



Occupational Cancer in the Fire Service

Report from the January 2015 Strategy Meeting

May 2015





Introduction

At the start of the Occupational Cancer in the Fire Service Strategy Meeting, attendees introduced themselves – as is the norm at these types of gatherings. As we listened to the introductions, I was struck by the number of people who said “I am a cancer survivor.” The attendees were from a cross-section of the fire service – from small rural fire departments to metro departments, seasoned veterans and the next generation, men and women. Knowing a firefighter who has cancer has become one of the few universals in the fire service. This is a norm that cannot be acceptable.

While the IAFF and a few other national organizations have led the charge on firefighter cancer for many years, it is past time for all fire service organizations to prioritize and strategize how to collaborate to make the greatest impact on this consequential issue. Transferring the known results of scientific research to operational and systemic changes will help to protect firefighters and provide for a better quality of life while on the job and in retirement. This is no easy task and it will take leveraging a coordinated and collaborative effort to accomplish.

Everyone has a role in mapping the future of occupational cancer in the fire service, including governmental partners, national organizations, manufacturers, training institutions, trade media and local fire departments. What follows in this report is a summary of the meeting held in Washington, DC in January 2015. It highlights what emerged from that session: what we know about occupational cancer in the fire service; what we need to know; and where we might go moving forward.

From the Commissioner of the Boston Fire Department stating, “I am convinced that the one thing people can do to decrease the manifestation of cancer is to keep your mask on your face” to the president of the Firefighter Cancer Support Network stating, “We can fix this!” to the Chief Medical Officer for FDNY reminding us that “It’s never too late to reduce further exposures,” I am confident that we can join together as fire service organizations and leaders to make an even greater impact on occupational cancer in the fire service.

The National Fallen Firefighters Foundation is grateful for all the speakers and attendees who shared their knowledge and provided integral feedback on the needs of the fire service in relationship to occupational cancer. The January meeting was possible thanks to the generous support of Motorola Solutions Foundation, Scott Safety, and DHS/FEMA’s Grant Program Directorate for Assistance to Firefighters– Fire Prevention and Safety Grants.

Chief Dennis Compton
Chairman, Board of Directors
National Fallen Firefighters Foundation



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Executive Summary

Fire service leaders, physicians, government officials, and scientists met on January 14-15, 2015 in Washington, D.C. for the Occupational Cancer in the Fire Service Strategy Meeting. The meeting was coordinated by the National Fallen Firefighters Foundation (NFFF) and chaired by Chief Dennis Compton, Chair of the Board of Directors of the NFFF.

Meeting expenses for the Occupational Cancer in the Fire Service Strategy Meeting were funded by the Motorola Solutions Foundation, Scott Safety, and DHS/FEMA's Grant Program Directorate Assistance to Firefighters Grant Program – Fire Prevention and Safety Grants.

This report summarizes the meeting's objectives achieved through presentations, group discussion and breakout group discussions. The format of this report follows the stated objectives of the meeting:

1. Learn what science can tell us about cancer in firefighters.
2. Identify what we think we know, but needs further research.
3. Review what has been done, and what needs to be done.
4. Address whether or not anyone is being left behind on the issue of firefighter cancer—are there specific populations who are not being studied or have been left out of the discussion?
5. Identify what organizations and corporate entities can be counted on as partners.
6. Discuss the Zadroga Act and its implications at the national, state, and local levels.
7. Review model state presumptive laws and strategies to push legislation in every state, including implications on workers' compensation and pension systems.
8. Discuss implications on the Line-of-Duty Death criteria, including those on workers' compensation and death benefits.

Presentations were given on the findings of recent firefighter cancer research including a study of World Trade Center firefighters, the challenges of firefighter occupational exposure research, future research needs, actions that can be taken to reduce the risk of cancer, and an update on state presumptive laws and the Zadroga Act.

Attendees discussed steps that can be taken to further assess fire service occupational cancer and steps that can be taken in the future to research, prevent, document, and treat firefighter cancers. Attendees were also divided into breakout groups to discuss Objectives #4, #5, and #8 and then reported out to all attendees. The recommendations below reflect the overall discussions from the meeting.



Awareness and Prevention Recommendations

1. Provide firefighters with information on steps they can take to reduce the incidence of occupational cancer – including diet, physical conditioning, use and proper maintenance of personal protective equipment (PPE), tobacco cessation programs, and other steps.
2. Develop a single unified message on fire service priorities related to occupational cancer.
3. Provide firefighters and fire officers with a single resource on firefighter cancer, potentially modeled on the fire service-based EMS toolkit.
4. Communicate with firefighters and fire officers on every level regarding occupational cancer hazards and prevention strategies.

Research Needs

5. Include long-term chronic exposures to toxins in firefighter cancer research, including diesel exhaust, exposure to contaminated personal protective equipment (PPE), flame retardants, and other exposures.
6. Develop a means to quantify the incidence of firefighter occupational cancer – a national firefighter cancer registry with links and inputs from other fire service data sources.
7. Include under-represented firefighter populations in future research, including female firefighters, minority firefighters, volunteer firefighters, wildland firefighters, and increase geographical diversity.
8. Develop a national firefighter cancer research strategy to direct future research efforts.
9. Support funding for firefighter cancer research and the continuation of existing effective efforts such as the Zadroga Act.

Partnership Opportunities

10. Encourage and support the adoption of presumptive legislation to cover firefighters that suffer from cancer and their families.
11. Encourage the development of PPE that better protects firefighters from the hazards faced in the line of duty.
12. Work cooperatively with fire service and non-fire service organizations with an interest in the prevention and treatment of firefighter cancer including outside of the fire service such as the American Cancer Society, National Institutes of Health, insurance providers, and elected officials.

A Steering Committee on Firefighter Occupational Cancer was formed to help facilitate the prioritization and implementation of these recommendations.



Objective #1 – Learn what science can tell us about cancer in firefighters.

Cancer in Firefighters: Recent Research

Robert Daniels, Ph.D., Epidemiologist and Health Physicist with the Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH) presented “Cancer in Firefighters: Recent Research.” Dr. Daniels’ presentation included summaries of recent studies, challenges of current research, and future research needs.

Recent Studies

Dr. Daniels discussed the value of studying firefighters, three recent studies: [NIOSH Firefighter Study- Phase I \(2013\)](#), [Nordic Firefighter Study \(2014\)](#) and [Australian Firefighter Study \(2014\)](#). Dr. Daniels also provided preliminary information from the [NIOSH Firefighter Study- Phase II \(2105\)](#).

The NIOSH Firefighter Study-Phase I (2013), supported by the U.S. Fire Administration, examined the mortality and cancer incidence in career firefighters (Chicago Fire Department, Philadelphia Fire Department and San Francisco Fire Department) and compared the cancer risk to the general population. The study found “excess solid cancers” in firefighters with the following types of cancer: digestive, genitourinary (kidney, bladder, prostate), oral, respiratory, and mesothelioma.

The NIOSH Firefighter Study-Phase II (2015), also supported by the U.S. Fire Administration, estimated exposure potentials for about 30,000 career firefighters from the same three departments as the Phase I study. This study estimated exposures by defining exposure potentials by the number of fire calls, number of exposed days, and/or number of fire run-hours. Cancer risks of higher-exposed firefighters and lower-exposed firefighters were compared. One of the key findings is that the study suggests an increased occupational cancer risk for lung cancer and leukemia.

The Nordic Firefighter Study (2014) examined more than 16,000 male firefighters from five Nordic countries and reported that firefighters were at an excess risk for prostate cancer and melanoma between the ages of 30-49 and an excess risk for mesothelioma at ages 70+. These findings were similar to the NIOSH Firefighter Study-Phase I, indicating that the same conclusions are being found in different observational studies.

The Australian Firefighter Study (2014) was the first study to look at career, part-time and volunteer firefighters. The key findings included a slight overall cancer risk compared to non-firefighters. The study reported “site-specific increased risk” of prostate cancer, melanoma, male breast cancer for firefighters with more than 20 years on the job, and brain cancer in part-time female firefighters.

Challenges of Current Research

- Firefighters are uniquely exposed to a wide variety of hazards that are often not well identified or quantified.
- Cancer clusters, those emanating from a particular fire incident or work location, have been very difficult to study. Availability of records from past events is challenging but future studies may benefit from electronic fire reporting.
- The long gestation or latency period for cancers makes them especially difficult to study.



- There are currently no studies showing the impact of exposures from previous employment or secondary jobs.
- Current studies capture exposures during a fire – not before or after a fire. There is a need to identify the complete environment that firefighters are exposed to on a continuous basis including stand-by duties, truck checks, and toxins in firehouses.
- The focus of hazard assessments has been on atmospheres during active fires and during the overhaul process. Hazards also exist in the fire station and in wildland firefighting. These other chronic exposures may be as impactful or more impactful than fire scene exposures, and include exposure to diesel exhaust and the products of combustion carried on firefighter protective clothing.

Future Research Needs

- Research causality including risk factors like diet and tobacco; accounting for complete exposure history, firefighting tactics, and use of PPE.
- Identify populations at risk by assessing differences by employment type, fire type, exposure data, and other parameters (i.e. geographical diversity, age, gender, race).
- Capture complete exposures to toxins in firefighter cancer research including prior exposures, diesel exhaust exposure, contaminated PPE exposure, flame-retardants and lesser-known compounds.
- Further study routes and pathways of exposure for causes of entry (inhalation, dermal, ingestion), methods to reduce exposure (i.e. during overhaul, decontamination of PPE) and the effect of extreme environmental factors.

Cancer in the Fire Service: Policy Implications

Virginia M. Weaver, M.D, M.P.H., Associate Professor in Environmental Health Sciences and Medicine at Johns Hopkins University presented “Cancer in the Fire Service: Policy Implications.” Dr. Weaver’s presentation included challenges related to firefighter occupational exposures, the evidence that firefighters have an increased risk of certain cancers, and actions that can be taken by firefighters and fire departments to reduce risk.

Challenges Related to Firefighter Occupational Exposures

- Firefighters work in an uncontrolled atmosphere compared to most other occupations where exposure to hazards can be controlled through engineering and procedures. Firefighters are exposed to hazards at high levels for short durations, unlike most other occupations.
- There are a number of known and probable carcinogens (including benzene and formaldehyde) in the fire atmosphere during an active fire and in overhaul. Measuring and classifying exposures at fires and during overhaul is still only looking at part of the problem since exposures can take place prior to and after employment as a firefighter.
- The “Healthy Worker Effect” may impact the comparison of firefighter cancer rates with the general public. Firefighters are generally healthier than the average person.
- The relatively small population sizes for firefighter cancer studies may mask important facts. The most recent NIOSH study is much larger than previous work on firefighter



cancer in the United States. International Agency for Research on Cancer (IARC) most likely will not increase the causality of cancer to firefighters because IARC compares firefighters with occupations having significantly larger datasets.

Evidence of Increased Risk of Certain Cancers

Analyzing the results of multiple studies aids in overcoming some of the challenges listed above. Dr. Weaver examined the three recent studies that Dr. Daniels reviewed and the [LeMasters 2006 Review](#) of data from 32 studies of firefighters with 20 different cancer types. An increased cancer risk overall or in a specific age group was found in at least two studies for all cancers as a group, and specifically for the following cancers: colon, lung, melanoma, mesothelioma, multiple myeloma, non-Hodgkin's lymphoma, non-melanoma skin cancer, prostate, rectal, and stomach.

Actions to Reduce Cancer Risk

- Require PPE during the overhaul process at fires and continue to research improvements for the level of protection provided by PPE.
- Creation of a firefighter cancer registry to gather data prior to death since death certificates are not always a reliable source of data on the cause of death, employment history or contributing factors to the death.
- Increase awareness of the importance in reducing cancer risks by management of diet, exercise, weight, sunscreen use, tobacco use and overall wellness.
- Continue to work on presumptive cancer legislation to reduce the burden of proof for causation and allow for individual case evaluation.

Panel Discussion

The panel discussion consisted of four speakers providing opening remarks and then responding to attendee questions.

Josh Burnheimer, PMP is the Marketing Program Manager for Scott Safety and is also on the Board of Directors for the American Cancer Society South Atlantic Division. Mr. Burnheimer spoke to the challenges on enforcing best practices, especially in volunteer departments. For example, there are financial challenges to ensure that departments have two sets of turnout gear. He also discussed determining the needs of the wildland firefighting community since their exposure to smoke is longer than in structural firefighting. He concluded his remarks by reminding attendees that it took the American Cancer Society about 20 years for the link of cigarettes and cancer to be accepted by the general public. The fire service cannot wait another 20 years to link firefighting and cancer. Partnering with the American Cancer Society would be beneficial.

Bryan Frieders is the president of the Firefighter Cancer Support Network and a Battalion Chief for the San Gabriel (CA) Fire Department. Battalion Chief Frieders encouraged leadership to enforce standard operating procedures (like proper diesel exhaust capture or usage of SCBA during overhaul). He also noted that the fire service industry needs to stop glamorizing dirty firefighter faces in advertisements and trade media. Frieders mentioned that there are many free or low-cost initiatives for reducing cancer risk in the Firefighter Cancer Support Network's White Paper, ["Taking Action Against Cancer in the Fire Service."](#)



Virginia Weaver, M.D., M.P.H. is an Associate Professor at the Bloomberg School of Public Health at Johns Hopkins University. Dr. Weaver provided examples of primary prevention messages that should be reinforced in the fire service including; comprehensive approaches to smoking cessation programs, maintaining a proper diet and alcohol moderation, offering workplace exercise options, and openly discussing weight control issues since weight has a major impact on cardiac disease, cancer risks, and quality of life. Dr. Weaver stressed that cancer screenings are only successful if they take place during a treatable phase of the cancer. The American Cancer Society and Cancer.gov offer many good resources on screening and prevention.

Deborah Winn, Ph.D., M.S.P.H. is the Deputy Director of the Division of Cancer Control and Population Sciences for the National Cancer Institute at the National Institutes of Health (NIH). Dr. Winn warned that getting organizations and individuals to adopt interventions is difficult. NIH offers webinars to teach organizations how to implement long-lasting intervention programs and encouraged the fire service to consider partnering with NIH.

Objective #2 – Identify what we think we know, but needs further research.

Attendees discussed what the fire service can say – with confidence and supported by scientific research – is true concerning cancer in firefighters.

Awareness and Prevention Messages

- Cancer caused by smoking is accepted by the general public.
- Cancer is being acknowledged as a fire service issue.
- Failure to properly use PPE is an issue.
- We don't have a problem; we have an epidemic.
- Annual physicals and physical fitness are the keys to early detection and survival.
- We can all take action individually – beginning today.

Research

- There is scientific evidence of the toxic atmosphere that firefighters work in.
- More than 60% of occupational LODDs are due to cancer, according to the International Association of Fire Fighters (IAFF).
- We have opportunities to improve data collection (i.e. include women and minority firefighters in research, improve baseline data, select a representative sample for studies).
- There is a higher level of cancer risk for firefighters than the general public.
- Firefighters have increased exposure at PPE interfaces (wrist, neck, waist, ankles).
- Further work is needed on a cancer registration program.
- The solutions to combating the risks associated with exposure to toxins will be cultural and technical.



- Adversaries have been identified and we need data-driven strategies to counter the opposition.

Importance of Partnerships

- Presumptive laws are not a fiscal burden on government agencies and there is much more work to be done on presumptive laws.
- Further effort and outreach to other entities and organizations that can support the cause needs to be done.

Objective #3 – Review what has been done, and what needs to be done.

Attendees developed recommendations, in no order of priority, based on the presentations and discussions:

Awareness and Prevention Recommendations

1. Provide firefighters with information on steps they can take to reduce the incidence of occupational cancer – including diet, physical conditioning, use and proper maintenance of personal protective equipment (PPE), tobacco cessation programs, and other steps.
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4. Communicate with firefighters and fire officers on every level regarding occupational cancer hazards and prevention strategies.

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7. Include under-represented firefighter populations in future research, including female firefighters, minority firefighters, volunteer firefighters, wildland firefighters, and increase geographical diversity.
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12. Work cooperatively with fire service and non-fire service organizations with an interest in the prevention and treatment of firefighter cancer including outside of the fire service such as the American Cancer Society, National Institutes of Health, insurance providers, and elected officials.

Objective #4 – Address whether or not anyone is being left behind on the issue of firefighter cancer – are there specific populations who are not being studied or have been left out of the discussion?

Attendees proposed that the following populations may merit attention in future research efforts and involvement in the discussion of firefighter cancer. Researchers cautioned to select research groups carefully to ensure that the intended goals are achieved. The fire service may determine it a priority to study some of these identified groups but it should be a separate population study, rather than a dilution of a study on the general fire service population.

- Pump operators and others outside the building who are exposed to smoke
- Fire investigators – private and public
- Volunteer firefighters
- Families, especially studying birth defects in children of firefighters
- Women and minority firefighters
- Wildland firefighters
- Gender-specific cancers
- Retirees
- Current firefighters who are being treated for cancer and those who are survivors

Objective #5 – Identify what organizations and corporate entities can be counted on as partners.

Attendees discussed what organizations and corporate entities should be partners in the firefighter cancer research, prevention, treatment, and benefits effort. Most, if not all, of the major fire service organizations were represented at the meeting. Additional partnerships should be considered with the International Society of Fire Service Instructors (ISFSI), the International Association of Arson Investigators (IAAI), International Association of Women in Fire & Emergency Service (iWomen), Drexel University (specifically Dr. Jennifer Taylor and her work with firefighter culture), Risk Management Insurance Society (RMIS), American Medical Association (specifically to educate primary care physicians), National Institutes of Health, American Cancer Society and the United States Forest Service. Also, risk pool data may be available from the insurance industry to use in comparison with firefighter cancer statistics.



Objective #6 – Discuss the Zadroga Act and its implications at the national, state and local levels.

David J. Prezant, M.D., Special Advisor to the Fire Commissioner on Health Policy and Chief Medical Officer for the Fire Department City of New York presented “Early Assessment of Cancer Outcomes in FDNY Firefighters after the 9/11/01 Attacks: An Observational Cohort Study.” Dr. Prezant discussed the extensive study of FDNY firefighters who responded to the World Trade Center (WTC) on September 11, 2001. Dr. Prezant also spoke on the value of the study’s data in getting the Zadroga Act passed. His final message was that it is never too late to reduce further exposures and provided action steps to reduce cancer risk.

Review of the Study of FDNY 9/11 Firefighters

- This study found that FDNY firefighters who responded to 9/11 were up to 10% more likely to develop cancer than similar males in the U.S. population.
- N95 masks and SCBA were ineffective at the WTC due to the types of hazards and the duration of the exposure. Not only were the dust particles hazardous, but gases and vapors increased exposure to toxins. Firefighters were exposed to trapped pockets of gases as late as February 2002.
- On 9/11, less than 20% of firefighters reported wearing any kind of mask. P100 half-face masks were effective but weren’t available for about a week after 9/11.
- The aim of cancer research should not just be to prove that cancer is job-related but to gather information to prevent cancer.
- A comparison study of the FDNY 9/11 research with the NIOSH Firefighter Study-Phase I (2013) is just beginning.

Zadroga Act

- Funding for the Zadroga Act ends June 2016. The Zadroga Act was enacted in 2010 and implemented in 2011.
- The Zadroga Act covers annual medical monitoring and treatment for WTC-covered conditions.
- The Zadroga Act is an excellent example of the need to have both data-driven and non-data-driven advocacy. It is also a great example of a successful labor-management partnership.

Actions to Reduce Future Exposures

- Reduce respiratory and skin absorption by properly using and maintaining SCBA and PPE.
- Maintain overall cardiac health. If someone can maintain 12 metabolic equivalents during physical activity, then their longevity is markedly improved.
- Support smoking/tobacco cessation programs. Prior to the FDNY’s smoking cessation program, 19% of firefighters reported that they were smokers. Currently 7% report that they are smokers.
- Change clothes and shower habitually and systematically after every fire run. The importance of on-scene decontamination cannot be overlooked.



Objective #7 - Review model state presumptive laws and strategies to push legislation in every state, including implications on workers' compensation and pension systems.

“State Presumptive Laws and Implications” was presented by Patrick Morrison, Assistant to the General President for Occupation Health, Safety, and Medicine and Jim Brinkley, Director of Occupational Health and Safety for the International Association of Fire Fighters (IAFF). The presentation included information on IAFF’s primary and secondary cancer prevention strategies, strategies used by opponents of presumptive legislation, and results of studying the impact of presumptive legislation.

IAFF addresses primary cancer prevention through programs aimed at stopping the occurrence of cancer before it develops. These programs include studying advances in PPE, tobacco cessation and nutrition programs and the new 2015 IAFF Online Cancer Awareness Prevention and Education Course (created in cooperation with the Firefighter Cancer Support Network).

IAFF addresses secondary cancer prevention with programs aimed at early detection to allow for early interventions and decreased risk in advancing the disease. These strategies include the Medical Residency Program begun in 1986, and the IAFF/IAFC Wellness and Fitness Initiative’s inclusion of annual medical evaluations and work on NFPA 1582.

Opponents to the strong evidence supporting presumption include National League of Cities, TriData, chemical companies, and others. The opposition often applies “beyond a reasonable doubt” views of the burden of proof on connecting firefighters to cancer. More appropriate would be to view it as a “balance of probabilities,” which is often used to determine workers’ compensation cases. Based on data collected from states with presumptive laws (Illinois, California, Vermont, Rhode Island, Massachusetts, Oklahoma, and Nevada) it was determined that the cost per claim is substantially less than the unsubstantiated costs reported by the opposition.

Objective #8 - Discuss implications on the Line-of-Duty Death criteria, including those on workers' compensation and death benefits.

Currently firefighter cancer deaths are not covered by the Public Safety Officers’ Benefits Program (PSOB). Historically, the United States Fire Administration (USFA) and the National Fire Protection Association (NFPA) do not include firefighter cancer deaths in their annual reports on firefighter on-duty fatalities. In the next NFPA Firefighter Study report, the reported number of firefighters who died from cancer will be included to help bring awareness to the issue. The IAFF does include firefighter cancer deaths on the Colorado Springs Memorial, but the National Fallen Firefighters Foundation does not generally include firefighter cancer deaths on the National Fallen Firefighter Memorial in Emmitsburg, Maryland.



Chief Compton spoke of the collective effort it would take to include firefighter cancer in the Line-of-Duty Death criteria for the Public Safety Officers Benefits Program (PSOB). Attendees were reminded that it took many years to initiate Hometown Heroes (for cardiac-related LODDs), three years for the Department of Justice to have the regulations finalized, and then an additional two years to implement it administratively. Further discussions at the national organizational level are needed to determine if this is a priority.



Appendix A: Meeting Attendees

Leadership

Dennis Compton – Chair, Board of Directors, National Fallen Firefighters Foundation (NFFF)

Ernest Mitchell – U.S. Fire Administrator, Federal Emergency Management Agency (FEMA)

Ronald Siarnicki – Executive Director, NFFF

Presenters

Jim Brinkley – International Association of Fire Fighters (IAFF)

Josh Burnheimer, PMP – Scott Safety

Robert (Doug) Daniels, Ph.D. – Centers for Disease Control, National Institute of Occupational Health

Bryan Frieders – Firefighter Cancer Support Network

Pat Morrison – IAFF

David Prezant, M.D. – Fire Department of the City of New York

Virginia Weaver, M.D., M.P.H. – Johns Hopkins University, Bloomberg School of Public Health

Deborah Winn, Ph.D., M.S.P.H. – National Cancer Institute, National Institutes of Health

NFFF Board of Directors

William Goldfeder – Loveland-Symmes (OH) Fire Department

Bill Webb – Congressional Fire Services Institute (CFS)

Fire Service & Allied Organization Attendees

Nick Baskerville – Prince William County (VA) Department of Fire and Rescue

Matthew Blakely – Motorola Solutions Foundation

Juan Bonilla – National Volunteer Council Agency

Richard Bowers – Fairfax County (VA) Fire and Rescue Department

Johnny Brewington – International Association of Black Professional Fire Fighters

George Broyles – USDA Forest Service

Jefferey L. Burgess, M.D., M.S., M.P.H. – University of Arizona

Sean Carroll – Congressional Fire Services Institute

Jim Dalton – National Fire Sprinkler Association

Joe Domitrovich, Ph.D. – USDA Forest Service

Dan Eggleston – Volunteer & Combination Officers Section of the International Association of Fire Chiefs (IAFC)

Cindy Ell – Firefighter Cancer Foundation

Rita Fahy – National Fire Protection Agency



Arman Fardanesh – Aetna Hose Hook & Ladder Co. (DE)
Joseph Finn – Boston (MA) Fire Department
Theresa Gorman – IAFF
Dr. Michael Hamrock – Last Call Foundation
Tim Hill – Phoenix Fire Fighters Association
Don Hroma – Chicago (IL) Fire Department
Anthony Hudgins – Philadelphia Firefighters & Paramedics Union
Bill Jenaway, Ph.D. – VFIS
Kara Kalkbrenner – Phoenix (AZ) Fire Department
Greg Mackin – Boston (MA) Fire Department
Brian McQueen – Firemen’s Association of the State of New York
Claire Miller – Honeywell First Responder Products
John Niemic – Fairfax County Professional Fire Fighters and Paramedics
Thomas O’Connor – San Francisco Firefighters
Richard Paris – Boston Firefighters
Deborah Pendergast – International Association of Women in Fire & Emergency Services
Larry Petrick, Jr. – IAFF
Vickie Pritchett – National Fire Sprinkler Association, Common Voices
Nathan Queen – IABPFF
Alan Rice – North American Fire Training Directors
Thomas Ryan – Chicago Firefighters Union
Marc Sanders – Boston Firefighters
Jim Seavey – Volunteer & Combination Officers Section of IAFC
Tim Sendelbach – Firehouse
Joseph Sol – USDA Forest Service
Matthew Tobia – Loudon County Department of Fire Rescue and Emergency Management
Tracy Thomas – Safety, Health and Survival Section of IAFC
Mike Wieder – IFSTA/Fire Protection Publications
Maggie Wilson – FEMA
Victor Wyrsh – San Francisco (CA) Fire Department

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Cynthia Leighton – Director of Marketing
Molly Natchipolsky – Writer
Kevin Roche – Consultant
Sonya Roth – Travel Coordinator
Amy Tippett – Consultant

NFFF Mission

Our mission is to honor and remember America's fallen fire heroes and to provide resources to assist their survivors in rebuilding their lives and work within the fire service community to reduce firefighter deaths and injuries.

www.firehero.org



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