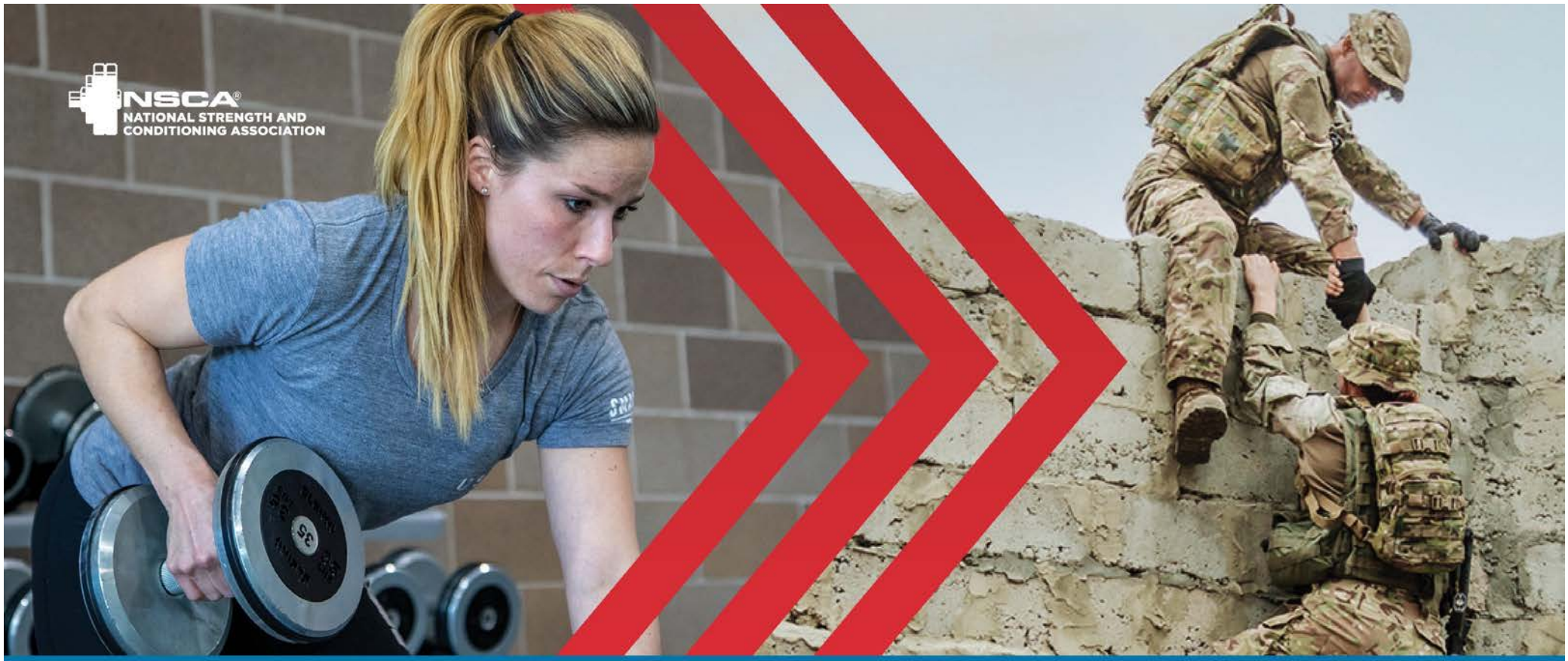


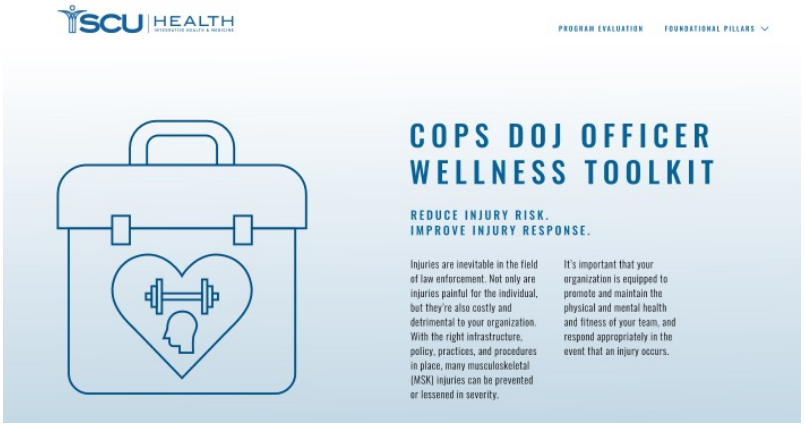
2022 NSCA TACTICAL ANNUAL TRAINING

#NSCATactical22

CONFLICT OF INTEREST STATEMENT

We have no actual or potential conflict of interest in relation to this presentation.

United States Department of Justice, Office of Community Oriented Policing Services (COPS) Injury Prevention and Rapid Rehabilitation (Injury Mitigation) Toolkit



Bond University Tactical Research Unit – TRU Injury Research Project

BOND UNIVERSITY
TACTICAL RESEARCH UNIT

The Challenge

- 18,000+ state, regional, and local law enforcement agencies
- 83+ federal law enforcement agencies
- 50 State Workers' Compensation systems
- Varied objectives of datasets
- Diverse definitions and interpretations
- Employee and organizational privacy
- ……..
- …….

Objectives

- At the conclusion of the presentation, attendees will be able to list national, regional, and local sources and trends of law enforcement injury data.
- At the conclusion of the presentation, attendees will recall at least three gaps in law enforcement injury research and potential viable mitigation actions for their operating environment.
- At the conclusion of the presentation, attendees will evaluate and prioritize the three most important stakeholders for their unique injury identification and mitigation efforts.

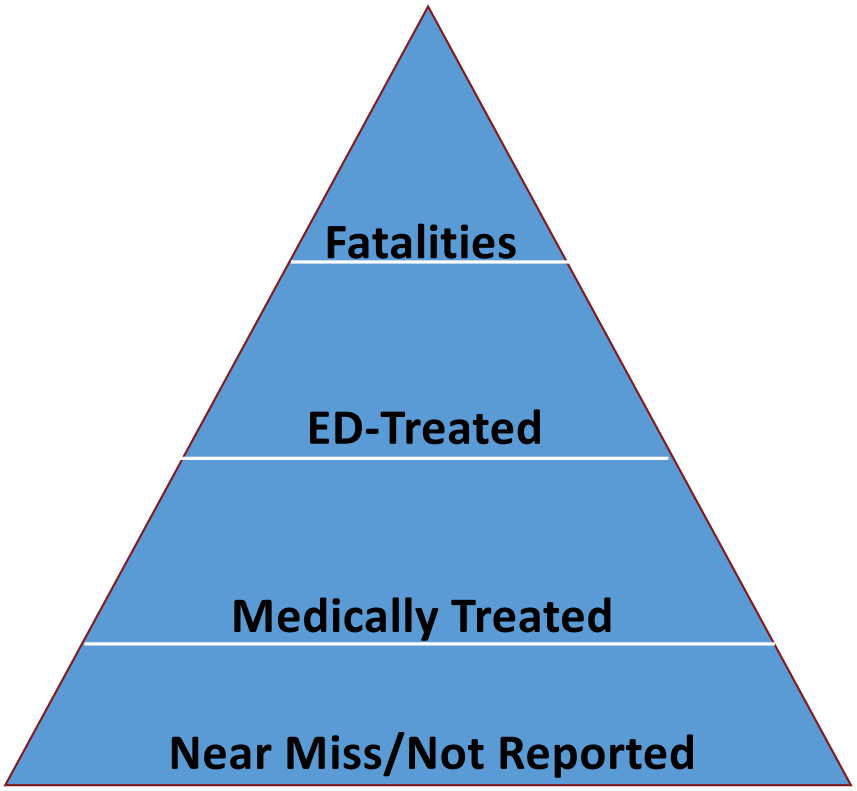
Agenda

- Injury Epidemiology – Hope Tiesman
- National Fatal Injury Data Sources and Trends – Hope Tiesman
- National Nonfatal Injury Data Sources and Trends – Hope Tiesman
- Regional and Local Injury Data Sources – Joe Dulla
- Research Gaps, Potential Solutions, and Conclusions – Joe Dulla

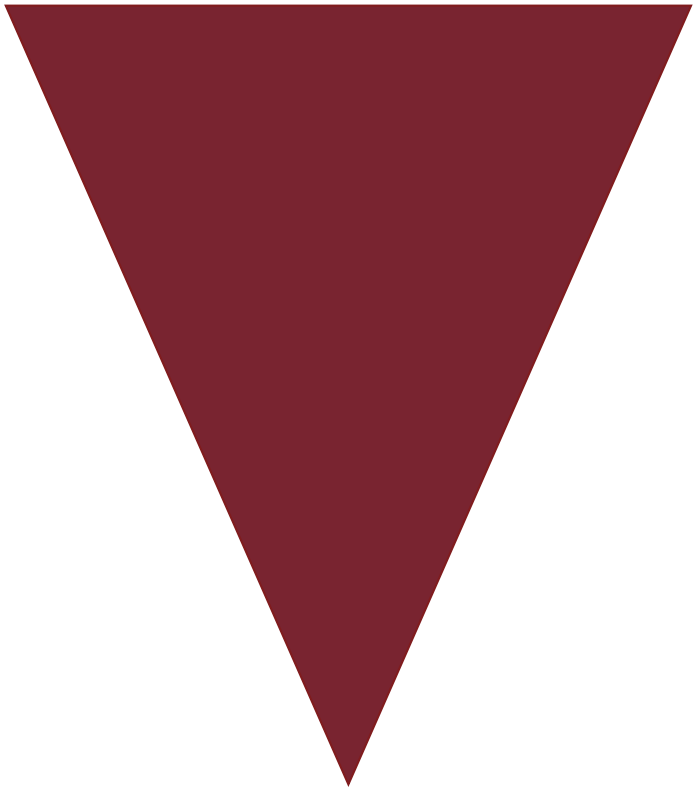
National Institute for Occupational Safety & Health (NIOSH)

- Research and recommendations to prevent work-related injuries and illnesses among all U.S. workers
- Part of the Centers for Disease Control & Prevention (CDC)
- Not a regulatory agency

Injury Epidemiology

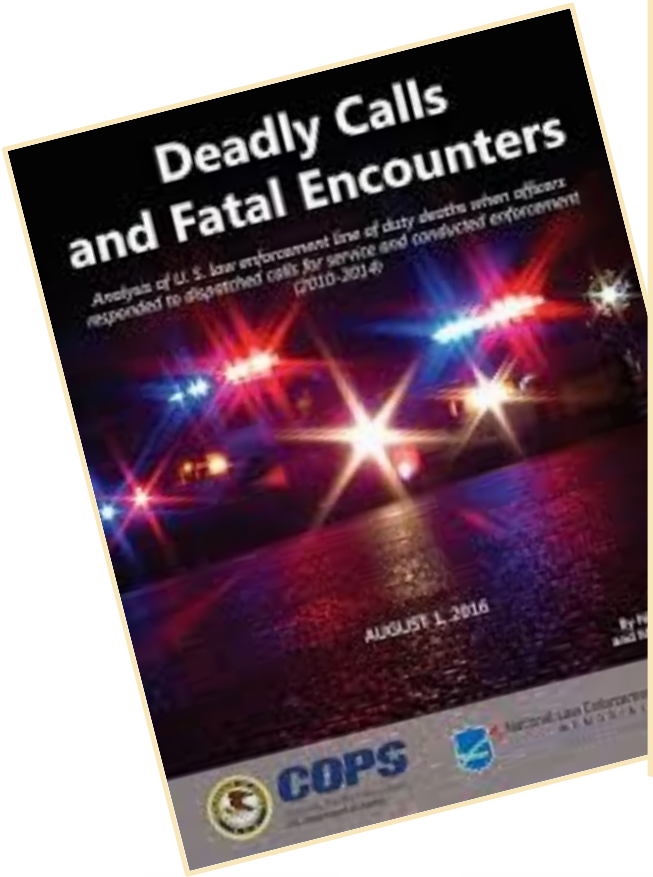


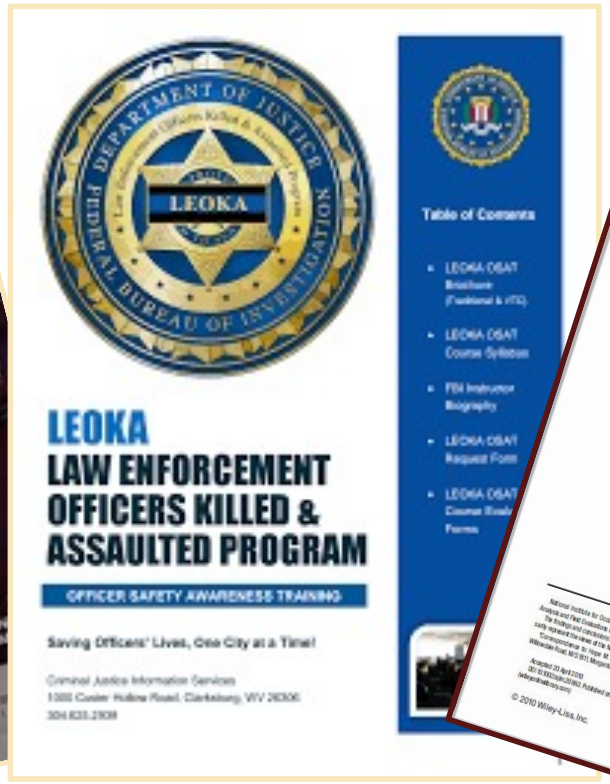
Injury Severity

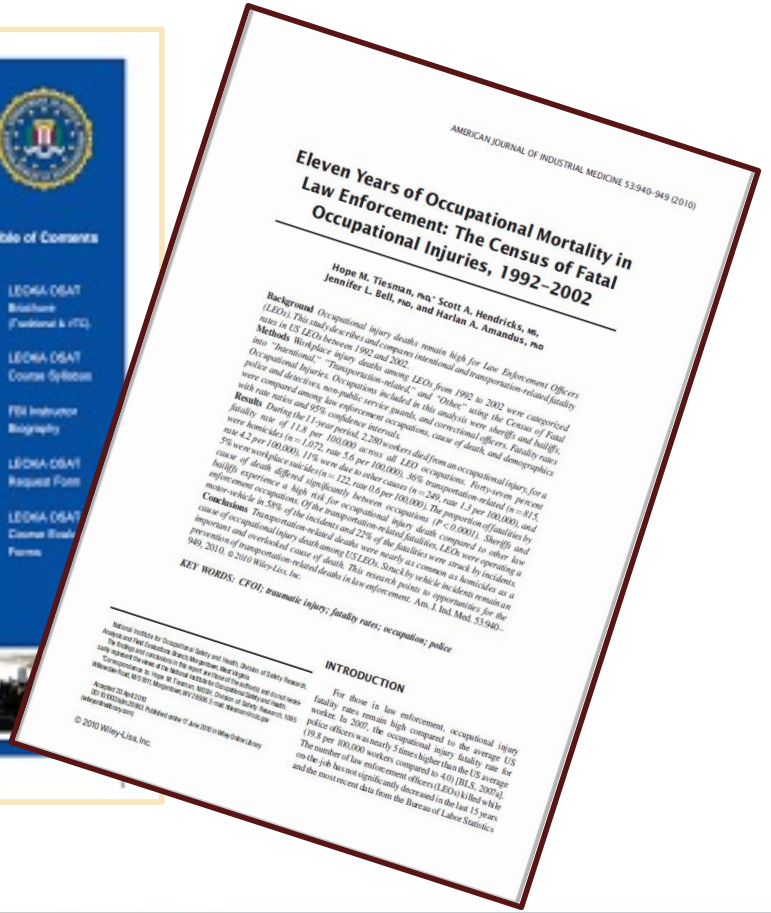


Reliability of Reporting

National Fatal Injury Data







AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 53:940–949 (2010)

Eleven Years of Occupational Mortality in Law Enforcement: The Census of Fatal Occupational Injuries, 1992–2002

Hope M. Tiesman, MA,* Scott A. Hendricks, MS, Jennifer L. Bell, PhD, and Harlan A. Amandus, PhD

Background Occupational injury deaths remain high for Law Enforcement Officers (LEOs). This study describes and compares intentional and transportation-related fatality rates in US LEOs between 1992 and 2002.

Methods Workplace injury deaths among LEOs from 1992 to 2002 were categorized into "Intentional," "Transportation-related," and "Other," using the Census of Fatal Occupational Injuries. Occupations included in this analysis were sheriffs and bailiffs, police and detectives, non-public service guards, and correctional officers. Fatality rates were compared among law enforcement occupations, cause of death, and demographics with rate ratios and 95% confidence intervals.

Results During the 11-year period 2,280 workers died from an occupational injury, for a fatality rate of 11.8 per 100,000 across all LEO occupations. Forty-seven percent were homicides (n = 1,072; rate 5.6 per 100,000), 36% transportation-related (n = 815; rate 4.2 per 100,000), 11% were due to other causes (n = 249; rate 1.3 per 100,000), and 5% were workplace suicides (n = 122; rate 0.5 per 100,000). The proportion of fatalities by cause of death differed significantly between occupations ($P < 0.0001$). Sheriffs and bailiffs experience a high risk for occupational injury death compared to other law enforcement occupations. Of the transportation-related deaths, 78% of the fatalities were nearly as common as homicides as a motor vehicle in 56% of the incidents and 22% of the fatalities LEOs were operating a cause of occupational injury death among US LEOs. Struck by vehicle incidents remain an important and overlooked cause of death. This research points to opportunities for the prevention of transportation-related deaths in law enforcement. Am. J. Ind. Med. 53:940–949, 2010. © 2010 Wiley-Liss, Inc.

KEY WORDS: CFOI; traumatic injury; fatality rates; occupation; police

INTRODUCTION

For those in law enforcement, occupational injury fatality rates remain high compared to the average US worker. In 2007 the occupational injury fatality rate for police officers was nearly 5 times higher than the US average (19.8 per 100,000 workers compared to 4.0) [BLS, 2007a]. The number of law enforcement officers (LEOs) killed while on-the-job has not significantly decreased in the last 15 years and the most recent data from the Bureau of Labor Statistics

National Fatal Injury Data – Specifics

- National Law Enforcement Officer Memorial Fund (NLEOMF)
  - https://nleomf.org
  - Data online by year, cause, gender, state
  - Reports published biannually
  - Rich data source - can be requested through NLEOMF for analysis

- FBI's Law Enforcement Officers Killed & Assaulted (LEOKA)
  - https://www.fbi.gov/services/cjis/ucr/leoka
  - Data released in formal reports yearly (2019 available) - tables on cause, weapon, age, circumstances, but no query
  - More recent data on Crime Data Explorer – no query, but infographics & maps

- BLS's Census of Fatal Occupational Injuries (CFOI)
  - www.bls.gov/iif
  - Data released end of year and runs about 2 years behind (2020 available)
  - Website has pre-developed chart, tables, limited query options
  - Can request data from BLS - based on available resources and may take weeks to process

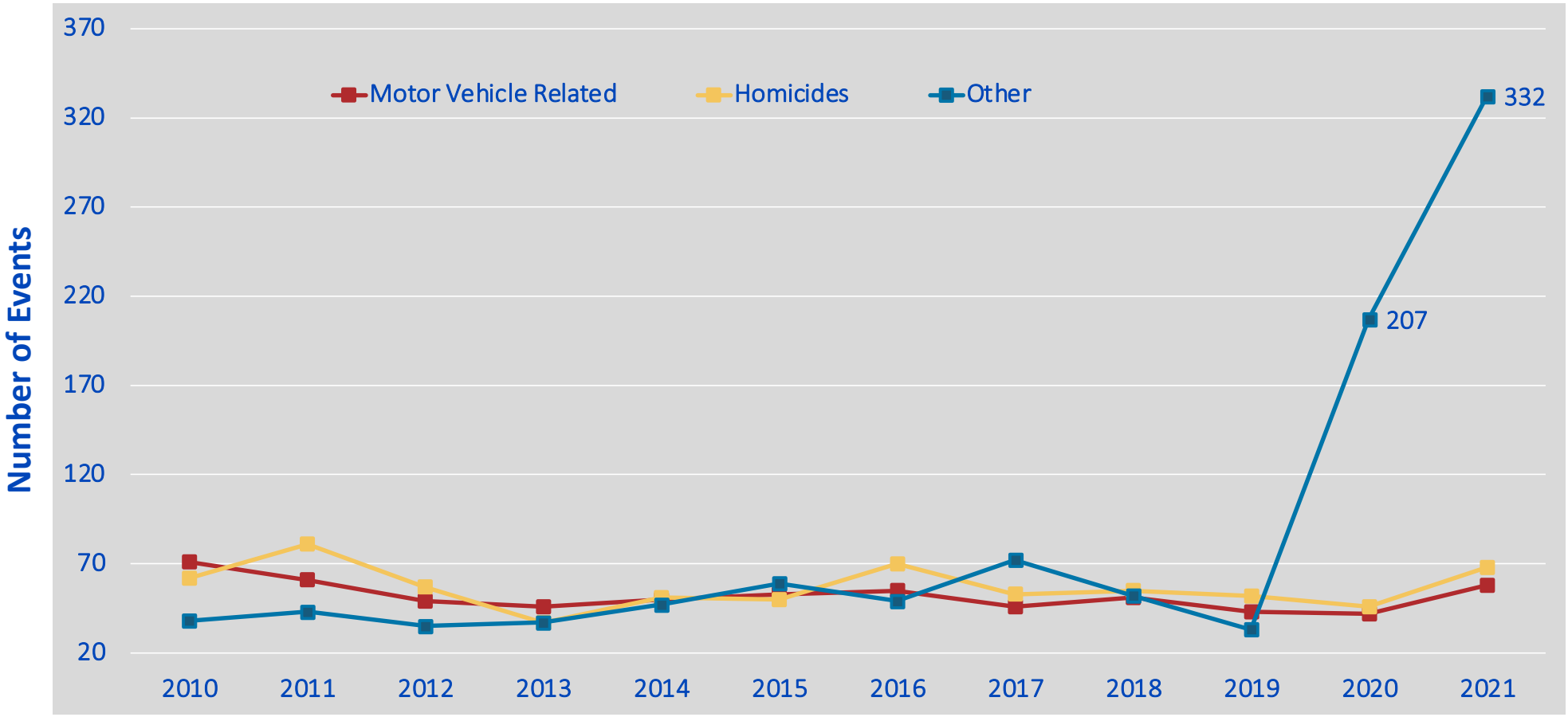
National Fatal Injury Data Comparison Study - 2013*

- Compared NLEOMF, CFOI, & LEOKA to identify advantages and disadvantages
- Every year, LEOKA undercounted fatalities for every cause
- Differences across systems – inclusion criteria, officer definitions
- 'Gold Standard' - NLEOMF includes broad LEO definition, has rich narrative text field, covers wide breadth of injury types, easily accessed

Year	NLEOMF	LEOKA	CFOI
2003	149	133	162
2004	165	139	146
2005	162	122	145
2006	155	114	145
2007	189	141	173
2008	141	109	157
2009	122	95	119
Total	1083	853	1,047

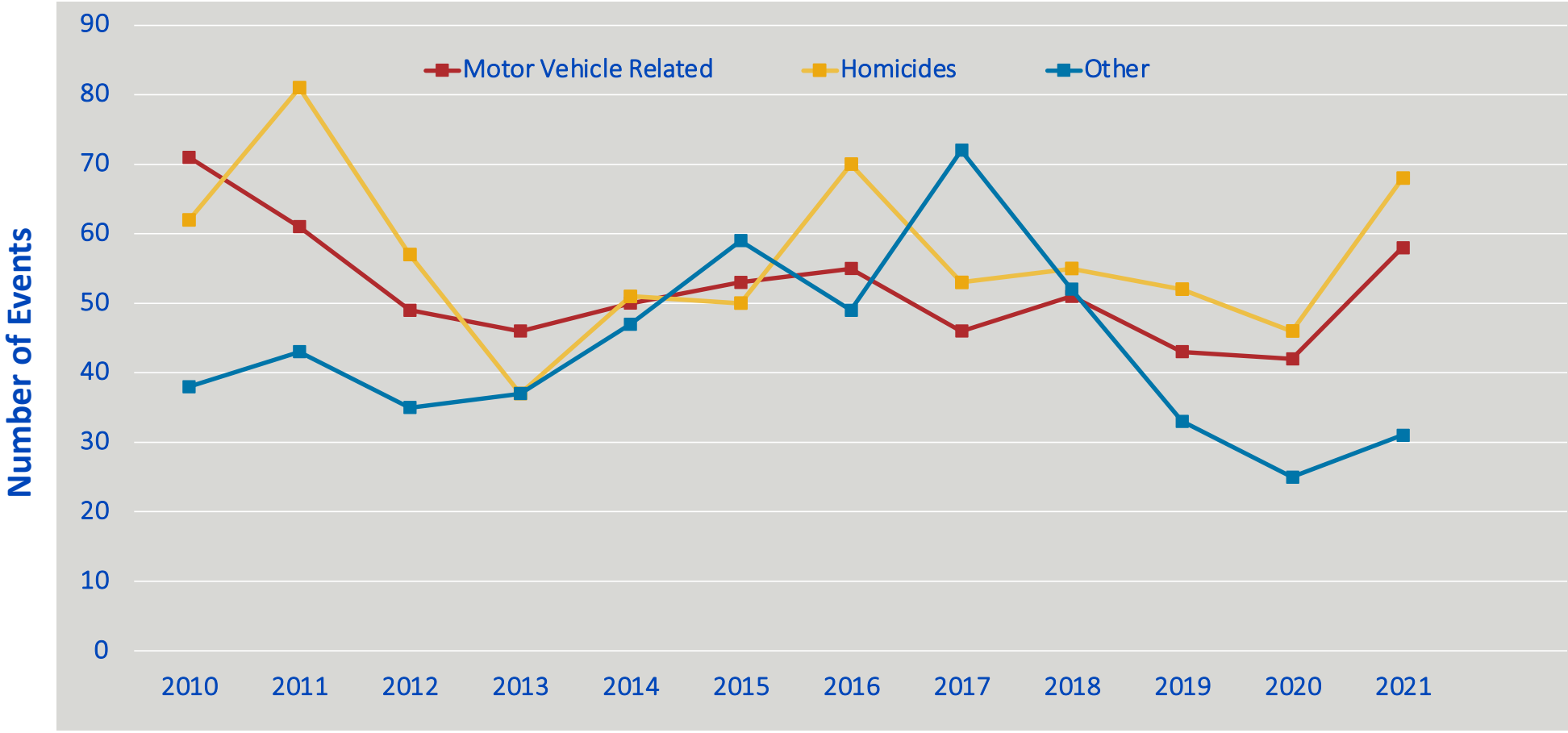
** Tiesman H, Swedler D, Konda S, Pollack K. 2013. Fatal Occupational Injuries among U.S. Law Enforcement Officers: A Comparison of Surveillance Systems. AJIM, 56(6):693-700.*

Fatalities among Law Enforcement Officers (COVID-19)*



** National Law Enforcement Memorial Fund: www.nleomf.org/facts/officer-fatalities-data/causes.html*

Fatalities among Law Enforcement Officers*



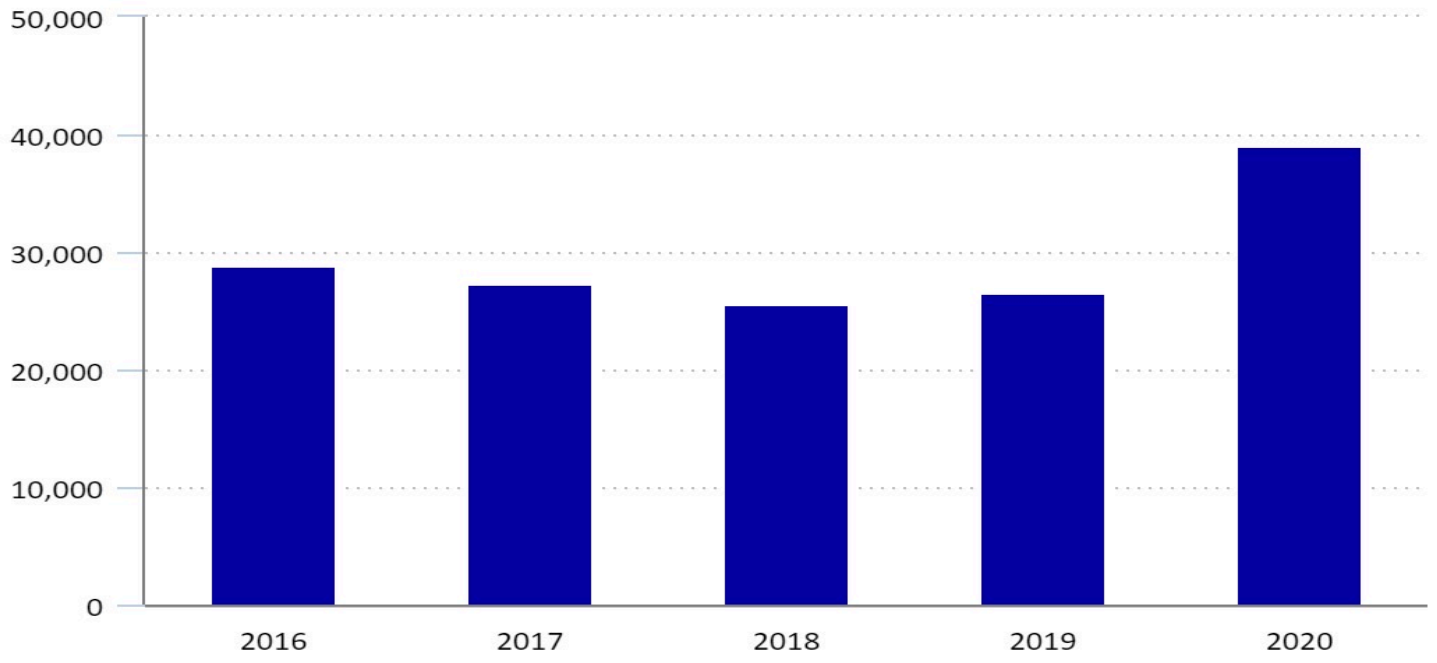
** National Law Enforcement Memorial Fund: www.nleomf.org/facts/officer-fatalities-data/causes.html*

National Nonfatal Injury Data – SOII

- **BLS's Survey of Occupational Injuries & Illnesses (SOII)**
  - www.bls.gov/iif/soii-data.htm#interactive
  - Includes events resulting in medical care beyond first aid
  - Data released in November through SOII News Release including various charts & tables
  - Can request specialized tables, but may take awhile to get them
  - BLS will not supply data for analysis by state or region
  - Excludes federal officers
  - Questions on undercounting

Example of SOII Nonfatal Injury & Illness Data

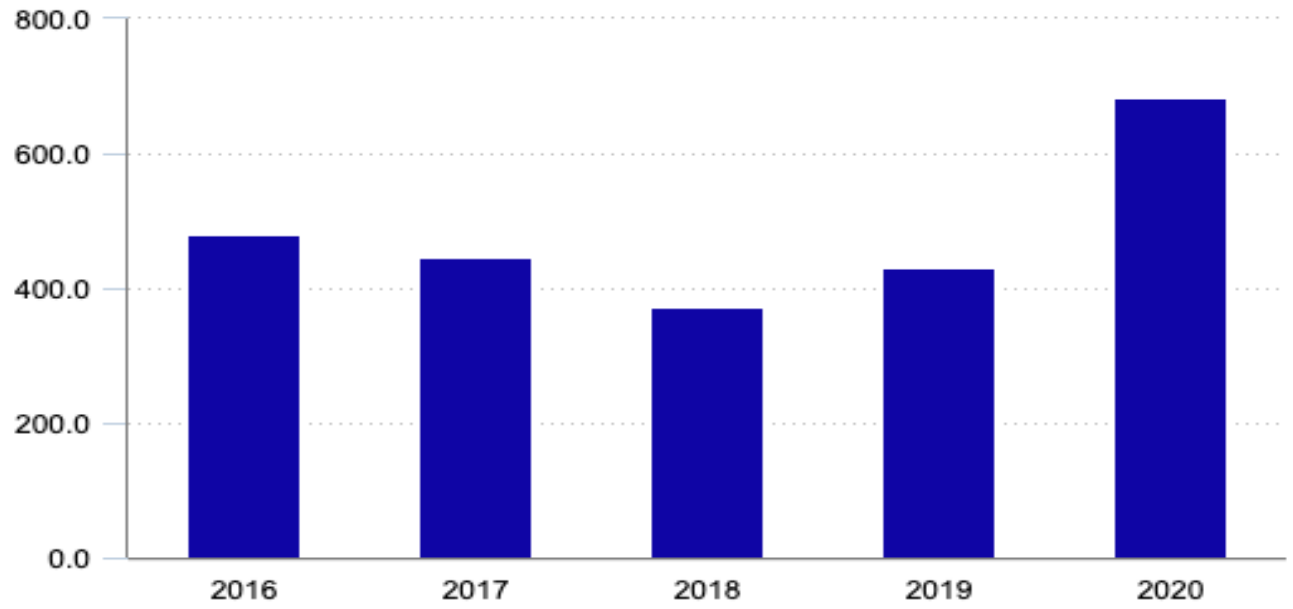
Chart 1. Number of nonfatal occupational injury and illness cases involving days away from work, police officers, all United States, 2016–2020



Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses

Example of SOII Nonfatal Injury & Illness Data

Chart 2. Incidence rate of nonfatal occupational injury and illness cases involving days away from work, police officers, all United States, 2016–2020



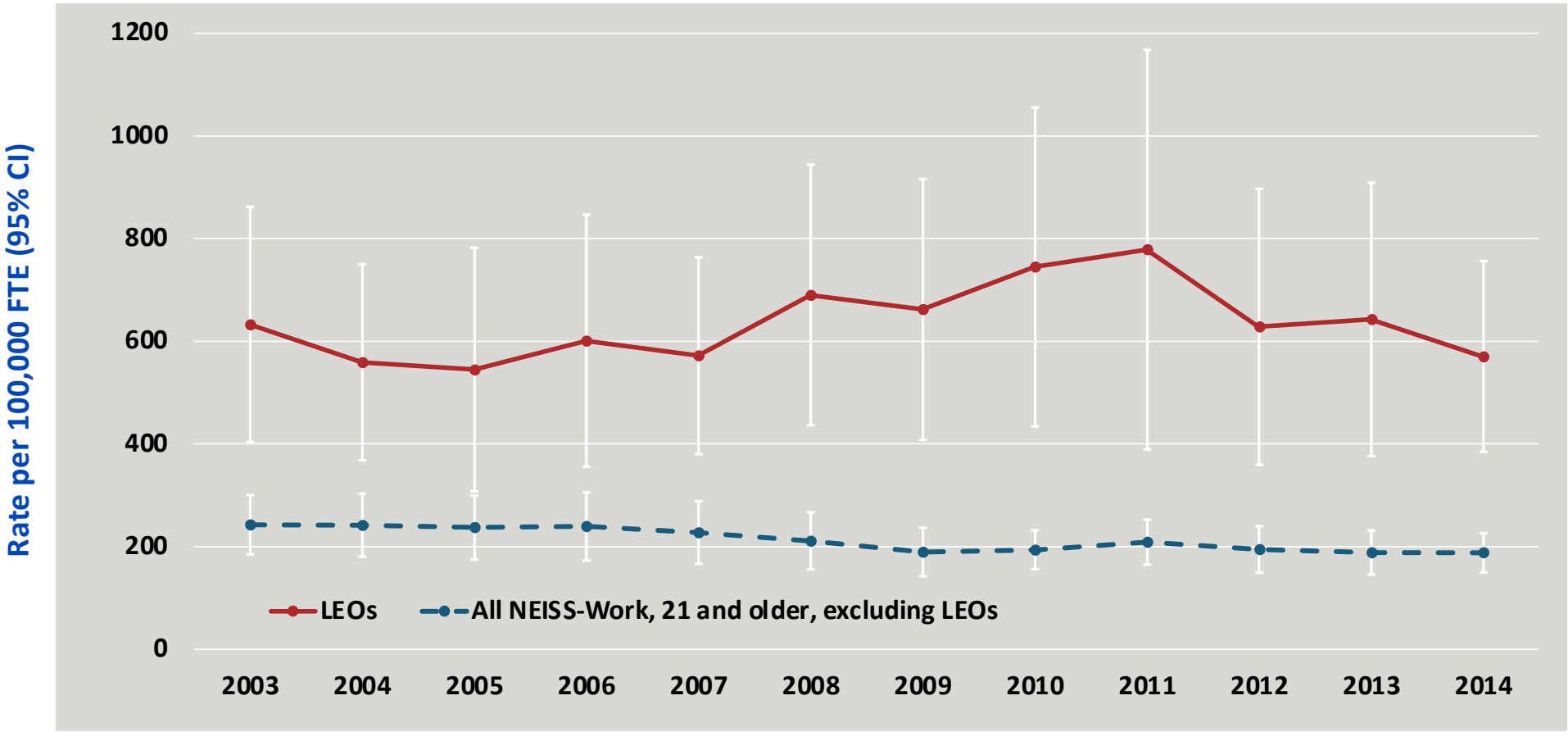
Hover over chart to view data.
Note: Incidence rate per 10,000 FTE workers.
Source: U.S. Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses

View data

National Nonfatal Injury Data – NEISS-Work

- **CPSC's National Electronic Injury Surveillance System – Occupational Supplement (NEISS-Work)**
  - wwwn.cdc.gov/Wisards/workrisqs/workrisqs_estimates.aspx
  - NIOSH conducts injury surveillance through a probability based stratified cluster sample of US Emergency departments.
  - Only includes injuries treated in an ED
  - Data only reportable at national level
  - Questions on the sample (~67 hospitals)

Nonfatal Injury Rates per 100,000 FTEs – NEISS 2003-2014*



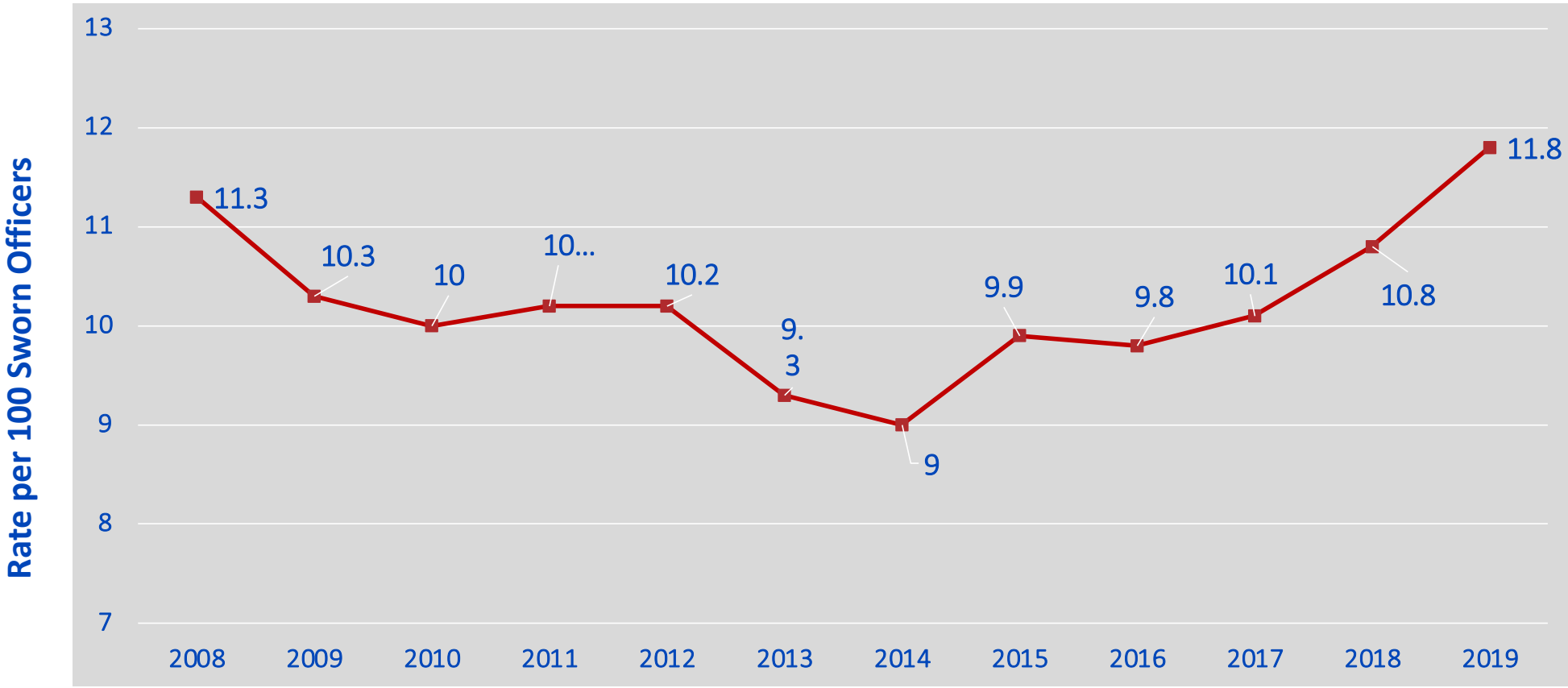
** Tiesman H, Konda S, Grieco J, Gwilliam M, Rojek J, Montgomery B. 2020. Resistance-Related Injuries among Law Enforcement Officers: Addressing the Empirical Gap. AJPM: 59(6): 231-238.*

National Nonfatal Injury Data - LEOKA

- **FBI's LEOKA**
  - Data released in reports yearly (2019) - tables on cause, weapon, age, circumstances, but no query
  - Recent data on Crime Data Explorer (1995-2020)
    - Download data in comma delimited files
  - Only includes assaults in the line of duty
    - Assaults & violent acts ~ 25% of LEO injuries*
  - Questions on its completeness
  - Can request specific data for analyses

** Tiesman H, Gwilliam M, Konda S, Rojek J, Marsh S. 2018. Nonfatal injuries to Law Enforcement Officers: A rise in assaults. AJPM: 54(4): 503-509.*

FBI LEOKA Data 2008 – 2019 (Nonfatal Assaults)



** FBI Law Enforcement Officers Killed and Assaulted (LEOKA) Program: https://www.fbi.gov/services/cjis/ucr/leoka*

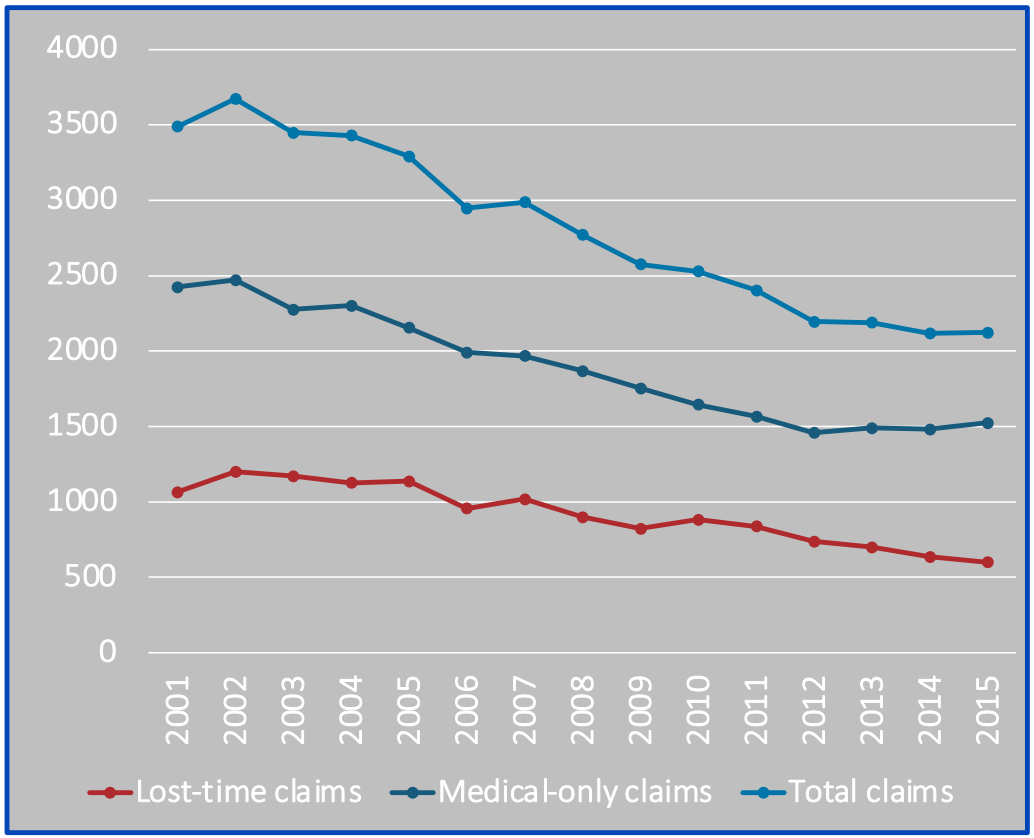
Workers' Compensation (WC) Data

Law Enforcement Examples

- Holloway, et.al. 2016. Occupational Injury Surveillance Among Law Enforcement Officers Using Workers' Compensation Data, Illinois 1980-2008. JOEM. 58(6):594-600.
- Witt, et.al. 2018. Workers' compensation-reported injuries among security and law enforcement personnel in the private versus public sectors. IE. 5(1):27.

Ohio Bureau of Workers' Compensation Study

- Characterize injury types & trends among Ohio LEOs from 2001-2019 using WC claims data. Injury claim costs will also be assessed.



Regional Nonfatal Injury Comparison

- Difficult to compare injury trends across agencies
  - Different injury coding schema
  - Different number of officers
  - Different injury definitions
  - Different cultures around injury reporting
- Better to focus on your agency's injury data

	Agency A	Agency B
Motor Vehicle	15%	10%
Assault	0%	12%
Fighting	32%	0%
Struck by	11%	14%
Falls	13%	14%
Exposure	3%	16%
Fitness Evals	14%	0%
Overexertion	7%	22%
Bites/Cuts	5%	12%

IACP Injury Study

- **IACP – BJA 2009**
- **Sample = 18 agencies**
- **1,295 injuries**
- **Cost**
  - 5,983 days missed
  - Avg. 4.5
  - Avg. rehab 3.5 days
  - 59,380 hours work time lost
- Est. total cost $1,211,352 cost
  +
  $1,817028 overtime to cover
  $3,028,330
  X 1,000 (to get to approx 18 agencies)

$$$$$
2009-2022 = cumulative increase of 38.12%
NOT counting increased in medical costs

"Importance of Injury Data Collection"

Table 1: Injury Types

Injury	Frequency
Sprains/Strains/Soft Tissue Tears	610
Contusion	189
Laceration	179
Other	92
Bloodborne Pathogen Exposure	90
Puncture Wounds	44
Broken Bones	41
Chronic Injuries	18
Burns	13
Internal Injuries	12
Dislocations	6
Gunshot Wound	1
Total	**1,295**

A Deeper Dive - Case Study

- State Level Workers' Compensation Data
  - Regional/Local
    - One Sample Group

One State Deeper Dive Nonfatal Injury

- CA Workers' Compensation
- 2005-2018
- LE included as a comparison group

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

One State Deeper Dive Nonfatal Injury

Table 3.3. WCIS Injury Counts by Occupation and Year

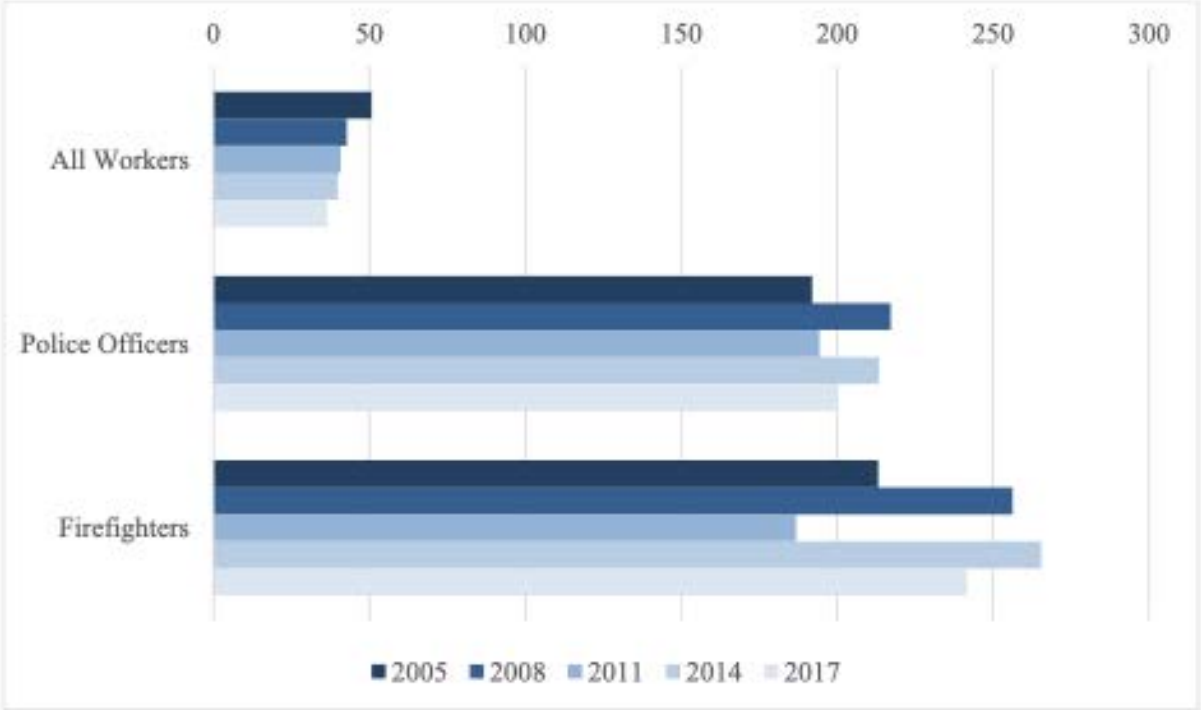
Year of Injury	Firefighters	Police Officers and Sheriffs' Deputies	Other Public-Sector Workers	Private-Sector Comparison Workers	Other Workers
2005	7,929	17,046	66,346	8,468	646,832
2006	7,414	17,085	64,105	7,618	625,318
2007	8,204	18,229	66,835	6,863	591,623
2008	9,082	18,026	70,608	6,454	545,680
2009	7,945	18,037	70,267	4,993	479,815
2010	7,038	18,133	66,165	4,344	474,487
2011	6,763	17,491	65,184	4,764	479,659
2012	8,978	17,874	73,611	4,986	483,142
2013	8,673	17,764	76,275	4,928	481,606
2014	8,661	18,235	77,801	5,484	492,425
2015	9,178	18,185	75,559	7,658	499,379
2016	8,486	16,882	77,020	8,258	490,341
2017	8,099	17,258	75,266	7,187	502,296
2018	2,274	5,773	26,283	1,654	174,690
All years	108,724	236,018	951,326	83,658	6,967,294

NOTE: Estimates use sampling weights to produce estimates representative for the full population of workers' compensation claims reported to WCIS.

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

One State Deeper Dive Nonfatal Injury

Figure 3.1. Number of Reported Injuries per 1,000 Workers in California



NOTE: Estimates use sampling weights to produce estimates representative for the full population of workers' compensation claims reported to WCIS.

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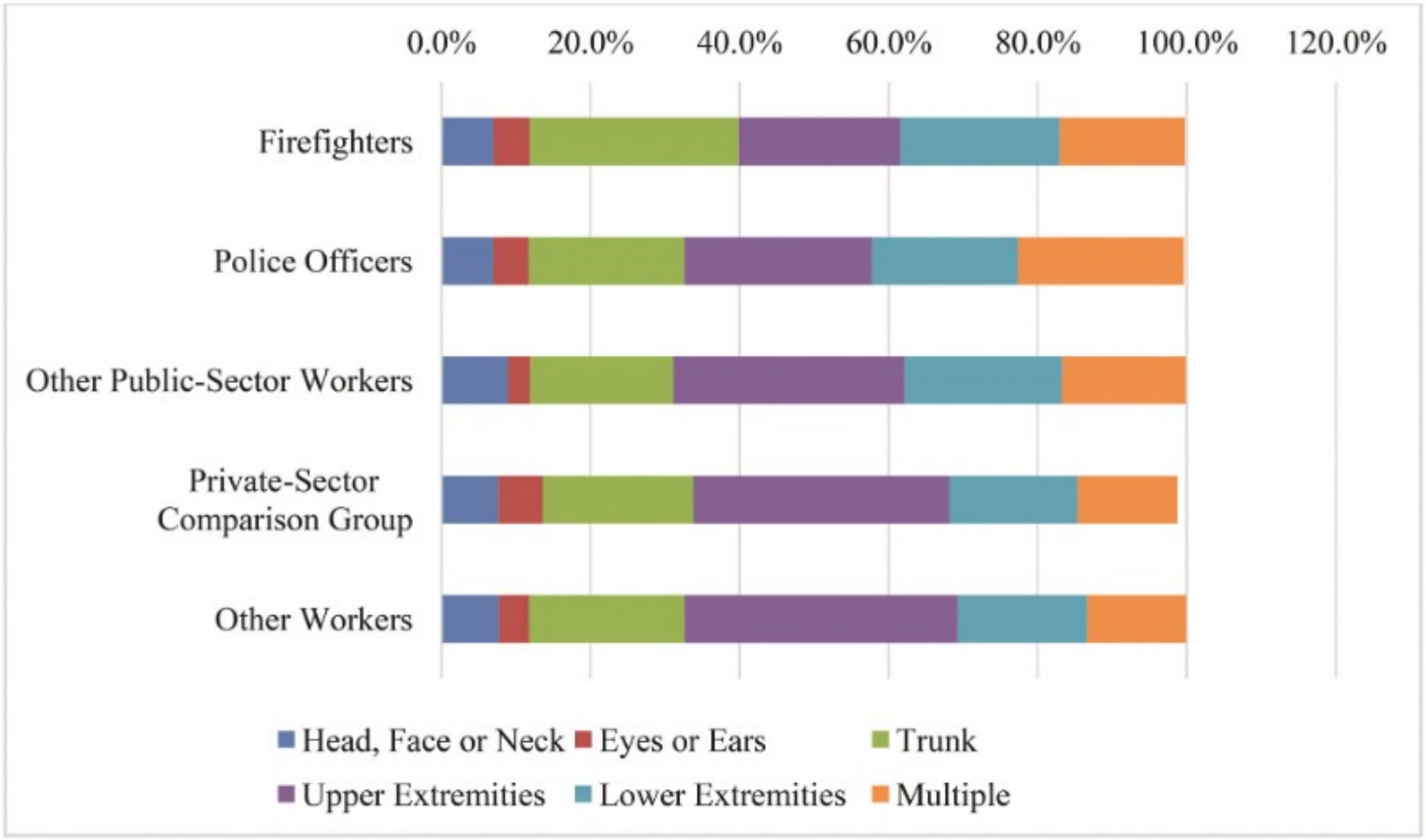
Table 3.4. Percent of Injuries Involving Musculoskeletal Disorders by Occupation and Year

Year of Injury	Firefighters	Police Officers and Sheriffs' Deputies	Other Public-Sector Workers	Private-Sector Comparison Workers	Other Workers
2005	47.0%	35.4%	42.1%	36.8%	41.6%
2006	45.3%	35.4%	41.9%	36.9%	41.1%
2007	47.3%	34.4%	42.6%	36.9%	40.7%
2008	43.7%	34.4%	42.5%	36.4%	40.9%
2009	46.3%	38.3%	43.5%	39.8%	42.6%
2010	50.3%	39.4%	44.9%	40.2%	43.1%
2011	49.3%	39.9%	45.0%	39.8%	42.8%
2012	48.9%	39.8%	44.1%	37.5%	42.7%
2013	49.7%	39.5%	43.6%	37.7%	43.0%
2014	49.5%	41.1%	42.8%	36.8%	42.8%
2015	47.4%	40.3%	42.4%	36.2%	42.1%
2016	44.4%	39.1%	40.2%	35.6%	41.5%
2017	45.8%	37.0%	38.9%	35.5%	39.8%
2018	47.7%	38.3%	38.9%	38.6%	39.8%
2005–2018	47.3%	38.0%	42.5%	37.2%	41.8%

NOTES: Estimates use sampling weights to produce estimates representative for the full population of workers' compensation claims reported to WCIS. Each cell reports the percentage of WCIS injuries that are MSDs, as defined in the text.

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

Figure 3.3. Injuries by Occupation and Body Part



NOTE: Estimates use sampling weights to produce estimates representative for the full population of workers' compensation claims reported to WCIS.

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

Table 3.6. Cause of Injury Breakdown by Occupation and Injury Type

Cause of Injury	Firefighters	Police Officers and Sheriffs' Deputies	Other Public-Sector Workers	Private-Sector Comparison Workers	Other Workers
			All Injuries		
Burn/scald	6.4%	3.7%	2.7%	3.8%	2.8%
Caught	1.2%	1.1%	2.2%	3.3%	3.1%
Crash	1.1%	5.0%	1.9%	3.0%	2.3%
Cut	3.5%	2.5%	5.0%	10.9%	10.0%
Fall	7.0%	6.9%	17.0%	13.1%	13.8%
Rubbed by	0.7%	1.3%	0.5%	0.6%	0.5%
Strain	31.8%	20.0%	26.6%	28.7%	34.0%
Striking	2.6%	2.6%	3.2%	3.9%	4.3%
Struck by	7.0%	14.9%	15.8%	12.4%	12.7%
Miscellaneous	37.0%	39.8%	23.1%	17.9%	15.3%
			Musculoskeletal Disorders Only		
Burn/scald	0.6%	0.6%	0.3%	0.8%	0.3%
Caught	0.5%	0.5%	0.7%	0.9%	0.8%
Crash	1.2%	4.7%	2.1%	3.5%	2.1%
Cut	1.0%	0.3%	0.6%	0.6%	0.7%
Fall	9.1%	8.0%	16.5%	14.8%	13.9%
Rubbed by	0.6%	1.6%	0.7%	0.5%	0.6%
Strain	57.5%	39.6%	50.9%	61.2%	64.8%
Striking	2.1%	2.1%	1.8%	2.1%	1.9%
Struck by	3.0%	8.4%	8.1%	4.7%	4.8%
Miscellaneous	22.9%	31.8%	16.4%	9.7%	8.8%

NOTES: Estimates use sampling weights to produce estimates representative for the full population of workers' compensation claims reported to WCIS. Columns do not necessarily add to 100 percent because of missing data on injury cause.

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

One State Deeper Dive Nonfatal Injury

Table 3.7. Proportion of Musculoskeletal Disorder Injuries Classified as Cumulative Trauma, by Occupation

	Active Firefighters	Active Police	Rest of Public Sector	Rest of Private Sector	All Other Injured Workers
Cumulative trauma	5.6%	7.0%	10.7%	7.0%	7.7%

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

Table 4.2. Earnings, Employment, and At-Injury Employment After Indemnity Musculoskeletal Disorder Claims, by Occupation

	Active Firefighters	Active Police	Other Public Sector	Private-Sector Comparison
Earnings ($)				
1 year preinjury	$116,185	$59,201	$56,116	$66,220
1 year postinjury	$101,409	$47,256	$43,230	$51,393
2 years postinjury	$94,956	$42,861	$38,010	$47,673
Relative Earnings				
1 year postinjury	92%	85%	83%	81%
2 years postinjury	95%	88%	85%	87%
Relative Employment				
1 year postinjury	98%	89%	91%	88%
2 years postinjury	96%	90%	90%	91%
Relative At-Injury Employment				
1 year postinjury	97%	86%	90%	80%
2 years postinjury	95%	82%	87%	75%

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

Table 6.4. Body Part of Highest-Rated Permanent Impairment by Occupation, Constant-Maturity Musculoskeletal Disorder Cases

Body Part	Active Firefighters	Active Police	Other Public Sector	Private-Sector Comparison Group
Knee	30.7%	27.8%	21.9%	24.1%
Lumbar spine	27.4%	24.6%	22.6%	28.4%
Shoulder	18.5%	18.2%	19.4%	22.2%
Cervical spine	7.0%	5.9%	8.5%	5.4%
Ankle	2.1%	3.0%	2.7%	2.3%
Hip	1.7%	1.0%	0.7%	0.4%
Elbow	1.2%	0.9%	1.3%	1.3%
Arm neuropathy	1.2%	3.5%	6.9%	3.3%
Hypertensive cardiovascular disease	0.7%	2.0%	0.4%	0.1%
Other	9.5%	13.0%	15.7%	12.6%

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

One State Deeper Dive Nonfatal injury -CA Workers' Compensation

Table 7.2. Average Visits Injured Workers with Indemnity Benefits Receiving Any Capped Services, by Injury Type, Service Type, and Occupation

		Active Firefighters	Active Police	Other Public Sector	Private-Sector Comparison
Chiropractic					
	Non-MSD	8.1	9.6	9.6	9.1
	MSD	9.2	9.1	9.3	8.3
Occupational Therapy					
	Non-MSD	5.6	8.1	9.0	10.1
	MSD	6.8	7.6	8.0	5.5
Physical Therapy					
	Non-MSD	12.5	12.1	12.6	13.5
	MSD	12.9	13.7	13.2	12.7

NOTE: Table reports average number of visits in first three years of medical care (dated from first date of service billed to workers' compensation) for workers with one or more visits.

Dworsky, Michael, Seth A. Seabury, and Nicholas Broten, *The Frequency and Economic Impact of Musculoskeletal Disorders for California Firefighters: Trends and Outcomes over the Past Decade*, Santa Monica, Calif.: RAND Corporation, RR-3037-DIR, 2020. As of July 23, 2022: https://www.rand.org/pubs/research_reports/RR3037.html

WCIRB Studies Cost Impacts of Delayed Medical Care Due to COVID-19

The Workers' Compensation Insurance Rating Bureau of California (WCIRB) has released its study, *Cost Impacts of Medical Care Delays in the California Workers' Compensation System*.

Key findings in the study include:

- Claims with soft tissue injuries that had a month delay before receiving the first medical service had significantly higher indemnity and medical costs than similar claims without medical care delays.
- Soft tissue claims with delayed care were more likely to stay open longer, have a longer duration of temporary disability and involve permanent disability.
- The long-term cost implications of delayed medical care were similar for claims with other leading medical diagnoses in the workers' compensation system.

https://www.wcirb.com/research/

Action Steps

Viewing / Building Your Own Injury Data for a Purpose

Key Concepts

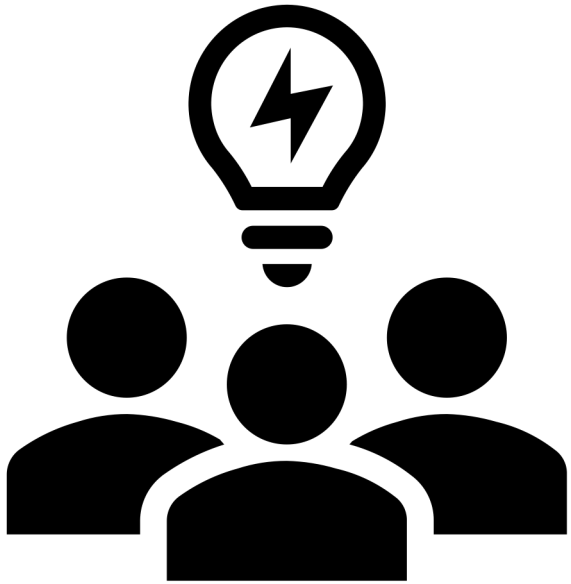
- What specific challenge(s) are we trying to solve?
- Is it truly “solvable”?
- What types of measurement might work?
  - Advantages
  - Limitations
- Organizational
  - DCAS - Desire, Capacity, Ability, Support
- What is a specifically measurable “end state” or definition of progress?
- How do we know what “good” “looks like”?
- SMART goals

Key Data Elements

- Age and gender
- Job tenure
- Nature of injury
- Cause of injury
- Body part injured
- Length of time off-duty due to injury
- Length of light or limited duty days
- Rate per 10,000, 1000, or 100 FTE / work hours
- If possible
  - Salary continuation costs
  - Medical costs
  - Backfill overtime costs

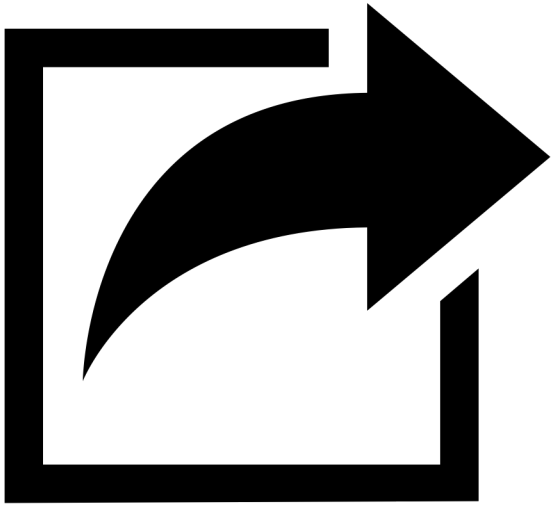
Remember and Engage Stakeholders

- Operator / employee
- Family members
- Peers
- Supervisors / managers
- Command
- Risk Management
- HR / Personnel
- Insurers
- Medical partners / providers
- Community members / service area



Action - Key Steps

- Secure best available data to identify possible trends
- Review measurable interventions
- Schedule assessment /review of data, measures, and interventions
- Engage and discuss with key stakeholders
- Tactical / Occupational Athletes
  - Monitor both “total” and training load
  - Mitigate overtraining
  - Consider sleep and nutritional elements
  - Check equipment and review applicable safety practices daily
  - Establish / continue quarterly reviews with command, management, & supervision
  - Enhance daily conversations about diverse aspects of safety into everyday conversations (challenge each other to develop new ways to weave into culture)



Review of Potential Data Sources/Resources

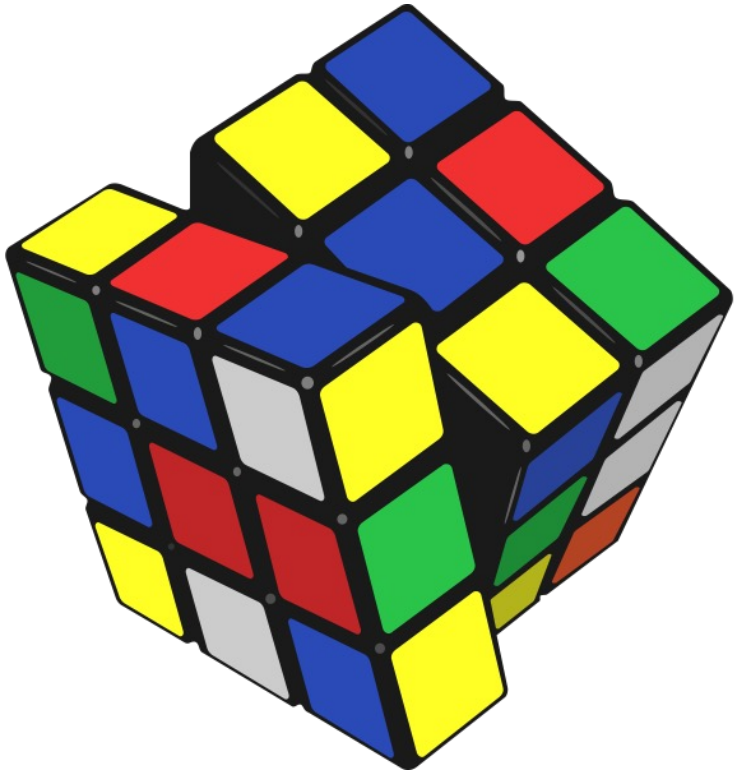
Dataset/Source	Characteristics	Advantages	Limitations
BLS - SOII	State reported data to BLS	National scope, incl. medical care "beyond" first aid, days "lost", rates per 10,000 FTE workers	Not easily searched for LE or public safety, excludes federal officers, no analysis by state or region, potential undercounting
NEISS-Work	NIOSH probability based stratified cluster sample of US ER's (~67 hospitals)	Includes injuries treated in ED, greater level of detail than SOII – but not days "lost" or other costs	Only includes sample of injuries treated in ED's, no analysis by state or region
FBI- UCR LEOKA	Officers killed or assaulted All types of deaths/fatalities Only assaults for non-fatal injuries	Data in tables on cause, weapon, age, circumstances	ONLY includes deaths and assaults in line of duty (only ~ 10-25% of injuries), ~ 75% of injuries are "all other causes" No query ability
State Workers' Compensation (WC)	Limited number ~ 4-5 state-run WC systems, very limited data source	Potentially days "light or lost" duty, severity, cost (salary continuation, medical, disability, other), cause, age, circumstances	Each state has slightly different WC laws, coverage, presumptions, definitions, resources, etc.
IACP	Sample of 18 agencies Self-reported	Costs, days missed, causes	Dated (2009), not fully representative of all LE as a whole, non-specific injury definition (no ICD-10 codes), could also include off-duty incidents, limited epidemiological approach,
National Policing Institute	Police Data Initiative and "LEO Near Miss"	PDI-Central location for open data sets, LEO Near Miss (agencies reporting on near misses/close calls), lessons learned to support training	PDI – limited by agency supplied data LEO Near Miss – self reports, all anonymous from individuals and agencies
Individual Agency Data	Controlled by each individual entity	Highest level of control for details	Potentially no formally trained epidemiology, risk management, and other resources/data points, potential data quality and ability to analyze

Gaps?

Potential Gap	Mitigation Action	Intended Result

Conclusions

- As occupational injury severity decreases, so does our ability to record, track, and understand them
- Federal data systems are not designed in a manner that allows for data dives or queries
- Non-traditional sources can be helpful
- Great efforts are underway



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Questions?

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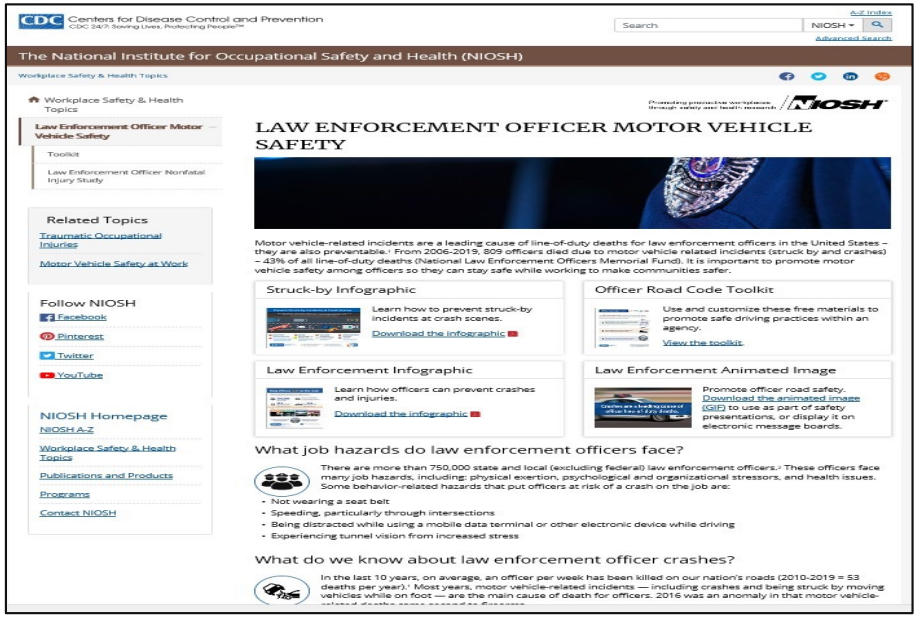

NIOSH Law Enforcement Officer Motor Vehicle Safety:
www.cdc.gov/niosh/topics/leo

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the National Institute for Occupational Safety & Health, Centers for Disease Control & Prevention.