Model Performance in Fire Prevention

Success Starts in the Home
Building a Strong Home Safety Visit Campaign to Address the Needs of Your Community

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Gwinnett County Department of Fire & Emergency Services
GOALS AND OBJECTIVES
Our vision...

Build a Home Safety Visit Program (HSVP) to address the fire, life safety and preventable injury needs of a growing, diverse community...

• Work from a position of strength.
• Uncover the areas where we need help.
• Change a culture.
• Be successful.
• Make it sustainable.
Overarching goals & objectives

• Life safety of our residents
• Identify high risk homes
• Open those doors…
• Reduce the impact of fire and preventable injury on our community
• Firefighter safety
• Collect pertinent, validated data to support community risk reduction strategies
FORMATIVE EVALUATION
Understanding the scope

• Large service area
  – 437 square miles with 16 cities

• Growing Population
  – 900,000 residents
  – 15th largest school district in nation

• Diversity
  – Diversity Index of 78.2
  – 154 languages spoken
Data sources & data quality

By the numbers... An overview of the past year

<table>
<thead>
<tr>
<th>Fire Responses By Incident Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
</tr>
</tbody>
</table>

Smoke Detector & Sprinkler Performance

Data captured through NFIRS reporting 133 Responses

<table>
<thead>
<tr>
<th>Data captured through NFIRS reporting 133 Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb (132)</td>
</tr>
<tr>
<td>Smoke alarm(s) present</td>
</tr>
<tr>
<td>Alarm(s) activated</td>
</tr>
<tr>
<td>Alarm(s) alerted occupants</td>
</tr>
<tr>
<td>Alarm failure(s)</td>
</tr>
<tr>
<td>Fire to small to activate</td>
</tr>
<tr>
<td>Sprinkler systems present</td>
</tr>
<tr>
<td>Sprinkler systems operated</td>
</tr>
<tr>
<td>NH - Not Home</td>
</tr>
</tbody>
</table>

Origin & Cause Highlights

Data captured through NFIRS reporting 86 Responses

<table>
<thead>
<tr>
<th>Oct</th>
<th>Sep</th>
<th>Aug</th>
<th>July</th>
<th>June</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>106</td>
<td>77</td>
<td>100</td>
<td>99</td>
<td>92</td>
<td>119</td>
</tr>
</tbody>
</table>

- Kitchen/cocking fires: 27, 22, 10, 9, 31, 25
- Heating/HVAC: 4, 4, 5, 8, 8, 10
- Electrical: 9, 6, 10, 9, 8, 14
- Dryer/Laundry: 2, 1, 4, 3, 7, 2
- Grass/Brush: 9, 1, 7, 9, 3, 9
- Smoking related: 2, 1, 2, 5, 1, 4
- Lightning/Storm: 0, 6, 10, 4, 4, 2
- Child Involved/Intox: 0, 0, 1, 1, 1, 0
- Incendiary/Suspicious (exclusive of 235): 3, 2, 2, 3, 3, 2

Some detail on data quality

Represents 18% of all fires this month

<table>
<thead>
<tr>
<th>ACTUAL INCIDENT FOUND</th>
<th>ACTUAL FIND AT INCIDENT</th>
<th>SMOKE DETECTOR PRESENT</th>
<th>SMOKE DETECTOR ACTIVATED</th>
<th>SMOKE DETECTOR ALERTED OCCUPANTS</th>
<th>SPRINKLER PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Clothes Dryer</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>None</td>
</tr>
<tr>
<td>111</td>
<td>Fire from Oven</td>
<td>Y</td>
<td>F</td>
<td>F</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Food on Stove Set Off</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>None</td>
</tr>
<tr>
<td>111</td>
<td>Sprinklers In Kitchen</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Fire on Stove</td>
<td>Y</td>
<td>Too Small</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Stove top fire</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Fire in Oven</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Fire in Kitchen</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>11 Year Old Cooking</td>
<td>Y</td>
<td>Too Small</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Pumpkin Seeds</td>
<td>Y</td>
<td>Too Small</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>111</td>
<td>Exhaust fan in Bathroom</td>
<td>Y</td>
<td>Too Small</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
Understanding the trends

Phase II

Community Fire Analysis

Goals & Objectives
- What we have learned...
- Disconnects exist between critical need data and responsible authority.
- Develop training opportunities to clearly communicate the need for increased data quality.
- Support field personnel through outreach.
- Look even deeper at GIS layers and how data from other locations & entities can assist in developing a clearer vision of the big picture.

Company Officer Response Forms

Highlights

Community Fire Analysis

Observations / Trends / Anomalies
- Our baseline continues to grow as we look at 16 months of data. It is impressive stabilization in the data set for responses in such a short period of time.
- Smoke alarms and performance. This months data continues to reinforce the importance of operable smoke alarms.
- Positives! Baseline data is very consistent, data quality for fire incidents is showing improvement but needs continued focus.

MODEL PERFORMANCE IN FIRE PREVENTION
PROCESS EVALUATION
Tools and Deployment

A variety of tools were designed, tested and deployed by the agency

- Data collection forms
- Database tools
- Signage & marketing material in a variety of languages
Education & training

Paramount to developing and delivering a consistent message

- Presentations
- Videos
- Incident Action Plans
Building your teams & scheduling events

Find strength in the diversity of your people

- Firefighters (Field Personnel)
- Fire & Life Safety Educators
- Fire Explorers
- Citizens Fire Academy
- Community Partners

Identify team captains based on leadership and experience levels and then add volunteers to meet the needs in a particular neighborhood. Always pre-announce & pre-register!
Building Collaborative Partnerships

Your strength and sustainability is found in your partnerships!
### Our experience vs. national data

<table>
<thead>
<tr>
<th>NIST &amp; NFPA</th>
<th>Gwinnett County</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Smoke alarms are installed in 96% of homes (NIST, 2013 NFPA, 2015)</td>
<td>• 33% of homes had no smoke alarms</td>
</tr>
<tr>
<td>• Approximately 20% of homes with smoke alarms they are not operational (NIST, 2013)</td>
<td>• 39% had alarms but were not working</td>
</tr>
<tr>
<td></td>
<td>• 94% of homes surveyed received alarms</td>
</tr>
</tbody>
</table>

* We acknowledge that there are differences in the methodologies used to collect and report this information.
The impact is felt…

• Family of 7 is awakened in the middle of the night by a smoke alarm sounding.
• Devastating cooking fire ravages a home of 4 with a disabled child.
• Late night fire destroys a home.

All homes were the recipients of free alarms from HSVP, all escaped the events with no injuries reported.
So we looked closer…

- Over the course of two years we found we had visited 84 homes prior to a fire response (excluding EMS related responses).
- Eleven (11) of those responses were for actual fire events in the home that range from an outside trash fire, multiple cooking related fires and structure fires.
- Seventy-three (73) incidents are still under review.
- Gwinnett County saw it’s first year without a fire fatality in 2015.
Changing a culture
One organization, one goal

Over the past 6 months we have seen a 225% increase in program involvement by field personnel. These gains are attributed to:

• Educating all senior field leadership with a 6 NFA Leadership in CRR course
• CRR goals on Company Officer performance evaluations
• One on one meetings with newly appointed Company Officers
• Fire recruits now receive an 8 hour Intro to CRR course their first week on the job
• Career Awareness Program (CAP)
OUTCOME EVALUATION
Long Term Evaluation

- 5 – 7 year timeframe with sufficient data to understand how the education and environmental changes impact the fire and life safety of the occupants of these homes.
- Assessing the impact of time on the environmental changes.
- Drive the collection of validated data!
- Predictive risk reduction through focused data mining.
Areas of concern...

• Not planning for culture shock / culture change
• Starting with a haphazard plan
• Starting without buy in....
• Not planning deep enough

Key elements for success...

• Organizational structure and culture plays a key role in developing a successful HSVP
• Support from the top down, inclusive of your governing body.
• Communicating a clear and concise vision to all parties
• Your ability to gain and sustain momentum is ultimately based on growing collaborative partnerships
Resources for your agency

- Strategicfire.org
  - Home Safety Visit How-To Guide
  - Home Safety Visit Apps
  - Fire Safety Materials Generator

- U.S. Census Bureau
- American Red Cross
- Contact GCFES

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