

The Mission of Implementing a Health, Wellness, & Fitness Program

The number one cause of death in North America is cardiovascular disease, mostly due to obesity (Center for Disease Control [CDC] 2007). According to some research, 70% of heart disease fatalities are preventable through lifestyle changes (CDC, 2007; Greenberg, Dintiman, & Oakes, 2004; Pearson, Hayford, & Royer, 1995). In an effort to improve national health, the Surgeon General of the United States first established health goals for the nation in 1979. More recently, the 2010 national health objectives were announced, specifying top national health objectives for physical fitness (U.S. Department of Health and Human Services, 2000). Physical fitness is important for the general population in prevention of heart disease; however, fire fighters are at an even higher risk of dying of heart disease at a young age. In fact, fire fighters die from cardiac problems at the rate of three times greater than the general population, in addition to suffering twice as many on the job injuries (Kales, Soteriades, Christophi, & Christiani, 2007). Therefore, due to the nature of the job and the stress involved in emergency services, Dr. Martin reported in a television broadcast about a study from the *New England Journal of Medicine* on why fire fighters risk of dying from a heart attack increases 100 times while fighting fires. Dr. Martin states that “The study came from a large U.S study that provides more evidence that fire fighters need to stay in shape. Experts said it shows that diet and exercise need to be priorities at the fire house” (R. Martin, personal communication, March 11, 2007).

This recent study reveals that 30% of fire fighter cardiac deaths occur during fire fighting activities, which increases a fire fighter’s chance of dying while fighting a fire 100 times more than doing every day activities (Kales et al., 2007). The United States relies on approximately one million fire fighters to protect and serve citizens from fires and emergency services (CDC, 2007). Approximately 100 fire fighters die in the line of duty each year. Approximately 50% of these deaths are from stress related heart attacks, at the average age of 44 (United States Fire Administration [USFA], 2007).

In an attempt to reduce line of duty fire fighter deaths, occupational safety and health programs were initiated in the 1970s. Safety programs, such as improved turn out gear and breathing apparatus, were implemented and accepted within fire departments nationally (Chissick & Derricott, 1981). Because fire departments focused on safety concerns in the 1970’s, fire fighter deaths decreased from about 150 fatalities a year to approximately 100 fatalities a year (CDC, 2007). However, health and wellness concerns within fire department culture have a much slower evolution of acceptance and readiness to change. This lack of focus on wellness issues continues to plague fire departments nationwide with approximately 50% of fire fighters dying from heart attacks in the line of duty. Many of these fatalities can be prevented with a proactive wellness and fitness program (Davis, 2007; Moore-Merrell, McDonald, Zhou, Fisher, & Moore, 2006; Peltin & Alkonis, 2003). Sources state that the preventable risk factors of premature cardiac death are blood pressure, smoking, obesity, blood cholesterol, sedentary life style, personality type, and diet (Curtis & Davis, 1983; Pearson et al., 1995). Studies continue to show that modifying these identifiable behavioral characteristics can reduce a person’s chance of dying prematurely from a heart attack by 70% (American Heart Association [AHA], 2007; CDC, 2007; Curtis & Davis, 1983). Due to the fact that so many fire fighters are dying from premature heart attacks, it does not appear that, neither the culture of the fire departments as a

whole, nor the individuals within the organization have fully accepted responsibility for health, wellness, and fitness issues.

Consequently, due to national fire fighter fatality statistics, fire departments have begun to identify the need to incorporate wellness and fitness into fire department culture. In 1987, the National Fire Protection Agency (NFPA) developed a standard for occupational health and safety which specifically addresses a wellness fitness program for fire departments (NFPA, 2000). Ten years later, in an attempt to improve the quality of life of uniformed personnel, the International Association of Fire Chiefs (IAFC) and the International Association of Fire Fighters (IAFF) initiated the “Fire Service Joint Labor Management Wellness-Fitness Initiative.” The initiative supports a comprehensive physical fitness program that requires mandatory participation once implemented (IAFC, 1997). More recently, the National Institute of Occupational Safety and Health (NIOSH) advocates that fire departments adopt a mandatory wellness program with mandatory annual fitness assessments (CDC, 2007). The National Fallen Fire Fighter Foundation launched a national initiative at the 2004 summit producing the “Everyone Goes Home” program and in collaboration with USFA, IAFC, NFPA, and NIOSH developed goals of reducing fire fighter fatalities by 25% in 5 years and 50% in 10 years (National Fallen Fire Fighter Foundation Life Safety Summit, 2004). Sandy Davis, chairman of the Fire Department Safety Officers Association, at the Life Safety Summit states:

The number one issue in the fire service with regard to health and safety is physical fitness and well being. If we can significantly reduce heart attacks, strokes, respiratory disease, and cancer in the fire service, we will cut fatalities by half. (¶ 5)

The United States Fire Administration (USFA) recommends and promotes reducing fire fighter fatalities by incorporating the recommendations from NIOSH, IAFC, and NFPA (USFA, 2007).

The primary purpose of this project is to define key components and identify factors that contribute to effective implementation of a wellness and fitness program. The research employed is action methodology to answer the following research questions: (a) What are the elements of a comprehensive wellness program? (b) What are management and members attitudes about wellness? (c) What are effective implementation strategies used by other organizations? (d) How do fire departments promote positive compliance of wellness and fitness programs?

Although it is crucial that fire rescue personnel are physically fit to perform essential job functions, being physically fit does not make one impervious to cardiovascular disease. Wellness is defined as having all aspects of health including physical health, social health, mental health, and spiritual health (Greenburg et al., 2004). In order for an individual to avoid the risk of sudden cardiac death, incorporating all components of a health, wellness, and fitness program may decrease the risk of cardiovascular disease by 70% (AHA, 2007; CDC, 2007; Greenburg et al., 2004).

NFPA 1500, 1582, & 1583, related the health, wellness, and fitness

Specific components of NFPA 1500 (2007) relating to the elements of a comprehensive wellness and fitness program:

- (a) Developing physical performance requirements for candidates and members (10.2.1)
- (b) All members shall be annually qualified as meeting the physical performance requirements (10.2.3)
- (c) Members who do not meet the required level of physical performance shall not be permitted to engage in emergency operations (10.2.4),
- (d) Members who are unable to meet the physical performance requirements shall enter a physical performance rehabilitation program to facilitate progress in attaining a level of performance commensurate with the individual's assigned duties (10.2.5)
- (e) The fire department shall provide health promotion activities through education and counseling for the purpose of preventing health problems and enhancing well being (11.2)
- (f) The fire department shall provide a program on the health effects of tobacco products and a tobacco use cessation program (11.2.2).

Specific components of NFPA 1582 (2000), on fire department medical physicals are:

- (a) Shall provide annual medical physicals for all members
- (b) Shall provide a Health and Fitness Coordinator, Health and Safety Officer, Infection Control Officer, and a Health and Safety committee (3.3.9-12)
- (c) Provide or arrange for a prescriptive rehabilitation and/or fitness program when indicated to aid a members' recovery from illness or injury and enhance his/her ability to safely perform essential job tasks. The fire department physician shall be a member of the fire department occupational safety and health committee chaired by the health and safety officer (4.2.1 -9)
- (d) A mandatory annual fitness evaluation that is not punitive or competitive shall be conducted as part of an individualized program (8.2.1).

Specific components of NFPA 1583 (2000), fire department fitness programs must possess, are:

- (a) Shall assign a Health and Fitness Coordinator (3.1.1 & 3.1.6),
- (b) All fire department members shall participate in a periodic fitness assessment (4.1.1)
- (c) Fitness assessments shall be conducted annually to all members (4.1.2),
- (d) Return to duty after an extended leave of illness or injury whereby the health and fitness coordinator shall develop an exercise program under the direction of the fire department physician (5.2.4)
- (e) Health promotion education is essential (6.1)