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Firefighters and First Responders: 2023 Update on Presumptive Workers Comp Benefits

EXECUTIVE SUMMARY

Many states have introduced new or revised statutory provisions regarding firefighter (and other first responder) presumptions for workers compensation (WC)—that certain diseases or injuries are presumed to have been contracted or sustained in the course and scope of employment. NCCI generally expects that the enactment of such presumptions will affect compensability and result in increases in WC system costs. However, there are complexities involved in reasonably measuring such increases which are described in the paper. This update to our 2018 paper[1] describes the challenges and considerations surrounding WC compensability rules for firefighters for the jurisdictions in which NCCI provides ratemaking services.

This paper describes the variety of firefighter presumptions being introduced and/or enacted in certain jurisdictions (including covered diseases and restrictions) and additional considerations when determining the impact of firefighter presumptions on a jurisdiction's WC system, as well as the data limitations. This update reflects changes since 2018[2] for the jurisdictions in which NCCI provides ratemaking services.

In this paper, the term "presumption" generally refers to a *rebuttable* presumption, i.e., it may be overcome by evidence to the contrary.

In addition, this paper cites observations from firefighter cancer claim data reported to NCCI, and it appears that the administration and judicial interpretation of statutes may play a role in determining whether firefighters are eligible for and receive WC benefits for cancer.

Note: WC presumption laws frequently apply beyond firefighters to an array of first responders, such as police officers and emergency medical personnel. While this paper focuses on firefighters, many of the key issues discussed apply to first responders in general. A summary chart of NCCI-identified presumptions for cancer and other diseases for firefighters and other first responders, in jurisdictions where NCCI provides ratemaking services, is provided at the end of this paper. (For simplicity, throughout the paper we will typically reference "firefighters.") The chart is for WC presumptions only; some states have presumptions for pension and other benefits that fall outside the WC system.

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[1] Racicot, Fawn, and Bruce Spidell, "Presumptive Coverage for Firefighters and Other First Responders," NCCI, November 2018. https://www.ncci.com/Articles/Pages/Insights-Presumptive-WC-Benefits-Firefighters.aspx.

[2] Presumptions for COVID-19 in several jurisdictions are only briefly covered, as such legislation typically contained sunset provisions. However, this document does explicitly address the broader category of infectious diseases.

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Background and Objectives

Some state legislatures have been providing expanded WC coverage for certain types of injuries for firefighters since the 1970s. However, in recent years, an increasing number of jurisdictions have proposed and enacted laws mandating that firefighters diagnosed with certain diseases be presumed to have contracted such diseases in the course and scope of employment. Typically, in WC insurance, when an employee is diagnosed with a disease or injury, the employee must prove that the disease or injury arose out of and in the course of employment to receive WC benefits. If, however, a statutory presumption of compensability exists, and the worker meets certain requirements, then the employee's injury or disease is presumed to have arisen out of and in the course of employment. Currently, over half of the jurisdictions analyzed in this paper have enacted firefighter presumption laws for cancer and/or other diseases under WC or a separate compensation system.[3]

As new or revised statutory provisions regarding firefighter presumptions are introduced, NCCI may receive requests to estimate the potential cost impacts of such legislative changes to jurisdictions' WC systems. Estimating the cost impact of a legislative change to a WC system involves two main components:

- an estimation of the change in the expected number of compensable claims, and
- an estimate of the expected change in claim costs.

For the estimated cost impact of firefighter presumptions, such approximations have proven to be quite challenging due to data limitations, uncertainty in administration and interpretation of changes, and varying conclusions in published studies on the link between certain occupational diseases and incidence rates in the firefighting profession.[4] However, despite these limitations, understanding the potential impact of proposed firefighter presumptive compensability is essential because it could result in a significant increase in WC costs for firefighter classifications as well as unintended consequences to a WC system.

This study discusses the key issues to be considered when such legislation is proposed and highlights the challenges that arise when estimating the cost impact of firefighter presumption bills.

Variety of Firefighter Bills

Firefighter bills introduced and enacted to date vary significantly with respect to the types of covered diseases and the restrictions that apply to the presumption of compensability. Both aspects can influence the final impact of a firefighter presumption on jurisdictions' WC systems. This section examines the diverse types of firefighter bills that have been introduced or enacted and describes the potential impact that each aspect could have on WC costs.[5]

Diseases Covered

The types of diseases defined as occupational diseases for which the firefighter presumptive coverage applies most often fall into the following categories: cancer, lung and respiratory conditions, blood and infectious diseases (which might include COVID-19—which often manifests as a respiratory illness—or other current or future similar diseases), heart and vascular conditions, and mental injuries. The frequency (how often a compensable disease or injury occurs) and severity (WC cost for a disease or injury) of each of these conditions vary significantly, with each playing a key role in the ultimate cost impact associated with such legislation.

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[3] See www.iaff.org/presumptive-health/. Some of the statutes regarding firefighter presumptions are located under general provisions or retirement/pension system laws rather than WC laws and may not be applicable to WC.
[4] Inconsistent findings among studies were found by Casjens, S., T. Brüning, and D. Taeger, "Cancer risks of firefighters: a systematic review and meta-analysis of secular trends and region-specific differences," International Archives of Occupational and Environmental Health (October 2020). www.ncbi.nlm.nih.gov/pmc/articles/PMC7452930/
[5] Some states like Mississippi have offered a lump-sum outside the WC system in lieu of WC benefits; under this option certain cancers are presumed to be work-related. This was accomplished via SB 2835, which created § 25-15-405 effective July 1, 2021.

CANCER

Of the 38 jurisdictions in which NCCI provides ratemaking services, 20 have a WC presumption available to firefighters diagnosed with any one of several types of cancer.[6] The specific requirements needed to qualify for the cancer presumption in each jurisdiction play a key role in the ultimate cost of providing such coverage for firefighters.

Several jurisdictions use a broad definition of cancer, such as: "… the type of cancer must be a type which may be caused by exposure to heat, radiation, or a known carcinogen, as defined by the International Agency for Research on Cancer."[7] This language may be considered as somewhat subjective in that a physician or an adjudicator may need to use judgment to determine whether a type of cancer could be caused by something other than the listed exposures if the presumption is contested.

Meanwhile, other jurisdictions specifically list the types of cancers presumed to have been related to firefighting.[8]

In general, broad definitions may result in a larger impact on WC costs because there is more room for interpretation compared to a jurisdiction where the presumption provides a specific subset of covered diseases. Such potentially subjective language could also lead to increased litigation costs and a possible broadening of the definition of occupational diseases to include diseases that are less likely to result from employment.

The following are key considerations applicable to cancer presumptions:

- The prevalence of cancer varies widely depending on the type of cancer but, in general, cancer is relatively common. According to the American Cancer Society, the risks of developing and dying from cancer from "all invasive sites" are 40.2% and 20.5%, respectively, for males and 38.5% and 17.9%, respectively, for females.[9]
- Cancer is among the most expensive medical conditions in terms of annual expenditures in the United States ($225.8 billion).[10] In addition to medical costs, a WC claim may include lost-wage benefits, litigation expenses, and possibly survivor and burial benefits.
- Cancer tends to have a long latency period, and the frequency of cancer claims associated with one's employment is difficult to predict. This creates uncertainty regarding the number of claims expected to emerge and the ultimate costs associated with those claims.

Statistical data reported to NCCI contains approximately 180 firefighter cancer claims occurring since 2004. Approximately three-quarters of these cancer claims come from Colorado, Louisiana, Maryland, and Oregon. The following are some of the potential differences in these states that may result in them having the vast majority of cancer claims in NCCI's data.[11]

- Colorado C.R.S. 8-41-209, enacted in 2007, is similar to several other presumption statutes with restrictions on cancer presumptions. For example, the firefighter must have worked for at least five years and was not known to have cancer when they began work. The presumption could be rebutted if it could be shown by a preponderance of medical evidence that the condition did not occur on the job. Following the 2007 enactment, a notable rise in WC firefighter cancer claims occurred. In 2016, the Colorado Supreme Court opined that the town of Castle Rock was not required to establish an alternate cause for the cancer to overcome the presumption.[12] As a result of that decision, the number of

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[6] NCCI jurisdictions in which a WC firefighter cancer presumption exists as of 11/1/2022: AK, AZ, CO, ID, IL, LA, MD, ME, MT, NH, NM, NV, OK, OR, TN, TX, UT, VA, VT, and WV. Of these, AZ, IL, MD, and TX extend cancer presumptions to another category of first responders.
[7] For example, NH Rev. Stat. § 281-A:17.
[8] For example, ID Code § 72-438 lists these cancers: brain, bladder, kidney, colorectal, non-Hodgkin's lymphoma, leukemia, mesothelioma, testicular, breast, esophageal, and multiple myeloma.
[9] "Lifetime Risk of Developing or Dying From Cancer," American Cancer Society, www.cancer.org/cancer/cancer-basics/lifetime-probability-of-developing-or-dying-from-cancer.html (Last Revised: January 4, 2018).
[10] "Top 11 Medical Expenses," WebMD, www.webmd.com/healthy-aging/ss/slideshow-top-11-medical-expenses.
[11] The high frequency of claims in data available to NCCI for these states does not necessarily imply that these states have the majority of such claims since firefighter data from certain states is of limited availability. See "Data Availability" section below.
[12] 2016 CO 26 Supreme Court Case No. 13SC560, *Industrial Claim Appeal Office and Mike Zukowski v. Town of Castle Rock and CIRSA*.

WC cancer claims was anticipated to decline in Colorado.

The year following the *Castle Rock* decision, the state legislature created the Colorado Firefighter Heart and Cancer Benefits (CFHC) Trust Cancer Award Program. This program provides an alternative mechanism to obtain benefits as a result of contracting cancer for firefighters working at participating fire stations. The CFHC Trust Cancer Award Program has less stringent benefit eligibility requirements than that contained in the Colorado WC Act, but the benefits are also generally smaller in magnitude.[13] Since these awards are in lieu of WC benefits, an impact of this program may be fewer WC firefighter cancer claims in the state.

- There has been a marked uptick in WC firefighter cancer claims in Louisiana since 2017. This may be a result of Louisiana Act No. 287 from the 2017 legislative session. This enactment did two things. First, it removed the requirement that granted the presumption only if the firefighter "is unable to perform his regular duties" due to the cancer. Second it added several new cancers including prostate and testicular, plus "any other type of cancer … for which firefighters are determined to have a statistically significant increased risk over that of the general population." The increase in WC cancer claims in Louisiana since 2017 may be resulting from firefighters who developed cancer but were still able to work or developed one of the new cancers listed.

- Maryland has long provided firefighters a presumption for certain cancers (§9-503). In 2012, the list of cancers was expanded from 4 to 9 cancers, and then in 2019, to 11 cancers. The presumption of coverage applies even if the cancer manifests itself after retirement.[14] While the presumption is rebuttable,[15] there is anecdotal commentary that in practice, the presumption is difficult to overcome in Maryland.[16]

- Oregon statute 656.802 provides presumptions for 14 types of cancer to non-volunteer firefighters employed for five or more years, and denial of a claim must be based on "clear and convincing medical evidence that the condition or impairment was not caused or contributed to in material part by the firefighter's employment" or proof that tobacco use "is the major contributing cause." In practice, the burden of proof needing to be met to rebut a presumption may be demonstrated in a non-cancer WC case, where the Supreme Court of Oregon decided in *SAIF Corp. v. Thompson* that merely producing medical testimony, i.e., meeting the "burden of production," was not enough; the employer had failed to meet the "burden of persuasion."[17] In another case, *In the Matter of the Compensation of Leonard C. Damian, II, Claimant*, the Workers' Compensation Board ruled that the employer/insurer was unable to rebut the presumption of compensability when there was evidence of some association of cancer and work.

While Texas has a firefighter cancer presumption law, it was reported in 2018 that, "Over the past six years, more than 90% of the 117 workers compensation claims filed by Texas firefighters with cancer have been denied, according to the Texas Department of Insurance."[18] At the time, types of cancer were not enumerated in the statutes, and some critics alleged that employers relied on a memo by the Texas Intergovernmental Risk Pool which presumed that only 3 types of cancer are

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[13] www.cfhtrust.com/wp-content/uploads/2017/06/cancer-overview.pdf
[14] *Montgomery County v. Pirrone*, 674 A.2d 98 (Maryland Ct. Special Appeals 1996). (In this case, the retired firefighter had a heart-related illness.)
[15] This was made clear in *City of Frederick v. Shankle*, 785 A.2d 749 (Maryland Ct. Appeals 2001). (In this case of a police officer with heart disease, the court stated that the presumption is not irrebuttable.)
[16] Calvert, Scott and Luke Broadwater, "New firefighter benefits stoke workers' comp debate," *The Baltimore Sun*, February 22, 2014. "Government officials complain that they rarely win presumption cases, despite documenting an individual's risk factors, including smoking, obesity or family history."
[17] Robinson, Thomas A., "Oregon: To Rebut Firefighter's Presumption, Employer Must Meet Both Burden of Production and Burden of Persuasion," www.lexisnexis.com/LegalNewsRoom/workers-compensation/b/recent-cases-news-trends-developments/posts/oregon-to-rebut-firefighter-s-presumption-employer-must-meet-both-burden-of-production-and-burden-of-persuasion (August 11, 2016).
[18] "Firefighters With Cancer Often Denied Workers' Comp in Texas," *Insurance Journal*, www.insurancejournal.com/news/southcentral/2018/08/15/498134.htm (August 15, 2018).

caused by firefighting: testicular, prostate, and non-Hodgkin's lymphoma.[19] In 2019, Senate Bill 2551 revised TX Government Code § 607.055 to specifically list 11 cancers for which the presumption applies, possibly aiming to address the concern cited above.

LUNG/RESPIRATORY CONDITIONS

Eighteen of the jurisdictions in which NCCI is a rating or advisory organization offer presumptive coverage for lung and respiratory (or "pulmonary") conditions, which often include tuberculosis.[20]

The following are key considerations applicable to lung impairment presumptions:

- Chronic lower respiratory diseases were the sixth leading cause of death in the United States in 2020, accounting for 4.5% of deaths,[21] and death rates due to lung disease increased by nearly 30% between 1980 and 2014[22] (and another 4% or so since 2014).[23]
- Nine NCCI jurisdictions limit lung cancer[24] presumptions by explicitly including a non-smokers clause in their statutes.[25] Under a non-smokers clause, in some jurisdictions, a current or recent user of tobacco may not be eligible for the presumption, while in others, there is an absolute bar to eligibility. According to a national study, firefighters have a substantially lower smoking rate than the general population and it has been suggested that this is in part due to "policy implementation at the state and local levels that prohibit tobacco use as a condition of employment and related presumption laws."[26] The extent to which mitigation in lung cancer claim frequency occurs would likely be dependent on the employer's or insurer's ability to prove the use of tobacco in order to rebut the presumption.

BLOOD/INFECTIOUS DISEASES

In addition to responding to fires, firefighters aid at the scene of traumatic events such as car accidents and may be exposed to infectious and bloodborne diseases (communicable diseases) while helping victims of such events. Thirteen of the jurisdictions in which NCCI is a rating or advisory organization offer presumptive coverage for communicable diseases.[27] These presumptions most frequently cover HIV or AIDS, hepatitis, tuberculosis,[28] and meningococcal meningitis.

- The National Fire Protective Association (NFPA) estimates that 7,675 firefighters were exposed to infectious diseases in 2019, with that figure rising to 20,900 in 2020, likely driven to some extent by COVID-19.[29] "NFPA offers a number of

[19] Ibid.
[20] NCCI jurisdictions in which a WC firefighter lung/respiratory presumption exists as of 11/1/2022: AK, AZ, FL, IL, LA, MD, ME, MT, NH, NM, NV, OK, OR, SC, TX, VA, VT, and WV. Of these, 8 extend such presumptions to another category of first responders. Note that UT grants a presumption for lung cancer, which we have listed in the "cancer" category.
[21] Murphy, Sherry L., et al., "Mortality in the United States, 2020," Centers for Disease Control and Prevention, NCHS Data Brief No. 427 (December 2021), www.cdc.gov/nchs/data/databriefs/db427-tables.pdf.
[22] "Large increase in recent decades in rate of death from chronic respiratory diseases in US," Institute for Health Metrics and Evaluation" (September 26, 2017), www.healthdata.org/news-release/large-increase-recent-decades-rate-death-chronic-respiratory-diseases-us.
[23] See Heron, Melonie, "Deaths: Leading Causes for 2015," National Vital Statistics Reports, Volume 66, Number 5 www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_05.pdf.
[24] In this paper, lung cancer may be discussed along with other lung and respiratory conditions.
[25] NCCI jurisdictions with a non-smoking clause as of 11/1/2022 AK, AZ, MT, NH, NV, OR, TX, UT, and VT. WV enacted a non-smoking clause in 2018, but it is for leukemia, lymphoma, and multiple myeloma.
[26] Poston et al., "A national qualitative study of tobacco use among career firefighters and department health personnel," *Nicotine & Tobacco Research*, June 2012 Issue, www.ncbi.nlm.nih.gov/pubmed/22180587.
[27] NCCI jurisdictions in which a WC firefighter blood/infectious disease presumption exists as of 11/1/2022: CO, FL, IL, LA, ME, NM, NV, OK, TN, TX, VA, and VT. Of these, 10 extend presumptions to another category of first responders. In addition, UT's presumption is only for emergency medical services providers.
[28] Based on its definition, tuberculosis may be considered under both lung conditions and infectious diseases; thus, it is included in both sections of this paper.
[29] Campbell, Richard and Ben Evarts, "United States Firefighter Injuries in 2020," National Fire Protection Association, (December 2021). See most recent report at www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osffinjuries.pdf. The authors note, "More recent attention has focused not only on the

protocols and initiatives that can be used at the local level to promote the safety and health of personnel," such as NFPA 1581, "Standard on Fire Department Infection Control Program,"[30] which may reduce the frequency of communicable disease claims in jurisdictions that have adopted these standards.

- Whereas other diseases may have long latency periods, bloodborne and infectious diseases generally have a much shorter incubation period. A positive diagnosis for most of these diseases can occur within weeks of exposure. Also, whereas other diseases may be caused by any of several factors, bloodborne and infectious diseases typically have only one cause, which is exposure to bloodborne pathogens or airborne particulates from an infected individual. For this reason, the linkage between the exposure and it arising out of and in the course of employment may be more clearly identifiable, therefore diminishing the impact of a presumption.

What about COVID-19? Several states have considered or implemented WC presumptions that COVID-19 is work-related or is a compensable injury or disease. These presumptions typically apply to frontline workers, and most enacted or adopted in 2020 and 2021 contained expiration dates or sunset provisions tied to the end of the state of emergency or another specified date. However, some states have proposed presumptions that extend beyond COVID-19 and contain terms such as "infectious disease," without an expiration or sunset date.[31] Jurisdictions with presumptions for such contagious diseases are included in the chart at the end of this paper under the column labeled "Blood/Infectious."

HEART/VASCULAR CONDITIONS

Nineteen of the jurisdictions in which NCCI is a rating or advisory organization offer firefighters presumptive coverage for heart and vascular conditions.[32] These presumptions typically cover hypertension and heart disease.

In general, determining work-related compensability of a heart condition is a complex issue because many heart conditions are progressive in nature and can be caused by a preexisting condition or several other non-work-related factors, such as personal lifestyle and family history. It may also be difficult to connect a heart condition with employment if an event or series of events requiring unusual physical exertion or causing mental stress did not immediately precede the heart condition.

The statutory requirement for presumptive coverage for heart-related conditions in a handful of states also includes a restriction that unusual physical exertion or mental stress causing the heart condition must be outside of the normal duties of the occupation for the condition to be deemed compensable. Therefore, it is possible that the physical exertion and stress associated with firefighting may be found to not qualify as being outside of the normal duties of the occupation. In states that do not require the events that cause the heart condition to be outside of the normal duties of the occupation, linking a heart condition to employment may be relatively easier for firefighters.

Statistical data reported to NCCI contains approximately 500 firefighter heart attack claims occurring since 2004. Firefighters may be less likely than other employees to have preexisting heart conditions because, in order to be hired, they are often required to pass rigorous health and physical examinations. The introduction of a presumption could make it easier for firefighters to receive heart-impairment-related benefits by shifting the burden of proof from the employee to the employer. However, due to the physical exertion and stress associated with the firefighting profession, heart-related

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increased risk of COVID infection in the fire service and the immediate health impacts of infection, but also on the potential complications of COVID infection on cardiovascular and other health outcomes due to the unique risk factors involved in firefighting occupations. The behavioral and cognitive impacts of long COVID are also a concern."

[30] "NFPA 1581: Infection control program resource for first responders," www.nfpa.org/-/media/Files/Code%20or%20topic%20fact%20sheets/1581TipSheet.pdf.

[31] Kersey, Laura, "COVID-19 Workers Compensation Presumptions Update—Five Things You Need to Know," NCCI, www.ncci.com/Articles/Pages/Insights-COVID-19-WorkersComp-Presumptions-Update-5-Things-to-Know.aspx (June 20, 2022).

[32] NCCI jurisdictions in which a WC firefighter heart/vascular condition presumption exists as of 11/1/2022: AK, AZ, CT, FL, IL, LA, MD, ME, MT, NH, NM, NV, OK, OR, SC, TX, VA, VT, and WV. Of these, nine extend presumptions to another category of first responders. In addition, TN's presumption is only for law enforcement officers.

injuries may already have been handled through general WC compensability standards, and an impact to WC costs may therefore be less prominent in this disease category than in other categories such as cancer and lung impairments.

The following are key considerations applicable to heart presumptions:

- This category of disease is prevalent among firefighters. Sudden cardiac death (usually from a heart attack) was the most common cause of on-the-job fatalities in the firefighting occupation in 2021, accounting for about half of the fatalities.[33] In addition, researchers recently detected a potential link between firefighting and atrial fibrillation (AFib), which is associated with an increased risk of heart failure. "Researchers found a 14% increased risk of [AFib] for every additional 5 fires fought annually."[34]
- Heart-related injury presumptions in some jurisdictions may include certain restrictions, such as a requirement that the heart impairment must occur within 24 or 72 hours of service in the line of duty for the presumption to be applicable. While these types of claims may already be covered through general WC provisions, the introduction of such a presumption could result in additional claims being compensable because firefighters who would not otherwise have associated their heart disease with their employment may be motivated to file a claim under WC.

MENTAL INJURIES (PTSD AND OTHER)

At least 25 NCCI jurisdictions currently recognize "mental-mental" injuries (a mental injury or disability that arises without a physical injury) as being compensable.[35] Since this white paper was last updated, six of the jurisdictions in which NCCI is a rating or advisory organization began to offer firefighters some form of presumptive coverage for mental injuries.[36]

PRESUMPTIONS AMONGST THE TYPES OF FIRST RESPONDERS

Most states that offer presumptive coverage to firefighters also offer similar coverage to other first responders. Presumptive compensability for other first responders is more often applicable to lung impairments, infectious diseases, heart conditions, and mental injuries than to cancer. The nature of employment for firefighters generally differs from that of other first responders and, as such, the risk of contracting certain occupational diseases may differ between firefighters and other first responders.

However, unless explicitly stated in relation to firefighters, the key factors addressed above regarding the frequency and severity of covered diseases and the mitigating effect of restrictions on the frequency of compensable claims would also affect the ultimate cost associated with the introduction of a presumption applicable to other first responders.

Restrictions

Many states place limitations on the applicability of a presumption or allow for a presumption to be rebutted under certain circumstances. Restrictions that are placed on a presumption, such as smoking provisions for lung cancer as previously noted, tenure requirements, and age limitations, serve to narrow the scope of firefighters to whom the presumption would apply. The creation of such restrictions may partially mitigate the expected increase in compensable claims resulting from a

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[33] Fahy, Rita and Jay T. Petrillo, "Firefighter Fatalities in the US in 2021," National Fire Protection Association (August 2022). www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osFFF.pdf . The authors note, "This report focuses on the non-COVID deaths of firefighters resulting from specific injuries or exposures while on duty in 2021. A complete picture of duty-related fatalities would also include the cancer, cardiac, stress, and other fatalities that were caused by exposure to toxins or the emotional toll of responses."

[34] Vanchiere, Catherine, et al., "Firefighters' risk of irregular heartbeat linked to number of on-the-job fire exposures," Journal of the American Heart Association Report (March 23, 2022). Firefighters' risk of irregular heartbeat linked to number of on-the-job fire exposures | American Heart Association.

[35] Spidell, Bruce, "Examining PTSD - What's the Impact on Future Workers Compensation Costs," NCCI, June 17, 2021. www.ncci.com/Articles/Pages/Insights-Examining-PTSD-Impact-on-Future-WorkersComp-Costs.aspx.

[36] NCCI jurisdictions in which a WC firefighter mental injuries presumption exists as of 11/1/2022: LA, ME, NH, NM, OR, and VT. Five of the six extend presumptions to another category of first responders.

presumption. The extent to which this mitigation may occur is dependent on workforce demographics and the employer's or insurer's ability to rebut a presumption, though it may also lead to increased litigation.

SERVICE REQUIREMENTS AND TIME LIMITATIONS

Many presumptions require a firefighter to serve a minimum number of years to qualify for presumptive coverage. The most typical service requirement is that the firefighter must have served a minimum of 5 years to qualify for the presumption, but the service requirement can range from 2 to 12 years and vary by the type of disease. To the extent that firefighters have less than the required number of years of service at the time such a disease manifests, these requirements could serve to limit the number of claims filed under a presumption. It is expected, however, that age is correlated with years of service; and since the risk for many of the occupational diseases covered by presumptions increases with age, the service requirement may only slightly mitigate an increase in the number of compensable claims due to a presumption. The long latency period of many diseases may also mitigate the impact of a service requirement.

Another way that states limit the applicability of a presumption is by placing time limitations on the number of years following retirement or termination in which a firefighter can file a claim, for which a presumption of coverage would otherwise apply. This restriction can be specified as a set number of years or can fluctuate depending on the tenure of a firefighter.

AGE RESTRICTIONS

Some presumptions place age restrictions on the applicability of certain diseases. Age restrictions can significantly influence the number of newly compensable claims resulting from a presumption because the general risk of contracting many diseases tends to increase with age.

The following are a few examples of age restrictions on firefighter presumptions:

- In Maine, the presumption applies to a retired firefighter who is diagnosed with cancer within 10 years of their last active employment as a firefighter or prior to attaining 70 years of age, whichever occurs first.[37] This restriction could result in fewer cancer claims being presumed compensable.[38]
- In New Mexico, the presumption applies for testicular cancer if diagnosed before age 40 (with no evidence of anabolic steroids or human growth hormone use).[39] This restriction could result in fewer claims being presumed compensable because about half of all firefighters are over the age of 40.[40]
- In Oregon, the presumption is not applicable for prostate cancer diagnosed after age 55.[41] This restriction could result in fewer claims being presumed compensable.[42]
- In South Carolina, the heart and respiratory presumption is applicable for firefighters who become a member of a fire department prior to the age of 37.[43] This could mitigate any increase in newly compensable claims.[44]

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[37] 39-A ME Rev Stat, §328-B:5 (2021).
[38] The median age for diagnosis for colorectal cancer for 2015-2019 is 66. See "Cancer Stat Facts: Colorectal Cancer," National Cancer Institute, seer.cancer.gov/statfacts/html/colorect.html.
[39] NM Stat § 52-3-32.1.B.8 (2021).
[40] Fahy, Rita, Ben Evarts, and Gary P. Stein, "US Fire Department profile 2020," National Fire Protection Association (September 2022). www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osfdprofile.pdf
[41] OR Rev Stat § 656.802(5)(d) (2021).
[42] The median age for diagnosis for prostate cancer for 2015-2019 is 67. See "Cancer Stat Facts: Prostate Cancer," National Cancer Institute, seer.cancer.gov/statfacts/html/prost.html.
[43] SC Code §42-11-30.(A) (2021).
[44] According to the Mayo Clinic, "Men age 45 and older and women age 55 and older are more likely to have a heart attack than are younger men and women." See www.mayoclinic.org/diseases-conditions/heart-attack/symptoms-causes/syc-20373106.

HEALTH EVALUATIONS

Many firefighter presumptions require that a preemployment health examination had been conducted with no evidence of a health condition or the contracted disease, to determine the employee's eligibility for those presumptions. The intent of this requirement is to prohibit coverage for diseases and health conditions that were contracted prior to employment as a firefighter.

While this requirement may limit the number of claims eligible for the presumption, the examination's ability to detect the presence of a latent occupational disease is unclear. For example, a general physical examination may not be successful in identifying cancer or heart disease at an early stage.[45]

In Vermont, initial cancer screenings prior to employment, and any subsequent cancer screenings recommended by the American Cancer Society, must be conducted to be eligible for the cancer presumption.[46] Specialized screenings may more accurately detect diseases at an early stage, which would limit the number of compensable claims eligible for a presumption (by determining if a disease was contracted prior to employment) and may decrease the cost of compensable claims (because occupational disease diagnoses at an early stage may be less severe).

REBUTTING A PRESUMPTION

Presumptions for cancer and other diseases for firefighters and other first responders are generally rebuttable in the states that have enacted them so far. The following are a few examples of statutory language concerning rebuttals:

- In Alaska, "This presumption of coverage may be rebutted by a preponderance of the evidence. The evidence may include the use of tobacco products, physical fitness and weight, lifestyle, hereditary factors, and exposure from other employment or nonemployment activities."[47]
- Arizona's rebuttal language varies by disease.[48]
- In Louisiana, the statute simply states, "This presumption shall be rebuttable by evidence meeting judicial standards ...."[49]
- In Texas, "A presumption … may be rebutted through a showing by a preponderance of evidence that a risk factor, accident, hazard, or other cause not associated with the individual's service … was a substantial factor in bringing about the individual's disease or illness without which the disease or illness would not have occurred."[50]

[45] National Fire Protection Association Form 1582 (NFPA 1582) is a standard that fire departments use to assess firefighter fitness. According to one observer, "There are many benefits to NFPA 1582, one of which is the ability to identify adverse health issues." However, it is also true that, "… precursors to cardiovascular events often remain dormant until they cascade into a precipitating event." See FirefighterNation, "Firefighter Fitness for Duty: Understanding NFPA 1582," (October 17, 2012). www.firefighternation.com/firerescue/firefighter-fitness-for-duty-understanding-nfpa-1582/#gref
[46] 21 V.S.A §601.(11)(E)(i).
[47] AK Stat § 23.30.121.(a) (2020).
[48] AZ Rev Stat §§ 23-901.01, 23-1043.04, 23-1105.
[49] LA Rev Stat § 33:2011.A (2021).
[50] TX Govt Code § 607.058 (2021).

Additional Considerations

In addition to the issues and key considerations mentioned thus far, several other factors may directly or indirectly affect the impact of a firefighter presumption. The remainder of this paper discusses several topics associated with firefighter presumption bills and additional matters to be considered when evaluating the impact of such presumptions.

Applicability to Volunteer Firefighters

In certain states that have enacted firefighter bills, the statutes explicitly exclude volunteer firefighters from the presumptive coverage that is offered to career firefighters.

Also, extending presumptive coverage to volunteer firefighters makes quantifying the cost impact of a firefighter bill substantially more complicated. The following questions outline some of the complexities associated with quantifying a cost impact to volunteer firefighter classifications:

- *How many volunteers are covered under WC insurance?* WC coverage is not always required for volunteer firefighters as it is for most other occupations. Industry benchmarks on the number of volunteer firefighters cannot be relied upon in states where coverage is optional. Historically, a minimum payroll basis of $300 was utilized for volunteer firefighters on a WC insurance policy in many jurisdictions. However, due to exceptions to this imputed value, lack of consistent application, and the possibility that the actual reported payroll may exceed the minimum, this measure cannot always be used to estimate the number of volunteer firefighters covered under WC insurance.
- *Are volunteers exposed to the same level of risk as career firefighters?* Volunteer firefighters may have lower levels of exposure to carcinogens and occupational diseases in general if they work a smaller number of fires than career firefighters. The number of hours worked by volunteers is difficult to estimate because this information is not well-defined and is inconsistently tracked.

In general, there may be sizeable characteristic differences between the volunteer and career firefighter populations in a state. As mentioned earlier, the potential cost impact of a firefighter presumption that covers career firefighters cannot be reasonably measured. For the reasons shown above, it is even more challenging to estimate the impact of a bill that extends coverage to volunteer firefighters as well.

Potential Shifts in Coverage

A potential unintended consequence of enacting a firefighter presumption bill is that because of the uncertainty of future losses, fire departments that do not self-insure their WC exposure may not be able to find coverage through the voluntary insurance marketplace. As a result, fire departments and the municipalities that employ them may have to seek insurance through the residual market or through an alternative insurance mechanism such as a state WC fund.

A historical example of this unintended effect is the 2011 establishment of a cancer presumption for volunteer and career firefighters in Pennsylvania known as Act 46. Testimony by the Pennsylvania State Association of Township Supervisors (PSATS) indicated that "most providers had announced that they were dropping workers' compensation coverage for firefighters due to the potential cost and liability exposure imposed by Act 46."[51] Apparently, this issue in Pennsylvania has persisted at least through late 2018.[52] Based on data collected by NCCI, a similar effect appears to have occurred in

[51] "Testimony by the Pennsylvania State Association of Township Supervisors on Act 46 of 2011." 2013_0220_0008_TSTMNY.pdf (state.pa.us)

[52] PSATS Assistant Director Elam M. Herr testified that, "Due to market changes caused by Act 46 of 2011, there are now only a very few private companies that provide workers' compensation to firefighters and many of our volunteers are now covered by our state's insurer of last resort, the State Workers Insurance Fund (SWIF)." PSATS Week in Review (October 19, 2018). connect.psats.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=aea275bc-9ce7-96fc-8ff2-22889f72b999&forceDialog=0

Vermont as there was a substantial increase in the number of fire departments insured in the residual market after the enactment of a firefighter presumption in that state.[53]

Impact of the Judicial Environment

As noted in the discussion of the prevalence of firefighter cancer claims from certain jurisdictions in NCCI's database, the impact of a firefighter bill may also be influenced by the judicial interpretation of the statutory presumption. Following the enactment of a firefighter presumption bill and before case law is established, an increase in litigation may be anticipated as stakeholders attempt to better understand the boundaries and operation of a presumption, or try and rebut it where they believe it is appropriate to do so. For example, in Virginia, a state in which one observer cited "the employer has a heavy burden of rebuttal,"[54] the Court of Appeals found that, "Testimony which merely refutes the premise of such a legislatively enacted presumption does not constitute proper evidence in rebuttal."[55] However, efforts to rebut a presumption have been successful in the courts in some instances, as was previously noted with respect to the Texas firefighter cancer presumption law. The following cases illustrate the varying outcomes in court cases involving a presumption for cancer and other diseases:

- *Nelson v. City of Pocatello* (April 2022): An Idaho firefighter, Nelson, was diagnosed with leukemia, and the Industrial Commission determined that the City failed to rebut a statutory presumption of causation with substantial and competent evidence. The city appealed not only this finding but also argued that Idaho Code section 72-438(14)(b) unconstitutionally discriminated between the employers of firefighters who had cancer and the employers of other employees. The Idaho Supreme Court affirmed the Industrial Commission.[56]
- *Industrial Claim Appeals Office v. Town of Castle Rock* (May 2016): In this Colorado case previously cited, the Colorado Supreme Court affirmed the appellate court, ruling that, "To meet its burden of proof, the employer is not required to prove a specific alternate cause of the firefighter's cancer. Rather, the employer need only establish, by a preponderance of the medical evidence, that the firefighter's employment did not cause the firefighter's particular cancer because the firefighter's particular risk factors rendered it more probable that the firefighter's cancer arose from a source outside the workplace."
- *City of Tarpon Springs and Florida League of Cities v. Vaporis* (March 2007): In this Florida case, a claim for WC benefits by a firefighter who passed the physical examination upon entering service but later suffered a heart attack was denied. The court concluded that the employer had overcome the statutory firefighter presumption and that the employer was not required to prove the disease was caused by a "specific or non-occupational hazard" to rebut the presumption.
- *Johnston v. Illinois Workers' Compensation Commission* (April 2017): In this case, a firefighter with coronary artery disease suffered a near-fatal heart attack while removing snow at the fire station. The appellate court found that clear and convincing evidence was not the standard of proof necessary for the firefighter's employer to rebut the WC statutory presumption that his condition arose out of and in the course of employment. Rather, the WC Act simply required the employer to offer some evidence sufficient to support the finding that something other than the firefighter's occupation caused his condition.

These cases highlight how the burden of proof required from the employer to successfully rebut a presumption can vary among states. For example, in Colorado, showing that an occupational disease was probably caused by something other

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[53] Presumptions enacted in Vermont were contained in S 194, effective January 1, 2007.
[54] Torrey, David B., "Firefighter Cancer Presumption Statutes in Workers' Compensation and Related Laws: An Introduction and a Statutory/Regulatory/Case Law Table," National Association of Workers' Compensation Judiciary, www.nawcj.org/wp-content/uploads/2019/06/NAWCJ-FIREFIGHTER-PRESUMPTIONS-Essay-Table-2013.pdf (2013).
[55] *Bristol City Fire Department v. Maine* [the surname of the claimant] (Virginia Court of Appeals; March 13, 2001). caselaw.findlaw.com/va-court-of-appeals/1339874.html. Similar case law has been established in the previously noted, *In the Matter of the Compensation of Leonard C. Damian, II, Claimant* (Oregon WC Board; filed October 26, 2012).
[56] See Justia summary at law.justia.com/cases/idaho/supreme-court-civil/2022/49171.html.

than firefighting could be sufficient to rebut a claim,[57] whereas in Virginia, the burden of proof is higher because the employer must show that a specific non-work-related factor caused the disease. The level of proof required of the employer will impact the number of claims that are compensated due to a firefighter presumption; therefore, until case law is established, there is uncertainty as to the actual impact on WC due to the enactment of a presumption.

Retroactive Impact

When a firefighter presumption is established, claims may be filed that resulted from exposures prior to the implementation of the presumption, particularly due to the cumulative nature and long latency periods of many occupational diseases covered by firefighter presumptions. As such, original premiums for previous policy periods would not have contemplated the increased costs associated with the presumption when a firefighter presumption is subsequently established. Since premiums from prior policy periods cannot be adjusted, an unfunded liability for insurance carriers and self-insureds may be created.

Data Availability

Data availability issues make it difficult to explicitly quantify the cost impact of firefighter presumption legislation. For data available to NCCI, the main difficulty is that only a portion of the data on firefighter WC experience is reported because firefighters are primarily employed by municipalities and political subdivisions, which often self-insure their WC exposure. The self-insured market is generally not required to report data to NCCI (except in Florida), so firefighter payroll data reported in states in which NCCI provides ratemaking services represents only a fraction of firefighter payroll. However, these percentages can vary widely by jurisdiction.

Compensability

Another issue is the inability to differentiate between claims where compensability is determined based on a presumption versus claims where compensability is determined based on general standards. Even if a change in reported claims occurs after a presumption becomes effective, consideration would need to be given to the possibility that a claim deemed compensable under a statutory presumption of benefits may have been found compensable even if the presumption did not exist.

Latency

Many of the occupational diseases typically included in legislative proposals providing presumptive coverage to firefighters have long latency periods. Therefore, it may take a number of years before claim activity associated with firefighter occupational diseases emerges in the data available to NCCI (which is already limited given that many of these risks are self-insured and do not report data to NCCI).

Varying Results Amongst Studies

Numerous studies have examined the relationships between the job duties of firefighters, exposure to certain toxins, and contraction of specific occupational diseases, with varying conclusions. For example:

- The International Association of Fire Fighters (IAFF) and US Fire Administration (USFA) found that respiratory disease among firefighters "is the result of a career of responding to fires and hazardous materials incidents; it is caused by breathing toxic smoke, fumes, biological agents, and particulate matter on the job."[58]

[57] At least as of 2016, when the decision was rendered; as previously noted, prior to *Castle Rock*, the lower courts tended to interpret the statute in practical terms as an irrebuttable presumption.
[58] "Respiratory Diseases and the Fire Service," USFA and FEMA, September 2010. Accessible through ohsonline.com/Articles/2010/09/16/Report-Examines-Firefighter-Lung-Diseases.aspx.

- A less definitive conclusion was reached by the National Institute for Occupational Safety and Health (NIOSH), which published a study that analyzed cancer in career firefighters and concluded that there is a "small to moderate increase in risk for several cancer sites and for all cancers combined."[59]
- In contrast, the United Kingdom's Institute of Occupational Medicine conducted a review of literature of non-cancer occupational health risks in firefighters and concluded that "none of the sets of papers reviewed showed any consistent association between the occupation of firefighter and any of a number of non-cancer disease and ill-health outcomes."[60]

Conclusion

The widespread introduction of statutory presumptions for firefighters and other first responders has created the need to understand the impact that these presumptions have on the jurisdictions' WC systems in which they are proposed. A review of the current enacted firefighter presumptions reveals that statutory language varies by jurisdiction. However, there are three key elements common to all firefighter presumptions that affect WC costs: the diseases that are covered, the restrictions that apply to the presumptions, and the ability of the employer to rebut the presumption. First, the types of diseases covered, and the elements used to define those diseases play a significant role in both the frequency and severity of newly compensable claims. Next, restrictions such as tenure, age requirements, health evaluations, and non-smoker clauses can also affect the ultimate cost. Finally, the wording of statutes regarding the ability to rebut (e.g., simply "rebuttable" or "rebuttal by a preponderance of the evidence") can influence claim frequency.

Two factors that affect the degree of accuracy when estimating the cost impact associated with enacting a firefighter presumption are: the scope of available data and the variation in results of published studies on the link between certain occupational diseases and firefighting and the resulting impact on incidence rates. However, all else equal, NCCI expects that the enactment of such presumptions will result in an increase in WC costs.

Lastly, some additional considerations must be noted because they could influence the application and ultimate cost impact of a firefighter presumption:

- Whether or not the bill is applicable to volunteer firefighters and other non-first responder occupations could complicate any cost impact analysis performed
- The judicial environment in which a newly established presumption is enacted can impact its overall cost to the WC system because the lack of established case law may leave a degree of interpretation to the courts
- With the enactment of the bill, there may also be the unexpected consequence of the availability of WC coverage for firefighters, resulting in a shift from the voluntary or self-insured market to the jurisdiction's residual market, which could exert a strain on the entire WC system
- Moreover, the enactment of a firefighter presumption will likely result in an unfunded liability if the presumption is applied retroactively

In conclusion, there are many factors that could affect the ultimate cost impact of a firefighter presumption on a state's WC system, and this document is intended to provide insights into the key considerations associated with such a legislative change.

Acknowledgement: The authors would like to thank Hunter Stevenson for his research assistance.

[59] "Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia" (1950–2009), NIOSH, oem.bmj.com/content/71/6/388 (October 2013).
[60] "Non-cancer occupational health risks in firefighters," Institute of Occupational Medicine, academic.oup.com/occmed/article-pdf/62/7/485/4392951/kqs116.pdf, 2012.

FIRST RESPONDER PRESUMPTIONS FOR WORKERS COMPENSATION IN JURISDICTIONS IN WHICH NCCI IS A RATING OR ADVISORY ORGANIZATION (As of 11/1/2022)

State	Type of Injury, Disease, or Condition				
	Cancer (incl. leukemia)	Lung / Respiratory	Blood / Infectious	Heart / Vascular	Mental-Mental
Alabama					
Alaska	✓	✓		✓	
Arizona	✓	✓		✓	
Arkansas					
Colorado	✓		✓		
Connecticut				✓	
District of Columbia					
Florida		✓	✓	✓	
Georgia					
Hawaii					
Idaho	✓				
Illinois	✓	✓	✓	✓	
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana	✓	✓	✓	✓	✓
Maine	✓	✓	✓	✓	✓
Maryland	✓	✓		✓	
Mississippi					
Missouri					
Montana	✓	✓		✓	
Nebraska					
Nevada	✓	✓	✓	✓	
New Hampshire	✓	✓		✓	✓
New Mexico	✓	✓	✓	✓	✓
North Carolina					
Oklahoma	✓	✓	✓	✓	
Oregon	✓	✓		✓	✓
Rhode Island					
South Carolina		✓		✓	
South Dakota					
Tennessee	✓		✓		
Texas	✓	✓	✓	✓	
Utah	✓		✓		
Vermont	✓	✓	✓	✓	✓
Virginia	✓	✓	✓	✓	
West Virginia	✓	✓		✓	


Firefighters (may include volunteer and/or non-volunteer)


Police or peace officers (may include sheriffs and other law enforcement employees)


Correctional officers


Emergency medical personnel, which includes emergency medical technicians (EMTs) and paramedics, who generally are advanced providers of emergency medical care (may include related occupations)

This chart is for WC presumptions only; some states have presumptions for pension and other benefits outside the WC system. For presumption information for jurisdictions in which NCCI does not provide ratemaking services, see Table 17 of the Workers Compensation Research Institute publication, "Workers' Compensation Laws as of January 1, 2022," by Karen Rothkin: www.wcrinet.org/reports/workers-compensation-laws-as-of-january-1-2022