

A Community-Based CPR and Harm Reduction Initiative in a Faith-Based Setting

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Executive Summary

- Providing classes in a trusted space, such as a church, can increase access to emergency training, thus meeting the needs of Healthy People 2030 goals.
- Class participants experienced immediate improvement in their willingness to help, overdose recognition, confidence in using AEDs, and confidence in Naloxone administration, representing high-impact, life-saving skills.
- 91% of participants reported improved confidence in responding to emergencies and would recommend the training.
- Statistically significant improvements were found ($p < .001$) with a large effect size (Cohen's $d \approx 0.95$).
- Largest gains observed in naloxone administration, overdose recognition, and AED use after the intervention.
- Participants shifted from neutral/disagree to agree/strongly agree across all domains.

Background and Purpose

Health emergencies, including cardiac arrest, opioid overdoses, and anaphylactic reactions, can strike at any time and affect anyone. Bystanders are often the first to arrive at these events, yet many lack the knowledge, skills, and confidence to respond effectively (Alexander et al., 2019; American Heart Association [AHA], 2023). According to the AHA (2023), every minute without high-quality CPR decreases a person's survival chances by 10%. Despite advancements in medical care, including the availability of naloxone and Automated External Defibrillators (AEDs), gaps in community preparedness and access remain contributing to preventable mortality and morbidity (Garcia et al., 2022). Utilizing trusted community settings,

such as faith-based organizations, to provide nurse-led training in CPR, AED usage, naloxone administration, and epinephrine delivery presents a scalable solution to enhance emergency preparedness, improve bystander response, and ultimately save lives (Derose & Rodriguez, 2020; Sanusi et al., 2023; Sobers et al., 2025; Fisher et al., 2024). The purpose of this project is to implement and evaluate a nurse-led harm reduction training in a faith-based setting focused on hands-only CPR, AED use, naloxone administration, and epinephrine autoinjector use. This initiative focused on engaging community members in a faith-based environment, aiming to inform scalable nurse-led interventions that can enhance bystander reactions, reduce health disparities, and improve emergency preparedness at the population level.

Methodology

This quality improvement project used a pre–post quasi-experimental design and was conducted in partnership with a faith-based organization in Northwest North Carolina, known for its strong community outreach programs. A total of 26 participants enrolled, with 23 completing both pre- and post-surveys (88.5% completion rate). Training sessions were conducted over 12 weeks and included hands-on practice, simulation-based learning, and scenario-based demonstrations. Participants practiced recognizing and responding to cardiac arrest, opioid overdose, and anaphylaxis while receiving real-time instructor feedback using feedback-enabled manikins.

Each class session was between 90 and 180 minutes. Participants registered for the class via a QR code, a registration form, or by attending in person. The classes were kept small to ensure the quality of training and opportunities for questions. The training was promoted through church announcements, community flyers, social media, the organization’s website, and signage displayed outside the church and at each entrance.

Data Collection

Attendees completed pre- and post-class surveys using a Likert scale to measure knowledge, confidence, and preparedness. The implementation was guided by the RE-AIM framework, and skill development was informed by Miller's Pyramid of Clinical Competence.

Data Analysis

Descriptive statistics were used to review all project data. This approach allowed for a comprehensive summary of participant responses and outcomes, providing an overall understanding of the effectiveness of the harm reduction training. By analyzing the data in this manner, trends and patterns were identified that reflected changes in confidence, readiness, and skill proficiency among attendees before and after the intervention.

Participant Surveys. The pre- and post-class surveys were collected and reviewed every 2-3 weeks after training sessions to inform implementation. The feedback from these surveys, along with comments during and after the training sessions, was essential for refining the course. Based on participants' suggestions and observations, adjustments were made to improve the training experience and better meet attendees' needs and expectations.

Results

Significant improvements were observed across all domains. The composite readiness score increased from 2.72 to 4.27 ($\Delta = 1.55$) in the pre versus post class surveys. The greatest improvements were observed in naloxone administration (+2.23), overdose recognition (+1.95), and AED use (+1.95). Statistical testing confirmed significance ($p < .001$) with a large effect size (Cohen's $d \approx 0.95$). Participants also demonstrated increased willingness to act in real-world emergencies.

Strengths

- There was significant support from project site liaisons and facilitators.
- The in-class discussion sessions provided valuable feedback and ideas for continuing the program in collaboration with the health ministry and church leadership.
- Training resulted in meaningful short-term improvements in participants' reported readiness and confidence.
- The project aligns with the Healthy People 2030 and the Institute for Healthcare Improvement's (IHI) Quadruple Aim.
- Class participants received training on feedback manikins per American Heart Association guidelines, allowing for real-time skill improvement and boosting their confidence.
- Implemented in a trusted community setting, improving reach and engagement.
- Achieved high completion and satisfaction rates, supporting feasibility.
- Demonstrated statistically meaningful improvements.
- Delivered a comprehensive, harm-reduction–focused curriculum.
- Shows strong potential for scalability and real-world impact.

Limitations

- Pre–post responses matched by timestamps may introduce pairing errors.
- Missing item-level data led to varied sample sizes, warranting cautious interpretation.
- Outcomes relied on self-reported measures rather than objective skill assessments.
- No standardized competency evaluation was done post-training; these observations were to enhance instruction rather than provide a quantitative assessment.

- Results reflect only immediate effects, with no assessment of long-term retention or application.
- The single-group design limits causal inference and does not address response bias.
- Small, single-site sample (mainly older adults in a faith-based setting) restricts generalizability.
- No long-term follow-up on skill retention or real-world outcomes.

Implications

This project illustrates that nurse-led, community-based emergency preparedness training enhances knowledge, confidence, and readiness to respond in crises such as cardiac arrests, opioid overdoses, and anaphylaxis. From a healthcare perspective, improving bystander response can reduce delays in care, lower morbidity and mortality, and alleviate pressure on emergency services. By empowering individuals, families, friends, and neighbors to act effectively, particularly in home and public settings, this initiative also promotes health equity by addressing disparities in access to training. Providing education in trusted faith-based environments helps eliminate barriers and stigma.

Conclusion

The training equips community members with lifesaving skills that can directly improve survival outcomes and strengthen community resilience. The project's findings align with national and local public health priorities, including those outlined in Healthy People 2030, Healthy NC 2030, and the IHI's Quadruple Aim. Expanding this model is recommended to improve public health outcomes and emergency preparedness on a larger scale.

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