Model Performance in Fire Prevention

SYMPOSIUM 2016

To Reduce/Eliminate Cooking Fires

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GOALS AND OBJECTIVES
Overall Goal/Vision

• To reduce/eliminate cooking fires.
• Target the highest risk occupancies in the jurisdiction.
• Create measurable loss reduction.
• Solidify a prevention partnership with affordable housing.
• Develop a template for a sustainable replicable process for continued reduction of cooking fires.
Program Goal

Goal:

• To reduce eliminate cooking fires in the target property.

• To change behaviors and educate residents on both safe cooking & home fire safety practices.

Program Solution:

• Incorporate **Temperature Limiting Control** technology on all stovetops to help prevent auto ignition.

• Education for all staff and residents.
FORMATIVE EVALUATION
The Problem

- 2000 – XXXX Sandusky Fire responded to 400 + kitchen fires.
- 48 were unattended cooking fires at Erie Metropolitan Housing Authority (EMHA)
  - 134 unit sprinkled 10-story high rise
  - Low income families, seniors, and people with disabilities
- In the five years prior to the program - 18 cooking related incidents:
  - 14 caused the sprinkler system to deploy
  - 4 burnt food events
  - $200,000 loss
The Process

• Risk assessment
  – Identified highest risk property
  – Set bench marks for the program

• Researched solutions to mitigate hazard

• Identified a technology solution that was preventative vs. reactive

• Developed educational component to support technology solution.
PROCESS EVALUATION
The Process

• Target Property:
  – Started in October 2012
  – 134 housing units
  – Education to all staff and residents on stoves
  – Safety education to all residents

• Additional Installations:
  – Extended with Red Cross grant matched by the EMHA.
  – all multi family units (a total of 239 units).
    • 29 seniors units
    • 76 single family units (Dec 2012).

• 3-year post impact/outcome analysis.
  – Outcome Evaluation limited to 134 unit target property.
Impact of Program on Risk

Target Property:

- 100% installation in 134 target property housing units.
- 100% staff & residents trained on care and use of stoves.
- 100% residents received additional cooking & fire safety training
- Documented results in incidents of fire and burned food.

Additional installations outside of test program (239 in total):

- 29 seniors units
- 76 single family (Dec 2012)
  (Not included in Outcome Evaluation)
<table>
<thead>
<tr>
<th>Target Property Results (134 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 18 cooking fires</td>
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<tr>
<td>• 4 burnt food events</td>
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<tr>
<td>• 14 sprinkler activations</td>
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<tr>
<td>• $200K in losses</td>
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✓ Cost of test property program approximately $30K.
✓ Significant return on investment in addition to fire safety.
Fires That Never Happened (MC)

• 0 cooking fires in all 239 housing units

• EMHA residents are
  – Happy with the technology,
  – Better educated, and
  – Saving $ on electricity and water.

• The elimination of preventable fire calls allows our department to serve in other capacities that have been neglected for years.
RECOMMENDATIONS
If you have a cooking fire problem

• Promote engineered solutions for cooking ranges that help prevent the fire before it starts.

• Focus on Multi-family dwellings specifically low income & seniors.

• Be aware of and take advantage of new UL standards coming that pertain to auto-ignition control for electric coil ranges.

• Work with your City, County, and housing providers to show the value added in terms of actual dollars savings by preventing these fires before they start as an added incentive.

• Emphasis on benefits to tenant and firefighter safety by virtually eliminating these fires in your most at-risk occupancies.
Resources

• Cooking Fire Fact sheet
• Safe-T-element product sheet
• Smart Burner product sheet
• Educational materials
• All items can be obtained from https://www.pioneeringtech.com/