug users in that practice. (This could include working with specialist services if part of a shared care scheme).
6. All GPs should be made aware that Naloxone packs can be prescribed/supplied to any drug user considered at risk on an opportunistic basis. It must be emphasised this is *not* a specialist service.

General

7. Any communication, resources or training material for GPs regarding Naloxone distribution should emphasise:
 - a. that this is a lifesaving medication,
 - b. there is a good evidence base to support the national programme.
8. An in depth exploration of the stigmatisation of drug users by GPs (and other generalist health professionals) is recommended to enable both the reduction in DRDs and recovery based drug strategy to be delivered.

1. Introduction

1.1 Background

1.1.1 Drug-Related Deaths (DRDs)

Definitions of DRDs can be complex but the simplest, as defined by the General Registrar for Scotland, was a death in which:

“...the underlying cause is poisoning, drug abuse or drug dependence and where any of the substances controlled under the Misuse of Drugs Act (1971) are involved.”¹

The rate of DRDs in Scotland is the highest in the UK and one of the highest in Europe.² Rates have been increasing since 1997 and in 2008, 2009 and 2011 there were more than 500 (just under 500 in 2010).¹ The majority of these deaths involve opiates, usually by injection and concurrent use of benzodiazepines and/or alcohol is common. A number of other risk factors have been identified including: having a long history of drug use; recently released from prison; recently leaving a detoxification programme; newly started on opiate replacement treatment; psychological stress and homelessness.³

A detailed analysis of DRDs in 2010 found that the majority of cases had died in a home; 53.3% in their own home and 26.9% in someone else's. There was someone present at the scene in 62.4% of cases and resuscitation had been attempted by a friend, witness, relative, spouse or partner in approximately a third of cases.⁴

A National Forum on DRDs was established in 2005. This independent group monitors data on DRDs and advises Government on how to address Scotland's high rate of DRDs. The Forum also considers possible interventions. One intervention that had shown potential to be effective was that of take-home Naloxone. A number of successful take-home Naloxone pilots/projects have been conducted across the globe to test the supply of take-home Naloxone to injecting drug users and their families/friends.^{5,6}

1.1.2 The Scottish National Naloxone Programme

Naloxone is a short acting opiate antagonist that reverses the effects of an opiate overdose. It has long been a staple supply of emergency medicine. Although it can be administered intravenously and intra-nasally, it is most frequently administered through the intramuscular route and is not orally active. The Scottish National Naloxone Programme (hereafter 'the national programme') was launched in November 2010 following successful pilots in the Health Boards of Lanarkshire, Glasgow and latterly, Highland.⁶ The programme is centrally coordinated and funded by the Scottish Government, empowering individuals, families, friends and communities to reverse an

opiate overdose. Naloxone provides more time for an ambulance to arrive and further treatment to be given to those in opiate overdose situations.

The explicit aim of the programme is to reduce Scotland's high and increasing number of DRDs caused by opiate overdose. This was also noted as an important component of Scotland's drugs strategy: *The Road to Recovery*.⁷

Scotland is now in its third year of delivering the national programme, with 29 of the 30 Alcohol and Drug Partnerships (ADP) now having developed local delivery models. The Scottish Drugs Forum provides a programme of training and awareness to support local ADPs to deliver take-home Naloxone to those at risk. Training programmes aim to raise awareness of DRDs and risks as well as training drug users and family members on Naloxone administration. Naloxone administration training covers the specific instructions on how to intervene in an overdose emergency and how to administer First Aid, resuscitation and intra-muscular Naloxone.⁸

Data on supply during 2011-12 indicate that 2730 Naloxone packs were supplied in the community of which 87% were supplied to individuals, 11% to service workers and 2% to friends and family of those at risk (with their consent). Of these, 132 packs were to replace packs used on a person at risk of overdose.⁹

1.1.3 The role of primary care

The engagement of General Practitioners is essential to maximise the benefit of the national programme. Naloxone is currently largely being distributed through specialist drug services. However, there may be drug users who are not using such services or perhaps, if in a rural location, may have limited access to such services. Analysis of the 2010 DRDs found that 62% of people had been in contact with drug treatment services prior to their death. This leaves almost one third that had not and even those that had may not have had recent contact.⁴ Thus, primary care distribution is considered essential to enhance access to this life saving medication. The potential involvement of GPs in DRD prevention is not a new concept. Cullen et al. noted the importance of this in 2000.¹⁰ However, in the UK there has been little explicit work to explore this. Furthermore the changes to the GP contract in which GPs are encouraged to specialise may have proved counter-productive. GPs general involvement in providing services to drug users has decreased in Scotland¹¹ which may have impacted on involvement in DRD prevention work.

Not all GPs manage patients with drug dependence as some refer them directly to specialist services. However, all GPs should provide general medical care. Analysis of DRDs in 2010 found that co-morbidity was common with over half of cases having a psychiatric condition and almost half having an alcohol problem.⁴ Furthermore, analysis of the causes of premature mortality in a cohort of drug users in Edinburgh found a range of co-morbid conditions including HIV/hepatitis C induced liver disease, kidney failure, respiratory disease and cardio-vascular disease.¹² With this level of co-morbidity it is very likely that these drug users will have consulted their GP even if they are not seeing them in relation to management of their drug dependency. Thus, GPs would be

in an ideal position to either point these patients to Naloxone administration training or provide this themselves. Additionally, GPs will often be in contact with friends and family who may be registered at the same practice; this group is a vital part of the national programme as they potentially would be required to administer Naloxone, thus 'buying' time for an ambulance to arrive.

However, before extending the national programme into primary care, it is very important to consider GP's current understanding, knowledge and willingness to be involved in DRD prevention and the national programme specifically. Thus, a research project to inform the national programme implementation process was considered essential to ensure GPs' perspectives are taken into account and to identify appropriate mechanisms for implementation, including training.

1.1.4 Baseline activity/Level of engagement of General Practice

To assess the level of GP engagement prior to the start of this commissioned research, a mapping exercise was conducted by NHS Health Scotland across 13 Health Boards in Scotland (excluding the Western Isles which has opted out of the national programme).¹³ This was conducted at Health Board level as GP services are managed at board level. Local Health Board Naloxone coordinators¹ were sent a short pro-forma that sought information on:

- current levels of GP engagement/activity in relation to Naloxone;
- any facilitators or barriers that may have been encountered;
- whether there were any outcomes from such GPs' current activity; and
- what future plans exist for activity around GP engagement with the national programme.

Responses were received from ten of the 13 local Health Board areas. Findings revealed little active GP involvement in the direct supply of Naloxone. Only one Health Board mentioned a GP that they knew supplied Naloxone. Training in this case was not provided in general practice but by a third sector organisation. Only one other Health Board provided local training on and/or the supply of Naloxone within the GP setting, but this was delivered by specialist substance misuse service staff.

Two Health Board areas had no GP involvement and the reason given was because GPs in these areas had decided to opt out of all care of drug users. Several Health Boards ran awareness raising events regarding Naloxone, some of which were well attended by GPs. At the lower level of involvement several Health Boards mentioned that GPs were notified if a patient had been supplied with Naloxone. Involvement of specialist services appeared to be a facilitator to GP engagement. Several future awareness raising events were planned at Health Board level.

¹ Naloxone coordinators are the lead contact people in each NHS Health Board area.

The mapping exercise concluded that the current level of GP involvement with the national programme was low and that it appeared to be facilitated by an existing shared care service structure.¹³

1.2 Aims and objectives

Aim:

The overall aim of this project was to identify at a national level how to enable GPs to engage effectively with the Scottish National Naloxone Programme.

Specific objectives:

1. To determine current GP knowledge, awareness and attitudes in relation to take-home Naloxone through a nationally representative survey;
2. To describe the needs of GPs in relation to take-home Naloxone and their involvement in the national programme through qualitative interviews;
3. To identify barriers to the delivery of current/proposed models of care from survey and interview responses;
4. To identify enablers to the delivery of current/proposed models of care from survey and interview responses;
5. To highlight the perceived workforce development requirements from survey and qualitative responses; and
6. To identify and report on the policy implications of the study overall.

2. Method

2.1 Methodology

The study used mixed methods comprising a quantitative postal survey and qualitative telephone interviews. Mixed methods gave both breadth and depth to the study and ensured a full assessment of the potential issues to be considered in taking the Naloxone GP engagement project forward. Both strands of the study ran concurrently over the period of 1st August – 31st October 2012. The postal survey and the qualitative interviews are presented separately below.

2.2 Survey of GP knowledge, experience and views on engagement in the National Programme

2.2.1 Questionnaire development

A questionnaire was developed following discussions with the Steering Group and familiarisation with the policy documents and literature. An initial draft was circulated around the Steering Group and the strategic project group which oversees the whole GP/Naloxone engagement programme. This initial draft was six pages long. Following revision and reduction to four pages (the maximum considered feasible based on the research team's experience to encourage participation), a pre-pilot version of the questionnaire was completed by a convenience sample of four GPs. The main issue raised was the length of the questionnaire; however it was felt difficult to further reduce the length without losing important content.

The final questionnaire covered:

- current practice relating to drug misuse generally;
- knowledge of DRDs and risk factors;
- awareness, attitudes and involvement in the national programme including factors that might influence GP involvement and views on different models of delivery;
- training experience;
- demographics, including the location of the practice i.e. whether city centre, suburban, town (defined as 4,000-90,000 inhabitants) or rural (defined as <4,000 inhabitants).

A copy of the questionnaire used in the survey is included in appendix 1.

The sampling frame for the project was the general practice population currently working in Scotland. A random sample was identified by the study statistician from the ISD database which lists all GPs in Scotland. A 1 in 10 sample was identified, stratified by NHS area to ensure a geographical spread. 20 were used in the pilot sample and 500 for the main distribution. Prior to the main questionnaire mailing, a letter from Dr Laurence Gruer, Director of Public Health Sciences at NHS Health Scotland was sent to the sample. This letter endorsed the national programme generally and specifically

noted and encouraged response to the questionnaire which followed approximately one week later.

The questionnaire was piloted among 20 GPs. The questionnaire was mailed with a reply paid envelope, an invitation letter and information sheet (appendix 2). The purpose of the pilot was to identify any problems with distribution or the study materials. No changes were required from the pilot so the main distribution continued. Pilot data were not included in the data analysis. The main distribution was mailed the week of August 27, 2012. A postal reminder was sent two weeks later.

2.2.2 Data analysis

Data was entered into an SPSS Statistics 20 database for analysis. Simple descriptive statistics (frequencies and distributions) were calculated. Cross tabulations were conducted for key variables. These were cross tabulations of gender, years of experience as a GP, training of the GP (specialist vs. non specialist), geographical location of their practice and whether or not they are treating drug misusers against attitudes of risk factors in relation to DRDs and the involvement and knowledge of the national programme.

2.2.3 Quality assurance

A research assistant set up an SPSS database which was checked by the study Principle Investigator (PI) prior to any data being entered. Questionnaire data were entered onto the SPSS database by the research assistant and research secretary. Data entry was checked by the statistician and by another researcher (20% of total checked). Data for the short questionnaire was entered by the statistician and checked by another researcher. (Over 12% total check, see section 2.6)

2.3 Qualitative interview study

Interviews were conducted to elicit GPs' views on how to engage the GP community in the national programme through prescribing and accompanying training of drug users in resuscitation and Naloxone administration. Since it was desirable to have national coverage, it was considered most time-efficient to use telephone interviews.

2.3.1 Topic guide development

It is known that GPs are asked to take part in many interviews and surveys and therefore it was felt that a short interview was essential. Thus, a short topic guide was developed with input from the Steering Group, seeking general views on GP involvement, barriers and enablers to involvement as well as some discussion around experience of Naloxone use and drug misuse treatment more generally. A copy is attached in appendix 3.

2.3.2 Sampling and recruitment of interviewees

A purposive sample was used to cover a range of different levels of experience with drug misusers generally and Naloxone specifically as it was considered that this might

influence GPs' views. The research team aimed to recruit specialist GPs in substance misuse (four); prison GPs (four) and non-specialist GPs (12).

One national specialist GP was recruited through the university research team and other specialist GPs were recruited through the RCGP specialist courses in substance misuse. Prison GPs were recruited through the prison service, Scottish Primary Care Research Network (SPCRN) and NHS Health Scotland, and non-specialist GPs were recruited through SPCRN.

Those identified as potential interviewees were contacted by e-mail and sent a study information sheet and invitation either by post or e-mail. This was followed up by e-mail or a telephone call to arrange a suitable time for the interview.

2.3.3 Interview conduct

Interviews were conducted by telephone and tape recorded using specialist recording equipment. Verbal consent was obtained prior to switching on the tape recording equipment. Interviewees were also asked to initial, sign and return a consent form which had been posted to them prior to the interview. Interviews lasted 15-20 minutes.

2.3.4 Data management and analysis

Interview recordings were transcribed. A basic thematic analytical approach was used in which themes were identified and the range of views and experiences under those themes presented. Due to the targeted nature of interviews and the limited time available for full in-depth qualitative analysis, the themes largely followed the topic guide headings although some analytical themes were also identified.

2.3.5 Interview quality assurance

Each transcript was checked for accuracy and references removed to protect anonymity. The first three interviews were listened to by another researcher and feedback given on interview conduct.

2.4 Ethical approval

NHS ethical approval was not required because this study involved health professionals only. However NHS Research and Development approval was required as was ethical approval in the host University. Ethical approval was sought and gained after minor amendments. NHS R&D approval was sought and obtained without amendments being required.

2.5 Problems and Solutions

The research team encountered two problems during data collection. The first problem related to the involvement of specialist GPs as a comparison group in the postal survey which was not possible due to data protection reasons. Instead, all GPs who had attended a level two course RCGP course (n=308) were e-mailed and asked to contact the research team if they were willing to participate. The response to this e-mail was very poor, thus no specialist comparison group was possible.

The second problem was in relation to a lower response rate to the postal questionnaire than was anticipated at the outset of the project. This required an amendment to the study protocol. Initially, when the response rate appeared to be slightly less than anticipated, telephone calls were made to practice managers to ensure the questionnaire had been received and to determine whether the named GP was still present at the practice. This identified that a number of GPs had left, retired, or were on sick or maternity leave. It was hoped these calls might act as a reminder. However, this did not boost response as hoped and therefore it was decided to produce a one page version of the questionnaire to be sent in a third mailing. The Steering Group and the university research team jointly decided which key questions were to be included from the existing questionnaire. These were put into a one page questionnaire (appendix 4) and a new accompanying letter was developed (see appendix 5). An amendment to the original ethics application was made to the University Ethics Board which was passed promptly within two weeks without changes being required. The short version questionnaire was also anonymous to boost response. This was posted in mid-October.

3. Results

3.1 Survey results

There were in total **183/439** responders to the long questionnaire. The baseline was adjusted from 500 to account for 61 questionnaires that were returned because addressees did not receive the questionnaire for the following reasons: wrong address, maternity leave or sickness.

An additional **57** (presumed previous non-responders) returned the short questionnaire (covering seven of the original questions prioritised as most important by the Steering Group and the university research team). Overall then for the most important questions there was a 55% response rate. The different questionnaire forms will be initially investigated for the seven common questions. Where there are major differences these will be further investigated otherwise the results will relate the combined dataset (n=240).

3.1.1 Summary statistics

3.1.1.1 Basic characteristics (Table 1)

Just under half of all the respondents were men. Most (75%) had been GPs for 10 or more years with some (13%) being qualified for no more than four years. The largest proportion (43%) of GPs were based in Towns.

Table 1: Sample Characteristics

Male %:	n=237	45.6%		
Years of experience as a GP: n=183	≤4	5-9	10-19	20+
	23 (12.6%)	22 (12.0%)	62 (33.9%)	76 (41.5%)
Location n=236	City Centre:	Suburban:	Town:	Rural:
	54 (22.9%)	39 (16.5%)	101 (42.8%)	42 (17.8%)

Location defined in method

3.1.1.2 Current practice relating to drug misuse

The proportion of GP's currently treating for drug misuse was 47%. The range of number of patients seen by each GP varied widely from 1 to as much as 72 in a month, but almost half stated they saw fewer than 5. Similarly, the numbers of patients on maintenance programmes within their practice varied from 1 to 470, although about a third estimated this to be 6-20 patients and a further third to be at 21-50. Very few GPs (6.8%) were in dispensing practices. (Table 2)

Table 2: Current Practice Relating to Drug Misuse

Currently treat: n=239	Yes:	47.3%				
Number of drug users YOU see:	Range	<5	6-10	11+	total	
	1-72	37 (48.1%)	15 (19.5%)	25 (32.5%)	77	
Patients on a maintenance programme:	Range	<5	6-20	21-50	51+	total
	1-470	8 (10.8%)	25 (33.8%)	27 (36.5%)	14 (18.9%)	74
Is yours a Dispensing Practice: n=176	Yes:	6.8%				

3.1.2 Drug-Related Deaths (DRDs)

Table 3 shows that just under half (42.6%) of the GPs stated that they did not know how many DRDs there are in Scotland annually. Only 12% correctly identified the range of 500-750 DRDs.

Table 3: Drug-Related Deaths (DRDs)

No. of DRDs n=183	<100	100-250	250-500	500-750	>750	Don't Know	
	4 (2.2%)	33 (18.0%)	35 (19.1%)	22 (12.0%)	11 (6.0%)	78 (42.6%)	
DRD Risk factors*	Risk Factors (n=183)					Agreed	%
	People who inject					167	91.3
	People recently released from prison					159	86.9
	People who take alcohol with other drugs					159	86.9
	People who take benzodiazepines with other drugs					137	74.9
	Homeless people					137	74.9
	Those newly started on opiate replacement					131	71.6
	People who've had additional psychological stress					129	70.5
	People who are under 24 years old †					111	60.7
	People who've recently been on a detox programme					108	59.0
	People who've used illicit drug for a long time					104	56.8
Do you provide overdose prevention: n=177					Yes: 9.0%		

* Ordered as per proportion, not as in questionnaire

† This is not an actual risk factor

Of the various potential risk factors, most GPs agreed that people who inject themselves are at high risk of overdosing followed by patients recently released from prison and those also consuming alcohol.

Only 9% of the respondents provided any overdose prevention service.

3.1.3 The Scottish National Naloxone Programme

Knowledge and practice about the national programme are summarised in Table 4. Only just over half of the respondents had heard of the national programme, mostly from NHS communications. The majority did not have any display or other information about the programme within their practice – only 33 (18%) practices displayed some information, mostly posters and/or leaflets. Very few knew who their local Naloxone lead was (8%) and even fewer had had any involvement with the national programme (3%). Around half (55.2%) of the GPs surveyed knew where to refer drug users for Naloxone. Similarly, 44% and 51% were prepared to prescribe Naloxone to patients and to patients' families/friends respectively. Those not prepared to prescribe were in general concerned about not having sufficient training/knowledge/experience or because their practice has decided not to provide services for drug users or because they felt the addictions team/specialist service should provide this service (see open question responses in appendix 7).

Table 4: Involvement in the national programme

Heard of national programme?:	n=240	Yes:	57.1%		
If yes via	n=112 †	Colleagues	NHS Com:	Other:	
		26 (23.2%)	71 (63.4%)	31 (27.7%)	
Display/give out information on Naloxone?	n=181	Yes: 18.23%			
		If yes how: n=33			
		P	L	P/L	O
		12	7	8	5
					P/L/O
					1
Know who local Naloxone lead is?	n=182	Yes:	8.2%		
Involved with national programme?	n=181	Yes:	3.3%		
Know where to refer for Naloxone?	n=181	Yes:	55.2%		
Prepared to prescribe & explain Naloxone to patients at risk?	n=237	Yes:	No:	Unsure:	
		43.9%	22.4%	33.8%	
Prepared to prescribe Naloxone & explain to family /friend?	n=182	50.5%	22.0%	27.5%	

NHS Com: NHS communications; † Of the 137 who had heard of the program only 112 specified how they had heard of national programme- these were all independent questions and should be treated independently.

P: poster only; **L:** leaflets only; **O:** other only; **P/L:** poster & leaflets **P/L/O:** poster, leaflets & other

GPs were asked about various factors that might facilitate extending the national programme in primary care (Table 5). Training was noted as being important, especially for GPs. Most agreed that the programme needed to be evidence based and two thirds (67%) thought it should be on the local formulary, but perhaps not in the QOF (57% stated this to be 'Not Important'). There was a mixed response as to whether GPs should be paid for the service.

Table 5: Importance of factors in relation to extending the national programme

Factors *	Very Important	Somewhat Important	Not Important	n
Have supporting Evidence	89.7%	9.5%	0.9%	232
GP appropriate training	82.8%	14.2%	3.0%	233
Must be on local formulary	67.2%	24.6%	8.2%	232
Practice Nurses appropriate training	52.3%	30.6%	17.1%	222
GP paid for service	43.5%	39.7%	16.8%	232
Should be included in the QOF †	14.7%	28.4%	56.9%	225

† **QOF**: Quality and outcome Framework. Recall responses differed between questionnaire formats

* Ordering with respect to importance not as per questionnaire

Within the long questionnaire, GPs were offered a choice of two potential delivery models for the national programme. Most of the responding GPs, 158/170 (92.9%), selected Model Two (GPs will only prescribe and others will deliver Basic Life Support (BLS) and Naloxone training) as their preferred choice – rather than Model One (delivering the whole intervention). However, it should be noted that 13 GPs, 7% of the sample, did not give valid responses to this question.

Of those who selected Model Two and gave further responses (n=158), the person they felt should deliver the patient training component of the intervention was generally not the GP (only 11% in favour), or the practice nurse (favoured by 25%) but mostly by some other professional (69%) including community psychiatric nurses, specialist (drugs) nurses or a key worker.

There were mixed views on how such an intervention should be delivered. Of the responders, n=174, 35% thought it should be one-to-one, while 25% thought it should be in small groups and a further 40% had no preference.

Approximately 60% (103/174) of those responding thought take-home Naloxone intervention sessions should be 20-30 minutes long, while 54/174 (31%) thought these should be more brief (<10 minutes). However, of those preferring the brief intervention, responses were split with 24/52 (46%) considering that the intervention would best be delivered opportunistically, as opposed to by appointment.

In terms of debriefing and re-supply once Naloxone had been used, the survey responders mainly thought GPs should be responsible, 99/180 (55%), followed by practice nurses, 24/180 (13.3%), but several, 71 (39.4%), cited others (the open questions in the survey showed that most interviewees believed that this should include an outside service, for example shared-cared clinics, substance misuse service or a psychiatric nurse).

The participants were asked to indicate their attitudes towards a variety of issues concerning the distribution of Naloxone. These, presented in Table 6, illustrate mixed

views: an uncertainty that General Practice distribution of Naloxone would reduce DRDs; more who disagreed that Naloxone might encourage riskier injecting practices; that peer group injecting of Naloxone might reduce seeking an ambulance; that Naloxone is a relatively important use of NHS resources but many being uncertain; and more uncertainty/disagreement about these GPs feeling confident in identifying and addressing overdose risks.

Table 6: Attitudes (%) concerning the distribution of Naloxone.

Statements	n	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
I believe General Practice based distribution of Naloxone is essential to reduce DRDs.	182	6.6	19.8	49.5	14.3	9.9
I am concerned that giving injecting drug users Naloxone might encourage riskier injecting practices.	183	5.5	20.9	24.7	37.9	11.0
I am worried that if Naloxone is administered by a peer to an injecting drug user they might not phone for an ambulance.	181	9.9	40.9	28.7	19.9	0.6
I believe the National Naloxone Programme is an important use of NHS resources.	181	5.5	40.3	44.8	6.6	2.8
I feel confident in identifying and addressing overdose risks.	182	2.7	21.4	37.4	34.1	4.4

3.1.4 Training

The GPs were asked various questions about whether they had ever received training for treating drug dependency. Around one third of those who responded, 61/181 (33.7%), stated that they had some previous specialist drug dependency training (Table 7). However, of this group, seven had not received a recognised training qualification*, leaving 29 GPs stating some recognised specialised training course (defined as RCGP 1 and some local specialist service-run training programme) and a further 25 GPs giving details of more extensive training (for example RCGP 2, Credited Post graduate course).

Table 7: Drug dependency training

n=181	Yes (%)
No training specified	120 (66.3%)
Specified some training	61 (33.7%)
Training considered minimal/ not recognised*	7 (11.5%)
Some specialist training*	29 (47.5%)
More specialist training*	25 (41.0%)

*As defined by the authors.

In contrast, very few, 8/180 (4.4%), have had any specific training on the prevention of DRDs. However, those who had not any had such training were in the main, 84/128 (65.6%), interested in receiving some.

The final question about training was about how DRD prevention training should be delivered (Table 8). Of those who responded, more favoured local evening sessions, although online resources were selected by about a third of respondents.

Table 8: DRD prevention training delivery

Mode of Training *	n= 201
Locally delivered evening training:	(45.8%)
Using Online resources:	(32.3%)
National forum e.g. RCGP:	(3.0%)
Other:	(18.9%)

* Ordered as per proportion, not as in questionnaire

3.1.5 Comparisons of long and Short questionnaires

The seven common questions were investigated for differences between the long and short forms of the questionnaire. These are presented in Appendix 6. Most did not differ between the two formats except for one question:

‘Would you be prepared to prescribe Naloxone and explain its use to a patient at risk of opiate overdose?’ On inspection the difference was that more were ‘unsure’ for the short format compared to definitely ‘yes’ of the long format responders.

Gender was not seen here to be statistically significant ($p=0.086$) between the long and short questionnaires (respectively 48.9% and 35% male). However, the proportions themselves warrant that for further analysis with gender comparisons the effect of the different forms should be considered.

3.1.6 Associations

Several comparisons were highlighted as potentially important and determined prior to analysis as defined by the Steering Group. These were differences between: gender,

experience, training of the responding GPs, the geographical location of their general practice and whether or not they currently treat drug users. These were compared against GPs attitudes towards the ten risk factors relating to DRDs and questions about the national programme, specifically whether they would be prepared to prescribe and explain Naloxone to patients at risk, along with six attitudes towards several factors that might help extend the national programme.

In addition to GPs being asked whether they would be prepared to prescribe and explain Naloxone to a patient at risk, they were also asked a similar question relating to family and friends of a patient. It might be expected that these two questions would be closely associated and hence were also examined.

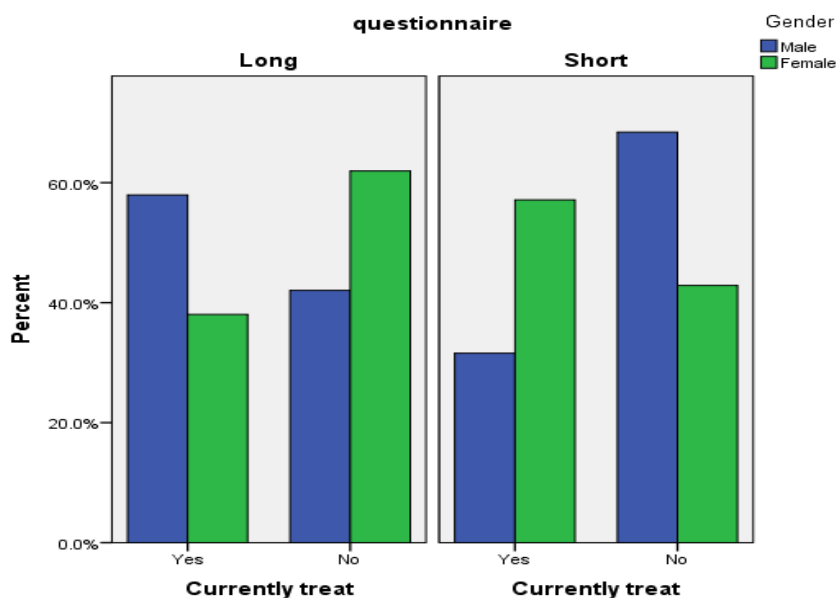
Although all of the above were compared, only significant associations (gender and training) are highlighted in sections 3.1.6.2 and 3.1.6.3.

3.1.6.1 Associations between pre-defined comparative variables

Gender, Experience, Training, Location and Currently Treating were pre-defined comparative variables which were checked for confounding and contradictory associations.

Overall, while the Male: Female ratio was even within this sample, as previously mentioned there were proportionately more women respondents, 35/54, for the short questionnaire. While this was not significant, it did on inspection affect the association between Gender and Currently Treat (see Figure 1).

Figure 1: Gender with proportion currently treating



For the long questionnaire, more men treated drug users whereas for the short questionnaire there were more women. When the long and short questionnaires were combined, the results cancelled each other out. A logistic regression was conducted. Whether or not respondents 'currently treat' drug users was dependent on gender and adjusted for questionnaire format. This indicated significance for gender ($p=0.008$), questionnaire format ($p=0.042$) and the gender x questionnaire interaction ($p=0.005$). This suggested that women and those responding to the short questionnaire were independently less likely to treat drug users. However, in combination a woman responding using the short questionnaire was more likely to be currently treating drug users.

Specialist Training and Practice Location were both significantly associated with those Currently Treating drug users (Tables 9a and 9b) but not significantly with each other (Table 9c) despite the observed higher proportion of those with some specialist training being in city GP practices. Those currently treating drug users were significantly more likely to be in the cities along with having had some recognised training.

Table 9a: Recognised specialist training with 'currently treat'

	Specialist Training (%)			
	None	Some	More	n
Currently Treat (%)‡	34.6	86.2	68.0	47.5
n	127	29	25	181

‡ Pearson Chi-Squared, $p<0.001$

Table 9b: Location with 'currently treat'

	GP Location				
	City	Suburban	Town	Rural	Total
Currently Treat (%) ‡	81.5	48.7	36.6	29.3	47.6
n	54	39	101	41	235

‡ Pearson Chi-Squared, $p<0.001$

Table 9c: Recognised specialist training with location

	GP Location	Specialist Training †			n
		None	Some	More	
	City Centre	51.3%	23.1%	25.6%	30
	Suburban	69.0%	17.2%	13.8%	29
	Town	79.7%	13.9%	6.3%	79
	Rural	70.0%	13.3%	16.7%	30
	Total	70.0%	16.4%	13.8%	177

N	124	29	24
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†Pearson Chi-Squared, p=0.061

These location/training/treating associations, while not surprising, will need to be considered when examining other associations.

3.1.6.2 Gender

With respect to DRDs, regardless of gender, GP's generally agreed in their assessment of importance of the ten given risk factors (Table 3). As these questions were very similar, the significance level was adjusted because there could have been a tendency to give the same response for all. Despite this, the risk factor of 'psychological stress' was highly significant (Continuity Correction Chi-Squared, p=0.002, n=182). The result indicates that more female GPs (82%) considered such stress to be important in relation to increasing the risk of DRDs compared to male GPs (60%).

Table 10: Gender associations with prescribing and explaining to patients

	Yes	No	Unsure	n	p-value
ALL	104 (44.4%)	52 (22.2%)	78 (33.3%)	234	
Male	50 (46.3%)	31 (28.7%)	27 (25.0%)	108	0.017†
Female	54 (42.9%)	21 (16.7%)	51 (40.5%)	91	

†Pearsons Chi-Square to test gender

One of the questions common to both the long and short questionnaire was whether GPs would be prepared to prescribe Naloxone and explain its use to a patient at risk (Table 10). Regardless of gender, about 44% were prepared to prescribe and explain to a patient. However, of those who felt unable to prescribe, female GPs were significantly more likely to indicate that they were unsure while male GPs tended to be split between 'unsure' and 'no'.

Views of the six factors (listed in Table 4) that might help extend the national programme in primary care were examined. Gender responses varied for only two of these (Table 11): 'GPs should be paid' and Naloxone 'must be on the local formulary'. Significantly more women (89%) considered that GP's should be paid for the service, to be 'very/some importance' compared to 77% of men. Similarly, 77% of female GPs thought it 'very important' that Naloxone must be on the local formulary compared to 56% of male GPs, a significantly higher proportion.

Table 11: Gender with importance of factors to extend the programme

Factor		Very important	Somewhat important	Not important	n	p-value†
GPs Paid	ALL	43.7%	39.7%	16.6%	229	p=.017
	Male	45.7%	31.4%	22.9%	105	
	Female	41.9%	46.8%	11.3%	124	
Local Formulary	ALL	67.7%	24.5%	7.9%	229	p=.001
	Male	56.2%	30.5%	13.3%	105	
	Female	77.4%	19.4%	3.2%	124	

† Pearson Chi-Square test

3.1.6.3 Level of specialist training for treatment of drug dependency

Responding GPs were in general agreement about most of the ten risk factors they were asked to consider in relation to DRDs and although there were some differences in responses depending on specialist training, (People who inject (p=0.012), People recently released from prison (p=0.013), People who have recently been on a detox programme (p=0.02)), these would not be considered significant if the p-values are adjusted to account for the identical structure of these questions.

The level of training did influence willingness to prescribe and explain Naloxone to a patient. Only n=219 answered this question from both the long and short questionnaires. While 99 respondents (45%) were willing (Table 12), when broken down into level of training then significantly more (72%) of those with the higher levels were prepared to prescribe Naloxone to patients. This was not significant for the question associated with prescribing/explaining to family/friends of patients.

Table 12: Prepared to prescribe and explain to a patient with training

Training Level	N	Yes	%
None	165	67	(40.6%)
Some	29	14	(48.3%)
More	25	18	(72.0%)
Total	219	99	(45.2%)

Chi-squared p=0.026

3.1.6.4 Prepared to prescribe and explain Naloxone

As seen earlier (Table 4) only around 50% of the GPs were prepared to prescribe and explain Naloxone to either the patient at risk or to the patients' family/friends. Table 13 shows further that of those prepared to prescribe and explain to the patient, 91% would also be prepared to prescribe/explain to family/friends. This was a significant trend

response such that their response to one would reliably determine their response to the other.

Table 13: Prepared to prescribe and explain to a patient and family/friends

Patient	Family and Friends		Unsure	Total
	yes	no		
Yes	79 (90.8%)	2 (2.3%)	6 (6.9%)	87 (48.6%)
No	4 (10.0%)	33 (82.5%)	3 (7.5%)	40 (22.2%)
unsure	7 (13.2%)	5 (9.4%)	41 (77.4%)	53 (29.4%)
Total	90 (50.3%)	40 (22.1%)	50 (27.6%)	180

Chi-Squared for Trend, $p < 0.001$

3.2 Telephone interview findings

3.2.1 Interviewee demographics

25 GPs were approached by email and asked if they would be willing to participate in an interview; none of them were part of the survey sample. 23 of the 25 initially agreed and in the end, 17 of them took part in an interview (Table 15). One was a face-to-face interview and sixteen interviews were conducted over the telephone. Demographics of the GPs that were interviewed are listed in table 14 below:

Table 14: Interviewee demographics

Gender	
Male	15
Female	2
Type of GP	
Prison GP	3
Specialist GP	8
Non-specialist GP	6
Health Board	
Grampian	3
Lothian	4
Tayside	1
Lanarkshire	1
Greater Glasgow & Clyde	3
Shetland	2
Highland	2
Dumfries & Galloway	1

3.2.2 Interview data management and analysis

Interviews lasted about 15-20 minutes and largely followed a predetermined topic guide. A basic thematic approach was used in which the following themes were identified:

- Experience with treating substance misuse patients and experience with Naloxone
- Willingness to participate in the national programme
- Resources
- Opportunistic Naloxone
- Models of delivery in practice
- Barriers to Naloxone

3.2.2.1 Experience with treating substance misuse patients and experience with Naloxone

Each interviewee was asked about their involvement with substance misuse patients and their experience with Naloxone to establish a profile of experience in this area.

Most interviewees have had some contact with substance misuse patients, either in previous posts or in their current position. Approximately half of the interviewees have had experience with Naloxone as an opiate antagonist, one interviewee reported they had used Naloxone to treat multiple sclerosis (low dose naltrexone is used in this way) and two carry it in their medical bag for emergencies; one of the two makes use of it 'at least once per year' while the other has not used it once at the time of interview.

3.2.2.2 Experience with treating substance misuse patients

Most of the interviewees reported that they have had many years of experience in treating drug users, although two of them are now working at a practice which does not have any. Another interviewee spent the last 11 years specifically working with homeless people which include:

'...a very high frequency of substance misuse problems....' (2)

One interviewee explained that while there were several drug users at his practice, he was not the first point of contact and therefore not involved in any maintenance treatment. This was done by the other GPs and only when they were unavailable or if a drug related problem emerged during a consultation, he would take over. Another interviewee commented that they used to treat drug users until recently when the Health Board introduced shared-care clinics and now all their drug using patients are referred there.

3.2.2.3 Experience with Naloxone

Overall, there was little experience with Naloxone as an antagonist for opiate overdose. Some interviewees had heard of the national programme but were not aware of details. One interviewee mentioned that he used Naloxone a long time ago before there were strict guidelines surrounding its usage; he only administered it in ER. Another interviewee reported that he was involved in the original prescribing of Naloxone for home use many years ago.

One interviewee, who mentioned that he carries Naloxone in his medical bag for opportunistic delivery in the practice, has some patients that are involved in the Naloxone project through the shared-care clinic which gives him indirect access to Naloxone.

Another interviewee, who was very much in favour of Naloxone distribution through general practice, reported that he has seen many drug users who had overdosed and were:

‘...in extreme coma, and it just reversed immediately with Naloxone...’ (13)

One interviewee with 21 years of experience in treating drug users reported that his practice did at one time have a national programme. This was run by a substance misuse nurse who left and once she was gone, the programme was stopped. There was no GP involvement in this service.

Another interviewee reported that they have been doing Naloxone training in their practice for about a year and this is led by the psychiatric nurse. In a different practice, an interviewee reported that he would occasionally prescribe Naloxone on the recommendation of a substance misuse nurse (from the substance misuse service), or because a drug user who had been prescribed Naloxone in the past, would come for re-supply.

Several interviewees had not heard about the national programme prior to being approached for the interview. In this sense, one interviewee reported that he has approximately 60 patients registered as having substance misuse problems but has never prescribed Naloxone as a ‘rescue’ medication; he only heard about the programme when contacted for the interview. Similarly, another interviewee with drug users in his practice said:

‘I have not prescribed Naloxone as that specific prescription would be led by the specialist services.I have not heard about the Scottish Naloxone programme before speaking to you.’ (11)

And again along those lines another interviewee mentioned that he works with patients on a methadone programme and has:

‘...heard of the Naloxone programme, which is going [on] in Aberdeen I think and Lanarkshire’ (9) but has not yet prescribed it.

One interviewee explained that while his practice does not provide direct treatment, they display posters and leaflets in the waiting area and will suggest that the patient makes contact with appropriate services.

GPs who work in prisons were more familiar with the use of Naloxone and the national programme. One of them reported that within the prison service, he provides inmates

with substance misuse services which include counselling, prescribing and dose adjustment. Within this remit he has heard about the national programme starting and has prescribed Naloxone but not received any specific information. In the practice where he works, he does not prescribe Naloxone as this is done through the substance misuse service. Another interviewee was familiar with Naloxone in his practice and has:

‘...actually discussed it with a couple of patients...two of them have expressed an interest...I got the feeling that there was quite a keenness to have it as widely circulated as possible within the drug misuse community so I’ve got no real problem prescribing Naloxone for some of the individuals concerned..’ (16).

He did, however, mention that he felt slightly apprehensive to just write a prescription without having had a proper training about issues surrounding Naloxone.

3.2.2.4 Willingness to participate in the National Programme

A further topic which emerged from the interviews was the willingness of interviewees to participate in the national programme. Most of the interviewees that were not already involved were in favour of participation, however, there was distinct uncertainty surrounding the programme and its delivery in primary care. Responses given centred around the following areas:

- Willing to participate but no need at own practice.
- Willing to participate but unsure of what is involved.
- Willing to participate but would like to see financial benefit.
- Willing to participate but others reluctant to get involved.
- Willing to participate after avoidable drug death.
- Willing to participate but need clinical evidence of its usefulness.
- Prison GPs already involved with Naloxone.

3.2.2.4.1 Willing to participate but no need at own practice

Several interviewees did not see the need for this in their own practice. They explained that currently either no or only a very small number of drug users are registered and these would be referred to a drug misuse service. However, one of them commented that if the national programme was rolled out in primary care as a new service, ‘he would be happy to learn more about it and if it seems appropriate.....willing to participate.’ (1) This was echoed by another interviewee:

‘I would be prepared to be involved if having read more about it, if I thought it was the right thing to do.....’ (4)

A similar opinion was voiced by another interviewee who commented that he knew several GPs who only have a small number of patients in their practice, and if a drug dependency problem comes into this, they would treat the patient to their best ability but:

'...wouldn't necessarily extend out to...more complex range of things....they would refer that on to the local drugs team...' (13)

3.2.2.4.2 Willing to participate but unsure of what is involved

One interviewee, who has not had any involvement yet but would be prepared to participate, commented that he has to discuss this with the other GPs in his practice before committing. This was echoed by other interviewees, one in particular commented that he would be keen to participate as he considers this to be a 'good thing' (9) but would have to discuss with colleagues prior to implementation. Currently, his practice has Naloxone available and if a patient turns up in a severe overdose state, it will be administered but it is not routinely used and never prescribed as take-home kit; another interviewee who has patients that are involved in the Naloxone project (through another source) would be willing to participate in the prescribing and speaking to family and peers.

One interviewee, who expressed an interest in the programme, mentioned that in his practice drug using patients are encouraged to attend Naloxone training sessions where they can learn about take-home supplies. These training sessions are provided through the drug misuse service. While he seemed to be keen on the programme, he did not think that prescribing through general practice was required:

'...we are directing people towards obtaining supplies from pharmacies and things like that. I don't see ourselves prescribing it directly to people, there doesn't seem to be any particular need to do that, as far as I understand the programme.' (10)

This interest in Naloxone was expressed by many interviewees although it was evident that a lot more information is required:

'....there would need to be more detail of how that would be implemented in practices, and what that would look like for individual practices to sign up.' (11)

And:

'Yes, definitely.....but I would have concerns if it became something that the GP's themselves had to deliver if there weren't resources to do that, because it's another time....' (12)

And:

'I like to think that Naloxone sounds like a good idea and certainly worth considering....' (7)

And:

'I think it's....a really good idea....I don't feel I have the expertise to deliver it.' (12)

3.2.2.4.3 Willing to participate but would like to see financial benefit

Three interviewees mentioned that they would be willing to participate if there was a financial benefit:

'If the financial aspects were favourable.....then the motivation for being involved with a heavy time commitment group of patients, might...be attractive.' (11)

Similar comments were given by different interviewees:

'...we've had a few discussions.....about this Naloxone programme....it takes up quite a lot of time, so what we decided is, we would be quite happy to participate if there are financial incentives...' (9)

'GP's can get paid additionally for dealing with drug users...and we do, we get quite a lot of income from that, although I have to say, you know, that more or less covers the doctor time and not much else.' (13)

3.2.2.4.4 Willing to participate but others reluctant to get involved

A couple of interviewees mentioned that while they would be interested to participate, they are concerned about the lack of interest of their colleagues:

'.....and my other colleagues are not very supportive.....My colleagues are just trying to not see any drug users at all; they would probably be uncomfortable with lack of knowledge.' (6)

Another interviewee offered to arrange an interview with one of his partners who does not want to treat drug using patients and opposes Naloxone administration. He later e-mailed to say that this person had actively declined to discuss his negative views.

The same message came from another interviewee who said:

'...some of my colleagues are uncomfortable dealing with them, I don't know the barriers, just...they are uncomfortable...they can't deal with that.' (14)

3.2.2.4.5 Willing to participate after avoidable drug death

One GP mentioned that they recently experienced a drug death in their community which may have been preventable if Naloxone had been available:

'I think it would be a really good idea, we've had a death, quite recently, from an overdose in our practice.....If he had Naloxone, that guy would not have been dead...' (7)

3.2.2.4.6 Willing to participate but need clinical evidence of its usefulness

It was also highlighted that, before implementing a new service which requires additional resources, there have to be:

‘...clear clinical benefits.....’ (11)

The same concerns were mentioned by other interviewees:

‘I’m not a specialist...but from my understanding there’s been studies done that show it does reduce overdose death...if there is good evidence then I would be supportive of it.’ (4)

And:

‘..if you are looking after drug users, you...have to be convinced by the evidence, that by providing maintenance drugs you are doing more good than harm.... there’s the same question about Naloxone.....you have to be convinced that giving people an extra drug to limit damage is going to do more good than harmand then I think it’s worth doing in practice.’ (15)

3.2.2.4.7 Prison interviewees already involved with Naloxone

Several prison GPs were interviewed for this study and one of them gave insight to issues involved in the national programme:

‘We...train our patients who are homeless or in temporary accommodation...families, friends, partners have often split from them.....and then [they]...become our patients.....prime focus is on...patients themselves, although information to be effective is no good for the patient themselves. They are encouraged to make others around them aware that they have this [Naloxone]...the focus was still mainly on educating the patient, and the patient was then to make others aware that they had the Naloxone...’(2)

Another prison GP commented that while he agrees in principle, he does not know enough about the programme to judge if it was better to have it delivered through general practice or through a specialist service. In his involvement at the prison, he would have several counselling sessions with prisoners regarding dosage adjustments and risk reduction in terms of overdose throughout their incarceration. This would not necessarily result in a Naloxone prescription at that time but it would give them an awareness of availability at time of discharge. Part of the problem is that most prisoners do not consider themselves to be at risk:

‘..I have yet to find one who thinks it will happen to them. Everyone has heard about it happening to other people.... but a number of prisoners have been agreeable to take the kit but they tend to think that they will never need it.’ (8)

Another interviewee who works in a prison commented that inmates with an addiction problem will attend a short course prior to release to give them an awareness of the problem and at the same time receive a Naloxone take-home kit. However, there is no

contact with family or peers and it is up to the inmate to relate this information to someone else after release.

Another interviewee reported that in the past they did not stock large amounts of Naloxone in prison. However, this was changed after an incident where a prisoner broke into the drug cupboard room; several prisoners overdosed and there was not enough Naloxone available at that time:

'...we did run out of Naloxone that time' so '...now we have a stock of medication and also a number of the emergency pharmacies.'(14)

3.2.2.5 Resources

When implementing a new service, resources are often a factor which impacts the willingness to participate in this and therefore interviewees were asked if they thought that additional resources were required and the following range of views were expressed:

- No additional resources required.
- Unsure if additional resources required.
- Additional resources required.

3.2.2.5.1 No additional resources required

Most interviewees did not think that they needed additional resources. This was partly due to them thinking that this service should not be delivered through primary care. One interviewee did not consider the service necessary for his practice as he has no drug using patients so additional resources would not be an implication for him. Another interviewee felt that the current set up for his drug using patients where they have open access to recovery hubs and are encouraged to self-present are sufficient and there was no need to introduce this into primary care; hence no additional resources would be required.

Another interviewee did not think that this service is something which needs to be overly resourced:

'These people are all fairly expert in injecting themselves anyway, so it would be a matter of producing a pack of some sort and giving them written information.'(7)

3.2.2.5.2 Unsure if additional resources required

Several interviewees were unsure if they needed any additional resources for the national programme because they were not the main decision makers in the practice or simply did not know what would be involved:

'I don't really know' (4), 'I've got no idea...' (5), 'I don't think we would need extra resources...' (7), 'I don't think there's anything particular that we would need... in terms of resources for us, I don't think there's anything we need.' (10)

With this in mind, they quoted time constraints, lack of space and finding someone to deliver the service as factors which would require additional resources.

3.2.2.5.3 Additional resources required

Some interviewees did envisage that the introduction of a whole new service would require additional resources 'for a couple of years, until we can get going, and running the service.' (9) In the current environment, 'things are getting tighter and tighter.....it's a bit like spinning plates....it's all held in there just by the effort of several people' (13)

And:

'....if you've got a patient coming in...the way to do this properly means that you have to take X amount of time and tick X number of boxes, the big issue there is time, and employing someone who can meet that time' (11),

'...you would need somebody....who could do whatever training was required to...probably need to find out what was involved...' (12)

These responses all signify a lack of knowledge about the programme as a whole and there was a sense that further information was desired to outline all of the practicalities that will be involved.

3.2.2.6 Opportunistic Naloxone

During the interview it was asked how they might deal with a patient who presented for an appointment, for example, with a minor infection which requires antibiotic therapy. If, during the consultation, the GP suspected that they were facing a drug user who may be at risk of overdose, would they address this appropriately? Most of the interviewees were concerned that this was not within their level of confidence or, as in the case of prison GPs, not aware this service was offered out with the prison service and therefore would not approach patients about Naloxone in the practice, even if they did appear to have a drug user at risk of overdose. Several views were expressed within this theme:

- Not a scenario which would happen in my practice.
- Approach clinical need and refer for drug problem.
- Approach and deal with drug problem.
- Assess if there is willingness to change behaviour.

3.2.2.6.1 Not a scenario which would happen in practice

Three interviewees said that they could not imagine this in their practice as none of them have drug users as a patient group. Two of them work in small rural practices in fairly affluent areas where they know every patient. While one of them has two patients registered for drug dependency, they get their prescriptions from the local drug misuse service and he has no involvement.

The other one commented that such a scenario would involve a new or temporary patient and prescribing Naloxone would not cross his mind. If the patient wanted a methadone prescription, he would refer, other than that he would treat the patient to the best of his ability and:

'...be hoping they didn't raise the whole drug misuse thing at all, because I wouldn't be sure, I wouldn't know, and if they did raise the whole drug misuse and were looking for a prescription for something, we'd say no...' (1)

This view also hints drug misuse is 'off the radar' of some interviewees. Those interviewees that rarely come across drug users e.g. in rural practices do not feel informed or skilled enough to address issues that might arise with drug users generally and Naloxone is grouped with drug misuse.

3.2.2.6.2 Approach clinical need and refer for drug problem

Several interviewees did not feel that they have the skills or knowledge to deal with such a situation comfortably and would refer the patient to a substance misuse facility:

'If I knew exactly what to do I would treat them.....I would mention that I run a clinic and....once we have the system set up with the Naloxone, I would of course include that.' (6)

Others mentioned that they would approach the situation, deal with specific clinical needs, possibly discuss methadone prescribing and then refer to a substance misuse clinic where they can get Naloxone:

'...and if there are specific substance misuse problems....you may refer them onto more specialist services, or the practice substance misuse clinic' (11)

Some interviewees mentioned that while they did not feel comfortable with Naloxone, they would deliver an opportunistic brief intervention if they considered this to be appropriate.

3.2.2.6.3 Raising the issue of drug use

One interviewee from an inner city practice which has close links to addiction services, reported that all patients are routinely asked about drug use at the time of joining the practice; therefore it is unlikely that drug problems will be picked up 'by coincidence' (5). If a patient has ever used drugs of any kind, this will be discussed and if they are regular drug users:

'The advantages of having Naloxone available....will be discussed and....will be strongly encouraged to have Naloxone at home. '(5)

Another GP reported that if a patient appeared to be a drug user but has come for something else, he will ask outright if they are taking heroin:

'Often you can tell, sometimes people turn up at their doctors stoned, they are usually not in a great frame of mind to consider doing anything, and they usually do not have much interest in engaging with anything at that particular time.' (7).

One interviewee stated that such a scenario may offer an opportunity to mention Naloxone, and if required, it can be supplied opportunistically.

3.2.2.6.4 Assess if there is willingness to change behaviour

Another interviewee mentioned that this would be confronted and assessed to see if the patient wants to change their drug using behaviour.

'if they have no intention of changing their lifestyle...I would, maybe give them some very brief advice and move on, but if they indicated that they wanted to change, or get help, then I would probably refer them to the drug and alcohol teams initially.'(12)

Once again, these comments highlight the need for better information and training so that general practitioners can gain confidence in treating drug using patients.

3.2.2.7 Models of delivery in practice

Interviewees were asked how they could envisage the national programme to be best delivered in practice. Interviewees generally had difficulty answering this question as there seemed to be some confusion to its scope and delivery. Responses fell into two distinct categories:

- A specialised substance misuse service
- Non-specialist (GP, nurse or specialist worker)

3.2.2.7.1 A specialised substance misuse service

Many interviewees seemed to think that the national programme was a service which should not be delivered in primary care; they were of the opinion that existing models of shared-care programmes and substance misuse services were sufficient and there was no need to change this. For example:

'...if practices are already signed up to a service where they are looking after drug addicts, I can't see any problem about the prescribing and training and administration being built onto that...' (1).

'The way that it's done in the practice just now.....is between the GP and drug support workers, so I would think that it would be reasonable to be doing it along the same kind of lines..' (4)

'I think the best mode of delivery is to convey to patients that it is through the addiction support...and then the kit is provided by the local pharmacy....it would not be delivered through our practice.'(5)

One GP was of the opinion that drug misuse is a psychiatric problem and should be referred and treated in secondary care as an addiction disease. In his practice during a 10 minute consultation, there are:

'A lot of issues coming up...with drug users...we really we struggle very, very much to even profile the bare minimum of that and at the moment, Naloxone...is not on the agenda..' (13)

The view that it should be dealt with by specialists also extended to the delivery of training for drug users/families on administration and emergency care.

'When it comes to the training itself it is probably not directly the role of people within the practice... far better to have someone coming in from outside...' (10)

'I can see the benefits of a more specialist role.....I think that is a far more sensible approach than for example these patients being dealt with randomly by random GP's who have just a little bit of knowledge about this..' (11):

3.2.2.7.2 Non-specialist (GP, nurse or specialist worker)

Several interviewees thought that anyone from clinician, nurse or specialist worker could deliver this service; the key issue here was that the person who has the most contact with the patient should look after the training and Naloxone prescription. One interviewee thought that a nurse with special interest should work with a GP in close enough proximity so that:

'...they develop some sort of good working relationship...and confidence in each other's approaches.' (15)

Others commented that everyone involved with the patient should be trained up on the programme. This was echoed by another interviewee who suggested that a GP with specialist interest, one of the nurses or practice staff could do the training and:

'...have a separate side clinic to invite in all the patients at risk of DRD to see if they would want to get Naloxone prescribed.' (3)

Another GP commented that at their practice two specialist nurses and a voluntary organisation have first contact with drug using patients; and after an initial assessment, further treatment would be through to the mental health department. He commented that none of his colleagues are keen to be involved (6).

A further suggestion for delivery was to invite drug using patients in for a longer appointment or in a group with families and discuss this. It should be delivered through

a specialist nurse. He mentioned that if a patient requested Naloxone, he would offer further information and then refer to the specialist nurse.

Another suggestion was that it should be provided either in general practice or specialist services because:

'...there may be some patients who are genuinely medically well, and they only contact the health services through their methadone prescription....if you wait for them to come along to see us, they may never come.' (8)

Equally it should also be provided on an opportunistic basis, because:

'...the trouble is if you make it either or, you could miss out a group of patients who could potentially benefit...' (8)

Two interviewees had very strong views about the programme being GP and not nurse led. One of them commented:

'...it's not going to be nurse led [meaning specialist substance misuse nurse], we may take in advice of substance misuse nurse, if possible, but it's going to be GP led.' (9)

This opinion was contrasted in another practice where the GP favours a specialist nurse over the GP as they would be:

'...involved with the patients anyway...they know them, and can assess whether it's appropriate for them, and then can deliver it, and they have longer appointments with them....and probably more expertise in it.' (12)

One interviewee who has many years of experience in treating drug using patients, works with a model where GPs do the prescription, psychiatric nurses do the referrals and then a consulting psychiatrist visits the practice once a month for a consultation with the referred patients; GPs will then be advised on how to best treat drug dependent cases with additional mental health problems. Currently, this model does not include Naloxone provision but if it is to be implemented in primary care, this particular interviewee felt that everyone should be involved and it:

'...has to be opportunistic....linked in with other services....you have to take the opportunity because you don't necessarily get people queuing up and...saying, I haven't got my Naloxone kit, and the only logical place to do it is, to do it when you prescribe methadone because that's the one time we know...the patient is listening to us..' (13)

Again, these varying opinions highlight the fact that more information is needed and models of delivery should be presented in detail so that GPs can decide if and how Naloxone would fit into their current practice.

3.2.2.8 Barriers to Naloxone

A key objective of this study was to identify barriers for GPs to engage effectively with the national programme. More specifically, one of the objectives was to identify real and perceived barriers to the delivery of current/proposed models of care. All interviewees were asked about barriers which they could foresee. Responses given were:

- this is not part of GP package,
- training issues,
- reluctance to prescribe drug which will be given by another person,
- lack of education,
- reluctance to treat drug users,
- Naloxone can be seen as a safety net,
- storage of Naloxone,
- time, space and money.

These are presented in more detail below.

3.2.2.8.1 Not part of the GP package

It was noted that substance misuse has not traditionally been core GP medicine. The GP contract of 2004 contained a separate element which started to recognise and remunerate the effort that went into the care of substance misuse problems. Various quality criteria had to be met by the GPs to be able to claim that remuneration. For this reason several interviewees felt that Naloxone should be part of the direct enhanced service package, otherwise a significant proportion of GPs who do not want to get involved will opt out. One interviewee said:

‘...well, we don’t have to do that, so we don’t want to get involved in that...’ (2)

This was echoed by another interviewee who works in a very small rural practice; he would not sign up to the national programme because it was not needed for his practice and it would be just another thing:

‘...hoisted on us, we’ve got enough work as it is’. (1)

A comment by another interviewee reflected that this issue should be dealt with at Health Board level:

‘...If financially, on a national level, this becomes a directly enhanced service...and is mandatory for practices, then that immediately puts a different spin on the whole implementation question. ‘(11)

And another interviewee commented:

‘...there are no additional resources to prescribe Naloxone, or to talk to patients about Naloxone, it’s not part of the enhanced service contract...’ (13)

The same GP highlighted that because patients do not know about it, they do not ask for it, so this makes it even less interesting from the GPs side:

'Patients have come in saying they've got a pain here, they've got a pain there...they need some methadone....they want to talk about this...they don't come in saying please give me some Naloxone.' (13)

These comments suggest that if GPs can avoid involvement they will, on the basis of need and managing workload.

3.2.2.8.2 Training

Appropriate Cardio Pulmonary Resuscitation (CPR) training, which is not part of the primary care structure at a small rural practice, was perceived as another barrier. One practice has a limited number of staff training places each year and it would be difficult to resource the training for all members of staff. However, he felt that if the programme was rolled out and included CPR training, it may also have a positive impact on other areas such as cardiac rehabilitation. This concern with CPR training was mentioned by several interviewees and one in particular said:

'I would suggest that this would need to be thought through centrally, so that there are programmes where people could be referred, hopefully locally, for CPR training' (1)

3.2.2.8.3 Reluctance to prescribe drug which will be given by another person

Another perceived barrier noted was the reluctance to prescribe an injectable medication to 'chaotic' drug users. One interviewee commented that as Naloxone would not actually be used by the drug user himself but by somebody else, other people have to be engaged and this may be difficult as drug users often have a limited and chaotic social circle. This interviewee thought that it was:

'...a bit pointless, I'm prescribing it for you, but you are not going to be the person to administer it.' (3)

This was echoed by another GP who said:

'But the most important thing is the carers, and their willingness and that is what we see as a barrier.'(9)

3.2.2.8.4 Education

Several interviewees commented that they believed that these challenges can be overcome by education but this was seen as a further barrier as it may be difficult to engage GPs to attend educational sessions; they may not engage out of 'fear of looking like an idiot.' (6). It may also take up too much time to engage in the Naloxone education (7) and this may be a barrier, similarly 'you could have an individual GP whose skill level or knowledge base doesn't match up with what's needed..' (11) According to another interviewee:

'A substantial number of GPs will not want to be involved with drug users, because they work in an area where there isn't a lot of drug use and they don't feel they have the skills.' (13)

One interviewee reported that many GPs receive a large number of messages each day about 'what they should and what they shouldn't do' from various disciplines and sometimes is difficult to distinguish between what is important and what is not important. In this sense, GPs need to be educated and convinced that this is something important to do:

'...because GP's are largely motivated by the interest in the patients, and what they think will benefit them most in that 10 minute consultation...and often overdose....is a conspiracy of silence...it's not going to happen...they are not at risk.' (12)

Another interviewee who is experienced in Naloxone distribution through prison work suggested that there should be clear guidelines:

'...saying...the things to do, a, b and c, and then they shouldn't have a problem dealing with it like they do with any other illness, they should get proper lectures and education...even if they refuse to treat drug addicts, this is a drug addict emergency, not anything else, and that's a part of the service to the community and should be included.' (14)

And another GP would like to see:

'...an on-site presentation, possibly at our own drug misuse clinic would be really useful, and we could do that, that way you could circulate the information to a wide number of people and see what their level of interest is...' (16)

3.2.2.8.5 Naloxone can be seen as a safety net

A big concern was that if drug users have access to Naloxone, they might be tempted to use more heroin 'as a kind of safety net' and it may encourage them to use heroin along with methadone.

'People may think it is safe as long as I've got the Naloxone there.' (7)

One interviewee, who has had personal experience with Naloxone, was concerned that the effect of Naloxone wears off, a further dose may be needed and it can still result in a potentially fatal overdose:

'...so I think there would be a concern that potentially somebody might get a single dose of Naloxone and an ambulance not be phoned and it could potentially then be dangerous.' (3)

And another interviewee was concerned that:

'...there is always the risk that you will get people who previously had been frightened to take heroin, when maybe they were taking methadone as well, that if they got Naloxone around, they might feel it is safer to do.' (7)

And along those lines, another interviewee commented that while the drug using patient may see Naloxone as a safety net, family/peer may not be willing to be involved, hence this perceived safety net is dangerous as no one would be available to give Naloxone in case of overdose.

3.2.2.8.6 Reluctance to treat drug users

Practices that do not prescribe methadone may feel that engagement with the national programme is too close to becoming involved with drug users. This opinion was voiced by several interviewees, one of whom said:

'A couple of my partners are not happy at all dealing with people who are on drugs'. (9)

A similar comment relating to reluctance to treat drug users was made by another interviewee:

'Not wanting to treat drug users....it's got to do with their own attitude....which is pretty shameful, but there you go.'(10)

And:

'...an individual GP prejudice...that they may not want to be involved with that type of patient...' (11)

However, according to one interviewee, even if GPs do not want to treat drug users, they can give out a possible life saving treatment:

'...they could say well, there's nothing I can do for you, other than refer you, but then here you can do that to make yourself safer...' (6)

Similarly, the characteristics of drug users were seen as another barrier by several interviewees as these could be quite disruptive individuals with behavioural problems which could affect other patients in the waiting area. Some GP's may not have the particular premises to accommodate this:

'...those people might be concerned it might change the atmosphere in the practice, if they had more of these people coming in, it might concern other patients...' (12)

This was expressed by another interviewee who commented that drug dependant patients have an overriding need for drugs and therefore they cannot be trusted:

'If I started treating a drug user here, I'm not particularly keen to do it, because we have such a cosy safe set up, patients come in and out of the rooms, personal property is left around the place safely....so it alters the things quite fundamentally..' (15)

One interviewee simply stated that as he has no known drug users registered in his practice, and could not imagine anyone requesting Naloxone; therefore there are no barriers for him as his patients only come for non-drug related problems. He would however be willing to:

'...keep some Naloxone there, in our emergency cupboard', just in case it was needed unexpectedly.' (14)

3.2.2.8.7 Storage of Naloxone

Several interviewees mentioned storage as another barrier (8, 3, 16); one of them felt more comfortable to just prescribe Naloxone but not storing the kit as he was concerned this could:-

'...create a kind of surge of demand, especially when it's launched. Also, I don't know where it's going to be stored, and who is going to be using it..' (8)

And along the same lines one interviewee raised his concerns about costs of the unit and storage and duration of viability, not just at his practice but also at the patient's house:

'I think they [the drug using patient] are probably more used to looking at Naloxone administration through *Pulp Fiction*, than they are through educational programmes...and I'd probably need a little bit more information on that.' (16)

3.2.2.9 Time, space and money

Time and lack of resource was mentioned by several interviewees as a barrier:

'...time is one barrier...' (7)

Another interviewee said:

'...some of the barriers may be physical space, so for example our practice is quite limited in building size and room availability.....There may [be] time and cost constraints as in, do we have time, can we afford to have someone provide this service..' (11)

This was also mentioned by a third interviewee:

'...I suppose worries about the time implications, if it was deemed to be something that GP's had to deliver without any extra resources... I think the main thing would be the resource issue.' (12)

While there seems to be a lot of confusion surrounding content and delivery of the national programme, three comments of sympathetic interviewees summed up what they viewed as the importance of it all:

‘drug deaths have gone up again and the more that this is out there, the more chance of giving people a second chance to get better, you can’t help dead drug users really, can you?’ (3)

And:

‘...at the end of the day, they are all somebody’s children... it’s very important that GP’s are pro-active and sympathetic in helping...as much as possible.’ (5)

‘...and trying to make them safer in an environment where they may use illicit drugs’. (10)

One interviewee thought the biggest problem with the national programme is that it is an antidote for heroin which was ‘yesterday’s problem....tomorrow’s problem is different so we are dealing beautifully with a world that no longer exists.’ (16).

3.2.3 Analytical themes

In addition to the themes emerging within each topic there were some analytical themes that emerged across all themes. These are described as: lack of knowledge; ‘typecasting’; ‘off the radar’ and negative attitudes. Typecasting refers to the immediate grouping of Naloxone as a specialised substance misuse service and linked to this is the ‘off the radar’ theme in which some GPs have no need to ever think of injecting drug users and the potential need for Naloxone. This is more likely to apply to practices that do not think they have drug users on their practice lists. Negative attitudes were clearly evident in some interviews and questionnaires. These themes will be integrated into the following discussion of findings.

4. Discussion

4.1 Summary

This research identified some awareness of the national programme, but very low current levels of involvement by GPs sampled (3.4%), little involvement in distributing information (<20%), and limited awareness as to who the local Naloxone lead was (8%). However there was tentative willingness to be involved in Naloxone prescribing with half of respondents willing to provide this to drug users or their friends/family, although both interviews and the survey indicated that GPs did not currently feel sufficiently skilled or knowledgeable to provide Naloxone. There was a strong need evident for information on DRDs, risk factors, the prescribing and use of Naloxone, all of which should be evidence based. A key barrier identified was the typecasting of Naloxone prescribing as a specialist service that only specialists can provide.

Further analysis found those with some, but not all, specialised drug treatment training had greater awareness of some of the risk factors for DRD (being an injector, recently released from prison or recently completed detoxification).

When asked what might enable the expansion of the national programme into primary care, the respondents rated the following factors as 'very important': having supporting evidence 89.7%; appropriate training 82.8%; it must be on the local formulary 67.2%; that practice nurses should be trained 52.3%; GPs should be paid 43.5%; it should be part of the quality and outcomes framework 14.7%. From interviews, it became apparent that GPs were not really aware of what Naloxone provision may involve.

4.2 Strengths and weaknesses

The key strength of this project was that the use of mixed methods allowed both national representation and breadth of information alongside complementary in-depth exploration through interviews. The survey sample was nationally representative to ensure Health Board variations were accounted for. The response rate to the survey was initially lower than anticipated, but ultimately boosted by the short questionnaire sent as a third reminder. Generating a good response rate from GPs for postal questionnaires is very challenging. This was anticipated and several steps were taken to boost response and helped achieve the final response of 55% which compares well with more recent GP survey response rates.¹¹

Regarding how representative the sample was of the GP population, the sample compares well with the national GP population, in which 47.8% are male.¹⁴ In addition, a previous survey of Scottish GPs also found the biggest proportion working in towns (41.5% compared to 44.1% in this survey), with similar proportions located across City Centre, suburban or rural practices.¹¹

The use of the short questionnaire to boost response and the data available also raised some interesting methodological considerations. Chi-squared tests were conducted to determine whether the respondents to the short questionnaire were different from the

main (long) questionnaire respondents. Some differences were noted: more females responded to the short questionnaire (although not significant) but these GPs were also more likely to be treating drug users. Gender differences were also noted in the response to some questions i.e. female GPs were more aware of psychological stress as a risk factor. These findings may have no relevance to the national programme. However, findings may be indicative of gender difference in the GP population that requires wider reflection and possibly further research.

Telephone interviews had been previously used by the research team and were considered to work well with GPs who were generally focussed, efficient and articulate in their responses. This made the process more efficient overall. However, there was difficulty contacting and scheduling GPs to arrange times for interviews. On the plus side, if an interview had to be postponed or cancelled (as happened on several occasions) it was better by phone than the researcher wasting a journey to a practice. Obtaining the specialist and prison sample was relatively simple as researchers could draw on contacts and resources in the team. However, the non-specialist sample used the Primary Care Research Network and did not yield as many potential interviewees as hoped (less than our target of 12). This may be indicative of the general difficulties in engaging non-specialist GPs in substance misuse related issues.

Unfortunately, there was a gender imbalance in the interview sample. Only two female GPs were actually interviewed although six were approached, and five had agreed but the interview could not be conducted in the timescale. There is some evidence that gender can influence GPs' level of sympathy towards drug users generally¹¹ and one study has shown that female GPs with experience of DRD on their caseload showed greater prevalence of grief-related reactions.¹⁵ This indicates that if the sample included more females, there may have been slightly different views. However, this was driven by the response to invites to participate. A longer timescale would have allowed a proactive approach to recruiting more female GPs.

4.3 Consideration of key findings

4.3.1 Experience with treating substance misusing patients and Naloxone

The proportion of the survey respondents currently treating drug users (47%) was comparable to a previous Scottish survey (43.7%)⁶. This indicates the survey response was representative of the GP population in Scotland in this respect.

The level of current experience in the national programme was very low with only six individuals being involved. Interviews also sought information on whether participants had any experience specifically of Naloxone prescribing. About half of interviewees had some experience but this was not generally recent or part of the national programme. Only one had actually actively prescribed it for potential emergency use.

4.3.2 Awareness of DRDs, risk factors and the National Programme

The knowledge of the number of DRDs in Scotland was surprisingly poor considering how much publicity this had received in the recent press; coincidentally, there had been considerable media coverage on the radio and in the press the week before the initial mailing.¹⁶ Despite this potentially heightened awareness, a considerable proportion of GPs surveyed (42.5%) did not know the correct number of DRDs in Scotland. The number of DRDs has been increasing year on year and was over 500 in 2011 (and 2008 & 2009).¹ Only 12% correctly categorised the number in the 500-750 range. Even if we generously assume those answering in the wider range of 250-750 have some knowledge this still leaves 69% that clearly did not know.

Confidence in identifying and addressing overdose risk was low with just 24% GPs agreeing they felt sufficiently confident to do this at the time of this survey. There was clearly a knowledge gap with 60% wrongly identifying people under 24 years as being at increased risk. Other known risk factors were correctly identified by the majority of respondents, but there was less certainty in some factors, namely in those who have used illicit drugs for a long time and those who have recently been on a detoxification programme. These are clearly factors that should be covered in any training that derives from this study.

Almost two thirds of respondents had heard of the national programme, mostly from NHS Communications. This is encouraging as it indicates that NHS Scotland has had some impact in trying to broaden awareness. Unfortunately, when combined with the lack of knowledge on DRD risk factors it appears that awareness is at a very superficial level in which GPs have heard of the programme but perhaps not felt the necessity to get more involved. This is supported by the few respondents (just 8%) who knew who their local Naloxone lead was or who provided information on Naloxone.

4.3.3 Attitudes and willingness to participate in the National Programme

There was clear uncertainty from survey and interview data about whether general practice was a suitable place for the national programme. However, there was also willingness in that almost half were prepared to prescribe Naloxone and explain it to those at risk (or family/friends). A fifth of respondents were definitely not willing and there was a relatively high proportion that answered 'unsure' to this specific question on willingness which indicates that they may be willing if certain requirements were fulfilled. Reasons given for being unsure were similar to those who stated that they were definitely not willing and were either around information/training needs or because all drug misuse services are managed by someone else e.g. another GP who is a specialist or the specialist drug treatment services. These views that 'someone else does this' were very much echoed in interviews in which there was clear 'typecasting' of Naloxone prescribing with drug treatment services. This was also evident in the NHS Health Scotland scoping exercise of Health Board involvement in which the lack of GP involvement was put down to local GPs deciding to opt out of care of drug users.¹³ This is discussed further under 'Models of Delivery' below.

In the survey, GPs were asked whether they believed general practice based distribution of Naloxone was essential to reduce DRDs. Half of respondents were uncertain indicating again that they still need more information to convince them that they have a role to play rather than leaving it to specialist practitioners and services. This was again further echoed in interviews in which non specialist GPs tended to frame their responses to questions around whether they would deliver Naloxone within their current set up for substance misuse services. For example, several said there was no need for them to do it as others covered substance misuse. This is further evidence of typecasting of Naloxone as a specialist service.

Interview data also suggested that practices that do not prescribe methadone may feel that engagement with the national programme is too close to becoming involved with drug users more generally and they have actively decided not to do this. This strongly indicates an underlying attitudinal barrier in parts of the GP population.

A strong emerging theme was that of negative attitudes towards drug users which could be interpreted as the stigmatisation of drug users using current definitions.¹⁷ This is linked to the other emerging themes of typecasting of anything to do with drug misuse as a specialist service. It appears that some GP's may be rather too keen to 'offload' what is perceived as a difficult group in their entirety to specialist services rather than considering the non-specialist care that is also required and whether overdose prevention is part of this.

The existing literature on GPs attitudes to treating drug users is old and this evidence suggests attitudes may not have improved over time. This is in contrast to pharmacists who have demonstrated significantly more positive attitudes to treating drug users over time that is associated with their increased involvement and experience.¹⁸ Training GPs in drug misuse is known to improve attitudes.¹⁹ Indeed this study also indicates those with more training as likely to be more willing to provide Naloxone to drug users. This is considered further under enablers (section 4.3.5.2).

Three interviewees mentioned that they would like to see a financial reimbursement to deliver a Naloxone service. Others noted that it fitted into the substance misuse enhanced care package and this could 'easily' be added to that.

As the interview sample was purposively sampled to include those more likely to be involved and informed (i.e. specialist and prison GPs) there was more experience of treating drug misusers. The main motivating factor in one GP practice wanting to provide Naloxone was the experience of what was considered an avoidable death of a patient. This finding concurs with other evidence in Scotland that experience of a DRD on the caseload of staff does cause a grief related response.¹⁵ It may be that this type of experiential evidence could be used to motivate others to participate.

4.3.4 Models of delivery in practice

Two models were presented in the survey and respondents were asked to note their preference. The preferred model was one in which GPs only prescribed and someone

else delivers the training component. Specialist services in the form of specialist nurses were the preferred people to deliver the training component. There was little enthusiasm evident to involve practice nurses.

There were very split views of whether group or 'one to one' delivery was preferable. However, the majority thought the training intervention would need to be 20-30 minutes. Those preferring a brief intervention did consider opportunistic delivery to be preferable, although opinion was split. The interviews specifically probed the idea of opportunistic Naloxone if a GP found a patient was a drug user (e.g. when consulting for something else). However, this scenario was perceived by many GPs to be unrealistic. For some, this was because they said they know all their patients and see such an event as unlikely. For others, they said all drug users were seen by specialist services. Thus, there was a sense that this was off their radar and they were blinkered to the possibility as they were not used to managing drug users. This has implications for the potential of an opportunistic, brief intervention type of delivery as considerable information would need to be imparted on the risks of DRD to even raise this issue in many GPs consciousness.

Other models exist already in parts of Scotland: for example in Aberdeen a pharmacy prescribes Naloxone and training is provided by a specialist needle exchange. One interviewee had experience of this system which was why he would simply refer people at risk to the pharmacy. Although this was perceived by the individual to work well, it was not explored in any depth and no other interviewees suggested such a model. However, there was concern expressed about storage and pharmacy dispensing from a standard prescription was perhaps not being considered.

It was noted in interviews that the intervention could be provided by a range of health professionals, not just GPs but specialist nurses who may or may not be working alongside GPs. This highlights the point that every healthcare professional that has contact with drug users should be aware of reducing overdose risk as a priority. There is a danger that there could be an assumption that someone else is addressing this therefore 'I do not have to'. The only way to avoid drug users falling through these potential cracks is for every health professional (specialist services/nurses, general practitioners and potentially pharmacists) to review the risks of DRDs with individual drug users as they present.

4.3.5 Barriers and enablers to GP delivery of the National Programme

4.3.5.1 Barriers

Barriers were explored in detail during interviews. A range of barriers was raised: lack of skills/training/information which is discussed in detail below under enablers; believing this was not part of the GP package (as has been discussed already); safety concerns; attitudinal barriers; time restrictions; money issues and practical concerns over storage, space etc.

Concerns were expressed in interviews that drug users might actually engage in more risky practice by knowing Naloxone was available. However, this was also explored in the survey and just a quarter of respondents agreed with this. Although a minority, it is a sizeable minority and should be addressed in any subsequent training. A further concern was that people might delay calling for an ambulance if Naloxone is administered. However, it is part of the training that accompanies Naloxone distribution that an ambulance is always called and the reasons for this are explained. Many participants will not be aware of this as they are not familiar with the existing training.

The stigmatisation of drug users was touched on above under attitudes. Stigmatisation of drug users has been considered in detail in recent years. The UK Drug Policy Commission (UKDPC) explored how stigmatisation of drug users manifests itself.¹⁷ The UKDPC report acknowledged that health professionals can stigmatise drug users and these findings support that view. The author, Lloyd, concluded that viewing drug misuse as a health issue rather than a crime resulted in less stigmatisation.¹⁷ This approach would complement these findings in that GPs want to preserve life and therefore emphasising the lifesaving nature of supplying take-home Naloxone could be used as a way of convincing GPs to provide this intervention to people at risk.

Attitudinal and time barriers clearly exist and are difficult to address. Education and training are one way to overcome attitudinal barriers but there is a challenge in making such people attend and the training might need to be taken to them. However, there may also be a need to try to work with GPs who do not want to treat drug users or do not feel they have the time. Opportunistic Naloxone prescribing with a brief intervention to those at risk could be delivered without much commitment to further involvement but only if these GPs were convinced it would be sufficiently safe and could save lives.

Practical barriers around storage and space are an issue that could be addressed through training.

One further barrier that was raised in interviews was that drug users themselves are not interested in discussing their personal risk of a DRD because they do not consider themselves to be at risk. There is some supportive literature around this concept given that 94.5% of fatalities were considered to be non-deliberate.²⁰ This barrier, whether real or perceived, needs to be addressed in GP training.

Some of the barriers raised by the interviewees are issues that are already addressed in the available training.

4.3.5.2 Enablers

Enablers were explored in the questionnaire by asking about the relative importance of a range of factors to consider when implementing the national programme. Training and the need for evidence supporting the national programme were considered very important by a substantial majority of questionnaire respondents. The majority did not think delivery of the national programme should be part of the Quality and Outcomes Framework (QOF). This is perhaps not surprising as inclusion in the QOF would be

strongly encouraging GPs to do something that many do not feel skilled to do or do not want to do.

Training emerged as a key enabler from both qualitative and quantitative data. Training is important to both impart information and increase skills. The need for effective training of clinicians (not just general practitioners) was also recognised in the English pilots of a cascading model of training in overdose prevention and take-home Naloxone.²¹ The cascading model of training professionals in the English pilots proved challenging.²² From the findings in this study there were some key features training should have given the GP population. Firstly, the strong need for information to have supporting evidence. Only 1% of the survey respondents did not consider this important. Interview data suggested that there was a need to appeal to GPs intrinsically caring nature by emphasising the key message that Naloxone is lifesaving. Training also needs to be delivered sensitively as from interviews it was clear that some GPs might feel almost embarrassed by their lack of knowledge. Furthermore it should not be assumed that GPs have any level of knowledge of how to administer Naloxone. Even those who are used to working with drugs users have rarely been involved in Naloxone administration themselves or training others how to administer it.

The survey gave useful information about the preferred training medium. Approximately a third felt online resources would be useful and just under half preferred locally delivered training.

4.4 Policy implications

The delivery of the national programme in primary care will need considerable training to support it as already detailed above. However, this research has raised other wider issues that policy makers might want to reflect on. Firstly, allowing specialised GP services within the GP contract appears to have facilitated the non-participation of generalist GPs in caring for drug users. Drug users suffer multi-morbidity and die prematurely from a range of health conditions as well as DRDs,¹² thus they need general medical care as well as specialist drug treatment. Findings suggest that general medical care may be underprovided which requires further assessment. This is not only important to address the health issues of individuals, but also the delivery of the Recovery focussed drug strategy.⁷ Furthermore, such gaps in medical care potentially may impact negatively on health inequalities.

The negative attitudes of some GPs may underpin the lack of willingness to provide Naloxone specifically but may also underpin the lack of willingness to have any involvement with drug users. No recent published research has considered whether or not GPs in the UK stigmatise drug users as a patient group in this way and further research is required. It is only by addressing stigmatisation of drug users that effective recovery-based services can be delivered.

5. Conclusions

5.1 Conclusion

This research has identified minimal awareness among GPs of the national programme. Current levels of knowledge and experience of DRD and of Naloxone use are low, and information needs are high. GPs tend to classify Naloxone provision as a specialist service and therefore assume it is not part of their remit. Even those with higher involvement of specialist training in substance misuse consider this a service that is not relevant to them. However, there were tentative and encouraging signs that some GPs would be willing to be more involved in Naloxone distribution if certain enablers were addressed. Most important of these was training which was recognised by GP participants as essential and the research identified some specific suggestions about what this should include.

This research identified that negative attitudes towards drug users are a clear barrier to any GP care of this patient group that needs to be considered beyond the expansion of the national programme.

Greater involvement of GPs in a generalist model of Naloxone supply as a basic lifesaving intervention, that is not confined to specialist services, might have a knock on benefit by giving them experience of this patient group that so many GPs currently distance themselves from. By exposing GPs to this patient group on the specific matter of avoiding DRDs, attitudinal barriers may start to be overcome.

5.2 Issues for consideration

Training for GPs is essential prior to expanding the national programme into General Practice.

5.2.1 Specific training issues

1. A range of training and information resources should be available to meet the mixed needs of GPs. Both online resources and local evening training sessions are essential.
2. Targeted training by national programme trainers through visits to practices that are not part of a shared-care scheme, but situated in areas of known drug use, may be required.
3. Negative attitudes towards drug users generally must be addressed to overcome the stigmatisation of this group. Further research is required to test novel approaches to changing entrenched negative attitudes.

5.2.2 Training should:

- assume a low level of knowledge of drug use generally and Naloxone distribution and administration in particular,
- cover practical aspects of Naloxone administration (who, how, where),
- cover risk factors for DRDs,
- address expressed concerns (risky use of Naloxone/not phoning for an ambulance).

5.2.3 Models of Naloxone delivery

- Enhanced care of substance misuse should include running Naloxone training sessions for known drug users in that practice. (This could include working with specialist services if part of a shared care scheme).
- All GPs should be made aware that Naloxone packs can be prescribed/supplied to any drug user considered at risk on an opportunistic basis. It must be emphasised this is *not* a specialist service.

5.2.4 General

- Any communication, resources or training material for GPs regarding Naloxone distribution should emphasise:
 - that this is a lifesaving medication,
 - there is good evidence to support the national programme.
- An in depth exploration of the stigmatisation of drug users by GPs (and other generalist health professionals) is recommended to enable both the reduction in DRDs and recovery based drug strategy to be delivered.

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