



**Presentation Title:** Focused Fire Prevention – Preparing, Implementing, and Evaluating a Statewide Community Risk Reduction Plan

**Presented by:** Greg Adams, Director of Education and Outreach

## I. Formative Evaluation – Planning

Tennessee has historically ranked high nationally in fire death rates. A 2011 University of Tennessee study found correlations between certain demographic characteristics and high rates of fire deaths. Since then, the Tennessee State Fire Marshal's Office (TSFMO) continued researching the idea that some people have a higher risk for fires than others. Sharing our analysis of local data has been key to helping fire departments understand risks in areas they protect.

Using Census data and fire data from NFIRS, the TSFMO found a high correlation among three demographic characteristics and fire risk: income, housing value, and educational attainment. The TSFMO uses a formula that assigns a fire risk score to Census block groups based on that data.

Feedback from Tennessee's annual Fire Loss Symposium revealed that many fire departments are overwhelmed and lack resources for community risk reduction. In a 2017 poll, Tennessee fire departments selected a statewide CRR plan as their highest priority for reducing fire loss. The TSFMO's goal is to provide resources, including risk assessments, that empower fire departments to implement CRR plans in their community.

## II. Process Evaluation – Implementation

In 2012, the TSFMO launched the 'Get Alarmed Tennessee' smoke alarm program that focused on high-risk communities from the University of Tennessee study. 'Get Alarmed' showed us the enthusiasm from fire departments to directly address the risk in their community, as more than 450 departments joined.

The next step was working with fire departments on targeted smoke alarm canvasses. For these events, the TSFMO meets with fire departments and creates risk maps to identify high-risk homes to visit for fire prevention education and smoke alarm installations. Since 2015, the TSFMO has assisted with more than 117 of these canvasses. Each canvass provides an opportunity to discuss community risk reduction concepts with the fire department.

The TSFMO met with stakeholders in Summer 2017 to get feedback on custom community risk assessments. Their comments improved the assessments to meet fire departments' needs better. Since the first risk assessments in the Fall of 2017, TSFMO received dozens of requests. By helping to identify and prioritize risks, the TSFMO gave fire departments the jumpstart they needed. It also provided fire departments with evidence to advocate for more CRR resources to local governments and leadership. We believe that helping implement more CRR plans in Tennessee will reduce fire loss.

### **III. Impact Evaluation – Short Term Results**

Since 2012, Tennessee fire departments have visited over 68,000 homes to provide safety education and install smoke alarms. TSFMO has consistently met its goal of installing 20,000 smoke alarms annually.

The TSFMO has delivered risk assessments to 113 fire departments. All participating departments submit a comprehensive CRR plan for their community within a year. So far, 28 fire departments have submitted CRR plans for evaluation. The TSFMO has awarded an annual Excellence in Community Risk Reduction Award since 2017. In 2019, 12 fire departments applied for the award. The TSFMO expects to have 100 plans by submitted by the end of 2020.

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

By identifying specific risks at the Census block group level (which is often even more local than the department or even station level), TSFMO has worked with fire departments to directly impact citizens through home fire safety visits and smoke alarm installations.

A recent national report dropped Tennessee from the 8th highest fire death rate to the 11th highest in the country. Between the 2006-2010 and 2011-2015 time periods, Tennessee's fire death rate fell 27% from 17.5 deaths per million to 12.8 deaths per million. In 2015, Tennessee had the fewest unintentional civilian fire deaths since TSFMO began tracking this number. Tennessee has also had about a 5% reduction in the reported number of structure fires and a 17% reduction in dollar loss in recent years.

#### **Recommendations for others:**

The importance of using local data cannot be overstated when developing a CRR plan. While national trends and the statistics of other jurisdictions can be useful for comparison, they do not provide enough insight into the risks faced by a specific population. A true risk assessment for a community helps to understand how and why a place is similar (or different) from other places. Because resources for fire departments and other public safety organizations are already stretched thin, it is vital to develop partnerships with other agencies. Assigning specific roles and duties to different partners makes executing a CRR plan easier and more realistic.

#### **Conclusions:**

State agencies can play a central role in not only promoting but implementing community risk reduction plans. State agencies can ease the burden on fire departments by providing materials, sharing best practices, and generating risk assessments using local data. Creating a statewide community risk reduction plan links fire departments and other agencies together with the common goal of reducing fire loss.