



**Bureau of Workers'
Compensation**

30 W. Spring St.
Columbus, OH 43215-2256

Governor **Mike DeWine**
Administrator/CEO **Stephanie B. McCloud**

www.bwc.ohio.gov
1-800-644-6292

To: Legislative Service Commission
Chair, Senate Transportation, Commerce and Workforce Committee
Chair, Senate Insurance and Financial Institutions Committee
Chair, House Insurance Committee

From: Chan Cochran, Chair, Ohio Bureau of Workers' Compensation (BWC) Board of Directors

Date: August 23, 2019

Re: ORC 4121.125 Actuarial Analysis of Pending Legislation – House Bill 308

Attached you will find an actuarial analysis of House Bill 308, which would modify Ohio workers' compensation benefits for Post-Traumatic Stress Disorder (PTSD) for first responders without an associated physical injury. This report fulfills ORC 4121.125 (C)(6) and (7), which require the BWC Board of Directors to have prepared, by or under the supervision of an actuary, an actuarial analysis of any introduced legislation expected to have a measurable financial impact on the workers' compensation system.

This bill is very similar to bills introduced in previous General Assemblies but limits the duration of benefits and treatment to a 12-month period from the date of first benefit receipt. In conducting the analysis, BWC's Actuarial staff has performed extensive research of publicly available related studies and their underlying assumptions for use in development of an estimate of the potential fiscal impact to the State Insurance Fund.

In summary, the actuarial estimate of the impact of the additional claims being filed as a result of the enactment of House Bill 308 would be an annual increase of approximately \$44 million. While the extent of the potential increase is difficult to predict with any degree of precision due to significant data limitations, we feel the estimate provided is reasonable. We note that this increased cost will result in higher future premiums for the public entities with first responder employees.

Details of the estimate can be found in the BWC Actuarial staff's analysis, as further detailed in the attached report.

Please feel free to contact our BWC staff if you have further questions.

**Estimated Financial Impact of 2019 House Bill No. 308
Proposed Legislation on Post-Traumatic Stress Disorder
for First Responders without an Accompanying Physical Injury**

Background

Workers' compensation benefits for Post-Traumatic Stress Disorder (PTSD) has been included in House Bill 308. Currently, workers' compensation benefits exist when PTSD coincides with a physical injury. The provisions of this bill would extend those benefits to police officers, firefighters, and emergency medical workers if they suffer from PTSD after being exposed to a traumatic event regardless of whether the event resulted in a physical injury.

PTSD language has been proposed twice recently.

- In 2015 during General Assembly 131 as Senate Bill 5
- In 2017 during General Assembly 132 as Senate Bill 118

The language of these two versions are similar to House Bill 308 but Senate Bill 118 appears to be more similar in that both contain a limitation of one year for the receipt of benefits.

Underlying Assumptions

In light of additional information from other states, we have revisited the reasonability of previous assumptions, the resulting estimated amounts as well as whether the ambiguity surrounding the assumptions underlying these amounts can produce an estimate that can be relied upon.

Claims Related Assumptions

The original assumptions were:

1. 18% of the Ohio First Responders may have PTSD at some point in their career.¹
2. PTSD in First Responders would emerge at an annual rate of 20% of that number (18%).

These assumptions result in an estimate that 3.6% of all First Responders would file a claim each year and implicitly assume the reporting rate would be 100% of those with PTSD.

Based upon the roughly 80,000 First Responders in Ohio, we would project approximately 2,900 PTSD claims per year.

New information reviewed

From an estimate develop by actuaries at the Washington Department of Labor & Industries on their recently enacted PTSD for Law Enforcement Officers and Firefighters, they presumed that 38% of those with PTSD (rather than our 100% estimate) would be willing to report it and make

¹ Extreme Stress: Promoting Resilience Among EMS Workers, Randal Beaton http://www.nwpublichealth.org/docs/nph/f2006/beaton_f2006.pdf and Post traumatic Stress Disorder in the National Comorbidity Survey, Kessler et al 1995 https://msrc.fsu.edu/system/files/Kessler_et_al_1995_Posttraumatic_Stress_Disorder_in_the_National_Comorbidity_Survey.pdf

**Estimated Financial Impact of 2019 House Bill No. 308
Proposed Legislation on Post-Traumatic Stress Disorder
for First Responders without an Accompanying Physical Injury**

a claim for treatment and benefits.² We found Washington's assumption to be persuasive and that 38% of those with PTSD in any given year will file a claim, at least initially.

Adding this assumption to our assumption set, reduces our annual frequency per exposed First Responder to 0.76% or just under 1,100 claims per year.

Cost per Claim Assumptions

The cost per claim is dependent upon the average expected wage replacement benefit, the average treatment cost, the average pharmaceutical cost and the expected duration of the coverage of those benefits. House Bill 308, as introduced, limits the duration of benefit payments to one year from the date of first receipt.

We have developed an expected average annual wage replacement benefit across the types of first responders to develop an expected average annual first responder wage replacement benefit of about \$33,000. To account for the possibility of some injured workers needing the wage replacement benefit for less than the full year, we have adjusted the annual figure by applying a factor of 90% which results in an adjusted amount of \$29,765.

Based on the estimated medical benefit costs developed by the BWC Medical Team in prior estimates, we are using the figures of \$7,500 for the average treatment cost over the year and \$2,500 for the average pharmaceutical cost in the year or \$10,000 for the estimated medical benefit costs per claim under House Bill 308.

House Bill 308 Cost estimate by the numbers:

- 80,100 Ohio first responders.
- At any point in time, 2,900 would have PTSD.
- 1,100 (38%) would file a claim in any year.
- Cost is \$40,000 per claim.
- **1,100 claims x \$40,000 costs = \$44 million in annual costs.**

Uncertainty of Actual Future Results

The methodology and factors used in this analysis involve assumptions on future contingent events. As outlined in the summary above, there are numerous assumptions essential in this analysis. Although the method and actuarial procedures follow actuarial standards of practice, it should be noted the actual future results may vary, perhaps significantly, from the estimates reported here.

² Kessler, RC, Post traumatic stress disorder: the burden to the individual and to society, 2000 <https://www.ncbi.nlm.nih.gov/pubmed/10761674> and Washington Department of Labor and Industries Individual State Agency Fiscal Note to SB 6214 S

**Estimated Financial Impact of 2019 House Bill No. 308
Proposed Legislation on Post-Traumatic Stress Disorder
for First Responders without an Accompanying Physical Injury**

Given the significant degree of uncertainty around the assumptions, we also mention that a change in a single assumption would result in a very different estimate. For example, using Washington’s 10% PTSD prevalence assumption lowers the estimated annual PTSD claim count to 600 and the total annual cost estimate to \$24 million. Conversely, if more first responders with PTSD file their claim – the amounts could be closer to our original estimate of \$183 million. Utilization is a challenge for all states to determine costs and is not a certainty.

Conclusion

Given the method and assumptions detailed above, we estimate the **potential costs of the 2019 House Bill No. 308 PTSD legislation, as introduced, could initially be \$44 million annually in Ohio if our assumptions, including 38% utilization, hold true.** As the stigma surrounding mental health care reduces through education, those willing to seek treatment for PTSD is expected to increase accordingly.

Qualifications

This actuarial report summarizes the estimates developed by Christopher S. Carlson, FCAS, MAAA and Chief Actuarial Officer of the Ohio Bureau of Workers’ Compensation and Daniel Myers, FCAS, MAAA and Senior Director of Actuarial Analysis at the Ohio Bureau of Workers’ Compensation. Both Mr. Carlson and Mr. Myers meet the continuing education requirements of the American Academy of Actuaries to issue this report.

**Estimated Financial Impact of 2019 House Bill No. 308
Proposed Legislation on Post-Traumatic Stress Disorder
for First Responders without an Accompanying Physical Injury**

Exhibit A

Average Claim Cost Assumptions

In our analysis of House Bill 308, the following key assumptions were made in the development of the cost estimate for PTSD medical and indemnity benefits:

- indemnity benefits would last at most 1 year at 90% of a full years' cost,
- medical benefits would last 1 year, and
- the average injured worker would seek psychological counseling that included prescription drugs

Notwithstanding the adjustments noted above in the Underlying Assumptions section, these assumptions appear to remain reasonable.

The following information underlies the cost per claim estimate:

Occupation	Number of Ohio Workers	Average Annual Indemnity Benefit
Ambulance Driver	1,080	\$14,449
EMS	10,130	\$20,119
Firefighter	33,491	\$31,206
Police	35,399	\$39,169
Total/Average	80,100	\$33,136
Adjusted for HB 308		\$29,765

Treatment Year	Therapy	Pharmacology	Total Medical
1	\$7,500	\$2,500	\$9,369

In our research, we found an estimate from the State of Connecticut that provided a range of potential cost per claim between \$20,000 and \$150,000 without an associated estimate of the number of expected claims. Thus, when reflecting a one-year limitation, our \$40,000 average annual PTSD claim cost estimate also appears to be reasonable.