Naloxone Distribution Programs in Waterloo Region: A One Year Review

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Executive Summary

As part of its harm reduction programs and services, Region of Waterloo Public Health and Emergency Services (ROWPHE) works with community partners to prevent and reduce overdose-related deaths. Naloxone is a prescription medication that has the ability to reverse the effects of an opioid overdose. Since June 2014, ROWPHE has offered training in naloxone administration and provided naloxone kits to clients who have identified a history of past or current opiate use. Sanguen Health Centre, a community partner of ROWPHE, has offered their Naloxone Distribution Program to residents of Waterloo Region since December 2013.

This report reviews the results of data collection and analysis from ROWPHE and Sanguen's Naloxone Distribution Programs from the period of June 2014 to June 2015. Key findings in this report include:

- Sixty-four residents of Waterloo Region were trained to administer naloxone
- A total of 96 naloxone kits were distributed in Waterloo Region (including kits provided to participants for the first time and replacement kits)
- A total of 26 reports were received of naloxone kits being used during an opioid overdose in Waterloo Region
- Males comprised 53.7 per cent of the participant population, while females accounted for 43.3 per cent
- The 20 to 29 year age range made up the highest proportion of the total male and female participant population (32.3%); however, participant ages ranged from 16 to 57 years of age. This excludes respondents who identified their gender as 'other.'
- A total of 67.2 per cent of participants reported living in "ongoing stable housing"
- Heroin was the most commonly used substance among participants as 53.7 per cent reported having used it at least once in the past six months
- Heroin was involved in 91.7 per cent of overdose incidents where participants reported administering naloxone
- Among those who responded to the question, 9-1-1 was called in 36.4 per cent of overdose incidents where participants reported administering naloxone
- Overdose victims survived in 23 out of 24 overdose incidents where participants reported administering naloxone; in one case the participant was unsure
- A total of 82.6 per cent of participants felt they had received enough training to administer naloxone, and 100 per cent indicated they would use naloxone again
- Suggestions made by clients for service improvement included having training available on a walk-in basis and increasing police awareness of naloxone

The information collected as part of this review will be used to enhance and/or improve Naloxone Distribution Programs in Waterloo Region. It will also be used to increase access to naloxone for the populations that need it.

Abbreviations

	Name
OPHS	Ontario Public Health Standards
ROWPHE	Region of Waterloo Public Health and Emergency Services
SANGUEN	Sanguen Health Centre
MOH	Medical Officer of Health
AMOH	Associate Medical Officer of Health

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1.0 Background

Under requirements 11 and 12 in the Sexual Health, Sexually Transmitted Infections, and Blood-borne Infections (including HIV) Standard in the Ontario Public Health Standards, Region of Waterloo Public Health and Emergency Services is required to:

- Engage community partners and priority populations in the planning, development, and implementation of harm reduction programming, and

- Ensure access to a variety of harm reduction program delivery models which shall include the provision of sterile needles and syringes and may include other evidence-informed harm reduction strategies in response to local surveillance.

As part of its harm reduction planning efforts under its mandate, Region of Waterloo Public Health and Emergency Services (ROWPHE) works with community partners to prevent and reduce overdose-related deaths. This includes, but is not limited to, presentations and workshops in both school and community settings. In addition, local data presented in the Crime Prevention Council overdose report of 2008 led community partners to advocate for the distribution of naloxone in Waterloo Region. Naloxone is a prescription medication that has the ability to reverse the effects of an opioid overdose (Bell, J.L. & Parkinson, M., 2008). In 2013, naloxone was made available by the Ministry of Health and Long-Term Care to select harm reduction partners at no cost.

Since June 2014, Public Health clinics in Waterloo and Cambridge now offer training in naloxone administration and provide naloxone kits to clients with a history of past or current opiate use. Sanguen Health Centre (herein referred to as Sanguen), a community partner of ROWPHE, also offers their own Naloxone Distribution Program to residents of Waterloo Region. Sanguen's program has been in operation since December 2013.

2.0 Program Overview

Naloxone Distribution Programs aim to reduce the number of preventable deaths due to opioid overdose. The Naloxone Distribution Programs offered by ROWPHE and Sanguen involve a combination of participant education and training, distribution of kits that contain naloxone, and participant follow-up and evaluation. Registered Nurses at ROWPHE are trained and certified to distribute naloxone kits under medical directive from the Medical Officer of Health (MOH) or Associate Medical Officer of Health (AMOH) in Waterloo Region. Registered Nurses and outreach/support staff at Sanguen Health Centre are also certified and trained to distribute naloxone kits under medical directive from Sanguen's Medical Director/Clinical Program Director. ROWPHE and Sanguen clients who report past or current opiate use are eligible to participate in this

program; and may only receive naloxone kits after completing naloxone training. Clients who request a replacement naloxone kit are offered another training session. If the client declines, ROWPHE nurses or Sanguen staff re-review the Post Training Checklist (see Table 1) with the participant to reinforce key concepts from the naloxone training.

At ROWPHE, training is conducted by Public Health Nurses. At Sanguen, training is conducted by an outreach coordinator or case manager. Training covers a variety of topics related to overdose prevention and management, including:

- Behaviours and practices that increase risk of overdose;
- Signs that identify an opiate overdose;
- The correct procedure for administering naloxone; and
- Directions for how to support an individual that is experiencing an overdose.

3.0 Purpose

The purpose of this report is to review results of data collection and analysis from ROWPHE and Sanguen's Naloxone Distribution Programs, from the period of June 2014 to June 2015, and provide recommendations for service provision going forward.

4.0 Methodology

Data collection tools used in the Naloxone Distribution Programs were adapted from tools developed by Toronto Public Health. Once the Waterloo Region-specific tools were developed, ROWPHE staff consulted with Sanguen staff to ensure that the data collection tools met the information needs of both agencies. Data collection occurred at various points during client interaction. Table 1 provides an overview of the data collection tools at both organizations.

Table 1: ROWPHE and Sanguen Naloxone Distribution Program data collection tools, June 2014 to June 2015.

Tool	When is this tool administered?	Who administers the tool?
***Naloxone Distribution Program Training spreadsheet	After naloxone training and provision of first-time kit to participant; and after provision of replacement kit	Public Health Nurse
Client History Form (refer to Appendix A)	Prior to training and provision of first-time kit	Self-administered with support from Public Health Nurse and Sanguen staff as needed
Post Training Checklist (refer to Appendix B)	After naloxone training and provision of first-time kit, and before provision of replacement kit	Public Health Nurse or Sanguen staff
***Training Feedback Form (refer to Appendix C)	After participant completes training	Self-administered with support from Public Health Nurse as needed
Administered Naloxone Form (refer to Appendix D)	After participant reports administering naloxone	Self-administered with support from Public Health Nurse and Sanguen staff as needed
Received Naloxone Form (refer to Appendix E)	After participant reports receiving naloxone	Self-administered with support from Public Health Nurse and Sanguen Staff as needed

***These materials were exclusively used by Public Health for training assessment purposes.

5.0 Limitations

It is important to note that this analysis would exclude any residents of Waterloo Region who may have obtained a naloxone kit from outside of Waterloo Region. In addition, some program participants may not have returned to a ROWPHE or Sanguen clinic to report administering or receiving naloxone after the event. As a result, our data may be under-representative of the actual number of kits distributed across Waterloo Region and the number of kits used during opioid overdoses in the past year.

Finally, all statistics presented in this report were derived from self-reported data collected from individuals who participated in Naloxone Distribution Programs at ROWPHE or Sanguen. As a result, it may not be representative of all substance use trends and opioid overdoses that occurred in Waterloo Region in the past year.

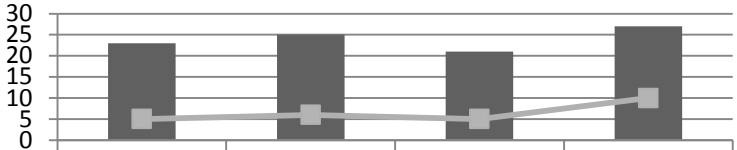
6.0 Program Statistics

6.1 Number of kits distributed, number of participants trained, and number of kits reported as used during an opioid overdose

Over the period of June 2014 to June 2015, 64 residents of Waterloo Region with a history of past or current opioid use completed training to administer naloxone[1]. Forty-one of these participants completed training at ROWPHE, while the remaining 23 completed training with Sanguen. During this time, a total of 96 naloxone kits were distributed across Waterloo Region through ROWPHE and Sanguen Naloxone Distribution Programs (see Figure 1). The number of naloxone kits distributed (96) exceeds the number of participants who received training (64) as it includes replacement kits given to participants who had previously completed training.

Over the period of June 2014 to June 2015, staff from either ROWPHE or Sanguen received 26 reports of naloxone kits being used (administered) during an opioid overdose in Waterloo Region; approximating a 4:1 ratio in kits distributed versus kits used (see Figure 1). The number of kits used during an opioid overdose (26) refers to the number of participants who reported either receiving or administering naloxone to a ROWPHE or Sanguen clinic. However, the small number of participants who reported receiving naloxone (less than five) did not allow for any further reporting on this group.

Figure 1: Number of naloxone kits distributed in Waterloo Region, and number of kits reported as used for an opioid overdose, by quarter, June 2014 to June 2015



	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Number of naloxone kits distributed in Waterloo Region	23	25	21	27
Number of naloxone kits used for opioid overdose in Waterloo Region	5	6	5	10

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

[1] Three additional participants completed naloxone training prior to June 2014, as Sanguen began their program in December 2013. The data from these participants was still included in this report as it contributes to knowledge about substance use and opioid overdose in Waterloo Region.

7.0 Demographic Profile and History of Substance Use

Participant demographic information was derived from the Client History Form completed by participants prior to naloxone training. It is important to note that in order to receive naloxone training and a kit, participants were only required to complete one question on the form which asked about their history of allergies. Participants could then choose to complete or skip the rest of the questionnaire without penalty.

7.1 Gender

Overall, slightly more males than females participated in the Naloxone Distribution Programs in Waterloo Region. In total, 53.7 per cent of the participant population was male, 43.3 per cent were female, and 3.0 per cent identified as "other". Males made up a slightly higher proportion of the ROWPHE participant population (58.5% male) compared to Sanguen (46.2% male).

Table 2: Gender of Naloxone Distribution Program clients in Waterloo Region, by agency, June 2014 to June 2015.

	Sanguen	Public Health	Total
Male	46.2%	58.5%	53.7%
Female	46.2%	41.5%	43.3%
Other	7.7%	0.0%	3.0%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

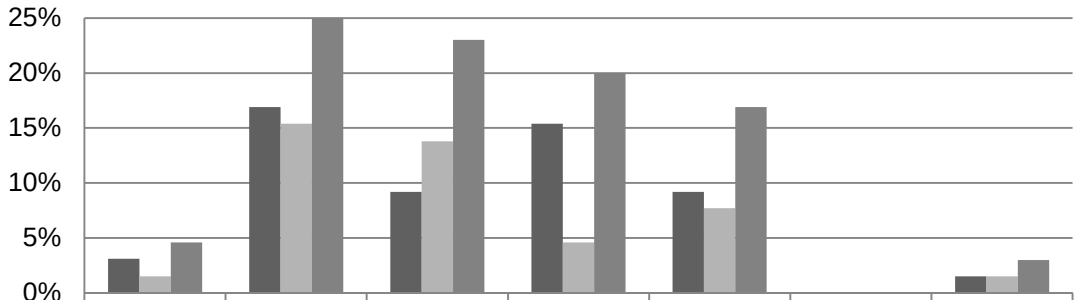
7.2 Age

Figure 2 shows the age distribution of male and female Naloxone Distribution Program clients in Waterloo Region. Participants in the programs varied greatly by age (between 16 and 57 years of age).

Males between the ages of 20 and 29 made up the largest age and gender group in the participant population – accounting for 16.9 per cent of the total population. The next largest groups were males between the ages of 40 and 49 (15.4%), and females between 20 and 29 years of age (15.4%). Overall, the 20 to 29 year age range comprised the highest number of participants, accounting for 32.3 per cent of the total Naloxone Distribution Program client population.

The greatest variation between males and females occurred in the 40 to 49 year age range where males in this age range made up 15.4% of the total population, while females in this age range accounted for just 4.6 per cent of the total population.

Figure 2: Proportion of male and female Naloxone Distribution Program clients by age range, in Waterloo Region, June 2014 to June 2015



	15-19	20-29	30-39	40-49	50-59	60 +	Unknown
Males	3.1%	16.9%	9.2%	15.4%	9.2%	0.0%	1.5%
Females	1.5%	15.4%	13.8%	4.6%	7.7%	0.0%	1.5%
Total	4.6%	32.3%	23.0%	20.0%	16.9%	0.0%	3.0%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

Due to rounding, the total may not correspond with the sum of the separate figures.

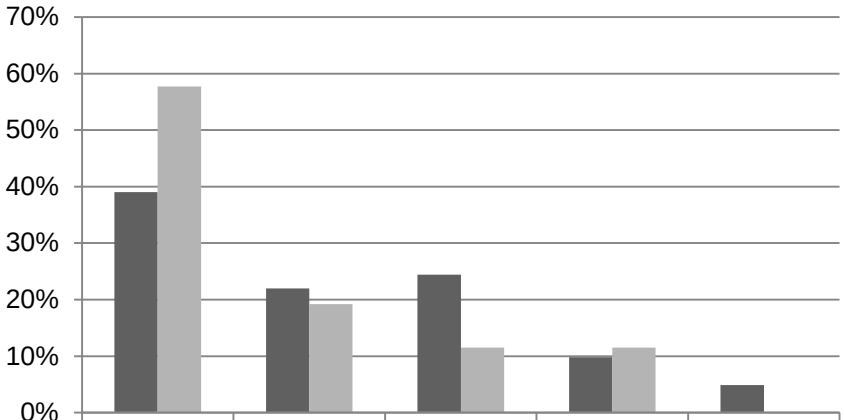
7.3 City of residence

Figure 3 shows the city of residence of Naloxone Distribution Program clients. Participants from Waterloo Region who did not list a city of residence were categorized as “other / unknown”.

Participants from Kitchener made up the highest proportion of all participants from Waterloo Region in the Naloxone Distribution Programs; accounting for 46.3 per cent of the total participant population. For Sanguen alone, participants from Kitchener made up an even higher proportion of the participant population at 57.7 percent. Participants from Cambridge made up the next largest proportion at 19.2 per cent.

Region of Waterloo Public Health and Emergency Services clients were more evenly distributed across the cities in Waterloo Region; participants from Kitchener made up 39.0 per cent, Waterloo 24.4 per cent, and Cambridge 22.0 per cent of the ROWPHE client population.

Figure 3: City of residence of Naloxone Distribution Program clients in Waterloo Region, by agency, June 2014 to June 2015



	Kitchener	Cambridge	Waterloo	Waterloo Region Townships	Other / Unknown
Percentage of Public Health clients that live in each city	39.0%	22.0%	24.4%	9.8%	4.9%
Percentage of Sanguen clients that live in each city	57.7%	19.2%	11.5%	11.5%	0.0%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

7.4 Housing status

Table 3 shows the self-reported housing status of Naloxone Distribution Program clients. The majority of respondents reported living in “ongoing stable housing”, which made up 67.2 per cent of the total participant population. The next highest category was “unstable or temporary housing” which accounted for 23.9 per cent, and finally 7.5 per cent of participants identified as “homeless”.

Table 3: Housing status of Naloxone Distribution Program clients in Waterloo Region, June 2014 to June 2015.

Housing status	Percentage of participants
Ongoing stable housing	67.2%
Unstable or temporary housing	23.9%
Homeless	7.5%
Did not respond	1.5%
Total	100.0%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

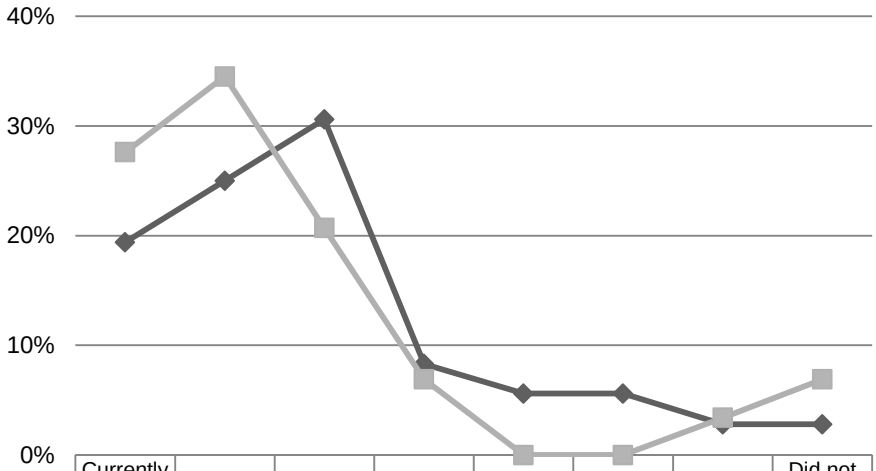
7.5 Duration of opioid use

Figure 4 shows the duration of opioid-use in years among male and female Naloxone Distribution Program clients. Overall, Figure 4 shows that the number of participants declined as duration of use increased. Among male respondents, 6 to 10 years was the most frequently reported duration of use, and made up 30.6 per cent of the male participant population. This number dropped to 8.3 per cent at the 11 to 15 year range, and then remained relatively steady as number of years increased.

Female participants typically reported using opioids for less time than male participants. Among female respondents, 0 to 5 years was the most frequently reported duration of use, and made up 34.5 per cent of the female participant population. As shown in Figure 4, this number dropped with every increasing time interval, with the exception of the very slight increase that was seen at 26 to 30 years.

In total, 19.4 per cent of male respondents and 27.6 per cent of female respondents reported not currently using at the time of their naloxone training; most of these participants were from the Sanguen client population.

Figure 4: Duration of opioid use, in years, among male and female Naloxone Distribution Program clients by five-year time intervals, in Waterloo Region, June 2014 to June 2015



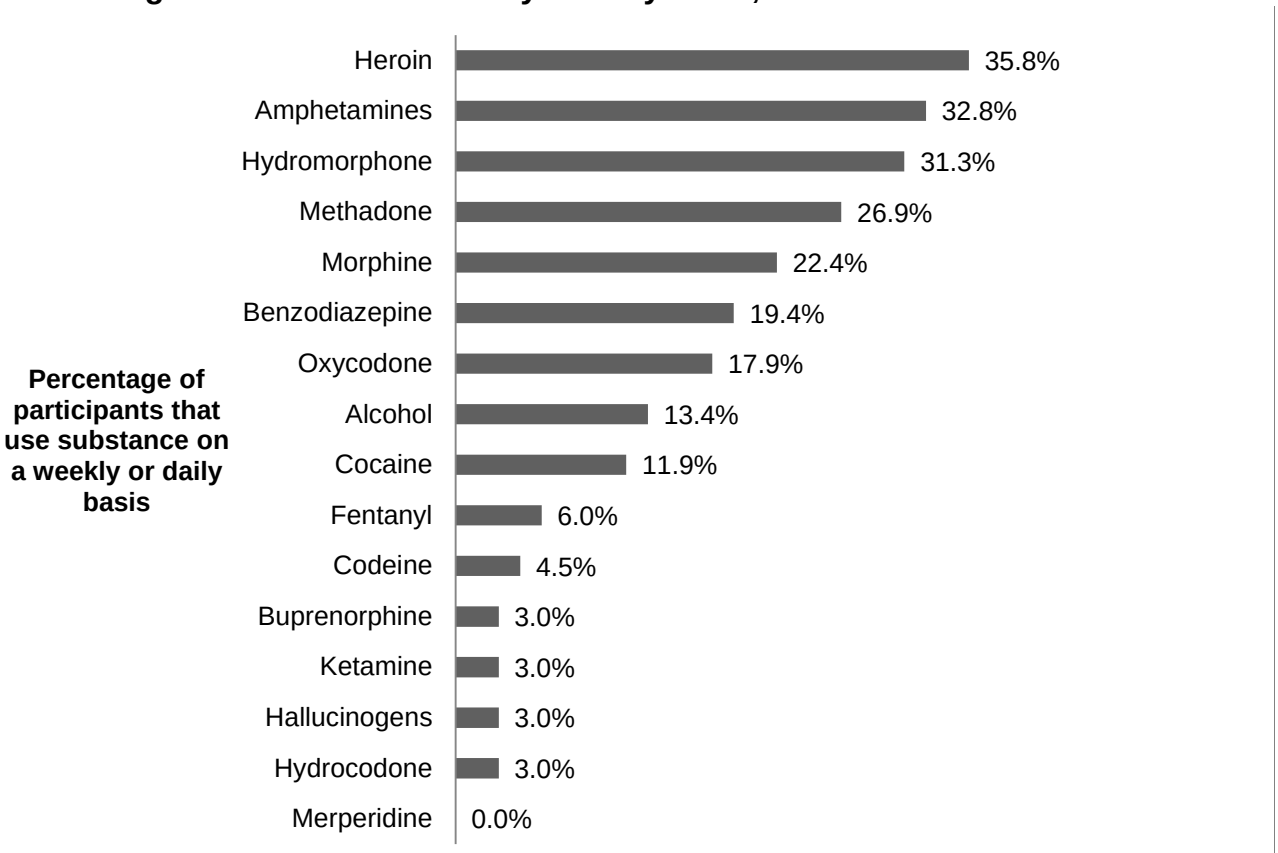
	Currently not using	0 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	Did not respond
Use in years among males	19.4%	25.0%	30.6%	8.3%	5.6%	5.6%	2.8%	2.8%
Use in years among females	27.6%	34.5%	20.7%	6.9%	0.0%	0.0%	3.4%	6.9%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

7.6 Most frequently used substances

The Client History Form asks participants to indicate the substances they had used in the past six months prior to naloxone training from a list of possible substances. Figure 5 shows the proportion of participants that reported using each substance on a weekly or daily basis in the past six months. For analysis purposes, non-responses were categorized as participants that did not use the substance on a weekly or daily basis.

Figure 5: Proportion of Naloxone Distribution Program clients who reported using the following substances on a weekly or daily basis, June 2014 to June 2015



Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

Heroin, amphetamines and hydromorphone were the most commonly used substances by Naloxone Distribution Program clients, and were also most likely to be used on a weekly or daily basis. Other substances such as fentanyl, codeine, ketamine and hallucinogens were used less often.

7.7 Substance use practices

Risk of an overdose is increased for people who choose to use substances alone, and for people who use substances after a period of not using substances (OHRP, 2008). Participants were asked whether they typically use substances alone or with other people. Participants more often reported using substances alone (28.4%) as opposed to using with other people (13.4%). An additional 9.0 per cent reported using alone and with others at an equal frequency. However, is important to note that 47.8 per cent of participants did not answer this question.

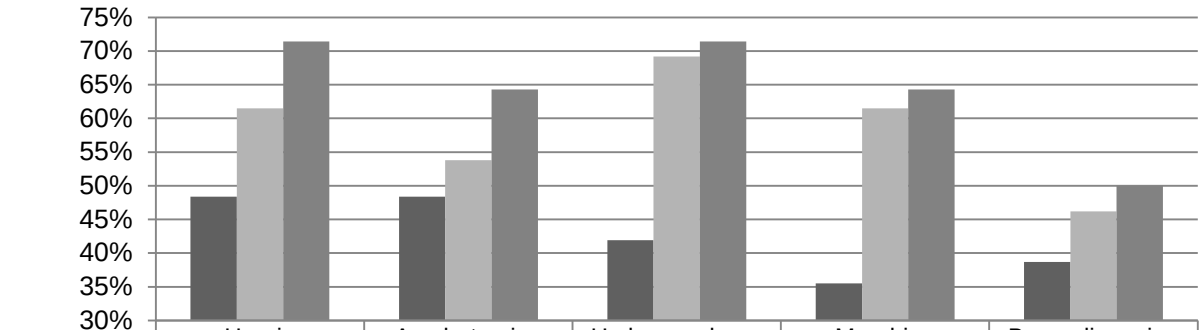
A total of 35.8 per cent of participants reported they did not use opioids for three or more days in a row at least once in the past year. The most commonly stated reason for not using opioids for three or more days was lack of money.

7.8 Substance use by city of residence

Figure 6 shows differences in the types of substances used among participants from Kitchener, Waterloo and Cambridge. Overall, the results show a wide variation in the types of substances used across the three cities, with the largest differences seen in hydromorphone and morphine use. Both hydromorphone and morphine were more likely to be reported as used among participants from Cambridge and Waterloo. However, it is important to note that there were fewer participants from Cambridge and Waterloo compared to Kitchener; therefore the observed trends may over- or under-represent actual substance use in these two cities.

Heroin was the most commonly used substance among participants from Kitchener, while hydromorphone was the most commonly used substance among participants from Waterloo. Heroin and hydromorphone were most likely to be used among participants from Cambridge.

Figure 6: Proportion of Naloxone Distribution Program clients who reported using heroin, amphetamine, hydromorphone, morphine and benzodiazepine in last six months by city of residence, June 2014 to June 2015



	Heroin	Amphetamine	Hydromorphone	Morphine	Benzodiazepine
Kitchener	48.4%	48.4%	41.9%	35.5%	38.7%
Waterloo	61.5%	53.8%	69.2%	61.5%	46.2%
Cambridge	71.4%	64.3%	71.4%	64.3%	50.0%

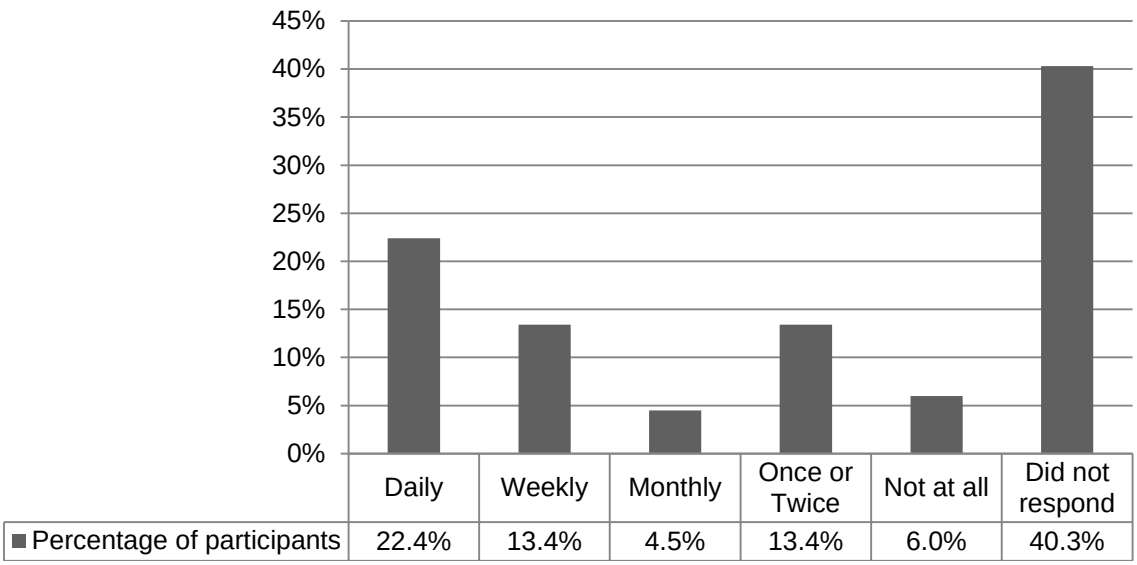
Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

7.9 Heroin use

Heroin was the most commonly used opioid by Naloxone Distribution Program clients six months prior to naloxone training. However, as shown in Figure 7, the frequency of heroin use varied across the participant population.

The majority of participants (53.7%) reported using heroin at least once in the past six months and 22.4 per cent said they used heroin on a daily basis. It should be noted that this may be an under-estimation of actual heroin use in the participant population as those who did not respond to this question (40.3%) were categorized as non-users.

Figure 7: Frequency of heroin use in past six months among Naloxone Distribution Program clients, June 2014 to June 2015



	Daily	Weekly	Monthly	Once or Twice	Not at all	Did not respond
Percentage of participants	22.4%	13.4%	4.5%	13.4%	6.0%	40.3%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

7.10 Experience with opioid overdose

Just under half (44.8%) of all respondents reported experiencing an opioid overdose prior to participating in this program. Among those who had overdosed, 43.3 per cent of respondents said they had overdosed at least once in the past year, with 26.6 per cent having overdosed multiple times in the past year (see Table 4). In addition, the majority of Naloxone Distribution Program clients (65.7%) said they had previously witnessed someone else overdose on opioids.

Table 4: Number of opioid overdoses in the past year among Naloxone Distribution Program clients who have previously overdosed on opioids, June 2014 to June 2015.

Number of overdoses in the past year	Percentage of participants
None	53.3%
Once	16.7%
Twice	13.3%
3 to 5 times	13.3%
Did not respond	3.3%
Total	100.0%

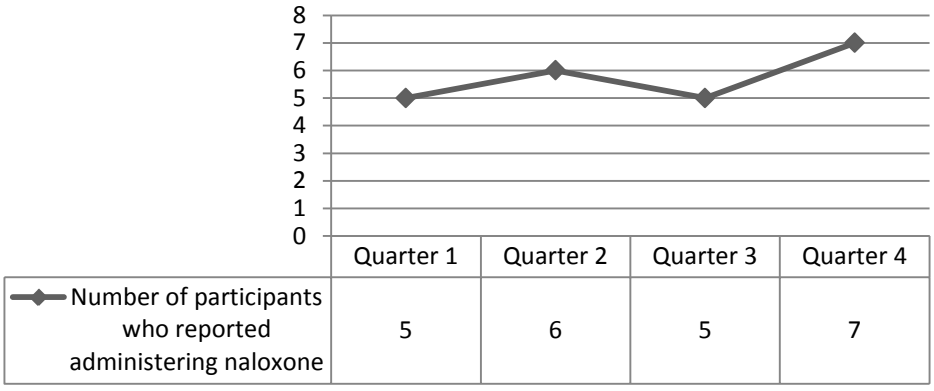
Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

8.0 Reported Naloxone Administration by Participants

8.1 Number of participants who reported administering naloxone

From the period of June 2014 to June 2015, 23 participants reported administering naloxone during an opioid overdose in Waterloo Region (see Figure 8). The actual number of reported overdose incidents came to a total of 24 as one participant reported administering naloxone on more than one occasion. In one case, a participant reported administering the naloxone to themselves before losing consciousness.

Figure 8: Number of Naloxone Distribution Program clients who reported administering naloxone during an opioid overdose in Waterloo Region, by quarter, June 2014 to June 2015



Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

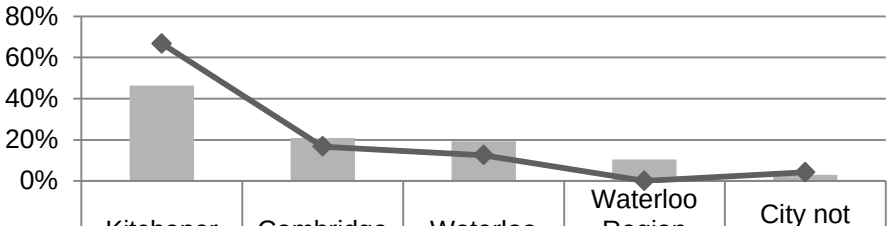
8.2 Overdose outcome

Of the total number of times that participants reported administering naloxone in an overdose situation, none of the overdose victims were reported to have died. In 23 of the 24 reported incidents, the participant reported that the person survived the overdose. There was one incident where the participant indicated that they were unsure of the outcome as the "person who overdosed took off before police got there".

8.3 City and location

Figure 9 shows the proportion of participants that live in each city and the proportion of reported naloxone administrations that occurred in each city in Waterloo Region. The majority of reported naloxone administrations occurred in Kitchener (66.7%); however, Kitchener also made up the highest proportion of participants across all cities in Waterloo Region. The second highest proportion of naloxone administrations occurred in Cambridge (16.7%), followed by Waterloo (12.5%). There were no reports of naloxone administrations in any of the Waterloo Region Townships. The majority of these administrations occurred in private homes (70.8%); while 16.7 per cent occurred in public venues such as malls or parking lots.

Figure 9: Proportion of Naloxone Distribution Program clients who live in each city, and the proportion of naloxone administrations by participants that occurred in each city, June 2014 to June 2015



	Kitchener	Cambridge	Waterloo	Waterloo Region Townships	City not specified
Percentage of participants from each city	46.3%	20.9%	19.4%	10.4%	3.0%
Percentage of reported naloxone administrations in each city	66.7%	16.7%	12.5%	0.0%	4.2%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

8.4 Relationship of participant to overdose victim

Table 5 reports the relationship of participants to the overdose victim. The majority of participants reported administering naloxone to friends (79.2%), followed by strangers (12.5%).

Table 5: Relationship of Naloxone Distribution Program clients with the individuals to whom they administered naloxone during an opioid overdose, June 2014 to June 2015.

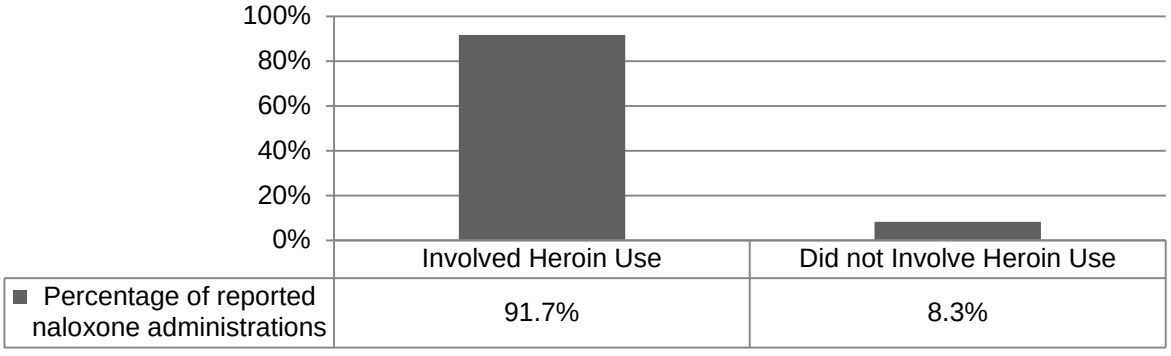
Relationship	Percentage of naloxone administrations
Friend	79.2 %
Stranger	12.5%
Acquaintance	4.2%
Self-Administered	4.2%
Total	100.0%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

8.5 Substances involved in overdose

Heroin was reported as being involved in 91.7 per cent of overdose incidents where participants reported administering naloxone. Heroin alone (i.e. not mixed with other substances) was reported to have caused 83.3 per cent of reported overdoses, while 4.2 per cent involved the mixing of heroin with other substances such as fentanyl, amphetamines and benzodiazepine. Heroin was not involved in 8.3 per cent of reported overdoses; in these cases either morphine or oxycontin were reported to have caused the overdose.

Figure 10: Cause of overdose in cases where Naloxone Distribution Program clients reported administering naloxone, June 2014 to June 2015



Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

9.0 Assessment of Naloxone Administration by Participants

9.1 Adherence to training guidelines

Table 6 shows a list of guidelines that participants were asked to follow before and after administering naloxone during an overdose situation. However, the degree to which these guidelines were followed varied across Naloxone Distribution Program clients. Respondents who did not answer this question were not included in the analyses summarized in Table 6.

Table 6: Proportion of reported naloxone administrations where training guidelines were followed, June 2014 to June 2015.

Training guideline	Percentage of cases where guideline was completed
Complete chest compressions	28.6%
Call 911	36.4%
Place person in the recovery position	71.4%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

9.2 Chest compressions

Chest compressions were completed in 28.6 per cent of cases. The most common reason for not completing chest compressions was because the “victim was still breathing”. Other reasons included:

- not believing that chest compressions were effective;
- not being feasible in the situation; or
- situation was taken over by someone else.

9.3 911 calls

In total, 911 was called in 36.4 per cent of cases. The most common reason for not calling was the concern that police would become involved (71.4%). Other reasons included believing that the person would recover on their own, or the participants chose to bring the victim to the hospital on their own.

9.4 Placement in recovery position

In 71.4 per cent of cases the overdose victim was placed in the recovery position. However, in cases where this was not done, reasons provided by the participant included;

- “I was in a huge panic”,
- “Patient became very aggressive, stubborn”,
- “Was sitting on a couch”

9.5 Accurate identification of opioid overdose

In 83.3 per cent of all reported naloxone administrations the participant reported observing at least one sign indicating that the overdose was caused by an opioid substance. As shown in Table 7, the most commonly reported sign was “person would not wake up” (70.8%), followed by “non-response to shake and shout” (66.7%), “person turning blue” (58.3%) and “person not breathing” (54.2%).

Table 7: Signs of an opioid overdose reported by Naloxone Distribution Program clients that administered naloxone during an overdose in Waterloo Region, June 2014 to June 2015.

Sign of an opioid overdose	Percentage of cases
Person wouldn’t wake up	70.8%
No response to shake and shout	66.7%
Person turned blue	58.3%
Person not breathing	54.2%

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre Statistics, 2014-2015

9.6 Duration of stay after naloxone administration

Participants were encouraged to stay with the victim after administering naloxone in case a second dose was required, and in order to provide information to emergency services. In 37.5 per cent of cases, participants reported staying with the victim for several hours (i.e. two hours to several days) after administering naloxone. In 29.2 per cent of cases participants reported staying 15 minutes or less.

9.7 Story of Overdose

Table 8 contains a selection of quotes derived from participants' accounts of the overdose situations in which they administered naloxone. These accounts are presented for the purpose of providing insight into some of the circumstances surrounding opioid overdoses reported by participants. Please note that these stories do not represent all of the stories provided by participants.

Table 8: Descriptions (provided by participants) of overdose situations where Naloxone Distribution Program clients reported administering naloxone, June 2014 to June 2015.

"…a gentlemen at [shopping location] was hunched over non-responsive, with indications of an overdose. I injected him with a single dosage and ambulance took care of it afterwards."
"Oxycontin was administered intravenously and person stopped breathing. After naloxone administered the person recovered. Police were called/ambulance and didn't lay charges or cause problems for me!"
"Delegated someone to do rescue breathing/chest compressing and to call 911 while I ran to my car for [naloxone]. Administered it & she woke up right away."
"I wasted the first dose because I didn't use the alcohol...The second went fine - I used the alcohol. In the situation you are freaking out and really trying hard to do the right thing."
"I gave him one shot. He kinda started to come to for a few minutes but he starting getting worse again. I gave him a second shot. He came back to and was talking with us. Then he started to go under and I told my friend to call 911 and left."

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre, 2014-2015

10.0 Participant Feedback

10.1 Naloxone kit and training

In total, 78.3 per cent of participants who reported administering naloxone said that the kit was easy to use. Among those who did not find it easy to use (4.3%), some felt that the kits should be "ready to use" (i.e. the naloxone already inside the needle) rather than having to set it up in an emergency situation. The remaining participants either did not respond to this question (13.0%) or were said they were unsure (4.3%).

In total, 82.6 per cent of participants said that they felt they had received enough training to administer naloxone. However, some suggested that having regular updates or refreshers would be beneficial. Others suggested that role-playing during training could also be helpful. Finally, 100 per cent of participants who had administered naloxone said that they would use naloxone again, and 95.7 per cent indicated that they would like a replacement kit (4.3% did not respond).

Other suggestions for improvement from clients included:

- Increasing the awareness of naloxone kits among police;
- Training police or other public security officers to administer naloxone;
- Increasing participant-involvement during naloxone training; and
- Having training available to walk-ins instead of having to make an appointment.

Table 9 contains a selection of quotes taken from the Training Feedback Forms distributed after participants trained at one of the ROWPHE clinics. Please note that these quotes do not represent all of the feedback provided by participants.

Table 9: Comments from Naloxone Distribution Program clients on the Training Feedback Forms or Naloxone Administered Forms, June 2014 to June 2015.

"Well explained, understood, clear, straight-forward, educational. My facilitator's human touch was positive surprise. Also, the genuine compassion for harm reduction."
"Great job and excellent opportunity! I will recommend this training to anyone who will listen."
"Excellent service. Need to increase awareness of naloxone and training for both users and their family and friends."
"Great nurse, made me comfortable, not feel guilty for using, easy to talk to."
"Thank you for having this program available. You saved 2 of my friend's lives."

Source: Region of Waterloo Public Health Sexual Health and Harm Reduction Program and Sanguen Health Centre, 2014-2015

11.0 Next Steps

Data collected and client feedback received over the 2014-2015 program year will be used to enhance and/or improve the Naloxone Distribution Programs in Waterloo Region. Changes will be made to try to increase awareness and use of Naloxone Distribution Programs by eligible residents in Waterloo Region, and to improve service provision for current and future participants.

References

Bell, J.L. & Parkinson, M. (2008). *A first portrait of drug-related overdoses in Waterloo Region Community Safety and Crime Prevention Council*, Waterloo Region

Ontario Harm Reduction Distribution Program (2012).*Community-based naloxone Distribution guidance document,* Kingston, ON.

APPENDICES

Appendix A: Client History Form

You must complete this question to receive a Naloxone kit.

1. **What allergies do you have?** _____

   Are you allergic to naloxone? ☐ Yes ☐ No ☐ Don't know

The following questions are part of the evaluation.

2. **What is your age?** _____

3. **Gender:** ☐ Male ☐ Female ☐ Other _____

4. **Where do you live?**
   ☐ Cambridge ☐ Kitchener ☐ Waterloo ☐ Other: _____
   ☐ Waterloo Region Township (North Dumfries, Wellesley, Wilmot, Woolwich)

5. **In which country were you born?** _____

6. **What is your ethnicity?** _____

7. **Do you have Hepatitis C?**
   ☐ Yes ☐ No ☐ Cleared/cured Hep C ☐ Don't know

8. **What is your current housing status? (only choose one)**
   ☐ Ongoing stable housing ☐ Unstable or temporary housing ☐ Homeless

9. **How did you hear about the Naloxone program?**
   ☐ Nurse at the Public Health clinic ☐ Public Health website ☐ Friend
   ☐ Community agency: _____
   ☐ Other: _____

10. **How many years have you been using opioids**? _____

11. **Do you mainly use:** ☐ By yourself ☐ With other people

12. In the last <u>6 months</u> how often did you use the following?

	Not at all	Once or twice	Daily	Weekly	Monthly	Amount used each time	Injecting	Non-injecting
Buprenorphine	☐	☐	☐	☐	☐	_____	☐	☐
Codeine	☐	☐	☐	☐	☐	_____	☐	☐
Fentanyl	☐	☐	☐	☐	☐	_____	☐	☐
Heroin	☐	☐	☐	☐	☐	_____	☐	☐
Hydrocodone (Vicodin)	☐	☐	☐	☐	☐	_____	☐	☐
Hydromorphone (Dilaudid)	☐	☐	☐	☐	☐	_____	☐	☐
Merperidine (Demerol)	☐	☐	☐	☐	☐	_____	☐	☐
Methadone	☐	☐	☐	☐	☐	_____	☐	☐
Morphine	☐	☐	☐	☐	☐	_____	☐	☐
Oxycodone (Percocet, percodan, oxycontin, OxyNEO)	☐	☐	☐	☐	☐	_____	☐	☐
Benzodiazepines (Alprazolam, Clonazepan, Diazapam, Temazepam, Lorazepam)	☐	☐	☐	☐	☐	_____	☐	☐
Alcohol	☐	☐	☐	☐	☐	_____	☐	☐
Cocaine/Crack	☐	☐	☐	☐	☐	_____	☐	☐
Amphetamine (crystal meth, speed)	☐	☐	☐	☐	☐	_____	☐	☐
Ketamine	☐	☐	☐	☐	☐	_____	☐	☐
Hallucinogens (LSD, MDMA)	☐	☐	☐	☐	☐	_____	☐	☐
Other: _____	☐	☐	☐	☐	☐	_____	☐	☐

13. In the past year, how many times have you gone <u>three or more days</u> without opioids?

_____

Why? ☐ In hospital ☐ Prison ☐ Lack of money
☐ Detox ☐ Other: _____

14. Have you ever overdosed on opioids? ☐ Yes ☐ No

If YES, on what drug(s)? _____

How many times have you overdosed on opioids in the past year? _____

Have you ever <u>received</u> an injection of naloxone? ☐ Yes ☐ No

If YES, what was your experience with receiving naloxone?

15. Have you ever <u>seen someone</u> overdose on opioids? ☐ Yes ☐ No

16. Have you ever <u>given</u> a naloxone injection to someone? ☐ Yes ☐ No

If YES, what was your experience with <u>giving</u> naloxone to someone?

To be completed by Public Health Nurse

Form received by: _____ Date: _____

Location of training: _____ W#: _____

Consent to participate in evaluation: ☐ Yes ☐ No Naloxone dispensed: ☐ Yes ☐ No

W#: _____

Appendix B: Post Training Checklist

1. **What can increase your risk of having an overdose? (check 1 box)**
   - ☐ Mixing Drugs
   - ☐ Using alone
   - ☐ Using after a period of non-use
   - ☐ All of the above

2. **Which of the following are <u>three</u> signs of an opiate overdose? (check 3 boxes)**
   - ☐ Unable to wake the person up
   - ☐ Not breathing at all or breathing very slow
   - ☐ Turning blue/purple around lips and finger tips
   - ☐ Increase energy wanting to exercise

3. **Is it essential that you call 911 for all overdoses?**
   - ☐ Yes
   - ☐ No

4. **Does naloxone work for a cocaine overdose?**
   - ☐ Yes
   - ☐ No

5. **Why <u>must</u> you stay and support the person that overdosed? (check one box)**
   - ☐ The naloxone may wear off and overdose may return
   - ☐ A 2nd dose of naloxone might need to be given
   - ☐ Important information will need to be provided to EMS (911)
   - ☐ All of the above

6. **How many cc's of naloxone do you administer for each dose? (check one box)**
   - ☐ 0.5cc
   - ☐ 1cc
   - ☐ 5cc
   - ☐ 10cc

7. **How long does it take for naloxone to start working once given?**
   - ☐ 1-5 minutes
   - ☐ 10 minutes
   - ☐ 20 minutes

8. **How many doses of naloxone do you administer for an opiate overdose?**
   - ☐ 10 doses
   - ☐ Start with 1 dose, if there is no response in 3 to 5 minutes, give a 2nd dose. Call 911.
   - ☐ 1 dose

9. **Do you feel you received enough information today to administer naloxone if needed?**
   - ☐ Yes
   - ☐ No

Appendix C: Training Feedback Form

Please answer the following questions based on the training you just received.

1. **How much do you agree with the following statements:**

	Strongly Agree	Agree	Disagree	Strongly Disagree
The amount of time I had to wait before I received the training was reasonable.				
The training session was offered at a convenient time for me.				
The length of the training was just right.				
I was given enough information today to administer naloxone if needed.				

2. **Would you refer a friend to this program?** ☐ Yes ☐ No

   If no, why not? _____

3. **Can we make this training better?** ☐ Yes ☐ No

   If yes, how?

4. **Do you have any additional comments or feedback?**

Thank you for your time. Your feedback is important to us.

Appendix D: Administered Naloxone Form

1. **What is your age?** _____

2. **When did the overdose occur? (date)** _____ (mm/dd/yyyy)

3. **Tell us your story about the overdose:**

4. **Who did you administer naloxone to?**

☐ Partner ☐ Family member ☐ Friend ☐ Acquaintance
☐ Stranger ☐ Yourself ☐ Other _____

5. **Where did the overdose occur?**

☐ Private home ☐ On the street ☐ Shelter/Hotel ☐ Other _____

6. **In what city did the overdose occur?**

☐ Cambridge ☐ Kitchener ☐ Waterloo ☐ Other: _____
☐ Waterloo Region Township (North Dumfries, Wellesley, Wilmot, Woolwich)

7. **What drugs were involved in the overdose?** _____ ☐ Unsure

8. **How did you know that an overdose was happening?**

☐ Person turned blue ☐ Person wouldn't wake up
☐ No response to "Shake and Shout" ☐ Person not breathing
☐ Other: _____

9. **How long did it take for the naloxone to work?** _____

10. **How much naloxone (ampoules) did you administer?** _____

11. **Did you do chest compressions?** ☐ Yes ☐ No
If NO, why not? _____

12. **Did you receive training to administer naloxone?** ☐ Yes ☐ No
If YES, where did you receive it? _____

13. **Where did you receive the naloxone kit?** _____
14. **Did you place the person in the recovery position?** ☐ Yes ☐ No

If NO, why not? _____

15. Did you or someone call 911/emergency services? ☐ Yes ☐ No

IF YES, was the person taken to the hospital? ☐ Yes ☐ No

Did the police attend? ☐ Yes ☐ No

If NO, what prevented 911/emergency services from being called?

☐ Worried police would become involved

☐ Thought person would recover on their own

☐ Other: _____

16. Did the person survive the overdose? ☐ Yes ☐ No ☐ Unsure

17. How long did you stay with the person after the naloxone was administered?

_____ (min/hrs)

18. Did you find the naloxone kit contents easy to access and use? ☐ Yes ☐ No

Comments: _____

19. If you were in the same situation again, do you think that giving naloxone would be a good thing to do?

☐ Yes ☐ No ☐ Unsure

If NO or UNSURE, why?_____

20. Do you feel you had enough training to give naloxone? ☐ Yes ☐ No

If NO, what could be done to better prepare you?

21. Would you like a replacement naloxone kit? ☐ Yes ☐ No

If NO, why not? _____

To be completed by Public Health Nurse

Form received by: _____ Date: _____

Appendix E: Received Naloxone Form

1. **What is your age?** _____

2. **Where do you live?**
   ☐ Cambridge ☐ Kitchener ☐ Waterloo ☐ Other: _____
   ☐ Waterloo Region Township (North Dumfries, Wellesley, Wilmot, Woolwich)

3. **When did the overdose occur (date)?**_____(mm/dd/yyyy)

4. **Who injected (gave you) the naloxone?**
   ☐ Partner ☐ Family member ☐ Friend ☐ Acquaintance
   ☐ Stranger ☐ Other: _____

5. **Did the naloxone kit that was used belong to you?** ☐ Yes ☐ No

6. **Where did the overdose occur?**
   ☐ Private residence ☐ On the street ☐ Shelter/Hotel ☐Other: _____

7. **What drugs were involved in the overdose?**_____ ☐ Unsure

8. **Did someone call 911/emergency services?** ☐ Yes ☐ No
   If YES, **were you taken to the hospital?** ☐ Yes ☐ No
   Did the police attend? ☐ Yes ☐ No

   If NO, **what prevented 911/emergency services from being called?**
   ☐ Worried police would become involved ☐ Person thought I would recover on my own
   ☐ Other: _____ ☐ Don't know

9. **If you were in the same situation again, would you want to receive naloxone?**
   ☐ Yes ☐ No ☐ Unsure

   If NO or UNSURE, why? _____

10. **Do you want a replacement naloxone kit?** ☐ Yes ☐ No

11. **Additional comments:**

To be completed by Public Health Nurse
Form received by: _____ Date: _____