

EVERYONE GOES HOME

FIREFIGHTER LIFE SAFETY INITIATIVES



WWW.EVERYONEGOESHOME.COM

Inside this issue:

Mourning Chief Tom Brennan	2
NFFF Memorial Weekend	2
MFRI Receives Grant	3
Motorola Donates \$1 Million to NFFF Scholarship Fund	3
Near-Miss System Reaches 700 Reports	4
Meet the Advocates	5
FDNY Peer Counseling Impacts Firefighter Health and Safety	6-7
Root Causes	9
Pre-Emergency Planning - A Missing Piece	10-11
Can a Tiny Device Save Your Life?	13

This program is made possible through the efforts of the



funding provided by the Department of Homeland Security, Assistance to Firefighters Grant and the generosity of Fireman's Fund Insurance Company.



Everyone Goes Home Newsletter

April 2006

The Safety Ethic

Fire departments must develop a safety ethic in order to reduce firefighter deaths and injuries. Robert H. Hill, Jr., PhD., of the Office of Health and Safety for the Centers for Disease Control and Prevention in Atlanta, Georgia, states that we need a strong ethic for our own self-preservation and long life. He gives us five elements that are key components of a safety ethic. We think firefighters and officers must commit to these ethical statements in order to change the culture of the fire service. This commitment is as follows:

Element #1 – I value safety as a positive, integral part of my everyday activities.

- Safety is a value not to be compromised.
- Safety is an inseparable part of my daily activities requiring prudent behavior.
- Safety prevents and protects my family, coworkers, myself and others from suffering.

Element #2 – I work safely by minimizing risks of injury or illness.

- I am educated in safety.
- I learn to recognize and evaluate hazards.
- I identify and practice safe procedures.
- I seek ways to minimize, reduce and control risks.
- I maintain a high level of awareness of safety at home, on the job and at leisure.

Element #3 – I prevent at-risk behavior whenever I encounter it.

- I learn to recognize at-risk behavior.
- I do not practice at-risk behavior.
- I seek to prevent at-risk behavior by others.
- I maintain awareness for at-risk behavior.

Element #4 – I promote safety to others whenever possible.

- I promote safety to others through my daily actions.
- I am an example and a leader to others in safety.
- I act as a mentor educating the unknown and inexperienced in safety.
- I recognize others for their safe acts.
- I pass The Safety Ethic to others.

Element #5 – I accept responsibility for safety as a free act of caring for others.

- I am responsible for my safety.
- I am responsible and accountable for the safety of my family, coworkers and employees ensuring they know and understand about its importance.
- I actively pursue the safe way to do things.
- I ensure my employees' safety with training, proper safety equipment and safe facilities.
- I will not compromise the safety of my family, coworkers, employees or others.

(From "The Safety Ethic: Where can you get one?" - Chemical Health & Safety Magazine May/June 2003)

Fire Service Mourns the Loss of Chief Tom Brennan, Fire Service Teacher and Firefighter Safety Advocate

Chief Tom Brennan, the beloved fire service teacher and firefighter safety advocate, died on April 20, 2006, leaving behind a rich legacy of fire service wisdom.

Known especially for his teaching in firefighting strategy and tactics and fireground safety, Tom was every ounce a firefighter's firefighter and a brother's brother. He served for 20 years in the Fire Department of New York and retired as captain of Truck Company 111 in the Borough of Brooklyn. He responded to 30,000 fire calls in his FDNY career and was known throughout the department as "Tommy Truck."

He left the fire department in 1983 to assume the position of editor in chief of *Fire Engineering* magazine, which he held for eight years, and

later was appointed fire chief of the Waterbury (CT) Fire Department. As editor, as chief, and as a teacher, Tom ascended to level that few in fire service history have reached. Through his writings, public speaking, and leadership, he had an immeasurable impact on two generations of American firefighters. His brilliant mind, straight-from-the-heart approach, and strong opinions were always engaged and never failed to inspire us.

He was a great friend to us at the National Fallen Firefighters Foundation and Life Safety Initiatives Team, and participated in think-tank sessions to help guide the development of Initiatives resources.

We salute this extraordinary man, and we're grateful for his many gifts to the fire service.



Chief Tom Brennan

2006 Marks 25th Anniversary of the National Fallen Firefighters Memorial Weekend Service

The National Fallen Firefighters Foundation (NFFF) and the United States Fire Administration have announced that the 25th annual National Fallen Firefighters Memorial Weekend will be held October 7-8, 2006, at the National Emergency Training Center in Emmitsburg, Maryland. A plaque with the names of 98 firefighters who died in the line of duty in 2005 will be added to the National Fallen Firefighters Memorial, located on the National Fire Academy campus. The names of six firefighters who died in previous years will also be added.

Thirty-three states experienced line-of-duty deaths in 2005. Deaths resulted from various causes, including motor vehicle accidents while en route to or returning from emergency calls, training incidents, building collapses, being struck by objects at the incident scene,

falls, heart attacks, air tanker and helicopter crashes, electrocution, drowning, assault, and burns.

Four multiple-fatality incidents accounted for ten deaths. Two multiple-fatality incidents occurred at structural fires, while the other two occurred during wildland operations. One structural incident involved an explosion. The other resulted in two firefighters becoming trapped. The wildland incidents involved aircraft crashes.

Wildland fires, controlled burns, and aircraft training/certification for wildland fire protection resulted in 10 deaths. Six of the firefighters died while piloting air tankers or helicopters.

Of the firefighters being honored this year, 63 were volunteer firefighters, 37 were career, and four were contract firefighters.

New York, with 17, had the nation's greatest number of line-of-duty firefighter deaths in 2005; California, Pennsylvania, and Texas each suffered eight firefighter line-of-duty deaths.

Hal Bruno, chairman of the NFFF board of directors, stated: "Survivors and members of the fire service travel from across the country to honor their loved ones and fallen comrades at the Memorial Weekend. They receive emotional support and meet others who suffered loss. The Foundation's services are offered to the families and colleagues of fallen firefighters not only following a line-of-duty death but for years to come."

For more information on the Memorial Weekend, contact the Foundation or visit www.firehero.org.

USFA and International Association of Fire Fighters Launch New Online Emergency Vehicle Safety Program

The Department of Homeland Security's United States Fire Administration (USFA) and the International Association of Fire Fighters (IAFF) announced today the release of a new emergency vehicle safety program designed to give firefighters a greater awareness of safety issues when riding on fire apparatus and operating at emergency roadway scenes. Although injuries and death as the result of apparatus collisions are among the easiest to prevent, of the 106 firefighters who died in the line of duty in 2005, 26 were due to emergency vehicle accidents. In fact, emergency vehicle accidents are the second leading cause of on-duty firefighter deaths.

"Fire departments have an obligation to adopt and enforce standard operating procedures that im-

prove firefighter safety," says Charlie Dickinson, acting U.S. Fire Administrator. "This program discusses critical emergency vehicle safety issues, including seatbelt use, intersection safety, roadway operations safety on crowded interstates and local roads, and driver training."

IAFF General President Harold A. Schaitberger adds, "Every firefighter must take responsibility for his or her safety, as well as watch out for and stop any unsafe actions. This emergency vehicle safety program provides basic strategies for improving safety during vehicle and roadway incident operations, and also addresses the need for a cultural shift in mindset in order to practice safer driving."

The USFA-IAFF emergency ve-

hicle safety program is an outgrowth of the partnership with several leading fire service organizations participating in the Emergency Vehicle Safety Initiative, a USFA project developed to reduce the number of firefighters deaths while responding to or returning from the scene of an emergency.

For more information about this program, visit <http://www.iaff.org/evsp>. Additional information about other USFA efforts in emergency vehicle safety is available at [USFA's Emergency Vehicle Safety Page](#).

MOTOROLA Gives \$1 Million to NFFF Scholarship Fund

On April 6, at the Congressional Fire and Emergency Services Caucus Dinner, Motorola presented \$1million to the National Fallen Firefighters Foundation for its family scholarship program. The program offers financial assistance for post-secondary education and training to spouses, children, and stepchildren of firefighters who died in the line of duty and were honored at the National Fallen Firefighters Memorial.

"Motorola is proud to stand with our nation's fire and emergency services professionals, and we have made this commitment to show our continued support and gratitude for their service to our families, our communities, and our nation," said Kelly Kirwan, vice president of networks and enterprise business for Motorola.

"This donation is an enormous benefit to survivor families looking to rebuild their lives after the loss of their loved ones," said Hal Bruno, NFFF chairman of the Board of Directors. "It will also help us honor our nation's heroes and their families during the annual National Fallen Firefighters Memorial Weekend."

Near-Misses Should Be an Instant Wake-Up Call

Every year, there are numerous incidents involving line-of-duty deaths that defy reason and, quite simply, are appalling. But there are near-misses, or rather, “near hits,” that are equally as unnerving, if not appalling. As with incidents that have tragic results, near-misses often are extreme indicators that the safety culture in the fire department needs to be readdressed immediately. As Heinrich’s Triangle suggests, near-misses probably are manifestations of cultural problems that, if left uncorrected, will push you and your department farther down the path of catastrophe.

A recent near-miss incident in Colorado calls this to mind. Under non-emergency conditions, the 20-year-old driver of a fire department pumper—with two adults and a

three-year-old child on board—attempted to cross railroad tracks. The lights and bells at the crossing were functioning normally. Though the driver of the train slowed down and sounded audible warning signals, the driver of the fire apparatus decided to beat the train across the tracks.

He failed to beat the train. Instead, the train struck the apparatus in the left rear, causing the engine to spin, and it was struck in the front as well. The apparatus was propelled over an embankment and rolled into the ditch, striking a power pole and partially crushing the cab of the truck.

Fortunately, in this case, no one in the apparatus was seriously injured. While the incident raises several obvious red flags, we’ll say this: This incident, as well as many

others, underscores the importance of aggressively pursuing a full-scale culture of safety that establishes safety policies, provides the training to accomplish safety priorities, and provides the means for policy enforcement.

It’s time to end the madness. It’s time that Everyone Goes Home. If you think your latest near-miss is “no big deal,” think again. Safety infractions and near-misses should be a wake-up call, and require immediate correction.

The apparatus was occupied by three additional people, a 29 year old female, a 28 year old male and a three year old child. None of the occupants of the fire engine were ejected and all were examined while on scene by EMS. None of the occupants were taken to the hospital. The driver of the fire engine was cited for careless driving

Lessons Learned: IAFC’s Near-Miss System Reaches 700

The Near-Miss Reporting System, established by the International Association of Fire Chiefs and supported by the National Fallen Firefighters Foundation, has reached 700 reports since its inception in August 2005. Reports have come from 43 states.

In keeping with Initiative 9 of the Firefighter Life Safety Initiatives, it’s incumbent on all of us who pursue firefighter life safety and a reduction of line-of-duty deaths to learn from these case studies. Sixty percent of the reports filed indicated that a life-threatening injury was possible.

What does this mean? In addition to the certainty that we’re in a high-risk business, it means we need to share our experiences and lessons learned, because it’s in understanding our potential risks that we can develop parallel training, departmental and operational systems, and safety cultures that defy the odds.

Interestingly, members with the rank of firefighter are contributing most to the Near-Miss Reporting System. While line officers and chiefs have also significantly contributed, that the System appears to be more bottom-driven is, we think, an encouraging sign with

regard to safety culture.

Another important note is there’s no time limit or shelf life of your lessons learned. To date, contributed near-miss lessons span back as far as 1973.

If you have something to share regarding near misses that could help shed some light on firefighter safety and the further pursuit of Everyone Goes Home, don’t neglect this great opportunity to do by visiting the website at: www.firefighternearmiss.com.

BECOME AN ADVOCATE OF *EVERYONE GOES HOME*

The Firefighter Life Safety Initiatives Advocates (FLSIA) will play a key role in helping to bring about awareness of the Initiatives and act as a conduit for resources to enable departments to implement and advocate them.

Following are the expectations and responsibilities for this important position:

Expectations:

Advocates will be expected to represent their state in the promotion, presentation, and awareness of Firefighters Life Safety Initiatives. They will serve as the eyes and ears of the FFLSI Program for their state.

Responsibilities:

- Monitor and review programs presented within your region that are relative to Firefighter Life Safety Initiatives.
- Attend, represent, or arrange to have a designate attend or participate in activities, events, programs, and training where there is an opportunity to promote Firefighter Life Safety Initiatives or assist in their implementation.
- Develop a reporting and sharing plan between you and the State/Local Advocates as well as with the FFLSIP team.
- Share with the FFLSIP team awareness and knowledge of activity within your region.
- Keep abreast of new developments and trends; make recommendation to FFLSIP team on desirable additions or suggested changes to enhance program and/or process.
- Participate in periodic teleconferences with Regional representatives.
- Identify and report on best practices within your state.
- Submit stories or provide input to the FLSI newsletter. Make recommendations for Seal of Excellence recipients.
- Assist in Coordination, oversight of performance/delivery of FLSI programs and presentations.
- Keep abreast of new developments and trends in the region; make recommendations to Regional Advocates on desirable additions or suggested changes to enhance the program and/or process.

If you are interested in becoming an Advocate, please email us at: everyonegoeshome@firehero.org

Meet the Advocates

Contact Information :

Ken McMahon Email address: DSFPCOM@aol.com

Ken McMahon is a member of Christiana Volunteer Fire Company in Bear, Delaware.

He has been a member since 1972 and has held every line office, including chief of department for eight years. In 1998, he was appointed to the Delaware State Fire Commission by then-Governor Tom Carper. In 2000, he was elected as chairman of the Commission and still holds that office. He is a member of the Delaware Firefighter's Hall of Fame.

Ken has been a member of the International Association of Fire Chiefs 22 years and belongs to the Industrial, Hazmat and VCOS sections. He's also a member of the National Fire Protection Association and serves on the technical committee for NFPA 1720 standard for volunteer fire department deployment.

In 2003 he retired from Shell Oil Company after 38 years of service, where he was a operations superintendent at the Delaware City Refinery. He also served on Shell's National Hazmat Response Team.

Ken is excited to be part of the Everyone Goes Home/Firefighter Life Safety Initiatives effort, and has worked hard to promote the concept of Courage to Be Safe (CTBS) program in his state. Thanks to his efforts and other members of the Delaware fire service, plans for a Delaware version of CTBS are underway.



Ken McMahon
Christiana Volunteer
Fire Company (DE)

FDNY Peer Counseling Program Having an Impact on Firefighter Health and Safety

Editor's note: *The 16 Firefighter Life Safety Initiatives recognize the important connection between mental and emotional health and performance safety. Fire departments are encouraged to establish programs that help firefighters handle emotional stresses on the job, particularly in the area of critical incident stress debriefing.*

The 1990 Happy Land Social Club Fire in New York City, in which 87 people died, exacted a heavy mental and emotional impact on many firefighters who responded to the incident. As a result, the FDNY Peer Counseling program was established to assist firefighters requiring stress debriefing services, especially after a traumatic incident. The voluntary program has evolved considerably, and now includes some 60 peer counselors and counseling professionals under the command of FDNY Captain Frank Leto. We asked Firefighter (ret.) Daniel McDonough, a peer counselor, for his thoughts on the program.

Q: *Who is the "peer" in peer counseling?*

Dan: Peers are other firefighters, usually well-respected senior people, who are trained in recognizing posttraumatic disorder issues and trained in how to talk with someone who's been involved in a bad incident and needs counseling help. Our peer counseling unit includes both active and retired firefighters.

Q: *What's the value of peers in a counseling unit?*

Dan: Well, we found that most firefighters who are having difficulties at first don't want to talk to certified counselors—they don't know them. Firefighters respond better talking with peers. In the beginning of the program especially, counselors weren't accepted. But if a peer brings in a counselor and gives the thumbs up, it gives credibility and approval. The counselors are much more accepted then. Another value is the peers are 24 hours on call, whereas the counselors are not. So firefighters can reach out to us at all hours, any day. If there is a line-of-duty death or serious injury or other serious incident at 3 a.m., peers will be to the fire stations before the firefighters get back. It's full-access, 24-hour critical incident stress stabilization for firefighters.

Q: *What type of training do peers get?*

Dan: We're trained in assessment skills, in detecting symptoms, in determining who needs immediate counseling. We learn listening skills, what to expect from firefighters who need help. It's kind of basic, not high-tech. Basic do's and don'ts on how to reach out to the firefighter, about what to say and what not to say. We learn how to address the problems and how to react to their re-

sponses, and how to get the firefighter to open up. The training was a 32-hour course, but I continue getting training from other groups. It's ongoing, really, because they invite different lecturers in several times a year to train us on different topics. Every two weeks the peers meet and go over current issues, how they were dealt with, what's happening in different parts of job, main complaints, what we can do to improve.

Q: *You mentioned symptoms. What are some of the symptoms?*

Dan: The main thing is if the firefighter is acting differently than normal, that's a symptom in itself. If someone is a big eater and stops eating, that's a symptom. Obvious behavioral changes. Alcohol abuse is a common symptom, but there are other things—burying yourself in work, not taking care of yourself, becoming intolerant or abusive at home.

Q: *How are peers "dispatched"?*

Dan: Captain Frank Leto is in charge of counseling program, including the peers. He sets up a list of priorities and orchestrates who goes where. We'll go out in twos and threes. We call the company officer ahead of time, give him a heads-up that we will be in the area and ask if it's okay to speak with the members. The peers basically develop a relationship in the firehouses, we sit down at the kitchen table and bring them information on the counseling services, start a dialogue.

Q: *What happens after a traumatic incident?*

Dan: After a line-of-duty death or a gruesome fire, the peers will be sent out immediately to the companies involved. We'll be at the firehouse when the firefighters get back from that incident. We tell them we're available to talk, we warn them about what they can expect, and we give them the opportunity to reach out. We're like paramedics, in a way: If the patient needs surgery, they'll rush him in to surgery, or they'll provide a bandage if that's all that's needed. We'll always call back a day or two later to ask how the firefighter is making out. It goes very far and it is so important. For the firefighter, it verifies that you really listened and you really care.

(continued on page 7)

FDNY Peer Counseling Program (continued from p. 6)

Q: *Do peers work with the professional counselors?*

Dan: The peers can help counselors by educating them on firehouse life and specifics that are unique to the job. We don't sit in on the professional counseling unless the counselor asks for it. For example, the counselor might bring a peer into a session to work as a translator, of sorts. Sometimes this is needed with counseling for a fatal fire or line-of-duty deaths, as the firefighters tend to be much harder on themselves and second-guess their actions at the fire. The peer might be able to help the counselor from the firefighting perspective of coming to grips with the problem. But again, it's the counselors call on whether to use peers that way.

Q: *Why did you become a peer counselor?*

Dan: Well, I'm retired—I've been out since 1999. A lot of us do it to stay involved. It fills void in my life. If I can help another firefighter get help, I feel I did the right thing. We spent our lives saving lives. When you're out of that, you really miss it. Being involved as a peer lets me still help and make a difference.

Q: *Are there difficulties with being a peer counselor?*

Dan: Sometimes the sessions can be kind of brutal on the peers. Sometimes the process opens up old wounds. After a session we peers usually talk among ourselves, give each other a check, avail ourselves of the peer concept. Sometimes it's necessary for the peers to debrief. If I have a real problem, I'll discuss it with the counselor. We keep close with the counselors. Usually the counselors will check on you if they know you are on a tough assignment.

Q: *What impact did 9/11 have on the peer counseling program?*

A: The program became larger after 9/11, because of the obvious immediate needs. Many retired firefighters came to the department and wanted to help. They were trained as peers. Many of them stayed on, so the program expanded.

Q: *Are you still dealing with 9/11 issues?*

Dan: Yes, to a degree, we are still having issues. Some guys didn't seem to have 9/11 problems until they retired. Now, combined with job separation problems, 9/11 is resurfacing, four and five years after. The younger guys didn't fall into the John Wayne thing that we older guys grew up with on the job, so the peer thing comes naturally to them. In the old days, the guys didn't want to deal with a counselor. Now, it's a normal thing for the firefighters—it's part of the job, part of the culture. We've turned around a negative part of the culture.

Q: *What's the reaction from the firefighters to the peer counseling program?*

Dan: Since 9/11, we've been to every fire station, and then some. The firefighters have responded well to it. We're at the point now that firefighters will call the peers right away if there's a problem—they don't even wait for us to make the first move. The old way was "Here, drink a few beers and you'll be fine." Now it's "We need to go see these counselors." Now firefighters will call and say, "We just had a big fire, and we have a guy acting out, we need help." For younger guys who came into the job just before or after 9/11, this is a natural part of the organizational culture. The older guys have been softened up to it. A lot of the old-school guys were trying to handle it all themselves but it got to be too much for them, and they came and got professional help. They are the best advertisement for the program. They go back to their companies and relate how the program helped them. It gives credibility to the whole program. I think most firefighters now realize that if you don't deal with it the right way, you could suffer from post-traumatic stress disorder and that could lead to some real problems. I think, for a lot of firefighters, just knowing they can call us makes them more comfortable.

Q: *Have the chiefs and officers taken well to the program?*

Dan: That's the good thing: a lot of our peers were chiefs and officers. The chiefs have been extremely supportive. I would say everyone in the department, from the top on down, has seen a peer; if there are exceptions, they are few.

Q: *Do you recommend a peer counseling program to other fire departments?*

Dan: The peer counseling model works great. We get nothing but praise from the counselors. It definitely works. We were predicted to have a lot of suicides after 9/11 but didn't, and I think the counseling service helped. No matter where you are in the country, whether your department is career or volunteer, anyone can have a traumatic incident. After I got trained as a peer in the early '90s, there was a horrible incident at a grammar school in my hometown when a wall collapsed on children in the cafeteria. The firefighters from our volunteer fire department and their families had a really bad time of it—divorce, suicides, and so forth. A fire department or county public safety entity that doesn't have a CISD program should customize this program for their own situation and culture and implement it right away.

For further information contact Captain Frank Leto, FDNY Counseling Services Unit, at 212-570-1693.

MFRI's Center for Firefighter Safety Research and Development Receives Homeland Security Grant

The Center for Firefighter Safety Research and Development at the Maryland Fire Rescue Institute (MFRI) has been awarded by the Department of Homeland Security a FIRE Act grant in the research category for \$825,000. The grant is for a project to research and develop interoperable firefighter accountability location and monitoring devices that can be incorporated into fireground management and safety systems. The project will explore the means by which to utilize integrated positioning techniques to continuously monitor the location and physiological status of firefighters, along with information on the fire environment, and transmit that data to firefighters inside and outside to a remote location for use by incident commanders.

The need for such technology has been notably evident in numerous fireground tragedies and near misses in which firefighters have become lost in untenable or tenuous fire environ-

ments and can't be quickly found by rescue crews. Situational awareness of firefighter physiological conditions and environmental conditions, as well as better real-time location of trapped firefighters, received a "high priority" ranking among fire service leadership at the most recent Research Agenda Symposium conducted by the National Fallen Firefighter Foundation as part of the Everyone Goes Home/Firefighter Life Safety Initiatives project.

MFRI's Center for Firefighter Safety Research and Development will be working very closely with the A. James Clark School of Engineering, the Small Smart Systems Center, and Grace Industries, who will serve as the private sector research and development partner in this project. Grace Industries is a well-known national fire product manufacturer and developer of the T-Pass Evacuate System.

This project was submitted as a two

year project with research and development in the first year and then field tests and product refinement in the second year. The first year has been funded; the second year cannot be funded until the federal budget is approved for fiscal year 2007. MFRI expects to work very closely with several Maryland area fire departments in the second-year, field-test phase of the project.

This is an important opportunity to address one of the highest priority needs of the fire service regarding life safety. We expect that the results of the research effort will have a major impact on the future of fire service emergency operations and firefighter safety.

Courage to Be Safe Outreach Certification Scheduled For Michigan

For the first time in Michigan, the National Fallen Firefighter Foundation's Firefighter Life Safety Initiatives team, in conjunction with the Regional Alliance for Firefighter Training, will present a free train-the-trainer certification seminar on the "Courage to Be Safe...So Everyone Goes Home" program. The seminar will take place on May 12, 2006, at the Farmington Hills Fire Department. With this event, the Michigan fire service will count itself among the small but growing number of states that have taken a leadership role in promoting the Everyone Goes Home program and firefighter life safety.

There is no other program in the fire service like the Courage to Be Safe program. It's a thought-provoking program designed to change a fire service culture that, generally, accepts the loss of one of our own as a normal circumstance. It graphically underscores the need for firefighters and officers to change fundamental attitudes and behaviors in order to prevent line-of-duty deaths. It's a fire service program that finally recognizes that, yes, it *does* take courage to do what it takes for the whole crew to return home after the call or at the end of shift.

This seminar is for instructors who are passionate about the need to have the Courage to Be Safe and who understand that, working together and with the 16 Firefighter Life Safety Initiatives as a blueprint, we CAN reduce line-of-duty deaths. And together, we will.

Participants receive a certificate of completion by the NFFF/Firefighter Life Safety Initiatives program. Registrations for the Michigan seminar must be received by May 9, 2006. For more information, email at raft911@earthlink.net.

Woodinville (WA) Fire and Life Safety District Addresses “Root Causes”

To the Firefighter Life Safety Initiatives Team:

I was reading your recent newsletter and saw the request for root causes in line-of-duty deaths. Here are some that we have been talking about and have attempted to address in my fire department:

1. Establishing a wellness and fitness program that includes discovery of undiagnosed illnesses, especially dealing with heart problems and poor fitness levels that lead to heart ailments.
2. Enhancing command and control at all incident scenes. This would include communications lapses and failure to use a personnel accountability system.
3. Improving members' ability to recognize changes in fire conditions or building integrity, with emphasis on identifying means of secondary means of egress and reading signs of imminent structural failure/collapse.
4. Adequately training on, and following, standard operating guidelines. This could be in fire ground operations, MVA operations on congested highways, operation of department vehicles going to or return from an incident, conducting training drills, and general operation of department tools and equipment.
5. Addressing attitudes, behaviors, and other human factors. This would include fatigue, apathy, attitude, tradition, complacency, controlled substance abuse and other human elements that would lead to exercising poor judgment in an emergency situation.

From Robert Whipple, Battalion Chief of Training, Woodinville Fire and Life Safety District

“Playing It Safe”

The Firefighter Life Safety Initiatives Team has identified five root causes of firefighter line-of-duty deaths.

Take some time now to think about and list what you believe are the root causes, and why.

Remember, all possible attributable causes of preventable firefighter line-of-duty deaths must fit within your five root causes.

Send your list of five root causes to us at our website:

everyonehome@firehero.org

Those who identify the five root causes will receive the Everyone Goes Home bracelet, helmet sticker, patch, and pin, and we'll publish your results in the EGH newsletter.

Pre-Emergency Planning – A Missing Piece of the Puzzle

By Greg Jakubowski, P.E., CSP, FSFPE

Principal and Chief Engineer, Fire Planning Associates, Washington Crossing, NJ

Emergency responders spend hours learning about the tools and equipment they have available to them to deal with a variety of emergency situations. They learn about building construction, and tactics and strategies to be utilized at various types of fires. They learn how to drive and operate large, complicated, heavy machinery that can pump tons of water per minute or scale buildings 10 stories in height. But in the end, a successful response is predicated on knowing where best to place that equipment at a scene, how the equipment can be utilized most effectively given the construction and arrangement of the building, how a nozzleman can access the seat of the fire quickly and safely to apply the minimum quantity of water necessary to handle the situation, and how firefighters can most effectively ventilate the building. All of this must be done while knowing the hazards in the building to protect the safety of the response personnel. The best way to successfully achieve this is with an effective preplan of the building.

Numerous NIOSH (National Institute for Occupational Safety and Health) firefighter death investigations have recommended that fire departments conduct pre-incident planning for all mercantile and business occupancies in their response area. Yet many fire departments don't have the time or expertise to conduct comprehensive preplanning in their coverage areas. Every department has one or more buildings that firefighters point to and say, "I hope we never have a big fire at that place," or "I wonder how we would handle an incident there?" Ignoring the opportunity to preplan these properties could be a fatal error.

PREPLANNING IS THE ANSWER

Many fire departments have veteran members who know the intricacies of many buildings in the response area. But that knowledge is in their heads, with the information neither shared nor documented. When they retire or leave the department, this institutional knowledge vaporizes with them. How can we capture that knowledge to share it with every responder that would need to respond to these buildings? Preplanning is the answer.

Before beginning the preplanning process, departments will need to prioritize the facilities in their community. Issues to consider in this prioritization include: hazards to responders; life safety risks in the facility; and value of the facility (historically and economically) to the

community. Prioritization of the properties will allow limited preplanning resources to be applied where they can be most effective. During the prioritization process, it might be very tempting to preplan a number of "easy" buildings to get much accomplished, while avoiding the more complicated and hazardous occupancies. While getting some "easy" buildings done will assist the preplanning team in gaining confidence and knowledge in the preplanning process, it might miss getting to the properties that will create the greatest response challenges (and offer the greatest benefit if preplanned).

UNKNOWN HAZARDS ARE FIREFIGHTER KILLERS

More than 100 firefighters die in the line of duty in the United States every year. Thousands more are injured. Many are killed or injured by unknown hazards that might have been known if the facility or building had been preplanned. Just a few of the hazards that can kill or maim include:

- storage/use of flammable/combustible liquids and gases
- combustible interior finishes
- tanks or pressure vessels
- a structure or façade that is susceptible to early collapse
- potential areas of rapid fire spread
- hazardous openings in floors/roofs
- heavy items on roofs/chimneys
- dangerous animals/reptiles/insects on or about the property
- swimming pools, pits or other firefighter traps on the property
- blocked means of egress
- hazardous areas such as shops, labs, kitchens, storage, et al
- hazardous materials
- use of high magnetic field equipment such as NMR or MRI

All of these types of hazards should be identified during the preplanning process and documented on the actual preplan for the benefit of all. *(continued on p. 11)*

Pre-Emergency Planning – A Missing Piece of the Puzzle

(continued from page 10)

Information that should be gathered during the pre-planning process is outlined in NFPA 1620, *Recommended Practice for Pre-Incident Planning*, and includes

- details on construction and building dimensions for fire flow calculations (find out how much water you will need);
- the number of building occupants, how that varies per shift or time of day, and any special evacuation needs;
- access to areas of the building, and features such as shutoffs, lock boxes, fire alarm panels, hose connections, and water supplies;
- the length of challenging hose stretches to various points in building;
- limitations on ground/aerial ladder access;
- details on protection/detection features and ways in which they can be utilized to handle an incident;
- the means to ventilate the building;
- details on elevators in the building and how to control/access them;
- information regarding hazardous materials;
- where a spill in or around the building would drain;
- any potential confined spaces in the building;
- salvage considerations;
- location of potential staging areas;
- location of potential medevac landing zones; and
- location of potential triage areas.

Proper preplanning requires attention to detail. Photos, drawings, and notes can all be incorporated into an effective preplan. Experience has shown that some of the best preplans provide a cover page with key information needed for an initial attack and to protect firefighter safety. Further information, including site and floor drawings, annotated aerial and specific feature photos, and detailed notes on building hazards and features can assist chief officers as well as the planning officer to map out a strategy for dealing with more complicated incidents. A preplan may be best conducted during the design of a building—when all of the data on the building is readily available, along with the thinking behind the building's construction and protection. Preplanning software packages allow the sharing and use of computer-based drawings to be modified for use with the preplans. Fire

departments should work with developers to see that this is done, and the two preeminent fire codes require that developers provide this information.

Once a preplan is completed, it's important that firefighters know it is available, what's included in it, and be required to review that information at least annually. Various simulation programs are available that will allow fire departments to train by creating simulated incidents in the preplanned facility. Members can assume various command roles and tabletop credible scenarios at the facility that will improve their ability to respond to and command an incident at the property.

Fire departments need to share their preplan information with key mutual-aid departments. And they must keep their preplans up-to-date. Property/deed transfer; occupancy/building permit changes; information from utility companies or police departments; changes in facility phone numbers; inquiries from architects or engineers; observations during inspections; notices of street closings or fire protection impairments; and other factors are all triggers for updating your preplans. A number of organizations, including Fire Planning Associates and their web based software (www.fireplanningassociates.com), are now available to assist fire departments in their preplanning efforts.

In many cases, departments are simply guessing at information about the facility or incident based upon a quick glance when they arrive at an incident. To be fair, these are usually quite educated guesses. But there are times these guesses are incorrect, placing both responders and victims at unnecessary risk. Why should you be preplanning? It can save your life. It can improve your service. Get the information right in advance – be ready. Take the time to develop preplans for critical buildings in your response area now, because we must make sure that Everyone Goes Home.

U.S. to Study Cyanide Poisonings from *The Providence Journal*, April 10, 2006

By Amanda Milkovits

A team from the National Institute for Occupational Safety and Health will study cyanide exposure suffered by several city firefighters two weeks ago.

It is a first by the federal agency, known as NIOSH, which makes only 50 to 100 site visits a year to investigate hazardous materials in the workplace.

But Providence's case is intriguing - the agency has never investigated cyanide poisoning in firefighters before, and anything it recommends to protect firefighters could have a national impact.

The agency, which is under the umbrella of the Centers for Disease Control and Prevention, conducts scientific research and recommends measures to prevent work-related injuries and illnesses. It decided to investigate Providence's case because cyanide exposure is an issue that the fire service is grappling with nationwide, said Capt. Thomas Hales, a physician and a senior medical epidemiologist for NIOSH.

Hydrogen cyanide gas has always been present in fires, Hales said, from wool and silk in carpets and clothes from decades past. But is it more prevalent in modern-day construction materials and furnishings that contain plastics and foam that emit toxic gases when they smolder or burn?

The answer might have a significant impact.

There are no national studies showing cyanide exposure in firefighters, although cyanide is one of several toxic gases that arise from everyday fires, Hales said.

"We don't have evidence that it is an issue or not an issue," he said. "We aren't exactly sure how much

exposure there is" at a fire.

Therefore, the NIOSH staff will have some issues in mind as it studies what happened in Providence, such as:

What is the exposure of hydrogen cyanide at fires? Is it as great a threat, or greater, than carbon monoxide poisoning? What is the best antidote for cyanide poisoning?

Cyanide gets into the bloodstream and binds with oxygen cells, preventing the oxygen from being absorbed by the body and causing suffocation. The symptoms range from headaches and giddiness to seizures and coma, and can lead to death.

There is one antidote used by U.S. hospitals that is highly controversial because its side effects are dangerous and can cause death. The antidote was used by Rhode Island Hospital emergency-room doctors about two weeks ago on three firefighters who had high levels of cyanide. The antidote worked, but made all three sick; one firefighter told Fire Chief David Costa that the antidote's effects were worse than the poisoning.

An antidote used in Europe for more than a decade has had no serious reported side effects. The drug is expected to be fast-tracked by the U.S. Food and Drug Administration this summer. Hales said his staff will raise the issue of the antidotes in their report but leave the decision of which is used to the medical personnel involved.

There's a growing awareness in the fire service on the problems of cyanide being present in fires - even when the flames are out and the building is smoldering. Some fire departments already require firefighters to wear air masks away from the fire and during "overhaul," when the fire has been knocked down.

Providence's policy has long called

for firefighters to wear air masks during "hazardous conditions." That's a loose term, relying on the firefighters' own judgment. They don't wear their masks during overhaul.

Then, on March 23 and 24, three seemingly ordinary fires sent nearly two-dozen firefighters to the hospital for cyanide exposure. Three firefighters - including one who suffered cardiac arrest - had levels of cyanide in their blood that were high enough to require an antidote.

Firefighter Kenneth E. Baker was resuscitated minutes after collapsing from cardiac arrest outside a house fire. He is recovering at Memorial Hospital of Rhode Island, in Pawtucket.

Immediately after Baker's collapse, Costa formed a task force to investigate the cyanide exposure. It will turn over its findings to the NIOSH staff.

The Providence task force is expected to release a draft of its report within a few weeks. The NIOSH team will write a report on its findings, which might be available in three to six months.

Can a Tiny Device Save Your Life? This Canadian Researcher Says It Can

Canadian Press (March 26, 2006)

The March 26, 2006, edition of Canadian Press reports that a University of Victoria researcher, VANCOUVER (CP) - A researcher at the University of Victoria says a transmitter the size of a vitamin pill that firefighters can swallow will help save their lives from heart attacks - the No. 1 killer of those in the business of saving others.

Lynne Wolski, an occupational physiologist, said the combination of heat stress - from temperatures of up to 200 degrees centigrade - and heavy-duty protective gear worn in a stressful occupation puts firefighters at risk of heart attacks.

When swallowed, the tiny transmitter allows firefighters' core body temperature to be monitored so they can be pulled from a blaze or any high-stress rescue if their temperature is dangerously high.

The transmitter, which has been on the market for about a year-and-a-half in the United States, was approved in January by Health Canada.

It works by sending out a radio signal of a firefighter's core body temperature via a monitor worn on the chest.

Another monitor also picks up heart and blood pressure rates to give a full picture of how much strain firefighters are enduring and if they need to take a break, Wolski said.

"All of a sudden they're just too overloaded and if they're susceptible, if they've got hidden coronary heart disease or whatever else, that's it, they're done."

Statistics from the U.S.-based National Fire Protection Association indicate that over 50 per cent of firefighters die of heart attacks, Wolski said.

"When they take a look at those

deaths they attribute about 85 to 90 per cent of them to thermal stress and the physical demands of (the work)."

Wolski, who has been testing the transmitter on firefighters from the Victoria fire department, said that currently, paramedics attending fires and other rescue scenes rely on ear thermometers to check firefighters' core temperatures.

Her research has shown that the thermometers are inaccurate, recording core body temperatures two to three degrees Celsius below the actual temperature, as shown by the transmitter, she said.

Firefighters whose temperatures are measured at 38 C, for example, would be advised by a paramedic using an ear thermometer to go back to continue a job, Wolski said.

"If their true reading is actually 41 C, now they are medically in a very serious area so from our research if we see anybody above 39.5 degrees we have to pull them from continuing in the activity."

Wolski said the transmitter would be especially beneficial for firefighters who rescue injured motorists trapped in mangled vehicles - considered even more stressful than entering burning buildings.

"There's a victim, and firefighters say there's just this knot in the pit of their stomach when they go to an auto accident and they don't know what they're going to face," she said.

Her research has shown that firefighters' blood pressure and heart rate jump dramatically at so-called auto extractions because of the physical and psychological demands they face, Wolski said, adding that kind of strain on a regular basis is causing heart attacks.

Scott Woodburn, assistant fire chief

of the Victoria fire department and participant in Wolski's research, said the transmitter would be a huge advantage in a high-risk job that could be much safer.

"Our people could perform their job better and in the long run help the people they're supposed to be helping even better," Woodburn said, highlighting the huge stress firefighters endure when rescuing people from crashed vehicles.

"Unfortunately, we're the last to be called. So police and ambulance are already on scene, a crowd has developed and then they realize that they can't get the person out - call fire. There's a huge urgency to get people out immediately."

Once firefighters arrive on the scene, they're under tremendous pressure to race against the clock during the so-called golden hour - when the severely injured need to be rushed to hospital within the first hour of a crash, Woodburn said.

While paramedics measure firefighters' vital statistics at such car accidents, Woodburn said he's now concerned about the inaccuracy of the ear thermometers that are used.

It's unlikely that fire departments will buy the transmitters that cost \$50 US a piece, he said of the device that's currently being used by American soldiers in Iraq. Monitors used with the transmitter are also expensive, at \$3,000 Cdn each.

Wolski said she may develop a formula that would determine the relationship between the core temperature recorded with an ear thermometer and the transmitter so ambulance attendants can get accurate readings that will allow firefighters to do their jobs more safely.

**C
A
L
E
N
D
A
R**

May 8 Courage To Be Safe - Train-the-Trainer:

Host: Verdoj FD
988 Troy Schenectady Road
Latham, NY.

May 12 Courage To Be Safe - Train-the-Trainer

Host: Farmington Hills FD
31455 W. 11 Mile Rd.
Farmington Hills, MI

June 8 Courage To Be Safe - Train-the-Trainer

Host: Connecticut Fire Academy
34 Perimeter Road
Windsor Locks, CT

June 8 Courage To Be Safe - Train-the-Trainer

Host: Kentucky State Fire School
Hyatt Hotel
Lexington, KY

July 1 FLSI Presentation

Host: Southeastern Assoc. of Fire Chiefs Conference
Annual Leadership Conference
Mobile, AL

July 29 FLSI Presentation and Forum

Host: Firehouse Expo
Baltimore Convention Center
Baltimore, MD

September 11 Courage To Be Safe - Train-the-Trainer/Taking Care of Our Own

Host: IAFC - Fire Rescue International
Dallas Convention Center
Dallas, TX

For additional Courage to Be Safe event listings visit our website at:
www.EveryoneGoesHome.com

What Are you Doing to Assure EVERYONE GOES HOME?

We're looking for those who have initiated a personal, department, organizational or community program that includes and endorses the **16 FIREFIGHTER LIFE SAFETY INITIATIVES**.

The purpose of this program is to recognize those who have taken the Fire Firefighter Life Safety Initiative Program's 16 Initiatives and the slogan, "**EVERYONE GOES HOME**," to the next level - that of implementation.

If you, or a department you know, has incorporated the Firefighter Life Safety Initiative Program's 16 Initiatives and the slogan, "**EVERYONE GOES HOME**," we want to hear from you.

Send a description (samples, pictures, and program) of your implementation to:

everyonegoeshome@firehero.org