

**Addressing the Opioid Epidemic in Local Homeless Populations:  
The CARE Project**

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Albert Schweitzer Fellowship Final Report

April 2025



**EASTERN**  
MICHIGAN UNIVERSITY

### Abstract

In 2022, drug overdose death rates in Washtenaw County, MI, increased significantly from the previous year, and drug toxicity was identified as the “most common mode of accidental deaths” in Wayne County, MI (Washtenaw County Medical Examiner, 2022; Medical Examiner’s Office, 2023). To address opioid overdoses among local homeless populations, a comprehensive and innovative approach was designed and implemented: The CARE Project - *Creating Awareness, Rescuing Lives: Educating the Homeless on Naloxone*. This intervention is theoretically based on the Transtheoretical Model of Change (TTM). The TTM can assess an individual's readiness to adopt healthy behaviors, such as a naloxone education program. A naloxone education program was conducted for 72 individuals from homeless shelters and encampments in Washtenaw and Wayne County using convenience sampling. Each participant engaged in an educational outreach on naloxone use, common opioids, and local policies for responding to an opioid crisis. Pie charts were utilized to visually compare the acceptance of the naloxone education program among Washtenaw and Wayne County participants based on the TTM. The findings reveal that more individuals were in the Contemplation stage, with Washtenaw County at 66.7% and Wayne County at 72.2%. This study identifies key areas for improvement for future large-scale naloxone education outreaches for individuals experiencing homelessness in the form of recommendations.

*Keywords:* naloxone, homeless, opioid crisis

As reported in a press release from the Centers for Disease Control and Prevention (CDC), in 2023, there were an estimated 107,543 drug-related deaths in the United States of America, with approximately 81,083 of those deaths being due to opioids (CDC, 2024). Data specifically concerning the overdose rate of the homeless population of Washtenaw County has not been reported on, but, in Michigan, it was found that drugs impacted 5.0% of deaths in the homeless population (Traverse City Police Department, 2024). As a whole, the drug overdose epidemic in the United States has continued to worsen, but there has been a significant lack of effective intervention at the homeless population level. The CARE Project, a novel program introduced in Washtenaw and Wayne Counties, Michigan, from 2024 to 2025, aimed at addressing the challenge of opioid overdoses among individuals experiencing homelessness. The primary goal was to assess the willingness of these individuals to adopt the materials from a naloxone education program based on the stages in the TTM. By February 2025, the CARE Project aimed to educate 200 individuals experiencing homelessness through the naloxone education program.

### **Literature Review**

In general, numerous interventions aim to reduce or abstain from drug-related use. While many interventions have been studied, this review will focus on the current naloxone interventions that are focused on decreasing drug-related use through a harm-reduction approach. As outlined by the National Harm Reduction Coalition (2024), harm reduction, in the context of this literature review, acknowledges that substance use is occurring while working to minimize harmful outcomes and does not require an individual to stop using substances. This literature review will focus specifically on individuals experiencing homelessness.

## **Naloxone**

Naloxone is a life-saving medicine used for opioid overdose reversals to restore usual breathing rates (Saari, Strang, and Dale, 2024). Intranasal naloxone can be found and bought without a prescription, is harmless, and can be used by the layperson with significant success (U.S. Food and Drug Administration, 2023). Naloxone has been used in numerous studies (Pietrusza *et al.*, 2018; Surendra *et al.*, 2022) with notable results in educating individuals experiencing homelessness.

In a study conducted by Pietrusza *et al.* (2018), individuals experiencing homelessness who came into a healthcare clinic in Allegheny County, Pennsylvania, were successfully educated on naloxone, identifying opioid overdoses, and local Pennsylvania legal protections regarding aiding someone overdosing. Similarly, a study by Surendra *et al.* (2022), a student-led group focused on street medicine in the Phoenix, Arizona area worked to educate individuals experiencing homelessness on utilizing naloxone and enabling them to have the confidence to save lives, however, there was a significant gap in this study as local legal protections on saving lives in Arizona were not discussed.

Both studies reveal gaps in knowledge about whether a more-rounded educational outreach program can be introduced in other cities and settings to individuals experiencing homelessness (Pietrusza *et al.*, 2018; Surendra *et al.*, 2022). Further research on naloxone education training for administration is crucial to address the gaps in these approaches by creating a comprehensive education on naloxone, opioid overdose identification, understanding local legal protections, and increasing one's confidence in responding to an opioid crisis for individuals experiencing homelessness in other cities.

Through the CARE Project, a more thorough approach to opioid overdoses can be

conducted, which will further assist with these unexplored factors. The CARE Project addresses misconceptions about naloxone, opioid overdoses, and local legal protections, like the Good Samaritan Law, through an informal, one-to-one method. Due to the larger counties involved, Washtenaw and Wayne, the reach and recommended adaptations can be assessed.

### **Methodology**

*Participants.* Participants were sampled using convenience sampling, with 36 participants selected from Washtenaw and Wayne County homeless shelters, tent encampments, and parks, resulting in a total sample size of 72 participants. Age and demographics were not taken into consideration during sampling.

*Procedures.* The study used a non-experimental descriptive study design to observe participants after the naloxone education program occurred. Subject recruitment and data collection occurred from February 1, 2024, through April 11, 2024 (Washtenaw County) and August 9, 2024, through January 3, 2025 (Wayne County).

During the time frame, participants in each county were educated through an informal education session (conversation) on naloxone usage, opioid overdose identification, common opioids, and local legal protection for responding to an opioid overdose. Participants were allowed to ask questions and discuss their experiences and knowledge throughout the conversation.

Participants who engaged in the opioid education outreach program received a winter supply bag in compensation, containing food, water, winter weather gear, toiletries, naloxone, and a brochure with information covered during the program in plain language.

*Data Collection.* Interactions with each participant were staged by the program coordinator using the key in Figure 1, based on the conversation with each participant and observations of the

coordinator. After each day that interactions occurred, data were manually entered using Google Sheets.

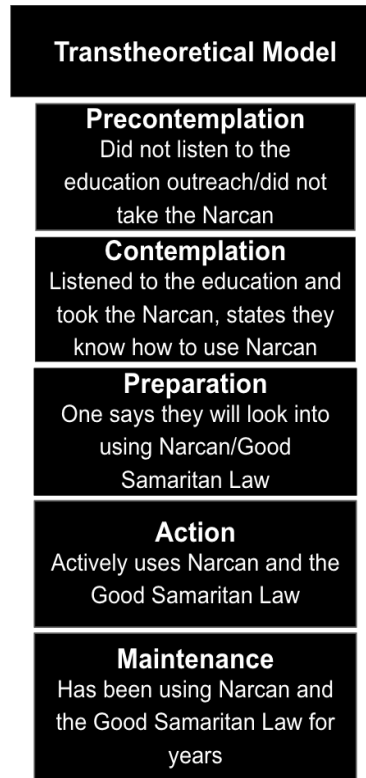


Figure 1. Key Adopted from TTM to Stage Interactions (Adopted from Prochaska & Velicer, 1997)

*Data Analysis.* After the opioid education program concluded, data were described using pie charts with percentages (Figures 2 and 3) to compare, by county, participants' willingness to adopt the program material based on the stages of TTM.

Based on the collected data, recommendations were made for future naloxone education programs that aim to address the opioid epidemic.

Figure 2. Number of Individuals Experiencing Homelessness for Washtenaw County vs. TTM Stages (n=36)

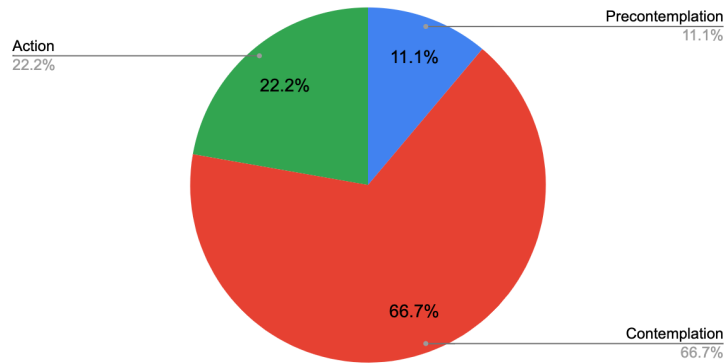


Figure 2. Number of Individuals Experiencing Homelessness for Washtenaw County vs. TTM Stages

Figure 3. Number of Individuals Experiencing Homelessness for Wayne County vs. TTM Stages (n=36)

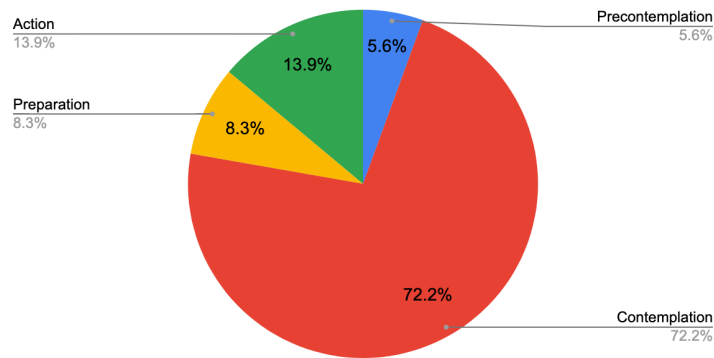


Figure 3. Number of Individuals Experiencing Homelessness for Wayne County vs. TTM Stages

**Recommendations**

Although the naloxone education program did not reach the target of 200 individuals, as initially intended, several recommendations can help implement the program for a sample size of that scope. First, there would need to be an increase in the number of staff conducting the program, allowing an expansion in the program’s reach. Second, the distance that the program covers in each county would need to be expanded, allowing for more cities to be reached. Third, to assess behavioral changes from before and after the naloxone education program, a pre-test

and post-test based on TTM would need to be implemented. Fourth, standardized material for each participant interaction needs to be created to provide structure in the material being taught. Fifth, a set time for each participant interaction needs to be established, which would allow for greater reach in each county, as it would allow time for more interactions. Finally, when educating individuals experiencing homelessness, it is essential to use a conversational approach. The education taught should be culturally sensitive, but presented using plain language, ensuring that individuals can understand the material. By engaging the individual in this conversational method, education can be provided in a holistic approach that develops a relationship between the educator and the individual, increasing the likelihood of the education being understood and adopted, as misconceptions can be addressed. Adopting an educational approach based on conversation fosters a relationship between the educator and the individual being educated, encouraging equality and rapport.

### **Reflection**

From this experience, I developed a better understanding of adaptability. When conducting the program in Washtenaw County, I found that I was able to have longer interaction times due to the environment the interactions were occurring in; however, when implementing the program in Wayne County, the environments I was interacting with each client in were not always conducive to more prolonged interactions. I had to be able to adapt and shorten the program material to fit the needs of the individuals in each county. Additionally, while in Washtenaw County, I was in environments where extended time could be spent on developing rapport with the participants; however, in Wayne County, often the participants I met with one week were not in the exact location the following week, which did not allow ease with rapport building. Therefore, in Wayne County, instead of being able to continue building rapport with the

participants, I began volunteering at shelters where I could continue to build rapport with individuals experiencing homelessness.

### **Acknowledgements**

I want to thank Dr. Jeffrey Schulz, Dr. John Sonnega, and Dr. Joan Cowdery for their support. I also thank Eastern Michigan University's College of Health and Human Services Dean's Office for funding this research.

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