ANNUAL REPORT

DEARBORN COUNTY CITIZEN OPIOID RESPONDERS (COR)

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PREVENTION INSIGHTS

AT THE **INDIANA UNIVERSITY** SCHOOL OF PUBLIC HEALTH

Applying Addiction Science for Healthier Communities

SUMMARY

INTRODUCTION

In partnership with the Dearborn County Health Department, Prevention Insights launched the Citizen Opioid Responders (COR) online naloxone training program in Dearborn County in August 2022. The COR training program seeks to reduce deaths from opioid related overdoses by recruiting, training, and linking citizen responders to these events so they can administer lifesaving naloxone. As a result of this funding opportunity, more Dearborn County residents are now trained to administer naloxone, conduct rescue breathing, respond to PulsePoint alerts, and carry naloxone in the first year of the project.

The COR training program supports, compliments, and extends local face-to-face overdose education and naloxone distribution efforts by offering a comprehensive, science-based online naloxone training program. In 2021, the COR training was developed and tested as part of a larger study in five Indiana counties (Boone, Dearborn, Hancock, Madison, and Monroe). The development and testing of the COR training was supported by the National Institute on Drug Abuse of the National Institutes of Health under Award Number R41DA053078.

METHODS

A total of 155 participants completed the training. Prior to starting the training, participants were asked to complete a voluntary pretest survey for program evaluation. At the end of the training, participants were directed to a posttest survey, after which they were provided with a certificate of completion. The purpose of these survey tools was to assess changes in participants' knowledge, readiness, and confidence that were associated with the training.

One hundred and five participants completed the voluntary pretest, of whom 68.6% affirmed living or working in Dearborn County. Then, 155 participants completed the posttest. We were able to confidently match the responses from 66 participants who completed both surveys. The matched data were analyzed using the Wilcoxon signed – rank tests or McNemar's Tests as appropriate based on the format of the question.

These findings reflect results collected between the initiation of the COR project in Dearborn County and September 6, 2023.

KNOWLEDGE

Knowledge Comparisons

- Percentages used for knowledge comparisons are for the 66 trainees with a matched pre-test and post-test.

Increases vs Decreases

- We want to see increases in percentages of *correct* responses.

- However, we want to see decreases in percentages of *incorrect* responses.

INDICATORS OF AN OPIOID OVERDOSE

Many program participants began the COR training knowing that slow/shallow breathing (91%) and loss of consciousness (96%) are signs of an opioid overdose. However, only half (52%) of trainees knew before the COR training that very small pupils are also an indicator of an opioid overdose. At post-test, that percentage had increased to 94% (Figure 1, $p<.001$).

Figure 1. Which of the following are indicators of an opioid overdose?
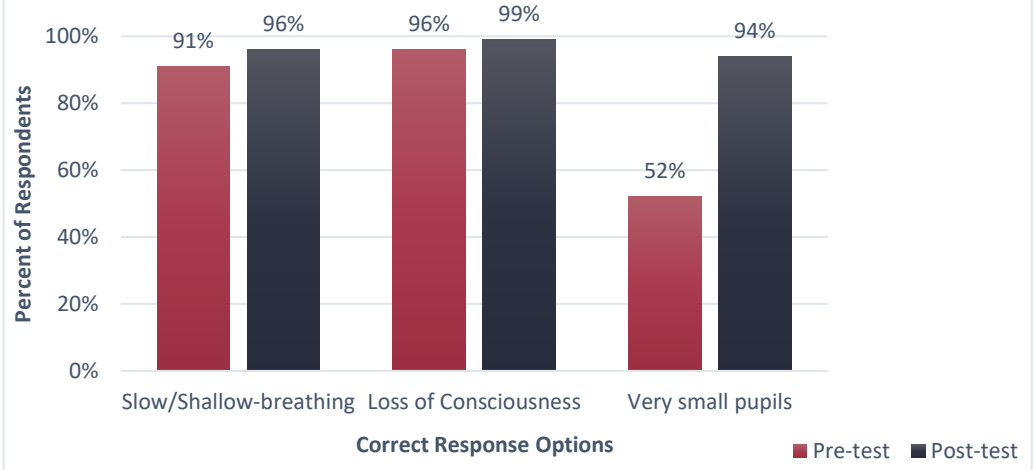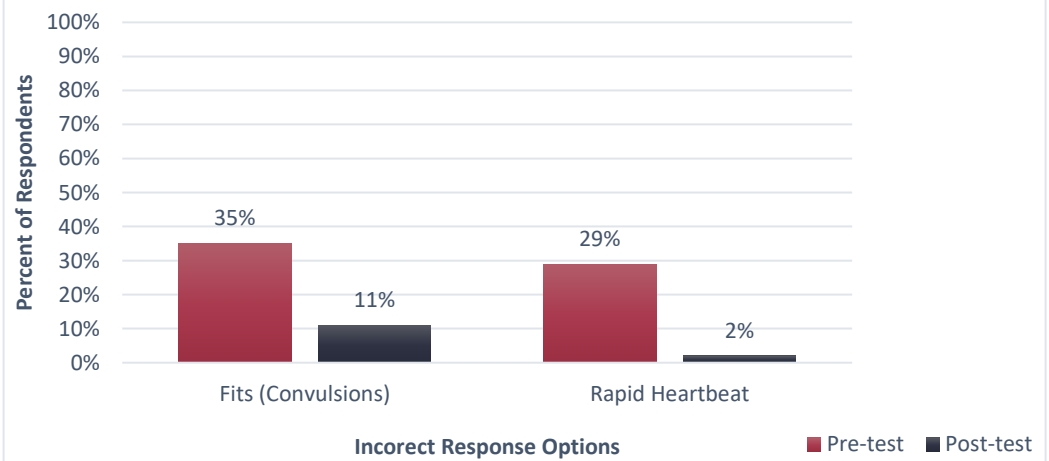

Figure 2. Which of the following are indicators of an opioid overdose?

In Figure 2, we observe that the percentages of participants *incorrectly* identifying fits/convulsions as a sign of an opioid overdose decreased from 35% to 11% (*p*<.001), and also that only 1 participant (2%) *incorrectly* identified rapid heartbeat as a sign of opioid overdose after the COR training (down from 29% before the training).

KNOWLEDGE ABOUT NALOXONE/NARCAN

Most trainees knew how long naloxone/Narcan takes to start having an effect at pretest (85%), though some people reported they didn't know. *All but 1 participant responded correctly* after the training (Figure 3, *p*=.004). In contrast, only one-third of trainees (33%) knew how long naloxone/Narcan lasts before taking the COR training, and *most* (92%) correctly responded after the training (Figure 4, *p*<.001).

Figure 3. How long does Naloxone/Narcan take to start having an effect? *(percentages may not add to 100% due to rounding)*
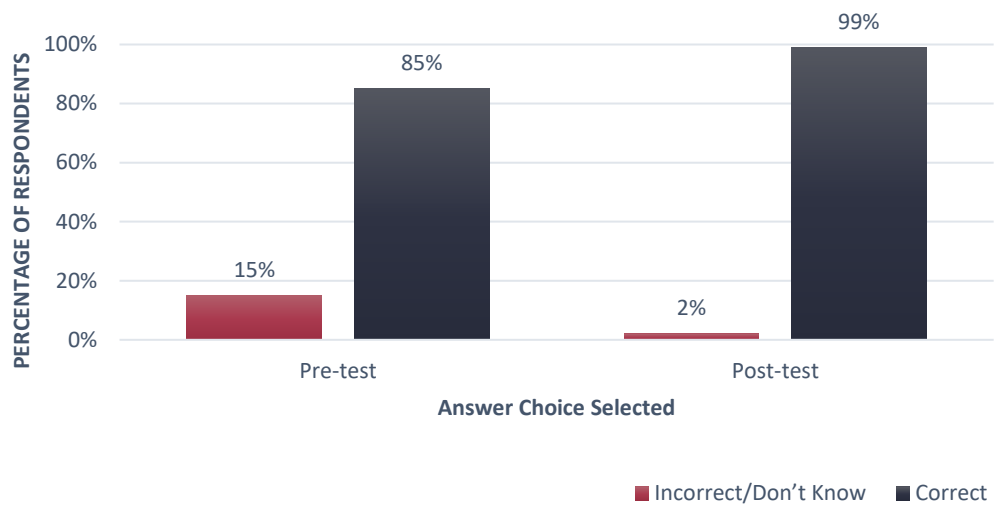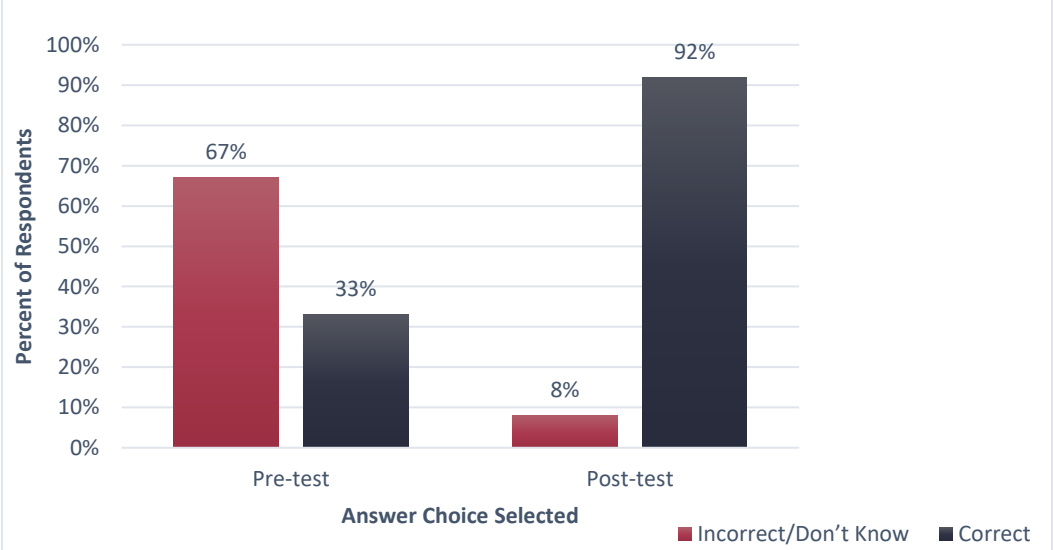

Figure 4. How long do the effects of Naloxone/Narcan last?

- Unlike knowledge, where things are either 'correct' or 'incorrect,' attitudes and perceptions are measured by *degree*.

- For example, we do not measure people as 'confident' or 'unconfident,' but instead ask about *how confident* they feel.

ATTITUDES AND PERCEPTIONS

Among the 66 matched COR trainees, there were increased perceptions that rescue breathing is effective in managing an opioid overdose after the COR training compared to before it (Figure 5, *Z*=-5.248, *p*<.001).

Of particular interest, we identified that after the COR training, participants were *substantially more likely* to strongly agree that they could effectively reverse an opioid overdose without any additional information or training (Figure 6, *Z*=-5.267, *p*<.001).

Figure 5. How effective are each of the following in managing an opioid overdose? (Rescue breathing) (*percentages may not add to 100% due to rounding*)
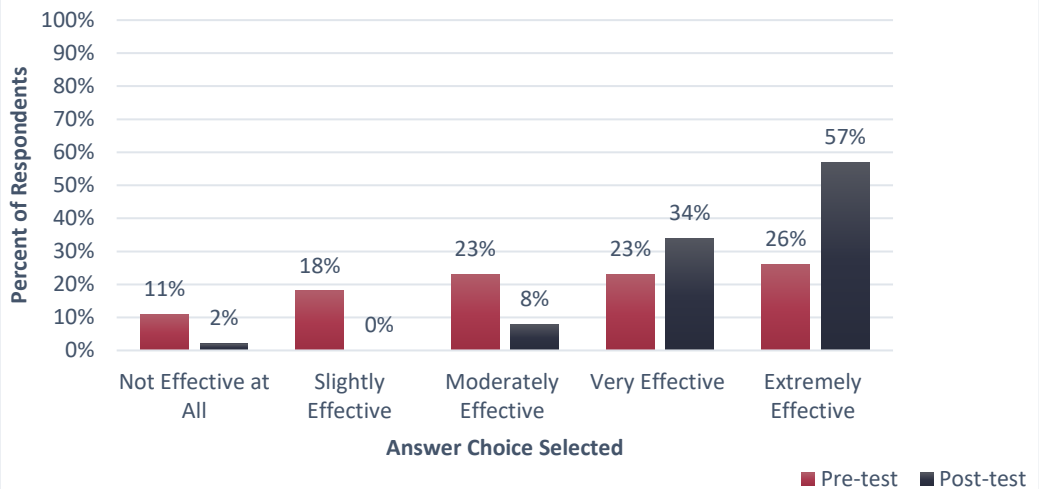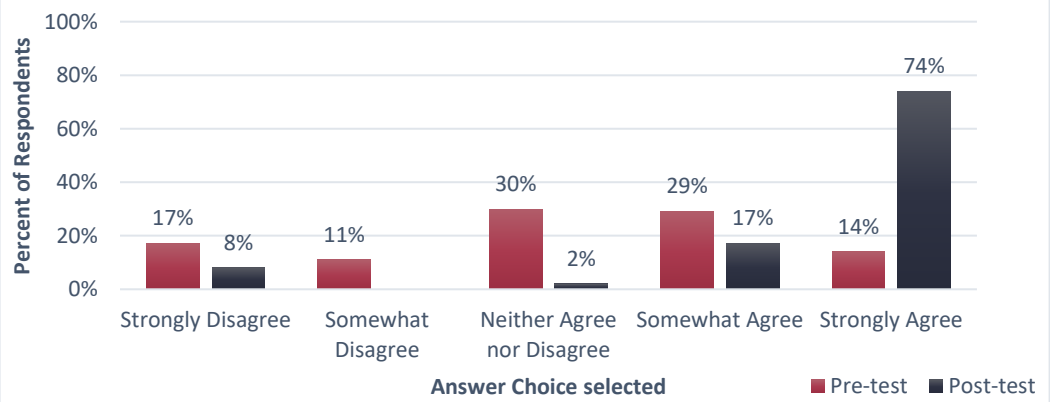

Figure 6. Without any additional training or information, I feel I could effectively reverse an opioid overdose. (*percentages may not add to 100% due to rounding*)

We also found that participants were *significantly more likely* to report being very confident in administering naloxone/Narcan intranasally to someone who has overdosed after taking the COR training, compared to before (Figure 7, Z=-5.454, p<.001). In addition, participants were *significantly more likely* to report being very confident in administering rescue breathing to someone who has overdosed after taking the COR training, compared to before (Figure 8, Z=-3.722, p=.001).

Figure 7. How confident are you in performing the following actions on someone who has overdosed? (Administer intranasal Naloxone/Narcan) *(percentages may not add to 100% due to rounding)*
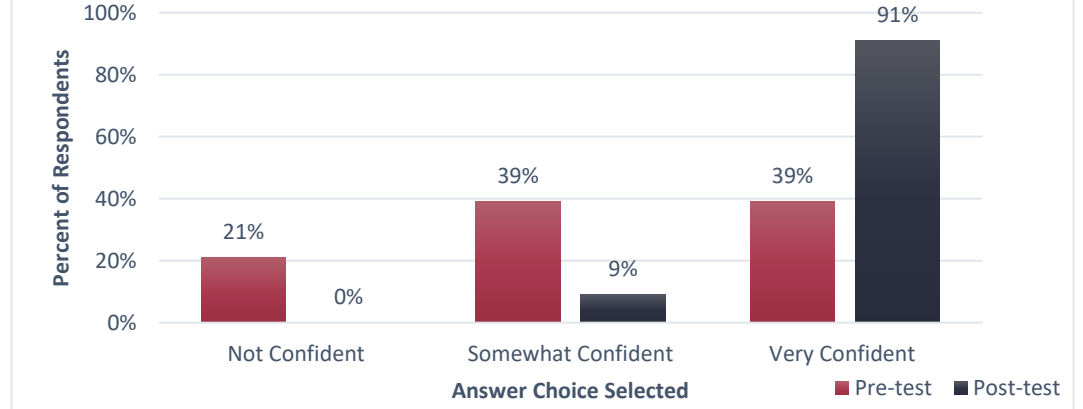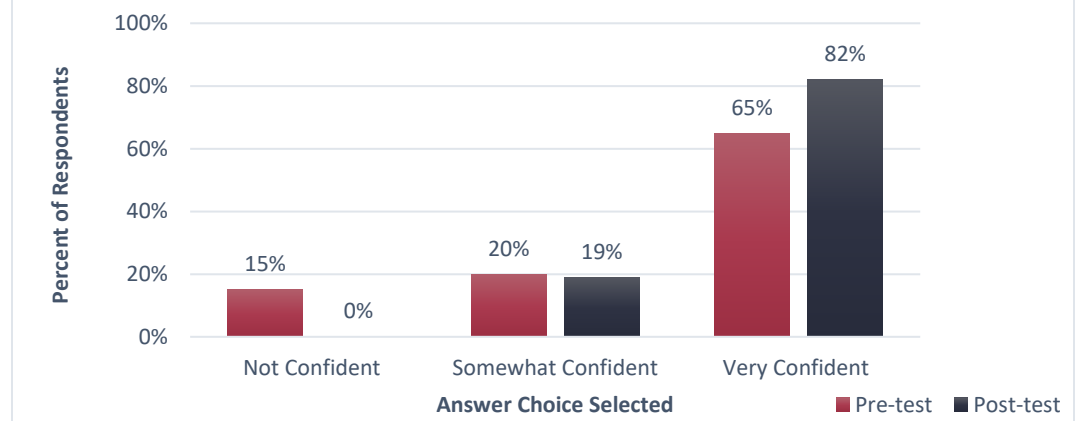

Figure 8. How confident are you in performing the following actions on someone who has overdosed? (Administer rescue breathing) *(percentages may not add to 100% due to rounding)*

- Many behavior theories have shown that intentions often precede actions. When we want to understand what people might do in the future, we can study their intent.

INTENTIONS

Large percentages of COR trainees with matched data *already* intended to carry naloxone on their person before attending the training. Because of that high baseline intention, statistical comparison may have been affected by a 'ceiling effect' reducing the apparent effect of the training, though the difference was still significant (Z=-2.615, p=.009). **95% of participants** reported a 5 or greater intention (where 7 is extremely likely) to carry naloxone after the COR training (see Figure 9).

Intent to respond to a nearby overdose if notified was also fairly high before the COR training. However, this statistic did not significantly differ between pre- and post-test (Z=-1.498, p=.134) (see Figure 10).

Figure 9. How likely are you to carry naloxone on your person? (*percentages may not add to 100% due to rounding*)
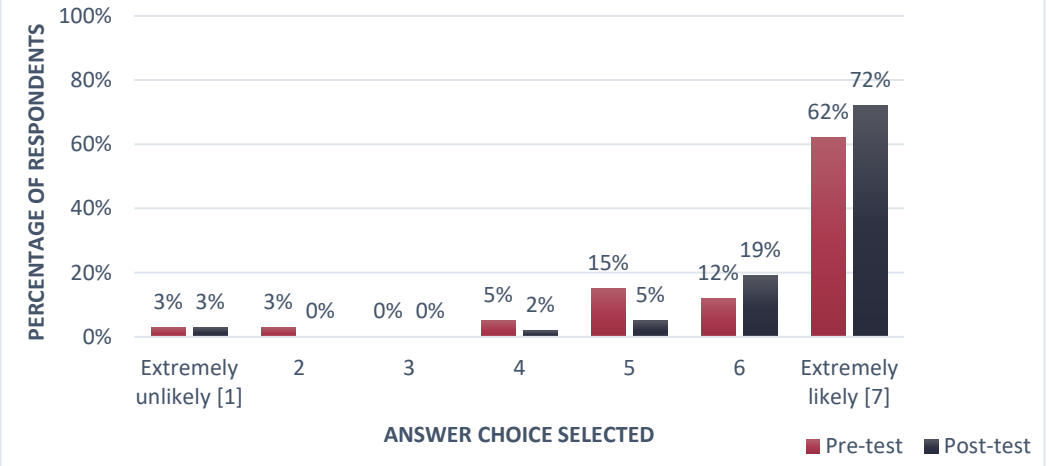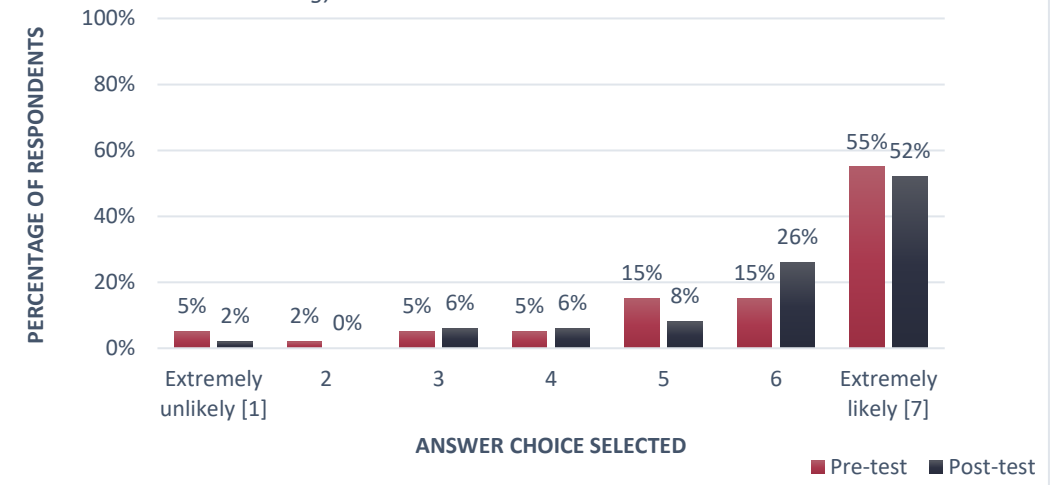

Figure 10. How likely are you to respond to an overdose event if you are notified of one occuring nearby? (*percentages may not add to 100% due to rounding*)

PULSEPOINT

Interestingly, only 39% of participants knew about the *PulsePoint* app before taking the COR training. Because the training includes information about the app, we are unsurprised that the percentage had increased to 99% by the end of the training (Figure 11). Although we don't present the data in a figure, we also note that **14 participants** indicated installing the app *for the first time* on one or more personal devices between taking the pretest and finishing the training/posttest.

Figure 11. Do you know what the PulsePoint Mobile App is?
(percentages may not add to 100% due to rounding)
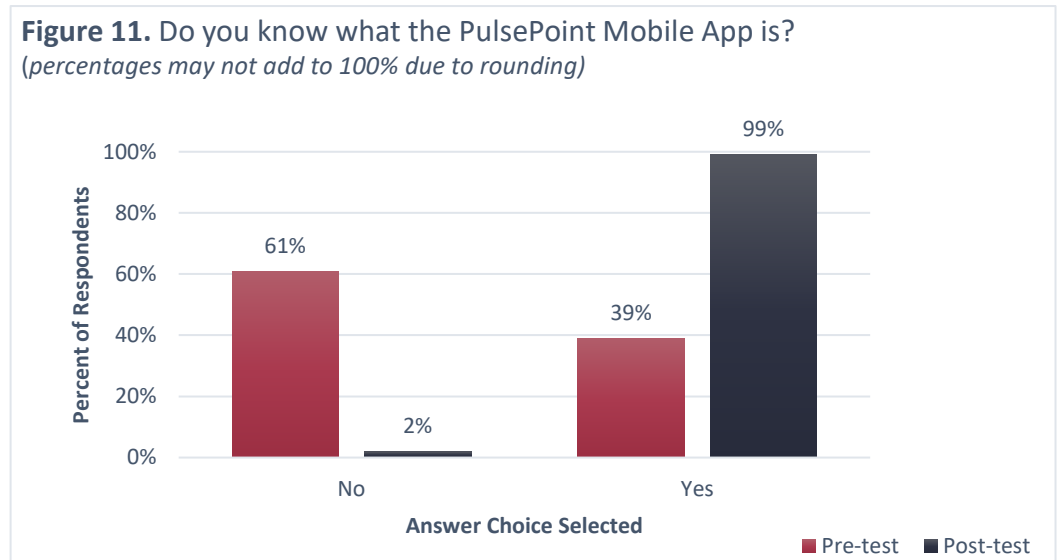
TRAINING FEEDBACK

- While our prior data have been based on a group of 66 trainees where we matched pretest and posttest data, the feedback was collected *after the training only*. Therefore, we can include all data for trainees who completed the post text (147 out of 155).

Feedback from the COR training was extremely positive. Out of 108 participants, we found that:

- 138 Strongly agreed that the training was worth the investment of their time (94%, Figure 12).

- 136 Strongly agreed that they would recommend the training to others in the community (93%, Figure 13).

- 136 Strongly agreed that they were satisfied with the educational content of the training (93%, Figure 14).

- 126 Strongly agreed that the length of time for the training was appropriate (86%, Figure 15).

- 127 Strongly agreed that the technology used in the training activities was appropriate (88%, Figure 16).

- 136 Strongly agreed that what they learned from the training will be useful if they respond to an opioid overdose (93%, Figure 17).

- 131 Strongly agreed that they knew where to get reduced cost or free naloxone/Narcan in their community (89%, Figure 18).

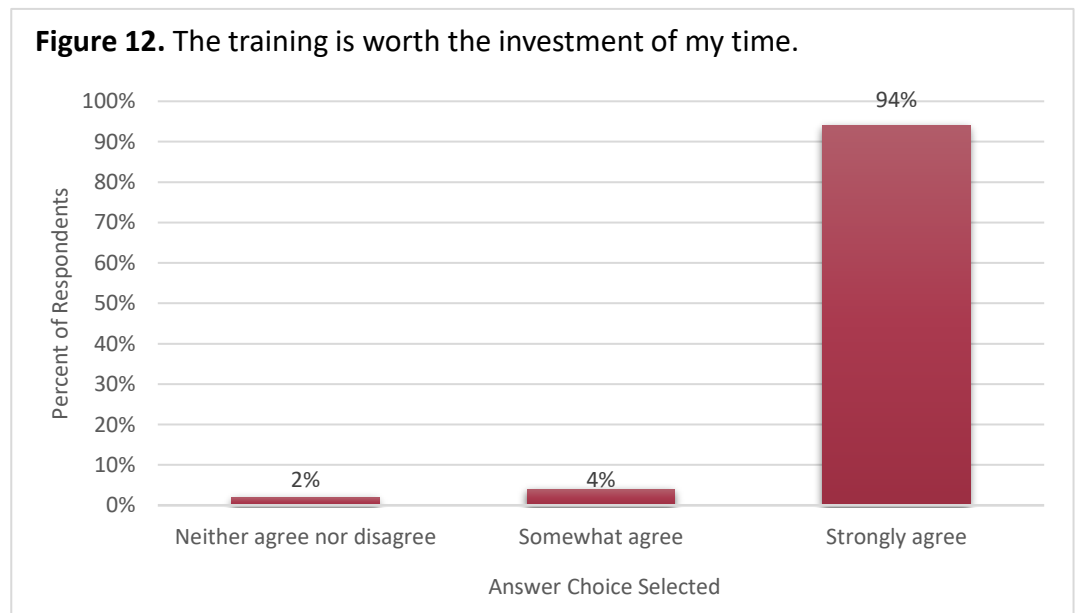**Figure 12.** The training is worth the investment of my time.

Figure 13. I would recommend the training to others in my community. (*percentages may not add to 100% due to rounding*)
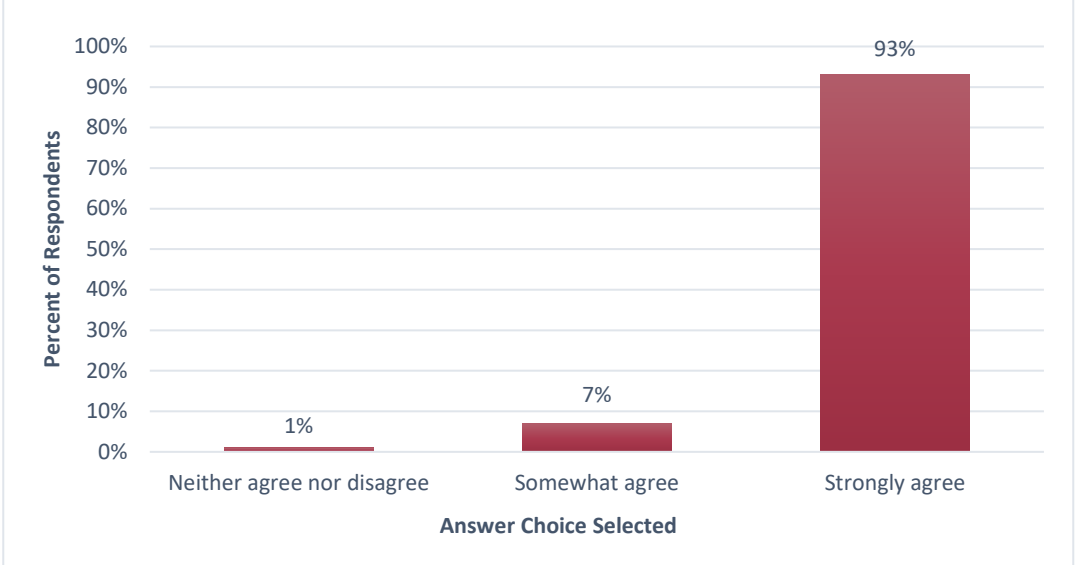

Figure 14. I am satisfied with the educational content of the training. (*percentages may not add to 100% due to rounding*)
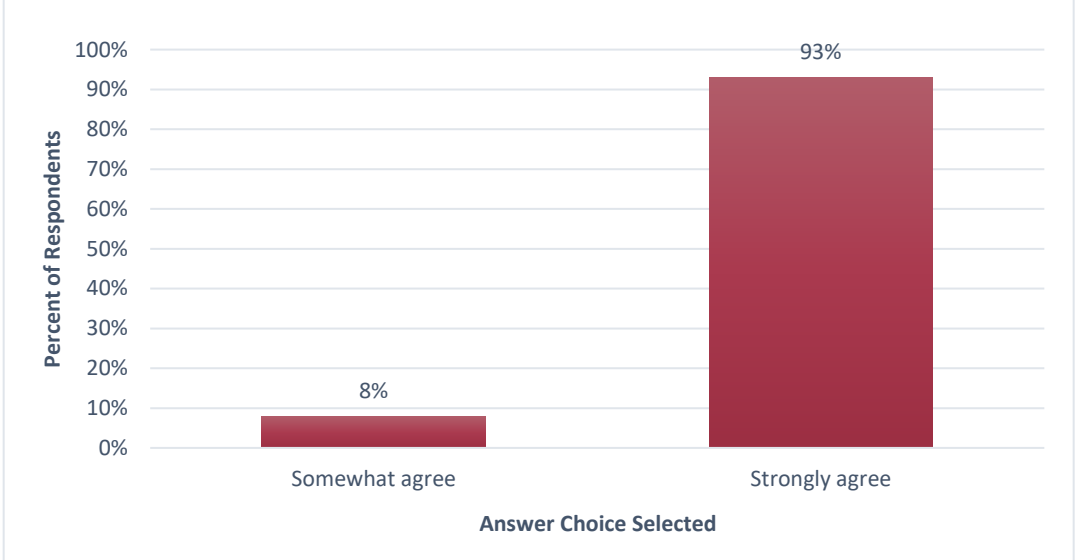
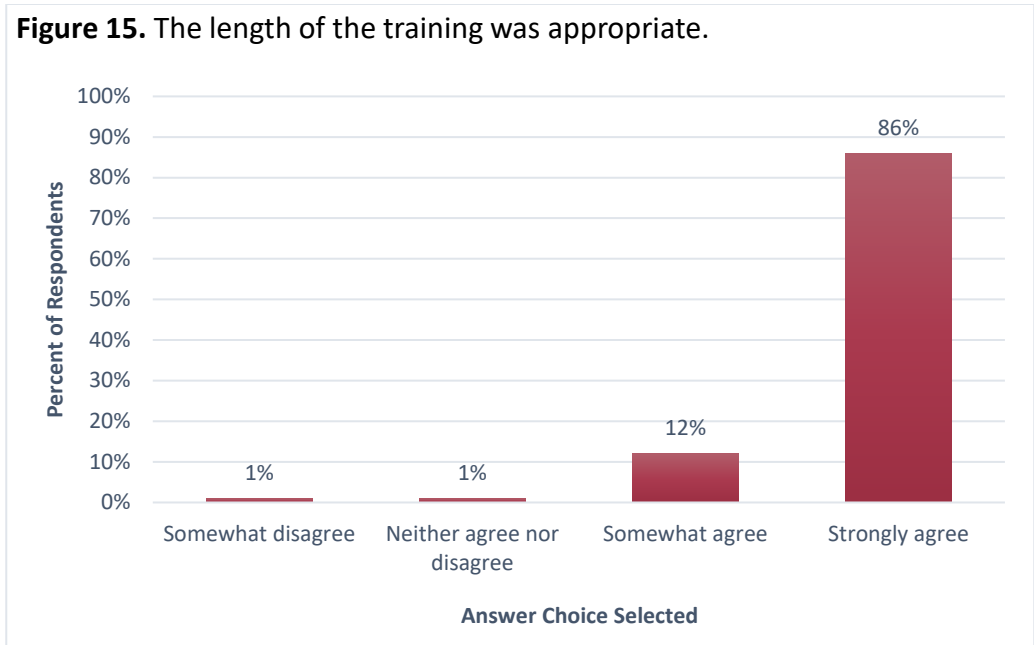**Figure 15.** The length of the training was appropriate.

Percent of Respondents

- Somewhat disagree: 1%
- Neither agree nor disagree: 1%
- Somewhat agree: 12%
- Strongly agree: 86%

Answer Choice Selected

Figure 16. The technology used in the training activities was appropriate.

Percent of Respondents

- Somewhat disagree: 1%
- Neither agree nor disagree: 1%
- Somewhat agree: 10%
- Strongly agree: 88%
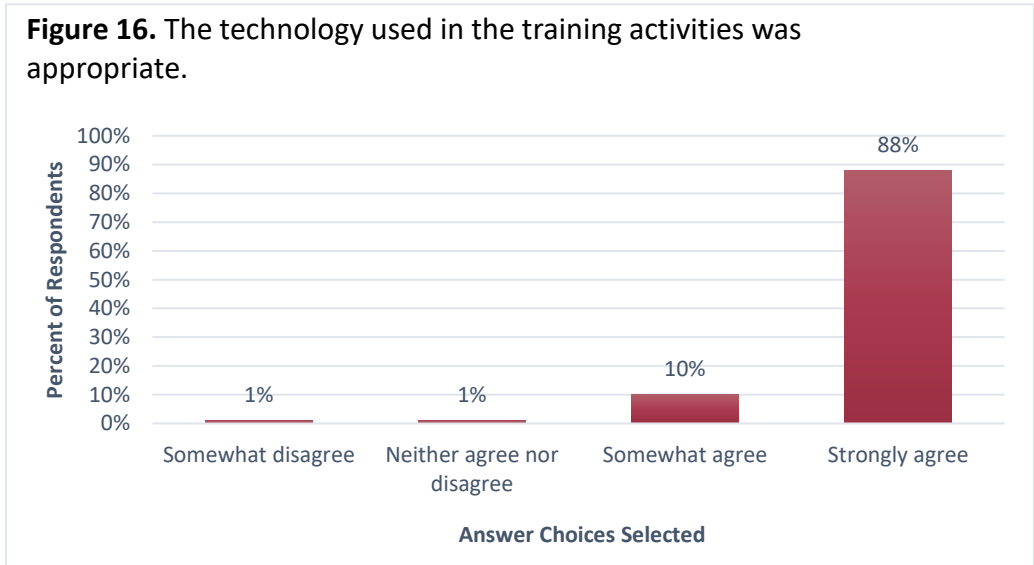
Answer Choices Selected

Figure 17. What I learned from this training will be useful if I respond to an opioid overdose.
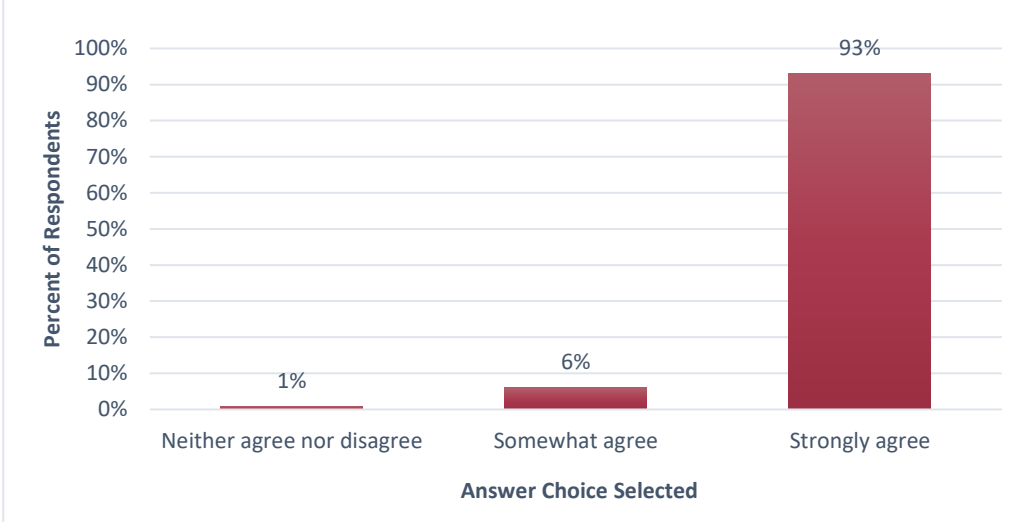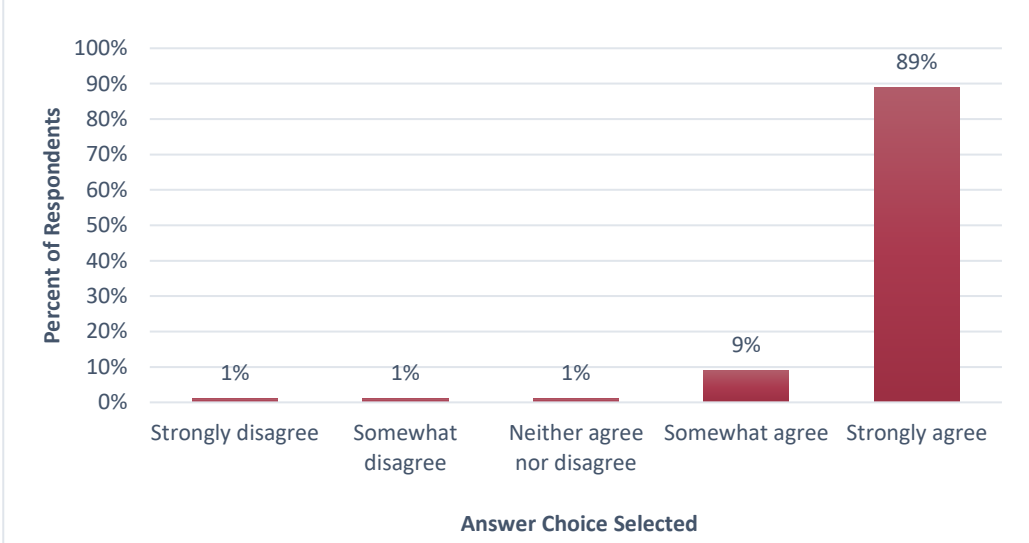

Figure 18. I know how to get a reduced or free naloxone/Narcan in my community.

BRIEF CONCLUSION

This annual report suggests that COR trainees are largely satisfied with the COR training and find it to be useful. In areas where deficits in knowledge existed prior to the training, we observed improvements. We also observed some significantly improved attitudes and perceptions at posttest, as well as some evidence for improved behavioral intentions for desired activities (such as carrying naloxone). There is also evidence that the training successfully builds awareness of the *PulsePoint* mobile app.

In sum, the preponderance of the evidence appears to support the value of the COR training and its continued use in the community.

This is an evaluation report and not a research study. This has implications in terms of how the reporting is structured. Our goal is to provide informative data to Dearborn County but not necessarily to make generalizable scientific conclusions. Thus, some mechanistic practices (e.g., correction for multiple pairwise tests) were not undertaken for the sake of clarity. However, we have presented these data in a manner we believe to be reasonably conservative, and without making undue assumptions. There are some additional data measured for which significant changes were not observed. As these are not necessarily actionable (e.g., cases where attitudes were extremely favorable before the training), we do not share them here for the sake of brevity, but we have retained all data for reference.