



ANNUAL REPORT

DEARBORN COUNTY CITIZEN OPIOID RESPONDERS (COR) - 2024

Image Credit: Dearborn County Historical Society

Cris Henderson, COR Project Director

Jon Agley, Deputy Director of Research



SCHOOL OF PUBLIC HEALTH
PREVENTION INSIGHTS
Bloomington



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. This report is part of a sequence of reports designed to update Dearborn County about training outcomes. As such, while data are updated each time, certain sections of language may be retained verbatim where appropriate and warranted.

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 **143** participants completed the training during this reporting period. 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.

Seventy-eight participants completed the voluntary pretest, of whom 60.3% affirmed living or working in Dearborn County. Then, 143 participants completed the posttest. We were able to confidently match the responses from 36 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 September 7, 2023 (the day after the Year 1 Annual Report was analyzed) and September 17, 2024.

KNOWLEDGE

Knowledge Comparisons

- Percentages used for knowledge comparisons are for the 36 trainees with a matched pre-test and post-test.



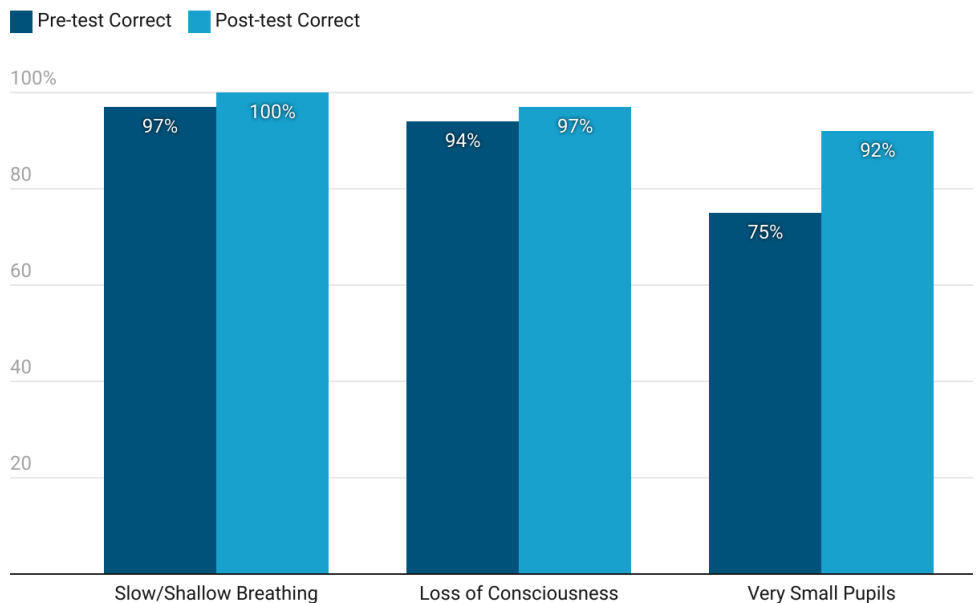
Increases vs Decreases

- We want to see **increases** in percentages of *correct* responses (Figure 1).
- However, we want to see **decreases** in percentages of *incorrect* responses (Figure 2).

INDICATORS OF AN OPIOID OVERDOSE

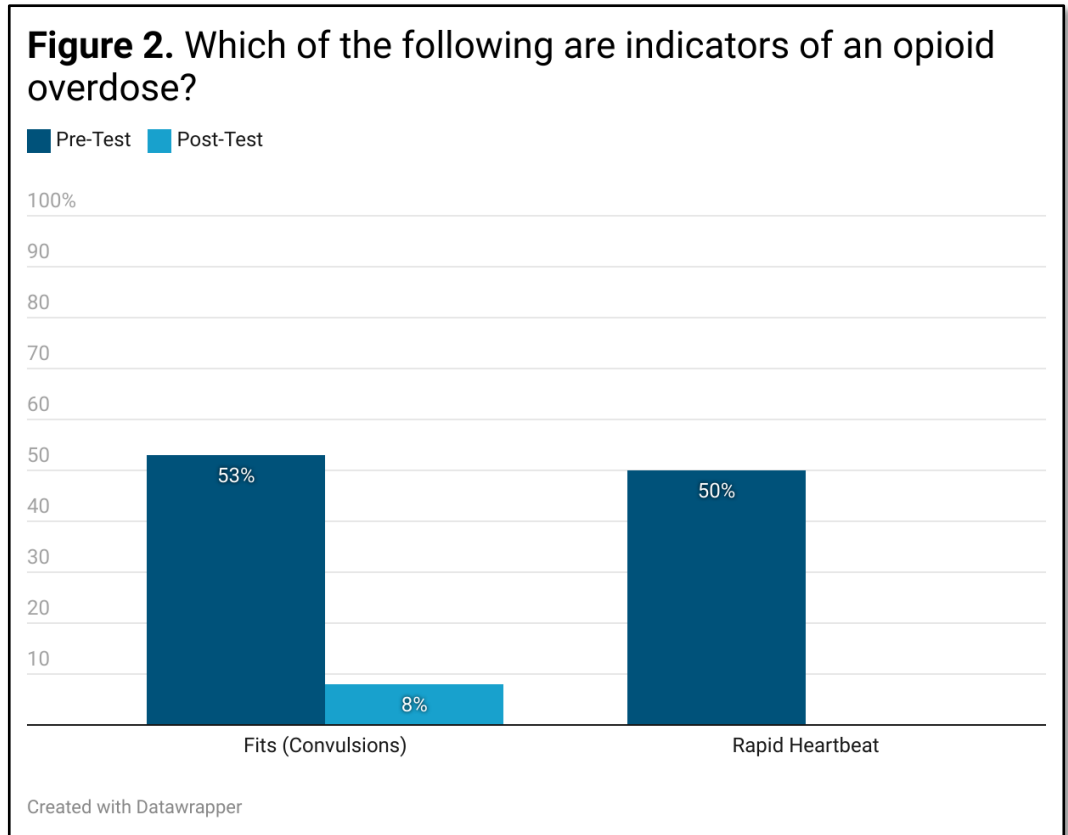
Many program participants began the COR training knowing that slow/shallow breathing (97%) and loss of consciousness (94%) are signs of an opioid overdose. In addition, around three-quarters (75%) of trainees knew before the COR training that very small pupils are also an indicator of an opioid overdose. At post-test, that percentage had increased to 92%, though the comparison was not statistically significant ($p=.109$).

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



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In Figure 2, we observe that the percentages of participants *incorrectly* identifying fits/convulsions as a sign of an opioid overdose decreased from 53% to 8% ($p<.001$), and also that no participants *incorrectly* identified rapid heartbeat as a sign of opioid overdose after the COR training (down from 50% before the training).



KNOWLEDGE ABOUT NALOXONE/NARCAN

Most trainees knew how long naloxone/Narcan takes to start having an effect at pretest (83%), though some people reported they didn't know. All but 1 participant responded correctly after the training (Figure 3, $p=.125$). In contrast, around half of trainees (53%) knew how long naloxone/Narcan lasts before taking the COR training, and all but two participants (94%) correctly responded after the training (Figure 4, $p=.001$).

Figure 3. How long does naloxone/Narcan take to start having an effect? (Select the best answer)

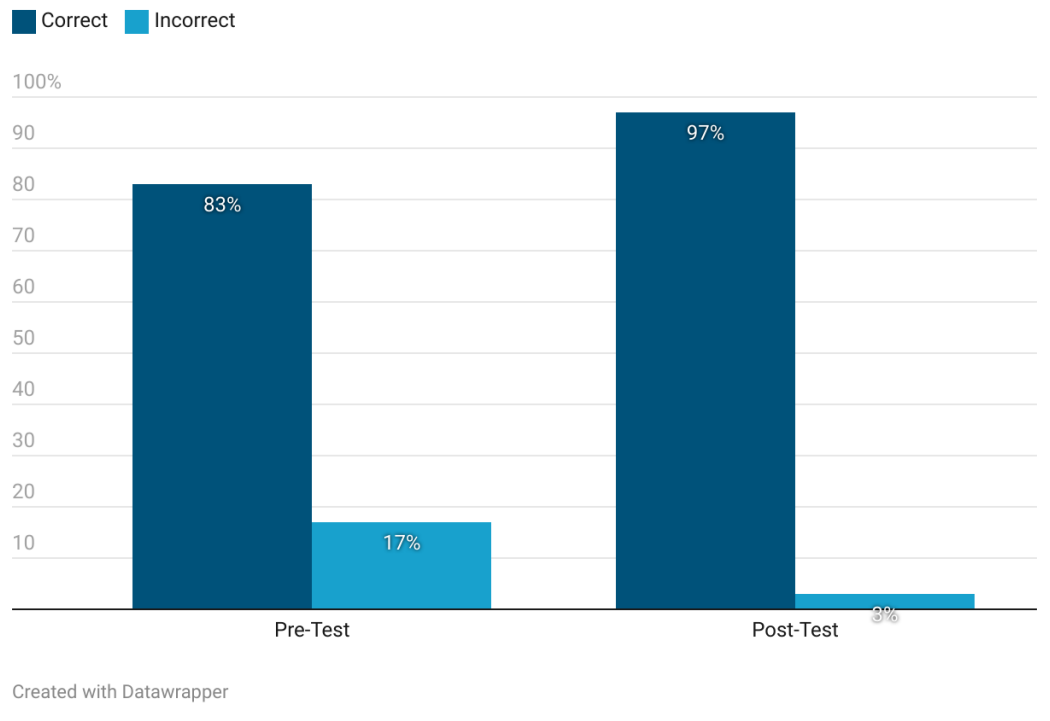
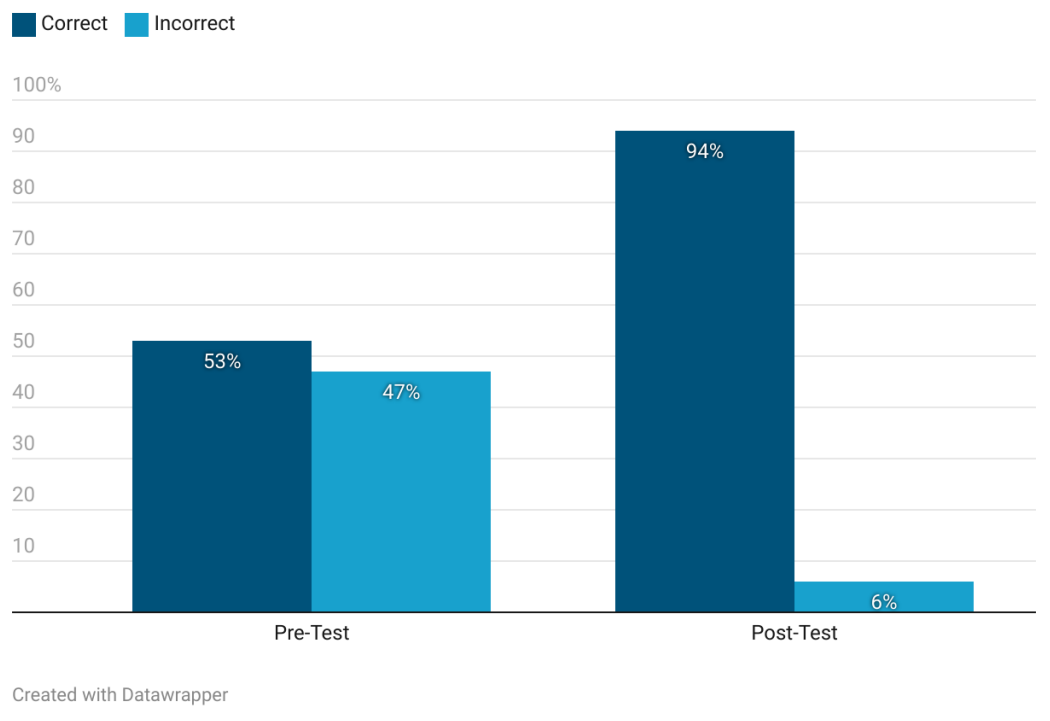


Figure 4. How long do the effects of naloxone/Narcan last? (Select the best answer)



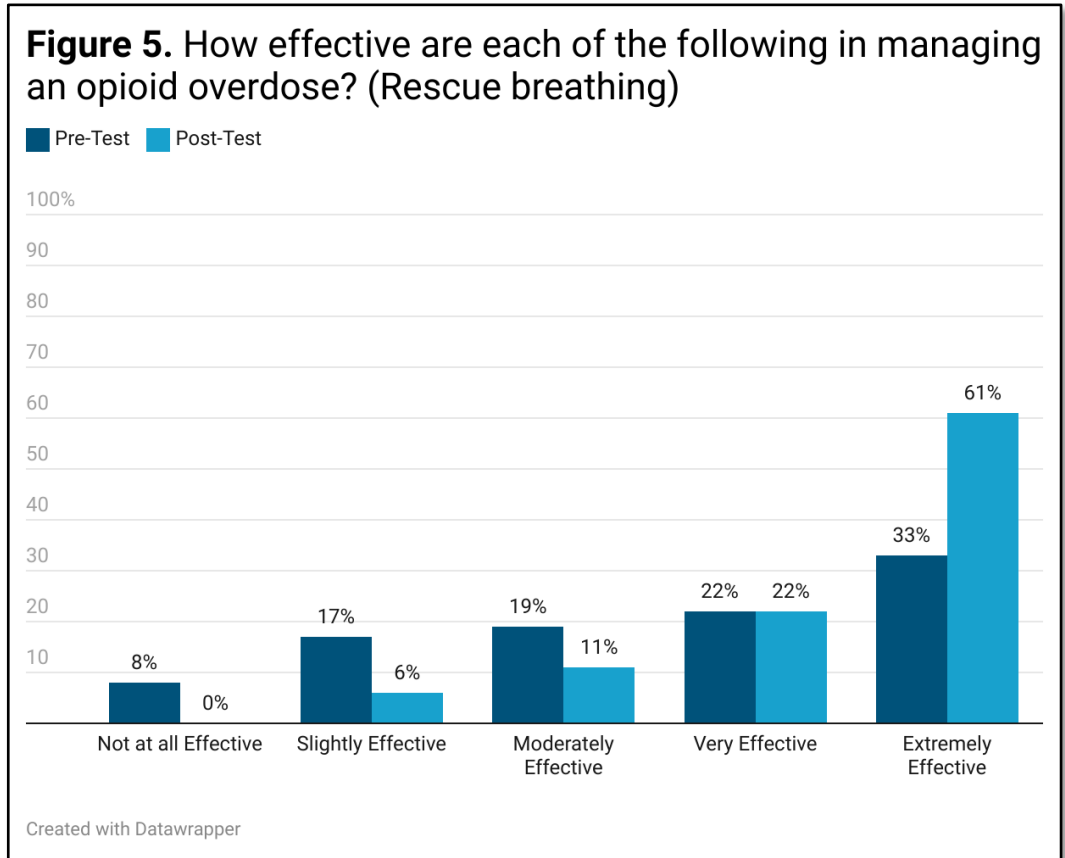


ATTITUDES AND PERCEPTIONS

Interpreting Attitudes and Perceptions

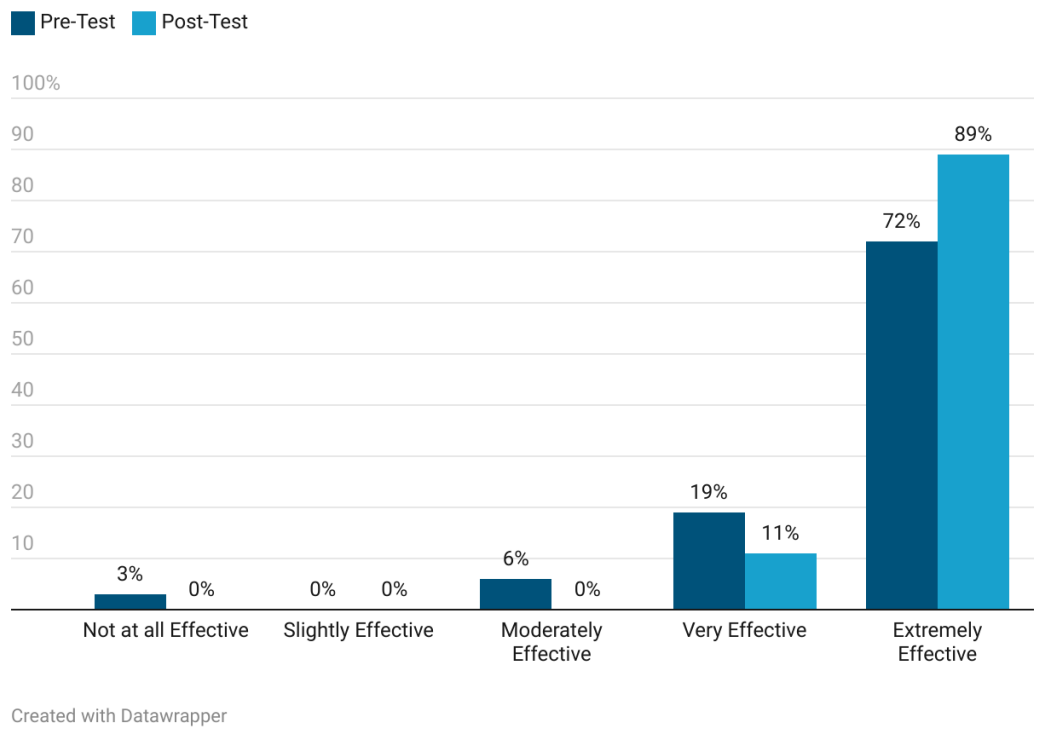
- Unlike knowledge, where things are either 'correct' or 'incorrect,' attitudes and perceptions are measured by *degree*.
- For example, we do not measure people as 'confident' or 'unconfident,' but instead ask about *how confident* they feel.

Among the 36 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, $Z=-3.205$, $p<.001$).



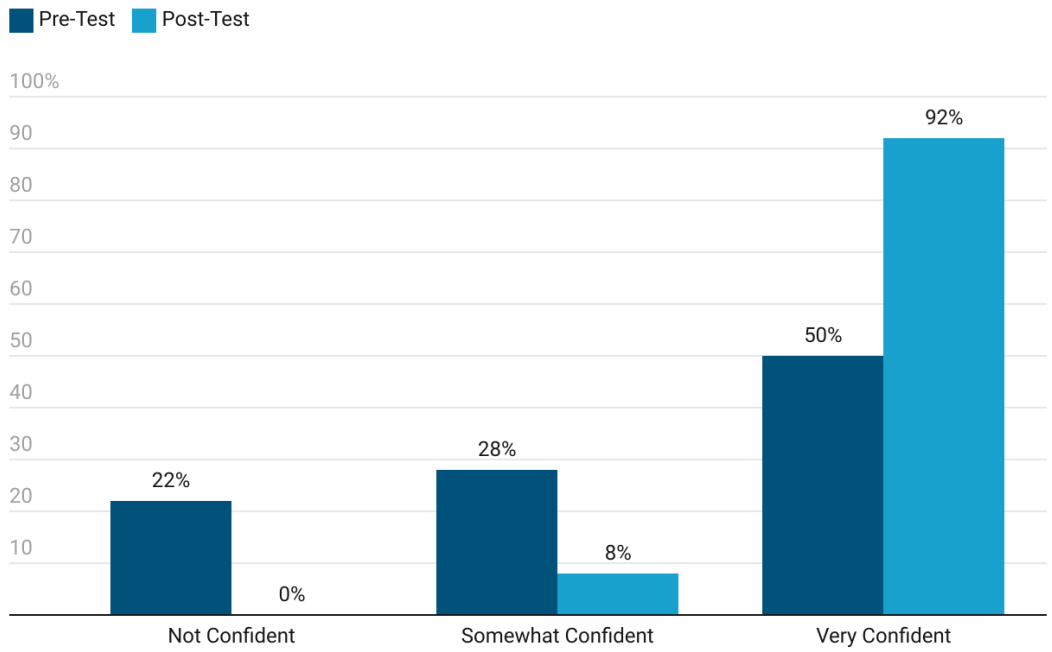
We also noted that after the COR training, participants expressed stronger perceptions of confidence that intranasal naloxone/Narcan spray can manage an opioid overdose (Figure 6, $Z=-2.496$, $p=.013$).

Figure 6. How effective are each of the following in managing an opioid overdose? (Administering intranasal naloxone/Narcan spray)



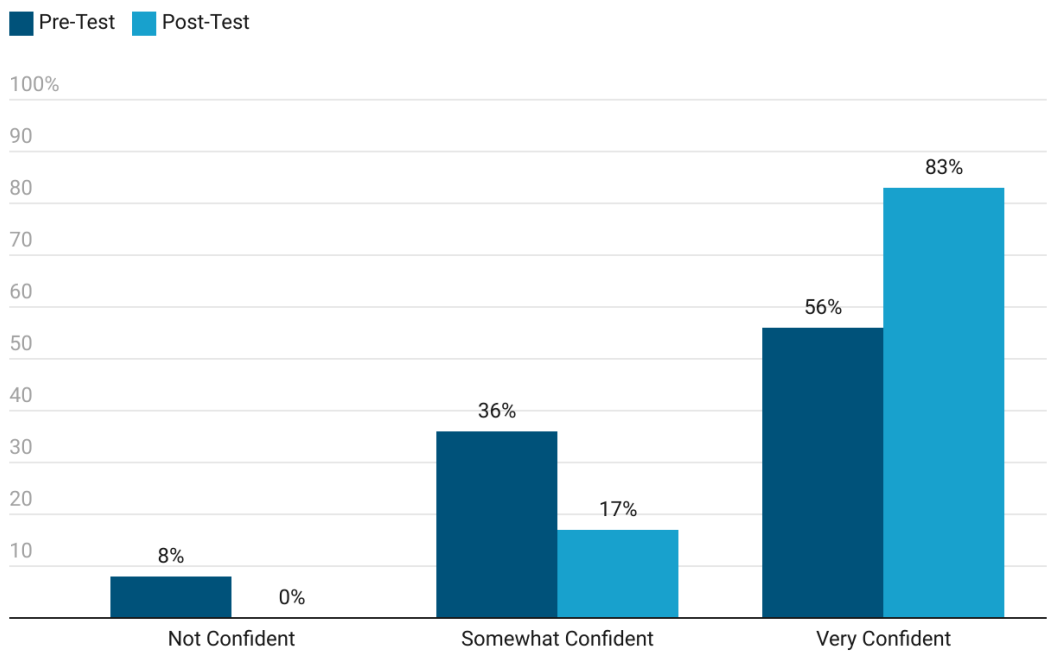
We also found that participants were *significantly more likely* to report being very confident in administering naloxone/Narcan intranasally to someone who has overdosed after taking the COR training, compared to before (Figure 7, $Z=-3.624$, $p<.001$). In addition, participants were *significantly 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, $Z=-3.153$, $p<.001$).

Figure 7. How confident are you in performing the following actions in someone who has overdosed? (Administering intranasal naloxone/Narcan spray)



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Figure 8. How confident are you in performing the following actions in someone who has overdosed? (Administering rescue breathing)



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INTENTIONS

Why intentions?

- 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.

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 ($Z=-1.956, p=.050$). Three quarters of participants indicated that they were “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 ($Z=-0.749, p=.454$) (see Figure 10).

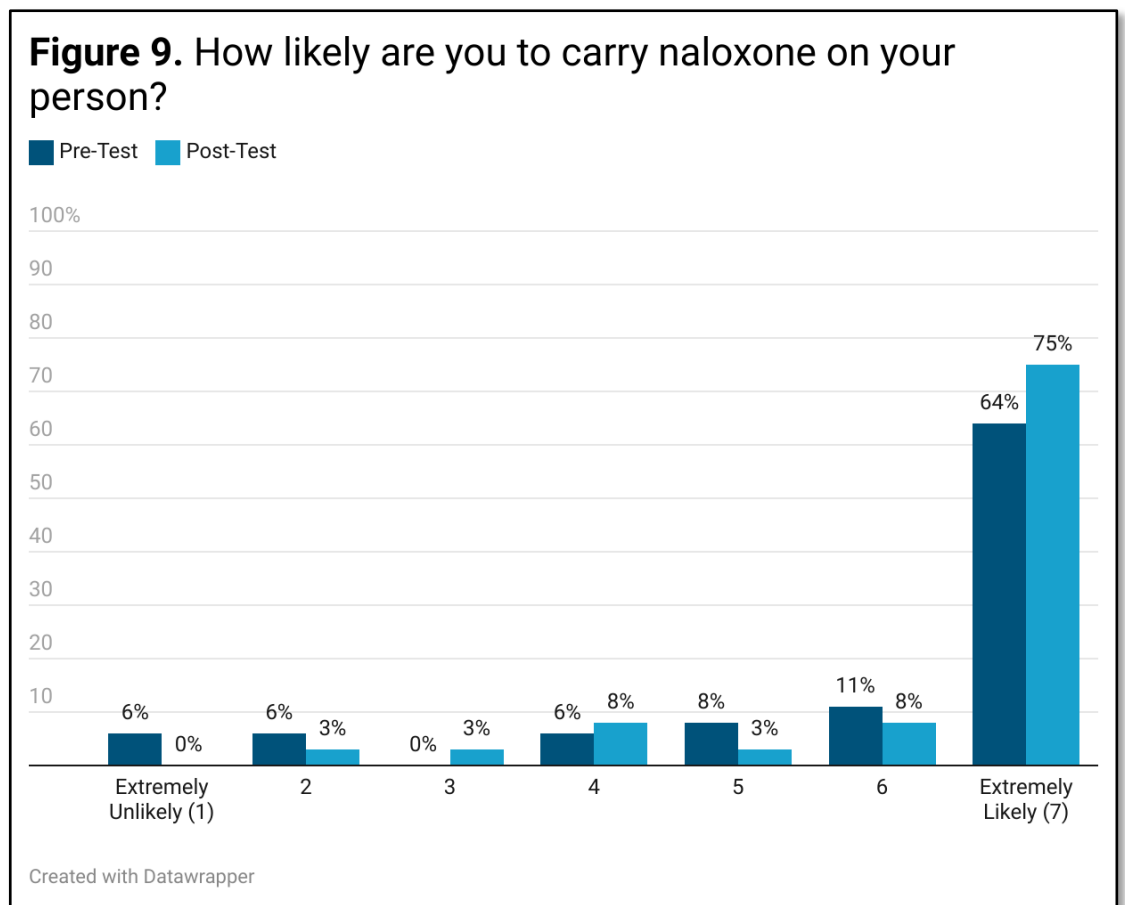
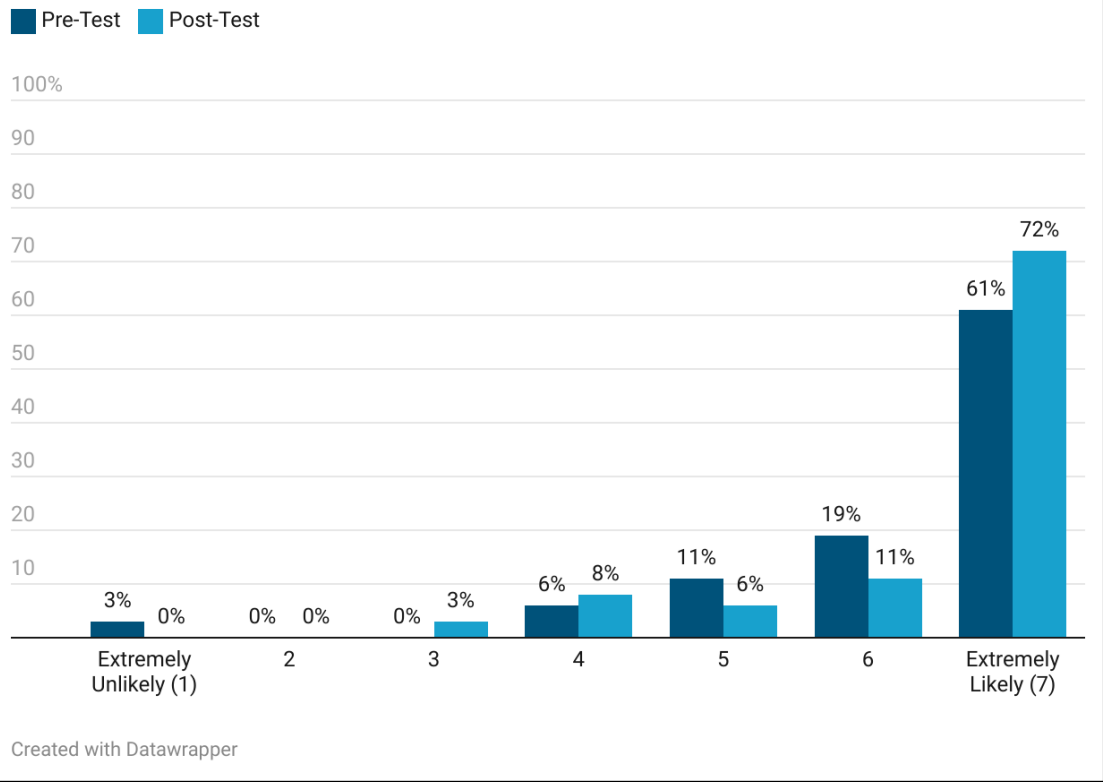


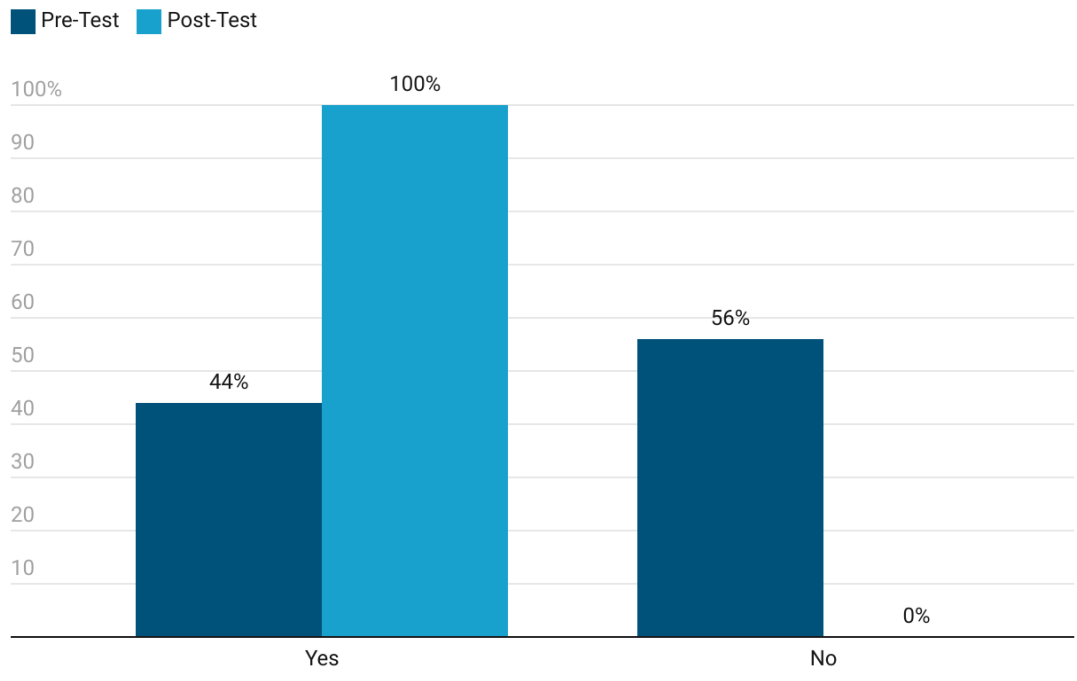
Figure 10. How likely are you to respond to an overdose event if you are notified of one occurring nearby?



PULSEPOINT

Around 44% 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 100% by the end of the training (Figure 11). Although we don't present the data in a figure, we also note that 10 of the 36 participants with paired data 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?



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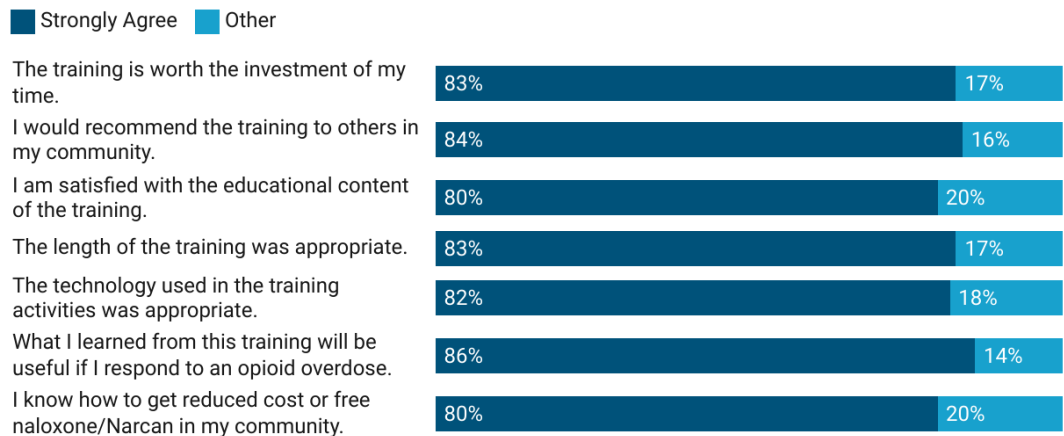
TRAINING FEEDBACK

While our prior data were based on a group of 36 trainees where we matched pretest and posttest data, the feedback was collected *after the training only*. Therefore, we can include all trainees' data who completed the post-test (depending on the question, either 131 or 132 out of 143).

Feedback from the COR training was extremely positive. Out of 131 or 132 participants, we found that (see Figure 12):

- 109 Strongly agreed that the training was worth the investment of their time (83.2%).
- 110 Strongly agreed that they would recommend the training to others in the community (84.0%).
- 106 Strongly agreed that they were satisfied with the educational content of the training (80.3%).
- 109 Strongly agreed that the length of time for the training was appropriate (82.6%).
- 108 Strongly agreed that the technology used in the training activities was appropriate (82.4%).
- 113 Strongly agreed that what they learned from the training will be useful if they respond to an opioid overdose (85.6%).
- 105 Strongly agreed that they knew where to get reduced cost or free naloxone/Narcan in their community (79.5%).

Figure 12. Percentages strongly agreeing with statements about the training.



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BRIEF CONCLUSION

As with previous reports, the 2024 annual report suggests that COR trainees are largely satisfied with the COR training and find it to be useful. In some 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. There is also evidence that the training successfully builds awareness of the *PulsePoint* mobile app.

For the annual report, only 36 respondents were matched (many people who took the pre-test did not take the post-test, or did not provide their e-mail for the post-test, and some people who took the post-test did not take the pre-test). As a result, statistical power remains somewhat limited. There are many reasons why a comparison may not be statistically significant, including a lack of a true difference, observation of a true difference but with low statistical power, or a ceiling effect (e.g., participants entered a program with high values of a variable, so upward change may be difficult to observe). With the expanded comparison sample since the midyear report, we have observed greater levels of significance for some comparisons.

While we could potentially increase the number of matched responses by including a requirement for an e-mail address at pre-test, this would potentially introduce a barrier that might lead people to leave the training site. As a result, in the interest of prioritizing training over matched data, we recommend continuing as-is.

As in previous reports, we note that preponderance of the evidence continues to support the value of the COR training and its 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.