EVERYONE GOES HOME
FIREFIGHTER LIFE SAFETY INITIATIVES PROGRAM

FIREFIGHTER LIFE SAFETY INITIATIVES NEWSLETTER

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The Detective Story

by J. Gordon Routley, Program Specialist, Everyone Goes Home - *Firefighter Life Safety Initiatives Program*

The following was published in the November 2005 issue of Fire Chief *magazine, about the importance of deaths, injuries, and near-misses investigations toward improving firefighter safety, and is reprinted with the author's permission.*

The need to conduct a thorough investigation of every firefighter fatality, injury or near-miss is one of the 16 firefighter life-safety initiatives intended to significantly reduce the number of line-of-duty deaths and injuries that occur each year. The investigation is a vital part of the process that allows us to learn from each negative experience, then identify and implement the necessary corrective actions to ensure that the experience isn't repeated. While the concept is simple and unquestionably important, in far too many cases the investigation is overlooked, delayed or conducted in a manner that fails to capture the critical information or to implement the corrective action.

The investigation of every accident and injury, no matter how minor, is listed as a supervisory responsibility in virtually every organizational health and safety program ever documented. Thousands of quickly produced reports are created and filed away every day in fire departments and other organizations, and in most cases, the great majority of those reports are never studied or analyzed to determine how the information could be translated into preventive programs and strategies. The investigation process only takes center stage after a fatality or serious injury.

The great majority of serious accidents are both predictable and preventable, and predictability is directly related to experience. Most fatal incidents and serious injuries can be traced to a series of contributing factors that come together to produce a highly undesirable outcome. Those individual contributing factors make themselves evident over a period of time through minor mishaps and near-miss incidents that should, in an ideal world, cause fire chiefs and safety officers to identify problems and implement corrective actions. For every tragic outcome there could be 10 or 100 warning events.

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The Detective Story by J. Gordon Routley (continued from page 1)

The ability to predict avoidable situations requires a commitment to conscientiously investigating occurrences, even minor events, and then analyzing the information. The system won't function if no one's paying attention. In far too many cases we don't notice that no one is conducting appropriate investigations, analyzing the information or conducting safety audits until we're faced with a tragic outcome. After a fatality has occurred, we're often forced to look closely at our past performance — or some other organization comes in to do it. At that point it's too late to go back; however, it's absolutely essential to look forward and ensure that we learn the lessons and never make the same mistakes again.

Major safety investigations

The investigation of a line-of-duty death or a serious firefighter injury is among the most important and difficult tasks that any fire chief will ever have to face. It's an unfortunate reality that the most painful and difficult situations also present the most immediate and critical need for a very thorough and intensive analysis. A thorough and conscientious investigation is an essential first step in ensuring that our worst days do not repeat themselves.

When we experience the loss of a life or a serious injury, it is usually only a matter of minutes before someone (usually a reporter) starts asking what went wrong. The reflex reaction to such questions is often, “We did everything by the book. If we had it all to do over again, we wouldn't do it any differently.” This response is comforting and possibly reassuring to those involved, but it's also a denial of the very obvious fact that something must have gone seriously wrong or we wouldn't have anything to talk about. This response also establishes a defensive posture for every subsequent question, conversation or revelation about what happened.

We should be saying, “We're not sure what went wrong at this point, but we are going to conduct a very thorough investigation and make every effort to ensure it doesn't happen again.” From the very beginning the emphasis has to be placed on determining what went wrong, what we can learn from the experience and how we can implement those lessons to prevent future occurrences. This process is seldom simple or easy, and it can be extremely painful, but it's also essential to keep firefighters from being killed or injured in the future for the same reasons.

Major investigations become highly visible events. Every individual or organization that has any relationship to the event will have an interest and often a bias when it comes to identifying the cause. The news media, in many cases, would be thrilled to be able to report that some individual was found to be negligent or held legally responsible, because those stories produce headlines that sell newspapers and attract viewers. Attaching blame to one individual or organization is simple, sensational, and relieves everyone else of any responsibility. In real life, things are seldom that simple.

On the opposite side of the equation, in many cases there's a reluctance to examine circumstances too closely in case they show that the victim was in some way negligent or contributed to the situation. There is a concern that we would dishonor a fallen firefighter by discovering that he or she made an error that contributed to his or her own death. As caring and sentimental as we may be, it would be foolish and professionally negligent to ignore facts and fail to learn the lessons from any unfortunate situation. The protective reflex also could apply to shielding other individuals or the fire department itself from critical examination.

Be prepared for investigation

There are several reasons why investigations miss the mark; however, the most frequent cause is the lack of a plan to conduct a proper investigation when the situation arises. The death of a firefighter is our worst nightmare. When faced with an intensely personal tragedy and all of the associated activities, few of us are capable of identifying the need for a thorough investigation as a top priority and formulating a rational plan to ensure that it happens.

Unfortunately, in many situations time is of the essence, and a delay in getting the investigation started can result in the loss of critical information. The best way to address this problem is to have a well-defined investigative process ready for immediate implementation when the situation arises. This is a plan that we hope will never have to be used, but if it's needed, the procedure should be predefined and initiated without delay.

Model procedures for conducting major investigations are available from national fire service organizations, and the U.S. Fire Administration publishes a model autopsy protocol. These guides can be obtained easily after a fatality has occurred, but that's too late to develop an effective plan. The procedure should be ready for immediate implementation.

Very few fire departments have the resources to conduct a thorough investigation of a major incident without assistance. This is particularly true when a fatality occurs, because the primary focus of the organization immediately turns to a list of pressing issues that include survivor notifications and assistance, funeral arrangements, critical incident stress debriefings, news media interviews and, in many cases, continuing operations at the incident scene. Other than in metropolitan departments, it's unlikely that the organization itself will be able to immediately assign a full team to begin the essential steps of investigation and documentation.

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The importance of looking closely at minor incidents and near-misses is beginning to be recognized within the fire service. For example, www.firefighternearmiss.com includes an advanced interactive system to accumulate and share valuable experience-based safety information. The system also provides links to resources that should help identify the appropriate intervention strategies once a problem has been identified.

Very few fire departments have the resources to conduct a thorough investigation of a major incident without assistance. This is particularly true when a fatality occurs, because the primary focus of the organization immediately turns to a list of pressing issues that include survivor notifications and assistance, funeral arrangements, critical incident stress debriefings, news media interviews and, in many cases, continuing operations at the incident scene. Other than in metropolitan departments, it's unlikely that the organization itself will be able to immediately assign a full team to begin the essential steps of investigation and documentation.

Some large departments are able to immediately assign a pre-designated investigation team to focus on capturing information and ensuring that the investigation begins without delay. Safety investigation teams have been defined as a standard mutual aid resource in several areas, and the members of a regional or statewide team are prepared to respond immediately and provide assistance to the jurisdiction that has experienced a loss of life or other major mishap. This ensures that trained and qualified individuals will be able to respond very quickly and begin the investigation process. The subsequent steps can be implemented more gradually if the initial priorities have been addressed.

Working with others

In most cases, particularly if there's a fatality involved, there will be other agencies conducting parallel investigations. These usually will include the authorized regulatory agency for occupational safety and health, and the coroner or medical examiner.

In the case of a vehicle accident, police investigators are usually responsible for conducting an inquiry. The police or a designated law enforcement agency is often required to conduct an investigation of any sudden death. The workers compensation insurer also might send an investigator to determine the circumstances. If the incident involved a fire, the fire marshal or fire investigation division will have to conduct a cause and origin investigation to determine how the fire started. If the investigation leads to criminal charges against someone who is responsible for causing the incident, the process will quickly become much more complicated. An arson fire that results in a firefighter fatality will probably become a homicide investigation, with all of the unavoidable legal complications.

All of these agencies generally have the legal responsibility, as well as the authority, to conduct their own investigations, issue reports and take specific actions as a result of their findings. Each investigative agency generally has its own rules and procedures for conducting an investigation, which may or may not include working with the fire department's internal team. Outside efforts are often directed toward finding legal responsibility, in the sense of negligence or a violation of an applicable code, standard or regulation. Depending on the situation, some of these agencies could adopt an adversarial role in which they're investigating the actions and policies of the fire department at the same time the fire department is examining itself.

It is critical for everyone involved to understand the different roles and responsibilities and to cooperate in a responsible manner. The pre-investigation planning process should identify all of the agencies and organizations that are likely to be involved in different situations and establish their various roles and responsibilities. The basic relationship between the firefighter safety investigation and all other investigative agencies must be understood.

Additional organizations, such as the National Institute for Occupational Safety and Health, the National Institute for Standards and Technology, the National Fire Protection Association and the USFA, also will become involved in some investigations as observers and information gatherers. These organizations are interested primarily in obtaining information that will provide educational or research value; however, they also can provide valuable technical assistance to a local investigation team.

Fire department responsibility

The most thorough investigation of any event should always be the fire department's own internal reconstruction and analysis of the occurrence. While other investigations will address a variety of special concerns, the fire department's internal investigation must consider every aspect and potential contributing factor. The mission of the investigation team must be to conduct a thorough and unconstrained analysis of the event and everything related to it, ensuring that the true and complete facts are determined. Corrective action must be based on addressing real problems; not a perception of the problem or part of the problem. The ultimate goal of the internal investigation is to identify corrective actions that will prevent future occurrences of a similar nature.

The results should always be shared with other fire departments and fire service organizations. The lessons, even if they are embarrassing, are much too valuable to be hidden from view. We owe it to our profession to let others learn from our experiences. The detailed fatality investigation reports and subsequent research efforts that have been produced by fire departments such as Phoenix and New York City have provided a wealth of information for the fire service to use. The reports should be studied and their lessons should be implemented by every fire department.

OSA–STEP UP TO THE PLATE
By Richard W. Patrick, M.S., EMT-P, FF

The following two articles were published in the **Volunteer Firemen's Insurance Services Newsletter.** *EGH believes every fire department should and must follow these or similar concepts of safe vehicle emergency response.*

The goal of Operation Safe Arrival is to prevent intersection collisions involving emergency and privately owned vehicles during incident responses, prevent rollover incidents, and protect responders functioning at roadway incidents.

Thousands of emergency-related vehicle collisions occur every year in the United States, resulting in hundreds of fatalities and thousands of injuries. Nearly half of the collisions occur at intersections, many more result in rollover, and a majority of these are caused by driver error. Additionally, many emergency responders are struck on the roadway while assisting others.

Although the program is formally rolled out by target states, every emergency service organization (ESO) can step up to the plate and incorporate basic fundamental principles to make a difference in their respective organizations. It takes a little work but the rewards are invaluable. Simply pledge to do the following:

GENERAL "FIVE PLEDGES OF EMERGENCY RESPONSE SAFETY"
Pledge 1: Require the ESO to adopt this program and develop and implement standard operating procedures mandating the following:

- Each ESO will develop, and all drivers will complete, a department-approved training program.
- ESOs will create and implement a behavior modification program.
- All emergency responders are to wear seat belts at all times when the vehicle is in motion.
- Officers are responsible for supervising emergency vehicle movement and safe highway operations.
- ESOs will develop and adopt SOPs for intersection safe passage, privately owned vehicle use, rollover prevention, and highway/roadway safe practices.

Pledge 2: Ensure that all drivers will be trained on intersection navigation, rollover prevention, and highway/roadway safety practices, and that training is documented.

Pledge 3: Conduct an evaluation of alternative methods to assist in managing intersection control, rollover prevention, and highway safety, and establish a plan to achieve the defined objectives. This should include posting of SOPs/SOGs, posters, and other incentives.

Pledge 4: Conduct annual motor vehicle record (MVR) reviews and verify insurance coverage on all licensed drivers.

Pledge 5: Define and implement a monitoring process and remedial training plan for corrective action.
Make a difference! Step up to the plate!

INTERSECTION GUIDELINES

As most emergency service personnel understand, intersections are a dangerous part of response. Accidents in intersections expose our personnel and their equipment to injuries and damage. Civilian death and injury can also result from these accidents. VFIS statistics indicate that intersection accidents account for a major part of our claim dollars. What do we need to do as emergency responders to be able to safely travel through that intersection?

Drivers need to concentrate on driving! Forget about everything except driving the vehicle. Your focus needs to be on arriving safely at the incident. Nothing else should be as important as that objective. Use your officer in the right seat to help with the response. Slow down, and stop if the intersection is not safe to travel through. Be ready to stop at any time during the process. Even when you believe it is safe to proceed through the intersection, be ready to stop. There is no magical formula for safely traveling through an intersection. Focus, be aware, slow down and be prepared to stop at any time.

Remember that your most important objective is to arrive safely at the incident. Make sure that the intersection is safe before proceeding.

Any intersection controlled by a stop sign, yield sign, or yellow or red traffic light requires *prudent action* by the emergency vehicle driver. The following steps should be taken:

- Do not rely on warning devices to clear traffic.
- Scan the intersection for possible hazards (right turns on red, pedestrians, vehicles traveling fast, etc.) as well as driver options.
- Begin to slow down well before the intersection, cover the brake pedal with your foot, and continue to scan in four directions (left, right, front, back).
- Change the siren cadence not less than 200 from the intersection.
- Scan the intersection for possible passing options (pass on right, left, wait, etc.), and avoid using the opposing lane of traffic if at all possible.
- If all visible traffic in all lanes cannot be accounted for, bring the vehicle to a complete stop. If you proceed past a control device with a negative right-of-way without coming to a complete stop, both the driver and officer should be required to complete an incident report providing an explanation of the circumstances that permitted them to do so.
- Establish eye contact with other vehicle drivers; have partner communicate that all is clear; and reconfirm that all other vehicles are stopped.
- Account for one lane of traffic at a time, treating each lane as a separate intersection. Have all of your drivers review these important procedures.

Mishap Analysis

By Colonel David Nichols, USAF

The following article excerpts appeared in the July/August 1973 edition of Air University Review. *Despite its publication date, we think it will provide the fire service with applicable food for thought regarding fire service incident analysis/ investigations. Feel free to substitute the words "fire service" for "Air Force" where appropriate.*

Several years ago a waterfront community was threatened by an epidemic from unknown causes. More than a thousand residents became ill within a week, and one person died. An autopsy was performed and revealed that death resulted from uremia, probably aggravated by impure food. The circumstances indicated that shellfish were the cause. Armed with this information, the local authorities acted promptly to correct the shellfish problem. But unfortunately, several other persons became seriously ill before it was discovered that the first fatality was not indicative of the real cause of the epidemic. The basic cause was not the shellfish but was, in fact, water pollution.

This story brings to light several fallacies from which it is important to learn the following lessons. The first lesson is that isolated and/or spectacular cases do not provide the best guide for corrective actions. A second lesson is that a wrong diagnosis of cause factors usually results in the wrong remedial actions. And finally, the true source of a majority of ills is the best foundation upon which to base analysis. Thus, while attacking the shellfish, one should not overlook the possibility of water pollution.

Today's Air Force is subject to three fallacies, too, and they impose limitations on the safety program.

Fallacy I. Today, relatively few problem areas are identified through accident investigation. One reason for this is that most causes do not reach the "accident" stage, because someone—usually the pilot—saves the aircraft. Airborne emergencies that are safely recovered belong in this category; they are events that could have been accidents. In reality, they should be considered as accidents, accidents that did not result in injury or damage. And it is here that a fallacy becomes apparent: these "accidents" will not be analyzed for accident potential because there was no injury or damage. They are ignored in much the same way as the polluted water.

The seriousness of this shortcoming was identified by H. W. Heinrich, a noted pioneer in the scientific approach to accident prevention, when he observed that ". . . for every mishap resulting in an injury [or damage] there are many other similar accidents that cause no injuries [or damage] whatever." He reached the conclusion that, in a group of similar mishaps, 300 will produce no injury whatever, 29 will result in minor injury, and one will result in major injury. He emphasizes that the importance of an individual mishap lies in its potential for creating injury and not in the fact that it actually does or does not. Therefore, any analysis as to cause and remedial action is limited and misleading if based on one major accident out of a total of 330 similar accidents, all of which are capable of causing injuries or damage. In other words, those who limit their study to isolated, spectacular cases—major aircraft accidents—are looking only at the tip of an ominous iceberg.

Fallacy II. Another reason many "causes" go undetected is that accidents are extremely difficult to investigate and analyze *accurately*. Often investigation boards have little more than a "smoking hole" for evidence; consequently, it is easy to arrive at erroneous conclusions in spite of the most commendable efforts. A more critical observer reports that ". . . accident boards, forced by expediency, sometimes find it easier to assume pilot error than to prove materiel deficiency or maintenance error." He supported his case with the following logic:

Over a nine-month period a fighter wing's mishap experience included 204 reportable and nonreportable incidents. In the same period the wing had six accidents. Analysis of the incidents revealed 9 percent were caused by pilot error, while 90 percent resulted from materiel failure and/or maintenance malpractice. However, pilot error was assessed as the primary cause in 83 percent of the accidents. Materiel failure was *proven* in only one case.

A more recent twenty-month study in a different wing revealed 975 mishaps (accidents, reportable incidents, and nonreportable incidents). Pilot error was the cause of approximately five percent of the total. This should indicate that pilots cause less than ten percent of the accidents. Yet during this same general period, Air Force-wide statistics reflect that pilots cause over 40 percent of the accidents.

Do accident investigation boards fail to uncover true cause factors? If so, numerous problems have been neglected and hence will contribute to other accidents.

Fallacy III. Accidents do not occur frequently enough to establish trends, particularly at lower echelons of command. Unless a trend is established, commanders may be forced to treat the effect rather than the cause of accidents.

Air Force directives require reports on those incidents that are "almost accidents," and this is particularly useful information because the aircrew and equipment are intact for a logical and thorough investigation. Thus reportable incidents provide more accurate cause factors and a better data base for analysis and remedial actions than actual accidents.

So those who analyze reportable incidents as well as accidents are on somewhat firmer ground, but this also is only looking at the tip of a large iceberg. The tip, in this instance, allows study of both accidents and "almost accidents," but it ignores data from "could have been accidents." Moreover, this tip is still too small for trend analysis at wing level.

The most reliable source of information is that which includes all problems that could result in an accident. These problems will be found by studying the *mishap rate*, which measures accidents, "almost accidents," and "could have been accidents." A truer definition of the mishap rate might be *the recording of all unexpected events, occurring in flight, that did result or could have resulted in an airborne emergency*.

Revisiting Heinrich's 'Accident Triangle'

Rather than focus on compliance, concentrate on safety fundamentals

By Dr. Mike Williamsen

Dr. Mike Williamsen is vice president of consulting services for CoreMedia Training Solutions.

H.W. Heinrich changed the world of safety fundamentals forever with his pioneering work in the 1930s. One of his concepts that continues to make me think is his accident triangle (pyramid) [which theorizes that] for every 300 unsafe acts there are 29 minor injuries and one major injury.

It's the concept that we all are familiar with. So many near misses lead to an analogous number of first aid injuries and onward through the logic to recordables and ending in the inevitability of a fatality.

This inevitability of disaster has always bothered me. If I cross the railroad tracks too many times I will die, or drive to work too many times or something else like that. I am not a fatalist, so what is there that will enable the industrial workplace to overcome this fatalistic teaching?

My work with companies and individuals that have done both well and poorly in safety always leads to individual behaviors as a key factor after workplace conditions, training and safety standards are addressed. So how do we attack the fatalism of Heinrich's triangle?

If we build a safety triangle (pyramid) on the "stone" of excellent fundamentals that modify behaviors and actions, we can limit the base of improper activities that lead to 98 percent of the injuries in Heinrich's model. Each time I have gone down this road the results have been similarly excellent.

Focus on Fundamentals

The fundamentals of upper management visibility in safety, middle management involvement, focused supervisory performance, [employee] active involvement, and training that both teaches and reinforces these basics of excellence has significantly reduced injuries. The approach has direct similarities to the six sigma process of continuous improvement (define, measure, act, improve, control). Here's how it applies to safety:

- Define the correct behaviors that eliminate unsafe acts and injuries;
- Train all personnel in these behaviors;
- Measure that personnel are indeed doing these correct behaviors;
- Reward their accomplishments of these correct behaviors.

By eliminating dangerous behaviors there are never enough dangerous actions to get us to a more serious level of safety injuries in Heinrich's pyramid. The key is to not focus on compliance, or reward "acceptable injury levels/goals." Instead, concentrate on the fundamentals that eliminate the activities/behaviors that move us up the Heinrich inevitability triangle.

"By eliminating dangerous behaviors there are never enough dangerous actions to get us to a more serious level of safety injuries in Heinrich's pyramid."

Everyone Goes Home: Words to Train and Live By!

Members of the Southwest United Fire District (IL) Academy's Certified Firefighter 2 class (photo at right) recite the "Everyone Goes Home" slogan. It's recited at the conclusion of each day's fitness period and at the end of every class day. The academy classrooms and training facilities carry the logo and recruits are awarded the black wrist bands at their graduation ceremony. Great work!

CREATING THE "NEW" FIRE SERVICE SAFETY CULTURE: A PERSPECTIVE, PART 1— by Bill Manning

On the face of it, the Life Safety Initiatives are basic stuff. Promoting their value to the fire service should be like selling baseball pitchers on the importance of the curveball and the changeup. But it's not as easy as that.

Few firefighters would take issue with the individual Life Safety Initiatives, in concept. While the process of implementing specifics within the Initiatives should yield healthy discussion, the conceptual framework is not only sound, but practically inarguable. What makes the task of reducing line-of-duty deaths and injuries so challenging is that certain negative behaviors, attitudes, and systems are engrained in many fire department cultures. Our success in reducing deaths and injuries on the job is directly related to our ability to change behaviors and attitudes—to change culture.

"Culture change" is the first Life Safety Initiative, from which all others follow. To do that, we must have a better understanding of what it is and what it isn't.

The first Initiative reads: "Define and advocate the need for a cultural change within the fire service relating to safety; incorporating leadership, management, supervision, accountability and personal responsibility." Focus on the words "incorporating leadership, management, supervision, accountability, and personal responsibility." We not only expect change, we expect *everyone* to change, we expect everyone to *lead* in the change, we expect everyone to be *accountable to each other* for the change, and we expect everyone to take *personal responsibility* for the change. It's heady stuff.

But think about it. We use these words—leadership, accountability, personal responsibility, and such—all the time to describe high-level action qualities in our fire service. Aren't these intangibles necessary for any life-saving operation to succeed? Aren't these values you inherently adopt when you swear to uphold your duty to save lives and property?

So where's the disconnect?

The disconnecting occurs on five levels. First, "culture change" is viewed by some as a threat. Second, bad (unsafe) behaviors and attitudes are allowed to leech into what the membership see as part of "tradition." Third, safety and mission within organizational cultures are imbalanced. Fourth, the voices (and actions) of safety leadership have been either subconsciously muffled or consciously subdued. And fifth, the lessons from behavioral safety science haven't been embraced by fire service leaders, much less blended into everyday operations.

It's not difficult to understand why, for some, culture change causes neck hairs to stand straight up: For them, "culture change" translate to "assault on tradition." But the goal is the culture change Life Safety Initiative is anything but that.

To put it simply: The fire service is an institution whose mission is to save lives and property. Saving lives and property is a 2,000-year fire service tradition. Other customs and traditions have developed in support of that mission and the organization: the tradition of parades, the tradition of fire department funerals, the tradition of graduation or advancement ceremonies. Fire service traditions are good. Saving lives is a proud fire service tradition.

A culture develops in the day-to-day execution of the mission, very different from tradition, that derives from personal and group attitudes and behaviors. It's how people think, feel, and act toward their work and others in the organization. There's good culture and bad culture, or more specifically, good behavior and bad behavior, good attitudes and bad attitudes. On the negative side, not wearing your chinstrap inside a burning building, for example, is bad behavior, a cultural aspect that needs changing, as is management's failure to correct the problem. We could fill pages on unsafe behaviors that are tolerated within fire department cultures. But they are just that—part of a culture, not part of a tradition.

With that in mind, changing the culture means reversing negative, "business as usual" thinking and behavior patterns to improve safety within the traditional mission. It means getting better and safer in every aspect of what you do, nothing more and nothing less.

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As of the end of November, more than 100 firefighters have died in the line of duty, continuing a trend that has plagued the American fire service for years. We take this opportunity, once again, to restate our commitment to reduce fire service LODDs and appeal to fire departments across the United States to take the steps necessary to create a more responsible, safety driven culture within their organizations. Only by working together, sharing information, implementing safety policies and procedures, and continuing to advocate for change can we reverse the trend. Everyone MUST Go Home!

CREATING THE "NEW" FIRE SERVICE SAFETY CULTURE: A PERSPECTIVE, PART 1 — by Bill Manning (continued from Page 7)

"Business as Usual" and Complacency: the Enemies of Progressive Culture

Firefighting and lifesaving is a heroic business, and your heroism shines through, in many ways and on many stages. That includes, each year, confrontations with fire that claim the lives of our members. However, without any judgment or prejudice whatsoever, the fact is that the vast majority of line-of-duty deaths each year do not directly involve heroic circumstances.

While it's true that every firefighter who dies in the line of duty rightfully receives a hero's funeral service, it's also true that the vast majority of our LODDs are so obviously preventable as to evoke well-founded outrage. This is especially true of our completely preventable and completely senseless roadway/vehicle response tragedies, and to an extent, our heart attack deaths.

There's no LODD circumstance or cause that defines personal and organizational irresponsibility like "to and from" injuries do. Such incidents display complacency and the "business as usual" mentality at their very worst. Without a basic culture change in this area, it's hard to imagine how we can tackle the rest of our problem areas with any measure of success.

But we can and we will. By the very nature of their controllability, reduction of "to and from" incidents overall must and will be the first manifestation of our willingness to become "progressive" organizations. Again, we need to strip away the mystery and misperceptions. Over years of conversations with firefighters, I've found that some think of the word "progressive" in the abstract, with a sense of mystique and wonderment, almost as something unachievable by organizations of mere mortals. Others imbue to it a negative connotation, as something to be avoided, an enemy of "real firefighting" and "real firefighters." Of course, being "progressive" just means seeing ahead and taking actions necessary to make progress. If we can all agree that reduction of "to and from" deaths are a good and common goal representing real progress, then it's incumbent on all fire organizations and individuals to "get progressive."

Perhaps this seems too unsophisticated. But, in part, we're dealing with changing attitudes, and the walls we've built to withstand change are thick. The natural human resistance to change is made all the more difficult to break because unsafe acts and attitudes have been repeated and repeated until they've been engrained in our cultures for years—the "business as usual" syndrome. And, if left unaddressed, very predictable human reactions to responses within a life-and-death occupation whose margins for error are small—the adrenaline rush during response comes readily to mind—will continue to bring about untimely funerals and incapacitated firefighters.

I've heard people wonder aloud why the Life Safety Initiatives focus on line-of-duty deaths, instead not injuries. First off, they're easily measurable and the reduction impact will be immediately recognized and felt. Saying, for instance, that we're shooting for a line-of-duty injury reduction 100,000 to 70,000 in five years is harder to quantify and doesn't carry the same urgency or stark simplicity. But more important, as the problems we face are interrelated, the question's a nonstarter: What connects LODDs, injuries, near misses, and thousands upon thousands of "harmless" unsafe acts without direct consequences is a business-as-usual and complacent mentality inherent in the fire service, which can only be counteracted by conscious, progressive efforts to change the culture at multiple levels of group interaction.

In other words, we know by measuring safety progress at the "tip of the iceberg" that profound cultural changes are happening "under the surface." The behavioral safety community has long theorized and amassed considerable evidence supporting that for every workplace catastrophe there are hundreds of unsafe acts preceding it.

In his article "Psychology of Behavioral Safety," published at www.behavioral-safety.com, Dr. Dominic writes, "People often behave unsafely because they have never been hurt before while doing their job in an unsafe way: 'I've always done the job this way' being a familiar comment. This may well be true, but the potential for an accident is never far away as illustrated by various accident triangles. Heinrich's Triangle, for example, suggests that for every 330 unsafe acts, 29 will result in minor injuries and 1 in a major or lost time incident. Over an extended period of time, therefore, the lack of any injuries for those who are consistently unsafe is actually reinforcing the very behaviors that in all probability will eventually lead them to be seriously injured. The principle being illustrated here is that the consequences of behaving unsafely will nearly always determine future unsafe behavior, simply because reinforced behavior tends to be repeated."

While I'm unaware of any of these studies having used the fire service as the subject, I'd presume, given the firefighting/fire service environment and prevailing cultures, that we'd not fare well. The challenge is not so much preventing the one catastrophe as it is preventing the hundreds and hundreds of unsafe behaviors that have no overt consequence but that degrade the safety culture to the point that the organization becomes ripe for a big tragedy.

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CREATING THE "NEW" FIRE SERVICE SAFETY CULTURE: A PERSPECTIVE, PART 1— by Bill Manning (continued from Page 8)

The fire department, for example, without strict, enforceable driving policies is a department that, due to repetition and reinforcement of unsafe acts, commits to a culture that feeds the lie that its human losses are "just part of the fire service—just the way it is, always has been, and always will be." It's *not* okay to drive recklessly and respond as though normal road safety rules don't apply, and a department that doesn't educate its members and enforce policies as such pays the price in ways yet to be seen. The same for seatbelt policies, driver training, and highway safety protocols. And physical fitness.

But it's not a one-way street or simple fix. Culture change is not as simple as a boss handing down policies. It's about mindswitch. It's about getting people motivated to buy into the message. It's about creating a culture that continually replenishes itself and moves forward through effective positive and negative reinforcement. You have to make it popular and fashionable to do the right thing, awarding good behavior and punishing bad behavior. Culture change happens company by company, championed by internal safety advocates. It's about reciprocal accountability, reciprocal leadership. It's a planet that, as it gets larger and stronger, pulls more people into its gravity. It's about infusing greater responsibility into the organizational fabric, demanding that the individual is dutybound to do what's right for the organization. People who aren't behaving in ways that are good for the organization have no business being there. The culture must support what's good for the organization as a whole so each individual can be served.

By not seeking to become progressive (as in *doing* something about the problems above and below the surface), by not at least *beginning* to create a safer culture within the fire service, by not addressing our "business as usual" mentality, and by falling into the complacency trap, the organization is doomed to repeating the mistakes of the past—mistakes we live and relive year after year.

Changing Fireground Culture

I've written extensively over the years about fire service culture and how courage and heroism and educated risk-taking must not be eradicated from this business—how they're defining characteristics of the fire service that distinguish it from most other nonmilitary occupations, and how sanitizing those characteristics will take the heart and soul out of it. I still believe that to be true. Yet in saying that, I'm also speaking from a perspective where all the support systems, on-scene resources and coordination, communications, size-up, training, experience, command structure and span of control, safety protocols, preincident planning, and so forth are abundant and in place before and during the event, whereby and through which thinking firefighters and officers can make personal and group risk assessments to place themselves in marginally tenable situations to save known lives—that's to say, they can act courageously because they have all the tools, systems, and support to do so. And while firefighters are and will continue to exhibit great courage and bravery, in too many places the complex safety/support structure isn't in place.

It's a crucial point, because when it comes to culture change, many, if not most, firefighters are concerned that they'll still have the freedom to be a "real" firefighter and make a difference where it counts most, in saving lives and property.

If properly construed, there's nothing in the Life Safety Initiatives meant to take "fighter" out of "firefighter." The key to it is *balance.* A culture of safety means the homogenization of smart thinking, sensible protocols, and providing the systems and people investment required to create an aggressive yet safe fire department. Because few fire departments in the United States have achieved equilibrium of the two, "safe" and "aggressive/effective" often are seen as antithetical, when they're really entwined.

The concepts of risk management, risk assessment, fireground behavior, and fireground policies deserve greater scrutiny with respect to culture change and LODD and injury reduction. These concepts must be developed in constructive, balanced ways that are mission- and people-responsive. Though there are some obvious circumstances wherein simple rules need to be instituted and enforced—seatbelt usage readily comes to mind—more complicated response safety issues demand thoughtful, holistic treatment because, first, they necessitate profound behavior and attitude changes and, second, the department's very identity hangs in the threads.

A firefighter wants to be a firefighter to the fullest extent, and you won't stop him or her from being one unless you turn the fire department into the department of public works. The prescription for firefighter deaths on the fireground isn't mission revision. For example, taming a potentially dangerous situation by writing out property protection may seem to "solve" the problem, but, in effect, it says "We (as an organization) don't have the wherewithal or ability to create a balanced culture of safety and aggressiveness within our mission statement, so to protect you (the underprotected firefighters) from yourselves, we're going to write rules that amend the mission statement."

That's not to disparage any organization whose leadership is concerned about its members going home after shift or after the call and so pose strict policy limits on response to unsavable property. We've all seen enough firefighters dying in vacant commercial structures to know better. But it is to consciously revisit what only a few courageous souls in this business have had the smarts and nerve to say: that effectiveness equals safety. The statement, when understood and practiced, is the perfect response to the "dilemma" between safety and mission.

In my next column, we'll continue the discussion of fireground culture and the "effectiveness equals safety" concept.

Nevada Fire Departments Adopt Wellness/Fitness Program

Recognizing the high incidence and potential for cardiovascular disease among firefighters, the Las Vegas, North Las Vegas, and Clark County fire departments have adopted a wellness/fitness program for their members that marries computer technology with health and fitness initiatives. Through the initiatives of the Office of Research and Development for Firefighter Wellness and Fitness, housed within the University of Las Vegas, the development, field testing, and distribution of a portal for firefighters – called Well eMerica© -- is underway.

Well eMerica is an electronic portal designed to improve health, reduce injury risk, and enhance job-related performance of fire service personnel (later target groups will also include fire service retirees, and family members). Well eMerica for fire service personnel is designed to:

- Allow the user to interact with a database of fire service specific wellness and fitness topics.
- Provide print and electronic resources that have the approval / endorsement of a) the research team within the Office of Research and Development for Firefighter Wellness and Fitness, b) the International Association of Firefighters / International Association of Fire Chiefs office, and / or c) the leaders of the local fire department.
- Determine current wellness and fitness levels, compare these levels with national standards, identify wellness and fitness goals, and create a plan to achieve personal goals tailored to the user's needs.
- Archive and make available individual wellness and fitness test results that are housed in a secured database.
- Coordinate rehabilitation (both physical and psychological) efforts between a fire department's medical staff and the guidelines developed within Well eMerica©.
- Sponsor motivational programs that enhance personal wellness and fitness levels.

For further information, go to http://wellemerica.unlv.edu/natl_res&dev.html.

USFA, NVFC Release Volunteer Vehicle Safety Program

The U.S. Fire Administration and the National Volunteer Fire Council have released a Web-based educational program, Emergency Vehicle Safe Operations for Volunteer and Small Combination Emergency Service Organizations, that includes an emergency vehicle safety best practices self-assessment, standard operating guideline examples and behavioral motivation techniques to enhance emergency vehicle safety.

As crashes from privately owned vehicles are the leading cause of volunteer firefighter on-duty fatalities responding to and returning from emergencies, this program also discusses critical issues of volunteer firefighter safety in such vehicles.

"Vehicle crashes represent the second-leading cause of on-duty firefighter deaths in the volunteer fire service," said Charlie Dickinson, USFA deputy administrator. "This emergency vehicle safety educational program will also support the National Fallen Firefighters Foundation Firefighter Life Safety Initiative."

The program is a result of one of the partnerships with several leading fire service membership organizations as a follow-up to the Emergency Vehicle Safety Initiative, a USFA project developed to reduce the number of firefighters killed while responding to or returning from the emergency scene.

"This emergency vehicle safety educational program will enable the volunteer fire service to easily and conveniently obtain comprehensive information in this area while at home or in the station," said NVFC Chairman Philip Stittleburg. "Educational outreach is critical in reducing the number of volunteer firefighters we lose year after year."

The Emergency Vehicle Safe Operations for Volunteer and Small Combination Emergency Service Organizations is now available online at www.nvfc.org/evsp/index.html.

Would you like one of Everyone Goes Home Speakers Bureau members to present on the Firefighter Life Safety Initiatives at your department or your conference? Please contact us at:
everyonegoeshome@firehero.org.

NIOSH PASS Alert Notice

The National Institute for Occupational Safety and Health (NIOSH) reports that exposure to high temperature environments may cause the loudness of Standard on Personal Alert Safety Systems (PASS) alarm signals to be reduced, causing the alarm signal to become indistinguishable from background noise at the incident scene. This potential problem was brought to the attention of the International Association of Fire Fighters and the National Fire Protection Association (NFPA) Technical Correlating Committee on Fire and Emergency Services Protective Clothing and Equipment and the NFPA Technical Committee on Electronic Safety Equipment.

NIOSH incident investigations of four firefighter fatalities between 2001 and 2004, in which PASS alarms were not heard or were barely audible, prompted the report. The PASS alarms had been certified as compliant to NFPA 1982, 1998 Edition, and involved both stand-alone PASS and SCBA-integrated PASS.

The National Institute for Standards and Technology (NIST) Fire Research Division has shown that sound reduction occurs at temperatures as low as 300°F (150°C). However, further testing on PASS signal degradation with respect to temperatures and exposure duration are required.

For further information, refer to the NIOSH, IAFF, and NFPA websites.

We welcome your input:

If you have an article or interesting news item that would benefit our readers and our program, please submit item to us for review. Send submissions as follows:

Email:
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Home and Commercial Sprinkler Advocacy - Further Supported by New NFPA Findings

Fully adopting and supporting the Everyone Goes Home Life Safety Initiatives includes advocating for automatic fire sprinklers however and wherever possible. The fire service must be at the forefront of local, state, and national legislative and awareness efforts.

With such advocacy in mind, the National Fire Protection Association has released an updated report with new evidence on the incalculable value of automatic fire sprinkler systems. The report, "U.S. Experience with Sprinklers and Other Fire Extinguishing Equipment," finds sprinklers to be even more reliable than previously estimated in reducing U.S. fire deaths, yet continues to remain underused, especially in the place where the risk of fire death is greatest: the American home. Sprinklers were installed in only nine percent of fires large enough to activate them.

The report states that when sprinklers are installed, the chances of dying in a fire are reduced by 50 to 75 percent. Furthermore, the report documents that nearly all sprinkler "failures" involve human error; 65 percent of sprinkler failures occurred because the systems had been shut off prior to the fire.

That report indicates that while sprinklers have been installed in most health care facilities, high-rise hotels, and high-rise office buildings and, to a lesser extent, in department stores and manufacturing facilities, most fires occur in properties without them—most critically, residential structures. According to the NFPA, sprinklers are present in less than one percent of the reported fires that occur in one- and two-family dwellings and in less than eight percent of reported fires in apartments. Where sprinklers are present in homes, their impact on life safety is as large as it has been in other properties where sprinklers have been long-established.

EVERYONE GOES HOME FIREFIGHTER LIFE SAFETY INITIATIVES
PROGRAM UPDATE

The implementation of the 16 firefighter life safety initiatives is dependent on continued visibility of the effort. With the assistance of funding from the Fire Act Grant, the team leaders for the *Everyone Goes Home* Firefighter Life Safety Initiatives Program have enlisted a group of audio/visual media companies to work with a select group of subject matter experts in the development of a media package for distribution to provide the necessary implementation tools to fire departments. The main focus of this media package will deal with the most critical issues facing firefighters: Health & Wellness, Vehicle Safety, Fire Protection Awareness, Situational Awareness, and Safety Self-Assessment. In the early part of 2006, a media package consisting of DVDs, videos, CDs, including Power Point presentations and detailed lesson plans, along with a supporting poster will be delivered to over 30,0000 fire department to aid the U.S. fire service in the implementation of these life saving initiatives to ensure that EVERYONE GOES HOME! Please check our website www.everyonegoeshome.com for updates on this effort.

SEAL OF EXCELLENCE Program

The *Everyone Goes Home* Life Safety Initiative Team is putting together a "SEAL of EXCELLENCE" awards/recognition program. This program is to identify and recognize those who have taken the "EVERYONE GOES HOME" theme to heart. During the first quarter of 2006 we will recognize and award a Seal of Excellence Awareness presentation to the firefighter, department, and organization that has taken seriously the objective of the LIFE SAFETY INITIATIVES and moved from seeing to believing that we can make a difference…

WHAT ARE YOU DOING TO ASSURE
"EVERYONE GOES HOME?"

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

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.

We want to recognize those who have taken the program from talking to walking, from showing to telling, and from hearing about it to implementing it. If you have done something that reflects the "EVERYONE GOES HOME" campaign as a means of endorsement, please tell us your story so that we might share it…

We are proclaiming January 2006 as
***SHOW AND TELL* Month**

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

everyonegoeshome@firehero.org

LSI—CALENDAR OF EVENTS

Date	Venue	Location
Jan. 22-25, 2006	**Fire Department Safety Officers Association (FDSOA)** - 18th Annual Apparatus Symposium Mini-Summit on Emergency Vehicle Safety, Driving Training, and Scene Safety www.fdsoa.org	Orlando, FL
Jan. 25-29, 2006	**Fire-Rescue East** Florida Fire Chiefs Association www.ffca.org Effecting Real Change...So *Everyone Goes Home* - Presenter: Billy Goldfeder, EFO, Deputy Chief, Loveland-Symmes (OH) Fire Department	Jacksonville, FL
Feb. 20, 2006	**Firehouse World Exposition & Conference** Mini-Summit on Health-Wellness-Fitness www.firehouse.com	San Diego, CA
Feb. 24-25, 2006	**Virginia Fire Chiefs Association** 2006 Mid-Atlantic Expo & Symposium Seminar on Implementation of 16 Initiatives www.vfca.us	Virginia Beach, VA