Model Performance in Fire Prevention

SYMPOSIUM 2016

Smoke Alarm Installations: Windows of Opportunity and Lessons Learned from a Mostly Volunteer Combination Department

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GOALS AND OBJECTIVES
Goals

• Reduce the fire death rate to below national, state, and county levels
• Reduce the number of civilian fire-related injuries
• Maximize windows of opportunity to install smoke alarms and deliver a personalized safety message
Windows of Opportunity

• Post-fire neighborhood canvassing
• Fireplace inspection program
• Incidents
  – Smoke alarm kits carried on every apparatus
Risk Assessment

• Sources
  – NFIRS reports
  – Non-emergency activity reports
  – Census data
  – Real estate assessment values
Risk Assessment

• 4 fire fatalities in the 10 years prior to implementing the smoke alarm program
  – No working smoke alarms in the fatal fires
• 30% of homes had no working smoke alarms
• 1/3 of the “working” smoke alarms were greater than 10 years old
Target Areas

• In 2 of the 5 municipal wards, 36% of the homes had no working smoke alarms
  – More densely populated
  – Lower income
  – Lower housing values
  – Older housing stock
  – Greater frequency of structure fires
  – Greater number of fire-related injuries
  – One had the highest % of people age 65 years and older
  – Other had the highest % of children under 5 years old
PROCESS EVALUATION
Implementation

• 1,650 smoke alarm installs in 1,270 homes
• Annual community outreach training
  – Promote standard messaging
• Door to door canvassing
  – 27% more people at home during weekday evenings compared to weekends
  – 11% refuse during post-fire canvassing compared to 19% in general
Volunteer Participation

• Over 50% of the volunteer firefighters participated in canvassing
• Four times as many participated in post-fire vs. general canvassing
Volunteer Participation

• Declined in the second year
  – 33% decrease in the number of volunteer firefighters participating
  – 27% decrease in the number of canvassing events worked per volunteer firefighter

• Rebounding during the third year
Working Smoke Alarms

• Community wide
  – Percentage of homes with a working smoke alarm increased from 70% to 81%

• Targeted wards
  – Percentage of homes with a working smoke alarm increased from 64% to 84%
OUTCOME EVALUATION
Results

• 50% reduction in fire-related injuries
• 1 Structure Fire mitigated to the object of origin
• 2 Carbon Monoxide saves
• Great public relations
Recommendations
Lessons Learned

• Install smoke alarms at all recommended locations
  – Only 34% of homes have working smoke alarms on all levels
  – Only 8% of homes have working smoke alarms in all bedrooms
Lessons Learned

• Must institutionalize canvassing as a department priority to sustain results and volunteer support
  – Need commitment of department leadership
  – Prevention staff can’t do it alone
  – Important to accurately collect data to justify continuation of the program and motivate personnel through demonstrated results
Lessons Learned

- Maximize windows of opportunity
  - Post-fire canvassing
  - Weekday evenings
  - Fireplace inspections
  - Smoke alarm kits on apparatus
Lessons Learned

• Deliver a succinct personalized safety message during the home visit
  – Use a positive instructional message
  – Train personnel in standard messages
Canvassing Data Collection

- Address
- Not Home? (Y or N)
- Refused Service? (Y or N)
- Working smoke alarm outside sleeping area? (Y or N)
- Is smoke alarm greater than 10 years old? (Y or N)
- Working smoke alarms on all levels? (Y or N)
- Working smoke alarms in all bedrooms? (Y or N)
- Number of smoke alarms installed?
- Number of batteries installed?