

Life Safety Message Priorities Based on Firefighter Risk Categories

Use this informational document to help plan your Firefighter Life Safety Session. While there are a number causes of LODD incidents, there are different safety priorities for different firefighter groups according to their age and whether they are volunteer or career staff. While these do not represent individual risk, they are representative of the overall groups.

Within these groups, there are three primary causes of LODD incidents. These three categories represent the vast majority of the 100-115 LODDs that occur each year, and include:

1. **Stress/Overexertion**

The number one cause of firefighter fatalities is stress and overexertion. This cause of death can be greatly reduced through improved health maintenance among firefighters, and by educating firefighters about the early warning signs of a cardiovascular event. The group of individuals most affected by this cause of death includes older firefighters from 41 years old and up, but each year stress or overexertion claims the lives of individuals in every age group as illustrated by a recent (April 2009) fatality involving the overexertion of a 26-year old. Health education and physical fitness programs generally show gradual results, so improvement in this area is a long-term solution. Given the abundance of deaths associated with this cause, however, it must be central to any advocate message.

2. **Vehicle Collisions and Seatbelt Use**

While ranking third overall, vehicle collisions are the second priority area for advocates due to the opportunities for immediate reductions in annual fatalities. In general, about half of accidents happen in personal vehicles, and half in department vehicles. The majority of these fatalities could have been prevented by either wearing a seatbelt or reducing speed.

3. **Operational Safety**

The third priority revolves around operational safety, and targets a reduction in several response-related causes of death. Through better training and reexamination of policy, fatalities associated with asphyxiation, trauma, and entrapment can all be reduced. For example, enhancing the ability of firefighters to identify less stable manufactured wood flooring, which tends to fail much earlier than natural wood or other materials when exposed to heat and flames, may have prevented several incidents in previous years where deaths were associated with structural failure.

The remainder of this document addresses advocate audience targeting by age and firefighter type. In recognition of the short period of effective communication that exists during each advocate visit due to the rigorous and uncertain

schedules of most firefighters, this document may be used to limit messages to those areas where the most dramatic change is possible.

Population: Under 21 Years Old (y/o)

Focus

1. Vehicle safety and seatbelt use, especially in personal vehicles
 - a. 46% of fatalities in this age group are caused by vehicle collision. Of this number, 35% occur in personal vehicles.
 - b. This age group, compared to all ages, is:
 - i. 2.2 times as likely to die responding
 - ii. 3.5 times as likely to die in vehicle collision
 - iii. 3.8 times as likely to die in personal vehicle
 - iv. 3.85 times as likely to die riding vehicle/apparatus
2. Fire attack safety
 - a. 42% of fatalities in this age group are caused by trauma or entrapment
 - b. This age group, compared to all ages is:
 - i. 2.4 times as likely to die of trauma

Causes of death for which education would be of little value:

1. Stress Overexertion (0.05 times as likely to die of stress/overexertion than general group)

Population: 21-30 y/o

Focus

1. Fire attack safety
 - a. 59% of fatalities in this age group are caused by trauma or entrapment
 - b. This age group, compared to all ages, is:
 - i. 2.26 times as likely to die b/c caught or trapped
 - ii. 2 times as likely to die b/c struck by something
 - iii. 2.26 times as likely to die of asphyxiation
 - iv. 2.37 times as likely to die of burns
2. Vehicle safety and seatbelt use, especially in personal vehicles
 - c. 14% of fatalities in this age group are caused by vehicle collision. Of this number, 15% occur in personal vehicles.
 - d. This age group, compared to all ages, is:
 - i. 1.61 times as likely to die driving personal vehicle

Causes of death for which education would be of little value:

1. Stress Overexertion (0.2 times as likely to die of stress/overexertion, and 1/5 times as likely to die of heart attack, than the general group)

Population: 31-40 y/o

Focus

1. Fire Attack Safety
 - a. 38% of fatalities in this age group are caused by trauma or entrapment.
 - b. This age group, compared to all ages, is:
 - i. 2 times more likely to die b/c caught/trapped
 - ii. 2 times as likely to die of asphyxiation
 - iii. 2 times as likely to die of burns
 - iv. 1.63 times as likely to die advancing hose lines / attack
 - v. 2.34 times as likely to die during S&R
2. Stress/Overexertion
 - a. 30% of fatalities in this age group are caused by stress or overexertion
3. Vehicle safety and seatbelt use
 - a. 15% of fatalities in this age group are caused by vehicle collision.
 - b. This age group, compared to all ages, is:
 - i. 1.61 times as likely to die driving personal vehicle

Causes of death for which education would be of little value:

- None

Population: 41-50 y/o

Focus

1. Stress/Overexertion
 - a. 56% of fatalities in this age group are caused by stress or overexertion
2. Fire Attack Safety
 - c. 24% of fatalities in this age group are caused by trauma or entrapment.
3. Vehicle safety and seatbelt use
 - a. 13% of fatalities in this age group are caused by vehicle collision.

Causes of death for which education would be of little value:

- None

Population: 51-60 y/p

Focus

1. Stress/Overexertion
 - a. 69% of fatalities in this age group are caused by stress or overexertion
2. Vehicle safety and seatbelt use
 - a. 13% of fatalities in this age group are caused by vehicle collision.

Causes of death for which education would be of little value:

- None

Population: 61+ y/o

Focus

1. Stress/Overexertion
 - a. 73% of fatalities in this age group are caused by stress or overexertion
 - b. This age group, compared to all ages, is:
 - i. 1.64 times as likely to be volunteer
 - ii. 1.5 times as likely to die of stress / overexertion
 - iii. 1.5 times as likely to die of heart attack

Causes of death for which education would be of little value:

1. Fire Attack Safety (0.4 times as likely to die struck by, 0.1 times as likely to die by asphyxiation, 0.5 times as likely to die advancing hose lines/attack)

Volunteer vs. Career Designation

The cause of firefighter fatalities between career and volunteer firefighters is not uniform. For this reason, the advocate focal areas differ by firefighter type in order to maximize fatality reductions through education. The following focal areas have been identified.

Population: Volunteer Staff

1. Vehicle safety and seatbelt use, especially in personal vehicles
 - a. This age group, compared to career firefighters, is:
 - i. 2.76 times as likely to die responding
 - ii. 1.3 times as likely to die driving vehicle / apparatus
 - iii. 4.3 times as likely to die driving personal vehicle
2. Stress/Overexertion
 - a. This age group, compared to career firefighters, is:
 - i. 1.4 times as likely to die of stress/overexertion
 - ii. 1.42 times as likely to die of heart attack

Causes of death for which education would be of little value:

1. None

Population: Career Staff

1. Fire Attack Safety
 - a. This age group, compared to volunteer firefighters, is:
 - i. 3.17 times as likely to die caught/trapped
 - ii. 2.28 times as likely to die of asphyxiation
 - iii. 3.22 times as likely to die of burns
 - iv. 1.62 times as likely to die advancing hose lines / attack
 - v. 5.53 times as likely to die performing pump operations
 - vi. 2 times as likely to die performing S&R

Priority Chart

The following chart displays message priority by age group and by employment type. Green indicates that the topic should be addressed by the advocate, with a number indicating the priority ranking of the message. Red indicates that the area is of insufficient risk to warrant discussion for that age group (in light of limited communication time).

The Volunteer / Career rows are added to address situations where there is little delineation by age, but where there is a predominance of either volunteer or career firefighters in attendance.

	Vehicle Safety Seatbelt Use	Fire Attack Safety	Stress Overexertion
Under 21	1	2	
21-30	2	1	
31-40	3	1	2
41-50	3	2	1
51-60	2		1
Over 60			1
Volunteer	2	3	1
Career	3	2	1