Firefighter/EMT Safety, Health & Survival:

Safety 101: The Fundamentals of Safety Management

December 15, 2009

We continue to hear that firefighter safety is an issue, and certainly more can be done to better manage firefighter injuries, illnesses and fatalities. Barriers to improving safe performance include cultural issues, leadership issues and operational philosophies—and these may all be valid.

Maybe we should go back to the basics of industrial safety and make sure we are applying fundamental safety practices to our jobs every day.

There are about as many definitions of safety as there are safety professionals and organizations. But there are also some realities about accidents, injuries, property damage and death that are consistent and continually fit into the environment or business we function in.

In real terms, accidents cause economic and social loss, impair the productivity of both individuals and groups, create inefficiency and lower the standard of living. In all cases, the elimination of accidents becomes vital to public interest (from the National Safety Council Philosophy, Accident Prevention Manual for Industrial Operations: 1978).

Here are traditional definitions for safety:

Safety: the condition or state of being safe; freedom from danger or hazard; exemption from hurt, injury or loss

Safe: incapable of doing harm, no longer dangerous, in secure care or custody

— Webster’s 1913 Dictionary

In all cases, by intent, definition or interpretation, the term safety means to keep one safe from injury, illness, damage or theft. As we have worked through the last century, we have seen that safety has become a vital part of business, industry and general daily activities, becoming an integral part of emergency-service operations.

Six Reasons to Work to Prevent Accidents

The National Safety Council has advanced six reasons for the continuing, concerted effort to prevent accidents (Accident Prevention Manual for Industrial Operations, 7th Edition):

•Needless destruction of life and health is a moral evil.

•Failure to take necessary precautions against predictable accidents involves moral responsibility.

•Accidents severely limit efficiency and productivity.

•Accidents produce far-reaching social harm.

•The safety movement has already demonstrated that its techniques are effective in reducing accident rates and promoting efficiency.

•Nothing in the available data suggests that safety professionals are near a limit in their ability to extend the moral and practical values of accident prevention.

While other initiatives have impacted industrial safety over the last 100 years, this author believes three major issues have contributed to maintaining a safe environment in the workplace:

•The human factor of being safe and the adversity of financial loss, injury, illness, death and property damage

•The introduction of worker’s compensation insurance protection

•The Occupational Safety and Health Act of 1970

Specific approaches to safety adopted by individual industry segments, such as secondary standards (e.g., NFPA standards, NIOSH, etc.), loss control requirements of insurance companies and changes due to litigation, are secondary impacts on the original idea of safety.

Safety Is Not the Same as Risk Management

Although they are often used interchangeably, these two terms—safety and risk management—don’t mean the same thing. Risk management evolved from the insurance industry, which combines approaches of both risk control and risk financing to manage risk.

The safety function is just one component of risk control, which includes the practices of loss avoidance, loss prevention, loss reduction, transfer of risk by contract and the segregation or separation of exposures to reduce risk.

Suffice it to say that many times the application of the term risk management to fire department operations is either an unintentional or intentional misnomer for loss avoidance, loss prevention, loss reduction or separation/segregation techniques.

Now that we understand the nuances of safety versus risk control versus risk management, we can move on to an important element in keeping firefighters and emergency medical personnel from being injured, sickened or killed or experiencing property damage: identify and analyze how incidents occur and prevent them from happening again.

Safety—being safe—is a personal responsibility and a concept every person in the emergency-service organization must understand and accept as a key principle of operation. Otherwise, your efforts to reduce accidents, injury, property damage and death will not be successful!

**Firefighter/EMT Safety, Health & Survival:**

**Safety and Risk Management Starts at the Top**

**November 15, 2010**

As we use the term today, risk management refers to programs that help us evaluate what we do and how we do it. We put into place certain controls in order for us to operate within particular safety parameters. These parameters help ensure that we injure and kill fewer people while working.

The first of the controls are administrative, consisting of standard operating guidelines or procedures, training requirements, safe practices, rules and regulations, fire-code compliance inspections, industry standards and best practices.

The engineering controls build in what we need to reduce risk and increase safety. Some examples of these are apparatus design, building construction (codes), thermal imaging and active and passive fire-protection systems.

The third type of control is personal protection, which comes in the form of PPE and is the one we more closely relate to; however, it is the last item in the process. We must realize that if the administrative and engineering controls are in place, the need for PPE lessens.

For example, take a commercial building fire. If in fact the codes were strictly adhered to when built and the building is outfitted with active and passive fire protection systems, and if a good inspection program ensures compliance, the fire will be contained to the area of origin by the sprinklers and fire walls and fire doors—we’re looking at an easy mop-up-and-go-home type of job.

However, a failure in these systems—whether mechanical in nature on an active fire-protection system or a breach of passive fire protection like a hole in a fire wall—could lead to unsafe conditions and firefighter injury or death.

Yes, Chief. Back to basic fire prevention and protection principles!

While knowing that firefighting is inherently risky work and our people are often thrust into situations considered high risk, having a good risk-management plan or program and knowing where the lines must be drawn are critical to the longevity and survival of our people in the field. We as chiefs need to reaffirm when the risk is not worth taking, as in vacant buildings, and when circumstances allow us to take some risk in the interest of saving a human life. The controls above, along with good, solid training and experience, permit us to take calculated risks with good outcomes.

A very small percentage of line-of-duty deaths happen due to unforeseen circumstances. It’s important that we start looking at a process by which we can evaluate and define risk so we can reduce injury and death on the job. That process is fairly simple:

•Identify what risks are inherent in firefighting, rescue, hazmat, EMS and the other things we do; perform a risk analysis.

•Evaluate the risks in terms of how often and how bad the consequences could be, what can happen and at what intervals.

•Control the risks through a good risk-management program using APE-Administrative, PPE and Engineering controls.

Risk management is a concept that has been in and around public service and private industry for a very long time. It should be regarded as a system more than anything else. Looking at the process above of identifying, evaluating and controlling risk, we need to use this system so we can minimize risk.

Analyses have been performed of firefighting tasks and the associated risks too many times to list, and they still show most of these risks are avoidable. If in fact fire departments use the three-phase process above and they’re successful, it’s probable that they’re measuring their success rates by their ability to enforce their risk-management program.

We also understand that we wield a two-edged sword. We know if we arrive too late at an occupied structure fire, we may not be able to make a difference in saving lives or property. However, with that in mind, we may also tend to drive too fast, run controlled intersections against signals and cause death and injury to others or ourselves, the very thing we’re trying to prevent.

It’s hard to strike a balance, but if this was easy, anyone could do it. Risk management takes patience, understanding, training and the ability to analyze and decipher where and when we’ll take chances. In fire service organizations, risk management has to occur at every level; however, it starts at the top and on the fireground, with the incident commander. It has to trickle down to the company officers and the line firefighters, these two being the most vulnerable to the risks at hand.

The expectation of people who depend on the emergency services is that we’ll show up in a timely manner and cure their headaches, whether it’s a fire, oil burner emergency, heart attack or a gasoline tanker lying on its side. Although the public expects their firefighters to “lay it all on the line,” they don’t necessarily accept the fact that we get injured or killed for no good apparent reason.

Many citizens have often questioned our tactics when firefighters are killed or badly injured in a vacant building, for example. Yes, even the layperson knows that an empty, abandoned building is not worth the risk. Chief Ronny Coleman of California said that based on the factors above, “we’re the most qualified group of individuals to go into a dangerous situation and come out alive.” He’s right.

Good luck, stay well and stay safe.

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