



PREVENTION ACTIVITIES IN U.S. FIRE DEPARTMENTS

Results and Recommendations
from a National Survey

Executive Summary
March 2023



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

**Johns Hopkins Center for
Injury Research & Policy**

INTRODUCTION

United States fire departments' role in fire prevention has been touted as a key strategy to reduce the overall fire burden in most major reports about the fire service. Fire prevention is an expansive topic that requires public education programming tailored to numerous populations, settings, and topics to be effective. The role of the fire department expanded well beyond the topic of fire and burn prevention decades ago under the frame of fire and life safety education (FLSE). In 2006, a survey of U.S. fire department's FLSE activities was conducted, and a 2007 report was distributed broadly to the fire service. Since that report, the concept of prevention has evolved within the fire service and the most contemporary conceptualization of it is as a key element of Community Risk Reduction (CRR). Given the continued evolution of prevention programming within the fire service and the amount of time that has transpired since the last survey, the time was ripe for an updated picture of fire departments' prevention activities. With support from FEMA's Assistance to Firefighters Grants, we surveyed U.S. fire departments to better understand their prevention priorities. Specifically, the survey addressed each department's:



METHODS

Using the 2006 survey as a starting point, we removed items that were determined by the study team to be irrelevant to current fire service prevention activities. A brief introductory statement was included to provide the survey's overall aim and working definitions for CRR and FLSE. The survey was organized into four sections:

- 1. Describing You and Your Department:** 12 questions about the respondent and the fire department, and general features of the personnel responsible for prevention activities
- 2. Assessing Your Community's Risks:** 10 items about aspects of the department's community risk assessment process, outcomes, as well as allocated resources for and barriers to CRR.
- 3. Responding to Your Community's Risks:** 15 items about prevention-oriented presentations, safety products and services, evaluation activities, policy or legislative activities, work with news media, and respondents' overall satisfaction with prevention activities.
- 4. COVID-19 and Your Fire Department:** 2 items about how the pandemic impacted their department.

Using the *2020 National Directory of Fire Chiefs and EMS Administrators*, we emailed a link to the survey to all 17,964 fire departments with a current email address. Reminders were sent to non-respondents and we offered text to various fire service newsletters to promote the survey broadly. Because the survey was implemented during the COVID-19 pandemic, respondents were invited to report on prevention and risk reduction activities in 2019 (pre-pandemic) and 2020 (during pandemic). Data were collected between March 12—May 28, 2021. Responses were weighted to be nationally representative according to fire department type (career, volunteer, combination), population size served ($\leq 10,000$, $>10,000$), and region of the country (Northeast, Midwest, Southeast, South, West), so that results from the 913 departments that responded to the survey are representative of the total population of U.S. fire departments. Presented in this report are the national estimates based on these weighting procedures .

RESULTS

Describing You and Your Department.



Survey respondents were experienced professionals, with 62.4% serving in the Fire Service between 21-40 years and another 19.3% who reported serving “more than 40 years.” Nationally, we estimate that 31.3% of fire departments were not engaged in any prevention activities and 68.7% were engaged in some type of prevention programming over the two-year reporting period (18.9% in 2019 only, 1.2% in 2020 only, and 48.7% in both years). Among those reporting prevention activities during the two-year time period, less than one-half rated any of them as “critical” or “important”: FLSE activities (43.4%), prevention-related EMS activities (33.6%), and CRR activities” (44.2%). Few fire departments (22.6%) had personnel assigned exclusively to FLSE or CRR (either uniformed or non-uniformed). Most common was the use of uniformed personnel with both FLSE/CRR and other responsibilities (44.5%). Most (58.4%) fire departments were either “very” or “somewhat” familiar with NFPA 1035, the minimum competencies for prevention personnel within the fire service; 5.6% had “never heard of it.”

Assessing Your Community’s Risks.



Nationally, 27.8% of fire departments had either completed or started a Community Risk Assessment (CRA) at the time of the survey. CRR activities were most often coordinated by Fire Chiefs (35.0%), Acting or Battalion Chiefs (13.3%), Captains (4.9%) and FLSE educators (4.9%). The two most common resources used to develop CRR plans are NFPA Resource Documents and Tools (30.0%) and USFA/FEMA National Fire Academy Courses or Materials (18.3%). More than half (50.6%) of fire departments did not have a CRR plan. Lack of time (58.6%), staffing challenges (51.9%), and lack of money (44.9%) were the most frequently reported barriers to CRR.

We asked respondents to identify and rank the top five risks for their community in 2019. Most (76.9%) respondents identified house fires as among their top five risks; 31.3% identified house fires as their community’s top risk. The same four topics emerged in both categories: house fires, wildfires, older adult falls, and cardiovascular disease/strokes.

Responding to Your Community’s Risks.



An estimated 57.0% of departments nationally interacted with elementary school students, 46.4% with children under age 5, 32.1% with older adults, 28.4% with middle/junior high school students, 25% with adults in workplace settings, 21.5% with high school students, 12.2% with people with disabilities, and 8.2% with people living in poverty. From a list of 13 “named programs,” more than half (53%) of all departments nationally offered fire prevention week/month events and 27.5% participated in Stop the Bleed activities. The remaining eleven programs were offered by 20% or less of departments. Despite the limited uptake of these named programs by fire departments, it is important to note the growth in evidence-based programs by fire service and other safety organizations. Learn Not to Burn and Risk Watch were the only named programs in existence when the 2006 survey was fielded. From a list of 15 topic areas, the most frequently addressed were First Aid/CPR (43.7%), fire extinguishers (40.2%), fire escape planning (36.6%), and carbon monoxide alarms (32.6%). Nationally, we estimate that 40.6% of fire departments partner with schools and teachers and that very few collaborate with public housing (6.2%) and hospital and/or burn units (4.8%). Five percent of departments reported no community partnerships. Smoke alarms were the most common safety product to be promoted by fire departments nationally (long-life battery alarms distributed, 24.6%) and installed (31.0%). Finally, 62.7% of fire departments did not evaluate their prevention activities; among the minority (37.3%) that did, most used process evaluation methods.

COVID-19 and Your Fire Department.



Most fire departments reported adopting new protocols to protect their personnel during the COVID-19 pandemic, including those promoted by the CDC (72.4%) and ones they created on their own (42.1%). Most departments also reported accessing additional resources to respond to COVID-19, including funding available from their own state (31.1%), their local jurisdiction (27.5%) and from federal resources (24.7%).

Comparison of Results between 2006 and 2019 Surveys.

A substantial majority of fire departments – 86.4% – reported conducting FLSE in 2006, whereas in 2019, only 67.5% were conducting FLSE and/or CRR. Few departments used staff exclusively assigned to FLSE, although the percentage that did increased from 11.8% in 2006 to 20.3% in 2019. There was a noticeable drop off in requiring specialized training for those personnel who conduct FLSE activities between the two time periods, from 32.3% to 18.2%. The percent of fire departments that required certification for FLSE personnel was low in both surveys (17.3% and 12.4% respectively), and only 10% of fire departments in 2019 reported requiring certification for CRR personnel in 2019.

Prevention activities reported by fire departments declined between 2006 to 2019. For example, elementary school presentations declined from 80.4%

to 57.0%, fire safety week/month from 69.2% to 53.0%, Risk Watch from 7.6% to 3.7%, and youth firesetting intervention programs decreased from 20.9% to 12.1%. The percent of fire departments that reported evaluating their prevention activities decreased from 52.4% in 2006 to 37.3% in 2019.

Perceptions about prevention activities remained stagnant over the time period of our two surveys. Satisfaction with prevention activities was rated about the same in both surveys (2006 mean satisfaction 52.5 in 2006 and 54.0 in 2019). FLSE was rated as important or critical to a fire department’s mission by 40.2% of fire departments in 2006 and by 43.1% in 2019. CRR’s importance to a fire department’s mission (43.9%), asked only in 2019 survey, was rated about equally to FLSE in 2019.

Limitations and Conclusions.

Sampling differences between the 2006 and the current survey limit our ability to make direct comparisons, and we are relying on self-report. More objective and real-time reporting of fire department’s prevention programming would contribute to a clearer picture of contemporary practice. While our self-selected sample is small relative to the total number of fire departments in the U.S., our robust analytic techniques allowed us to create national estimates.

This is only the second time that fire department prevention programming has been assessed via a national survey. The data in this report demonstrate small areas of progress along with considerable stagnation. If the fire service and the communities they serve want to enjoy the full benefits from the life and property savings that are the promise of effective prevention programming, investment in prevention program is necessary. Ultimately, this report helps to bring into focus the need for a more comprehensive and timely monitoring system of both communities’ needs and fire departments’ responses to those needs.



Recommendations for Strengthening Prevention Programming Capacity with the Fire Service.

Strengthening fire department's prevention and risk reduction programming takes both individual and collective action. We offer six broad principles with some examples of recommendations emanating from each. These principles and recommendations are in no particular order; specific implementation partners or responsible agencies have not been identified. Instead, we offer these to the entire fire service community for consideration and action. (Examples of best practices and case studies can be found at [here](#).)

Principle 1. Use Data to Drive Programming Needs

- Identify prevention needs of communities served by developing capacity within the fire department or partnering with others who serve the same communities
- Apply an equity lens to help ensure that the needs of underserved communities are being considered when planning a program, service, initiative, or policy and to ensure that such programming is inclusive, and avoids bias and stigmatization
- Advocate for compulsory evaluation metrics for prevention programming (beyond simple process measures) to be reported annually

Principle 2. Use Evidence-based or Evidence-informed Programs to Respond to Community Needs

- Promote the use of evidence-based or evidence-informed programs tailored to local needs and resources (e.g., home visits)
- Couple education with installation of free safety products for those at high risk (e.g., smoke alarms, SmartBurners, grab bars) or services (e.g., practicing a fire drill during a fire department home visit, services for home modifications) to ensure the behavior change and impact
- Contribute to building the evidence for different programs by developing robust evaluations of prevention program offerings and to sharing experiences that help others replicate programs proven effective through substantive evaluation

Principle 3. Invest in Training Personnel

- Integrate prevention training into on-boarding of all new recruits and continuously reinforce the importance of prevention and risk reduction strategies with all frontline fire fighters
- Advocate for prevention training and certification for personnel commensurate with their role in prevention programming, from frontline fire fighters to personnel exclusively dedicated to prevention efforts
- Promote the importance of personnel assigned exclusively to FLSE and CRR, and push for strengthened training requirements for such personnel, including program planning and evaluation skills





Principle 4. Promote a Culture that Prioritizes Prevention

- Advocate for prevention in fire department budgets and fund prevention activities sufficiently
- Advocate widespread use of *NFPA 1300: Standard of Community Risk Assessment and Community Risk Reduction Plan Development* among US fire departments
- Educate fire service leadership about the importance and impact of prevention programming
- Create career paths for those passionate about prevention and risk reduction, including both volunteers and fire department personnel
- Advocate for the Public Information Officer to amplify and promote prevention programming needs and accomplishments
- Review fire department standards and codes to ensure that they fully support prevention

Principle 5. Strengthen Partnerships for Prevention

- Partner with community agencies and organizations whose missions also include fire prevention and Community Risk Reduction and/or who already have relationships with and access to priority populations (e.g., public health)
- Collaborate with non-traditional partners who may have access to and relationships with priority/high risk audiences (e.g., housing authority, groups serving low-income families)
- Explore relationships with other community partners who could contribute time, expertise, personnel, and funding to support and strengthen prevention programming capacity and activities

Principle 6. Support Research to Strengthen and Promote Effective Prevention Programming

- Sponsor research that explores investment in prevention and education as a proportion of the overall fire department budget
- Develop outcome measures for prevention and risk reduction programs to quantify their impacts and reward those who excel at it
- Identify fire departments doing exemplary prevention and risk reduction work and share their best practices
- Explore the association between fire codes and prevention programming (Do jurisdictions with stronger fire codes have more effective prevention programming? Can prevention programming mitigate the impact of weak fire codes?)

*Examples of best practices and case studies can be found at <https://strategicfire.org/resources/presentations/>

Support provided by Federal Emergency Management Agency's Assistance to Firefighters Grants program, grant number EMW-2019-FP-00912.

McDonald EM, Omaki E, Moloczniak A, Appy MK, Shields WC, Hrustich S, Gielen AC. *Prevention Activities in U.S. Fire Departments: Results and Recommendations from a National Survey, Executive Summary*. Baltimore (MD): Johns Hopkins Center for Injury Research and Policy, 2023.

For access to the full report, please contact Eileen McDonald at emcdona1@jhu.edu.