

Assaults on Healthcare Workers in Montana

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Introduction

Background

Workers in the healthcare and social assistance industry are injured at work more often than any other industry group in the United States^a. Healthcare workers are employed in varied environments, such as hospitals, emergency rooms, group homes, mental health facilities, correctional institutions, nursing homes, retirement centers, and home health. Many people may not consider that employment in a healthcare field can put workers at significant risk of exposure to situations that can result in violent physical attacks. Violent assaults on healthcare workers are common within Montana and across the United States. These attacks may result in physical injury, medical expenses, inability to return to work, and increased stress.

Based on national data from the Occupational Health Safety Network (OHSN), there were 4.9 injuries per 10,000 worker-months that resulted from workplace violence in healthcare facilities from 2012 to 2014^b. Injury rates from workplace violence were highest in inpatient adult wards, and elevated in outpatient emergency departments, urgent care, acute care centers, and adult critical care departments. Nurses and nurse assistants had the highest incidence rates for workplace violence injuries of all healthcare occupations, with the rate for these two occupations almost doubling from 2012 to 2014. The type of assault (physical, verbal, or destruction of property) was specified in about 50% of the workplace violence injury reports included in the OHSN national data, and 99% of those reported assaults were physical assaults. Descriptions of the perpetrator of the assault were included in 13% of the workplace violence reports, and patients contributed to 95% of those workplace violence reports. This rate of injury from patients has been at a consistently high level over the past few years. Based on national data collected by the BLS Annual Survey of Occupational Injuries and Illnesses (SOII), the rate of injury among healthcare and social assistance workers where the source of the injury or illness was a patient was 32.0 injuries per 10,000 full-time employees in 2014.

Relevant Studies and Projects

Healthcare employees are encouraged to report workplace injuries and events to their employers. However, such incidents are severely underreported nation-wide. Recent studies have estimated that only 7 to 42 percent of healthcare worker assaults in hospitals are reported^c. Underreporting of workplace injuries in this setting may occur for a variety of reasons, including work load, stress, or fear of retaliation. Therefore, it is important to keep in mind that estimates of workplace injuries occurring among healthcare workers probably do not estimate the full extent of the workplace injuries taking place in this industry in Montana and the United States overall.

The National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), Government Accountability Office (GAO), and the U.S. Department of Health and Human Services all provide information and guidance documents related to violence in the healthcare setting. GOA recently examined the prevalence of workplace violence in healthcare facilities, and OSHA's efforts to address workplace violence^c. NIOSH developed a free online course, titled "Workplace Violence Prevention for Nurses," which provides information to healthcare workers on the scope and nature of workplace violence in healthcare settings^d.

In 2016, Dr. Nanette Yragui and her colleagues at Washington's Safety and Health Assessment and Research for Prevention (SHARP) program published key findings about workplace aggression on

healthcare workers in two psychiatric hospitals in Washington^d. In this study, patient-initiated violence was linked to increased burnout and stress-related physical symptoms in psychiatric healthcare workers^d. Additionally, supportive supervisors were found to play a role in reducing the negative work and health effects resulting from patient violence. Dr. Yragui has also formulated a training program for supervisors that addresses several issues related to workplace violence in healthcare settings, including avoiding and addressing patient aggression and violence. A grant proposal has been submitted to the National Institute of Occupational Safety and Health (NIOSH) that would allow the training program to be tested and validated as an evidence-based program.

Healthcare Workers in Montana

In Montana, assaults on healthcare workers are receiving attention by the Montana Nurses Association (MNA). The MNA is currently running a campaign to improve workplace safety for healthcare workers. The stated goal of the campaign is “to address workplace violence through education, legislation, and cultural change within the healthcare field.” Further information on their campaign can be found at the MNA website <http://www.mtnurses.org/>.

The Montana Occupational Health and Safety Surveillance program (MOHSS) conducted surveillance and descriptive analysis of assaults on healthcare workers in Montana, using Bureau of Labor Statistics (BLS) data and Department of Labor & Industry workers’ compensation data. The purpose of the study was to provide analysis of the prevalence, breakdown, and severity of assaults on healthcare workers in Montana, hopefully providing information that can lead to increased knowledge, interventions, or training to increase safety for these workers.

Methods

We used data from the U.S. Bureau of Labor Statistics (BLS), Montana Department of Labor & Industry research reports, and the workers’ compensation database (WCAN) maintained by the Employment Relations Division (ERD) in the Montana Department of Labor & Industry to examine assaults on healthcare workers in Montana. We also looked into using data from Montana Hospital Discharge and Emergency Department surveillance systems, but the data did not allow us to precisely examine assaults on healthcare workers.

BLS Survey of Occupational Injuries and Illnesses (SOII) Data

National and state-level data from the BLS Survey of Occupational Injuries and Illnesses (SOII) was used to examine potential assaults on workers in the private sector healthcare and social assistance industry from 2011 to 2014. The Survey of Occupational Injuries and Illnesses (SOII) estimates the number and incidence rates of work-related injuries and illnesses each year, based on OSHA logs maintained by employers in private industry. An incidence rate is a statistical measure that examines the number of new cases of an outcome in a specific population over a period of time. The incidence rates are generally reported in the SOII as the number of cases of the specific injury or illness per number of full-time workers. The SOII is not an exact count or census of all the work-related injuries and illnesses for each year, but rather is an estimation based on a representative sample of workplaces selected by the Bureau of Labor Statistics for participation each year. The most recent SOII data that is available is the 2014 SOII data.

The industry categories included in the healthcare and social assistance industry, as defined by the 2012 North American Industry Classification System (NAICS), include:

- Ambulatory health care services
 - Physician offices
 - Dentist offices
 - Other health practitioner offices
 - Outpatient care centers
 - Medical and diagnostic laboratories
 - Home health care services
 - Other ambulatory health care services
- Hospitals
 - General medical and surgical hospitals
 - Psychiatric and substance abuse hospitals
 - Specialty (except psychiatric and substance abuse) hospitals
- Nursing and residential care facilities
 - Nursing care facilities (skilled nursing facilities)
 - Residential intellectual and developmental disability, mental health, and substance abuse facilities
 - Continuing care retirement communities and assisted living facilities for the elderly
 - Other residential care facilities
- Social assistance
 - Individual and family services
 - Community food and housing, and emergency and other relief services
 - Vocational rehabilitation services
 - Child day care services

Injury and illness rates were obtained for the following injury events and sources of injury:

- Event: Intentional injury by other person (OIICS code 111XXX)
- Event: Unintentional or unknown intent by other person (OIICS code 121XXX)
- Event: Intentional injury by other person: Hitting, kicking, beating, shoving (OIICS code 1113XX)
- Source of Injury: Person, other than injured or ill worker (OIICS code 57XXXX)
- Source of injury: Person, other than injured or ill worker: Patient (OIICS code 574XXX)

Workers' Compensation Claims Data

The Worker Compensation Administration Network (WCAN) is populated with information on workers' compensation claims reported by insurers on First Reports of Injury (FROI) and Subsequent Reports of Injury (SROI) that are submitted to the Montana Department of Labor & Industry. WCAN provided data on specific claims in Montana related to healthcare worker assaults. Claims data for the project were retrieved from WCAN based on the following criteria:

- Study Period
 - Workers' compensation claims with dates of injury from January 1, 2011 to December 31, 2015
- Causes of Injury codes:
 - "Struck or Injured By"
 - "Person in Act of a Crime"
 - "Fellow Worker, Patient, or Other Person"
- Payroll Classification Codes (insurance occupation classification):

- 8829 Convalescent or Nursing Home – All Employees
- 8842 Group Homes – All Employees & Salespersons; Drivers
- 9040 Hospital: All Other Employees
- 8833 Hospital: Professional Employees
- 8835 Nursing-Home Health; Public and Traveling – All Employees
- 8834 Physicians – All Employees including Clerical Office Employees
- 8824 Retirement Living Centers: Healthcare Employees

The following industry groups were represented in the healthcare worker assault claims, based on industry classification information in the claims:

- Health Care & Social Assistance (1,218)
- Administrative, Support, Waste Management, & Remediation Services (783)
- Real Estate, Rental, & Leasing (62)
- Not Otherwise Classified (42)
- Other Services (except Public Administration) (26)
- Public Administration (13)
- Manufacturing (5)
- Wholesale Trade (3)
- Educational Services (2)

We chose to examine healthcare worker assaults by job title, rather than industry classification, due to the wide variety of industries represented in the healthcare worker assault claims. If we restricted our analysis to only claims that were coded in the healthcare and social assistance industry, our sample would have excluded over 900 claims with relevant information about potential healthcare worker assaults.

The accident descriptions of all retrieved claims were reviewed to determine whether the claim was an assault. The reported Causes of Injury for the retrieved claims did not always indicate an actual aggressive action against the healthcare work in the performance of his/her duties. MOHSS staff manually viewed and coded 2,729 claims as either assaults or non-assaults. During the coding process, 574 claims were removed from further analysis that appeared to be accidental (503) or did not contain enough information to make a determination (71). Some error in the interpretation of short or incomplete accident descriptions could have occurred.

Examples of accident descriptions that were coded as assaults:

- “Client became upset and tried to attack staff. He swiped at staff and left multiple scratches on both forearms.”
- “R arm/R hand – contusion/puncture – patient grabbed arm/bit hand.”
- “Client scratched the back of my neck while having a behavior.”
- “EE was struck multiple times with rocks shoes & feet by three youth in safety restraint in her head stomach and ribs.”
- “EE was hit in stomach by resident while assisting.”
- “Associate states that while trying to unlock wheelchair for resident to move them from dining room resident head-butted her hitting associate’s nose.”

Examples of accident descriptions that were **not** coded as assaults, and removed from the analysis:

- “Sprain to right hand/wrist. Pushing client in a swing and felt a pop in wrist/hand.”
- “Was helping a client and was accidentally scratched.”
- “Bodily fluid exposure.”
- “Emp was transferring a resident when he started to fall and emp blocked him from falling injuring herself.”

Classification of a claim as an assault did not necessarily mean the assault was done knowingly, or with intent to cause harm. The patient could be of advanced age, or suffer a mental or physical condition that results in confusion or lack of control, such as Alzheimer’s disease. The intention to harm the healthcare worker is not present in all of the situations, as evidenced by some of the above accident descriptions. Further analysis of the detailed claims would be needed to determine if intent was present. For example, one could assume that intentional assaults would be unlikely in facilities treating patients with Alzheimer’s, dementia, mental illness, or other conditions in which the residents were not mentally able to attack with ‘intent’. Many states have criminal statutes that define assaults on various types of healthcare workers as misdemeanors or felonies. However, exceptions frequently exist for those with the mental incapacity for intent.

The assault claims were also analyzed by payroll classification code, occupation description, cause of injury, nature of injury, gender, and severity. We also examined the receipt of wage-loss benefits as a proxy to examine the severity of injuries in the claims. In Montana, injured workers are eligible to receive wage-loss benefits after they have been unable to work and gain wages for 4 days or 32 hours, whichever comes first (Section 39-71-736, MCA). If a worker is totally disabled and unable to work for 21 days or longer, compensation may be paid retroactively to the first day of total wage loss. The majority of all injured workers in Montana (about 85%) are able to return to work within that waiting period. Complete medical information can be used a common measurement of injury severity, but is not included on all claims in Montana.

Discussion of Results

Section I. Injuries that could be related to assaults on healthcare and social assistance workers in private industry, Montana and United States, 2011-2014

This section uses estimated data taken from the BLS Annual Survey of Occupational Injuries and Illnesses (SOII). This survey does not include exact information about assaults on healthcare workers for the United States, but we decided to examine events and sources of injury that could help paint a picture of potential assault-related injuries among workers in the healthcare and social assistance industry in Montana. The following data describe cases of relevant injuries that resulted in days away from work, as classified by the SOII. In the SOII methodology, the number of days away from work is determined according to the number of calendar days that an employee is unable to work, even if the employee was not scheduled to work that day. The day that the employee was injured or became ill is not included in the count of days away from work.

We examined the following events and sources of injury:

- Intentional injuries by another person
- Unintentional injuries, or injuries with unknown intent, by another person
- Intentional hitting, beating, kicking, or shoving by another person
- Injuries with source: patient

Healthcare workers in the private industry in Montana had higher rates of intentional injuries by another person, compared to the national rates (Exhibit 1). Rates of intentional injuries by another person involving hitting, beating, kicking, or shoving were higher than the national rates, with a high increase in the number of reported events seen in 2012. Rates of injuries among healthcare workers from patients were also much higher than the national rates over the time period.

It would be beneficial to continue to monitor these trends and to include more years of data in this analysis in the future. Currently, it is difficult to decipher an exact direction of trend in healthcare worker injuries in Montana. However, the rates of injuries among healthcare workers in Montana are consistently higher than the national rates for the examined events or sources of injury.

Disclaimer: Differences in industry concentration and sample sizes limit direct comparisons between states or national estimates from SOII data. Therefore, it is not accurate to divide the rate for Montana by the national rate to get a percentage or ratio, when using data from the SOII.

Exhibit 1.1. Estimated number of intentional injuries by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana, 2011-2014.

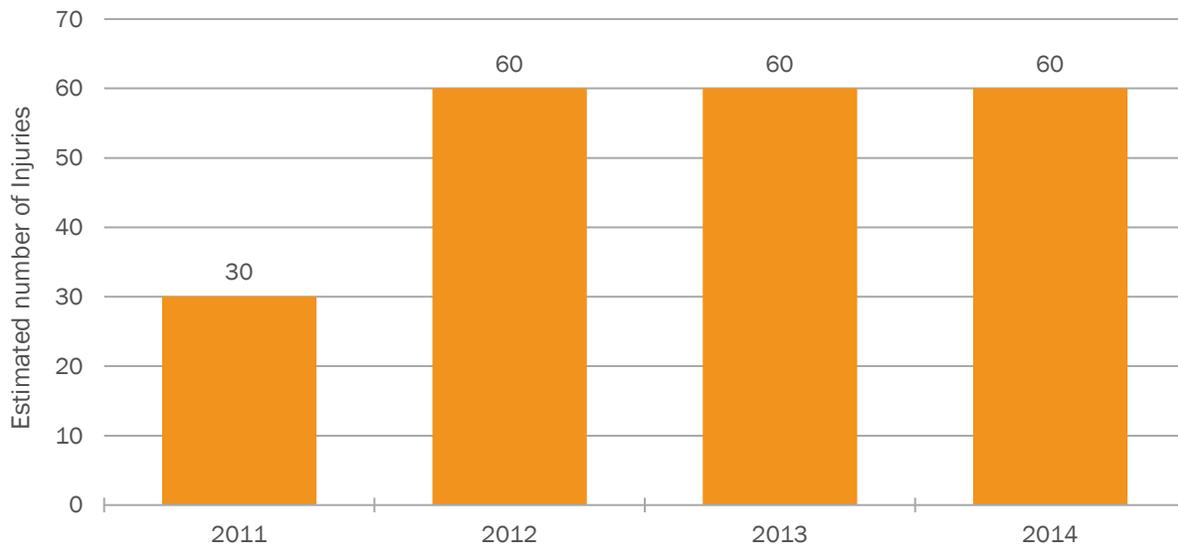


Exhibit 1.2 Estimated rates (per 10,000 full-time workers) of intentional injuries by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana and the U.S., 2011-2014.

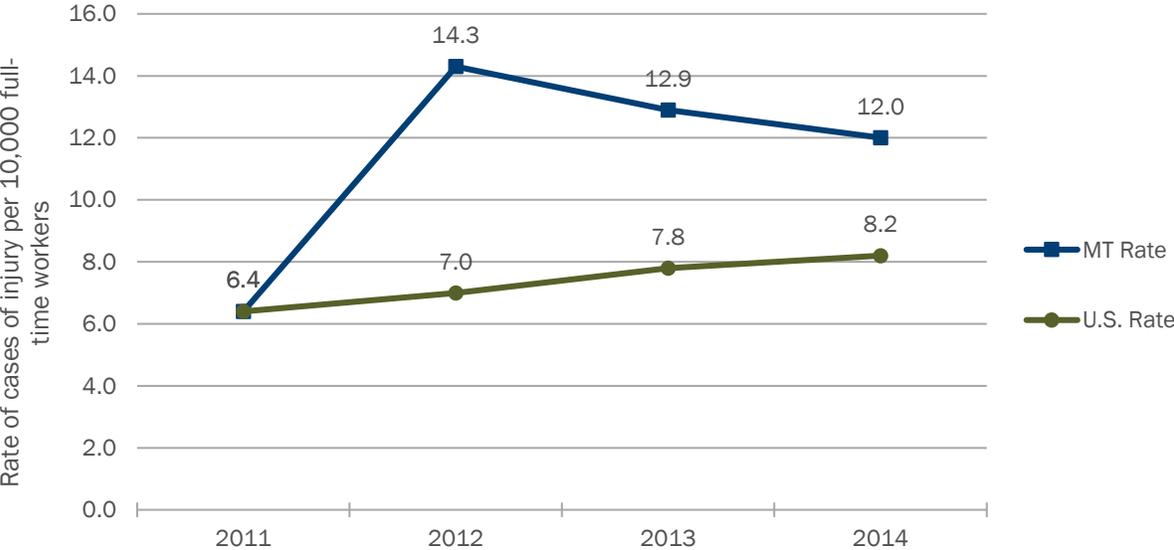


Exhibit 2.1. Estimated number of injuries involving intentional hitting, kicking, beating, or shoving by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana, 2011-2014.

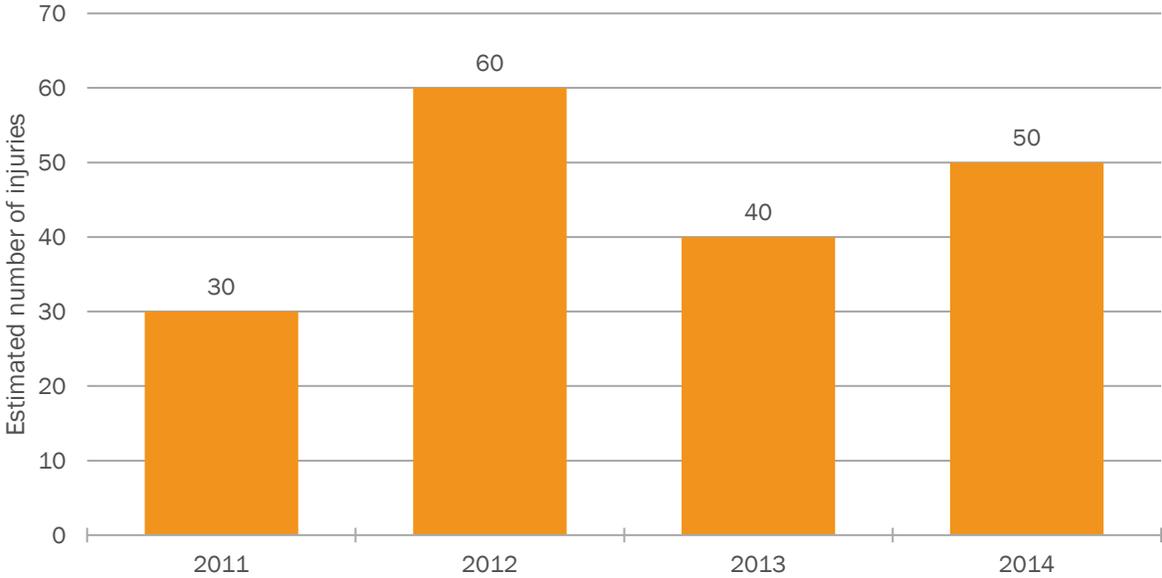


Exhibit 2.2. Estimated rates (per 10,000 full-time workers) of injuries involving intentional hitting, kicking, beating, or shoving by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana and the U.S., 2011-2014.

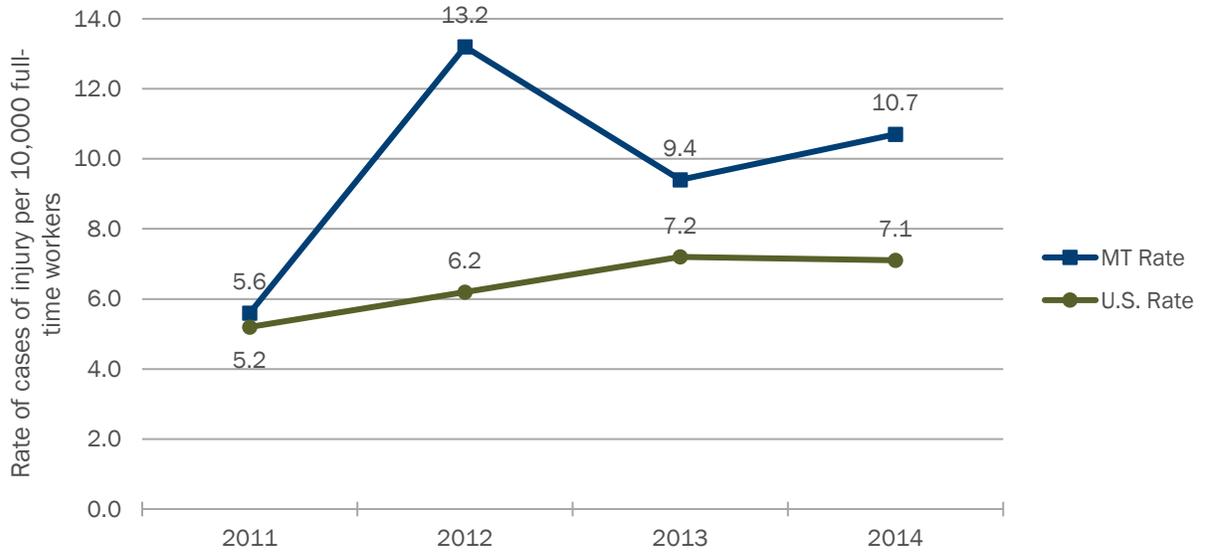


Exhibit 3.1. Estimated number of unintentional injuries or injuries with unknown intent by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana, 2011-2014.

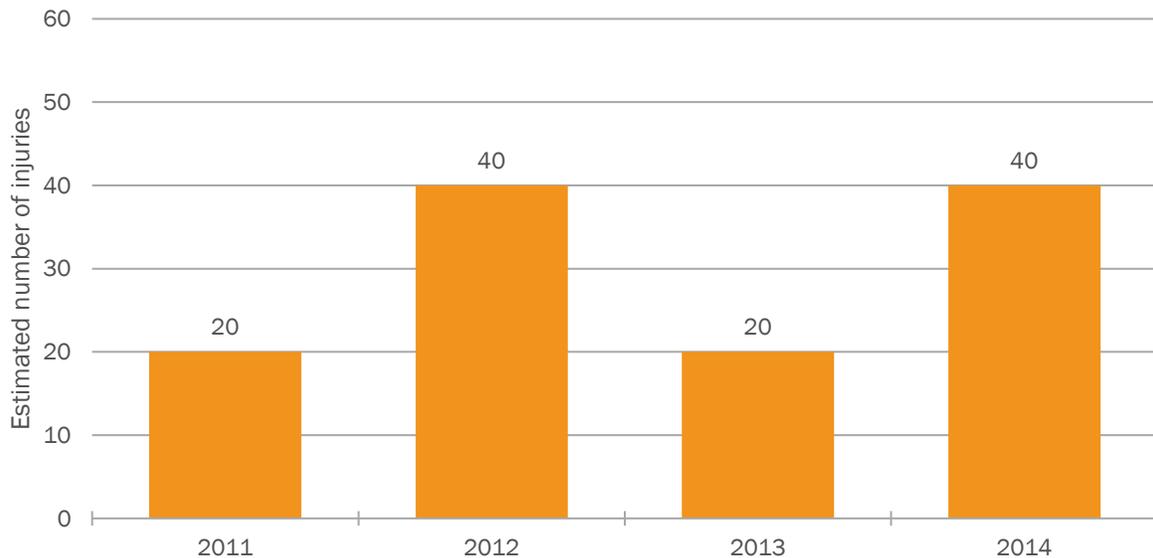


Exhibit 3.2. Estimated rates (per 10,000 full-time workers) of unintentional injuries or injuries with unknown intent by another person that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana and the U.S., 2011-2014.

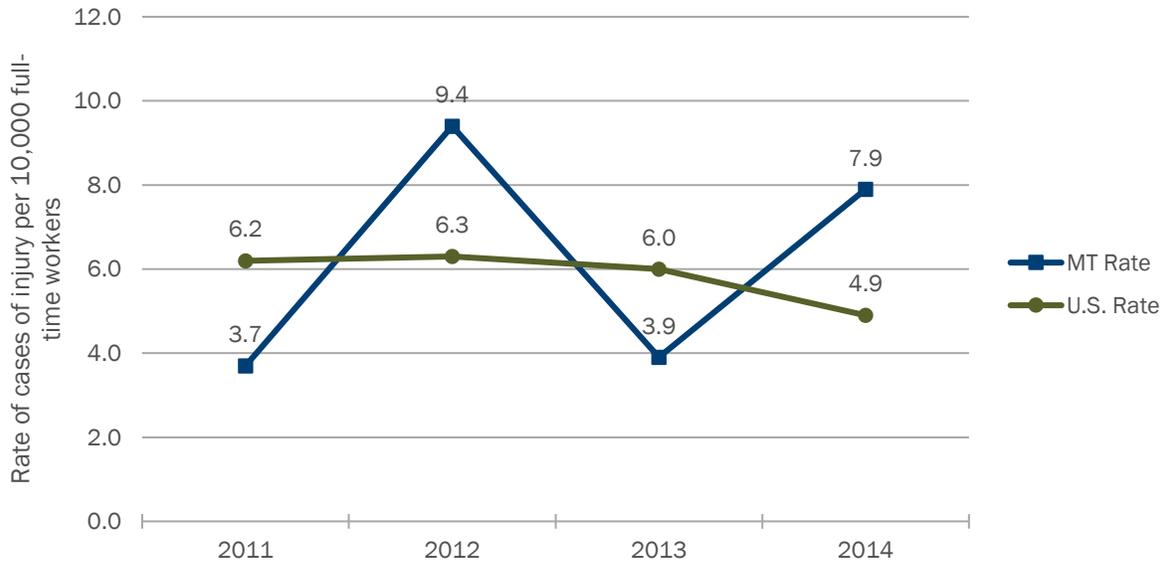


Exhibit 4.1. Estimated number of injuries caused by a patient that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana, 2011-2014.

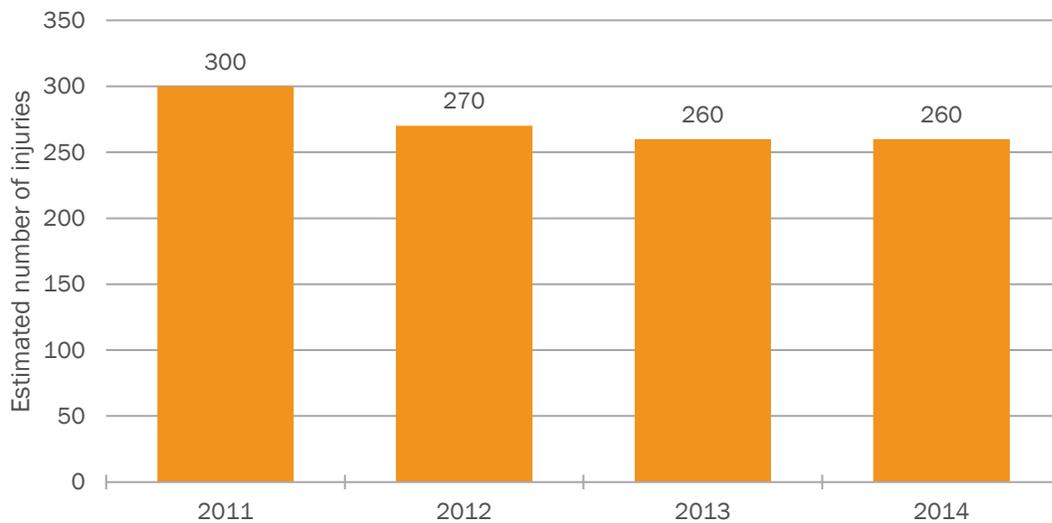
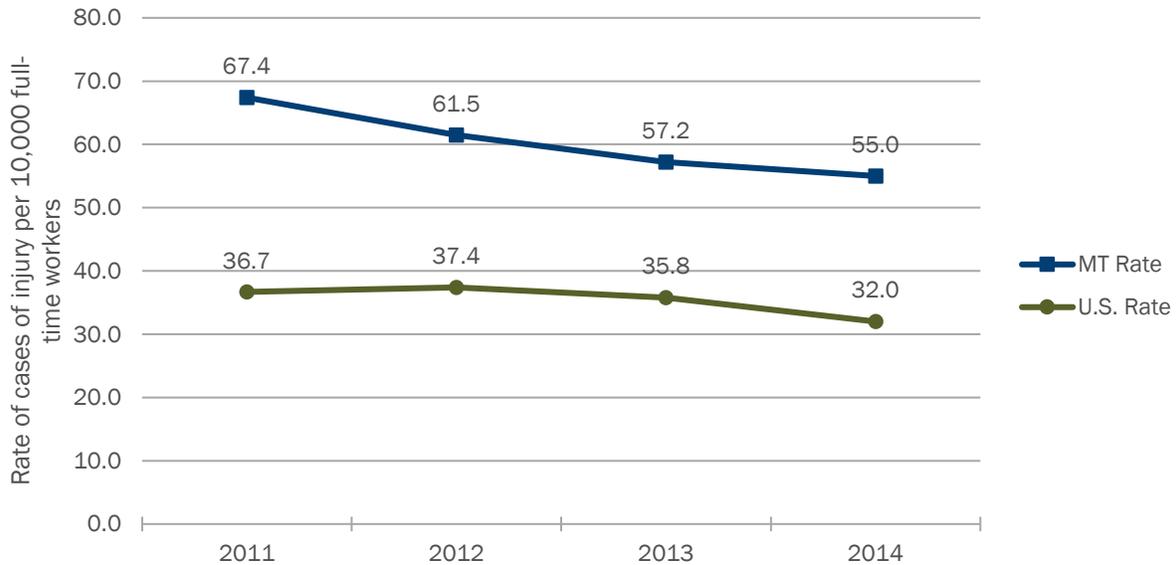


Exhibit 4.2. Estimated rates (per 10,000 full-time workers) of injuries caused by a patient that resulted in days away from work, among healthcare and social assistance workers in private industry, Montana and the U.S., 2011-2014.



Section II. Injuries and Illnesses among Healthcare workers in Montana

This section uses summary data from the Montana Occupational Injuries and Illnesses 2014 report from the Montana Department of Labor & Industry, and estimated data taken from the BLS Annual Survey of Occupational Injuries and Illnesses for 2014 (SOII).

Key Points:

- In 2014, there were 63,352 employees in the healthcare and social assistance industry (private sector) in Montana, according to the BLS Quarterly Census of Employment and Wages. Employees in the healthcare and social assistance industry (private sector) represented 12.6% of total workers in Montana in 2014.
- Workers in healthcare and social assistance in Montana represented the highest percentage of total recordable injuries in the private sector in 2014 (23.8%), followed by workers in retail trade, accommodation and food services, manufacturing, and construction. The share of total injuries for this industry group (23.8%) is greater than the share of employment (12.6%) in Montana in 2014.
- Nursing assistants accounted for 5.5% of reported injuries involving days away from work in Montana in 2014 (222 reports), followed by retail salespersons, heavy and tractor-trailer truck drivers, and constructions laborers. Nursing assistants provide basic patient care under direction of nursing staff. Certified nursing assistants, nursing care attendants, and certified nursing aides are considered to be nursing assistants, based on the SOC occupational coding system.

- In 2014, 270 reports of nonfatal occupational injuries and illnesses involving days away from work involved injury by a health care patient.
- In 2014, nursing and residential care facilities in Montana had the highest recordable incidence rate of injury and illness among private healthcare and social assistance sectors, followed by hospitals, social assistance, and ambulatory health care services [Exhibit 5].

Exhibit 5. Incidence rates (per 100 full-time employees) of total recordable cases of non-fatal injuries and illnesses for healthcare and social assistance workers in different sectors, private industry, Montana, 2014.

Healthcare and Social Assistance Sector	Incidence Rate (per 100 FTE)
Nursing and residential care facilities	9.2
Hospitals	6.4
Social assistance	6.4
Ambulatory healthcare services	3.8

Section III. Claims Filed with Workers' Compensation: Healthcare Workers

Montana workers in healthcare-related occupations reported 18,446 workers' compensation claims from 2011 to 2015. Of those claims, 2,155 claims were considered to be healthcare worker assault claims, based on the previously described criteria. The healthcare worker assault claims were analyzed by gender, occupation description, payroll classification code, nature of injury, and severity.

Almost 74% of the healthcare worker assault claims were reported for female workers, while 26% of the claims were for male workers.

Occupation descriptions are reported voluntarily and were not reported for 1,307 claims. Certified Nursing Assistants (CNAs) and Registered Nurses (RNs) were most highly represented in the assault claims. For the 867 assault claims that were reported with reported occupation descriptions, the top 5 job-title descriptions were:

- CNA 284 assault claims
- RN 157
- Mental Health Worker 67
- Hospital: All Other Employees 32
- LPN 30

The top four natures of Injury, which comprised 87.8% of the healthcare worker assault claims, were Contusion (37.1%), Laceration (22.6%), Sprain or Tear (19.5%), and Strain or Tear (8.6%). The top reported natures of injury for the healthcare worker assault claims were:

- Contusion 799 assault claims
- Laceration 487
- Sprain or tear 421
- Strain or tear 185
- Puncture 66

Lacerations and contusions were the most commonly reported natures of injury for healthcare worker assault claims. These natures of injury could be less likely to result in physical injuries requiring extensive time away from work. This finding is reflected in the examination of severity of claims. Based on the inability to return to work, and thus receive wage-loss benefits, claims with healthcare worker injuries from assaults required less time away from work than healthcare worker injury claims overall, as well as injuries for all workers of any occupation. Healthcare worker assault claims resulted in 134 of the 2,155 workers (6.2%) being unable to return to work and earn wages for 4 days or 32 hours, and thus were eligible for wage-loss benefits in the workers' compensation system. The severity comparison to all claims could be affected by comparing a different 'mix' of claims. For example, healthcare worker assault claims were comprised of contusions 37.1% of the time, while all workers' compensation claims are comprised of contusions 15.7% of the time.

This section of the report is based on data found in claims submitted through the workers' compensation system in Montana. Anecdotal statements from healthcare stakeholders suggest that healthcare workers are less likely to report claims of work-related injuries and illnesses. Our understanding of healthcare worker assaults in Montana, and the quality of our data, could certainly be improved if more healthcare workers consistently reported workplace injuries, particularly assaults.

Exhibit 6.1 Number of Assaults by Payroll Classification Code – 2011-2015

Payroll Classification - Occupation Group	Number of Assault Claims
Physicians - All employees including clerical office employees	767
Hospital - Professional employees	544
Group Homes - All employees & salespersons, drivers	526
Retirement Living Centers - Health care employees	187
Hospital - All other employees	86
Nursing, home health, public and traveling - all employees	44

Exhibit 7.1. Numbers and rates of total workers' compensation claims filed per 1,000 workers covered by workers compensation in Montana, 2011-2015

Description	2011	2012	2013	2014	2015
Total Number of Workers Covered by Workers' Compensation in Montana	406,000	414,000	421,000	-	-
Total Number of Workers' Compensation Claims	25,666	25,218	25,308	26,062	24,749
Rate of Total Claims Filed (per 1,000 workers covered)	63.2	60.9	60.1	-	-

Dashes indicate that rates not calculated for 2014 or 2015 due to lack of available data on covered workers.

Exhibit 7.2. Numbers and rates of total healthcare worker claims filed per 1,000 workers covered by workers compensation in Montana, 2011-2015

Description	2011	2012	2013	2014	2015
Total Number of Claims Filed by Healthcare Workers	3,701	3,690	3,642	3,947	3,467
Rate of Total Claims Filed by Healthcare Workers (per 1,000 workers covered)	9.1	8.9	8.7	-	-

Dashes indicate that rates not calculated for 2014 or 2015 due to lack of available data on covered workers.

Exhibit 7.3. Numbers and rates of total healthcare worker assault claims filed per 1,000 workers covered by workers compensation in Montana, 2011-2015

Description	2011	2012	2013	2014	2015
Total Number of Assault Claims Filed by Healthcare Workers	416	490	398	469	382
Rate of Total Assault Claims Filed by Healthcare Workers (per 1,000 workers covered)	1.0	1.2	0.9	-	-

Dashes indicate that rates not calculated for 2014 or 2015 due to lack of available data on covered workers.

Exhibit 7.4. Number of total workers' compensation claims filed by healthcare workers, and claims filed by healthcare workers that were assault claims in Montana, 2011-2015.

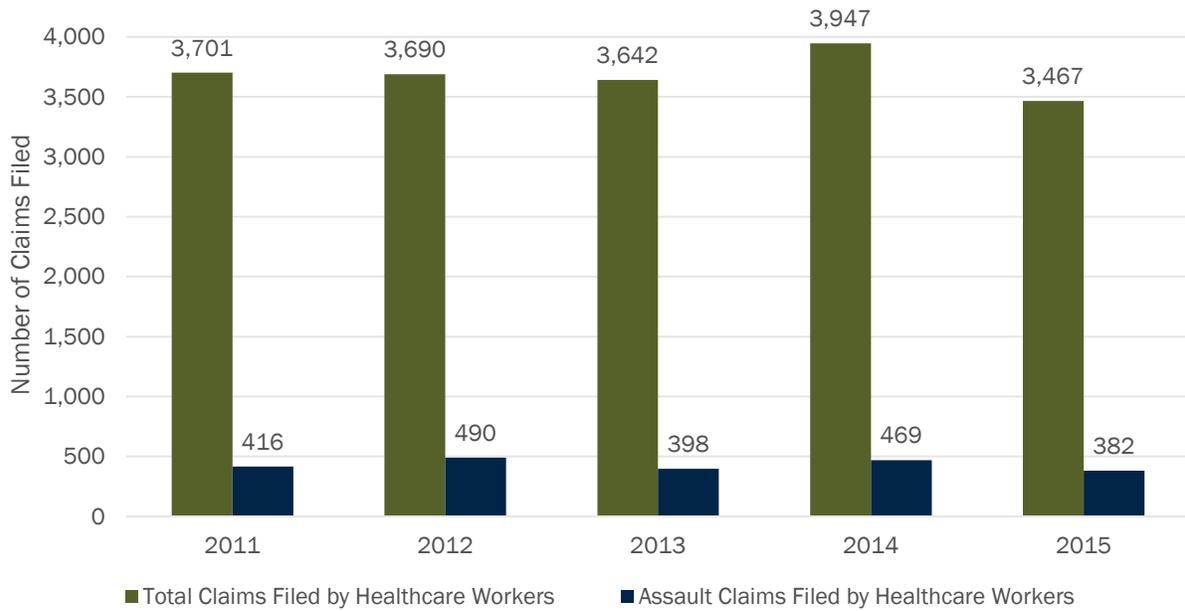
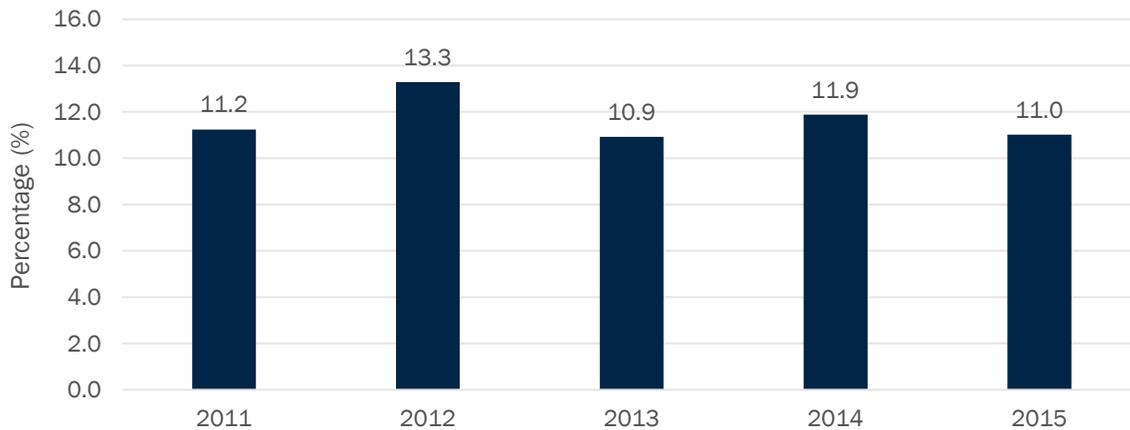


Exhibit 7.5. Percentage of workers' compensation claims filed by healthcare workers that were assault claims in Montana, 2011-2015.



Data Sources

Section I. Data sources:

U.S. Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses (SOII)
Nonfatal cases involving days away from work: selected characteristics database, SOII-C&D, BLS.
Ownership: Private Industry
Data Type: Injury and illness rate per 10,000 full-time workers
Case Type: Industry division or selected characteristics by detailed source of injury/illness
Category: Industry – Health care and social assistance
Source: Person-other than injured or ill worker (57XXXX); patient (574XXX)

Nonfatal cases involving days away from work: selected characteristics database, SOII-C&D, BLS.
Ownership: Private Industry
Data Type: Injury and illness rate per 10,000 full-time workers
Case Type: Industry division or selected characteristics by detailed event
Category: Industry – Health care and social assistance
Events: Intentional injury by other person; unintentional or unknown intent by other person; hitting, kicking, beating, shoving.

Section II. Data sources:

Montana Occupational Injuries and Illnesses 2014, Department of Labor and Industry, Research and Analysis Bureau.
U.S. Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses (SOII)

Section III. Data Source:

Queries from Worker Compensation Administrative Network (WCAN) database, Montana Department of Labor & Industry, Employment Relations Division, WC Claims Assistance Bureau, Data Management Unit.

References

^a“Safety and Health Topics: Healthcare.” United States Department of Labor. Occupational Safety and Health Administration. Accessed at: <https://www.osha.gov/SLTC/healthcarefacilities/>.

^b“Occupational Traumatic Injuries Among Workers in Healthcare Facilities – United States, 2012 – 2014”, Morbidity and Mortality Weekly Report (MMWR), Centers for Disease Control and Prevention, April 24, 2015.

^cUnited States Government Accountability Office, “Workplace Safety and Health: Additional Efforts Needed to Help Protect Health Care Workers from Workplace Violence”, March 2016.

^d“Workplace Violence and Supervisor Support in Healthcare: Linking Workplace Aggression to Employee Well-Being and Work: The Moderating Role of Family-Supportive Supervisor Behaviors (FSSB)”, Nanette L. Yragui, Caitlin A. Demsky, Leslie B. Hammer, Sara Van Dyck, Moni B. Neradilek, Journal of Business and Psychology, 2016.

^eTeleconference on May 26, 2016 with Dr. Nanette Yragui, David Elenbaas, Julia Brennan, Brenda Donaldson, and Lorri Deplazes.