

Stroke Ready Intervention: Community Engagement to Decrease Prehospital Delay

The following is a synopsis of “Stroke Ready Intervention: Community Engagement to Decrease Prehospital Delay,” published in May 2016 in the *Journal of the American Heart Association*.



What is already known on this topic?

An acute stroke is the sudden loss of blood in the brain due to a pulmonary obstruction or sudden bleeding in the brain. A stroke can result in a number of problems, such as paralysis on the left side of the body or memory loss, depending on which part of the brain affected. Treatments for acute stroke have been shown to reduce post-stroke disability and are cost-effective. However, such treatments reach less than 5% of stroke patients in the United States. This failure to receive time-sensitive treatment is largely due to prehospital delays, which may be caused by patients' and witnesses' inability to recognize stroke and immediately call emergency medical services. Stroke preparedness interventions may be particularly worthwhile for African Americans, who experience greater stroke incidence and prehospital delays, and are less likely to receive treatment than non-Hispanic whites.

What is added by this article?

The authors of this study used community-based participatory research (CBPR), a form of community engagement in which researchers and community members collaborate throughout the research process to improve the health of a specific community. In 2009, the researchers

worked with members of Bridges in the Future, a faith-based organization, and the University of Michigan to improve cardiovascular health and increase stroke preparedness among adults and youth in three African American churches in Flint, Michigan. The focus on African Americans drew from the lack of success stories with stroke preparedness interventions in African American populations.

Together, they developed Stroke Ready, a peer-led intervention based on the theory of planned behavior, which points to intention as the most immediate predictor of behavior and focuses on predictors of intention. These predictors include self-efficacy, the belief in one's capabilities, and perceived subjective norms, or a person's sense of how others will judge a behavior. Phase 1 of Stroke Ready consisted of developing culturally sensitive materials, including a participant workbook, a peer leader manual, workshop PowerPoint slides, stroke video vignettes, and a Stroke Ready gospel music video. Phase 2 included peer leader trainings that focused on three areas: stroke preparedness, skills-based knowledge such as how to lead activities, and research implementation. Phase 3 involved recruitment and the delivery of the Stroke Ready program, which consisted of two workshops. The first included efforts to increase participants' stroke recognition and understanding

of the importance of calling 911. The second concentrated on self-efficacy and subjective norms in an attempt to change behavior during an acute stroke.

Using a time-series analysis, the researchers examined measures at baseline, immediately following the intervention, and 1 month later in a delayed post-test. The researchers measured stroke preparedness by participants' response to videos portraying acute stroke, non-acute stroke, and non-stroke vignettes. Participants selected a diagnosis and their intended response after each video. Results indicated increased stroke recognition between baseline and the delayed post-test. Appropriate stroke response improved in the immediate and delayed post-tests. Self-efficacy for stroke recognition improved from baseline to immediately following the program and was sustained 1 month later. Self-efficacy for stroke response also improved at immediate post-test. Attitudes toward stroke and family norms did not change. Community subjective norms did not change in the immediate post-test, but decreased in the 1-month post-test.

What are the implications of these findings?

The improvement in stroke preparedness and self-efficacy indicates that the Stroke Ready program is a possible route for improving proper stroke response in the African American community. The minimal religious content was considered acceptable by the participants, which could allow for further dissemination to other relevant communities. The study authors also believe that the CBPR approach helped significantly with recruitment because the churches' involvement encouraged greater acceptance of the program. The authors also indicated the need for future research on clinical outcomes as well as large-scale interventions to measure improvement in acute stroke treatment rates.

Resources

American Heart Association/American Stroke Association
www.strokeassociation.org/STROKEORG

Centers for Disease Control and Prevention
Stroke Resources
www.cdc.gov/stroke

Community-Campus Partnerships for Health
Community-Based Participatory Research
<https://ccph.memberclicks.net/participatory-research>

Citation

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.