



Implementing a Health and Safety Intervention Program through Community Environmental Health Workers

Executive Summary

This case study summarizes a presentation at the National Symposium on Model Performance in Fire Prevention in May 2012.

Sonora Environmental Research Institute, Inc. (SERI), with assistance from a Fire Prevention and Safety FEMA grant, worked with the Department of Housing and Urban Development (HUD) in a program implemented by SERI *promotoras* (community environmental health workers). Our current project addresses the lack of fire alarms and knowledge of fire prevention and safety in the target area through visiting homes, conducting assessments and installing over 5,000 alarms in southern Arizona.

Overview

SERI is a community-based, non-profit organization that has been extensively involved with environmental, health and safety issues in southern Arizona for over sixteen years. We partner with neighborhoods that are under economic, environmental and health stress and help determine the risks to which the residents are exposed and actions to be taken to reduce those risks. We fulfill this mission by conducting risk assessments and healthy homes interventions, providing technical assistance and training, conducting community participatory research and partnering with organizations to offer educational opportunities. We take a comprehensive approach to addressing multiple environmental, health and safety issues in the home by focusing on hazards in a coordinated fashion, rather than addressing a single hazard at a time and have adopted the healthy homes concept as our risk reduction strategy. Our FP&S grant funded fire prevention program works in conjunction with our Department of Housing and Urban Development (HUD) healthy homes production grant, where we use the HUD Healthy Homes Rating System (HHRS) to assess twenty-nine hazards including fire.

Formative Evaluation (qualitative or quantitative risk assessment)

This vulnerability of the target population was determined by an in-house review of statistics collected during our past home visit and smoke alarm installation programs. During the home visits we completed surveys that recorded the number of working and nonworking smoke alarms in the home prior to the visits and the number installed during the visit. Household demographics were collected as well as data on the families' knowledge and use of emergency escape plans. We previously installed 2,500 smoke alarms in 555 homes in the target area and only 22% had a working smoke alarm. (Only 28% had any alarm at all.) Only 21% of the families with children under the age five, only 25% of the families with members over 65 and 33% of the families with members who were disabled had a working smoke alarm. The percentage was even

lower for families with smokers, only 15%. Only 4 families of the 555 had the recommended number of alarms; most families had only one, nonworking or working. Only 3% of families had a fire escape plan and most had not practiced the plan in the past year. Our statistics clearly showed the great need for continued and expanded fire safety interventions.

Process Evaluation (analysis of the program's development and early implementation)

The target area is four ZIP codes in southern metropolitan Tucson, Arizona, with a population of approximately 180,000. This area has a variety of socio-economic and environmental risk factors including high poverty rates, high concentration of minority (Hispanic) families, high concentration of sensitive (i.e., high risk) populations (including children and elderly), and a large number of the population lacking high school diplomas.

The oldest and most crowded housing units in the County are located in the target area. Not only are the families in the target area more at risk than residents in the metropolitan area in general, they also have fewer resources and opportunities to reduce that risk.

The key measurable goals were to:

- Install a minimum of 5,100 smoke alarms in the target area with a minimum of 75 of the alarms being for deaf/hard of hearing individuals
- Develop a standard smoke alarm installation/maintenance and fire safety segment in Spanish to be included in SERI's community health worker training course that is required of all staff and volunteers before conducting home visits
- Train at least 10 new SERI staff or volunteers with the new segment
- Develop a new bilingual home inspection checklist that includes fire prevention and safety and inspect a minimum of 1,200 homes
- Conduct a minimum of 25 community outreach and educational events

We have expanded our existing program to include healthy homes principles and have demonstrated that trained community workers can effectively and efficiently implement fire prevention and safety programs. We are building healthy homes community capacity that promotes long-term sustainability through mainstreaming the healthy homes approach, developing a trained workforce, generating community support and ownership and leveraging community resources to continue the program after grant funding has ended.

Impact Evaluation (identification of measurable changes that are cognitive gains or behavior changes that reduced risk)

The program impact is significant as demonstrated by the results below:

Only 13% of the homes visited had a working smoke alarm, while 21% had nonworking alarms. Only 1% of families had a fire escape plan and most had not practiced the plan in the past year. All homes received the recommended number of alarms during the home visit.

Additional healthy homes interventions were completed in the 750 homes assessed with the HHRS including interventions against falls, excess heat, electrical hazards, mold and moisture, food safety, entry by intruders, structural collapse and carbon monoxide (CO). 120 grab bars were installed in homes with elderly or disabled residents, and over 800 CO alarms were installed. Only 1.3% of the homes in need of CO alarms

had a working or nonworking alarm. Sixty-four of the homes received construction interventions such as replacing or repairing evaporative coolers, roofs, cabinets and/or leaking plumbing.

Outcome Evaluation (longer term documentation that supports reduction of injury, death or economic losses)

The project has substantial potential for long-term benefits. The outreach campaign focuses not only on smoke alarm installation, but also on long-term community risk reduction by changing perceptions and behavior. The new training course for staff and volunteers elevated their expertise and understanding of fire prevention and safety and increased their job skills. The educational events for community members increase their understanding as well and assist them in making safety improvement decisions for their families. In addition the Community Advisory Board as an active board with more than 30 participating organizations and individuals support local fire prevention and safety infrastructure through education, collaboration and fundraising.

Recommendations for Others

This project has demonstrated that community members can be effective in conducting smoke alarm installation programs. The key element to success is community members who are respected, well-trained, and devoted to their

CATEGORY	GOAL	ACTUAL (4/18/12)
Homes inspected	1,200	1,016
Alarms installed	5,100	4,640
Alarms deaf/hard of hearing	75	15
Staff/volunteers trained	10	31
Community Outreach/Education	25	44

community's environmental health and safety. Many of the women participating in the *promotora* program had never been involved in community activities primarily because of a lack of knowledge of the system, fear of the unknown and/or lack of English skills. Through the project the women moved from students, to interns, to volunteer *promotoras*, to staff, and to community leaders. For many participants and their families, this is a life changing experience. Without this type of community infrastructure development, community members often do not participate in the decision-making process. Adding to the success of the project is SERI's active Community Advisory Board, which includes the key stakeholders in the target area. With the assistance of the Advisory Board, the project mobilizes local resources and utilizes voluntary programs to carry out risk reduction activities. It creates a positive environment that encourages all members of the community to join a collaborative partnership to promote community wellness.

For More Information

Contact: Ann Marie Wolf, Sonora Environmental Research Institute, Inc. (SERI), 3202 E. Grant Rd., Tucson, AZ 85716, 520-321-9488, aawolf@seriaz.org.

To see an expanded version of this case study that was presented at the 2012 National Symposium on Model Performance in Fire Prevention hosted by Vision 2020, click <http://strategicfire.org/page.cfm/go/2012-Model-Performance>.

