



The Elephant in the Room. Is your Volunteer Firefighter Fit for Duty?

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We're probably all familiar with the term "the elephant in the room". The "elephant in the room" is that topic that is too big and too important to ignore, yet always gets ignored. In the volunteer fire service, we currently have at least one "elephant in the room".

What is this "elephant in the room"?

Well, consider this. As we know all too well, the work of a firefighter is physically demanding, and typically performed in dangerous and stressful conditions. Not surprisingly, injury and death sometimes result. Some of these deaths are regrettably likely unavoidable. But not all of them. According to a report from the National Fire Protection Association from June 5, 2017, in 2016 there were 39 volunteer firefighter line of duty deaths. 40% of these deaths were labeled "cardiovascular", meaning caused by a heart attack or stroke. At least some of these deaths, perhaps a significant number of them, might be avoidable. 59% of "line of duty deaths" were in firefighters over the age of 51. As a group, volunteer firefighters are aging, and with aging comes more health issues and more health risk. Do you know if the firefighters in your district are healthy enough to safely and effectively perform their duties? Isn't this something that you need to know? This is the elephant in the volunteer fire service room that is often not being addressed. It is also an issue for some small departments with paid firefighters as well – and this information also applies to such departments.

While many volunteer departments and small departments with paid personnel require an entry physical, few are performing periodic physicals once a firefighter joins the department. The National Volunteer Fire Council has recommended that all firefighters have an annual physical examination. But for volunteer fire departments, following this

recommendation can be a challenging task. It's the purpose of this article to help meet this challenge. In this article, we'll consider the benefits of firefighter physical exams, the components that should go into a firefighter physical examination, and then review some options for implementing a firefighter physical screening program for departments on a limited budget.

Why do exams? The simple answer is because physical examinations save firefighter lives. This should be the immediate goal of any firefighter physical program. We know that cardiac events kill firefighters. Any physical program should seek to identify individuals who are at high risk for cardiac events, and ensure that they have appropriate follow up testing and intervention as needed.

What is the best way to detect heart disease in firefighters? The answer depends on the age of the firefighter. Younger firefighters that have cardiac problems almost always have structural heart issues. Cardiac issues in older firefighters are usually related to blockages in the coronary arteries. Structural issues in young firefighters can typically be ruled out with an echocardiogram of the heart. This is a relatively inexpensive, non-invasive test that often only needs to be performed one time. Older firefighters can be screened for coronary artery disease with a coronary calcium score. This is an imaging test of the heart that costs about \$150.00 and typically only needs to be performed once every five to ten years. If your department does nothing else, the use of these two tests can help prevent the number one cause of "Line of Duty Deaths" nationally from causing injuries or fatalities among your firefighters.

Beyond detection of cardiac disease, a good physical exam program also detects other medical issues. A good place to start is for the firefighters to fill out a

medical history and review of symptoms, which document is reviewed by a medical provider. As a part of the process, blood and urine samples should be analyzed for signs of disease, including cancer. The provider should take the firefighter's "vital signs", including blood pressure. A full physical exam should be performed. This examination should screen for skin, thyroid and testicular cancer. While it is often overlooked in practice, cancer screening should not be ignored.

According to Dr. Gavin Horn, Director of the Illinois Fire Service Institute Research Center in Champaign, while "... sudden cardiac events are the leading cause of line-of-duty deaths in the fire service and the primary acute health concern ... cancer is a primary chronic health concern associated with firefighting ...".

Once the examinations have been completed, the results of all the tests and physical examinations should be reviewed with the firefighter and medical recommendations should be made.

What are the other benefits of such a physical examination program? Quite simply, it improves the health of our firefighters. Many medical issues can be avoided by early detection and treatment. These include simple things like treating high blood pressure and cholesterol. Lifestyle intervention with smoking cessation, weight loss and increased exercise can also prevent medical issues. A good program will help your department develop a culture of health and wellness that will give you healthier and more fit firefighters.

There are additional risk management issues that should be considered. Do your firefighters see well enough to safely operate fire apparatus? Do they hear well enough to perform safely on the fire

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ground? Is their lung function adequate to wear SCBA equipment, and use it on the fire ground? Do any of your firefighters have a medical condition, or take medications, that impair safety – their own safety, the safety of other personnel, and the public? If the only physical assessment that your department performs is when the firefighter joins the department, then you likely can't accurately answer these questions three, five, ten, or more years later. In the event of an accident or cardiac event – especially a fatality -- these questions will be asked. It will be important to have good answers that pass both the test of public opinion and the test of legal liability.

And while a testing program as described above is not without fiscal costs, in the end, a good firefighter physical program will save your department money. Studies show that departments that have physical programs lower their injury rates and workers compensation claims. Healthier firefighters perform better and are less prone to accidents. Aren't these benefits worth considering as you evaluate possible changes in your approach to firefighter health and wellness?

As important as these above recommendations are, they are not, of course, a substitute for the requirements set out by Illinois OSHA, such as the medical evaluations required for those firefighters using SCBA. For those able to do more, NFPA 1582 "Standard on Occupational Medical Programs for Fire Departments" provides in-depth guidance about things that a fire department can do to assess firefighters' ability to meet the physical requirements of the job, especially those related to physical strength and aerobic fitness. The above paragraphs obviously do not address those circumstances where, because of known health issues, additional or different steps are required.

So what is the bottom line? Fire district trustees and fire command need to take those steps necessary to protect the health and wellness of their firefighters. In doing so, districts will prevent injuries, disease and death, generally improve the health of their personnel, and in the long run, save their department money.

Speaking of money, in most volunteer departments, the number one barrier to

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performing physical examinations such as those described above, is lack of funds. Is there a way to save lives and improve health economically? Depending on geographic location and provider, a full firefighter physical as outlined in NFPA 1582 can cost anywhere between \$250.00 and \$1,000.00 per firefighter. Such a program is generally performed annually. Despite the best of intentions, many volunteer departments simply do not have the financial resources to perform this type of exam yearly. When money is tight, there are strategies that can be employed to stretch department resources and still accomplish the goals of saving firefighter lives and improving their health.

One strategy that can be followed is to invest in a good baseline physical when the firefighter joins the department. When performed appropriately, this can identify medical issues that could harm the firefighter and endanger safety. In performing such a baseline physical, it is important to ensure that the right questions are being asked and that the right tests are being performed.

A second strategy to make physicals less demanding on the district's budget is to focus on older firefighters, who are more likely to have medical issues requiring attention, and ensure that these older firefighters (and others who may have been identified as more at risk) get yearly or every other year exams. While such an approach is not optimal, it recognizes that usually younger firefighters can have exams less frequently, as younger firefighters are less likely to exhibit medical issues related primarily to age.

If your district does not have the resources for the physical exams described above, except for those physicals legally mandated, there is a third alternative.

Recently the International Association of Fire Chiefs published a "Healthcare Provider's Guide to Firefighter Physicals" (www.iafc.org/topics-and-tools/resources). This document is designed for firefighters to take to their medical provider. It educates medical providers about the additional risks that firefighters face because of their fire department service, and recommends extra testing that should be considered for firefighters. This document is free to use, and it can be coupled with any annual or other physical examination that a firefighter might have. While there is no medical clearance issued as a result of using this document as part of a firefighter's personal physical, it can be an important first step in emphasizing the additional medical issues that result from serving as a firefighter, and it can highlight medical issues that impact the firefighter being examined.

Hopefully your department will examine its current approach to firefighter physical exams and, if necessary, make changes. If changes are going to be made, it is important to remember that the district cannot spend money – even on something as important as protecting firefighter health and wellness -- that has not been appropriated. As a result, any costs that will be incurred by additional attention to medical screening must be included in the district's annual budget and appropriation ordinance. If such expenditures are not currently within your annual budget, or are there only in a minimal amount, perhaps it's time for a budget upgrade.

Physical examinations have been proven to save lives, improve the health of firefighters, and help keep firefighters safe. If you are among those districts that are doing little or nothing in this area, do something additional now to address this "elephant in the room". ■