

## Estimated Financial Impact of 2019 Proposed Legislation on Post-Traumatic Stress Disorder for First Responders

### Background

Post-Traumatic Stress Disorder (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 in the sub-bill to the BWC Budget bill appears to be the same as SB5. The annual cost estimate that we developed for SB5 was approximately \$183 million per year.

### Revisit of Assumptions

In light of additional information from other states, we have revisited the reasonability of these 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.<sup>1</sup>
2. PTSD in First Responders would emerge at an annual rate of 20% of that number (18%).

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

Therefore, the analyses for SB5 and Senate Bill 118 assumed that 3.6% of the eligible workforce would make a claim each year. Based upon the roughly 80,000 First Responders in Ohio, we projected approximately 2,900 PTSD claims per year.

### *Original estimate and assumptions by the numbers:*

- 80,100 Ohio first responders.
- At any point in time, 2,900 would have PTSD.
- All 2,900 (100%) would file a claim.
- Cost is \$63,000 per claim. *See Exhibit A.*
- **2,900 claims x \$63,000 costs = \$183 million in annual costs.**

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<sup>1</sup> Extreme Stress: Promoting Resilience Among EMS Workers, Randal Beaton [http://www.nwpublichealth.org/docs/nph/f2006/beaton\\_f2006.pdf](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](https://msrc.fsu.edu/system/files/Kessler_et_al_1995_Posttraumatic_Stress_Disorder_in_the_National_Comorbidity_Survey.pdf)

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### New information reviewed

From an estimate developed 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 a claim for treatment and benefits.<sup>2</sup> 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.

### Updated 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.
- Cost is \$63,000 per claim.
- **1,100 claims x \$63,000 costs = \$70 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.

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 \$39 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 proposed 2019 PTSD legislation could initially be \$70 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.

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<sup>2</sup> 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

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**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.

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**Exhibit A**

*Average Claim Cost Assumptions*

The following key assumptions were made in the development of the cost estimate for PTSD medical and indemnity benefits:

- indemnity benefits would last an average of 1 year,
- medical benefits would last 5 years, and
- the average injured worker would seek psychological counseling that included prescription drugs

These assumptions appear to remain reasonable.

The following information underlies the cost per claim estimate:

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

<b>Treatment Year</b>	<b>Therapy</b>	<b>Pharmacology</b>	<b>Total Medical</b>
1	\$6,869	\$2,500	\$9,369
2	\$4,361	\$2,500	\$6,861
3	\$2,181	\$2,500	\$4,681
4	\$2,181	\$2,500	\$4,681
5	\$2,181	\$2,500	\$4,681
<b>Total</b>	<b>\$17,773</b>	<b>\$12,500</b>	<b>\$30,273</b>

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, our \$63,000 average annual PTSD claim cost estimate also appears to be reasonable.