

Notes of the Testimony of Michael Skaza

February 22, 2023

Senate Committee on Economic Development, Housing, and General Affairs

Good morning, I am Michael Skaza and I serve as the Director and Chief of Training of the Vermont Fire Academy. As you know, Act 26 of 2023 directed the Director of the Division of Fire Safety to report back on several items related to firefighter cancer screening and prevention. To comprehensively answer the questions posed by Act 26, Director Michael Desrochers formed a working group with stakeholder representatives from across the fire service. The members of the working group represented the Division of Fire Safety, Vermont Career Fire Chiefs Association, Professional Firefighters of Vermont, Vermont State Firefighters Association, and a local Vermont firefighter who just happened to be a subject matter expert and currently serves as the President of the Fire Fighter Cancer Foundation. I was appointed by the Director to facilitate this group.

The fire service is grateful that you have afforded the time to discuss this important topic and consider necessary actions to protect those who protect our residents and visitors every day. The CDC has concluded that cancer is the leading cause of death among firefighters and that they are at higher risk for numerous different types of cancer than the general public. Firefighters have a 9% higher risk of being diagnosed with cancer and a 14% higher risk of dying from cancer than the general population.

The higher risks faced by firefighters call for a more focused and targeted screening algorithm than is used for the general public. This algorithm is defined in NFPA 1582, which is the Standard on Comprehensive Occupational Medical Programs for Fire Departments. An exam compliant with this standard provides a comprehensive, structured, and risk-targeted evaluation to establish a health profile and achieve early detection of pre-cancerous and cancerous diseases in firefighters. They utilize a combination of a physical exam, history collection, respiratory testing, and laboratory testing. The screening should also include a method of early cancer detection such as a multi-cancer blood test, ultrasound, or other diagnostic imaging as deemed appropriate by the qualified healthcare practitioner.

To estimate the costs of providing every Vermont firefighter with an appropriate cancer screening, the working group solicited estimates from established providers who specialize in NFPA 1582 compliant examinations. Comparisons were also conducted between those estimates and actual costs incurred by a small sample of Vermont fire departments who have already been conducting these exams. **The average cost for a single NFPA 1582 compliant physical exam is \$1,000 per firefighter bringing the total annual cost screen all Vermont firefighters to \$4.5 million.**

The cost to provide these exams to every firefighter as they entered the Vermont Fire Academy Firefighter I program would be \$145,000 annually. This figure would obviously be variable based on fluctuating enrollment numbers from year to year.

Act 26 also asked us to identify opportunities to reduce the cost for fire departments to provide annual cancer screenings for their firefighters. **The working group found that the most effective way to reduce costs are to administer state contracts for the screening services and allow municipal and private fire departments to utilize the contracts.** Contracting for these services could create a more competitive market and result in lower costs from providers due to the increased volume of services provided. The Department of Buildings and General Services confirmed that they routinely work on behalf of municipalities by extending contract pricing to political subdivisions such as municipalities and schools, however, it is unclear whether private or incorporated non-municipal fire departments would be able to take advantage of state contracts in the same manner.

Act 26 identified the importance of personal protective equipment in cancer prevention and asked us to project the cost for the state to fund the replacement of personal protective equipment on a rolling basis within 10 years of being acquired in accordance with national standards. Knowing that firefighter PPE is highly customizable and specifications vary from department to department, the working group asked five popular manufacturers to provide costs estimates from their most common mid-range product specifications. Those estimates were then averaged and adjusted for anticipated inflation to provide a basis for our projected costs. **Assuming that we would replace**

10% of the PPE each year to establish a rolling replacement schedule, the projected cost would be \$2,034,000 in the first year and increase to \$3.6 million in the tenth year. Our local knowledge tells us that there is currently a large amount of non-compliant firefighter PPE in use across the state. To address this, we suggest that any PPE replacement program consider expediting the replacement of the oldest and most non-compliant PPE early in the program and suggest that additional funding be added to the program in its infancy to make a marked improvement on firefighter safety.

There are opportunities for the State to reduce the cost to fire departments for the replacement of PPE. **As we suggested with cancer screenings, an opportunity exists for state contracts to be administered and utilized by local fire department to achieve cost savings.** Again, we caution that private and non-municipal fire departments may not have access to this purchasing avenue.

Opportunities also exist to reduce the cost to fire departments by developing a state-funded grant program focused on firefighter PPE replacement. Such a program could be customized to equitably distribute funding based on demonstrated need and a priority system. The State of Massachusetts has a model program that successfully distributes \$5 million annually to local fire departments using clear criteria that can be adjusted by the program administrator to meet the local needs. The only similar program that Vermont fire department have access to is the FEMA Assistance to Firefighters Grant Program. Unfortunately, in 2023 this program received 8,000 applications and only 9 Vermont fire departments were awarded. A state grant program would have a direct positive benefit on improving the safety and wellbeing of Vermont firefighters.

Act 26 sought recommendations from the Division of Fire Safety to help tackle the problem of firefighter cancer and we offer the following:

Education

The working group concluded that **the Vermont fire service needs to be better-informed on the topic of firefighter cancer.** While we provide cancer awareness training at every opportunity, we need to double our efforts to

spread the message about cancer prevention, detection, screening, and the importance of registering with the national Firefighter Registry for Cancer.

The working group performed a survey of Vermont Fire Departments to better understand our demographic make-up and determine the scope of the firefighter cancer problem. Last session, the Vermont League of Cities and Towns provided testimony that they have received only 9 firefighter cancer presumptive claims since 2008. While they are not the sole provider of workers compensation coverage, we suspect that they are the largest. 35% of Vermont's fire departments responded to our survey, which identified 73 cancer cases known to the respondents. **This suggests that firefighter cancer is under-reported and many firefighters may be fighting this disease without the support of workers compensation benefits.** This too can be improved upon with education.

General healthcare practitioners are often not well-informed on the added cancer screenings recommended for firefighters. **Educational efforts should also be directed to our healthcare practitioners in an effort to foster best decision-making practices when providing health services to firefighters.**

Data

The working group found that there are data gaps pertaining to firefighter cancer. Vermont's Vital Records Reporting System does not seem to provide a means to capture cancer deaths within firefighters, especially in volunteers, who often have their full-time employment listed as their occupation on their death certificate. **Steps should also be taken to ensure that the Vermont Health Department's Cancer Registry is sharing data with the National Firefighter Registry for Cancer.** The National Firefighter Registry for Cancer is geared to matching firefighter information with cancer registry information to paint a clearer picture of the cancer problem.

Elimination of PFAS in Firefighter PPE

We know that PFAS is carcinogenic and we also know that it is contained in most of our firefighting PPE. We also know that we have intimate skin contact with these PFAS containing materials. While we can make assumptions, the working group failed to find scientific evidence or validated studies that

indicate that PFAS contained within our PPE materials was directly causing firefighter cancer. Despite that fact, every effort should be made to remove PFAS from firefighting PPE material.

But here's the problem, currently, there is no structural firefighting gear available on the market that is PFAS free. Efforts to reduce or eliminate PFAS from firefighting gear are concentrated on finding alternative materials that maintain or enhance the necessary protective properties while minimizing environmental and health concerns associated with PFAS. Recent testing has found that non-PFAS containing materials offer a substandard level of protection to the wearer with respect to thermal protection and flammable liquid repelling properties. These deficiencies may pose a different and potentially greater risk to firefighters. Given the lack of an acceptable alternative, it seems premature to mandate the elimination of PFAS in firefighter gear. **What is reasonable is to work toward the replacement of current gear with PFAS-free gear that provides adequate protection from hazards when it is available.**

Source: Firefighter Cancer Support Network (www.firefightercancersupport.org)

What are some of the latest statistics related to cancer in the fire service?

Cancer is the most dangerous threat to firefighter health and safety today.

Cancer caused 66 percent of the career firefighter line-of-duty deaths from 2002 to 2019, according to data from the International Association of Fire Fighters (IAFF). Heart disease caused 18 percent of career LODDs for the same period.

Cancer caused 70 percent of the line-of-duty deaths for career firefighters in 2016.

Firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general U.S. population, according to research by the CDC/National Institute for Occupational Health and Safety (NIOSH).

The cancers mostly responsible for this higher risk were respiratory (lung, mesothelioma), GI (oral cavity, esophageal, large intestine), and kidney.

Are firefighters' risks for certain types of cancer significantly higher?

Firefighters' risks are significantly higher for some specific types of cancer than the general population.

In 2013, NIOSH researchers reported a two-fold excess of malignant mesothelioma, a very rare cancer. Put another way, firefighters have a 100 percent increased risk (100 percent = double = 2 times) of getting mesothelioma. Firefighters have a 129 percent increased risk of dying from mesothelioma. A 2006 meta-analysis by Grace LeMasters of 32 firefighter cancer studies noted a two-fold excess for testicular cancer. Firefighters have a 62 percent higher risk of getting esophageal cancer, and they have a 39 percent increased risk of dying from esophageal cancer, according to the NIOSH research.

Here's an overview with some specific additional risks for firefighters noted:

- testicular cancer – 2.02 times the risk (again: 100% = double = 2 times);
- mesothelioma – 2.0 times greater risk;
- multiple myeloma -1.53 times greater risk;
- non-Hodgkin's lymphoma – 1.51 times greater risk;
- skin cancer – 1.39 times greater risk;
- malignant melanoma – 1.31 times greater risk;
- brain cancer -1.31 times greater risk;
- prostate cancer – 1.28 times greater risk;
- colon cancer -1.21 times great risk; and
- leukemia – 1.14 times greater risk.