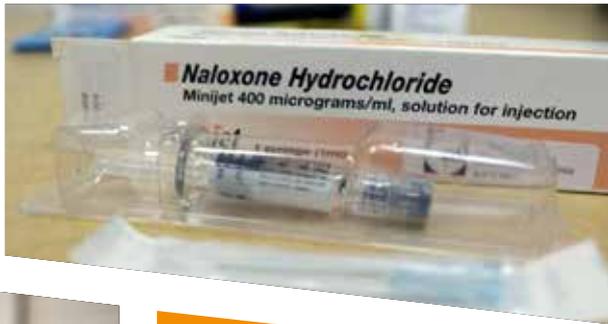


# Evaluation of the WA Peer Naloxone Project – Final Report



Marina Nelson  
Simon Lenton  
Paul Dietze  
Anna Olsen  
Seraina Agramunt

August 2016



## Preventing harmful drug use in Australia

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**August 2016**

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## TABLE OF CONTENTS

|  |          |
|--|----------|
| <b>ACKNOWLEDGEMENTS .....</b>  | <b>I</b> |
| <b>LIST OF TABLES .....</b>  | <b>V</b> |
| <b>1 EXECUTIVE SUMMARY .....</b>   | <b>1</b> |
| 1.1 The WA Peer Naloxone Project (WAPNP) .....   | 1        |
| 1.2 The key findings against the primary evaluation questions.....   | 1        |
| 1.2.1 Was naloxone used appropriately by people in a non-medical setting within the<br>WA context?.....            | 2        |
| 1.2.2 Did the program result in successful overdose reversals?.....  | 3        |
| 1.2.3 Should the program continue and, if so, what changes in the program and its<br>contexts are desirable? ..... | 3        |
| <b>2 INTRODUCTION.....</b>   | <b>5</b> |
| 2.1 The WA Peer Naloxone Program overview .....  | 5        |
| 2.2 Background – Peer Naloxone programs .....  | 6        |
| <b>3 METHOD.....</b>   | <b>8</b> |
| 3.1 Aims.....  | 8        |
| 3.2 Study Design .....   | 8        |
| 3.3 Procedure .....  | 8        |
| 3.3.1 Measures .....   | 9        |
| 3.3.2 OOKS overdose risk factors subscale .....  | 9        |
| 3.3.3 OOKS overdose signs subscale.....  | 10       |
| 3.3.4 OOKS overdose actions subscale.....  | 10       |
| 3.3.5 OOKS naloxone knowledge subscale .....   | 11       |
| 3.3.6 OOKS overall score.....  | 12       |
| 3.4 Analysis .....   | 13       |
| 3.4.1 Descriptive statistics and qualitative data.....   | 13       |

---

---

---

|          |   |           |
|----------|---|-----------|
| 3.4.2    | Pre-training/post-training comparisons and knowledge retention analysis .....                               | 13        |
| 3.4.3    | Single-item analyses .....  | 13        |
| <b>4</b> | <b>RESULTS.....</b>   | <b>14</b> |
| 4.1      | Descriptive statistics .....  | 15        |
| 4.1.1    | Training location and attendance .....  | 15        |
| 4.1.2    | Participant characteristics and drug use history .....  | 15        |
| 4.2      | Quantitative Comparisons.....   | 20        |
| 4.2.1    | Pre-training/post-training comparisons .....  | 20        |
| 4.2.2    | Knowledge retention .....   | 21        |
| 4.2.3    | OOKS risks subscale individual item analysis .....  | 23        |
| 4.2.4    | OOKS signs subscale individual item analysis.....   | 24        |
| 4.2.5    | OOKS actions subscale individual item analysis.....   | 27        |
| 4.2.6    | OOKS naloxone subscale individual item analysis.....  | 30        |
| 4.2.7    | Willingness to train others .....   | 38        |
| 4.2.8    | Follow-up questionnaire specific responses .....  | 38        |
| 4.2.9    | Qualitative feedback about the training .....   | 46        |
| 4.3      | Overdoses.....  | 49        |
| 4.3.1    | Witnessed overdoses .....   | 51        |
| 4.3.2    | Personal overdoses .....  | 66        |
| <b>5</b> | <b>DISCUSSION.....</b>  | <b>68</b> |
| 5.1      | Was naloxone used appropriately by people in a non-medical setting within the<br>WA context? .....          | 68        |
| 5.2      | Did the program result in successful overdose reversals? .....  | 69        |
| 5.3      | Did the program have any unintended consequences, either positive or negative? .....                        | 70        |
| 5.4      | Should the program continue and, if so, what changes in the program and its<br>contexts are desirable?..... | 70        |
| 5.5      | Overall conclusions .....   | 71        |
| <b>6</b> | <b>REFERENCES.....</b>  | <b>72</b> |

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---

---

|  |            |
|--|------------|
| <b>APPENDIX 1: PRE WORKSHOP QUESTIONNAIRE .....</b>                      | <b>75</b>  |
| <b>APPENDIX 2: POST WORKSHOP QUESTIONNAIRE.....</b>                      | <b>80</b>  |
| <b>APPENDIX 3: FOLLOW UP QUESTIONNAIRE .....</b>                         | <b>85</b>  |
| <b>APPENDIX 4: PARTICIPANT INFORMATION SHEET &amp; CONSENT FORM.....</b> | <b>99</b>  |
| <b>APPENDIX 5: SUPPLEMENTARY QUALITATIVE DATA.....</b>                   | <b>104</b> |

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## LIST OF TABLES

|  |    |
|--|----|
| Table 1: Marital status (n=63) .....   | 16 |
| Table 2: Opioids used in the last 28 days (n=51) .....   | 17 |
| Table 3: Opioids currently used daily or near daily (n=43) .....   | 18 |
| Table 4: Non-opioids used daily or on alternate days (n=48) .....  | 19 |
| Table 5: Occasions without opioid use for three or more days (n=60).....                                   | 19 |
| Table 6: Drug treatment (n=56).....  | 20 |
| Table 7: Pre- and post-training scores on modified version of the OOKS.....                                | 21 |
| Table 8: Pre-training post-training and follow-up scores on modified OOKS signs and actions subscales..... | 22 |
| Table 9: Pre and post-training responses on OOKS risk subscale items .....                                 | 24 |
| Table 10: Pre-training, post-training and follow-up responses on OOKS signs subscale items .....           | 26 |
| Table 11: Pre- post- training and follow-up responses on OOKS actions subscale items .....                 | 29 |
| Table 12: Pre and post-training responses on OOKS naloxone subscale items (naloxone purpose).....          | 31 |
| Table 13: Pre and post-training responses on OOKS naloxone subscale items (naloxone administration).....   | 32 |
| Table 14: Pre and post-training responses on OOKS naloxone subscale items (time to take effect) .....      | 33 |
| Table 15: Pre and post-training responses on OOKS naloxone subscale items (duration of action).....        | 34 |
| Table 16: Pre and post-training responses on OOKS naloxone subscale items (ambulance need).....            | 35 |
| Table 17: Pre and post-training responses on OOKS naloxone subscale items (confidence). 36                 |    |
| Table 18: Pre and post-training responses on OOKS naloxone subscale items (suggest naloxone).....          | 37 |
| Table 19: Pre and post-training responses on OOKS naloxone subscale items (give naloxone) .....            | 37 |
| Table 22: Participants' suggests for improving the training (n=63).....                                    | 41 |

---

---

---

|   |    |
|---|----|
| Table 23: Skills used after training (n=62).....                                  | 43 |
| Table 24: Where naloxone is kept (n=35).....                                      | 44 |
| Table 25: What happened to your naloxone kit? (n=62).....                         | 45 |
| Table 26: Naloxone kit problems (n=62).....                                       | 46 |
| Table 27: Signs of overdose at last witnessed overdose .....                      | 52 |
| Table 28: Reasons for the last witnessed overdose.....                            | 53 |
| Table 29: Actions taken during a witnessed overdose after receiving naloxone..... | 54 |
| Table 30: Reasons for last personal overdose .....                                | 67 |
| Table 31: Actions taken during personal overdoses .....                           | 67 |

---

---

## LIST OF FIGURES

|   |    |
|---|----|
| Figure 1: Number of participants who completed follow-up interviews and number of follow-up interviews..... | 14 |
| Figure 2: Last overdoses described by participants .....  | 50 |

## **1 EXECUTIVE SUMMARY**

### **1.1 THE WA PEER NALOXONE PROJECT (WAPNP)**

This project is an evaluation of The WA Peer Naloxone Project (WAPNP), which aimed to reduce opioid overdose fatality among existing opioid users. The WAPNP was run by the West Australian Substance Users Association (WASUA) in collaboration with the Drug and Alcohol Office of WA (now known as the Mental Health Commission). It was recommended by the inter-agency Western Australian Overdose Strategy Group (OSG).

The training component of the WAPNP comprised a two-hour small group session which covered: risk factors for overdose; myths and facts about overdose and about calling an ambulance; first aid response to overdose (DRSABC); when and how to give naloxone by IM route using Miniject®; post naloxone monitoring and support; and communication with ambulance officers.

The evaluation employed a mixed-methods repeated-measures design, drawing on both quantitative data and qualitative participant accounts. Eligibility for the evaluation was limited to participants in the WAPNP who had been prescribed naloxone as part of the program. Participants completed self-report paper-and-pencil surveys at baseline prior to training (pre-training) and immediately following training (post-training). Follow-up interviews with participants were conducted between two weeks and 21 months following training (scheduled follow-up). Additionally, participants who had witnessed or personally experienced an opioid overdose either before or after their scheduled follow-up interview were asked to contact the evaluation team and were administered a further interview to document the overdose (second and third follow-ups). In the vast majority of cases the follow-up interviews were face-to-face, but in a small number of cases, notably those where the participant lived outside the metropolitan area, interviews were conducted by telephone.

### **1.2 THE KEY FINDINGS AGAINST THE PRIMARY EVALUATION QUESTIONS**

Between January 2013 and May 2015, 153 program participants were trained, completed pre- and post-training assessments and received a prescription for naloxone. At the time of the scheduled follow-up, the majority of the sample (61/63, 97%) reported having used opioids in their lifetime; two participants reported never having used opioids but were current amphetamine users who had contact with opioid users. Among lifetime users, the majority

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(51/61, 84%) reported having used at least one type of opioid in the preceding 28 days. Participants had a mean age of 41.9 years and 51% were male. Some 63 of these participants completed at least one follow-up interview.

### **1.2.1 Was naloxone used appropriately by people in a non-medical setting within the WA context?**

#### **Yes**

- In all reported overdoses where naloxone was administered by a peer, the person survived the overdose. Among witnessed overdoses where naloxone was administered by a peer, the vast majority of witnesses (90%) perceived that the naloxone was responsible for saving the person's life.
  - All participants who had administered naloxone to a peer reported that it was 'very easy' or 'easy' to administer.
  - In the majority of witnessed overdoses, including those in which naloxone was administered, program participants reported appropriately carrying out actions covered in the training such as checking the person's airways and breathing, calling an ambulance, appropriately administering naloxone, placing the person in the recovery position and staying with them until they regained consciousness or the ambulance arrived.
  - Participant accounts of witnessed overdoses suggested trained respondents managed the overdose situation in a calm and confident manner, often while other people present were panicking.
  - A number of participant accounts indicated that the person who had been trained and provided with naloxone was called on by others to help manage the overdose situation.
  - Naloxone was administered by a peer into an appropriate bodily location in the majority of witnessed overdoses (86%). Where naloxone was administered in a bodily location not consistent with the training, no serious complications were reported.
  - In instances of witnessed overdoses where naloxone was administered by a peer, complications were rare (reported in 14% of cases) and minor, most commonly involving abusive behaviour, confusion and nausea.
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- In only 36% of witnessed overdoses was an ambulance called, but this may be greater than in situations where people were not trained in overdose management. Participant accounts indicated that when ambulances were not called this was primarily due to concerns about the cost of an ambulance and concern about police involvement, or if the witness judged that the person had substantially recovered.

### **1.2.2 Did the program result in successful overdose reversals?**

#### **Yes**

- Program participants reported 32 overdose reversals following training in which naloxone was administered by a peer; 29 of these instances were overdoses witnessed by program participants and three instances were personal overdoses of participants.
- Participants' increased knowledge regarding opioid overdose following training further suggests that the program contributed to successful overdose reversals. Results indicate that the training had large to very large positive impacts on participant knowledge regarding how to recognise and appropriately respond to an overdose.

### **1.2.3 Did the program have any unintended consequences, either positive or negative?**

#### **No negative consequences**

- No unintended negative consequences were reported. An unintended positive consequence was that several participants reported a sense of empowerment and confidence as a result of the training.

### **1.2.4 Should the program continue and, if so, what changes in the program and its contexts are desirable?**

#### **Yes the program should continue**

- The results of this evaluation overwhelmingly support the continuation and expansion of the WAPNP. The program provided participants with access to naloxone and the necessary knowledge and skills to manage an overdose situation, including the administration of naloxone, which undoubtedly contributed to many lives being saved and prevented significant morbidity due to hypoxia.
  - Participants' scores on measures of knowledge of overdose risk factors, signs of opioid overdose, actions to take in an overdose and naloxone purpose and administration significantly increased immediately following training compared to pre-training, with medium to very large effect sizes. Increases in participant
- 
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knowledge of the actions to take in an overdose were maintained at follow-up, but increases in participant knowledge of the signs of opioid overdose were not maintained at follow-up.

- Participant feedback about the program was overwhelmingly positive. All participants who had personally administered naloxone to a peer since undergoing training reported that they found the training useful.

### **Suggestions for program improvement**

- Individual item analysis on measures of overdose knowledge provided useful feedback to the WAPNP regarding specific content areas could be addressed to further improve participants' knowledge retention.
  - Some participants reported difficulty obtaining naloxone after the training or replacing their naloxone once it had been used. It is expected that the recent rescheduling by the Therapeutic Goods Administration to make naloxone available over-the-counter will improve naloxone access for future program participants.
  - Participants made some useful suggestions for improving the program both in regard to the training sessions and the naloxone kits themselves. While approximately two-fifths of the sample stated that no improvement in training was necessary, there was some uncertainty regarding how to access naloxone in the community. There were additional suggestions regarding promoting the training and specific content areas which could be addressed. The most frequent suggestions for improving the naloxone kit involved increasing the number of naloxone doses and other equipment included.
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## 2 INTRODUCTION

This project is an evaluation of The WA Peer Naloxone Project (WAPNP) run by the West Australian Substance Users Association (WASUA) in collaboration with the Drug and Alcohol Office of WA (now known as the Mental Health Commission). The WAPNP, which commenced in January 2013, was the fourth small scale naloxone program to commence in Australia, beginning with the I-ENAACT program, which started in Canberra in April 2012 (Lenton et al., 2015). The evaluation of the program is based on that conducted for the I-ENAACT program in the ACT (Olsen, McDonald, Lenton, & Dietze, 2015) and a similar program in NSW (Chronister et al., in press). The evaluation consisted of two components: (1) analysis of quantitative pre- and post- training session questionnaires and (2) analysis of qualitative and quantitative data, collected during follow-up interviews with program participants, which focused on the retention of information from the education session and any subsequent responses to overdoses including the use of naloxone. Some 150 opioid users and potential overdose witnesses were recruited for the evaluation.

### 2.1 THE WA PEER NALOXONE PROGRAM OVERVIEW

The WAPNP was an initiative recommended by the inter-agency Western Australian Overdose Strategy Group (OSG). Given the continued increasing trend in opioid overdose among existing and experienced users (Fetherston & Lenton, 2015), the OSG recommended the immediate development of a peer naloxone program to reduce opioid overdose fatality among existing opioid users. The WAPNP was a collaboration between the Drug and Alcohol Office (DAO), now the Mental Health Commission, Workforce Development Branch, and the West Australian Substance Users Association (WASUA). The WAPNP was designed with a view to reducing opioid overdose morbidity and mortality through: improved overdose identification; increased effectiveness of interventions in opioid overdose management; enhanced provision of comprehensive overdose identification and management training; provision of take-home naloxone by prescription to eligible participants in the program; reduction in opioid overdose through overdose prevention education.

The recruitment for the WAPNP was conducted via: information provided through existing peer networks and word of mouth; information fliers in targeted settings that provided services for opioid users and organisations that support families and friends of opioid users; information sessions for stakeholder groups and in targeted settings; promotion through the West Australian Network of Alcohol and Drug Agencies (WANADA) sector newsletter; and

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via regular agenda items through WA alcohol, tobacco and other drugs sector governance bodies.

The training component of the WAPNP comprised a two-hour small group session which covered: risk factors for overdose; myths and facts about overdose and about calling an ambulance; first aid response to overdose (DRSABC); when and how to give naloxone by IM route using Minijet® (DRSABNC); post naloxone monitoring and support; and communication with ambulance officers. Immediately after the training session, participants who were eligible to be prescribed naloxone were assessed by GP who attended the session. If satisfied participant had sufficient knowledge, the GP dispensed naloxone under prescription to the participant as part of a naloxone kit. Each naloxone kit, which was provided at no cost under the program, included: two Minijets® containing 0.4mg naloxone; two 23g needles suitable for intramuscular (IM) injection; four alcohol wipes (swabs); two face shields (for EAR); two pairs of disposable gloves; a sharps disposal tube; a copy of the “Stop The Drop” step-by-step guide to managing an overdose, including naloxone administration; a business card sized ‘Training Certificate’ which included WASUA contact numbers for participants to provide to police if they were questioned about having naloxone in their possession; and finally a contact card for the evaluation team so they could call the research team for a follow-up interview.

The objectives of the WAPNP were consistent with public health approaches generally, and with both harm reduction and consumer participation, in particular as evident in alcohol and drug treatment policy in WA and in the broader national policy context (see, for instance, the Drug and Alcohol Interagency Strategic Framework for Western Australia 2011-2015 and the National Heroin Overdose Strategy). The structure of the program drew on an extensive body of overseas research and the experience of other Australian jurisdictions.

## **2.2 BACKGROUND – PEER NALOXONE PROGRAMS**

The place of naloxone in responding to overdose has recently been summarised by Lenton and Dietze (2015):

When a person has an opioid overdose, they lose consciousness and their breathing can slow and even eventually stop. This results in damage to the brain and other organs and, eventually, death. Most opioid overdoses occur among experienced users. People are at most at risk of overdose when their opioid tolerance drops after a period of abstinence or reduced opioid use, such as after prison release, or if they use other

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drugs such as alcohol or sleeping pills in addition to the opioids. However, in most fatal cases, tragically, there is no intervention before death. This is primarily because most people are ill-equipped to respond to overdose (wrongly) assuming, for example, that the deep snoring or gurgling associated with impending respiratory collapse means that the person can be left to "sleep it off". But opioid overdose can be managed by monitoring the person, maintaining their airway, providing ventilation (with rescue breathing), basic life support and calling an ambulance. Naloxone administration can greatly assist in reversing overdose by helping to quickly restart normal breathing. Naloxone has a very specific action in reversing the effects of opioid intoxication. It does not produce any intoxication itself and has no effect on people who don't have opioids in their system. In an emergency situation, naloxone is typically administered by injection into a muscle (shoulder, thigh or buttock). It can also be provided in a device so it can be sprayed into the nostrils, but naloxone is not licensed for nasal use in Australia. (The Conversation, 4 November 2015)

In the mid-1990s calls were made to make naloxone available to opioid (typically heroin) users, their peers and family members to prevent overdose deaths, through peer or 'take-home' naloxone programs (Darke & Hall, 1997; Strang, Darke, Hall, Farrell, & Ali, 1996). Accumulating international evidence shows that the provision of peer naloxone, with appropriate training, to people who come into contact with people who use opioids (including friends, family, service providers) can lead to successful opioid overdose reversals and that it is a remarkably safe intervention with few, if any, adverse effects (e.g. Bennett & Holloway, 2012; Doe-Simkins, Walley, Epstein, & Moyer, 2009; Enteen et al., 2010; Green, Heimer, & Grau, 2008; Kim, Irwin, & Khoshnood, 2009; Markham Piper et al., 2008; Maxwell, Bigg, Stanczykiewicz, & Carlberg-Racich, 2006; McAuley, Best, Taylor, Hunter, & Robertson, 2012; McAuley, Lindsay, Woods, & Louttit, 2009; Piper et al., 2007; Tobin, Sherman, Beilenson, Welsh, & Latkin, 2009). In November 2010 Scotland became the first jurisdiction to implement THN nationally (McAuley et al., 2012). In the United States, more than 53,000 people have been trained as overdose responders, resulting in more than 10,000 overdose reversals (Wheeler, Davidson, Stephen Jones, & Irwin, 2012). In 2014 the World Health Organization recommended that people likely to witness an overdose should have access to naloxone (World Health Organization, 2014).

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### **3 METHOD**

#### **3.1 AIMS**

This project aimed to evaluate the effectiveness and appropriateness of the WAPNP run by the West Australian Substance Users Association (WASUA) in collaboration with the Drug and Alcohol Office of WA, now known as the Mental Health Commission. The primary evaluation questions, based on Olsen et al (2015), were:

1. Was naloxone used appropriately by people in a non-medical setting within the WA context?
2. Did the program result in successful overdose reversals?
3. Did the program have any unintended consequences, either positive or negative?
4. Should the program continue and, if so, what changes in the program and its contexts are desirable?

#### **3.2 STUDY DESIGN**

This study employed a mixed-methods repeated-measures design. Participants completed self-report paper-and-pencil surveys at baseline prior to training (pre-training) and immediately following training (post-training). The evaluation team conducted follow-up interviews with participants between two weeks and 21 months following training (scheduled follow-up). Additionally, participants who had witnessed or personally experienced an opioid overdose either before or after their scheduled follow-up were asked to contact the evaluation team and were administered a further interview to document the overdose (second and third follow-ups). Both scheduled and respondent initiated follow-up interviews included quantitative and qualitative elements. In the vast majority of cases the follow-up interviews were face-to-face, but in a small number of cases, notably those where the participant lived outside the metropolitan area, some interviews were conducted by telephone.

#### **3.3 PROCEDURE**

Eligibility for the evaluation was limited to participants in the WAPNP who had been prescribed naloxone as part of that program. Although some drug workers and others did complete the WAPNP for their professional development, as they were not prescribed naloxone, they were not included in the evaluation final sample. Participation in the

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evaluation was entirely voluntary. At the commencement of the WAPNP training session it was explained to participants that the program was being evaluated, they were provided with the relevant project information sheet (see Appendix 4) and were invited to participate in the evaluation. Respondents were reimbursed \$40 for the scheduled follow-up. Qualitative elements of follow-up interviews included digitally audio-recorded accounts of their recent experience of being an overdose witness or overdose victim. These were subsequently transcribed. Participant responses were matched across pre-training, post-training and follow-up datasets using a participant generated unique identifier. Quantitative data was analysed using SPSS for Windows Version 22. The study was approved by the Curtin University Human Research Ethics Committee (HR120\_2012).

### **3.3.1 Measures**

The self-report surveys administered at pre-training, post-training and follow-up contained a modified version of the Opioid Overdose Knowledge Scales (OOKS) (Williams, Strang, & Marsden, 2013). While some demographic data was collected at pre-training, due to concerns about the time participants would spend completing research questionnaires at their training session, most demographic data was collected at scheduled follow-up. In addition to accounts of overdose experiences, follow-up interviews also assessed knowledge retained from the WAPNP training not covered by the OOKS and respondents' opinions/feedback on the training and program (see Appendix X for pre-training, post-training and follow-up surveys).

The OOKS measures knowledge of opioid overdose across four subscales; (1) overdose risk factors, (2) overdose signs, (3) overdose actions and (4) naloxone knowledge. All four OOKS subscales were administered to participants at pre-training and post-training. Only the OOKS signs and OOKS actions subscales were administered at follow-ups. Content and scoring of the OOKS subscales is detailed below.

### **3.3.2 OOKS overdose risk factors subscale**

Respondents were presented with a list of seven correct risk factors ('using too much heroin', 'using heroin alongside other substances' 'change in drug purity (e.g., through a change in dealer)', 'change in tolerance (e.g., after prison/detox)', 'switching from smoking to injecting heroin', 'using heroin on my own', 'using in unfamiliar places/with unfamiliar people') and 'other'. For each risk factor participants were asked to indicate if it increased the risk of an opioid overdose (yes/no).

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Total OOKS risk subscale scores were calculated for each participant by summing responses on all overdose risk items, excluding ‘other’. A score of 1 was given for endorsement of each item and a score of 0 was given for non-endorsement. Scores had possible minimum of 0 and a possible maximum of 7, with higher scores representing greater overdose risk factor knowledge.

### **3.3.3 OOKS overdose signs subscale**

Participants were presented with list of possible overdose signs and asked to indicate which responses were correct. The list comprised five correct items (‘slow/shallow breathing’, ‘turning blue’, ‘loss of consciousness/can’t be roused’, ‘deep snoring’, ‘pinned pupils’) and two incorrect items (‘bloodshot eyes’, ‘fitting’). Multiple responses were allowed for this question.

Signs subscale scores were calculated for by summing responses on the seven overdose signs items. For the five correct items, a score of 1 was given for endorsement of the item and a score of 0 was given for non-endorsement. For the two incorrect items, participants received a score of 0 if they endorsed the item and a score of 1 if they did not. Scores had a possible minimum of 0 and a possible maximum of 7, with higher scores representing a greater degree of correct knowledge of overdose signs.

### **3.3.4 OOKS overdose actions subscale**

At pre-training and post-training, participants were asked ‘Which of the following actions are important when faced with an opioid overdose?’ Respondents were presented with six correct actions (‘call an ambulance’, ‘stay with the person until they come around’, ‘perform mouth to mouth resuscitation’, ‘place the person in the recovery position’, ‘give naloxone’, ‘stay with the person until the ambulance arrives’) and three incorrect actions (‘inject saline (salt) solution’, ‘give stimulants (e.g. black coffee etc.)’, ‘shock the person with cold water’). Participants responded on a 5-point Likert scale (1: strongly agree; 2: agree; 3: unsure; 4: disagree; 5: strongly disagree) for each item. At follow-up, participants were presented with the same list of correct and incorrect items, but simply asked ‘what are the most important steps to take when someone has overdosed? (‘Please tick all that apply)’ without responding on a Likert scale.

At pre-training and post-training, participants were considered to have endorsed an item if they responded with either ‘agree’ or ‘strongly agree’ and considered to have not endorsed an item if they responded with either ‘disagree’, ‘strongly disagree’ or ‘unsure’. At follow-up,

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the actions question was presented differently, as: ‘What are the most important steps to take when someone has overdosed? (Please tick all that apply)’. It is possible that declines from post to follow-up may in part be due these differences in how this question was asked.

Action subscale scores were calculated for each participant by summing responses on the overdose actions items. For the six correct items, participants were assigned a score of 1 if the item was endorsed and a score of 0 was given if it was not. For the three incorrect items, a score of 0 was given if the item was endorsed and a score of 1 was given if it was not. Scores had a possible minimum of 0 and a possible maximum of 9, with greater scores representing greater correct knowledge of the appropriate actions to take when faced with an opioid overdose.

### **3.3.5 OOKS naloxone knowledge subscale**

The OOKS naloxone subscale scores were calculated for each participant by summing responses on eight questions related to the purpose and use of naloxone as detailed below. Total OOKS naloxone subscale scores had a possible minimum of 0 and a possible maximum of 8, with higher scores indicating greater naloxone knowledge.

#### **Naloxone purpose**

Participants were asked ‘What is Naloxone used for? (please tick all that apply)’. Response options included one correct item (‘reversal of opioid overdose (including heroin, methadone)’) and seven incorrect responses (‘reversal of any drug overdose’, ‘reversal of methamphetamine (‘speed’, ‘whiz’, ‘meth’ ‘ice’ ‘rock’) overdose’, ‘reversal of cocaine overdose’, ‘reversal of benzodiazepines (‘benzos’) overdose’, ‘don’t know’ and ‘other (specify)’). Participants were assigned a score of 1 if they selected the correct response and a score of 0 if they selected any incorrect response.

#### **Naloxone administration**

Participants were asked ‘Currently in Australia, how should naloxone be given by a trained peer to someone who has overdosed? (please tick all that apply)’. Responses options included one correct item (‘Intra-muscular injection (injection into the muscle)’) and seven incorrect items (‘intra-venous injection (injection into a vein), ‘subcutaneous injection (injection under the skin)’, ‘oral consumption (liquid)’, ‘oral consumption (tablet)’, ‘nasal spray’, ‘don’t know’ and ‘other’. Participants were assigned a score of 1 if they selected the correct response and a score of 0 if they selected any incorrect response.

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### **Naloxone time for effect**

Participants were asked ‘How long does naloxone take to start having effect? (please tick the appropriate box). Response options included one correct item (‘2-5 mins’) and four incorrect items (‘5-10 mins’, ‘10-20 mins’, ‘20-40 mins’, and ‘don’t know’). Participants were assigned a score of 1 if they selected the correct response and a score of 0 if they selected an incorrect response.

### **Naloxone duration of action**

Participants were asked ‘How long is the duration of action of naloxone (how long do the effects last)? (please tick the appropriate box)’. Response options included one correct item (‘About an hour’) and four incorrect items (‘Less than 20 minutes’, ‘1 to 6 hours’, ‘6 to 12 hours’, and ‘don’t know’). Participants were assigned a score of 1 if they selected the correct item and score of 0 if they selected an incorrect item.

### **Overdose aftercare and naloxone endorsement**

Participants were asked ‘Is there a need to call an ambulance in addition to naloxone administration?’, ‘Would you suggest the use of naloxone in an overdose situation?’ and ‘Would you ever give naloxone in an overdose situation?’. Response options were ‘yes’, ‘no’ and ‘don’t know’. Participants were assigned a score of 1 for each of these questions if they answered ‘yes’ and a score of 0 if they responded with ‘no’ or ‘don’t know’.

### **Naloxone confidence**

Participants were asked ‘How confident do you feel at giving a naloxone injection? (please tick the appropriate box)’. Response options were ‘very confident’, ‘confident’, ‘unsure’, ‘not confident’ and ‘not confident at all’. Participants were assigned a score of 1 if they responded with ‘very confident’ or ‘confident’ and a score of 0 if they responded with any other response option.

### **3.3.6 OOKS overall score**

An overall OOKS was calculated for each participant by summing scores risks, signs, actions and naloxone subscales. The total overdose knowledge score had a possible minimum of 0 and a possible maximum of 31, with higher scores indicating greater opioid overdose knowledge.

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## **3.4 ANALYSIS**

### **3.4.1 Descriptive statistics**

All descriptive statistics were conducted only on non-missing data; cases with missing data were excluded from analysis. On questions for which multiple responses were permitted, responses are presented as both a percentage of the number of participants who answered the question ('% respondents') and a percentage of the total number of responses provided by all participants ('% responses'). On multiple response questions it was therefore possible for response percentages to sum to greater than 100%.

### **3.4.2 Pre-training/post-training comparisons and knowledge retention analysis**

To evaluate whether participants' knowledge of opioid overdose increased following training, paired samples t-tests were conducted to evaluate mean differences in OOKS subscale and total scores between pre-training and post-training. To evaluate participant's retention of opioid overdose knowledge, repeated measures ANOVAs were conducted using the OOKS signs and OOKS actions subscale scores. Pairwise comparisons were performed to identify the pattern of significant differences among pre-training, post-training and follow-up scores.

To allow for the use of as large a sample as possible, missing data were replaced using Multiple Imputation on the variables included in the computation of OOKS scores prior to conducting the paired samples t-tests and repeated measures ANOVAs. Data were imputed automatically using a Markov chain Monte Carlo method (with ten iterations) on data with a non-monotone pattern of missingness and a non-iterative monotone method on data with a monotone pattern of missingness.

### **3.4.3 Single-item analyses**

Differences between the proportion of participants who endorsed OOKS items and survey questions with forced response options at pre-training, post-training and follow-up were examined using McNemar tests. These single-item analyses were conducted to provide guidance as to the particular areas of training which could be further emphasised in any revision of the program content. All single-item analyses were conducted only with non-missing data; cases with missing data were excluded from analysis.

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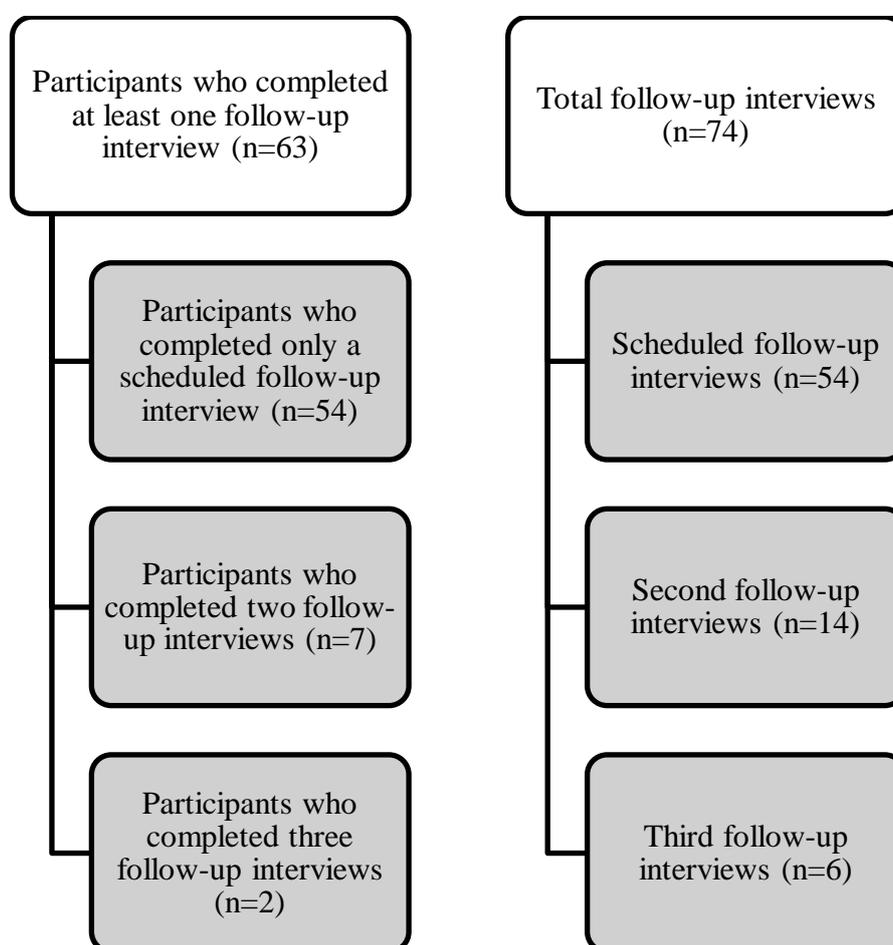
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All pre-training/post-training comparisons and single item analyses were conducted using an alpha level ( $\alpha$ ) of .05.

## 4 RESULTS

153 participants completed pre- and post-training assessments. In addition, 63 participants completed at least one follow-up interview; 54 completed a single follow-up interview (scheduled follow-up), seven completed two follow-up interviews and two completed three follow-up interviews. In all, 74 follow-up interviews were conducted (see Fig. 1).

**Figure 1: Number of participants who completed follow-up interviews and number of follow-up interviews.**



Participant training was conducted between January 2013 and May 2015, with follow-up interviews taking place between May 2013 and September 2015. The median time period between training and scheduled follow-up was 23 weeks (range 2.14 – 91.43 weeks).

## **4.1 DESCRIPTIVE STATISTICS**

### **4.1.1 Training location and attendance**

#### **Where training was attended**

At scheduled follow-up, participants were asked where they had attended training. More than half (57%, 36/63) reported attending at Kudlitj Café, 30% (19/63) reported attending training at WASUA, and 13% (8/63) reported attending training at Fremantle.

#### **Who attended the training**

At scheduled follow-up, participants were asked who had attended the training with them. The largest proportion (49%, 31/63) reported they had attended with another opioid user. An additional 41% (26/63) reported attending on their own, 8% (5/63) reported attending with a non-opioid user and one participant (2%, 1/63) reported attending with a non-specified 'other' person.

### **4.1.2 Participant characteristics and drug use history**

Data regarding the age and gender was collected from the 153 participants who completed pre-training. All additional data regarding demographics and drug use history was collected at the first follow-up interview from the 63 participants who completed at least one follow-up interview.

#### **Age and gender**

At pre-training, the sample comprised 51% males (78/153), 48% females (74/153) and one participant who specified their gender as 'other' (1%, 1/153), with a mean age of 41.9 years (range 20-69).

#### **Marital status**

More than half of follow-up respondents (36/63, 57%) reported their marital status as single. This was followed by 'living together' (14/63, 22%) and 'divorced' (7/63, 11%). The proportion of participants who reported each marital status category is shown in Table 1.

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**Table 1: Marital status (n=63)**

| Marital status  | n  | % respondents |
|-----------------|----|---------------|
| Single          | 36 | 57            |
| Living together | 14 | 22            |
| Divorced        | 7  | 11            |
| Widowed         | 2  | 5             |
| Married         | 3  | 3             |
| Separated       | 1  | 2             |
| Total           | 63 | 100           |

### Living situation

Approximately half of follow-up respondents (31/63, 49%) indicated that they currently lived with other opioid users. A quarter (16/63, 25%) reported that they lived alone, and a further 25% (16/63) reported that they lived with non-opioid users.

### Aboriginality

Just less than one-tenth of follow-up respondents (6/63, 9%) reported they were either Aboriginal or Torres Strait Islander (4/6 Aboriginal; 1/6 Torres Strait Islander; 1/6 missing).

### Age of first opioid use and injecting drug use

Two participants reported never having used opioids, but were current amphetamine users who contact with opioid users. The remaining 97% (61/63) of the participants reported lifetime opioid use. Among these participants, the mean age of first opioid use was 18.9 years (range 12–35). All participants who reported lifetime opioid use also reported lifetime injecting drug use. The mean age of first injecting drug use was 19.3 years (range 12-35).

### Use and injection of opioids in last 28 days

Among lifetime opioid users, the majority of participants (51/61, 84%) reported having used least one type of opioid in the preceding 28 days. Among participants reporting opioid use in the last 28 days, the vast majority had also injected opioids within that time period (48/51,

94%). The type of opioids participants reported using in the preceding 28 days is shown in Table 2.

**Table 2: Opioids used in the last 28 days (n=51)**

| Drug                | n  | % respondents | % responses |
|---------------------|----|---------------|-------------|
| Heroin              | 41 | 80            | 48          |
| Buprenorphine       | 8  | 16            | 9           |
| Oxycodone/Oxycontin | 7  | 14            | 8           |
| Homebake            | 7  | 14            | 8           |
| Suboxone/Subutex    | 7  | 14            | 8           |
| Morphine            | 5  | 12            | 6           |
| Methadone           | 3  | 6             | 3           |
| Other*              | 7  | 14            | 8           |
| Total responses     | 85 | -             | -           |

\*Other responses were 'Tramadol', 'Jurnista', 'Endol', 'Hydro-Morphine' 'Morphine Sulfate' and 'Fentanyl'

### **Opioids used daily or alternate days**

Approximately two-thirds of the participants (43/63, 68%) reported currently using opioids daily or on alternate days. The type of opioids participants reported currently using daily or on alternate days is shown in Table 3.

**Table 3: Opioids currently used daily or near daily (n=43)**

| Drug             | n  | % respondents | % responses |
|------------------|----|---------------|-------------|
| Heroin           | 33 | 77            | 55          |
| Buprenorphine    | 7  | 16            | 12          |
| Homebake         | 7  | 16            | 12          |
| Morphine         | 4  | 9             | 7           |
| Suboxone/Subutex | 4  | 9             | 7           |
| Methadone        | 1  | 2             | 2           |
| Oxycontin        | 1  | 2             | 2           |
| Other*           | 3  | 7             | 5           |
| Total responses  | 60 | -             | -           |

\*Other responses were: 'Jurnista', 'Hydro-Morphine' and 'Fentanyl'

### **Other substances using daily on alternate days**

The majority of the follow-up sample (48/63, 76%) reported currently using other non-opioid substances either daily or on alternate days. The substances that participants reported using daily or near daily are shown in Table 4.

**Table 4: Non-opioids used daily or on alternate days (n=48)**

| Drug                        | n  | % respondents | % responses |
|-----------------------------|----|---------------|-------------|
| Tobacco                     | 22 | 46            | 26          |
| Cannabis                    | 21 | 44            | 25          |
| Amphetamine type stimulants | 19 | 39            | 23          |
| Alcohol                     | 11 | 23            | 13          |
| Benzodiazepines             | 11 | 23            | 13          |
| Total responses             | 84 | -             | -           |

### Occurrences of three or more days without opioid use

Participants who reported lifetime opioid use (n=60; n=1 missing) were asked to indicate how many times they had not used opioids for three or more days in the preceding 12 months, on a response scale from 'none' to 'many times'. Participant responses to this item are shown in Table 5.

**Table 5: Occasions without opioid use for three or more days (n=60)**

| Drug          | n  | % respondents |
|---------------|----|---------------|
| Never         | 22 | 37            |
| Once or twice | 9  | 15            |
| Several times | 9  | 15            |
| Many times    | 20 | 33            |
| Total         | 60 | 100           |

### Current treatment

Participants who had used opioids in their lifetime were asked if they were currently receiving treatment, responding on a forced-choice scale. Responses are shown in Table 6 for participants without missing data on this question (n=56).

**Table 6: Drug treatment (n=56)**

| Drug                           | n  | % respondents |
|--------------------------------|----|---------------|
| Not in treatment               | 25 | 45            |
| Opioid maintenance (methadone) | 18 | 32            |
| Opioid maintenance (suboxone)  | 8  | 14            |
| Other*                         | 5  | 9             |
| Total                          | 56 | 100           |

\*Other responses were: 'Hydromorphone', 'Non-prescribed suboxone methadone', 'Naltrexone implants', 'Morphine' and 'Stable pain management treatment'.

### Familiarity with naloxone

Among participants who responded to this question at pre-training (n=152) the majority (93%, n=141) reported that they had heard of naloxone before; 6% (n=9) reported that they had not and 1% (n=2) responded with 'maybe' to this question. Among participants who responded to this question at post-training (n=14), the majority (97%, n=14) also reported having heard of naloxone at post-training, four participants (3%) reported that they had not.

At pre-training, among participants who responded (n=152), the majority (94%, n=143) also reported that they had never given naloxone to someone else; 5% (n=8) reported that they had and one participant responded with 'maybe' to this question (1%).

## 4.2 QUANTITATIVE COMPARISONS

### 4.2.1 Pre-training/post-training comparisons

A Missing Values Analysis (MVA) on the variables in the OOKS scores at pre- and post-training revealed that there was no more than 12.4% missing data on any one variable. Little's MCAR test was significant ( $p < .001$ ), indicating the data were not missing completely at random. Given that MI is a robust imputation method where data is not missing at random (Tabachnick & Fidell, 2013) and the percentage of missing data was relatively low, MI was used to impute missing data. Pre-training and post-training comparisons were conducted on datasets with both missing and imputed data. The pattern of significance and effect sizes were

consistent across both datasets, confirming that the imputation method was appropriate; analyses from the imputed dataset are presented below.

Paired samples t-tests revealed that all pre-post differences were statistically significant ( $p < .001$ ) (see Table 7). A small effect size (Cohen's  $d$ ) was seen on the risks subscale and a large effect size on the signs subscale. Very large effect sizes were seen on the actions and naloxone subscales as well as the overall score.

**Table 7: Pre- and post-training scores on modified version of the OOKS**

| Scale/question                    | Pre-training<br>mean | Post-training<br>mean | Mean difference<br>(95% CI) | $t$   | $p$   | $d^*$ |
|-----------------------------------|----------------------|-----------------------|-----------------------------|-------|-------|-------|
| OOKS risks<br>(7 items, n=153)    | 5.93                 | 6.44                  | 0.50 (0.24 – 0.68)          | 4.76  | <.001 | 0.34  |
| OOKS signs<br>(7 items, n=153)    | 5.09                 | 5.93                  | 0.84 (0.64 – 1.04)          | 8.23  | <.001 | 0.80  |
| OOKS actions<br>(9 items, n=153)  | 6.88                 | 8.17                  | 1.29 (1.06 – 1.52)          | 11.02 | <.001 | 1.09  |
| OOKS naloxone<br>(8 items, n=153) | 5.19                 | 7.32                  | 2.13 (1.78 – 2.48)          | 12.01 | <.001 | 1.34  |
| OOKS total<br>(31 items, n=153)   | 23.09                | 27.82                 | 4.73 (4.11 – 5.33)          | 15.38 | <.001 | 1.35  |

\*Cohen's  $d$  values were computed using a calculator at [http://www.psychometrica.de/effect\\_size](http://www.psychometrica.de/effect_size) to account for correlations between pre-training and post-training scores, based on a formula outlined by Dunlap, Cortina, Vaslow, and Burke (1996).

#### 4.2.2 Knowledge retention

An MVA conducted on the variables OOKS subscales administered at pre-training, post-training and scheduled follow-up revealed that there was not more than 20.6% missing data on any one variable. Little's MCAR test was non-significant ( $p=1.00$ ), indicating the data

were missing completely at random. The percentage of missing data was higher than for variables used in the pre-training/post-training comparisons. However, given that any imputation method is likely to be robust when data are missing completely at random (Tabachnick & Fidell, 2013), and to ensure consistency across analyses, data were again imputed with MI. Analyses were again conducted on datasets with and without missing data. The pattern of significance and effect sizes were consistent across both datasets, confirming that the imputation method was sound; analyses from the imputed dataset are presented below.

Two repeated measures ANOVAs were revealed that were significant changes in each of the subscale scores over time, with medium to large effect sizes (partial  $\eta^2$ ; see Table 8).

**Table 8: Pre-training post-training and follow-up scores on modified OOKS signs and actions subscales**

| Scale/question                  | Pre-training | Post-training | Follow-up | <i>F</i> | <i>p</i> | Partial $\eta^2$ |
|---------------------------------|--------------|---------------|-----------|----------|----------|------------------|
| OOKS signs<br>(7 items, n=63)   | 5.19         | 5.98          | 5.60      | 11.59    | <.001    | .158             |
| OOKS actions<br>(9 items, n=63) | 7.16         | 8.25          | 8.25      | 25.13    | <.001    | .288             |

Pairwise comparisons on OOKS signs scores revealed that the mean post-training score was significantly higher than the mean pre-training score. There was no significant difference in the mean OOKS signs score between post-training and follow-up or between pre-training and follow-up. These results suggest that while there was an increase in participants' knowledge of the signs of opioid overdose at immediately after training, this increase in knowledge was not maintained at follow-up.

Pairwise comparisons of OOKS actions scores revealed that the mean score significantly increased at post-training compared to pre-training. The mean score at follow-up was the same mean as at post-training. These results suggest that participants' knowledge of the correct actions to take in an overdose situation increased immediately after training, and this increase in knowledge was maintained at follow-up.

### 4.2.3 OOKS risks subscale individual item analysis

The number of participants who endorsed each item in the OOKS risk subscale item at pre-training and post-training are shown in Table 9.

McNemar tests revealed that while the proportion of participants who endorsed the first three subscale items ('using too much heroin', 'using heroin alongside other substances' and 'change in drug purity') increased from pre-training to post-training, these increases were non-significant. It should be noted that the very large proportion of participants who endorsed these items at both pre-training and post-training suggests the possible presence of ceiling effects for these items.

There were significant increases in the proportion of endorsement at post-training compared to pre-training for the items 'change in tolerance (e.g. after prison/detox)' ( $p=.012$ ), 'switching from smoking to injecting heroin' ( $p=.001$ ), 'using heroin on your own' ( $p=.001$ ), and 'using in unfamiliar places/with unfamiliar people' ( $p<.001$ ). The proportion of participants who endorsed the 'other' did not significantly change from pre-training to post-training.

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**Table 9: Pre and post-training responses on OOKS risk subscale items**

| Risk Factor   | Pre-training (n=153) |                  |                | Post-training (n=152) |                  |                |
|---|----------------------|------------------|----------------|-----------------------|------------------|----------------|
|   | n                    | %<br>respondents | %<br>responses | n                     | %<br>respondents | %<br>responses |
| Using too much heroin                                   | 145                  | 95               | 16             | 147                   | 97               | 15             |
| Using heroin alongside other substances                 | 147                  | 96               | 16             | 149                   | 98               | 15             |
| Change in drug purity (e.g. through a change in dealer) | 140                  | 91               | 15             | 146                   | 96               | 14             |
| Change in tolerance (e.g. after prison/detox)           | 137                  | 89               | 15             | 146                   | 96               | 14             |
| Switching from smoking to injecting heroin              | 122                  | 80               | 13             | 137                   | 90               | 13             |
| Using heroin on your own                                | 119                  | 78               | 13             | 139                   | 91               | 14             |
| Using in unfamiliar places / with unfamiliar people     | 98                   | 64               | 10             | 121                   | 80               | 12             |
| Other   | 19                   | 12               | 2              | 23                    | 15               | 2              |
| Total responses   | 927                  | -                | -              | 1008                  | -                | -              |

#### 4.2.4 OOKS signs subscale individual item analysis

Participants' responses on each of the OOKS signs subscale items at pre-training, post-training and scheduled follow-up are shown in Table 10.

The proportion participants who endorsed the incorrect item 'blood-shot eyes' paradoxically significantly increased from pre-training to post-training ( $p=.035$ ). There was no significant change in the proportion of participants who endorsed this item at follow-up compared to post-training, or at follow-up compared to pre-training. The paradoxical increase in endorsement of the 'blood-shot eyes' item at post-training appears not to have been maintained at follow-up.

The proportion of participants who endorsed the item 'slow/shallow breathing' significantly increased from pre-training to post-training ( $p=.049$ ). There was no significant difference between the proportion of participant endorsement of this item between post-training and follow-up or between pre-training and follow-up. This tends to suggest the increase in accuracy on these items at post-training was ultimately not maintained at follow-up.

The proportion of correct responses on the items 'turning blue' and 'loss of consciousness/can't be roused' did not significantly change from pre-training to post-training or from post-training to follow-up. These results suggest knowledge on these items was largely unaffected by the training, likely due to the high level of participant knowledge on these items, even at pre-training; this high level of knowledge was maintained at follow-up.

The proportion of correct responses on 'fitting' did not significantly change from pre-training to post-training or from post-training to follow up. This pattern of results suggests there was no increase in the proportion of correct responses on this item following the training.

The proportion of participants endorsing the 'deep snoring' item significantly increased from pre-training to post-training ( $p<.001$ ). The proportion of correct responses significantly decreased from post-training to follow-up ( $p=.019$ ). However, at follow-up the proportion of correct responses remained higher than at pre-training ( $p=.002$ ). This pattern of results suggests that the significant improvement in accuracy at post-training was only partially retained at follow-up.

Finally, for the correct item 'pinned pupils', there was a significant increase in the proportion of participants who endorsed this item from pre-training to post-training ( $p<.001$ ). However, the proportion of participant endorsements significantly decreased from post-training to follow-up ( $p=.003$ ). There was no significant difference in the proportion of participants who endorsed this item between pre-training and follow-up. This pattern of results suggests that while there were increases in the proportion of correct responses at post-training, these increases were not maintained at follow-up.

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**Table 10: Pre-training, post-training and follow-up responses on OOKS signs subscale items**

| Overdose sign                               | Pre-training (n=153) |                  |                | Post-training (n=152) |                  |                | Follow-up (n=63) |                  |                |
|---|----------------------|------------------|----------------|-----------------------|------------------|----------------|------------------|------------------|----------------|
|   | n                    | %<br>respondents | %<br>responses | n                     | %<br>respondents | %<br>responses | n                | %<br>respondents | %<br>responses |
| Blood-shot eyes<br>(incorrect response)     | 27                   | 18               | 4              | 40                    | 26               | 5              | 10               | 16               | 3              |
| Slow/shallow breathing                      | 136                  | 89               | 20             | 145                   | 95               | 18             | 58               | 92               | 19             |
| Turning blue                                | 143                  | 93               | 21             | 150                   | 99               | 18             | 62               | 98               | 21             |
| Loss of<br>consciousness/Can't be<br>roused | 147                  | 96               | 22             | 150                   | 99               | 18             | 61               | 97               | 20             |
| Fitting (incorrect<br>response)             | 72                   | 47               | 11             | 63                    | 41               | 8              | 25               | 40               | 8              |
| Deep snoring                                | 65                   | 42               | 10             | 135                   | 89               | 17             | 45               | 71               | 15             |
| Pinned pupils                               | 81                   | 53               | 12             | 125                   | 82               | 15             | 36               | 57               | 12             |
| Total responses                             | 671                  | -                | -              | 808                   | -                | -              | 297              | -                | -              |

#### 4.2.5 OOKS actions subscale individual item analysis

Participants' responses on each of the OOKS actions subscale items are shown in Table 11.

The proportion of participants who endorsed the 'call an ambulance' item did not significantly increase from pre-training to post-training. However, the large proportion of correct responses at both pre-training and post-training suggest the presence of a ceiling effect. The proportion of correct responses on this item significantly decreased from post-training to follow-up ( $p < .001$ ). At follow-up, the proportion of participants who endorsed this item was paradoxically significantly smaller than at pre-training ( $p = .004$ ). However, the majority of respondents (81%) correctly endorsed this item even at follow-up. These results are difficult to interpret but suggest that participant knowledge on this item was high even prior to training and remained so at follow-up.

The proportion of participants who endorsed the item 'stay with the person until they come around' did not significantly change from pre-training to post-training, but did significantly decrease from post-training to follow-up ( $p = .031$ ). There was no significant difference in the proportion of participants who endorsed this item at follow-up compared to pre-training. The percentage of correct endorsement of this item remained very high at follow-up (90%). These results are difficult to interpret but suggest that participant knowledge on this item was high even prior to training and remained so at follow-up.

The proportion of participants endorsing the incorrect item 'inject saline (salt) solution', was very small at all three measurement periods, and did not significantly change from pre-training to post-training or from post-training to follow-up. No participants endorsed this item at follow-up. These results suggest that participant knowledge of this item was high even at baseline and this level of knowledge remained high at follow-up.

The proportion of participants who endorsed the correct item 'place the person in the recovery position' significantly increased from pre-training to post-training ( $p = .016$ ). The proportion of correct responses and did not change from post-training to follow-up. At follow-up, the proportion of correct responses was also not significantly different from pre-training. While these results are difficult to interpret, they tend to suggest that the increase in accuracy at post-training was not maintained at follow-up.

The proportion of correct responses on the item 'stay with the person until the ambulance arrives' did not significantly increase from pre-training to post-training. However, the large proportion of correct responses at both pre-training and post-training again suggest the

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presence of a ceiling effect. Compared to post-training, the proportion of correct responses significantly decreased at follow-up ( $p=.004$ ). At follow-up, the proportion of correct responses was also significantly smaller than at pre-training ( $p=.004$ ). While these results suggest that accuracy on this item decreased at follow-up compared to both pre- and post-training, the proportion of correct responses remained large at follow-up (86%). These results are difficult to interpret but suggest that participant knowledge on this item was high even prior to training and remained so at follow-up.

The proportion of participants who endorsed the incorrect item ‘give stimulants (e.g. black coffee etc.)’ did not significantly change from post-training compared to pre-training or from post-training to follow-up. The relatively small proportion of participants who endorsed this item at all three measurement points suggests the possible presence of a floor effect. These results suggest that participant knowledge of this item was high even at baseline and remained high at follow-up.

There was no significant difference in the proportion of participants who endorsed the incorrect item ‘shock the person with cold water’ at post-training compared to pre-training. However, the number of participants who endorsed this item at follow-up was significantly smaller than at post-training,  $p<.001$ . At follow-up, the proportion of participants who endorsed this item at follow-up was also significantly smaller than at pre-training ( $p=.001$ ). The possible presence of a floor effect make these results difficult to interpret. However, they tend to suggest a trend of increasing accuracy on this item at post-training that increased further by follow-up.

A significantly larger proportion of participants endorsed the item ‘perform mouth to mouth resuscitation’, at post-training compared to pre-training ( $p<.001$ ). However, at follow-up, the proportion who endorsed it was significantly smaller than at post-training ( $p<.031$ ). At follow-up, the proportion of correct responses was not significantly different to pre-training. This pattern of results suggests that increases in accuracy on this item at post-training were not maintained at follow-up.

There was a significant increase in the proportion of participants who endorsed the correct item ‘give naloxone’ at pre-training compared to post-training ( $p=.002$ ). There were no significant differences between the proportion of endorsement at follow-up compared to post training or pre-training. While difficult to interpret, the results tend to suggest that increases in accuracy on this item at post-training were not maintained at follow-up.

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**Table 11: Pre- post- training and follow-up responses on OOKS actions subscale items**

| Overdose action   | Pre-training |                  |                | Post-training |                  |                | Follow-up |                  |                |
|---|--------------|------------------|----------------|---------------|------------------|----------------|-----------|------------------|----------------|
|   | n<br>(153)   | %<br>respondents | %<br>responses | n<br>(152)    | %<br>respondents | %<br>responses | n<br>(63) | %<br>respondents | %<br>responses |
| Call an ambulance   | 147          | 96               | 16             | 151           | 99               | 16             | 51        | 81               | 15             |
| Stay with the person until they come round                    | 147          | 96               | 16             | 151           | 99               | 16             | 57        | 90               | 16             |
| Inject saline (salt) solution (incorrect response)            | 8            | 5                | 1              | 5             | 3                | <1             | 0         | 0                | 0              |
| Place the person in the recovery position                     | 142          | 93               | 15             | 149           | 98               | 16             | 58        | 92               | 17             |
| Stay with the person until the ambulance arrives              | 153          | 100              | 16             | 151           | 99               | 16             | 54        | 86               | 15             |
| Give stimulants (e.g. black coffee etc.) (incorrect response) | 19           | 12               | 2              | 6             | 4                | 1              | 2         | 3                | <1             |
| Shock the person with cold water (incorrect response)         | 56           | 37               | 6              | 49            | 33               | 5              | 6         | 9                | 2              |
| Perform mouth to mouth resuscitation                          | 124          | 81               | 13             | 143           | 94               | 15             | 57        | 90               | 16             |
| Give naloxone   | 137          | 89               | 15             | 149           | 98               | 16             | 62        | 98               | 18             |
| Total responses   | 933          | -                | -              | 954           | -                | -              | 347       | -                | -              |

NB: The way this question was worded and the type of response allowed varied from the pre-post to the follow-up. See above text for details.

#### 4.2.6 OOKS naloxone subscale individual item analysis

Participant responses to the question ‘What is naloxone used for?’ are shown in Table 12. The number of participants who endorsed the correct item ‘reversal of opioid overdose (including heroin, methadone)’ significantly increased at post-training compared to pre-training ( $p < 0.001$ ). There was a significant decrease in the proportion of participants who endorsed the incorrect items ‘reversal of methamphetamine (‘speed’, ‘whiz’, ‘meth’, ‘ice’, ‘rock’) overdose’ ( $p < 0.001$ ), ‘reversal of cocaine overdose’ ( $p = 0.003$ ), ‘reversal of benzodiazepine overdose’ ( $p = 0.012$ ), ‘reversal of alcohol overdose’ ( $p = 0.039$ ) and ‘don’t know’ ( $p = 0.021$ ) at post-training compared to pre-training. There were no significant differences in the proportion of participants who endorsed the incorrect items ‘reversal of any drug overdose’ and ‘other’ between pre-training and post-training. These results suggest an overall increase in participant knowledge about the purpose of naloxone immediately after training.

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**Table 12: Pre and post-training responses on OOKS naloxone subscale items (naloxone purpose)**

| Naloxone purpose   | Pre-training (n=149) |                  |                | Post-training (n=152) |                  |                |
|--|----------------------|------------------|----------------|-----------------------|------------------|----------------|
|  | n                    | %<br>respondents | %<br>responses | n                     | %<br>respondents | %<br>responses |
| Reversal of any drug overdose  | 33                   | 22               | 13             | 22                    | 15               | 11             |
| Reversal of opioid overdose (including heroin, methadone)                    | 135                  | 91               | 54             | 149                   | 98               | 76             |
| Reversal of methamphetamine ('speed', 'whiz', 'meth' 'ice', 'rock') overdose | 16                   | 11               | 6              | 3                     | 2                | 1              |
| Reversal of cocaine overdose   | 15                   | 10               | 6              | 4                     | 3                | 2              |
| Reversal of benzodiazepine ('benzos') overdose                               | 24                   | 16               | 10             | 12                    | 8                | 6              |
| Reversal of alcohol overdose   | 10                   | 7                | 4              | 3                     | 2                | 1              |
| Don't know   | 9                    | 6                | 4              | 1                     | 1                | <1             |
| Other  | 6                    | 4                | 2              | 2                     | 1                | 1              |
| Total responses  | 248                  | -                | -              | 196                   | -                | -              |

Participant responses to the question 'Currently in Australia, how should naloxone be given by a trained peer to someone who has overdosed?' are shown in Table 13. There was a significant increase in the proportion of participants who endorsed the correct item 'intramuscular injection (injection into a muscle)' at post-training compared to pre-training ( $p < .001$ ). Compared to pre-training, at post-training a significantly smaller proportion of

participants endorsed the incorrect items ‘intravenous injection (injection into a vein)’ ( $p=.007$ ), ‘subcutaneous injection (injection under the skin)’ ( $p=.002$ ), and ‘don’t know’ ( $p<.001$ ). There were no significant differences in the proportion of participants who endorsed the incorrect items ‘oral consumption (liquid)’ ‘oral consumption (tablet)’, ‘nasal spray’ and ‘other’ at post-training compared to pre-training. These results suggest an increase in participant knowledge of how to administer naloxone at post-training compared to pre-training.

**Table 13: Pre and post-training responses on OOKS naloxone subscale items (naloxone administration)**

|   | Pre-training (n=150) |               |             | Post-training (n=151) |               |             |
|---|----------------------|---------------|-------------|-----------------------|---------------|-------------|
|   | n                    | % respondents | % responses | n                     | % respondents | % responses |
| Intramuscular injection (injection into a muscle) | 112                  | 75            | 53          | 149                   | 99            | 85          |
| Intravenous injection (injection into a vein)     | 22                   | 15            | 10          | 9                     | 6             | 5           |
| Subcutaneous injection (injection under the skin) | 22                   | 15            | 10          | 6                     | 4             | 3           |
| Oral consumption (liquid)                         | 2                    | 1             | 1           | 1                     | 1             | 1           |
| Oral consumption (tablet)                         | 4                    | 3             | 2           | 1                     | 1             | 1           |
| Nasal spray                                       | 13                   | 9             | 6           | 7                     | 5             | 4           |
| Don’t know  | 33                   | 22            | 16          | 1                     | 1             | 1           |
| Other   | 2                    | 1             | 1           | 1                     | 1             | 1           |
| Total responses                                   | 210                  | -             | -           | 175                   | -             | -           |

Participant responses to the question ‘How long does naloxone take to start having an effect?’ are shown in Table 14. Compared to pre-training, at post-training there was a significant

increase in the proportion of participants who responded with ‘2-5 minutes’ ( $p<.001$ ) and a significant decrease in the proportion who responded with ‘don’t know’ ( $p<.001$ ). There were no significant differences in the proportion of participants who endorsed any other response for this question between pre-training and post-training. These results suggest an increase in participant knowledge regarding the time for naloxone to take effect immediately after training.

**Table 14: Pre and post-training responses on OOKS naloxone subscale items (time to take effect)**

|                     | Pre-training (n=144) |               | Post-training (n=148) |               |
|---------------------|----------------------|---------------|-----------------------|---------------|
|                     | n                    | % respondents | n                     | % respondents |
| Time to take effect |                      |               |                       |               |
| 2-5 minutes         | 84                   | 58            | 133                   | 90            |
| 5-10 minutes        | 13                   | 9             | 10                    | 7             |
| 10-20 minutes       | 1                    | 1             | 3                     | 2             |
| 20-40 minutes       | 1                    | 1             | 2                     | 1             |
| Don’t know          | 45                   | 31            | 0                     | 0             |
| Total               | 144                  | 100           | 148                   | 100           |

Participant responses to the question ‘How long is the duration of action of naloxone (how long do the effects last)?’ are shown in Table 15. The proportion of participants who endorsed the correct response (‘about an hour’) increased significantly at post-training compared to pre-training ( $p<.001$ ). The proportion of participants who endorsed the ‘don’t know’ response significantly decreased at post-training compared to pre-training ( $p<.001$ ), and the proportion of participants who endorsed the incorrect item ‘1-6 hours’ significantly decreased at post-training compared to pre-training ( $p=.012$ ). There were no significant changes in the proportion of participants who endorsed any other response to this question. These results suggest an increase in participant knowledge of the duration of action of naloxone immediately after training.

**Table 15: Pre and post-training responses on OOKS naloxone subscale items (duration of action)**

| Duration of action   | Pre-training (n=145) |               | Post-training (n=146) |               |
|----------------------|----------------------|---------------|-----------------------|---------------|
|                      | n                    | % respondents | n                     | % respondents |
| Less than 20 minutes | 18                   | 12            | 11                    | 7             |
| About one hour       | 34                   | 23            | 128                   | 88            |
| 1 to 6 hours         | 17                   | 12            | 5                     | 3             |
| 6 to 12 hours        | 4                    | 3             | 1                     | 1             |
| Don't know           | 72                   | 50            | 1                     | 1             |
| Total                | 145                  | 100           | 146                   | 100           |

Participant responses to the question ‘Is there a need to call an ambulance in addition to naloxone administration?’ are shown in Table 16. The proportion of participants who responded ‘yes’ to this question significantly increased from pre- to post-training ( $p<.001$ ). The proportion of ‘don’t know’ responses significantly decreased from pre-training to post-training ( $p<.001$ ). The proportion of ‘no’ responses did not significantly change from pre-training to post-training. These results suggest participant knowledge about the need to call an ambulance in addition to naloxone administration increased immediately after training.

**Table 16: Pre and post-training responses on OOKS naloxone subscale items (ambulance need)**

| Ambulance needed | Pre-training (n=149) |             | Post-training (n=147) |             |
|------------------|----------------------|-------------|-----------------------|-------------|
|                  | n                    | % responses | n                     | % responses |
| Yes              | 99                   | 66          | 141                   | 96          |
| No               | 13                   | 9           | 6                     | 4           |
| Don't know       | 37                   | 25          | 0                     | 0           |
| Total            | 149                  | 100         | 147                   | 100         |

Participant responses to the question ‘How confident do you feel at giving a naloxone injection?’ are shown in Table 17. The proportion of participants who endorsed the ‘very confident’ response significantly increased at post-training compared to pre-training ( $p<.001$ ). The proportion of participants who responded with ‘confident’ was not significantly different at post-training compared to pre-training. The proportion of participants who responded with ‘not confident’ ( $p<.001$ ), ‘not at all confident’ ( $p=.001$ ) and ‘unsure’ ( $p<.001$ ) significantly decreased at post-training compared to pre-training. This pattern of results suggests that participants’ reported confidence to administer naloxone increased immediately after training.

**Table 17: Pre and post-training responses on OOKS naloxone subscale items (confidence)**

| Confidence           | Pre-training (n=144) |               | Post-training (n=150) |               |
|----------------------|----------------------|---------------|-----------------------|---------------|
|                      | n                    | % respondents | n                     | % respondents |
| Very confident       | 54                   | 37            | 107                   | 71            |
| Confident            | 40                   | 28            | 42                    | 28            |
| Not confident        | 16                   | 11            | 0                     | 0             |
| Not at all confident | 11                   | 8             | 0                     | 0             |
| Unsure               | 23                   | 16            | 1                     | 1             |
| Total                | 144                  | 100           | 150                   | 100           |

Participant responses to the question ‘Would you suggest the use of naloxone in an overdose situation?’ are presented in Table 18. The proportion of ‘yes’ responses increased from pre-training to post-training ( $p=.001$ ) and proportion of ‘don’t know’ responses decreased at post-training compared to pre-training ( $p<.001$ ). The proportion of ‘no’ responses did not significantly change from pre-training to post-training. These results indicate that participants’ reported willingness to suggest the use of naloxone in an overdose situation increased immediately following training.

**Table 18: Pre and post-training responses on OOKS naloxone subscale items (suggest naloxone)**

| Suggest naloxone | Pre-training (n=150) |               | Post-training (n=149) |               |
|------------------|----------------------|---------------|-----------------------|---------------|
|                  | n                    | % respondents | n                     | % respondents |
| Yes              | 134                  | 89            | 148                   | 99            |
| No               | 3                    | 2             | 1                     | 1             |
| Don't know       | 13                   | 9             | 0                     | 0             |
| Total            | 150                  | 100           | 149                   | 100           |

Participant responses to the question ‘Would you ever give naloxone in an overdose situation?’ are shown in Table 19. The proportion of ‘yes’ responses significantly increased from pre-training to post-training ( $p<.001$ ) and the proportion of ‘don’t know’ responses significantly decreased from pre-training to post-training ( $p=.002$ ). The proportion of ‘no’ responses did not significantly change from pre-training to post-training. These results suggest participants’ reported willingness to give naloxone during an overdose increased immediately after training.

**Table 19: Pre and post-training responses on OOKS naloxone subscale items (give naloxone)**

| Give naloxone | Pre-training (n=147) |               | Post-training (n=149) |               |
|---------------|----------------------|---------------|-----------------------|---------------|
|               | n                    | % respondents | n                     | % respondents |
| Yes           | 132                  | 90            | 148                   | 100           |
| No            | 4                    | 2             | 1                     | 0             |
| Don't know    | 11                   | 8             | 0                     | 0             |
| Total         | 147                  | 100           | 149                   | 100           |

#### 4.2.7 Willingness to train others

At pre- and post-training, participants were asked ‘If asked, would you be willing to train other people in overdose management and naloxone administration?’. Participant responses are shown in Table 20. Although the proportion of participants who answered ‘yes’ to this question increased from pre-training to post-training and the proportion of ‘no’ responses decreased, these changes were not statistically significant. The very high proportion of ‘yes’ responses and the very low proportion of ‘no’ responses at both pre- and post-training suggests the possible presence of a ceiling effect. These results suggest that while there was an increase in participant reported willingness to train other immediately after training, this was not statistically significant likely because the percentage of participant willingness was very high even at pre-training.

**Table 20: Willingness to train others**

|       | Pre-training (n=149) |               | Post-training (n=149) |               |
|-------|----------------------|---------------|-----------------------|---------------|
|       | n                    | % respondents | n                     | % respondents |
| Yes   | 136                  | 91            | 141                   | 95            |
| No    | 13                   | 9             | 8                     | 5             |
| Total | 149                  | 100           | 149                   | 100           |

#### 4.2.8 Follow-up questionnaire specific responses

Participants were asked a number of questions only at follow-up. Descriptive statistics for these responses with the 63 participants that completed a scheduled follow-up are detailed below.

##### Identification of naloxone injecting sites

Participants were asked to identify the three correct sites for injecting naloxone on a peer in an overdose situation (shoulder, thigh and buttock). All participants identified at least one correct injecting site; 38% (n=24) identified all three sites. A further 46% (n=29) identified two correct sites and the remaining 16% (n=10) identified only one correct site. Some participants identified injecting sites that were not covered in the training or recommended.

These were arm (but not upper arm) (n=19, 30%) and then chest, stomach, vein and ‘any muscles’ (each n=1, 2%).

### Confidence in appropriate overdose response abilities

Participants were asked about their confidence in their ability to recognise, manage and appropriately respond to an overdose. Participants reported high levels of confidence to respond appropriately to an overdose (see Table 21).

**Table 21: Proportion of participants reporting confidence and ability respond to an overdose (N=63)**

| Response   | Yes (%) | No (%) | Maybe (%) |
|--|---------|--------|-----------|
| Confident in ability to recognise overdose                   | 98      | 0      | 2         |
| Confident in ability to manage overdose                      | 97      | 0      | 3         |
| Would call an ambulance                                      | 57      | 5      | 38        |
| Confident in ability to check breathing                      | 100     | 0      | 0         |
| Would actually check breathing                               | 100     | 0      | 0         |
| Confident in ability to perform mouth to mouth resuscitation | 100     | 0      | 0         |
| Would actually perform mouth to mouth resuscitation          | 98      | 2      | 0         |
| Confident in ability to place person in recovery position    | 100     | 0      | 0         |
| Would actually place person in recovery position             | 100     | 0      | 0         |
| Confident in ability to give naloxone                        | 100     | 0      | 0         |
| Would actually give naloxone                                 | 100     | 0      | 0         |

### Knowledge of the recovery position

Participants were asked to describe the recovery position, after which the interviewer evaluated whether the participant described the position correctly. Of the 60 participants who

responded to this question, 83% (n=50) described the position correctly and 15% (n=9) described it partially correctly. One participant (2%) described it incorrectly.

### **Most valuable aspects of the training**

Participants were asked ‘What aspects of the workshop were the most valuable for you? And why?’. The answers of those that responded were written down by the interviewer and these accounts are presented in Appendix 5. We have not summarised or reduced this data any further to let the voices of the participants come through as much as possible.

### **How training could be improved**

Participants were asked what they would improve about the training. They were prompted regarding material on how and why overdoses occur; overdose prevention section; resuscitation; naloxone administration. Once again the answers of those that responded were written down by the interviewer. Table 22 shows a summarised and reduced frequency breakdown of common responses. See Appendix 5 for the complete quantitative data.

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**Table 20: Participants' suggests for improving the training (n=63)**

| Improvement  | n  | %<br>respondents | %<br>responses |
|--|----|------------------|----------------|
| No improvement required  | 27 | 42               | 35             |
| Training would be improved by making access to naloxone easier/it was difficult to get naloxone replaced once it had been used/it was unclear from the training how to obtain naloxone | 10 | 16               | 13             |
| Awareness of the program should be increased   | 4  | 6                | 5              |
| The training should be broken down into multiple sessions and/or there should be booster sessions or refresher training  | 4  | 6                | 5              |
| Training should cover overdoses on other drugs in addition to opioids  | 4  | 6                | 5              |
| Training in CPR was not covered completely/CPR should be physically demonstrated   | 4  | 6                | 5              |
| Participants should be financially reimbursed completing the training  | 3  | 5                | 4              |
| Other  | 20 | 32               | 26             |
| Total Responses  | 76 | -                | -              |

### Participants' training of others

Participants were asked if they had trained anyone else in the use of naloxone since their own training. Forty-eight percent of respondents (30/63) reported that they had and 52% (33/63) reported that they had not.

### **How naloxone was supplied to participants**

Participants were asked how they had received their naloxone. More than two-thirds (68%, 43/63) reported receiving it at the training. This was followed by street doctor (13%, 8/63), WASUA (11%, 7/63), 'doctor/prescribed after training' (3%, 2/63), and 'got it a couple of trainings later', prescription collected at the chemist and did not receive a supply (each 2%, 1/63). The participant who did not receive a supply stated that they attempted to obtain naloxone from the street doctor but was unable to do so.

### **Use of skills covered in the workshop**

Participants were asked whether they had used any of the skills which they had acquired in the naloxone workshop. They were prompted with regards to: what skills they had used and why; whether there had been any changes in their drug use; whether they had advised others about the training or use of naloxone. Table 23 shows a reduced quantitative breakdown of common responses. See Appendix 5 for the complete qualitative data.

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**Table 21: Skills used after training (n=62)**

| Skill used   | n   | %<br>respondents | %<br>responses |
|--|-----|------------------|----------------|
| Administered naloxone to someone else  | 24  | 39               | 23             |
| Increased appropriate actions when confronted with others overdose/ potential overdose, e.g., performing checking breathing/pulse, performing CPR, placing person in the recovery position | 24  | 39               | 23             |
| Passed on skills or knowledge learned in the training to others  | 23  | 37               | 22             |
| Informed others about the training   | 12  | 19               | 12             |
| Decreased own risky behaviours or increased harm-reduction behaviours, e.g., using filters, cleaning equipment   | 6   | 10               | 6              |
| Have not used skills   | 6   | 10               | 6              |
| Decreased own drug use   | 5   | 8                | 5              |
| Other  | 2   | 3                | 2              |
| Total responses  | 102 | -                | -              |

### Where naloxone is kept

Participants were asked where they kept their naloxone. Table 24 shows a summarised quantitative breakdown of these responses. See Appendix 5 for the complete qualitative data.

**Table 22: Where naloxone is kept (n=35)**

| Location                               | n  | %<br>respondents | %<br>responses |
|--|----|------------------|----------------|
| Home                                   | 19 | 54               | 45             |
| With me/in my bag                      | 13 | 37               | 31             |
| Car                                    | 5  | 14               | 12             |
| Work                                   | 2  | 6                | 5              |
| Not applicable/no longer have naloxone | 1  | 3                | 2              |
| Other                                  | 2  | 6                | 5              |
| Total responses                        | 42 | -                | -              |

**What happened with their naloxone minijet**

Participants were asked what happened to each of the naloxone minijets that they were given. They were prompted as to whether they still had it; had lost it, naloxone expired; whether it had been used on themselves; used on someone else; or other. Responses for the scheduled follow-up are presented in Table 25.

**Table 23: What happened to your naloxone kit? (n=62)**

| What happened to naloxone | Minijet 1 |                  | Minijet 2 |                  |
|---------------------------|-----------|------------------|-----------|------------------|
|                           | n         | %<br>respondents | n         | %<br>respondents |
| Still have it             | 32        | 52               | 35        | 56               |
| Used it – unspecified     | 8         | 13               | 7         | 11               |
| Used it on someone else   | 14        | 23               | 10        | 16               |
| Used on self              | 0         | 0                | 1         | 2                |
| Gave it away              | 5         | 8                | 3         | 5                |
| Lost it                   | 2         | 3                | 2         | 3                |
| Other                     | 0         | 0                | 3         | 5                |
| Don't know                | 1         | 2                | 1         | 2                |
| Total                     | 62        | 100              | 62        | 100              |

### Problems with the naloxone kit

Participants were asked whether there had been any problems with the naloxone kit they received at the workshop training. They were prompted with regards to: how they found the minijets overall, whether two were enough; whether the kit bag was too big or little and whether they would like to see anything else in the naloxone kit bag. Table 26 shows a reduced quantitative breakdown of common responses. See Appendix 5 for the complete qualitative data.

**Table 24: Naloxone kit problems (n=62)**

| Kit Problems  | n  | %<br>respondents | %<br>responses |
|---|----|------------------|----------------|
| No problems   | 23 | 37               | 31             |
| Additional minijets required; two minijets is insufficient  | 17 | 27               | 23             |
| Additional protective/hygiene equipment required, e.g. gloves, CPR facial mask, cleaning swabs                  | 7  | 11               | 9              |
| Kit too large/difficult to carry in bag   | 6  | 9                | 8              |
| Authentication certificate with owners name printed on it required  | 6  | 9                | 8              |
| Difficulty using kit equipment/kit design problems, e.g. difficulty opening syringe package or attaching needle | 5  | 8                | 7              |
| Part of the kit was missing or broken   | 4  | 6                | 5              |
| Syringe problems, e.g., syringe too large or too long   | 3  | 5                | 4              |
| Other   | 4  | 6                | 5              |
| Total responses   | 75 | -                | -              |

#### 4.2.9 Qualitative feedback about the training

As part of the qualitative components of the follow-up interviews respondents were prompted as to whether they would like to say anything about the experienced of being trained or the naloxone programme. Some of their responses are presented here.

*I hope it keeps going, because you know, yeah, just you know in a short amount of time like we've been involved or have known people that've probably save someone. This guy I am talking about, you know, he would have definitely been dead; no ifs and buts. The one before, I might have, you know, given him the naloxone just to be safe this sort of things, but this time it was just like life and death.*

(Male, aged 40-44)

*Well if I hadn't been trained and given her the medication to her, she would be dead so...yeah it was very critical. I think they teach more people and people aren't frightened to put steps in action and save more life and that's about it.*

(Male, aged 50-54)

*And from the training, I dunno how else to say it, it all just made sense and it all just was really smooth and I was really calm about it and I was just really aware of the bystanders and I was really aware of where we were, like, I wasn't just freaking out. And I think that helped the people around us. They called the ambos for me and gave me the phone. It was just really smooth.*

(Female, aged 30-34)

*It gave me a lot of confidence you know. Like yeah heaps of confidence...yeah, what I've been told and what I thought came together...put it in that way. And these guys helped me heaps because I really needed that. I've seen people in really busy place, as in street people and stuff whatever. But you know, yeah I wouldn't be confident enough to do it without that training. You definitely need that training yeah. It's a good thing.*

(Male, aged 55-59)

*The training was useful because I know where and how to put the naloxone in. I've done a first aid course before, so I know rough a bit about the other bits. Yeah so just like, how to respond, I guess... Yeah the training should happened more, as it is a really a good thing.*

(Male, aged 25-29)

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*It was more like adrenalin, like 'Wow, I get to actually use it'. You know, it's hard to explain. It was a bit scary. And because I knew the kid as well, I know him. It was closer to home sorta thing, a bit close to home. But when the adrenalin kicked in, I just didn't see him, I just saw my training [inaudible]. Everyone was just standing back looking at me like 'What the hell are you doing?', and my partner was telling them all to be quiet 'Leave her alone, she's knows what she's doing'. So that was it. When the adrenalin kicked in I didn't have time to have any other emotions.*

INTERVIEWER: So how was the training useful in that situation?

*...It was very useful. And I just hope that if there's anybody else that needs that again that I am able to help them.*

(Female, aged 40-44)

*[A] very positive experience...yeah...very good and it puts you in a position where you're not shy to come forward if you think that someone had overdosed. You know what you are doing, you know that you can cope with this. Yeah.*

(Female, aged 50-54- 54)

*Yeah, yeah it just gave me the confidence, like I have been involved in giving people mouth-to-mouth who overdosed previously but it was really good to have the naloxone there. Because on one occasion I actually had to administer CPR and naloxone for 25 minutes until the ambulance arrived and I was totally exhausted doing that for 25 minutes. .... Again, it's just having the naloxone there, instead of relying on an ambulance to have to turn up on time, particularly if someone's lips have gone quite blue and you know, is not in a good state. I suppose it depends...it makes a difference on how quick you intervene I think and the program gave me more confidence.*

(Female, aged 45-49)

*Good, very good people. The WASUA people are very helpful, very open. If you can understand one particular way of putting something they will find a way of helping you to understand. There are a lot of people whose ability is limited. They...they can communicate with people with a lower education level and they can communicate with people with a higher education level. They are very, very versatile. It's a good*

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*program. Very good. I've spoken to my GP about the program as well and yeah, he thinks it's a good program. Yeah very, very good people. They seem to be very good people, very open about things too.*

INTERVIEWER: In which way did the program help you in that overdose situation? How was it helpful?

*To not panic and to be able to have a refreshed image in my mind of what the steps are. So...I think it provides confidence. When I repeated this back to my children, their first comment [to] me [was]: 'I am so happy that I now know, that this can help and that I can do something.' Even calling an ambulance is something that they need to do. Just basic things and confidence. You have to have the confidence I think to be able to approach a stranger who is unconscious or non-responsive and to have the confidence to take control of the patients and to take control of any other causes as well. To be able to give instructions, so instead of having someone running around like a headless chook: 'Oh my God! Oh my God!' ... Get a watch; time it. I need to know this much time has passed or I need to make this phone call or ...Yeah, confidence I think, is a very big, big part of all of this.* (Female, aged 45-49)

*I feel privileged. Yeah, I think it's great yeah and as I said I do walk around sometimes at night around Northbridge ... with my naloxone, just in case I find someone who has gone over, like, yeah.* (Male, aged 35-39)

*Everything in the training was really good, so you know, we got to play in the training with the equipment in the training already first, so that was, you know, helpful.*

(Male, aged 35-39)

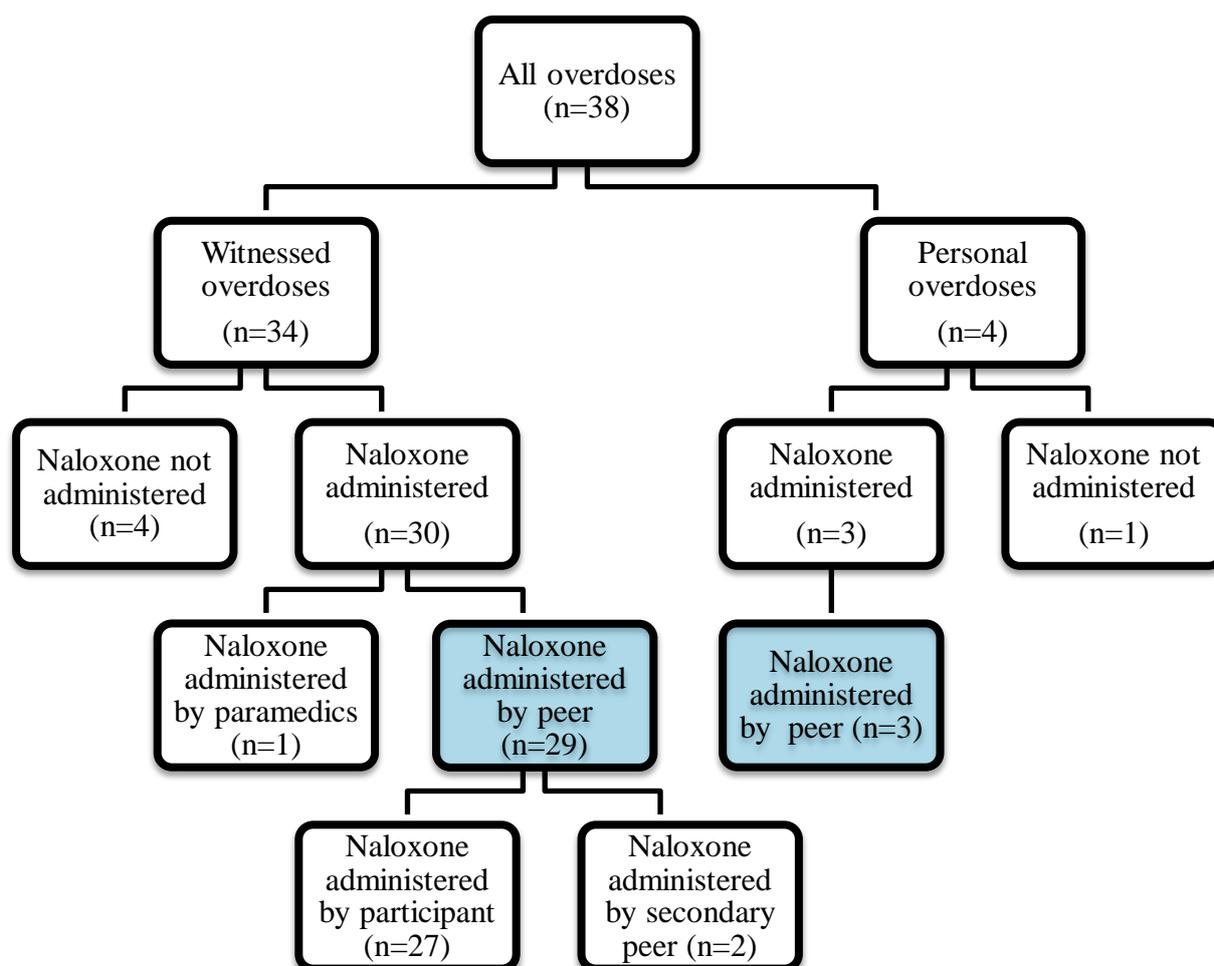
### 4.3 OVERDOSES

Participants were asked about overdoses that they had either witnessed or personally experienced since receiving their naloxone kit. Respondents were asked to describe the last witnessed or personal overdose. A total of 38 last overdoses were reported among participants who received at least one follow-up interview; 34 witnessed overdoses and four personal overdoses.

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In total, there were 32 overdoses in which naloxone was administered by a peer; 29 witnessed overdoses and three personal overdoses. A breakdown of all overdoses by type is shown in Figure 2.

**Figure 2: Last overdoses described by participants**



### 4.3.1 Witnessed overdoses

At the scheduled follow-up, 76% (48/63) of the participants reported having ever witnessed an opioid overdose. These participants had witnessed a mean of 15 overdoses in their lifetime (median 8.5, range 1-150), and 52% (25/48) reported having witnessed an overdose since receiving their naloxone kit. A mean of 2.08 overdoses had been witnessed since receiving naloxone (median 2, range 1-8).

Participants who had witnessed an overdose since receiving their naloxone were asked to describe the last overdose they witnessed. A total of 34 overdoses witnessed were described; 25 were reported at the scheduled follow-up interview, 7 were reported at a second follow-up interview and two were reported at a third follow-up interview.

Naloxone was reported to have been administered in 30/34 (88%) of witnessed overdoses. Naloxone was administered by a peer in 29/30 (97%) of cases and administered by paramedics in 1/30 case (3%). Where naloxone was administered by a peer, it was reported to have been administered by the participant themselves in the majority of cases (27/29, 93%); in the remaining two cases it was reported to have been administered by 'dad' (1/29) and 'girlfriend' (1/29). The administered naloxone was reported to have belonged to the participant who witnessed the overdose in the majority of cases (27/29, 93%); in the remaining two cases it was reported to have belonged to the person who had overdosed (1/29) and 'my father' (1/29). The naloxone was prescribed to the person to whom it belonged in all cases

### Signs of overdose

Participants who had witnessed an overdose since receiving their naloxone were asked to indicate the signs of the last overdose they witnessed (see Table 27).

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**Table 25: Signs of overdose at last witnessed overdose**

| Sign                      | All witnessed overdoses (n=34) |               |             | Overdoses with peer naloxone administration (n=29) |               |             |
|---------------------------|--------------------------------|---------------|-------------|--|---------------|-------------|
|                           | n                              | % respondents | % responses | n  | % respondents | % responses |
| Unconscious               | 28                             | 82            | 26          | 24   | 83            | 26          |
| Pale or blue lips         | 25                             | 71            | 23          | 22   | 73            | 24          |
| Shallow breathing         | 23                             | 68            | 21          | 19   | 65            | 21          |
| Unresponsive to mild pain | 16                             | 47            | 15          | 14   | 48            | 15          |
| Pinpoint pupils           | 13                             | 37            | 12          | 11   | 37            | 12          |
| Fitting                   | 2                              | 6             | 2           | 2  | 7             | 2           |
| Total responses           | 107                            | -             | -           | 92   | -             | -           |

**Reasons for overdose**

Participants who had witnessed an overdose since receiving their naloxone were also asked to indicate the reason for the last witnessed overdose (see Table 28).

**Table 26: Reasons for the last witnessed overdose**

| Reason                          | All witnessed overdoses<br>(n=34) |                  |                | Overdoses with peer naloxone<br>administration (n=29) |                  |                |
|---------------------------------|-----------------------------------|------------------|----------------|---|------------------|----------------|
|                                 | n                                 | %<br>respondents | %<br>responses | n   | %<br>respondents | %<br>responses |
| Mixing drugs                    | 23                                | 68               | 56             | 20  | 69               | 57             |
| Change in purity                | 7                                 | 20               | 17             | 5   | 17               | 14             |
| Reduced tolerance<br>to opioids | 4                                 | 12               | 10             | 4   | 13               | 11             |
| Used too<br>much/greedy         | 1                                 | 3                | 2              | 1   | 7                | 3              |
| Unsure/don't know               | 2                                 | 6                | 5              | 1   | 3                | 3              |
| Other*                          | 4                                 | 12               | 10             | 4   | 13               | 11             |
| Total responses                 | 41                                | -                | -              | 35  | -                | -              |

\* Other reasons were: 'never used before/good quality', 'purely accidental' 'used new drugs', 'depressed'.

### **Actions taken during overdose**

Actions participants reporting undertaking during witnessed overdoses are shown in Table 29.

**Table 27: Actions taken during a witnessed overdose after receiving naloxone**

| Action   | All witnessed overdoses (n=34) |               |             | Overdoses with peer naloxone administration (n=29) |               |             |
|--|--------------------------------|---------------|-------------|--|---------------|-------------|
|  | n                              | % respondents | % responses | n  | % respondents | % responses |
| Stayed with the person until they came around      | 32                             | 94            | 15          | 27   | 93            | 14          |
| Given naloxone                                     | 30                             | 88            | 14          | 29   | 100           | 16          |
| Checked breathing                                  | 26                             | 76            | 12          | 21   | 72            | 11          |
| Checked airways for obstruction                    | 25                             | 73            | 11          | 21   | 72            | 11          |
| Placed the person in the recovery position         | 21                             | 62            | 9           | 18   | 62            | 10          |
| Checked pulse                                      | 20                             | 59            | 9           | 16   | 55            | 9           |
| Performed mouth to mouth resuscitation             | 16                             | 47            | 7           | 14   | 48            | 7           |
| Called an ambulance                                | 12                             | 36            | 5           | 10   | 34            | 5           |
| Slapped or shook the person                        | 12                             | 35            | 5           | 7  | 24            | 4           |
| Stayed with the person until the ambulance arrived | 11                             | 32            | 5           | 9  | 31            | 5           |
| Walked the person around the room                  | 7                              | 20            | 3           | 7  | 24            | 4           |
| Admitted to hospital                               | 4                              | 12            | 2           | 4  | 14            | 2           |
| Shocked the person with cold water                 | 2                              | 6             | 1           | 1  | 3             | <1          |
| Gave stimulants (e.g. black coffee)                | 1                              | 3             | <1          | 1  | 3             | <1          |
| Injected salt (saline) solution                    | 0                              | 0             | 0           | 0  | 0             | 0           |
| Total responses                                    | 219                            | -             | -           | 185  | -             | -           |

## Overdose outcomes and training utility

The person who overdosed was reported to have survived in all cases of witnessed overdose (34/34). Among participants who reported witnessing an overdose in which naloxone was administered by a peer, the majority perceived that the naloxone had saved the person's life (26/29, 90%). One participant did not attribute the naloxone to saving the person's life and the remaining two participants responded with 'don't know' to this question. In just less than two-thirds of cases just one injection was administered by a peer (19/29, 65%). In the remaining 34% of cases (10/29), two injections were administered; in one of these cases the second injection was administered by paramedics. For overdoses in which a single injection was administered, consciousness was regained in five minutes or less after the injection in 63% of cases (12/19; range 30 seconds to 25 minutes). Where two injections were administered, consciousness was regained in 5 minutes or less in 90% of cases (9/10; range 5 seconds to '10-15 minutes'). Participants who witnessed an overdose where peer naloxone was administered were asked to report where on the body the naloxone had been injected. The most frequent responses were thigh and upper arm/shoulder (each 10/29, 34%) and buttocks (5/29, 17%). A small number of participants (4/29, 14%) reported that the naloxone had been administered in the arm (but not upper arm) of person who overdosed. In these cases the naloxone was considered by the interviewer to have been administered in a manner not covered by the training and not recommended. In all 10 cases in which an ambulance was called in addition to peer naloxone administration, ambulance personnel were notified that naloxone had been administered. All participants who had administered naloxone themselves reported that it was either 'very easy' (21/27, 78%) or 'quite easy' (6/27, 22%) to inject. Among witnessed overdoses involving peer naloxone administration, complications were reported in 14% of cases (4/29). These were aggressive behaviour, verbally abusive behaviour, confusion and nausea. Police were reported to have attended 6% of all witnessed overdoses (2/34); in both cases naloxone had been administered by a peer. All participants who witnessed an overdose involving peer naloxone administration (29/29) reported that they had found the training useful. Most of these participants reported that they did not require additional training or re-training on naloxone use (22/29, 76%), while 21% (6/29) reported that they did and one participant responded with 'don't know' to this question. Participants who had witnessed an overdose in which the administered naloxone belonged to them were asked whether their naloxone supply had been replaced by DAO or WASUA. Forty-one

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percent of these respondents reported that it had been replaced (11/27), and the remaining 59% (16/27) reported that it had not been replaced.

### **Qualitative accounts of witnessed overdoses**

As part of the qualitative components of the follow-up interviews, respondents were asked to give accounts of the last overdose they witnessed since completing the naloxone training. In most but not all of these cases naloxone was administered. Excerpts from some of their accounts are presented here. They give a picture of the overdose situations and the reality of the program participants administering naloxone as part of their responding to an overdose situation.

There were a number of scenarios where the person with the naloxone was contacted by others to attend an overdose situation. The following is one example.

*I got a phone call from my neighbour saying he was around the corner at a house. And they have found some heroin. And they were all upper [stimulant] users, and one guy had overdosed, like going blue lips, knew that I had the naloxone. I got my bike. I was there in probably just over a minute. So I don't know...I was thinking...I knew that like, I just said 'Keep giving him CPR'. I said to him on the phone, because I knew that, you know, if they kept giving CPR for five minutes... So I got there. As soon as I got there, I just basically just pulled up this guy's shirt and gave him one rod of naloxone straight into the arm. I just waited, like, because I knew we had two. I knew you know, the first one would last about 20 minutes; it's like a long time, but it wasn't. I think it was about 30 or 40 seconds. He sort of opened his eyes and he came round and then I just did exactly what I was explained in the training. I tried to say, 'Oh it's all right you've gone over!' And he pretty much already knew what would have happened. He was just angry that... because yeah...the other mate of this guy was Aboriginal and this mate was too, but they thought they had found speed and so everyone in the room - there was about four of them - they all had heroin. He overdosed. One of them among the other was very stoned and that... Yeah, I kind of packed up and got out there and quick. But yeah I didn't...yeah, I rang up later, because I said to my neighbour, you know, if he goes over again, I've got another injection of it and to call me. But yeah, I was there probably 75 minutes all up anyway so yeah. He seemed all right...just.*

(Male, aged 35-39)

Many of the accounts demonstrated the participants' use of the skills that they had acquired during the training. For example:

*OK. I was at my apartment and I had a couple of friends...well I had a friend around who had a friend of theirs there. They decided to have something, not sure. And unfortunately her girlfriend went over and she started going.... My mate started freaking out and her friend had... started going blue around her lips and... I think she was still breathing maybe still shallowing...shallow...shallow...but not very frequently. I mean she couldn't have been otherwise she would have been going blue. So I...um...make sure that she was lying flat down on the bathroom floor, because she was in the bathroom and checked her mouth and make sure it was clear of anything or vomit or whatever. She was just reassured that she was going to be all right, even though she couldn't probably hear me and I pretty much got the...Narcan or whatever [naloxone]...out of the bag, where I kept it in my bedroom cabinet. Un-did the little screw on the top of the tip. ...Put the needle on and then turned, like just tuned over a little bit and put it straight through her jeans. I was actually a little bit surprised how long it took. It seems to take a little while to work. Because I know I've had like many, many, many years ago and it was instantaneous like...but anyway she came to and she was pretty dazed and didn't really know what was going on. ... Whether or not that was because of the pills or whatever she had, I'm not too sure. But she couldn't get the grasp of what was going on for a little while, but she did eventually. What else... And I...she...she kind of ...still was groggy, but she was breathing and everything. And I had considered giving her the other ampoule or syringe, but it was obvious she didn't need it, because she was, by that stage, she was sitting up and OK.*

(Female, aged 50-54)

There were a number of participant accounts where the trained respondents were managing the situation in a calm confident manner while other people present were panicking.

*OK, my friend came over and she brought five rods of homebake, which is homebake heroin, and she had them all. She gave me half of one of the rods and whilst I was having mine she had finished taking hers and fell on the ground and her daughter was downstairs and her friend...the girl went over to her friend and she was looking after the little girl, because the little girl got very distressed: 'Mummy, mummy, don't die like dad did!'. It was pretty intense, so I started, you know, giving her CPR and I rang an*

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*ambulance. There was another person there, and I was on the phone with the ambulance... while giving her CPR and gave the phone to my mate, so I just could deal with this person to tell her where to go. And so I could continue giving CPR to my friend. So um... yeah, I gave that to her. I gave her one minijet that didn't sort of um...wait for about five minutes and still kept giving her CPR and then gave her the other one because she wasn't sort of aroused that much. So yeah I gave her the second one and after that she was fine. She could sort of...like she remembered everything that happened up until yeah... She could certainly remember what was being said while she was out of it so...*

INTERVIEWER: Yeah and can you tell me what happened when the ambulance...Did the ambulance come?

*I think they did come, but my friend told them, you know, that she was all right and they left. Well they did come and checked on her and then they left afterwards.*

INTERVIEWER: Yeah, OK. Was there any other action that you took during the overdose? ...

*After putting her in the recovery position um...I just tried to keep...it's hard to keep ...because there are three or four people who are panicking; it's hard to keep everybody else not panicking while you are giving someone else CPR and talking to the ambulance on the phone so...I've tried keeping everyone calm and telling the little girl you know 'Your mum is gonna be OK'. (Female, aged 30-34)*

It was often apparent that participants were aware of the risk factors for overdose, but the person who overdosed sometimes denied or minimised that they had also consumed alcohol or tranquilisers in addition to the opioids. The following two transcriptions are examples:

*OK, someone came over and they said that they had something and could they have a taste. And we said 'yes'. I was a bit worried because it seemed like he had been drinking, and I asked him and he swore that he hadn't. I also asked him if he'd had any tablets and he said that he hadn't. You know he had his shot and my partner said 'Oh, oh, I think you better get the naloxone'. And I went rushing out and he had just... he was sort of slumped over, and I like tried to arouse him and said his name. And by this stage, y'know, so he was sort of slumped in the chair, and we sort of got him off the chair, my partner helped me with that because he was quite large. I got the naloxone*

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*out and quickly gave him like, got the top of his t-shirt up, swabbed him, gave him the shot, tried to rouse him again, give him some quick breaths, um, nothing, you know. I breathed for him for about three or four minutes probably, which is quite a long time. Um and then I administered the second ampoule of Narcan, he then sort of started to arouse a bit, and I started to shook him, he came around a bit and said 'What are you shaking me for?'. We then told him what had happened and he didn't believe us. We set him down he left about half an hour (later) and we kept ringing him and checking that he was OK.*

(Female aged 45-49)

*OK, I was at a friend's house where I had purchased and used some opioids myself. There was um... my flatmate was there. Prior to that person being given any opioids, the person had checked whether they have been drinking or taking any pills and the person who overdosed said no, they hadn't, and they were given a small amount of opioids. I think it was only half a point. This person is known to overdose quite easily. He had opioids and he became very intoxicated, started to lose consciousness. ... What happened was we kept checking him and that was in terms of if he still responded to us verbally. Then what we noticed is that he stopped responding, so myself and another person, what we did was, we had to see if we could arouse him and we couldn't. We tried to get him to respond to us. He did not respond to us. So we...um...checked his pulse and both of us...there was actually two of us who were actually checking his pulse to see if he was OK and he...he...you know, he just wasn't breathing. There was a really faint pulse in his wrist that I felt, so what I did is that I put him flat on his back and I started to administer mouth-to-mouth. At the same time, the other girl, I told her that I had the naloxone in my car and she went out and got it while I was continuing to give him mouth-to-mouth. She came back with the naloxone and I stopped the mouth-to-mouth to see if he was breathing on the side, which he wasn't. I believe the only reason why he was breathing is because I was giving him mouth-to-mouth and so...my friend administered it. She has done the course herself as well. She administered the first lot of naloxone, and then we waited for about five minutes or so, and I continued to give him mouth-to-mouth because the naloxone doesn't work instantly. After probably about five minutes and him still not responding, I asked her to take over from doing the mouth-to-mouth, which she probably did it for a couple of minutes longer. I don't know. And then we made the decision to administer another naloxone. I administered*

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*the second one, because she was doing mouth-to-mouth at that stage. We both changed over. So I administered the second lot of naloxone. She continued to do mouth-to-mouth and then, probably after two or three minutes more, he sort of...it looks like he jumped and he vomited at the same time, while she was still giving him mouth-to-mouth. So she ended up with vomit all over her and it was like he sort of came back to life. And what we did then is that we cleaned the vomit out of his mouth and everything and he sort of didn't know what was going on. We actually put him in the recovery position for a while and kept monitoring him. We hadn't rung an ambulance, but we did monitor him for quite some time after that. We sort of decided not to ring an ambulance. He already has got a lot of ambulance bills and we stayed with him until he was fully conscious and then we told him off, for you know, putting other people in that situation where obviously he admitted he had been drinking.*

(Female, aged 45-49)

The cost of ambulance transport was often a factor in decisions about calling an ambulance and in the following case, contributed to the person who had overdosed becoming angry when they came to and realised that an ambulance had been called, as she was paying off a number of previous ambulance bills due to previous callouts.

*Before we went into compressions, like I was saying, because I didn't know how far she has gone, like I am gonna Narcan you, because I knew that would step her out of it, if she was still conscious. Because, you know, you can lose your stone. So I jabbed on, she didn't even feel it. She didn't even move, so that's why we knew she was in trouble. We went into compressions and called an ambulance, we put on speaker phone and that's when we were yelling at each other. Sorry it was sort of backwards and forwards... And then...And then she came to and just stood straight up. And she thought...this was so messed up...she thought the lady on the phone...for some reasons she thought the ambulance lady on the phone was the drug dealer. So then she got 'Oh thanks mate, thanks for the gear; it was really good'. And I'm like 'You just fucking died, mate!' And she was like 'Oh, thanks'. And she was saying this lady's name who was called off, so the ambulance officer...she was like 'Yeah, thanks the gear is really good'. And I am like 'Man, you just fucking died'. And I was like a bit like shaken. No, actually I was pretty calm, but it was like I was trying to make her aware about how bad it was and then she...she said she was willing to die and then I realised she was maybe engaging in risky behaviours for...not for recreational purposes. And so...but*

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*then she heard...she heard the sirens and then she was like 'Oh, what the fuck, you called an ambulance' and she got really really angry and she was like 'I can't afford an ambulance' and then she went to take off. She was like 'I'm gonna go before the ambulance get here; I can't afford to pay for it'. So I said to her 'Look, I'll get the ambos to leave if you stay here'. So I went out, and there was like three ambulances...there was two ambulances in one of these cars. So I was like taking to them and I told them what happened and then I said 'Look, she just took off'. Because I knew if they came in the house and saw it, she'd try to do a runner or she would take off. So I was trying to keep her in the house. So I told them she had already left to try to just get rid of them. And so they grabbed a torch and started looking around. And like, she's in my room. I was like 'Look! Look, she's got a car and she left! And they were saying 'You know the naloxone wears off'. I am like 'Yeah I'm aware it wears off, but you know, she's got a friend with her', which she did. And so then I went back in the house and I am just like look...I just reassessed situation and she was fine by then. She was just really freaked out about talking to the ambulances so I came out and said 'Look, she sent me a text, she's fine, she's with a friend'. And so they left. But they were really cool. They said 'Look, if she comes and talk to us we would just see if she's ok.*

(Female, aged 30-34)

In the following account the participant managed a difficult overdose situation in a public place and was praised by attending ambulance officers for her management of the overdose situation.

*I went and scored my friend waited in...there's a park nearby - he waited in the park while I went and got it. And then I came back and we went into this little kind of hidey place in the grass we've got - it's really beautiful actually. I always go first - I've got a high tolerance - but I always go first so I can tell him how much I have. And I had it and I was like 'Whoa, that was really nice, make sure you split yours in half'. And so he split his in half and had less than me. We put 60 units in, I had 40 units and he had 20, and he split it in half so he had 10. So I thought, that's such a small dose, he'd be fine...And so he had it, but I think because ... we were sitting down and sort of comfy and chilling out, I think he didn't realise how stoned he was. And so he goes 'Yeah I'm fine, I'll have the other one' and I was like 'Yeah, OK'. And then it sort of crept on [me], and I became really stoned and I turned around I'm like 'Don't have any more, like, it's really strong'. But he already had it in his arm and was having it. And I'm like*

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*'OK, look, let's get out of here', and he couldn't stand up. And so I kind of dragged him up. And because we were opposite the dealer's house in the park, so I'm like, 'Fuck, I can't call an ambulance'. And I couldn't call an ambulance anyway because I didn't even know the address, I didn't know anything. I didn't know where we were. And so I picked him up by the back of his collar and he was just flopping everywhere and I just, like, marched him, like, just kept walking and marching him. And it was just so...it was total serendipity that he happened - I didn't have my naloxone - but he just happened to have one in his bag because he was going to give it to someone else.... So I was like... I was so angry, I was so angry. So I was like 'Get the fucking naloxone, I can't believe you have fucking done this to me'...I was so angry, and I never get angry and I was so angry. And then I just kept marching him and marching him as far we could go. And I got him pretty far and then he just collapsed. And he was just...he was wobbling and wobbling and then he just fell down and collapsed. And then we were...it was so fucked because there was all these, like, joggers going past and people with prams, like, jogging and shit and they all, like, came over. And I was like 'Look, I don't know the address, can someone call the ambulance?'*

*So I made sure he was off the road...so you know, did the danger thing, got him off the road and then I checked for his pulse. And because there were these joggers around I was making sure it sounded like I knew what I was doing. So I was like 'one...two...three', like, counting for his breath, and he just wasn't breathing...he wasn't breathing properly. So I got the naloxone out, but I was trying to pretend it was an epipen because there was the fucken joggers, you know, they're fitness freaks. And I'm like going 'Look, he's just sick, he's just sick, he hasn't had his medicine today, I've gotta give him his epipen'. It looks nothing like an epipen, but you know. So I put it in, and I put it in like an epipen and counted to ten and then I was like 'You're all right' and rubbed it and said 'You're all right mate, you're all right'. And then he just went [takes a big breath in] and just sat up. It happened, like, within a minute. It was amazing, it was amazing. And then he's like going 'Oh, I want to go home now'. And he was still really not walking right. And I'm like 'Nah mate, you're not going home'. ... And then the ambos turned up and I gave a really good handover, you know, like I...basically what I've just said now but a condensed version. And I just said 'I gave him 0.4 milligrams of naloxone, he's up now but he's wobbly, he might need some more'. And the ambo drivers, they were so nice. They said 'Look, you've done exactly*

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*what we would've done, you've done a perfect job'. And it was really cute, because I said ... 'Yeah, I did this project with naloxone' and they were like 'Yeah, that sounds amazing, .... So I was like 'Yeah, that's cool'. And then they gave me a lift home and then took him to the hospital, so it was really cool...*

INTERVIEWER: So he didn't have any adverse reactions?

*No. It was like magic. Like, he was dead. He was purple, he was dead. And then I gave him this injection and colour came back into his face and he got up. It was like magic, it was amazing. It was amazing. And because I was so calm, like, I was able to watch the whole thing. And I was just like 'Fuck, that was just amazing'.*

(Female, aged 30-34)

Again, in this case the ambulance officers appreciated the work done by the trained participant prior to them intervening.

*I was called into a flat where a young lady was on the lounge. Her lips were black and her breathing was virtually not existent. So I got to clear the area, make sure the area was clear before working, put her onto the floor. Gave her mouth-to-mouth and how do you call that -the CPR- OK I gave her CPR, did it for a certain amount of times and she didn't seem to get any better. So yeah, I gave her the injection into her thigh and then called the ambulance prior to that and kept doing CPR and breathing for her until the ambulance came and also put her back into that foetal position.*

INTERVIEWER: Could you tell me more about what happened when the ambulance did arrive?

*When the ambulance drivers arrived they virtually told everyone to get back just fair enough. They tried to give her CPR and that and they had the no, no joy, so they gave her a large shot which failed to pull her back then they pulled her back. They gave her naloxone and then, they put her on her side in the foetal position and then she slowly came back. ... They just said 'Yeah, you've done the best you can do in that in situation, could you stay back please and we'll get on with saving the young lady'. They took her to the hospital because that means she had been drinking as well; that's a strong possibility she get back under.*

(Male, aged 50-54)

One of the rationales for providing naloxone to peers is that other drug users are often present when people have an opioid overdose and so are best placed to provide timely intervention to maintain airway, provide rescue breathing and CPR and administer naloxone. A number of

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the accounts of overdoses managed by project participants demonstrated this, such as the following:

*Sure OK, so me and my friend went to go score some smack. And we well...he decided to get a quarter, which is one... no, 2.5 points of smack and he gave me one third of it. Now he was thinking that he was used to the amount usually. He thought he can handle it. He had it. I had mine at the same time. I was fine and he had instantly lost all coherence of me being anywhere in the room, or anyone else. He was very slow to react to speech, to movement. I couldn't shake him to come to, because I wanted to get the fuck out of it (laugh). Basically I had things to do, and he was not moving and he suddenly started to get a bit blue in his lips and also his breathing was so shallow you barely hear it; that's why I knew something was wrong. And because it has been at least two minutes since he had it and was not talking...no...I mean, like, sometimes people are in a nod you know and you can get a word out of; I couldn't get a word out of it. I knew something was wrong. I asked a mate if he had any Narcan on hand. He said no, so I quickly said 'OK, well I've brought some so let me just check if he needs it'. So I basically gave him a big shake, to see if I could get a bit of reaction out of him; still no reaction. And then I said to him well this doesn't work, nothing will, so I slipped my tongue down his throat just to see if he was faking it. Now if he was faking it, he would have sure as hell pushed me away. Now, he didn't, so I knew he was definitely... yeah, I knew he was going downhill, and he's not with us at all, and I needed to bring him out of it because I've seen dudes before. And...basically he had too much and it was new gear also, so you know, he couldn't gauge how much he needed, and I felt pretty stoned, so I knew he must have been really stoned because he didn't give me nearly as much as him...Anyway, so I had decided to make sure that my friends that were there to tell them to stay with him, and give him just CPR, well just a breathing, while I ran down the car and get my Narcan. I did that, came back and when I come back; still no recovery, so I gave him one full syringe of Narcan and waited two minutes to see if there were any changes in his heart rate, breathing rate or even, you know, coherence. And there was no change, so I knew I had to give him the second one. Because I remember hearing during the training that sometimes you might need two; one is not enough. So I gave him the second one. And glad I did, because about five minutes he started to come into and would you believe it, he was denying he was even OD. The private people I guess. Anyway...yeah...the friends that were there were extremely grateful for me doing that.* (Male, aged 30-34)

In a number of accounts it was clear that the person who had been trained and provided with naloxone was called on by others to help manage and overdose situation as happened in this account:

*I was actually down on my floor and I got a text message from the caretaker – I saw him go running past us – and he went up into the lift, and the next minute I got a text message saying ‘Can you come and help?’. And I run in straight away and I said ‘What’s wrong? What’s happened?’ and he said ‘This young boy’s just... we think he’s overdosed’ and I said ‘Check his eyes mate, I’ll just grab my kit, I’ll be up in a sec’. My partner and myself went up there. I said ‘Has the ambulance been called?’ and he said ‘Yes’. I checked his pulse and [inaudible] and I had no response. I thought ‘Oh god’. I sort of went into panic mode but I didn’t go into panic mode. I kept my cool ‘cause I knew I had the naloxone there. I checked his eyeballs – his eyeballs were pinned. I checked his tongue, his mouth. Like I said, I very gently opened the bottom of his chin with a finger – just very gently opened up to just make sure he wasn’t biting his tongue. [Inaudible], put him in a coma position. [Inaudible] He had a really weak pulse. I didn’t hesitate. Lucky he had tracksuit pants on, so I [inaudible] I think it was the right buttocks, I just pulled his pants down and just bang, administered that. And I said to my partner, I said ‘Right, did you get that?’ he said ‘Yep’, I said ‘Well if I don’t get a response in five minutes, I’ve got to administer the other one’. And I think it was just over 90 seconds, he come to. He was delusional. He didn’t actually know where he was for a start, at the beginning, but then when he did he started getting a bit aggressive.*

(Female, aged 40-44)

Even in situations where naloxone wasn’t administered it was clear that the training that participants had received assisted them in managing the situation and helping the overdosed person to recover. For example:

*A friend and I, we had to...we were going out, but we were going the wrong way, so she pulled in into these blocks of flats to turn around and ...as she pulled in there, as she was reversing, I had to look into this car that was sort of next to me. There was a bloke in there and to me he looked blue so I said to my friend ‘I think that guy has overdosed’, so we stopped the car and got this fellow out of the car. There was nothing we could do for him in the car. But we managed to get him out of the car.*

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*Unfortunately, the only place we could pulled him was on the bitumen, but you know...And I began CPR and he ...um...responded and I put him into the recovery position. Somebody else had called the ambulance. Some builders that were working on the house next door. They were on the roof so they could see what was happening. It was all a little bit confusing really because the fellow who rang the ambulance, they were trying to give me instructions, but I've already, sort of...he was OK by then. And he kept telling me: 'No, no, no, put him on his back and start doing this...' But we've done that! But because I wasn't speaking to the person on the phone and he didn't really know what was going on; he just...he was just...and the ambulance was very quick getting there and the guy survived. But I think he was very very lucky, extremely lucky. It was unfortunate that as I said, I didn't have my naloxone on me at the time, but the training I had been given obviously really helped.* (Female aged 50-54)

#### **4.3.2 Personal overdoses**

Among the 63 participants who had at least one follow-up interview, 59% (n=37) reported ever having had an opioid overdose; the mean number of lifetime overdoses was 5.83 (range 1-50). Among those who completed at least one follow-up interview, four participants (6%) reported having overdosed since receiving their naloxone kit. Three of these were reported at the scheduled follow-up and one was reported at a second follow-up. All of these participants had overdosed just once since receiving their kit. Naloxone was administered in three cases (3/4, 75%) and all three cases the naloxone was reported to have been administered by a peer ('defacto', 'roommate/housemate' and 'friend').

#### **Reasons for overdose**

Participants were asked to indicate the reasons for their last overdose since receiving naloxone (see Table 30).

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**Table 28: Reasons for last personal overdose**

| Reason                       | All personal overdoses (n=4) |               |             | Overdoses with peer naloxone administration (n=3) |               |             |
|------------------------------|------------------------------|---------------|-------------|---|---------------|-------------|
|                              | n                            | % respondents | % responses | n   | % respondents | % responses |
| Mixing drugs                 | 3                            | 75            | 60          | 2   | 67            | 67          |
| Change in purity             | 1                            | 25            | 20          | 1   | 33            | 33          |
| Reduced tolerance to opioids | 0                            | 0             | 0           | 0   | 0             | 0           |
| Other*                       | 1                            | 25            | 20          | 1   | 33            | 33          |
| Total responses              | 5                            | -             | -           | 3   | -             | -           |

\* Other reason was: 'had too much'.

### Actions taken during overdose

Participants were asked what actions were taken at the time of their last overdose since receiving their naloxone kit. Data for one participant was missing on this question. Table 31 shows participant responses.

**Table 29: Actions taken during personal overdoses**

| Action                          | All personal overdoses (n=3) |     | Overdoses with peer naloxone administration (n=2) |     |
|---------------------------------|------------------------------|-----|---|-----|
|                                 | n                            | %   | n   | %   |
| Placed in the recovery position | 2                            | 67  | 2   | 100 |
| Don't know                      | 1                            | 33  | 0   | 0   |
| Total                           | 3                            | 100 | 2   | 100 |

In all three cases where naloxone was administered, it was reported to have belonged to and been prescribed to the person who overdosed (3/3). Participants were asked where on their

body the naloxone had been administered. Two participants (2/3, 67%) responded with 'arm' and one responded with 'don't know' (1/3 33%). The times taken to regain consciousness were reported as 'under one minute', 'five minutes' and '20 minutes'. None of these participants reported complications from the naloxone and all reported that they believed the naloxone had prevented them from dying. Two of these participants (2/3, 67%) reported that their naloxone had not been replaced by DAO or WASUA and one (1/3, 33%) reported that it had. The police did not attend any personal overdoses.

## 5 DISCUSSION

The results are discussed in terms of their relevance to the study aims below.

### 5.1 WAS NALOXONE USED APPROPRIATELY BY PEOPLE IN A NON-MEDICAL SETTING WITHIN THE WA CONTEXT?

Participants' accounts overwhelmingly detailed appropriate responses being taken at the time of reported overdoses. The person survived the overdose in all cases where peer naloxone was administered, with naloxone being perceived to have been the factor that saved the person's life in the vast majority of those cases. In the majority overdoses, including those in which naloxone was not administered, participants reported that they stayed with the person who had overdosed until they regained consciousness, checked their airways and breathing, placed the person in the recovery position and checked their pulse. While some inappropriate responses were reported (giving the person stimulants, walking the person around the room), these were infrequent and not associated with any significant adverse outcomes. In instances where a peer administered naloxone, it was injected into an appropriate location on the body in the majority of cases. A small proportion of participants reported that the naloxone was injected into a bodily area that was not advised in the training and two participants reported injecting naloxone using their own syringes rather than those in the training-issued naloxone kit. However, these responses were again not associated with any serious adverse outcomes. Indeed, all reported complications were minor and were primarily reports of aggressive behaviour, confusion or nausea. Further, naloxone was considered to be easy or very easy to administer by all participants who had done so.

While the training encouraged participants to call an ambulance in addition to naloxone administration, rates of ambulance calls to overdoses were lower than expected at just over a third of witnessed overdoses, although this may be higher than among untrained overdose

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witnesses. Participant accounts indicated that reluctance to call an ambulance was primarily influenced by concerns about the cost of the ambulance service, which is \$916 per callout in the metropolitan area (St. Johns Ambulance, 2016). There were also concerns that ambulance personnel may contact the police; this should only happen if ambulance personnel are concerned about threats to their safety – a particular address may be flagged in the emergency services system due to previous incidents of aggression or violence. In a number of overdoses where naloxone was administered, ambulances were also not called if the witnesses judged that the person who overdosed had substantially recovered. Increasing the rate of ambulance call outs would align with best practice, and this is emphasised to participants during training. It may be appropriate for authorities to explore ways of lessening the financial burden of ambulance callouts for people who inject drugs; for instance, some health insurers offer ambulance cover for \$70 per annum. It is also worth noting that in at least one other state, Victoria, under a concession scheme, people with a Health Care Card receive free emergency ambulance transport throughout Australia (Ambulance Victoria, 2016).

Participants' increased knowledge regarding opioid overdose following training provides further evidence that naloxone was used appropriately. The effect size increases from pre- to post-training on the OOKS overall score, as well as three of the four subscales, indicate that the training had large to very large positive impacts on participant knowledge regarding how to recognise and appropriately respond to an overdose. While scores on the OOKS risk subscale significantly increased from pre- to post-training, this increase had a small effect size. This may be a consequence of a ceiling effect due to participants having a high level of knowledge of overdose risk factors prior to training. Some decline in participant knowledge could be expected in the months following training. Indeed, the results indicate that the increase in participants' knowledge of the signs of opioid overdose immediately after training was not maintained at follow-up. However, the increase in participants' knowledge of the correct actions to take in an overdose situation at post-training was maintained at follow-up.

## **5.2 DID THE PROGRAM RESULT IN SUCCESSFUL OVERDOSE REVERSALS?**

As reported above, there were 32 reported instances of overdose reversal resulting from peer-administered naloxone. There were six additional reported instances of overdose in which naloxone was either administered by paramedics or not administered at all, but during which participants used skills acquired at the training, such as giving CPR or placing the person in the recovery position. Beyond reversing overdoses with naloxone and performing first-aid,

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participants reported disseminating skills or knowledge to others, informing others about the training, implementing harm-reduction behaviours or decreasing their own drug use.

### **5.3 DID THE PROGRAM HAVE ANY UNINTENDED CONSEQUENCES, EITHER POSITIVE OR NEGATIVE?**

No significant unintended negative consequences of the program were reported by participants. An unintended positive consequence of the program was that several participants reported that being provided with training and naloxone instilled them with a sense of empowerment and confidence.

### **5.4 SHOULD THE PROGRAM CONTINUE AND, IF SO, WHAT CHANGES IN THE PROGRAM AND ITS CONTEXTS ARE DESIRABLE?**

Participants gave feedback on how the training and the naloxone kits could be improved. With regards to the training, half the sample said no improvement was required. Some participants reported that it was unclear from the training how naloxone should be obtained, or that naloxone was difficult to access or replace because it needed to be collected from a pharmacy. This was somewhat puzzling as naloxone was provided to workshop participants immediately after the training, unless there were exceptional circumstances such as some early training events held in non-metropolitan areas. It is also worth noting that on February 1 2016, naloxone was rescheduled by the Therapeutic Goods Administration, to make it available over-the-counter – without the need for a doctor’s prescription (Lenton, Dietze, & Jauncey, 2016). It is expected that this will improve ease of access to naloxone for some program participants, although cost may be a significant barrier for others (Lenton et al., 2016). There were other suggestions as to further promotion of the training, other content to be included in the training sessions themselves, reimbursement of participants for attending the sessions, and the use of follow-up booster sessions to improve knowledge retention. With regards to participant feedback concerning the naloxone kits themselves, more than one-third of those who responded said they had no problems with the kit. Of suggestions for improving the kits, most related to increasing the number of minijets, and other equipment included, and decreasing the size of a single naloxone kit to improve portability, which may be incompatible with the previous suggestion.

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## 5.5 OVERALL CONCLUSIONS

The results of this evaluation overwhelmingly support the continuation and expansion of the WAPNP. The program provided participants with access to naloxone and the necessary knowledge and skills to manage an overdose situation including the administration of naloxone. There were no reports of serious adverse events. The follow-up results show that while there was a decline in knowledge in some areas, knowledge was maintained in other domains. Knowledge acquired through the training enabled participants to safely manage overdoses in ways that, without question, contributed to many lives being saved and prevented significant morbidity associated with hypoxia. While there has been some useful feedback which could inform further enhancing both training program content and the contents of the naloxone kits, feedback was overwhelmingly positive. With the recent rescheduling of naloxone in Australia, the broader environment in which the WA program is operating is changing. Nevertheless, there is a recognition that programs such as the WAPNP reach a marginalised and often financially disadvantaged group of people who inject drugs, for whom there may be significant barriers to accessing naloxone over-the-counter from a pharmacy at \$30 or more per dose (Lenton et al., 2016). For that reason, programs such as the WAPNP need to continue to be supported and expanded even though naloxone is now available over-the-counter from pharmacies.

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**APPENDIX 1:  
PRE WORKSHOP QUESTIONNAIRE**

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**Evaluation of the Peer Naloxone Education Project, WA**

**2013-2014**

**PRE-WORKSHOP QUESTIONNAIRE**

**CODE ID (Important to complete carefully)**

First two letters of your first name \_\_ \_\_

First two letters of your last name \_\_ \_\_

Last letter of your last name \_\_

Last two numbers of the year you were born \_\_ \_\_

1. Gender: Male  Female  Other

2. Age: \_\_\_\_\_

**3. Which of the following factors increase the risk of an opioid overdose?**

*(please tick all that apply)*

|  |  |
|--|--|
| <input type="checkbox"/> Using too much heroin                                   | <input type="checkbox"/> Switching from smoking to injecting heroin          |
| <input type="checkbox"/> Using heroin alongside other substances                 | <input type="checkbox"/> Using heroin on your own                            |
| <input type="checkbox"/> Change in drug purity (e.g. through a change in dealer) | <input type="checkbox"/> Using in unfamiliar places / with unfamiliar people |
| <input type="checkbox"/> Change in tolerance (e.g. after prison/detox)           | <input type="checkbox"/> Other _____   |

**4. Which of the following are signs of an opioid overdose**

*(please tick all that apply)*

|   |  |
|---|--|
| <input type="checkbox"/> Blood-shot eyes        | <input type="checkbox"/> Loss of consciousness / Can't be roused |
| <input type="checkbox"/> Slow/shallow breathing | <input type="checkbox"/> Fitting                                 |
| <input type="checkbox"/> Turning blue           | <input type="checkbox"/> Deep snoring                            |
| <input type="checkbox"/> Blurred vision         | <input type="checkbox"/> Pinned pupils                           |

**5. Which of the following actions are important when faced with an opioid overdose**

*(please tick one box per statement)*

|  | Strongly agree           | Agree                    | Unsure                   | Disagree                 | Strongly disagree        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Call an ambulance                                | <input type="checkbox"/> |
| Stay with the person until they come round       | <input type="checkbox"/> |
| Walk the person around the room                  | <input type="checkbox"/> |
| Inject saline (salt) solution                    | <input type="checkbox"/> |
| Give stimulants (e.g. black coffee etc.)         | <input type="checkbox"/> |
| Slap or shake the person                         | <input type="checkbox"/> |
| Shock the person with cold water                 | <input type="checkbox"/> |
| Perform mouth to mouth resuscitation             | <input type="checkbox"/> |
| Place the person in the recovery position        | <input type="checkbox"/> |
| Give Naloxone                                    | <input type="checkbox"/> |
| Stay with the person until the ambulance arrives | <input type="checkbox"/> |

**6. Have you heard of Naloxone or Narcan?**     YES     NO     UNSURE

**7. Have you ever given a Naloxone injection to someone?**     YES     NO     UNSURE

**If Yes** please give a brief description of what happened including the source of the naloxone:

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**8. What is Naloxone used for?**

*(please tick all that apply)*

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|                          |  |                          |   |
|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | Reversal of any drug overdose  | <input type="checkbox"/> | Reversal of benzodiazepines ('benzos') overdose |
| <input type="checkbox"/> | Reversal of opioid overdose (including heroin, methadone)                            | <input type="checkbox"/> | Reversal of alcohol overdose                    |
| <input type="checkbox"/> | Reversal of methamphetamine ('Speed', 'whiz', 'Goe', 'meth', 'ice', 'rock') overdose | <input type="checkbox"/> | Don't know                                      |
| <input type="checkbox"/> | Reversal of cocaine overdose   | <input type="checkbox"/> | Other _____                                     |

**9. Currently in Australia, how should Naloxone be given by a trained peer to someone who has overdosed?**

*(please tick all that apply)*

|                          |  |                          |                           |
|--------------------------|--|--------------------------|---------------------------|
| <input type="checkbox"/> | Intra-muscular injection (injection into the muscle) | <input type="checkbox"/> | Oral consumption (tablet) |
| <input type="checkbox"/> | Intra-venous injection (IV, injection into a vein)   | <input type="checkbox"/> | Nasal spray               |
| <input type="checkbox"/> | Subcutaneous injection (injection under the skin)    | <input type="checkbox"/> | Don't know                |
| <input type="checkbox"/> | Oral consumption (liquid)                            | <input type="checkbox"/> | Other _____               |

**10. How long does Naloxone take to start having effect?**

*(please tick the appropriate box)*

|                          |               |
|--------------------------|---------------|
| <input type="checkbox"/> | 2-5 minutes   |
| <input type="checkbox"/> | 5-10 minutes  |
| <input type="checkbox"/> | 10-20 minutes |
| <input type="checkbox"/> | 20-40 minutes |
| <input type="checkbox"/> | Don't know    |

**11. How long is the duration of action of Naloxone (how long do the effects last)?**

*(please tick the appropriate box)*

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | Less than 20 minutes |
| <input type="checkbox"/> | About one hour       |

|                          |               |
|--------------------------|---------------|
| <input type="checkbox"/> | 1 to 6 hours  |
| <input type="checkbox"/> | 6 to 12 hours |
| <input type="checkbox"/> | Don't know    |

|   | Yes                      | No                       | Don't know               |
|---|--------------------------|--------------------------|--------------------------|
| <b>12. Is there a need to call an ambulance in addition to Naloxone administration?</b> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>13. Would you suggest the use of Naloxone in an overdose situation?</b>              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>14. Would <u>you</u> ever <i>give</i> Naloxone in an overdose situation?</b>         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**15. If you answered YES to 14: How confident do you feel at giving a Naloxone injection?**  
 (please tick the appropriate box)

| Very confident           | Confident                | Unsure                   | Not confident            | Not at all confident     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> |

|   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| <b>16. If asked, would you be willing to train other people in overdose management and Naloxone administration?</b> | <input type="checkbox"/> | <input type="checkbox"/> |

**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY**

**PLEASE HAND THE SURVEY TO THE FACILITATOR**



**APPENDIX 2:  
POST WORKSHOP QUESTIONNAIRE**

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**Evaluation of the Peer Naloxone Education Project, WA**

**2013-2014**

**POST-WORKSHOP QUESTIONNAIRE**

**CODE ID (Important to complete carefully)**

First two letters of your first name \_\_ \_\_

First two letters of your last name \_\_ \_\_

Last letter of your last name \_\_

Last two numbers of the year you were born \_\_ \_\_

**17. Gender:**    Male     Female     Other

**18. Age:** \_\_\_\_\_

**19. Which of the following factors increase the risk of an opioid overdose?**

*(please tick all that apply)*

|  |  |
|--|--|
| <input type="checkbox"/> Using too much heroin                                   | <input type="checkbox"/> Switching from smoking to injecting heroin          |
| <input type="checkbox"/> Using heroin alongside other substances                 | <input type="checkbox"/> Using heroin on your own                            |
| <input type="checkbox"/> Change in drug purity (e.g. through a change in dealer) | <input type="checkbox"/> Using in unfamiliar places / with unfamiliar people |
| <input type="checkbox"/> Change in tolerance (e.g. after prison/detox)           | <input type="checkbox"/> Other _____   |

**20. Which of the following are signs of an opioid overdose**

*(please tick all that apply)*

|   |  |
|---|--|
| <input type="checkbox"/> Blood-shot eyes        | <input type="checkbox"/> Loss of consciousness / Can't be roused |
| <input type="checkbox"/> Slow/shallow breathing | <input type="checkbox"/> Fitting                                 |
| <input type="checkbox"/> Turning blue           | <input type="checkbox"/> Deep snoring                            |
| <input type="checkbox"/> Blurred vision         | <input type="checkbox"/> Pinned pupils                           |

**21. Which of the following actions are important when faced with an opioid overdose**

*(please tick one box per statement)*

|  | Strongly agree           | Agree                    | Unsure                   | Disagree                 | Strongly disagree        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Call an ambulance                                | <input type="checkbox"/> |
| Stay with the person until they come round       | <input type="checkbox"/> |
| Walk the person around the room                  | <input type="checkbox"/> |
| Inject saline (salt) solution                    | <input type="checkbox"/> |
| Give stimulants (e.g. black coffee etc.)         | <input type="checkbox"/> |
| Slap or shake the person                         | <input type="checkbox"/> |
| Shock the person with cold water                 | <input type="checkbox"/> |
| Perform mouth to mouth resuscitation             | <input type="checkbox"/> |
| Place the person in the recovery position        | <input type="checkbox"/> |
| Give Naloxone                                    | <input type="checkbox"/> |
| Stay with the person until the ambulance arrives | <input type="checkbox"/> |

**22. Have you heard of Naloxone or Narcan?**     YES     NO     UNSURE

**23. What is Naloxone used for?**

*(please tick all that apply)*

|                          |  |                          |   |
|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | Reversal of any drug overdose  | <input type="checkbox"/> | Reversal of benzodiazepines ('benzos') overdose |
| <input type="checkbox"/> | Reversal of opioid overdose (including heroin, methadone)                            | <input type="checkbox"/> | Reversal of alcohol overdose                    |
| <input type="checkbox"/> | Reversal of methamphetamine ('Speed', 'whiz', 'Goe', 'meth', 'ice', 'rock') overdose | <input type="checkbox"/> | Don't know                                      |
| <input type="checkbox"/> | Reversal of cocaine overdose   | <input type="checkbox"/> | Other _____                                     |

**24. Currently in Australia, how should Naloxone be given by a trained peer to someone who has overdosed?**

*(please tick all that apply)*



|                          |  |                          |                           |
|--------------------------|--|--------------------------|---------------------------|
| <input type="checkbox"/> | Intra-muscular injection (injection into the muscle) | <input type="checkbox"/> | Oral consumption (tablet) |
| <input type="checkbox"/> | Intra-venous injection (IV, injection into a vein)   | <input type="checkbox"/> | Nasal spray               |
| <input type="checkbox"/> | Subcutaneous injection (injection under the skin)    | <input type="checkbox"/> | Don't know                |
| <input type="checkbox"/> | Oral consumption (liquid)                            | <input type="checkbox"/> | Other _____               |

**25. How long does Naloxone take to start having effect?**

*(please tick the appropriate box)*

|                          |               |
|--------------------------|---------------|
| <input type="checkbox"/> | 2-5 minutes   |
| <input type="checkbox"/> | 5-10 minutes  |
| <input type="checkbox"/> | 10-20 minutes |
| <input type="checkbox"/> | 20-40 minutes |
| <input type="checkbox"/> | Don't know    |

**26. How long is the duration of action of Naloxone (how long do the effects last)?**

*(please tick the appropriate box)*

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | Less than 20 minutes |
| <input type="checkbox"/> | About one hour       |
| <input type="checkbox"/> | 1 to 6 hours         |
| <input type="checkbox"/> | 6 to 12 hours        |
| <input type="checkbox"/> | Don't know           |

|   | Yes                      | No                       | Don't know               |
|---|--------------------------|--------------------------|--------------------------|
| <b>27. Is there a need to call an ambulance in addition to Naloxone administration?</b> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>28. Would you suggest the use of Naloxone in an overdose</b>                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| situation?   |                          |                          |                          |
| 29. Would <u>you</u> ever <i>give</i> Naloxone in an overdose situation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**30. If you answered YES to 13: How confident do you feel at giving a Naloxone injection?**  
 (please tick the appropriate box)

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very confident           | Confident                | Unsure                   | Not confident            | Not at all confident     |
| <input type="checkbox"/> |

|  |                          |                          |
|--|--------------------------|--------------------------|
|  | Yes                      | No                       |
| 31. If asked, would you be willing to train other people in overdose management and Naloxone administration? | <input type="checkbox"/> | <input type="checkbox"/> |

**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY**

**PLEASE HAND THE SURVEY TO THE FACILITATOR**



**APPENDIX 3:  
FOLLOW UP QUESTIONNAIRE**

**Evaluation of the Peer Naloxone Education Project, WA**  
**2013-2014**  
**Follow-up Survey**

**CODE ID (Important to complete carefully)**

Interviewer initial / Resp#   /

First two letters of your first name \_\_ \_\_

First two letters of your last name \_\_ \_\_

Last letter of your last name \_\_

Last two numbers of the year you were born \_\_ \_\_

Date: \_\_\_\_\_ Interviewer: \_\_\_\_\_

**DEMOGRAPHICS, DRUG USE AND TREATMENT INFORMATION**

1. Age:   years      2. Gender:  Female  Male  Other

**3. Marital Status:**

- Single
- Living together
- Married
- Separated
- Divorced
- Widowed

Who do you live with?     Alone     With opioid users     With non-opioid users

4. Are you of Aboriginal or Torres Strait Islander origin?  Yes \_\_\_\_\_ (which)  No

5. Within which suburb do you live? \_\_\_\_\_

**6. Are you in a treatment program?:**

- Opioid detox (methadone)
- Opioid maintenance (methadone)
- Opioid detox (Subutex) (*NB: Subutex=buprenorphine*)
- Opioid maintenance (Subutex)
- Opioid maintenance (Suboxone)
- Other (please describe)
- Not in treatment – please give reason -

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

7. Length of time in treatment (current episode) in months: \_\_\_\_\_

**Please answer the following questions if you have ever used illegal drugs. Otherwise please move to Question 17.**

|  |   |  |
|--|---|--|
| 8. Age first used opioids: .....   | 9. Age first IV use, if applicable: .....   |  |
| 10. Are you currently taking any prescribed medication?  | Yes <input type="checkbox"/><br>No <input type="checkbox"/>   | (If yes) On the last occasion, what were you prescribed?<br>.....<br>..... |
| 11. Which illegal/non-prescribed opioid/s have you used at least once in the last 28 days? (please tick for each)                        | Heroin <input type="checkbox"/><br>Methadone <input type="checkbox"/><br>Buprenorphine <input type="checkbox"/><br>Other (specify all) .....<br>.....<br>.....  |  |
| 12. Have you injected opioids in the last 28 days?   | Yes <input type="checkbox"/><br>No <input type="checkbox"/>   |  |
| 13. Which illegal/non prescribed opioid/s are you currently using daily or on alternate days? (please tick for each)                     | Heroin <input type="checkbox"/><br>Methadone <input type="checkbox"/><br>Buprenorphine <input type="checkbox"/><br>Other (specify all) .....<br>.....<br>.....  |  |
| 14. In the last 12 months, how many times have you gone 3 or more days without using any (whether prescribed or non prescribed) opioids? | Never <input type="checkbox"/><br>Once or twice <input type="checkbox"/><br>Several times <input type="checkbox"/><br>Many times <input type="checkbox"/>   |  |
| 15. Which other substances are you currently using daily or on alternate days? (please tick for each)                                    | Cocaine <input type="checkbox"/><br>Alcohol <input type="checkbox"/><br>Benzodiazepines <input type="checkbox"/><br>Amphetamine <input type="checkbox"/><br>Type Stimulants <input type="checkbox"/><br>Other (specify all) ..... |  |

**THE NALOXONE TRAINING**

16. Did you attend training for the use of naloxone in overdose situations?  YES  NO

17. How long ago did you receive training in naloxone use?

Last month  Two months ago

Three months ago                       More than 3 months ago

**18.** Where did you receive the training?

WASUA    Drug and Alcohol Office    Other \_\_\_\_\_

**19.** Who else attended the training with you? (please tick all that apply)

No-one, I attended on my own                       At least 1 family member/friend who use(s) opioids

At least 1 family member/friend who does not use(s) opioids    Others \_\_\_\_\_(specify)

**20.** What aspects of the workshop were the most valuable for you? And why?

**21.** Have you used any of the skills covered in the workshop? (Prompts How/Why/Changes in your drug use?/Advised others)

**22.** What would you like improved on or added to the workshop? (Prompts How/Why/Overdose prevention section?/Resuscitation section?/Naloxone administration section?)

**23.** Since you were trained, have you trained anyone else in the use of naloxone?    YES    NO

**24.** How were you given your supply of 'take home' naloxone?

At the training

Prescription collected from a chemist

Other, please specify: \_\_\_\_\_

**25.** What happened to each of the 2 naloxone minijets you were given? (Prompts: Still have it; lost, naloxone expired; used on self; used on someone else; other (specify))

1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

26. Have there been any problems with the naloxone kit you received at the workshop training?  
 (How do you find the minijets? Are 2 enough? Is the kit bag too big or little? Would you like to see anything else in the naloxone kit bag?)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

27. Where do you keep your naloxone? \_\_\_\_\_

28. Which of the following signs indicate an opioid overdose? (Please tick all that apply)

|                          |                        |
|--------------------------|------------------------|
| <input type="checkbox"/> | Blood-shot eyes        |
| <input type="checkbox"/> | Slow/shallow breathing |
| <input type="checkbox"/> | Blue lips              |
| <input type="checkbox"/> | Vomiting               |

|                          |                                    |
|--------------------------|------------------------------------|
| <input type="checkbox"/> | Loss of consciousness / unrousable |
| <input type="checkbox"/> | Fitting                            |
| <input type="checkbox"/> | Deep snoring                       |
| <input type="checkbox"/> | Pinned pupils                      |

29. What are the most important steps to take when someone has overdosed? (Please tick all that apply)

|                          |  |                          |  |
|--------------------------|--|--------------------------|--|
| <input type="checkbox"/> | Call an ambulance                                | <input type="checkbox"/> | Give stimulants (e.g. black coffee etc.) |
| <input type="checkbox"/> | Stay with the person until they come round       | <input type="checkbox"/> | Slap or shake the person                 |
| <input type="checkbox"/> | Walk the person around the room                  | <input type="checkbox"/> | Shock the person with cold water         |
| <input type="checkbox"/> | Inject saline (salt) solution                    | <input type="checkbox"/> | Perform mouth to mouth resuscitation     |
| <input type="checkbox"/> | Place the person in the recovery position        | <input type="checkbox"/> | Give Naloxone                            |
| <input type="checkbox"/> | Stay with the person until the ambulance arrives |                          |  |

30. What are the recommended intramuscular injecting sites on the body for naloxone?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

31. What is the recovery position?-

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**Interviewer to assess:** Did the client describe the recovery position correctly?  YES  NO  Partly

32. Do you feel confident you would recognise an opioid overdose?  YES  NO  MAYBE

33. Do you know how to manage an opioid overdose?  YES  NO  MAYBE

34. Would you call the ambulance in an opioid overdose situation?  YES  NO  MAYBE

35.

|  | YES                      | No                       | Maybe                    |   | YES                      | NO                       | Maybe                    | Under specific circumstances<br>(Please specify) |
|--|--------------------------|--------------------------|--------------------------|---|--------------------------|--------------------------|--------------------------|--|
| <b>36(a).</b> Would you be able to check the person's airway and breathing?        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>36(b).</b> Would you actually do it? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____<br>_____          |
| <b>37(a).</b> Would you be able to give mouth-to-mouth resuscitation if necessary? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>37(b).</b> Would you actually do it? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____<br>_____          |
| <b>38(a).</b> Would you be able to place a person in the recovery position?        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>38(b).</b> Would you actually do it? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____<br>_____          |
| <b>39(a).</b> Would you be able to give an injection of naloxone?                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>39(b).</b> Would you actually do it? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____<br>_____          |

## PERSONAL OVERDOSES

NB: Definition of Overdose

*Overdose is defined as any of the following symptoms occurring in conjunction with your drug use: difficulty breathing, turning blue, lost consciousness, unable to be roused, collapsing. Overdose does not mean being ‘on the nod’.*

**40.** Have you ever had an opioid overdose?     YES    NO    Not sure/maybe **(If no go to Section D)**

If yes, how many? \_\_\_\_\_

**41 a.** Have you had an opioid overdose *since receiving your naloxone*?    YES    NO **(If no go to Section D)**

**41 b.** If yes, how many \_\_\_\_\_

**SINCE RECEIVING NALOXONE**

Please answer the following questions about your most recent overdose experience

I’m going to audio record the next question and I will tell you when the recorder is off. Is that OK?

**[Begin audio recording]**

**This is respondent (Interviewer initial / Resp#)** / **question 41 c**

**41 c** Can you describe in your own words what happened the last time you had a drug overdose?

Prompts:

- What happened before you overdosed? What drugs had you been using?
- Had you had recent periods of abstinence due to prison treatment etc.?
- Who else was present when you were using?
- What happened when you overdosed (what did others tell you)?
- What happened after you overdosed? Did you go to hospital? Adverse reactions, re-intoxication etc.,

Thanks for that. Although you've just given me the story of your last overdose in your own words, I need to ask you some more detailed questions about it so we make sure we get the same information from everyone we interview and don't miss out anything important. I appreciate that this might be a bit repetitive, but are you OK with that?

42. How long after receiving naloxone did you have an overdose? \_\_\_\_\_

43. During this overdose was naloxone used to revive you?  YES  NO

44. If yes, to whom did the naloxone belong?

- Myself  The person who overdosed  
 Ambulance  Friend/partner of the person who overdosed  
 Stranger  Other, please specify: \_\_\_\_\_

44 (b) Was the naloxone prescribed to that person?

- Yes (skip next question)  No (go to next question)  Don't know (skip next question)

44 (c) To whom was the naloxone prescribed?

- Myself  The person who overdosed  
 Stranger  Friend/partner of the person who overdosed  
 Other, please specify: \_\_\_\_\_

45. Why do you think you overdosed?

- reduced tolerance to opioids please specify: \_\_\_\_\_  
 change in purity, please specify: \_\_\_\_\_  
 mixing drugs (polydrug use), please specify: \_\_\_\_\_  
 other, please specify: \_\_\_\_\_

46. What happened after the overdose?

- I was placed in recovery position  Ambulance was called  
 Police attended  Don't know  
 I was admitted to hospital

47. Who gave you the naloxone injection? \_\_\_\_\_

48. Where on the body was the naloxone injection given? \_\_\_\_\_

49. How many naloxone injections were you given during this overdose? \_\_\_\_\_

50. How long approx. did it take to regain consciousness following the naloxone injection (if known)?  
\_\_\_\_\_

51. Did you experience any complications or problems from naloxone (other than the symptoms associated with opioid withdrawal)?

- YES  NO  DON'T KNOW

If yes, please describe: \_\_\_\_\_

52. In your opinion did the naloxone prevent you dying from an overdose?  YES  NO  DON'T KNOW

53. Was the naloxone supply replaced by your drug service?  YES  NO

**WITNESSED OVERDOSES**

54. Have you ever witnessed an opioid overdose?  YES  NO (if no go to Section E)

If yes, how many? \_\_\_\_\_

55 a. Have you witnessed an opioid overdose *since receiving your naloxone*?

YES  NO (if no go to Section E)

55 b. If yes, how many \_\_\_\_\_

**Please answer the following questions about the overdose you witnessed  
SINCE RECEIVING NALOXONE**

I'm going to audio record the next question and I will tell you when the recorder is off. Is that OK?

**[Begin audio recording] This is respondent (Interviewer initial / Resp#)** / **question 55 c**

55 c. Can you describe in your own words what happened the last time you witnessed a drug overdose since receiving naloxone?

Prompts:

- What happened before the overdose?
- What drugs had the person been using?
- Had they had recent periods of abstinence due to prison, treatment, etc.?
- Who else was present? What happened when they overdosed?
- What happened after they overdosed? Did they go to hospital? Adverse reactions, re-intoxication, etc.?

56. How did you recognise that this person had overdosed?

- |  |  |
|--|--|
| <input type="checkbox"/> Shallow breathing | <input type="checkbox"/> Unresponsive to mild pain |
| <input type="checkbox"/> Pale or blue lips | <input type="checkbox"/> Unconscious               |
| <input type="checkbox"/> Pin-point pupils  | <input type="checkbox"/> Fitting                   |

57. Why do you think they overdosed?

- Reduced tolerance to opioids
- Change in purity
- Mixed drugs use, please specify: \_\_\_\_\_
- Other, please specify: \_\_\_\_\_

58. What actions were taken during the overdose on this occasion?

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Called an ambulance                          |
| <input type="checkbox"/> | Stayed with the person until they come round |
| <input type="checkbox"/> | Walked the person around the room            |
| <input type="checkbox"/> | Injected saline (salt) solution              |

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Gave stimulants (e.g. black coffee etc.) |
| <input type="checkbox"/> | Slapped or shaken the person             |
| <input type="checkbox"/> | Shocked the person with cold water       |
| <input type="checkbox"/> | Performed mouth to mouth resuscitation   |

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Placed the person in the recovery position         |
| <input type="checkbox"/> | Stayed with the person until the ambulance arrived |
| <input type="checkbox"/> | Checked airways for obstruction                    |
| <input type="checkbox"/> | Checked breathing                                  |

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | Given Naloxone       |
| <input type="checkbox"/> | Admitted to hospital |
| <input type="checkbox"/> | Checked pulse        |

59. Did the person survive the overdose?  YES  NO

60. Did the police attend?  YES  NO

61. Was naloxone used to aid resuscitation?  YES  NO (if no go to Section F)

62. To whom did the naloxone belong?

- Myself
- Ambulance
- Stranger
- Other, please specify: \_\_\_\_\_
- The person who overdosed
- Friend/partner of the person who overdosed

62 (b) Was the naloxone prescribed to that person?

- Yes (skip next question)
- No (go to next question)
- Don't know (skip next question)

62 (c) To whom was the naloxone prescribed?

- Myself
- Stranger
- Other, please specify: \_\_\_\_\_
- The person who overdosed
- Friend/partner of the person who overdosed

63. If an ambulance was called, were the ambulance personnel notified that naloxone had been used?

- YES  NO  DON'T KNOW

64. Who gave the person the naloxone injection? \_\_\_\_\_

65. Where on the body was the naloxone injection given? \_\_\_\_\_

66. How many naloxone injections were they given? \_\_\_\_\_

67. How long approximately did it take for them to regain consciousness? \_\_\_\_\_

68. Did they experience any complications or problems such as aggression from naloxone other than the symptoms associated with opioid withdrawal?

- YES  NO  DON'T KNOW

If yes, please describe: \_\_\_\_\_

\_\_\_\_\_

---

**69.** If the person survived, in your opinion did the naloxone prevent the person dying from an overdose?

YES  NO  DON'T KNOW

**70.** Was the naloxone supply replaced by WASUA or DAO?

YES  NO  DON'T KNOW

**EXPERIENCE OF GIVING NALOXONE**

**These questions are to be answered if YOU have given any of the naloxone you received from the program?**

**71.** How confident did you feel giving naloxone?

very confident    quite confident    not very confident    not at all confident

**72.** How easy was it to inject the naloxone?

very easy    quite easy    not very easy    not at all easy

**73.** Was the naloxone training you received useful in this situation?    YES    NO    DON'T KNOW

**74.** Do you require additional training or re-training on naloxone use?    YES    NO    DON'T KNOW

**75.** If possible, the research team would like to speak to the person who overdosed. Would you be willing to pass on our contact details to that person:

YES    NO

If yes, we will provide you with a card with our contact details.

Interview provided card to participant?    YES    NO

**CONTACT DETAILS (TO BE KEPT SEPARATELY FROM SURVEY FORM)**

Have you experienced or witnessed an opioid overdose where naloxone was used other than those described above?

YES  NO

If yes, may the evaluation team contact you?  YES  NO

Please provide contact details:

Address: \_\_\_\_\_

Mobile: \_\_\_\_\_

Landline: \_\_\_\_\_

Email: \_\_\_\_\_

**THANK YOU VERY MUCH FOR YOUR TIME**

**APPENDIX 4:  
PARTICIPANT INFORMATION SHEET & CONSENT FORM**

**Evaluation of the Peer Naloxone Education Project, WA  
2013-2014  
Evaluation Participant Information Sheet**

A new program called the *Peer Naloxone Education Project* is starting up here in WA. People who volunteer for this program will be trained to recognise and respond to overdoses on opioid drugs like heroin and oxycodone as part of a strategy to help stop overdose deaths. People who successfully complete the training program will be offered a prescription to obtain naloxone (Narcan®), an overdose reversal drug, to assist their peers to resuscitate them should they experience opioid overdose.

A. An independent evaluation of the program is being undertaken. The people responsible for the evaluation are Professor Simon Lenton, Allison Christou, and Professor Paul Dietze. Professor Lenton can be contacted at National Drug Research Institute at Curtin University (GPO Box U1987, Perth WA 6845, telephone (08) 9266 1603, email [s.lenton@curtin.edu.au](mailto:s.lenton@curtin.edu.au)). Allison Christou can be contacted at the Drug and Alcohol Office (7 Field St, Mt Lawley 6050, telephone (08) 93700347, email [allison.christou@health.wa.gov.au](mailto:allison.christou@health.wa.gov.au)). Professor Dietze can be contacted at The Centre for Population Health at the Burnet Institute in Melbourne (85 Commercial Road, Melbourne 3004, telephone (03) 9282 2134, email: [pauld@burnet.edu.au](mailto:pauld@burnet.edu.au)).

**B. Why are we conducting the evaluation?**

We are conducting the evaluation to find out about the experiences and views of people who do the training program and are given a prescription for naloxone. This information will be used by the Drug and Alcohol Office of WA and the West Australian Substance Users Association (WASUA) to see whether the program is effective and appropriate. This information will help them to make decisions about next steps for the program, for example expanding it, changing it, or closing it down.

**C. What does the evaluation involve?**

We need to speak to you about your experiences of the program. We would like you to:

- fill in a written survey before and after the training program, and
- provide your contact details so that we can speak to you later to find out about how you used the new knowledge and skills you gain in the course (including whether you have used naloxone). We will contact you about three to six months after you do the naloxone training course. We may ask you to take part in an audio-recorded interview at that time.

It is not compulsory for you to be a part of the evaluation. If you choose not to participate, then this decision will not have any adverse effects - you can still stay in the program, complete the training course and, if eligible, receive a prescription for naloxone. You can withdraw from the evaluation at any time. You don't need to provide any reasons if you choose not to participate in the evaluation either now or in the future.

**D. Payment**

We need you to fill in the surveys you receive today for the evaluation. We will also offer you a further \$40 in cash if you fill another survey at each follow-up interview, as compensation for your out-of-pocket expenses and time. We will ask you to write your name, and sign, to show that you have received the payment.

### **E. Reporting**

The results of this independent evaluation will be given to the Drug and Alcohol Office of WA. We expect that they will pass on the report to WASUA and other drug and alcohol services in the WA. Summary results will be made available to the people who use WA drug and alcohol services and to others in the community. The results may also be published on the internet, in academic journals or in books, and presented to conferences.

### **F. Are there any risks if I participate in the evaluation?**

There are no serious risks for you if you choose to participate in this evaluation. The questionnaires and the follow up survey will only identify you by a code. Your personal details will be stored separately.

The study is not intended to find about any illegal activity (e.g. the use of illegal drugs now or sometime in the past) but may do so as participants will be asked about their own experiences of overdose.

The information you provide will be kept in a secure place, a locked office in the evaluator's premises, and will be seen only by the authorised evaluation researchers. It will be kept confidential as much as possible - to the extent permitted by law.

As mentioned above, there will be no adverse effects for you if you don't want to be a part of the evaluation or withdraw from it later on. If you choose to withdraw from the evaluation all audio recordings and computer records will be erased and all paper-based records will be securely destroyed.

If you feel upset by any of the questions we ask you, our trained interviewers will be happy to help you. Please feel free to tell them if any of the topics discussed make you feel uncomfortable. You do not have to answer the questions if you don't want to.

The reports of the evaluation will be written in such a way that the information provided cannot be linked to any individual person. Your privacy will be assured.

### **G. Providing consent to participate in the evaluation**

Please read and, if you agree, sign the attached Consent Form.

### **H. Contact names and phone numbers**

If you have any questions or complaints about the evaluation please feel free to contact the chief investigators (details above) or:

Drug and Alcohol Office, WA

7 Field Street

Mt Lawley, WA 6050

This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR120/2012). The Committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).

If you have any problems or queries about the way in which this study has been carried out and you do not feel comfortable communicating with the staff conducting this survey, please contact the Curtin University Human Research Ethics Committee (contact details above).

**Evaluation of the Peer Naloxone Education Project, WA**

**2013-2014**

**Evaluation Participant Consent Form**

Chief Investigators: Professor Simon Lenton, Allison Christou & Professor Paul Dietze

I ..... (please print your name) consent to take part in this evaluation project. I have read the Evaluation Participant Information Sheet and understand what is in there. I have had the nature and purpose of the evaluation, so far as it affects me, fully explained to my satisfaction by the evaluation research worker. I give my consent freely.

I understand that if I agree to participate in the evaluation project I will be asked to fill in a survey before and after the overdose prevention training program. I will also be asked to provide my contact details so that I can be invited to a follow-up interview three to six months after the training course. The follow-up interview will take about 20 minutes and will involve questions about what I learned in the training program, my views about and experiences of overdose prevention, and my use or non-use of naloxone to help resuscitate someone experiencing an opioid overdose. I understand that I may be asked to give my permission for the interview to be audio-recorded at the follow-up interview.

I understand that, while the study is not intended to find out about illegal activity (e.g. the use of illegal drugs now or sometime in the past), it may do so as participants will be asked about their own experiences of overdose.

I understand that, while information gained during the evaluation project may be published in reports and in academic publications, my name and other identifying information will not be used in any publications coming from the evaluation.

I understand that my personal information such as my name and contact details will be kept confidential so far as the law allows. Surveys and completed interview forms and any other identifying materials will be stored in a locked office at the evaluator's premises. Information entered onto a computer will be kept in a computer that is accessible only by a password known only to authorised members of the evaluation team.

I understand that I may withdraw from the evaluation at any stage, without providing any reason for doing so, and that this will not have any adverse effects for me and that any records related to me will be erased or securely destroyed.

Signed: ..... Date .....

Please print name (or alias) .....

Witnessed: ..... Date .....

Please print name .....

**APPENDIX 5:  
SUPPLEMENTARY QUALITATIVE DATA**

**Table 31: What aspects of the workshop were the most valuable for you and why?**

|   |
|---|
| 1st aid. Overdose prevention part. Also did OPAM first aid certificate confidence training feel empowered hard to watch friend go over lost friends in 90s felt guilty [male, aged 35-39]           |
| Already done 1st Aid course and registration doesn't last. Refresh it, because had to use it a number of times. Interaction with other people [female, aged 50-54]                                  |
| Availability of the Naloxone to get someone back. Refreshing course about CPR to save lives [male, aged 55-59]  |
| Difference between nodding off and OD and how to use the Naloxone > save lives [female, aged 30-34]   |
| Get information about the naloxone, as I didn't know much about it. Learn how to administer it. Getting more confident [female, aged 45-49]   |
| Getiting the Naloxone if someone overdose it's there so there is no need to call an ambulance or the police and it's easy to administer [male, aged 30-34]  |
| Getting paid for the training. Getting the naloxone to save lives. Helping partner who had 5 od next to me [female, aged 65-69]   |
| Getting the Naloxone kit + getting trained > practically giving the kit; feel safer [female, aged 25-29]  |
| Getting the Naloxone, because I had to administer it in the past; it's good to know how to do it properly. Getting 1st aid. I took my girlfriend in as well, as we have children [male, aged 35-39] |
| Giving CPR because can get back somebody. How to use the Naloxone to bring back a friend [male, aged 35-39]   |
| How to inject Naloxone. How stop people from getting infections. How to use drugs more safely. Now he knows how to do it. [male, aged 40-44]  |
| How to use the Naloxone, in order to save friends' life. Get a better understanding of it [male, aged 30-34]  |
| I liked the presenters> they kept a dry subject interesting. Being able to use the naloxone to be familiarised with it [female, aged 45-49]   |
| Know what to do in a OD situation. Naloxone is very handy. Training is useful because I can help other people [male, aged 25-29]  |
| Knowing how to use it and use it properly because I know lots of drug users and people who get out of jail so able to help them. [female, aged 35-39]   |
| Learning self-awareness. Know what to do if something goes wrong. Information for myself. Learning CPR. Know how to use the narcan gives me confidence [male, aged 55-59]                           |
| People that use can receive kits to prevent OD. Security guards should be trained as well. Very informative and simple to understand [male, aged 40-44]   |
| Resuscitation section and Naloxone administration section were helpful, so that he knows what to do and can save lives. [male, aged 55-59]  |
| The fact that we can reverse an overdose to save someone's life [female, aged 25-29]  |
| Updating of first aid & CPR training (new regime) [female, aged 45-49]  |
| Very interesting to do the course + the medical side of it > feel quite educated. Saved 2   |

|   |
|---|
| people who would have been dead without the training. Gave the naloxone> naloxone works. I've refreshed my skills [female, aged 50-54]  |
| The greatest aspect was getting the Naloxone. Quite confident resuscitating people but still learnt things. Hadn't given Naloxone before. Now used 4 times. [female, aged 50-54]  |
| 1 breath every 15-20 seconds not good enough; 1st aid; doses; everything else new [male, aged 30-34]  |
| Actually learning how to use the Narcan; wish daughter had come; would have been useful for her. [female, aged 45-49]   |
| Being able to legally have the medication if OD and learning CPR. [male, aged 50-54]  |
| Clearing up a couple of myths. Knew most of it. [male, aged 40-44]  |
| Everything, recognising and knowing what to do. Naloxone prescription. [female, aged 30-34]   |
| First aid training really handy; discussion with group about different myths other people experiences; being able to help someone if do come across OD situation. [female, aged 30-34]  |
| Getting Narcan & knowing how to use it. [male, aged 45-49]  |
| Getting the Naloxone [male, aged 45-49]   |
| Getting the Naloxone and being able to use it. [male, aged 45-49]   |
| Having the equipment there to save someone's life. If haven't got it, sometimes ambulance not quick enough. Hate to see life wasted. [male, aged 60-64]   |
| How does the Naloxone works e.g.: timeframe; the number of changes of CPR: 30/2 nowadays; most of the information hasn't changed: refreshing course; Necessity of mouth to mouth may not be as crucial as formally believed. [female, aged 45-49] |
| How to administer the Naloxone and a bit of a refresher on first aid. [female, aged 25-29]  |
| How to use the naloxone, signs and symptoms of an OD [female, aged 50-54]   |
| I learnt how to help peers; get benefit out of it if I help someone. Heard people dropping and my brther died from an OD so be able to help someone. [male, aged 40-44]   |
| It was very straight forward; easy to understand. [gender missing, aged 65-69]  |
| Just being thought how to deal with overdose situation calm how to deal with an overdose what to do. Frightening when you don't know what to do. [female, aged 50-54]   |
| Just having this available to use; talking to friends about available> happening and going to save a lots of lives. [male, aged 35-39]  |
| Just to know that you could administer it not just a nurse. [male, aged 55-59]  |
| Knowing how to use it. [female, aged 65-69]   |
| Knowing how to use Naloxone in case a friend will need it> ability to save a friend's life [male, aged [45-49]  |
| Learning CPR to know what to do in an OD situation. It was easy going; able to relax with friends as if we were just having a conversation; food was provided [male, aged 45-49]  |

|  |
|--|
| Learning how to give Naloxone, so able to save life [female, aged 40-44]   |
| Learning how to inject Naloxone and the 1st aid part. [female, aged 25-29]   |
| Learning how to respond appropriately in an opioid OD situation eg. DRSABCD as well as how to admin Naloxone [female, aged 30-34]  |
| Learning to do mouth to mouth + CPR properly; I feel more confident. [female, aged 45-49]  |
| Learning true & false fact about what helps & what doesn't. [male, aged 30-34]   |
| Learning what to do in an overdose situation; not feeling useless in case of an OD. [female, aged 30-34]   |
| Myths about bringing people back [female, aged 30-34]  |
| Nothing already knew it all; the most valuable thing was getting the Naloxone. Have done 1st aid. Have friends who OD sometimes. [male, aged 55-59]  |
| Probably just training how to use Naloxone. Already knew a lot of other info before. A lot was beneficial. [male, aged 35-39]  |
| Receiving Naloxone because used what received; used three times to bring people but better to be safe than sorry. [male, aged aged 55-59]  |
| Talking about the Naloxone effects & the benefits. [male, aged 55-59]  |
| The basic first aid; refresher course & naloxone information & practical side of it. [female, aged 25-29]  |
| The minijets, not that used or seen anyone go over but have in the past and thinking why can't I have narcan. [male, aged 45-49]   |
| The way Narcan works, how it brings you back without putting into withdrawal [male, aged 45-49]  |
| The whole thing in general. Can't pick a specific point. Thought knew a lot, but not as much as thought. Wash hands every time take a shot. Enjoyed first aid training. Pretty sure could get job done injecting Naloxone [male, aged 40-44] |
| To get the Naloxone jets probably the best part; important that circulates & available when people need it. [male, aged aged 55-59]  |
| Understanding of everything; being provided with info which I can forward to others; getting Naloxone [male, aged 40-44]   |

**Table 32: What would you like improved on or added to the workshop?**

|  |
|--|
| Six months after workshop get people together for a debrief and see if other people have used it (the naloxone) as well or once a year get everybody together to pick up good tips [female, aged 50-54]  |
| All pretty good: first aid was covered well; clean material section was good; learnt how to talk to people on the ground was good money incentive would be a good idea giving 40 dollars to each participant, as I haven't been paid for the training. More people would enrolled if they were paid [male, aged 45-49]   |
| Card with toll free number if something happens (e.g. OD). I'd like to know more about pharmacology and effects of drugs. e.g. Is there a way to know for sure that a person has used opioids; things like that> learn indicator of OD on heroin, or heart attack vs OD with benzos.> without information you can't do anything.> knowing different kind of OD. e.g. different reactions depending on the drugs [female, aged 45-49]   |
| Covered everything > everything was straight forward [male, aged 40-44]  |
| Covered everything; really knowledgeable [female, aged 65-69]  |
| CPR: Hard to see what's going all because the instructor got called out so this part was skipped so no-one got to know what to do. Didn't receive the second part of the training because of funding restrictions; received a text: "due to budget cut we can't continue the second part of the training" and I haven't heard anything since then. The course was fine, but instructors should get a piece of paper with squares to tick so that they don't forget anything [female, aged 35-39] |
| Everyone should be trained - children at school and counsellors every 6 months; it should be part of an ongoing training. Quite good; happy with the training disconcerting that people come and go for a cigarette during the training even if enough breaks. Touching the equipment was good [female, aged 50-54]  |
| Everything was very satisfying. People running the workshop are very good [female, aged 50-54]   |
| Would like to get more details about overdose symptoms, because unsure if someone has overdosed or if it's a nod [male, aged 55-59]  |
| It would be great to have people at the training who share their personal story about their experience of giving the Naloxone. The training and the interview take time so people should get paid for it. Street doctor in Fremantle - not very clear how to get the minijets there. Training was pretty good. [Uncertainty whether] we need to give heart compression or not during resuscitation [female, aged 45-49]  |
| More funding; need to go to another location to get the kit; had to get the kit at the street Dr; a Dr could come at the end of the training; good like it is; not too long or difficult to retain information practice resuscitation on dummies would be great> demo [female, aged 25-29]   |
| Not clear how to get the Naloxone; they should let us know where to get it and what to do to get it [female, aged 45-49]   |
| Nothing was covered about smoking opioids; it was only about injecting it; more information about research chemical (e.g. MDVP) would be useful [male, aged 35-39]   |
| Pretty clear [female, aged 30-34]  |
| Pretty good the way it is would be useful to have the training in prison take more time to get people to understand what they are using [male, aged 55-59]   |

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| Pretty good; covers everything; well presented [male, aged 35-39]   |
| Quite good; covered everything make sure that people got their first aid certificate to do it properly [male, aged 55-59]   |
| Really good. There should be more awareness about the training. [male, aged 25-29]  |
| Suboxone is much more addictive than heroin so other agencies should be more informed about it and should tell people about that. Higher level of first aid. More scenarios involving other drugs should be showed [male, aged 40-44]   |
| The workshop was pretty good. Maybe cover a bit of overdosing on other drugs such as rock to be more aware of what to do in this situation [male, aged 30-34]   |
| The workshop was pretty good; everything was covered [female, aged 25-29]   |
| I would just like to be more accessible to get to. To have to take time off to come and get more doses. Last time used needed another one. Didn't come around for another morning after given Naloxone had pills and alcohol on board [female, aged 50-54]  |
| Can't think of anything; was very well run; have done first aid in the past though [male, aged 45-49]   |
| Could emphasise more the prevention section: how to behave when using heroin [male, aged 45-49]   |
| Couldn't really say [male, aged 40-44]  |
| Doesn't need to be improved, but do something to get more people there. Maybe people don't know about it. More advertisements about the training would be useful [male, aged 30-34]   |
| Don't know; quite happy with whole thing; a lot of information was already aware of, but good to clarify what's right, what's a myth [female, aged 30-34]   |
| Don't think there is anything that could be added; presented really well; wish daughter had come; didn't realise with medication taking going on the nod could stop breathing; didn't think about it because pharmaceutical prescribed [female, aged 45-49]   |
| Everything that I thought would be covered was covered [female, aged 30-34]   |
| Follow ups every year maybe to go over it, especially if people haven't used it [female, aged 65-69]  |
| Good; [Really] enjoyed it [male, aged 40-44]  |
| It was comprehensive and accessible [female, aged 30-34]  |
| It would be great to receive a card with a name, photo and go to the chemist and receive your dose. Run the card through and if you have already received your dose, you can't get it; able to get it everywhere in Australia.Bad thing: breaking of confidentiality from someone who was at the training who knows me [male, aged 40-44] |
| May be easier to get refilling of Naloxone [female, aged 30-34]   |
| Maybe a bit more information on how intramuscular injection can be quickly [female, aged 25-29]   |
| More frequent; hard for people with dependency to get these separate stages, 3 workshops1 hr day. Refresher. Keep track of sessions each done. Check where at [male, aged 30-34]  |
| More legal stuff, rights, etc. [female, aged 45-49]   |
| More speaking about moderation, repercussions; all know about danger [male, aged 55-59]   |

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|---|
| No [male, aged 45-49]   |
| No, don't think so. Maybe actually go through CPR [female, aged 50-54]  |
| No, going well [male, aged 50-54]   |
| No, I think the workshop is good [other, aged 65-69]  |
| No, not really. The only thing would be more dates, more time open to replace naloxone. Have somebody designated with authority to give out so never out of naloxone [male, aged 60-64]                             |
| No, not that can think of [male, aged 45-49]  |
| No, pretty good [male, aged 45-49]  |
| No, thought it was really good, comprehensive, appropriate [female, aged 25-29]   |
| No, thought was fairly comprehensive [male, aged aged 55-59]  |
| No [male, aged aged 55-59]  |
| Not really no. Ease of refilling naloxone. Have skills, but access to Naloxone need to go to the chemist [male, aged 45-49]   |
| Not that can think of. More availability/marketing, more awareness discrimination, stigma opioid users breaking down [male, aged 35-39]   |
| Nothing [female, aged 30-34]  |
| Nothing; it was easy to understand [female, aged 25-29]   |
| Pretty good. Maybe a bit easier to get Naloxone prescribed. Need to wait for street Doctor to come availability. Can't think of any negatives about the project [male, aged 40-44]                                  |
| She would like to have more information about poly drug use [female, aged 45-49]  |
| Sufficient, very informative, easy to understand [male, aged 30-34]   |
| Think it was good how it was [male, aged 35-39]   |
| Think it was really well; overall really well done [male, aged 37]  |
| Would be good if didn't have to wait if use then see any doctors. Accessibility [male, aged aged 55-59]   |
| Yes, needs to be more intensive; go for longer, cover more. Cover effect, bringing people back in more detail; limited time. Financial incentive;taking people's time, benevolent recipient [male, aged aged 55-59] |

**Table 33: Use of the skills covered in the workshop**

|   |
|---|
| Decreased benzos since the training [male, aged 55-59]  |
| Discussed with other people - myths. Letting people know about the program [female, aged 30-34]   |
| Haven't used it yet [male, aged 45-49]  |
| He told people about naloxone, CPR, swabbing, infections.... he doesn't share needles, he cleans his equipment. He's more aware of how being clean, using new needles. [male, aged 40-44]   |
| I used the naloxone. I put someone in the recovery position. -I advised other people about the training and how to use the naloxone [female, aged 45-49]  |
| Injected naloxone. Mouth-to-mouth resuscitation. CPR. Advised other people about the training [female, aged 50-54]  |
| I've advised other people about the training [female, aged 25-29]   |
| I've told people about the training [male, aged 35-39]  |
| Mouth-to-mouth resuscitation. Pressure on chests (CPR). Have become more aware of the possibility of an overdose. I now test [the drugs] first and then take the rest. Have used naloxone on someone else [male, aged 55-59]  |
| Mouth-to-mouth. Injected naloxone. Advised others. Told people about naloxone, the training and that they shouldn't be mixing drugs [female, aged 45-49]  |
| Nothing really changed but feel safe to have the kit at home [female, aged 25-29]   |
| Told people about the training [female, aged 50-54]   |
| Used CPR, but person already deceased. -advised friends about the naloxone program [male, aged 30-34]   |
| Used the minijet. CPR [female, aged 45-49]  |
| Used to use the same barrel, but not anymore [female, aged 65-69]   |
| Using the Narcan. Draw a cross at someone's bottom to know where to inject the Narcan. Put them in the recovery position. Call an ambulance anyway because they can still go over again. Check if they are blue [female, aged 35-39]  |
| Yeah, used naloxone [female, aged 50-54]  |
| Have told others about correct use, filters and things that increase chances of overdose. Have used CPR but learned before. [male, aged 35-39]  |
| Yes, not just naloxone but clarified some things like when people snoring still vulnerable. Have been promoting [naloxone training] to other people. How simple it is and that it doesn't put people into precipitated withdrawal. Not fear to use it. [female, aged 50-54] |
| Advised other people about the use of naloxone, how to use it and has injected naloxone to someone else. [female, aged 25-29]   |
| Advised other people- don't mix alcohol and opioids. [female, aged 30-34]   |
| CPR. Used naloxone on a friend. Used drugs more often with friends; alone: not that much anymore. -advised other people- 1 attended the training [male, aged 35-39]   |
| CPR. Injecting naloxone. Encouraging other people to make changes [female, aged 50-54]  |
| Gave naloxone to someone + place the person in the recovery position [female, aged 40-44]   |
| Haven't had to yet; have told others about it. [female, aged 45-49]   |

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| I have; I got to administer naloxone; told others about it; they know I have it. [male, aged 35-39]   |
| I've advised other people about the workshop. I gave out clean needles and filters to my flatmates [male, aged 45-49]   |
| Learnt to clean equipment [male, aged 40-44]  |
| Moderation & things like that; telling mates; pass on knowledge [male, aged 55-59]  |
| 1st aid. -administered the naloxone. I take more drugs now because the naloxone is there so I can take that risk now. I've advise people how to do the injection [male, aged 30-34]   |
| Not yet, but do always have naloxone with me. [female, aged 25-29]  |
| Not yet; have told others, every chance I get. Particularly injecting safely. Have been using what I learned, but not naloxone. [male, aged 45-49]                                    |
| Recovery position when previous flatmate passed out [female, aged 30-34]  |
| Reduced drug use [male, aged aged 55-59]  |
| Thankfully haven't had to but have to, but know what to do. [male, aged aged 55-59]   |
| Told lots of people; advised them. [male, aged 40-44]   |
| Told roommate where naloxone being kept; they know what it is. [male, aged 45-49]   |
| Used mouth-to-mouth resuscitation and CPR. Have learnt to care more about myself in an overdose situation and have learnt how to educate people about CPR. [female, aged 45-49]       |
| Used naloxone on a friend. advised other people how to use it and about the training as well [male, aged 25-29]   |
| Yeah, jabbed needle into guy's upper arm & put in recovery position. [male, aged aged 55-59]  |
| Yes regarding changing injection sites using filters. [male, aged 40-44]  |
| Yes, all of them; confronted with overdose. checking; administering Narcan [male, aged 30-34]   |
| Yes, breathing -few times kept eyes on mates counting breaths but they were ok. Felt more calm during situation empowered [male, aged 35-39]  |
| Yes, but haven't had to use naloxone. Used basic first aid when someone started to go over. [female, aged 25-29]  |
| Yes, checking airways, etc. before using naloxone to save life. [male, aged 60-64]  |
| Yes, given CPR. Peer educate. People who came over to the house used naloxone [female, aged 30-34]  |
| Yes, have given naloxone. [male, aged 50-54]  |
| Yes, injecting the Narcan. [male, aged 45-49]   |
| Yes, kept people conscious breathing, getting them to stay coherent until help arrived. [male, aged 30-34]  |
| Yes, passed on as much knowledge; people I know who use drugs; let them know about course; people think stop heart; surprised about how little some people know. [female, aged 30-34] |
| Yes, previously. DRSABC. Peer education told other people. [male, aged aged 55-59]  |
| Yes, prompting [naloxone training] to people [female, aged 45-49]   |
| Yes, saved 2 people administered it and saved them. [male, aged aged 55-59]   |
| Yes, used the naloxone. [male, aged 45-49]  |
| Yes, used the naloxone. Teaching other people how to swab, use clean, and distribute clean equipment. [male, aged 45-49]  |
| Yes. Clear behaviour; advice & information to friends who haven't been to WASUA. Haven't  |

|   |
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| had to save anyone's life. [male, aged 40-44] |
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| Yes. Found someone not breathing. Put in recovery position. Used 1 naloxone to revive someone. [female, aged 30-34] |
|---|

**Table 34: Where do you keep your naloxone?**

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|--|
| At home and in the car [male, aged 40-44]  |
| At home & friends in car so if using can have access [female, aged 30-34]                |
| At home (in drawer in bedroom) or take in bag if go to uses house [female, aged 30-34]   |
| At home (locked cupboard in bedroom) or take with when go to get on [female, aged 30-34] |
| At the end of the bed [female, aged 65-69]   |
| At work & at home [female, aged 65-69]   |
| At work (XXXXX) if need to show anyone [...] [female, aged 45-49]                        |
| Carry in bag pretty much all the time [male, aged 35-39]                                 |
| Drawer at work [female, aged 50-54]  |
| Fridge at home [female, aged 45-49]  |
| In a cupboard in bedroom of house [male, aged 40-44]                                     |
| In a plastic A4 folder in my backpack [female, aged 45-49]                               |
| In a safe secure place [male, aged aged 55-59]   |
| In bag [male, aged 45-49]  |
| In bedroom or trying to keep handy if using with people using. [male, aged 45-49]        |
| In cabinet, in bedroom, up high [female, aged 50-54]                                     |
| In car [male, aged 30-34]  |
| In car back seat fold away compartment [male, aged 30-34]                                |
| In car inside pocket driver door [female, aged 50-54]                                    |
| In draw in living room [male, aged 45-49]  |
| In handbag [female, aged 25-29]  |
| In his bag [male, aged 40-44]  |
| In his bag / in his room [male, aged 55-59]  |
| In kitchen draw [male, aged aged 55-59]  |
| In my bag [male, aged 45-49]   |
| In my bag [female, aged 30-34]   |
| In my bag at home [male, aged 30-34]   |
| In my bag/ on the table in my room [male, aged 45-49]                                    |
| In my bedroom, in a box [male, aged aged 55-59]  |

|  |
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| In my car (glovebox) [female, aged 30-34]  |
| In my car/ in my drawer in the bathroom [female, aged 45-49]   |
| In my drawer in my room [female, aged 35-39]   |
| In my first aid bag on the top of the fridge [female, aged 25-29]  |
| In my handbag [female, aged 50-54]   |
| In my make-up bag [female, aged 45-49]   |
| In my workbag [female, aged 25-29]   |
| In the bedroom in the bed draw [male, aged 40-44]  |
| In the car [male, aged 45-49]  |
| In the glove box; on my shelf at home [male, aged 25-29]   |
| In the glovebox in my car [male, aged 35-39]   |
| In the kitchen in the cupboard [male, aged 30-34]  |
| In the medicine cabinet in kitchen [male, aged 45-49]  |
| In the medicine cupboard in my bathroom [male, aged aged 55-59]  |
| In the pantry, kitchen. [male, aged aged 55-59]  |
| In the wardrobe (on the top) [female, aged 40-44]  |
| Keep it in my carry bag [male, aged 35-39]   |
| Kitchen cupboard where everyone can find if need [female, aged 30-34]  |
| Normally on me or leave it in wardrobe; always accessible to me. Take if other people will be using. [male, aged aged 55-59] |
| On shelf in kitchen [other, aged 65-69]  |
| On top of the fridge at home [female, aged 25-29]  |
| One in my medicine chest and one in my handbag [female, aged 50-54]  |
| One kit in bag, one kit in drawer in bedroom [female, aged 25-29]  |
| Take with me everywhere [male, aged 55-59]   |
| Top drawer next to bed. [male, aged 50-54]   |
| Under the car seat [male, aged 35-39]  |
| Was always with me before I lost it. [male, aged 60-64]  |

**Table 35: Naloxone kit problems**

|  |
|--|
| Is enough to bring someone around so 2 minijets are enough [female, aged 35-39]  |
| 2 enough to start with perfect size [female, aged 30-34]   |
| 2 minijets are enough; didn't get the kit bag-> just got 2 minijets as they ran out of kits [female, aged 25-29]   |
| 2 minijets are enough the size of the bag is OK if you leave it at home --some information in case you get arrested or you want to take it overseas; some kind of certificate should be given, if you travel interstate as well [male, aged 55-59]                           |
| 2 minijets are not enough; receiving a mouth-to-mouth mask would be useful. [male, aged 55-59]   |
| 2 minijets are not enough; but don't want too many of them out there if people are not trained--> 3 or 4 would be sufficient bag too big, because not able to carry it in my handbag more facial masks [female, aged 50-54]  |
| 2 minijets are enough for my lifestyle, but it would be good to have different options e.g. giving more or less if hanging around with users; just received the 2 minijets so they were not in bag; ideal: pencil case at home/ in car could be smaller [female, aged 50-54] |
| 4 minijets would be great, as it's difficult to go back to the Dr and get a prescription; the narcan is easy to use; it fits in the glove box; good size [male, aged 25-29]  |
| bag a little bit small -have disposal gloves and a resuscitation mask to prevent infectious diseases [male, aged 45-49]  |
| bag too big to carry in my handbag -> a little container would be great [female, aged 65-69]   |
| easy to use -2 minijets are enough; the bag size is fine [male, aged 30-34]  |
| fine -2 minijets are enough -bag good size -gloves would be great [female, aged 50-54]   |
| good that they come in a little case -2 minijets are enough -make the kit bag smaller to make it easier to carry it on [male, aged 35-39]  |
| minijets are fine -would be more comfortable to use the nasal Naloxone -the size of the bag is fine a fluo stripe on the bag could be useful-> some people couldn't find their bag [female, aged 45-49]  |
| more minijets would be better: 4 -more alcohol wipes [female, aged 40-44]  |
| needle too long used 27 gauge instead. -large person difficult -good if different tips, depends on time -more: 2 not enough; used in 2 days [male, aged 55-59]   |
| no problems - 4 minijets would be better (2 ml is perfect, as it is better than 5ml, so you still have got your stone) -size of the bag is perfect [male, aged 45-49]  |
| out of date--> the minijet expired within 3 months -should get more than 2 minijets - everything required is in there [male, aged 30-34]   |
| people share their minijets with each other, because they don't have enough minijets--> some households need more than 2 minijets -the bags are good; everything is in there [female, aged 45-49]  |
| the 2 jets should be in the same box. the first 2 kits didn't have a needle in it. [female, aged 45-49]  |
| the kit is pretty handy -2 minijets are all right the size of the bag is alright--> I took it out and put it in my first aid kit so it's easier to carry out [female, aged 25-29]  |
| the police told me that anyone could write down their name on my cards, so names should be printed out on the cards minijets are easy to use the minijets should come in one part only--> there is a risk to lose the needle; 2 minijets are enough [male, aged 35-39]       |
| training was perfect; extra couple of jets would be great just in case; for example 4 jets would be better. [male, aged 40-44]   |

|   |
|---|
| zip on pencil case broken, but nothing other than that [male, aged 35-39]   |
| -2 minijets are enough. bags could be a little bit smaller, so it's easier to carry it in your handbag. -not able to put my name on the card as it has been laminated so when police sees the card, nothing is written on it--> better to sign it before [male, aged 40-44] |
| -2 minijets is a good level the size of the bag is alright the bag is OK [male, aged 55-59]   |
| 2 not enough [female, aged 50-54]   |
| 3 minijets would be better; 2 are not enough. [female, aged 25-29]  |
| Everything is good. [female, aged 30-34]  |
| Fine [female, aged 30-34]   |
| I think if it could be a bit bigger maybe a choice between 2&4 (minijets) . Could've been handy years ago when would've been gone through it. [male, aged 35-39]  |
| No, It was enough when used. [male, aged 40-44]   |
| no problems; just used one; emphasise no reaction straight away; not to panic [male, aged 30-34]  |
| No, although maybe 5 minijets would be better [male, aged 35-39]  |
| No, but maybe more doses. [female, aged 30-34]  |
| No, don't think so. Seems pretty complete. [female, aged 65-69]   |
| No, I suppose maybe back up; gloves or swabs, the extra little things. [female, aged 25-29]   |
| No, just didn't seem to be enough. [male, aged 50-54]   |
| No, just use of getting it is the hassle. [male, aged 45-49]  |
| No, maybe better description at what it is for people who have no idea if they find it. [male, aged 45-49]  |
| No, no problem with it. Is pretty basic. [male, aged 60-64]   |
| No, not at all. Maybe change of design e.g. diabetic needle If can, just theory. [male, aged 30-34]   |
| No, pin frightening-. Smaller pin. [male, aged 40-44]   |
| No, the packaging the only thing e.g. pencil case [other, aged 65-69]   |
| Not enough swabs; maybe 4 Narcans if hanging around users all the time [male, aged 55-59]   |
| The kit is a little bulky to carry all the time. [female, aged 30-34]   |
| -the minijets are very approachable I would have needed 8 minijets before the training, but 2 minijets are probably enough kit bag is too small an info card with basic info saying what Naloxone will do and for how long if person refused. [female, aged 45-49]          |
| yes put needle on, chaotic situation ; trying to decide it needed 2nd. Put needle on, flicked it, back of plunger felt out. Maybe could have been more careful but not best design. [female, aged 50-54]  |
| Yes, zipper broke, but no, nothing. [male, aged 45-49]  |





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