

DIR Issue Brief

**Overview of California First Responders' Behavioral Health Using PTSD-Related Workers' Compensation Claims Data**

DRAFT 9/26/17

In May 2017, Assemblymember Tim Grayson (District 14 and author of [AB 1116](#)) requested that the Commission on Health and Safety and Workers' Compensation (CHSWC) gather data and conduct a study on occupational behavioral health for emergency response personnel.

This issue brief uses actual claims data to inform the discussion and outlines a set of recommended next steps to guide the scope of a formal study. The questions addressed in this issue brief include:

1. What guidance does the Medical Treatment Utilization Schedule (MTUS) offer for workers' compensation (WC) doctors to ensure the streamlined delivery of medical treatment for behavioral health disorders, such as post-traumatic stress disorder (PTSD)?
2. What WC claim data information is available on first-responder claimants with PTSD diagnoses?
3. What specific treatments are requested, and what are the outcomes of the requests?

**Background**

PTSD and extreme trauma are highly correlated. PTSD, per the American Psychiatric Association, may develop following exposure to extreme trauma, which is recognized as a terrifying event or ordeal that a person has experienced, witnessed, or learned about, particularly when it is life threatening or causes physical harm. The experience can cause a person to feel intense fear, horror, or a sense of helplessness. The stress caused by trauma can affect all aspects of a person's life, including mental, emotional, and physical well-being.

At least once in their lives, 70% US adults have experienced a traumatic event, and 20% of them develop PTSD. More than 13 million US adults (4% of the population) have PTSD at any given time, and over 21 million US adults (6% of the population) will develop PTSD during their lifetime. One in 10 women will get PTSD at some time in their lives. Women are about twice as likely as men to develop PTSD.<sup>12345</sup>

---

<sup>1</sup> The current US population is 326 million, per the U.S. Census Bureau. Website accessed 9/25/17: <https://www.census.gov/popclock/>

<sup>2</sup> American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. Accessed 9/25/17: <https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/dsm-5-fact-sheets>

<sup>3</sup> RAND Corporation (2017). Raising Awareness of the Need for Collaborative Care to Treat PTSD. Accessed 9/25/17: <https://www.rand.org/blog/2017/06/raising-awareness-of-the-need-for-collaborative-care.html>

<sup>4</sup> Sidran Traumatic Stress Institute, Inc. Post Traumatic Stress Disorder Fact Sheet. Accessed 9/25/17: <http://www.sidran.org/resources/for-survivors-and-loved-ones/post-traumatic-stress-disorder-fact-sheet/>

<sup>5</sup> U.S. Census Bureau. The current US population is 326 million. Website accessed 9/25/17: <https://www.census.gov/popclock/>

People at risk of developing PTSD include:

- Anyone who has been victimized or has witnessed a violent act or who has been repeatedly exposed to life-threatening situations
- Survivors of domestic or intimate partner violence
- Survivors of rape or sexual assault or abuse
- Survivors of physical assault, such as mugging or carjacking
- Survivors of other random acts of violence, such as those that take place in public, in schools, or in the workplace
- Children who are neglected or sexually, physically, or verbally abused, or adults who were abused as children
- Survivors of unexpected events in everyday life, such as:
  - Car accidents or fires
  - Natural disasters, such as tornadoes or earthquakes
  - Major catastrophic events, such as a plane crash or terrorist act
  - Disasters caused by human error, such as industrial accidents
- Combat veterans or civilian victims of war
- Those who have been diagnosed with a life-threatening illness or who have undergone invasive medical procedures
- People who learn of the sudden unexpected death of a close friend or relative
- **Professionals who respond to victims in trauma situations, such as emergency medical service workers, police, firefighters, those in the military, and search-and-rescue workers**

The last group is the focus of this issue brief.

### **Guidance for Treatment**

The MTUS offers guidance for WC doctors to ensure the streamlined delivery of medical treatment for behavioral health disorders, such as PTSD. Through a combination of MTUS guidelines and the MTUS medical evidence and search sequence, appropriate guidance is available to address any condition.

Currently, the MTUS treatment guidelines include “stress-related conditions” per California Code of Regulations (CCR) Title 8 section [9792.23.8](#). In general, treating doctors review this guideline to see whether it addresses the patient’s condition. If so, they determine whether it supports the treatment that they would like their patient to receive. If the MTUS treatment guidelines do not cover their patient’s condition or do not support the desired treatment plan, then treating doctors would follow the MTUS Medical Evidence Search Sequence (CCR 9792.21.1).

The MTUS Medical Evidence Search Sequence is very broad and comprehensive and gives treating doctors the ability to provide information from a variety of sources to support their treatment requests.

## Insight from Claims Data

### Data Sources for Workers' Compensation Claims

California's Workers' Compensation Information System (WCIS) uses electronic data interchange (EDI) to collect comprehensive information from claims administrators to help the Department of Industrial Relations oversee the state's WC system. Electronic transmission of the first report of injury has been required since March 1, 2000, and electronic versions of benefit notices were mandated as of July 1, 2000. Electronic reporting of medical billing data is required for any medical service that occurs on or after September 22, 2006.

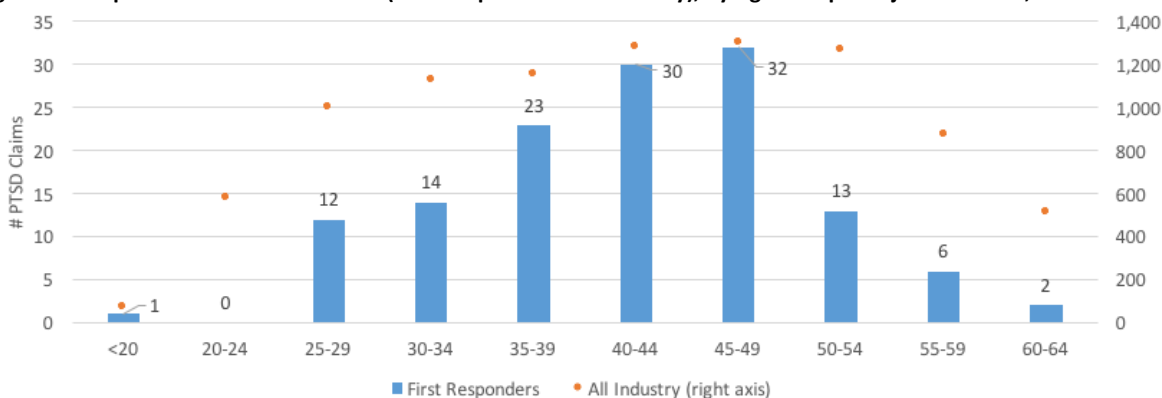
For the purpose of this analysis, staff used data from the WCIS extracted on July 19, 2017, for claims and bills reported with a date of injury between January 1, 2012, and December 31, 2016. To isolate PTSD-related claims, staff relied on diagnosis code PTSD (ICD-9 diagnosis code 309.81; ICD-10 diagnosis codes F431 [F43.1], F4310 [F43.10], F4311 [F43.11], F4312 [F43.12]). To isolate the first-responder cohort, claims were identified using NAICS codes 922120, 922160, 922190, and 621910. The resulting small sample size ( $N = 133$ ) of eligible cases reported for first-responder PTSD WC claims suggests that findings should be interpreted with caution.

Claim information obtained from the WCIS included age, gender, nature of injury, cause of injury, claim duration, job tenure, provider specialty, instances of multiple claims, geographic distribution of claims, amount of services paid, services/treatment types billed.

### Findings

As shown in Figure 1, nearly half (47%) of first-responder PTSD claimants were 40-49 years old when the injury occurred. In the United States, the median age of firefighters is 38.6 years<sup>6</sup> and the median age of police officers is 39.7 years.<sup>7</sup>

**Figure 1. Comparison of PTSD WC Claims (First Responder v All Industry), by Age Group of Injured Worker, 2012-2016**



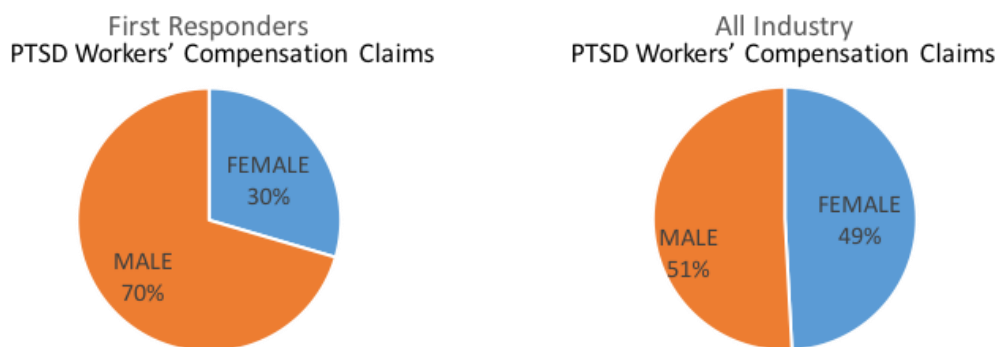
Source: WCIS database.

<sup>6</sup> ACS PUMS 5-Year Estimate, Census Bureau, accessed July 25, 2017: <https://datausa.io/profile/soc/332011/>.

<sup>7</sup> Based on 2016 data in the Current Population Survey (CPS) conducted by the US Census of the Bureau of Labor Statistics, accessed July 26, 2017: <https://www.bls.gov/cps/cpsaat11b.htm>.

Gender differences among first responders differ from those in all industries (see Figure 2). These differences are salient in view of the wide gap between men and women in labor force participation as first responders and generally. Among first-responder PTSD claimants, 70% were male, but in all industries men comprised just over half. Both nationally and in the state, the first-responder labor force participation rate is lower among women than men: Women represent 4% of firefighters in the United States<sup>8</sup> and 13% of full-time law enforcement officers in California.<sup>9</sup>

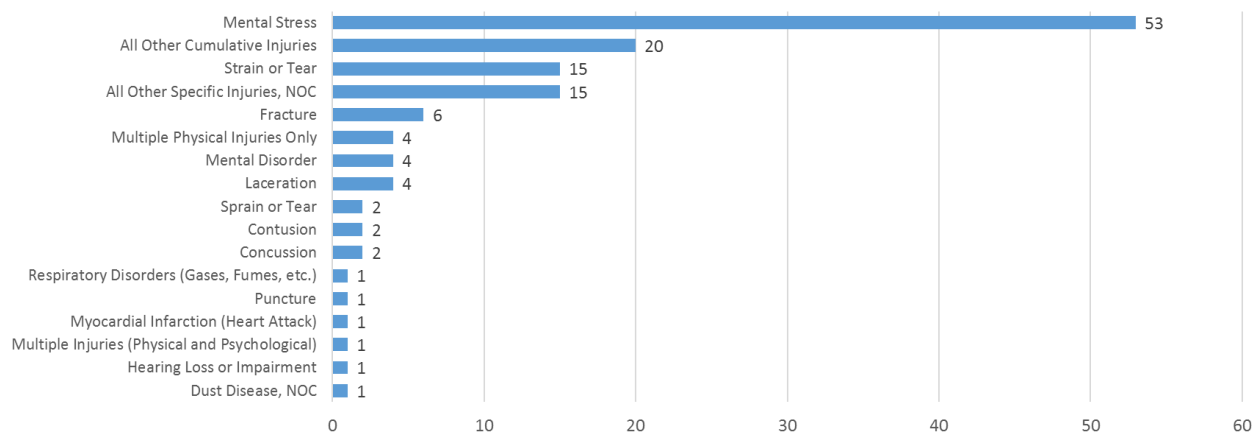
**Figure 2. Gender Distribution of PTSD Workers’ Compensation Claims for First Responders and All Industry, 2012-2016**



Source: WCIS database.

“Nature of injury” identifies the primary physical characteristics of an injury. Mental stress was reported as the “nature of injury” for 40% (53 claims) of first-responder PTSD WC claims (see Figure 3).

**Figure 3. Most Frequently Reported Nature of Injury for First Responder PTSD WC Claims, 2012-2016**



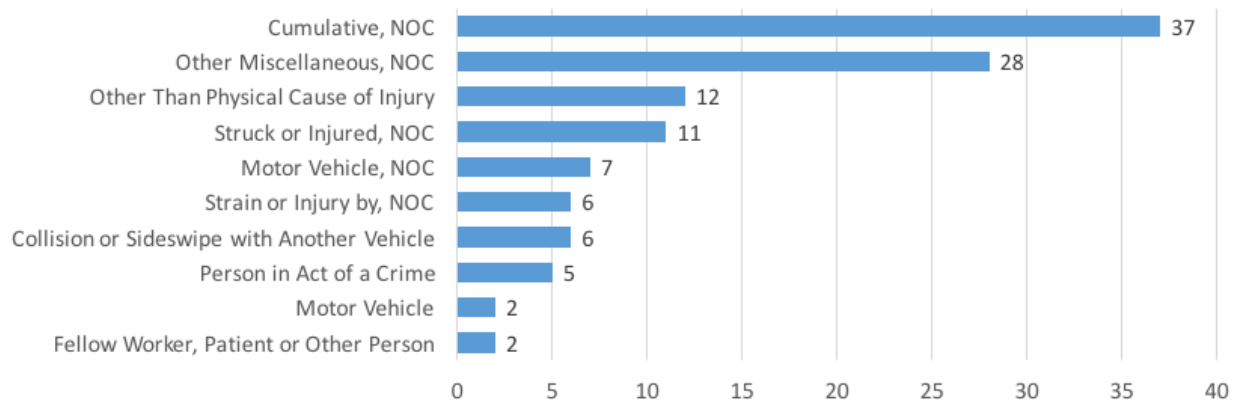
Source: WCIS database.

<sup>8</sup> See note 6.

<sup>9</sup> Based on 2015 data, US Department of Justice, accessed July 26, 2017: <https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-77/>.

Cumulative injury was reported as the cause of 28% (37 claims) of first-responder PTSD workers' compensation claims (see Figure 4).

**Figure 4. Most Frequently Reported Cause of Injury for First Responder PTSD WC Claims, 2012-2016**



Source: WCIS database.

In terms of employment tenure with the current employer when injured, 25% of all industry claims were filed in the first year on the job while tenure with job at injury varied for first responders (see Figure 5). Because of limited reporting of date of hire and/or claim closed date in WCIS, the number of cases reflecting the tenure for first responders is rather small ( $N = 46$ ), therefore the data is insufficient to reliably assess any trend.

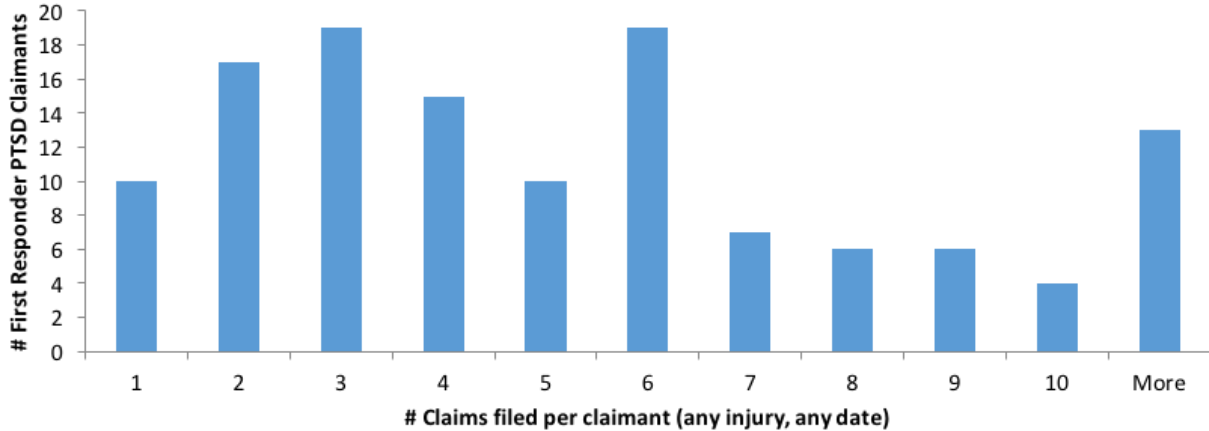
**Figure 5. Tenure for Reported PTSD Claims, 2012-2016**



Source: WCIS database.

To examine whether PTSD claims were filed in isolation, the staff reviewed the data for all injury claims filed at any time for first responders who filed PTSD WC claims in 2012-2016. This enabled the staff to determine whether additional claims were associated with the same injured worker. Overall, 92% of first responders who filed PTSD WC claims filed additional injury claims (see Figure 6).

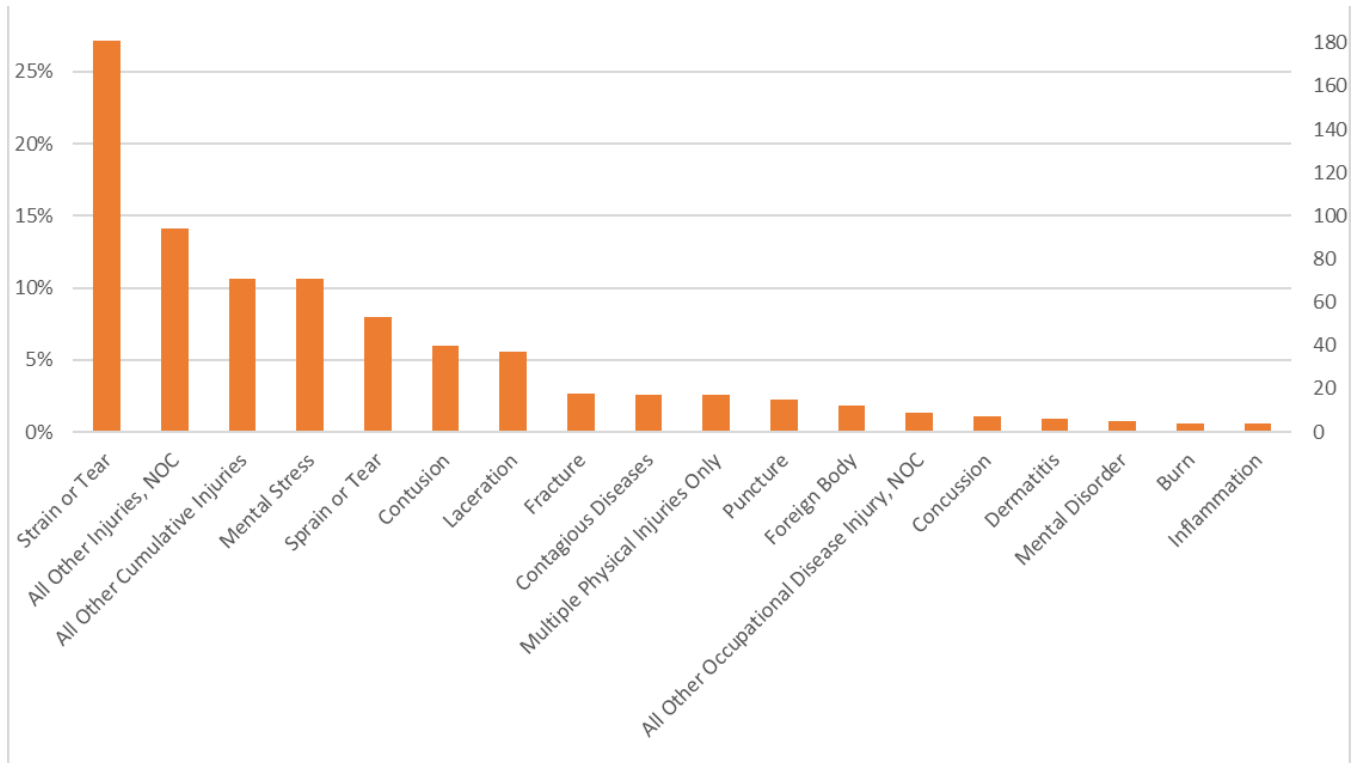
**Figure 6. Total Claims Filed for First Responders Who Filed PTSD WC Claims**



Source: WCIS database.

Of the distinct additional claims filed by first responders who filed PTSD WC claims in 2012-2016, over a third (34%) were for strain, sprain or tear injuries. “Other injuries” comprised 13%, followed by cumulative injuries and mental stress, each representing 10% of the other WC claims filed (see Figure 7).

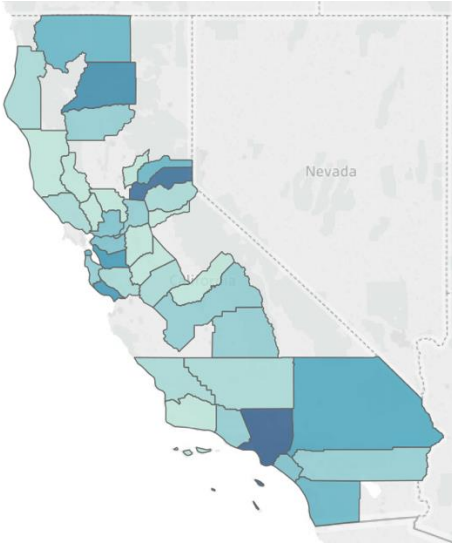
**Figure 7. Types of Other Injuries Filed by First Responders Who Filed PTSD WC Claims in 2012-2016**



Source: WCIS database. Extract from 9/25/17.

First-responder PTSD claims were distributed throughout California, as shown in the geographical mapping in Figures 8 and 9.

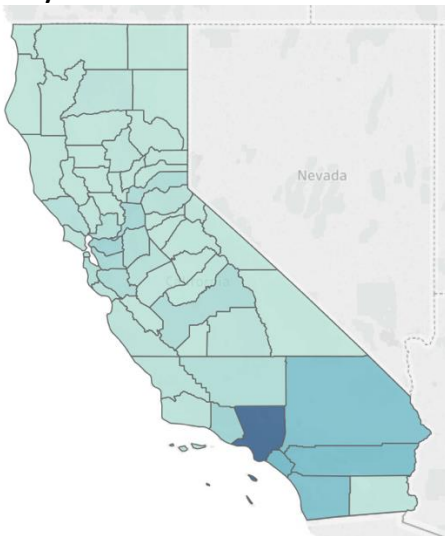
**Figure 8. First-Responder PTSD Workers' Compensation Claims for Dates of Injury in 2012-2016, by Employee County**



*Source:* WCIS database.

Note: Map is based on generated longitude and latitude from employee county data. Depth of color on spectrum indicates density of claims.

**Figure 9. All Police and Firefighter Workers' Compensation Claims with Date of Injury in 2012-2015 by Employee County**



*Source:* WCIS database.

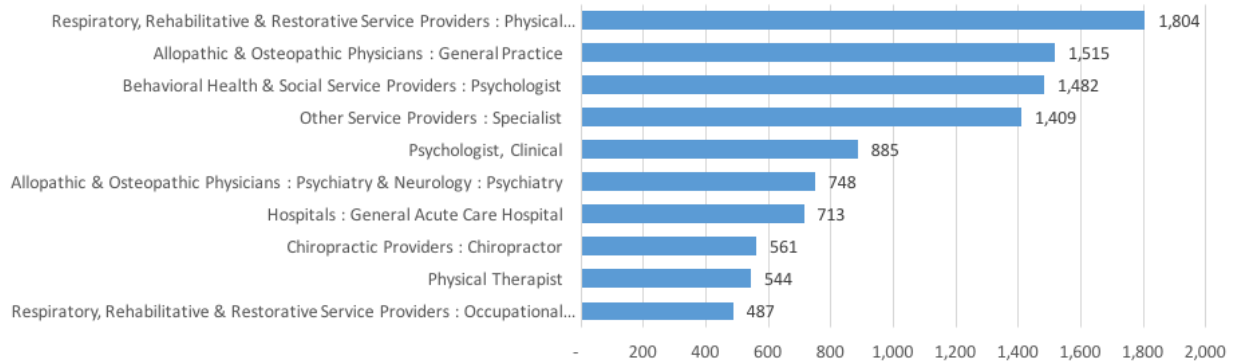
Note: Map is based on generated longitude and latitude from employee county data. Depth of color on spectrum indicates density of claims. Data is filtered on Date of Injury Year for 2012, 2013, 2014 and 2015.

At the time of the extracted data from the WCIS, \$2,067,037 was paid for medical services for first-responder PTSD WC claims, averaging \$15,659 per claim.

*Specific Treatment Requests and the Outcome of Those Requests*

Physician specialty provides insight into the types of treatment that workers receive. Physical therapy and psychology lead in physician specialties for first-responder PTSD WC claims (see Figure 10).

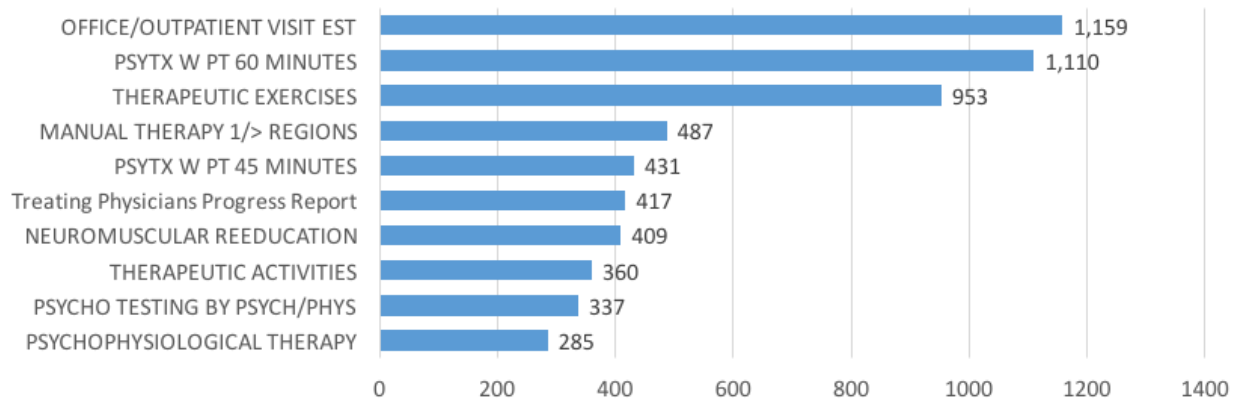
**Figure 10. Most Frequently Reported Physician Specialty for First Responder PTSD WC Claims, 2012-2016**



Source: WCIS database.

Physical and other therapies comprise the most frequently billed PTSD-related treatments for first-responder PTSD workers' compensation claims (see Figure 11).

**Figure 11. Most Frequently Billed Medical Service for First Responder PTSD WC Claims, 2012-2016**



Source: WCIS database.

Information from the Independent Medical Review (IMR) database provides insight into treatment requests and outcomes. California's WC system uses IMR to resolve disputes over the medical treatment of injured employees. As of July 1, 2013, medical treatment disputes for all dates of injury are resolved by physicians through IMR. For this study, PTSD claim data from IMR were extracted May 24, 2017, for requests filed January 1, 2013, to May 24, 2017. To isolate cases related to PTSD, the staff used primary diagnosis code PTSD (ICD-9 diagnosis code 309.81; ICD-10 diagnosis codes F431 [F43.1], F4310 [F43.10], F4311 [F43.11], F4312 [F43.12]).

IMR data revealed 694 unique IMR claimants with a listed PTSD-related diagnosis. Not including ineligible applications or withdrawn or terminated cases, 1,138 IMRs were reviewed and decided for these unique claimants. Table 1 shows the geographic distribution of these cases.



**Table 1. IMR Cases for PTSD-Related Diagnosis, 2013-2017, by Injured Worker Location**

Location of injured worker	Total
Los Angeles	285
Bay Area	244
Inland Empire	232
Central Valley	79
Central Coast	78
San Diego	71
Out-of-State	66
Eastern Sierra Foothills	34
North State/Shasta	25
Sacramento Valley	24
<b>Total</b>	<b>1,138</b>

Source: IMR database.

Although IMR generally upheld utilization review (UR) decisions on filings related to PTSD, the overturn rate was higher for several PTSD-related filings than the general overturn rates for the same treatments, as highlighted in yellow for pharmacy (801 cases) in Table 2, with a 12% overturn rate for PTSD cases compared with 7% for general cases. Diagnostic testing (107 cases) had an overturn rate for PTSD-related cases of 21% versus 9% for general cases. Psych services (607 cases) showed a lower overturn rate (14%) for PTSD-related cases than for general cases (18%).

**Table 2. PTSD-Related IMR Treatment Requests, 2013-2017**

PTSD Related IMR Treatment Requests 2013-2017			
Category of Treatment	Total No. of Requests	Overturn Rate	General Overturn Rate (based on 2016 data)
Diagnostic Testing	107	21%	9%
Equipment, supplies (DMEPOS)	38	26%	7%
Evaluation & Management	36	33%	20%
Home Health Care	9	0%	6%
Injection	16	25%	10%
Pharmacy	801	12%	7%
Programs	17	6%	10%
Psych Services	607	14%	18%
Rehabilitation	146	5%	7%
Surgery	21	10%	10%
Therapies (unspecified)	17	18%	8%

Source: IMR database.

## **Recommendations for Next Steps**

Based on the findings from an analysis of claims data, the following merit consideration:

1. Determine whether model programs exist for preventing and/or treating PTSD. It would be useful to conduct a literature review of programs that are designed to help with mental health issues and/or serve as a resource for first responders.
2. Assess the effectiveness of existing programs. A review of any evaluations that empirically support practices or programs, especially those in California, such as the California Peer Support Association (CPSA), would help address additional questions posed in Assemblymember Grayson's letter to CHSWC.
3. Examine other states/countries for lessons learned and experiences. Given their recent efforts to codify similar requirements, there is merit in exploring the issues and options identified in Massachusetts (existing programs since 9/11) and states with pending/recent legislation, including Colorado, Florida, New York, and Vermont. Other countries, such as Canada, may also have lessons from which California can learn.