



Presentation Title: MS Smoke Alarm Installation Program

Presented by: Tammy L. Peavy

I. Formative Evaluation – Planning

Mississippi (MS) has long had one of the highest fire death rates in the nation. As a result, the MS State Fire Marshal's Office (SFMO) created the Fire Safety Education Division (FSED) in 2004. This division is tasked with developing and implementing programs based on national standards to reduce the fire death rate. One fire safety educator was hired in 2007 with an additional employee in 2010.

Since the hiring of the first employee, the FSED has been tracking fire death data. This data showed that 51% of fire deaths had no smoke alarm in their home at the time of the fire. An additional 16% had smoke alarms that were not working at the time of the fire.

II. Process Evaluation – Implementation

The SFMO applied for and received a 2007 Fire Prevention and Safety Grant (FP&S). Our goal was to install working sealed, long-life battery smoke alarms in the homes of high risk residents. The high risk groups were chosen based on national statistics that tell us the young, old, low-income, and disabled are at highest risk of dying in a fire. The award of this grant allowed us to purchase 32,800 sealed, long-life battery, ionization smoke alarms and educational brochures. Additionally, we provided a \$10 per house fuel stipend to volunteer installers. We chose to only install smoke alarms on each level and outside the sleeping areas to reach the maximum number of homes. Installers educated residents on proper smoke alarm testing and maintenance, home escape planning, and cooking fire safety. Additionally residents were given brochures to remind them of this information as well as a fire safety check list. We provided training to the county fire coordinators who were to train the firefighters within their counties. This training included installation of the smoke alarms, education of the residents, and completion of the data collection forms.

We applied for a 2008 FP&S grant that was denied. We feel this was largely due to a lack of data from the first year of the program since the application period opened shortly after installations began.

We applied for and received a 2009 FP&S grant to continue the program. An additional 55,566 sealed, long-life battery smoke alarms were purchased and continued to provide the fuel stipend. We trained the firefighters regionally rather than attempting the train-the-trainer approach used in the first year. With fewer than expected requests for installation, we asked installers to put smoke alarms inside the sleeping rooms as well as in the previously required locations. There were not as many installations as we had anticipated in the grant application. We submitted a grant amendment to purchase hearing impaired alert devices with the remaining funds.

We applied for and received a 2010 FP&S grant to purchase hearing impaired alert devices. We purchased approximately 3,100 bed-shaker alarms and 1,000 strobe alarms. We chose not to continue providing the fuel stipend to installers. We trained installers in each fire department rather than regionally.

III. Impact Evaluation – Short Term Results

To date, volunteers have installed 52,572 smoke alarms and 252 hearing impaired alert devices in 26,478 homes.

Installers found that 46% of the homes had no smoke alarm. Another 31% had at least one smoke alarm that did not work and 36% had alarms that were more than 10 years old.

We have documented 22 lives saved in seven fires. Five of those fires were fully involved home fires while the families were sleeping. The other two were elderly couples that were alerted to an unattended cooking fire in the morning hours.

IV. Outcome Evaluation – Long Term Results

We saw the lowest number of annual fire deaths in recorded history in 2012 with 62 deaths. That was followed by 65 in 2013. This is down from an average of 81 deaths over the previous five years.

Follow up calls were made in 2012 to residents who received smoke alarms in 2009 and early 2010. We spoke with residents in 992 homes and found that the smoke alarms remained in 97% of the homes with 90% of those recently tested and 97% of the residents having made a behavior change since the installation. In 96% of the homes, the family had developed a family fire escape plan; however, only 9% of those had actually practice the plan. In 7% of the homes the smoke alarm had activated primarily from smoke or steam. There was only one fire reported.

Recommendations for others:

- When applying for grant funding, be realistic about the number of installations you can perform in the performance period. Having a commitment from the installer organizations before submitting the application will help you determine this. We didn't know how many organizations would be installing and assumed they would be able to install as many alarms as could be purchased with our funding.
- Consider partners outside the fire service. We found that churches can reach a segment of the population that the fire departments could not. We have also used law enforcement agencies. Additionally, we partnered with other state agencies that were doing other projects in their client's homes to do installations while they were there.
- We found that training each fire department/organization individually was more effective training three counties at a time which was more effective than doing a train-the-trainer with the county fire coordinators.
- Consider incentives for installers such as a fuel stipend or tools. Many of the installers didn't care about the stipend, but we lost a lot of installers once we it was longer available. Many installers felt that tools should have been provided.
- Allow the fire departments/organizations to make the program their own. We provided guidelines of installation and proper document but allowed them to publicize as they felt best suited their community.
- Pay attention to supply and demand! We ran out of smoke alarms and still have fire departments begging for them.
- Set deadlines. This will give more encouragement to install the alarms right away rather than procrastinating.

Conclusions:

This has been a very rewarding project. Not only have we improved the safety of our residents, but we have fire departments going into the community that never would have done so before. Some of the fire departments are now working to start fire prevention programs in their communities where none existed. Fire departments are more aware of resources available to them within the state as well as nationally. We are also encouraging the fire departments to apply for grant funding to support the smoke alarm program locally.