Presentation Title: Temperature Limiting Technology

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I. Formative Evaluation – Planning

The analysis and focus on the targeted risk audience was pulled locally and supported by national studies and data developed by NFPA, US Fire Administration, and the CPSC as documented in the recent Cooktop Report developed by the fire and life safety section of the IAFC. Cooking is the number one cause of household fires and fire injuries. At last report they constitute: 156,300 reported cooking related fires, 44% of reported home fires, 39% of reported home fire injuries, 19% of home fire deaths (now the 2nd leading cause). In addition CPSC estimates that only 1 in 30 cooking fires are reported resulting in 4.7 million additional cooking fires annually, over 100,000 injuries & $7 billion in indirect cost. The report goes on to state that by far the leading platform for these fires is the electric coil stove. Local data identified one building where there was a significant problem with these incidents. The demographics for that building were low income and seniors. This demographic also falls in line with the national data. The data was tracked by the housing providers. Run data from the Green Bay Fire Department was also used to focus on this property

The specific target was a building serving of low income/senior multi-family residents. The program objective is to educate and motivate the housing providers by partially installing temperature limiting technology to permanently reduce kitchen fires related to the stovetop of electric coil ranges. The ultimate goal was to educate and motivate the housing authority to expand the program to ultimately include it within all their at risk housing.

II. Process Evaluation – Implementation

The program grant was originally designed to install a product best described as a small tin can of dry powder extinguishing agent that is hung above the stove and opens to extinguish a fire at a set temperature. FEMA representatives said that they would not allow this to qualify for the grant but would still like to give funds to prevent fires in the building. This was due to an incident involving an electric range at one of the tax supported buildings as a resident was badly burned due to a cooking fire. Representatives from FEMA drove from Chicago to see a demo of the temperature limiting devises put on by the Green Bay Fire Department. They approved use of the funds for the device. After looking at the building and local records it was determined to do a pilot program for the building in question. The strategy was to buy as many temperature limiting devices as remaining funds allowed (24) for a partial program and track what impact it

would have on the incidents themselves and to educate and motivate the building manager to see the value of the technology and expand the program.

The product was already extensively tested so we did no further testing on the technology itself We asked the managers of the apartment building to identify their most at-risk tenants and keep track of any fire or incidents related to cooking in their occupancies after the installation of the product for a before and after side by side comparison. The overall goal was to show a marked improvement in incident rate thus motivating the building to do a full retro-fit.

III. **Impact Evaluation – Short Term Results** Documented, two saves due to the technology. Data on building records on incidents before installation and after. $20,000 estimated savings to the housing authority. Data on related fire service runs before were an average of 2.4 responses (per year average from 2007-2012) for cooking related fires to the 154 unit building. Since the building was retrofitted in 2012, we have had one oven incident and another on the stovetop that was found during a medical call (this was the second save).

IV. **Outcome Evaluation – Long Term Results**

There are two specific measurements of long term goals. One; These reductions will be permanent because of the permanent nature of the temperature limiting control technology. Product longevity testing has the units at a less than 20% failure rate after 12 plus years. If failure does occur at that point they fail safe. Two; because of the success of the 24 unit pilot the apartment owner decided, at their own expense, to retro-fit their entire building with the temperature limiting control product. This will provide solid long term data to continue to expand the use of this technology in the City of Green Bay.

Recommendations for others:

Use the existing data and case studies to approach your low income housing providers and city decision makers with this technology. Show both the life safety and economic advantages to this solution. Identify specific properties that are having issues with kitchen fires. Set up a partnership between the fire service, local housing providers, and decision makers to develop a plan or program that will best provide and utilize this technology.

Conclusions: Temperature limiting technology as it relates to stovetop fires works without a doubt. It has worked in our community and it can work in yours.