

# **HEALTH AND WELFARE WORKERS: SOUTH AUSTRALIAN WORKERS' COMPENSATION CLAIMS, 2004-2013**

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## About NCETA

NCETA is based at Flinders University in South Australia and is an internationally recognised research and training centre that works as a catalyst for change in the alcohol and other drug (AOD) field. NCETA's areas of expertise include training needs analyses, the provision of training and other workforce development approaches. We have developed training curricula, programs and resources, and provided training programs, to cater for the needs of: specialist AOD workers; frontline health and welfare workers; Indigenous workers; community groups; mental health workers; police officers; and employers and employee groups. The Centre focuses on supporting evidence-based change and specialises in change management processes, setting standards for the development of training curriculum content and delivery modes, building consensus models and making complex and disparate information readily accessible to workers and organisations.

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## Terminology Notes

- The term 'health and welfare workers' used in this report comprises Australian Standard Classification of Occupations (ASCO) (ABS 1997) categories of health professionals and health and welfare associate professionals
- The term 'injury' includes all injuries and diseases
- ReturnToWorkSA refers to activities undertaken by the Return to Work Corporation of South Australia (formerly WorkCover Corporation of South Australia).

*SafeWork SA and the South Australian Government do not endorse the content of this material and the views expressed herein are not reflective of SafeWork SA or the South Australian Government.*

# Contents

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<b>1. EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>2. INTRODUCTION.....</b>	<b>3</b>
<b>3. RESEARCH QUESTIONS.....</b>	<b>4</b>
<b>4. METHODS.....</b>	<b>5</b>
4.1 Study Population.....	5
4.2 Data Sources.....	5
4.3 Measures.....	6
4.4 Analyses.....	7
<b>5. RESULTS.....</b>	<b>8</b>
5.1 Claimants and Claims.....	8
5.2 Injury Characteristics.....	10
5.3 Injury Outcomes.....	35
<b>6. DISCUSSION .....</b>	<b>41</b>
6.1 Number of Compensation Claimants and Claims.....	41
6.2 Injury Characteristics.....	41
6.3 Injury Outcomes.....	41
6.4 Limitations.....	42
<b>7. CONCLUSION .....</b>	<b>43</b>
<b>REFERENCES .....</b>	<b>44</b>
<b>APPENDIX .....</b>	<b>46</b>



# 1. EXECUTIVE SUMMARY

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The nature of work in South Australia is progressively moving from physical tasks to work that involves more mental and emotional endeavours. Concomitant with national changes, health and welfare services have become one of the fastest growing sectors of the South Australian economy. However, to date, there has been little exploration of the impact of these changes on health and welfare workers' compensation claims in South Australia.

South Australian workers' compensation data were examined to identify:

- The number and rate of health and welfare workers' compensation claims made over the 10 year period 2004 to 2013
- Workers' compensation claimant and claim characteristics
- Patterns of claims by health and welfare workers.

The occupational grouping defined here as health and welfare workers comprises Australian Standard Classification of Occupations (ASCO) (ABS, 1997) categories of health professionals and health and welfare associate professionals (see Appendices 1 and 2). Data concerning accepted and pending claimants and claims submitted by eligible health and welfare workers to ReturntoWorkSA for the period 2004-2013 inclusive were used. A **claimant** is defined as the person who submits the workers' compensation claim. A **claim** is a submission for compensation for medical expenses, loss of wages, or both.

Two analyses were undertaken. First, descriptive analyses compared health and welfare workers with all other occupation groups. Second, compensation rates per 1,000 South Australian workers for claimants, claims and injury outcomes were calculated. For these calculations, the number of South Australian health and welfare workers were obtained from the 2006 and 2011 Australian census data (Australian Bureau of Statistics 2006b, 2011).

Key findings:

- Between 2004 and 2013 there was a decline in health and welfare workers' compensation claims
- Injury characteristics were consistent among health and welfare workers, with both professionals and associates citing similar body locations, nature, agency and mechanism of injuries in their compensation claims. This finding suggests that there are similar physical risks associated with the work undertaken by professionals and associates
- Injury outcomes differed between the professionals and associates subsets of health and welfare workers, with professionals claiming fewer days off but having more expensive claims.

In summary, fewer South Australian health and welfare workers have submitted workers' compensation claims over time. Both professionals and associates report similar body locations, nature, agency and mechanism of injury characteristics, although injury outcomes vary between professional and associate occupational subsets. Further

research is required to ascertain whether generic or tailored health and safety interventions are warranted for specific health and welfare occupations.

## 2. INTRODUCTION

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Health and welfare workers<sup>1</sup> are priority occupations for ReturnToWorkSA and SafeWork Australia. Employment in these occupations can be demanding, stressful and distressing (Farmer, 1995; Skinner and Roche, 2005; Söderfeldt et al., 2000). A better understanding of the injuries and diseases experienced by health and welfare workers is needed to inform the development of appropriate occupational health and safety responses. The purpose of this study was to examine the patterns of compensation claims submitted by South Australian health and welfare workers.

Health and welfare workers provide vital health and social care to South Australians. They deliver a multitude of services, interventions and programs to address a vast array of health conditions and social problems affecting people living in remote, rural, regional, and metropolitan areas (Dollard et al., 2007; Healy and Lonne, 2010).

In the 2011 Australian census, 46,709 South Australians were employed as health and welfare workers, an increase from 38,736 in 2006 (Australian Bureau of Statistics, 2006b, 2011). An increasing number of health and welfare workers necessitates a better understanding of the current extent, nature and distribution of workers' compensation claims for injury and disease in this population. In turn, such data can also inform the development of effective primary and secondary prevention models, along with retention and return to work strategies.

Health and welfare workers are primarily employed in the health care and social assistance industry. This industry is one of the fastest growing sectors in the Australian economy (Healy and Lonne, 2010), employing 100,602 South Australians in 2011 (Australian Bureau of Statistics, 2011), an increase from 86,220 in 2006 (Australian Bureau of Statistics, 2006b). This is consistent with patterns elsewhere in Australia that have seen the nature of work progressively move from physical tasks to more mental and emotional endeavours (Ruotsalainen et al., 2008).

This study was undertaken to describe workers' compensation claims and claimant characteristics of health and welfare workers in South Australia during the period 2004-2013, and to compare them with workers employed in all other occupations.

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<sup>1</sup> The term 'health and welfare workers' comprises the ASCO (Australian Bureau of Statistics, 1997) sub-major occupational groups health professionals and health and welfare associate professionals.

### **3. RESEARCH QUESTIONS**

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In undertaking this project, the following questions were addressed:

1. What is the number and proportion of compensation claimants and claims from health and welfare workers?
2. What is the pattern of claimants and claims from health and welfare workers?
3. What proportion of health and welfare workers' claims cite mental stress as the mechanism of injury and has this changed over time?



## 4. METHODS

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### 4.1 STUDY POPULATION

The study population examined in this investigation were South Australian health and welfare workers employed in health professional and health and welfare associate occupations who submitted a workers' compensation claim in South Australia between 2004 and 2013.

Health and welfare workers were identified from the relevant major occupational groups in the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics, 1997). These occupational groups were health professionals (ASCO sub-major occupational category #23) and health and welfare associate professionals (ASCO sub-major occupational category #34) (see Appendix 1).

Under the *Return to Work Act 2014*, a worker is defined as a person working within an employment relationship. All workers, as defined by the Act, have the right to submit a claim for compensation for a workplace accident or injury. Compensation covers medical expenses, loss of wages, or both (South Australian Government, 2014).

### 4.2 DATA SOURCES

#### **Workplace Health and Safety Tabulator (Tabulator)**

The data used to examine workers' compensation claims in South Australia were drawn from the *Workplace Health and Safety Tabulator* (Tabulator). The Tabulator comprises data on work-related injuries and diseases in South Australia that:

- Have been accepted as a claim by ReturnToWorkSA; or
- Are likely to become an accepted claim (i.e., pending claims). Historically, approximately 95% of pending claims become an accepted claim (SafeWork SA, 2016).

The Tabulator excludes ReturnToWorkSA claims that are withdrawn or rejected; and work-related injuries and diseases incurred by self-employed workers and Comcare service workers (SafeWork SA, 2016).

Tabulator data includes the occupation of claimants and claims. In the Tabulator, occupation data for 2004 to 2013 is coded according to the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics, 1997).

#### **2006 and 2011 Australian Census Data (ABS)**

To establish rates of South Australian workers' compensation claimants and claims, 2006 and 2011 Australian census data were used. Using the Australian Bureau of Statistics TableBuilder program, the number of South Australians employed as health professionals and health and welfare associate professionals were extracted from the 2006 and 2011 Australian census databases (Australian Bureau of Statistics 2006b, 2011).

The 2006 and 2011 census categorised occupations according to the Australian and New Zealand Standard Classifications of Occupations (ANZSCO) (Australian Bureau of Statistics, 2006a), whereas the Tabulator categorises occupations according to the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics, 1997). The ANZSCO categories which corresponded with the ASCO health professionals (ASCO sub-major occupational category #23) and health and welfare associate professionals (ASCO sub-major occupational category #34) were identified. The corresponding ANZSCO categories were health professionals (sub-major occupation category #25) and health and welfare workers (sub-major occupation category #41) (see Appendix 2).

The selected ANZSCO and ASCO occupational groups were cross-referenced. This cross-check identified several ANZSCO occupations that did not directly align with ASCO unit groups. These were occupational and environmental health professionals, health professionals (not further defined (nfd)), health diagnostic and promotion professionals (nfd), health therapy professionals (nfd), and diversional therapists. These occupations were removed for the purposes of the present comparative analysis. The resultant total number of South Australians employed as health and welfare workers in 2006 and 2011 was established as 37,359 and 44,137, respectively.

### **4.3 MEASURES**

In this study, measures were grouped into three domains: claims and claimants, injury characteristics and injury outcomes.

#### **Claims and Claimants**

A *claimant* is defined as the person who submitted a workers' compensation claim. When total claimant numbers are reported for the entire study period (i.e., 2004 to 2013), a claimant is counted only once.

A *claim* is a submission for compensation for medical expenses, loss of wages, or both. A worker (claimant) may submit more than one claim. Hence, there may be a higher number of claims than claimants.

#### **Injury Characteristics**

Injury characteristics are coded in the Tabulator according to the first digit classification of the *Type of Occurrence Classifications System, Version 3.1* (TOOCS3.1) (Australian Safety and Compensation Council, 2008b). The following injury characteristics were examined in the present analyses:

- *Body location* is the part of the body affected by the most serious injury or disease.
- *Nature of injury* is the type of injury that occurred.
- *Mechanism of injury* is the action, exposure or event, which was the direct cause of the most serious injury or disease.
- *Agency of injury* is the object, substance or circumstance that was principally involved in or most closely associated with inflicting the injury or disease.

## **Injury Outcomes**

Three injury outcomes were examined: hospitalisation, days off work and expenditure.

*Hospitalisation* is recorded in the Tabulator with a flag. The flag indicates that the worker was hospitalised for the injury which resulted in the claim. Hospitalisation was coded as a bivariate variable (yes/no).

*Days off work* is defined as the number of days a worker was absent from work due to injury, rounded to the nearest day. The number of days lost is in effect a 'running total' for an individual, as some claims may take years to finalise (Australian Safety and Compensation Council, 2008a). Days off work was recoded into a categorical variable (zero; 1-5; 6-10; 11-30; 31-183; 184 or more days).

*Expenditure* is the estimated value of the potential full cost of a claim. The mean, median, standard deviation, minimum, and maximum expenditure per claim are reported.

## **4.4 ANALYSES**

Analyses involved three phases:

1. Transferring tabulator data to the statistical program STATA
2. Descriptive analyses which compared:
  - Health and welfare workers with all other occupation groups
  - Health professionals (professionals) with health and welfare associates (associates).
3. Where possible, establishing South Australian working population rates for workers' compensation claimants, claims, injury characteristics and injury outcomes. For these calculations, 2006 (Australian Bureau of Statistics, 2006b) and 2011 (Australian Bureau of Statistics, 2011) census data were used as the workforce denominators (see Appendix 2). Rates were calculated per 1,000 health and welfare workers.

## 5. RESULTS

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The results are organised into three main sections: claimants and claims, injury characteristics and injury outcomes. Each section comprises two sub-sections that compare:

- Health and welfare workers with all other occupation groups
- Professionals with associates.

### 5.1 CLAIMANTS AND CLAIMS

#### 5.1.1 Health and welfare workers vs all other occupation groups

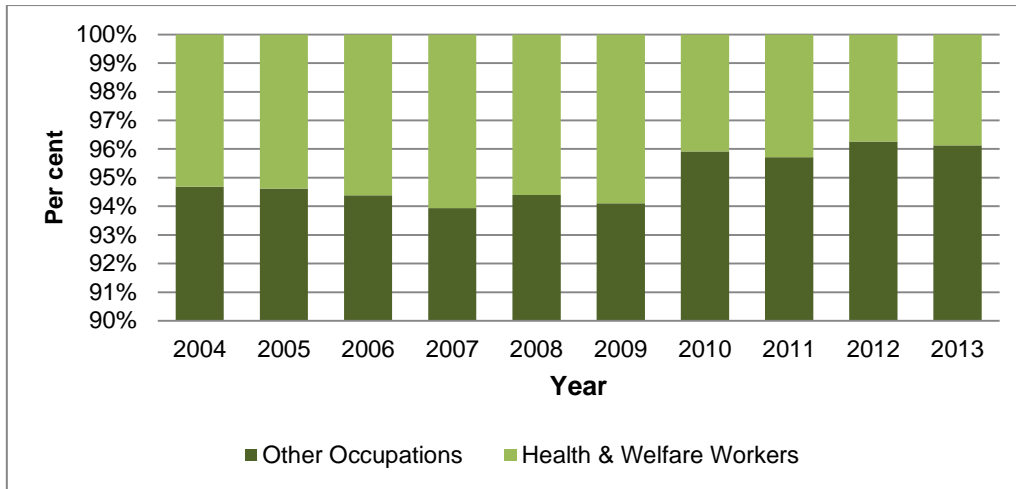
During the period 2004 and 2013 inclusive, there were 172,010 claimants from workers across all occupational groups (for whom an occupation was reported) who made 290,754 claims. Of these claimants, 8,793 were health and welfare workers who submitted 14,696 claims during the period (Table 1).

**Table 1 Number of health and welfare workers<sup>1</sup> and all other occupational groups' workers' compensation claimants and claims, 2004-2013**

	Occupational Group		
	Health & Welfare Workers <sup>1</sup> n	All Other Occupations <sup>2</sup> n	Total <sup>3</sup> N
Claimants	8,793	163,217	172,010
Claims	14,696	276,058	290,754

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Excluding professionals and associates; <sup>3</sup> Only workers' compensation claimants and claims where the occupational group had been reported have been included. For the period 2004-2013, there was a total of 196,623 claimants and 333,344 claims.

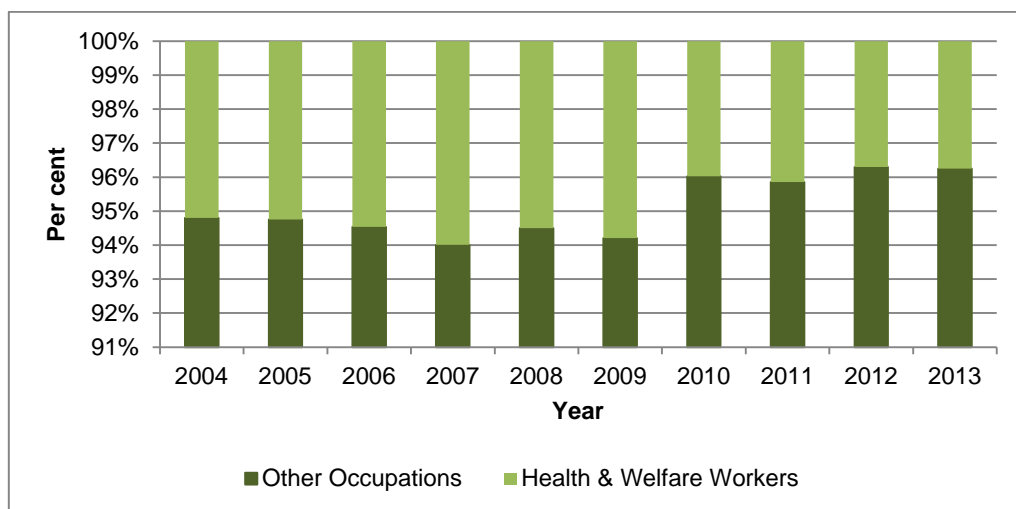
For the period 2004 to 2013, the number of claimants from health and welfare workers decreased as a proportion of claimants from all occupational groups. In 2004, health and welfare workers comprised 5.32% of claimants. In 2013, this proportion had decreased to 3.87%, a reduction of 27.26% (Figure 1).



**Figure 1 Health and welfare worker<sup>1</sup> claimants as a proportion of all workers' compensation claimants, 2004-2013**

<sup>1</sup> Professionals and associates combined

In 2004, the proportion of claims from health and welfare workers was 5.20%. In 2013, the proportion was 3.75%, a reduction of 27.89% (Figure 2).



**Figure 2 Health and welfare worker<sup>1</sup> claims as a proportion of all workers' compensation claims, 2004-2013**

<sup>1</sup> Professionals and associates combined

### Rate of South Australian health and welfare workers claimants and claims

To establish rates of South Australian workers' compensation claimants and claims, 2006 and 2011 Australian census data were used. In 2006, the rate of South Australian health and welfare worker claimants and claims was 47.78 and 52.49 per 1,000, respectively, compared to 45.98 and 51.99 per 1,000 workers in other all other occupational groups. In 2011, the rate of South Australian health and welfare worker claimants and claims was 18.13 and 19.92 per 1,000, respectively, compared to 25.72 and 29.22 per 1,000 workers in all other occupations (Table 2).

**Table 2 Rate of health and welfare workers' compensation claimants and claims per 1,000 South Australian health and welfare workers, 2006 & 2011**

Census Year	Occupational Group	SA Working Population N <sup>2</sup>	Claimants		Claims	
			N <sup>3</sup>	per 1,000	N <sup>3</sup>	per 1,000
2006	Health & welfare workers <sup>1</sup>	37,359	1,785	47.78	1,961	52.49
	All other occupations <sup>4</sup>	652,541	30,006	45.98	33,927	51.99
	<b>Total</b>	689,900	<b>31,791</b>	46.08	<b>35,888</b>	52.02
2011	Health & welfare workers <sup>1</sup>	44,137	800	18.13	879	19.92
	All other occupations <sup>4</sup>	695,223	17,882	25.72	20,316	29.22
	<b>Total</b>	739,360	<b>18,682</b>	25.27	<b>21,195</b>	28.67

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Australian Bureau of Statistics 2006, Labour Force (2006 Census), TableBuilder. Findings based on use of ABS TableBuilder data; and Australian Bureau of Statistics 2011, Employment, Income and Unpaid Work Classifications (2011 Census), TableBuilder. Findings based on use of ABS TableBuilder data; <sup>3</sup> 2006 and 2011 claimant and claim ReturnToWorkSA Tabulator data; <sup>4</sup> Excluding professionals and associates

### 5.1.2 Professionals vs associates

During the period 2004 to 2013, there were 4,344 professional claimants who submitted 6,476 claims and 4,449 associate claimants who submitted 8,220 claims (Table 3).

**Table 3 Number of health and welfare workers' compensation claimants and claims, 2004-2013**

	Health & Welfare Workers		
	Professionals n	Associates n	Total <sup>1</sup> N
Claimants	4,344	4,449	8,793
Claims	6,476	8,220	14,696

<sup>1</sup> Professionals and associates combined

## 5.2 INJURY CHARACTERISTICS

The following section considers four injury characteristics: body location, nature of injury, mechanism of injury and nature of injury.

### 5.2.1 Health and welfare workers vs other occupation groups

#### Body Location

During the period 2004 to 2013, the most common body locations of injury cited by health and welfare worker claimants were upper limbs (31.59%) and trunk (25.21%). Health and welfare worker claims during this period also most commonly cited upper limbs (30.78%) and trunk (26.17%) as the location of injury (Table 4).

**Table 4 Health and welfare workers<sup>1</sup> compensation claimants and claims by body location of injury, 2004-2013**

Body Location	Claimants		Claims	
	n	%	n	%
Head	635	7.21	1,029	7.00
Neck	336	3.81	548	3.74
Trunk	2,221	25.21	3,846	26.17
Upper limbs	2,783	31.59	4,523	30.78
Lower limbs	1,286	14.60	2,157	14.68
Multiple locations	744	8.45	1,288	8.76
Systemic locations	283	3.21	466	3.17
Non-physical locations	477	5.41	781	5.31
Unspecified locations	44	0.50	57	0.39
<b>Total</b>	<b>8,809</b>	<b>100.00</b>	<b>14,695</b>	<b>100.00</b>

<sup>1</sup> Professionals and associates combined

The trunk, upper limbs and lower limbs were the most common injury locations reported by health and welfare worker claimants and claims throughout the study period. Between 2004 and 2013, the proportion of claimants and claims citing the trunk as the body location of injury decreased by 40.37% and 40.70%, respectively. By contrast, the proportion of claimants and claims citing the upper limbs increased by 29.19% and 30.38%, and the lower limbs increased by 47.75% and 51.05%, respectively. Despite these proportional changes, the actual number of claimants and claims substantially declined for all body locations, apart from the head (Table 5).

**Table 5 Health and welfare workers'<sup>1</sup> compensation claimants and claims by body location of injury, between the years 2004 and 2013**

Body Location	Claimants					Claims				
	2004		2013		Proportion Change %	2004		2013		Proportion Change %
	n	%	n	%		n	%	n	%	
Head	95	5.17	93	14.22	+ 174.82	108	5.26	95	13.53	+157.37
Neck	74	4.03	11	1.68	- 58.27	88	4.28	17	2.42	-43.48
Trunk	532	28.98	113	17.28	- 40.37	597	29.07	121	17.24	-40.70
Upper limbs	515	28.05	237	36.24	+ 29.19	570	27.75	254	36.18	+30.38
Lower limbs	247	13.45	130	19.88	+ 47.75	277	13.49	143	20.37	+51.05
Multiple locations	186	10.13	29	4.43	- 56.23	210	10.22	31	4.42	-56.81
Systemic locations	53	2.89	24	3.67	+ 27.12	60	2.92	24	3.42	+17.04
Non-physical locations	116	6.32	17	2.60	- 58.86	126	6.13	17	2.42	-60.52
Unspecified locations	18	0.98	0	0.00	-100.00	18	0.88	0	0.00	-100.00
<b>Total</b>	<b>1,836</b>	<b>100.00</b>	<b>654</b>	<b>100.00</b>		<b>2,054</b>	<b>100.00</b>	<b>702</b>	<b>100.00</b>	

<sup>1</sup> Professionals and associates combined



## **Nature of Injury**

The nature of injury most commonly cited by health and welfare claimants was traumatic joint/ligament and muscle/tendon injury (46.46%), followed by wounds, lacerations, amputations and internal organ damage (18.65%). Claims were also most commonly for traumatic joint/ligament and muscle/tendon injury (48.60%) and wounds, lacerations, amputations and internal organ damage (17.09%) (Table 6).

**Table 6 Health and welfare workers<sup>1</sup> compensation claimants and claims by nature of injury, 2004-2013**

Nature of Injury	Claimants		Claims	
	n	%	n	%
Intracranial injuries	52	0.59	89	0.61
Fractures	315	3.58	451	3.07
Wounds, lacerations, amputations & internal organ damage	1,640	18.65	2,509	17.09
Burn	102	1.16	158	1.08
Injury of nerves and spinal cord	12	0.14	20	0.14
Traumatic joint/ligament and muscle/tendon injury	4,086	46.46	7,133	48.60
Other injuries	418	4.75	672	4.58
Musculoskeletal and connective tissue diseases	1,084	12.33	1,835	12.50
Mental diseases	476	5.41	780	5.31
Digestive system diseases	50	0.57	77	0.52
Skin and subcutaneous tissue diseases	158	1.80	290	1.98
Nervous system and sense organ diseases	142	1.61	243	1.66
Respiratory system diseases	17	0.19	31	0.21
Circulatory system diseases	16	0.18	26	0.18
Infectious and parasitic diseases	137	1.56	223	1.52
Neoplasms (cancer)	2	0.02	3	0.02
Other diseases	16	0.18	29	0.20
Other claims	72	0.82	108	0.74
<b>Total</b>	<b>8,795</b>	<b>100</b>	<b>14,677</b>	<b>100</b>

<sup>1</sup> Professionals and associates combined

The most prevalent nature of injury categories were examined to ascertain patterns in the proportion of claimants and claims. These injury categories were: wounds, lacerations, amputations and internal organ damage, traumatic joint/ligament and muscle/tendon injury, and musculoskeletal and connective tissue diseases. Mental diseases were also examined due to current concerns regarding mental health and the workplace.

While traumatic joint/ligament and muscle/tendon injuries was the most common nature of injury reported by health and welfare worker claimants and claims throughout the study period, between 2004 and 2013 the proportion of claimants and claims citing this as the nature of injury decreased by 37.13% and 35.92%, respectively. By contrast, the proportion of claimants and claims citing wounds, lacerations, amputations and internal organ damage increased by 60.65% and 57.23%, and musculoskeletal and connective tissue diseases increased by 16.04% and 17.26%, respectively. Despite these proportional increases, the actual number of claimants and claims substantially declined over time (Table 7).

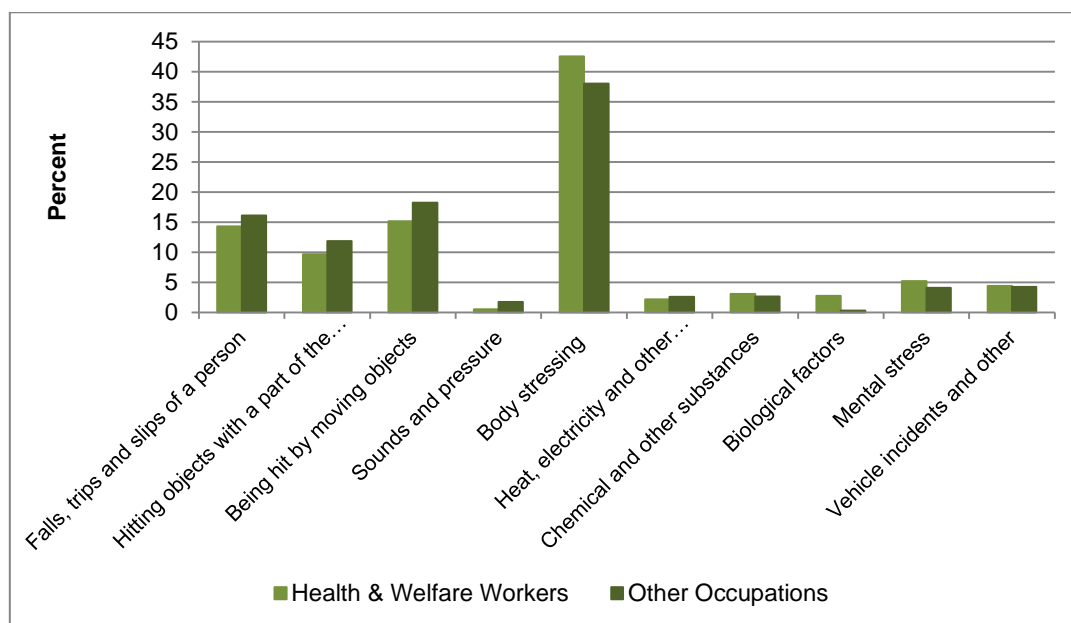
**Table 7 Health and welfare workers:<sup>1</sup> compensation claimants and claims by select nature of injury, between the years 2004 and 2013**

Nature of Injury	Claimants					Claims				
	2004		2013		Proportion Change %	2004		2013		Proportion Change %
	n	%	n	%		n	%	n	%	
Wounds, lacerations, amputations and internal organ damage	287	15.63	164	25.11	+ 60.65	328	15.97	176	25.11	+ 57.23
Traumatic joint/ligament and muscle/tendon injury	984	53.59	220	33.69	- 37.13	1,111	54.09	243	34.66	- 35.92
Musculoskeletal and connective tissue diseases	206	11.22	85	13.02	+ 16.04	225	10.95	90	12.84	+ 17.26
Mental diseases	117	6.37	17	2.60	- 59.18	127	6.18	17	2.43	- 60.68
Other	242	13.18	167	25.57	NA <sup>2</sup>	263	12.80	175	24.96	NA <sup>2</sup>
<b>Total</b>	<b>1,836</b>	<b>100.00</b>	<b>653</b>	<b>100.00</b>		<b>2,054</b>	<b>100.00</b>	<b>701</b>	<b>100.00</b>	

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Not Applicable

## Mechanism of Injury

The most common mechanisms of injury cited in health and welfare worker claims were body stressing (42.53%), being hit by moving objects (15.16%) and falls, trips and slips (14.31%). Similar mechanisms of injury were also cited in claims by workers in other occupations (Figure 3).



**Figure 3 Health and welfare workers<sup>1</sup> compensation claims by mechanism of injury, 2004-2013**  
<sup>1</sup> Professionals and associates combined

The overall proportion of claims from health and welfare workers for each mechanism of injury was additionally considered. Health and welfare workers comprised 30.22% of all claims for biological factors<sup>2</sup>, 6.40% of all mental stress claims and 5.62% of body stressing claims (Table 8).

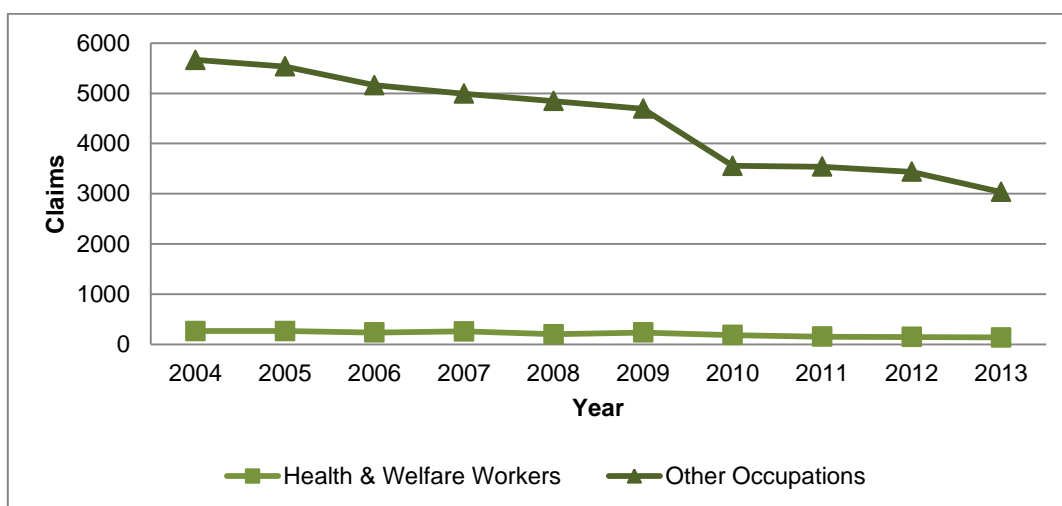
<sup>2</sup> Biological factors refer to disorders that result from contact with, or exposure to, germs, bacteria, and other micro-organisms (Australian Safety and Compensation Council, 2008b).

**Table 8 Health and welfare workers<sup>1</sup> proportion of compensation claimants and claims by mechanism of injury, 2004-2013**

Mechanism of Injury	Occupational Group	
	Health & Welfare Workers <sup>1</sup> %	All Other Occupations <sup>2</sup> %
Falls, trips and slips of a person	4.52	95.48
Hitting objects with a part of the body	4.17	95.83
Being hit by moving objects	4.24	95.76
Sounds and pressure	1.66	98.34
Body stressing	5.62	94.38
Heat, electricity and other environmental factors	4.24	95.76
Chemical and other substances	5.79	94.21
Biological factors	30.22	69.78
Mental stress	6.40	93.60
Vehicle incidents and other	5.23	94.77

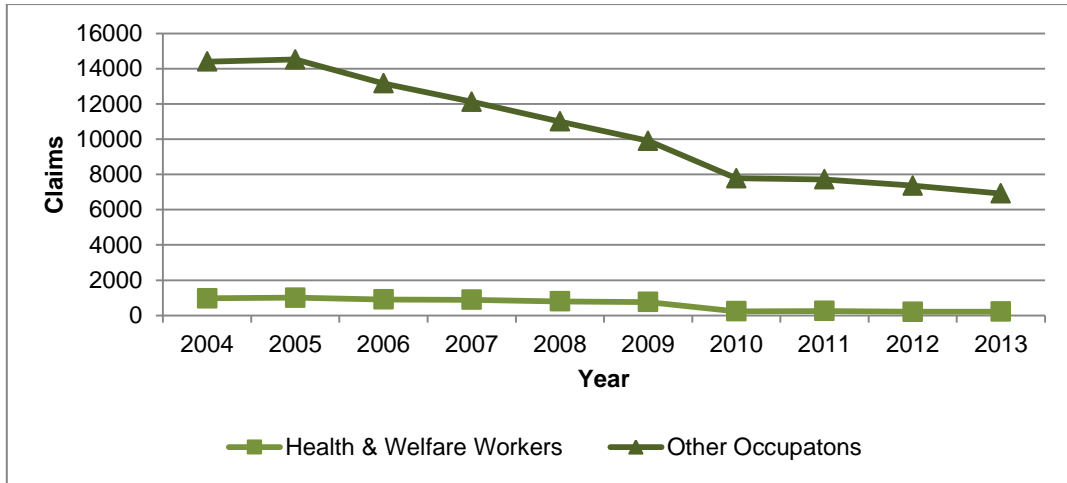
<sup>1</sup> Professionals and associates combined; <sup>2</sup> Excluding professionals and associates

The number of claims by health and welfare workers involving falls, slips & trips (Figure 4), body stressing (Figure 5), being hit by a moving object (Figure 6) and mental stress (Figure 7) remained fairly consistent over time. In contrast, claims for these mechanisms of injury, apart for mental stress, decreased in other occupation groups.



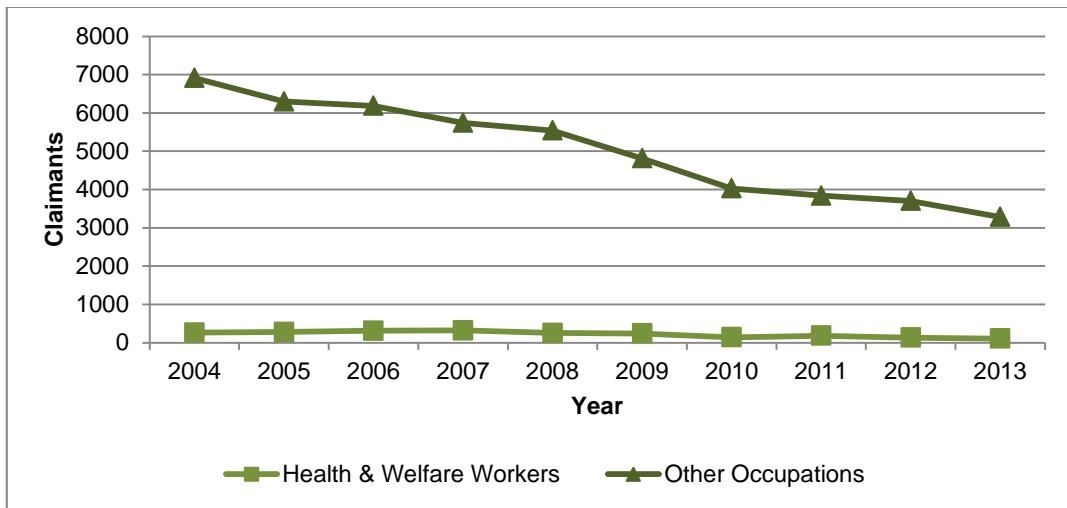
**Figure 4 Health and welfare workers<sup>1</sup> compensation claims for falls, trips and slips as the mechanism of injury, 2004-2013**

<sup>1</sup> Professionals and associates combined



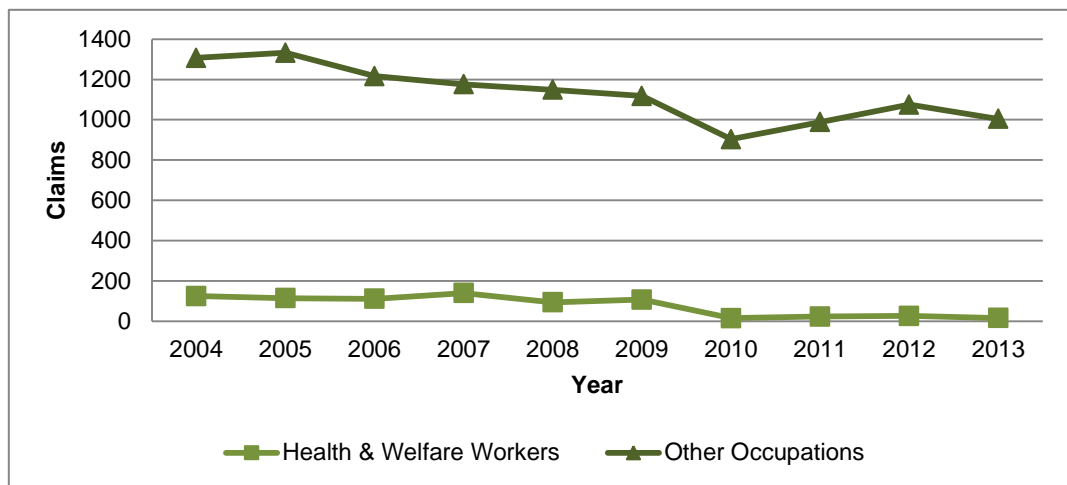
**Figure 5 Health and welfare workers<sup>1</sup> compensation claims for body stressing as the mechanism of injury, 2004-2013**

<sup>1</sup> Professionals and associates combined



**Figure 6 Health and welfare workers<sup>1</sup> compensation claims for being hit by moving objects as the mechanism of injury, 2004-2013**

<sup>1</sup> Professionals and associates combined

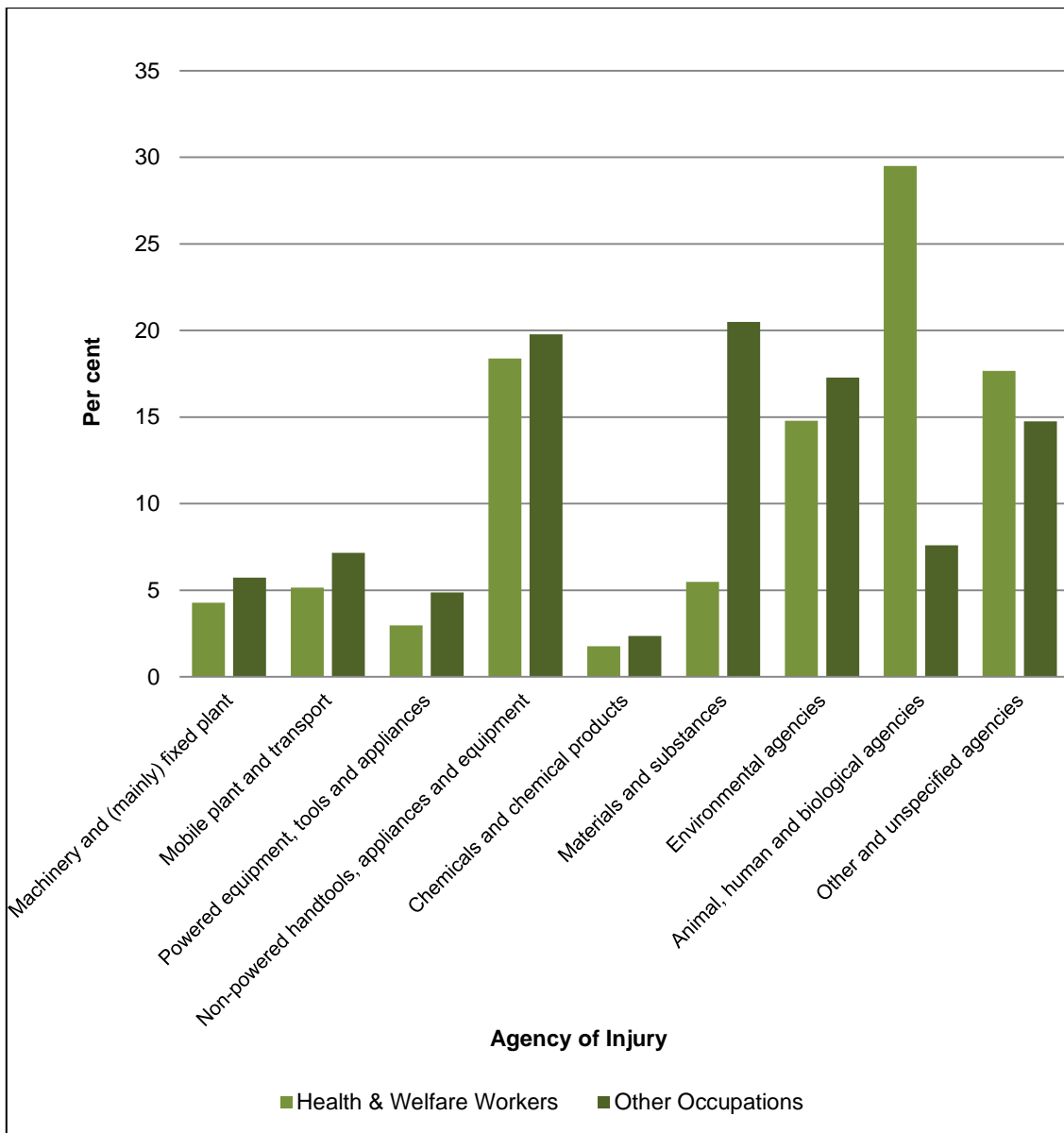


**Figure 7 Health and welfare workers<sup>1</sup> compensation claims for mental stress as the mechanism of injury, 2004-2013**

<sup>1</sup> Professionals and associates combined

## Agency of Injury

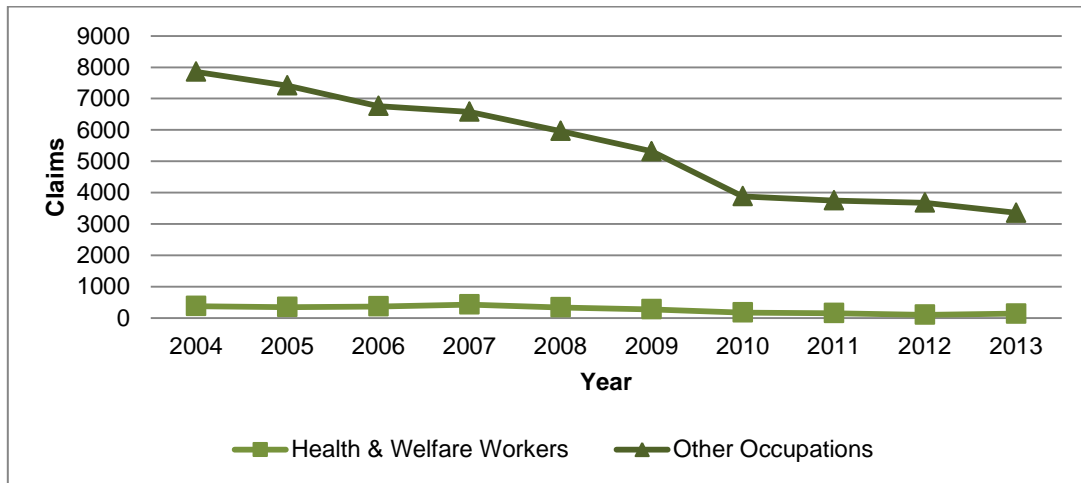
The agency of injury most commonly cited in health and welfare worker claims was animal, human and biological agencies (29.50%), followed by non-powered equipment, tools and appliances (18.39%) and environmental agencies (14.79%). In all other occupational groups, the most common agency of injury cited was materials and substances (20.48%) followed by non-powered equipment, tools and appliances (19.77%) and environmental agencies (17.28%) (Figure 8).



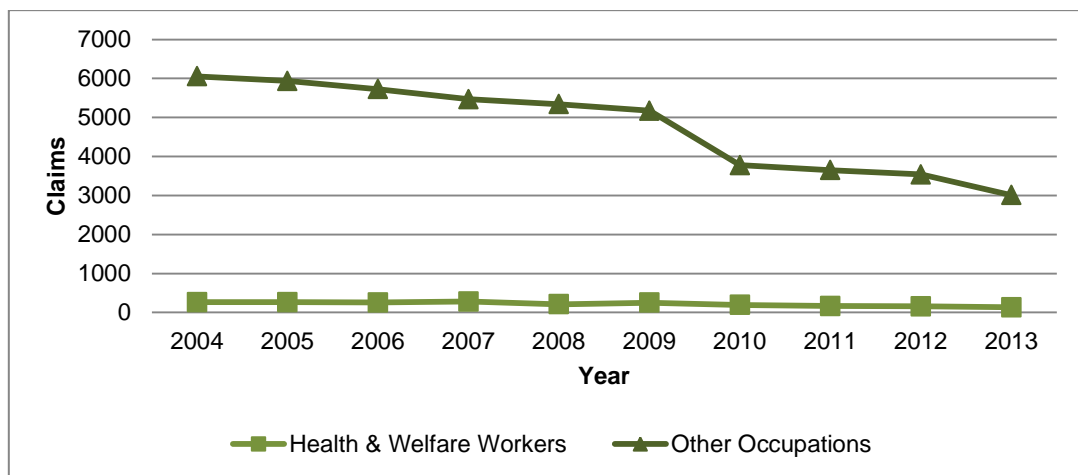
**Figure 8 Health and welfare workers<sup>1</sup> compensation claims by agency of injury, 2004-2013**

<sup>1</sup>Professionals and associates combined

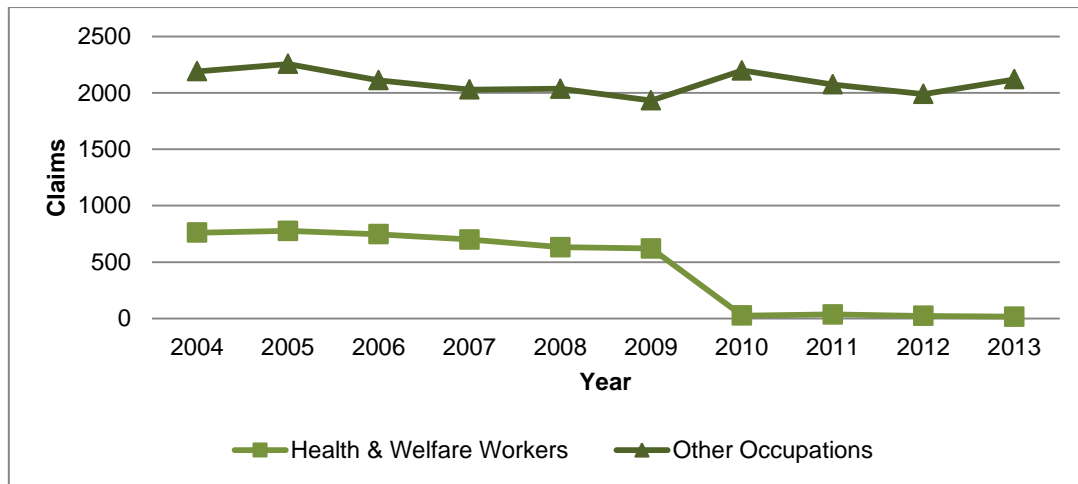
Two of the most common agencies of injury cited in health and welfare workers' claims - non-powered equipment, tools and appliances (Figure 9) and environmental agencies (Figure 10) - remained relatively constant over time, whilst claims for animal, human and biological agencies (Figure 11) declined. In contrast, among other occupations, non-powered equipment, tools and appliances and environmental agencies have declined whilst claims for animal, human and biological agencies remained constant.



**Figure 9 Health and welfare workers<sup>1</sup> compensation claims for non-powered handtools, appliances and equipment as the nature of injury, 2004-2013**  
<sup>1</sup> Professionals and associates combined



**Figure 10 Health and welfare workers<sup>1</sup> compensation claims for environmental agencies as the nature of injury, 2004-2013**  
<sup>1</sup> Professionals and associates combined



**Figure 11 Health and welfare workers<sup>1</sup> compensation claims for animal, human and biological agencies as the nature of injury, 2004-2013**  
<sup>1</sup> Professionals and associates combined

## 5.2.2 Professionals vs associates

### Body Location

During the period 2004 to 2013, the most common body locations cited by professional claimants were upper limbs (30.44%) and trunk (27.18%), with claims similarly citing these two body locations most often (upper limbs: 29.75%; trunk: 27.63%). Associates also most commonly cited these body locations (claimants: upper limbs: 32.71%; trunk: 23.30%; claims: upper limbs: 31.59%; trunk: 25.02%) (Table 9).

**Table 9 Professionals and associates workers' compensation claimants and claims by body location of injury, 2004-2013**

Body Location	Health & Welfare Workers							
	Professionals				Associates			
	Claimants		Claims		Claimants		Claims	
	n	%	n	%	n	%	n	%
Head	269	6.20	408	6.30	366	8.18	621	7.55
Neck	178	4.10	263	4.06	158	3.53	285	3.47
Trunk	1,179	27.18	1,789	27.63	1,042	23.30	2,057	25.02
Upper limbs	1,320	30.44	1,926	29.75	1,463	32.71	2,597	31.59
Lower limbs	555	12.80	838	12.94	731	16.35	1,319	16.05
Multiple locations	409	9.43	613	9.47	335	7.49	675	8.21
Systemic locations	139	3.20	201	3.10	144	3.22	265	3.22
Non-physical locations	253	5.83	393	6.07	224	5.01	388	4.72
Unspecified locations	35	0.81	44	0.68	9	0.20	13	0.16
<b>Total</b>	<b>4,337</b>	<b>99.99</b>	<b>6,475</b>	<b>100.00</b>	<b>4,472</b>	<b>100.00</b>	<b>8,220</b>	<b>100.00</b>



The trunk, upper limbs and lower limbs were the most common body locations for injury reported by professional claimants and claims throughout the study period. Between 2004 and 2013, the proportion of professional claimants and claims citing the trunk as the body location of injury decreased by 37.18% and 37.06%, respectively, while the proportion of professional claimants and claims citing the upper limbs increased by 43.37% and 46.49%, and the lower limbs by 43.83% and 41.67%, respectively. However, despite these proportional changes, the actual number of professional claimants and claims substantially declined for all body locations over time (Table 10).

**Table 10 Professionals workers' compensation claimants and claims by body location of injury, between the years 2004 and 2013**

Body Location	Claimants					Claims				
	2004		2013		Proportion Change %	2004		2013		Proportion Change %
	n	%	n	%		n	%	n	%	
Head	59	5.95	12	10.71	+80.15	67	6.12	12	10.26	+67.47
Neck	39	3.93	2	1.79	-54.58	45	4.11	3	2.56	-37.66
Trunk	282	28.43	20	17.86	-37.18	312	28.52	21	17.95	-37.06
Upper limbs	278	28.02	45	40.18	+43.37	300	27.42	47	40.17	+46.49
Lower limbs	117	11.79	19	16.96	+43.83	132	12.07	20	17.09	+41.67
Multiple locations	106	10.69	7	6.25	-41.51	122	11.15	7	5.98	-46.35
Systemic locations	35	3.53	1	0.89	-74.69	37	3.38	1	0.85	-74.73
Non-physical locations	62	6.25	6	5.36	-14.29	65	5.94	6	5.13	-13.69
Unspecified locations	14	1.41	0	0.00	-100.00	14	1.28	0	0.00	-100.00
<b>Total</b>	<b>992</b>	<b>100.00</b>	<b>112</b>	<b>100.00</b>	<b>NA<sup>1</sup></b>	<b>1,094</b>	<b>100.00</b>	<b>117</b>	<b>100.00</b>	<b>NA<sup>1</sup></b>

<sup>1</sup> Not Applicable

The trunk, upper limbs and lower limbs were the most common body locations of injury reported by associate claimants and claims throughout the study period. Between 2004 and 2013, the proportion of claimants and claims citing the trunk as the body location of injury decreased by 42.07% and 42.42%, respectively, while the proportion of claimants and claims citing the upper limbs increased by 26.15% and 25.81%, and the lower limbs by 32.96% and 39.20%, respectively. Despite these proportional changes, the actual number of associate claimants and claims substantially declined for all body locations apart for the head, which increased (Table 11).

**Table 11 Associates workers' compensation claimants and claims by body location of injury, between the years 2004 and 2013**

Body Location	Claimants					Claims				
	2004		2013		Proportion Change %	2004		2013		Proportion Change %
	n	%	n	%		n	%	n	%	
Head	36	4.27	81	14.94	+250.37	41	4.27	83	14.19	+232.21
Neck	35	4.15	9	1.66	-59.96	43	4.48	14	2.39	-46.57
Trunk	250	29.62	93	17.16	-42.07	285	29.69	100	17.09	-42.42
Upper limbs	237	28.08	192	35.42	+26.15	270	28.13	207	35.38	+25.81
Lower limbs	130	15.40	111	20.48	+32.96	145	15.10	123	21.03	+39.20
Multiple locations	80	9.48	22	4.06	-57.18	88	9.17	24	4.10	-55.24
Systemic locations	18	2.13	23	4.24	+98.97	23	2.40	23	3.93	+64.10
Non-physical locations	54	6.40	11	2.03	-68.28	61	6.35	11	1.88	-70.41
Unspecified locations	4	0.47	0	0.00	-100.00	4	0.42	0	0.00	-100.00
<b>Total</b>	<b>844</b>	<b>100.00</b>	<b>542</b>	<b>100.00</b>	<b>NA<sup>1</sup></b>	<b>960</b>	<b>100.00</b>	<b>585</b>	<b>100.00</b>	<b>NA<sup>1</sup></b>

<sup>1</sup> Not Applicable

## **Nature of Injury**

Between 2004 and 2013, the nature of injury most commonly cited by professional claimants was traumatic joint/ligament and muscle/tendon injury (47.58%), followed by wounds, lacerations, amputations and internal organ damage (17.07%). Similarly, professionals' claims were typically for traumatic joint/ligament and muscle/tendon injury (48.89%) followed by wounds, lacerations, amputations and internal organ damage (15.70%).

The nature of injury most commonly reported by associate claimants was traumatic joint/ligament and muscle/tendon injury (45.37%), followed by wounds, lacerations, amputations and internal organ damage (20.17%). For claims, the most prevalent nature of injury was again traumatic joint/ligament and muscle/tendon injury (48.37%), followed by wounds, lacerations, amputations and internal organ damage (18.19%) (Table 12).

**Table 12 Professionals and associates workers' compensation claimants and claims by nature of injury, 2004-2013**

Nature of Injury	Health and Welfare Workers							
	Professionals				Associates			
	Claimants		Claims		Claimants		Claims	
	n	%	n	%	n	%	n	%
Intracranial injuries	30	0.69	49	0.76	22	0.49	40	0.49
Fractures	157	3.62	201	3.11	158	3.54	250	3.05
Wounds, lacerations, amputations and internal organ damage	740	17.07	1,016	15.70	900	20.17	1,493	18.19
Burn	26	0.60	42	0.65	76	1.70	116	1.41
Injury of nerves and spinal cord	3	0.07	4	0.06	9	0.20	16	0.19
Traumatic joint/ligament and muscle/tendon injury	2,062	47.58	3,163	48.89	2,024	45.37	3,970	48.37
Other injuries	150	3.46	222	3.43	268	6.01	450	5.48
Musculoskeletal and connective tissue diseases	587	13.54	883	13.65	497	11.14	952	11.60
Mental diseases	252	5.81	392	6.06	224	5.02	388	4.73
Digestive system diseases	15	0.35	22	0.34	35	0.78	55	0.67
Skin and subcutaneous tissue diseases	83	1.92	133	2.06	75	1.68	157	1.91
Nervous system and sense organ diseases	51	1.18	84	1.30	91	2.04	159	1.94
Respiratory system diseases	12	0.28	20	0.31	5	0.11	11	0.13
Circulatory system diseases	7	0.16	8	0.12	9	0.20	18	0.22
Infectious and parasitic diseases	93	2.15	133	2.06	44	0.99	90	1.10
Neoplasms (cancer)	1	0.02	2	0.03	1	0.02	1	0.01
Other diseases	8	0.18	12	0.19	8	0.18	17	0.21
Other claims	57	1.32	84	1.30	15	0.34	24	0.29
<b>Total</b>	<b>4,334</b>	<b>100.00</b>	<b>6,470</b>	<b>100.00</b>	<b>4,461</b>	<b>100.00</b>	<b>8,207</b>	<b>100.00</b>

Wounds, lacerations, amputations and internal organ damage, traumatic joint/ligament and muscle/tendon injuries, and musculoskeletal and connective tissue diseases were the most common nature of injury reported by professional worker claimants and claims throughout the study period. Mental stress is also included here as it is an issue of current concern.

Between 2004 and 2013, the proportion of professional claimants and claims citing traumatic joint/ligament and muscle/tendon injury decreased 29.20% and 26.95%, respectively, and mental diseases 15.59% and 14.93%, respectively. By contrast, wounds, lacerations, amputations and internal organ damage increased 3.23% and 5.04%, respectively, and musculoskeletal and connective tissue diseases 64.98% and 58.59%, respectively. Despite these proportional changes, the actual number of claimants and claims substantially declined over time (Table 13).

**Table 13 Professionals workers' compensation claimants and claims by select nature of injury, between the years 2004 and 2013**

Nature of Injury	Claimants					Claims				
	2004		2013		Proportion Change	2004		2013		Proportion Change
	n	%	n	%	%	n	%	n	%	%
Wounds, lacerations, amputations and internal organ damage	163	16.43	19	16.96	+ 3.23	178	16.27	20	17.09	+5.04%
Traumatic joint/ligament and muscle/tendon injury	513	51.71	41	36.61	- 29.20	576	52.65	45	38.46	-26.95%
Musculoskeletal and connective tissue diseases	102	10.28	19	16.96	+ 64.98	112	10.24	19	16.24	+58.59%
Mental diseases	63	6.35	6	5.36	- 15.59	66	6.03	6	5.13	-14.93%
Other	151	15.22	27	24.11	+58.41%	162	14.81	27	23.08	+55.84%
Total	992	100.00	112	100.00	<b>NA<sup>1</sup></b>	1094	100.00	960	100.00	<b>NA<sup>1</sup>-</b>

<sup>1</sup> Not Applicable



Throughout the study period, associate worker claimants and claims most commonly reported wounds, lacerations, amputations and internal organ damage, traumatic joint/ligament and muscle/tendon injuries, and musculoskeletal and connective tissue diseases as the nature of injury. Mental stress is also included here as it is an issue of current concern.

Between 2004 and 2013, the proportion of associate claimants and claims citing traumatic joint/ligament and muscle/tendon injury decreased 40.71% and 39.17%, respectively, whilst wounds, lacerations, amputations and internal organ damage increased 82.44% and 70.89%, respectively. The proportion of associate claimants citing musculoskeletal and connective tissue diseases decreased less than one per cent whilst claims increased 3.31%. Despite these proportional changes, the actual number of claimants and claims substantially declined over time, apart for wounds, lacerations, amputations and internal organ damage, which slightly increased (Table 14).

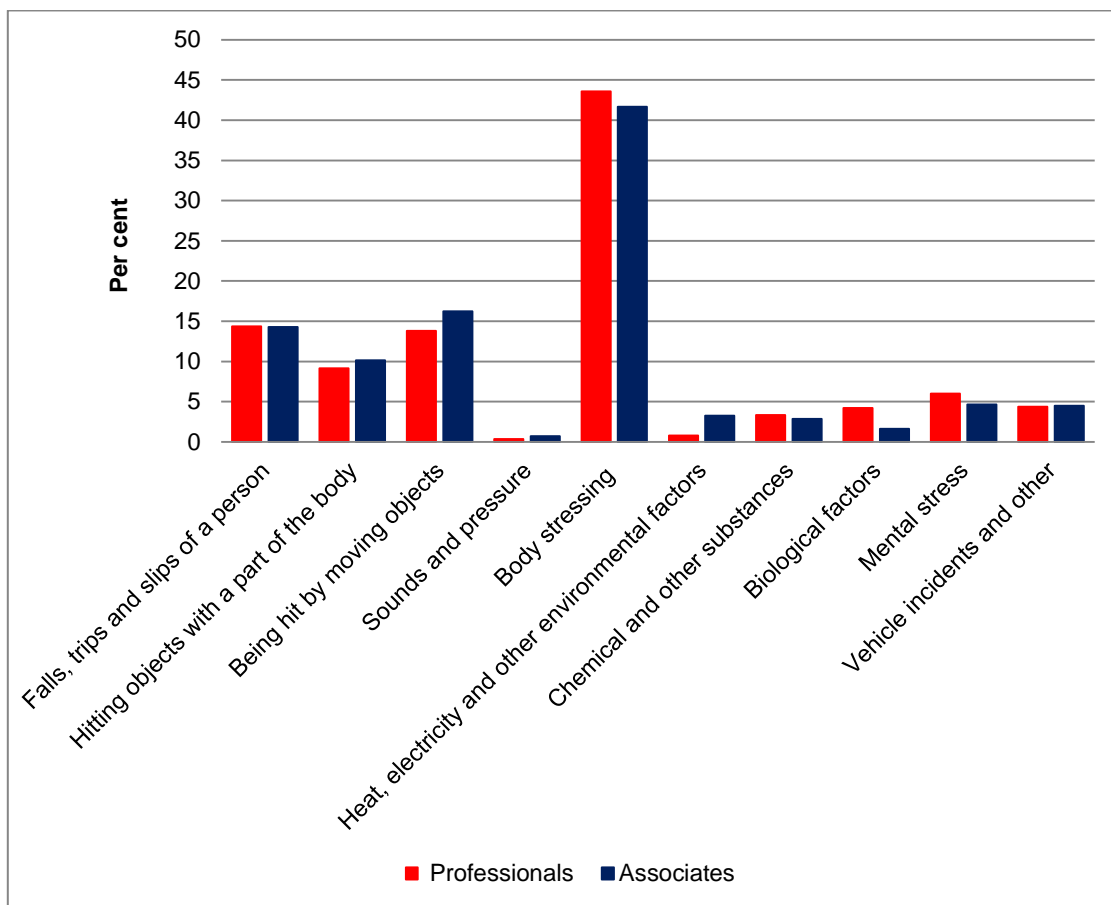
**Table 14 Associates workers' compensation claimants and claims by select nature of injury, between the years 2004 and 2013**

Nature of Injury	Claimants					Claims				
	2004		2013		Proportion Change	2004		2013		Proportion Change
	n	%	n	%	%	n	%	n	%	%
Wounds, lacerations, amputations and internal organ damage	124	14.69	145	26.80	+ 82.44	150	15.63	156	26.71	+ 70.89
Traumatic joint/ligament and muscle/tendon injury	471	55.81	179	33.09	- 40.71	535	55.73	198	33.90	- 39.17
Musculoskeletal and connective tissue diseases	104	12.32	66	12.20	- 0.97	113	11.77	71	12.16	+ 3.31
Mental diseases	54	6.40	11	2.03	- 68.28	61	6.35	11	1.88	-70.39
Other	91	10.78	140	25.88	140.07	101	10.52	148	25.34	140.87%
Total	844	100.00	541	100.00	NA <sup>1</sup>	960	100.00	584	100.00	NA <sup>1</sup>

<sup>1</sup> Not Applicable

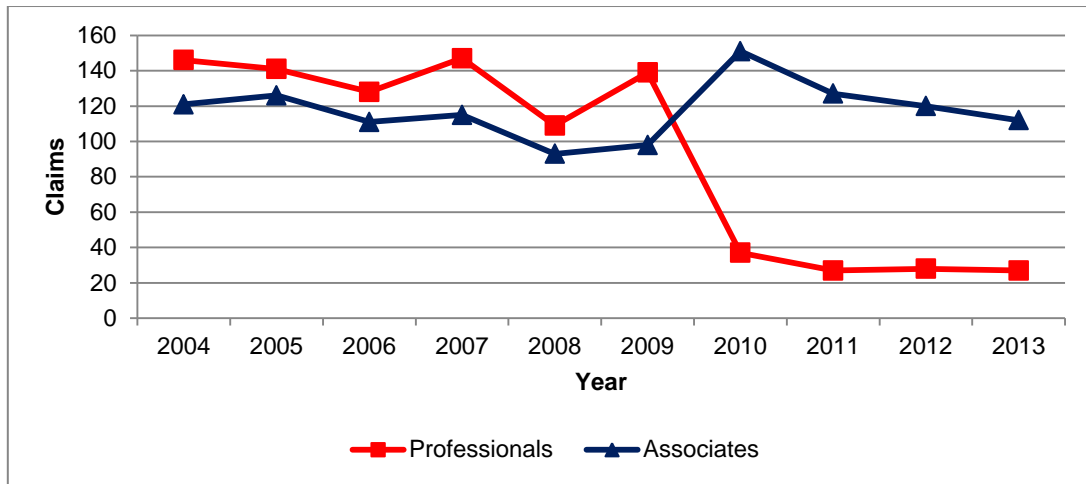
## Mechanism of Injury

During the period 2004 to 2013, the most common mechanism of injury cited in claims by professionals was body stressing (43.60%), followed by falls, trips and slips of a person (14.35%) and being hit by moving objects (13.79%), with mental stress cited in 6.01% of claims. These mechanisms of injury were also the most commonly cited by associates (body stressing: 41.69%; being hit by moving objects: 16.24%; falls, trips and slips of a person: 14.29%). Among associates, mental stress was cited as the mechanism of injury by 4.65% (Figure 12).

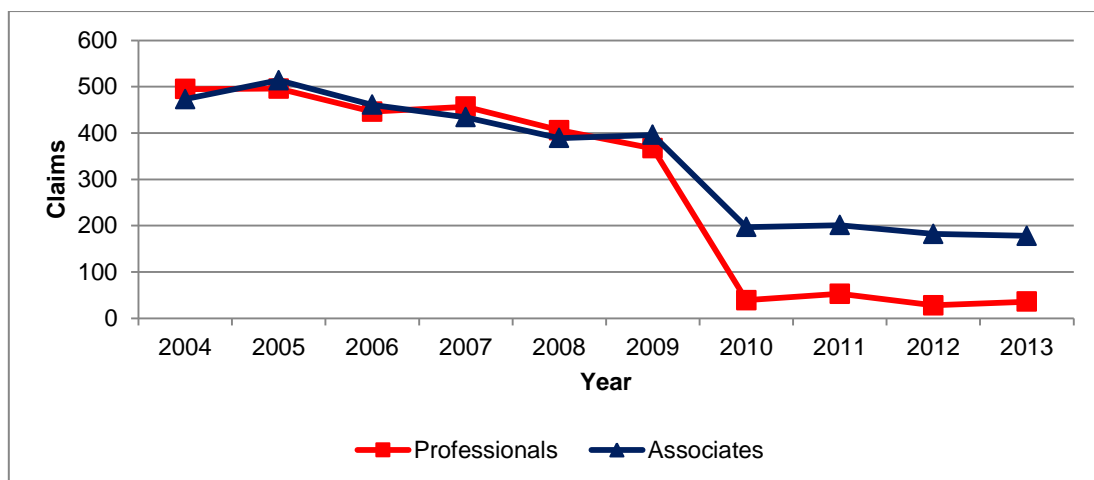


**Figure 12 Health and welfare workers' compensation claims by mechanism of injury, 2004-2013**

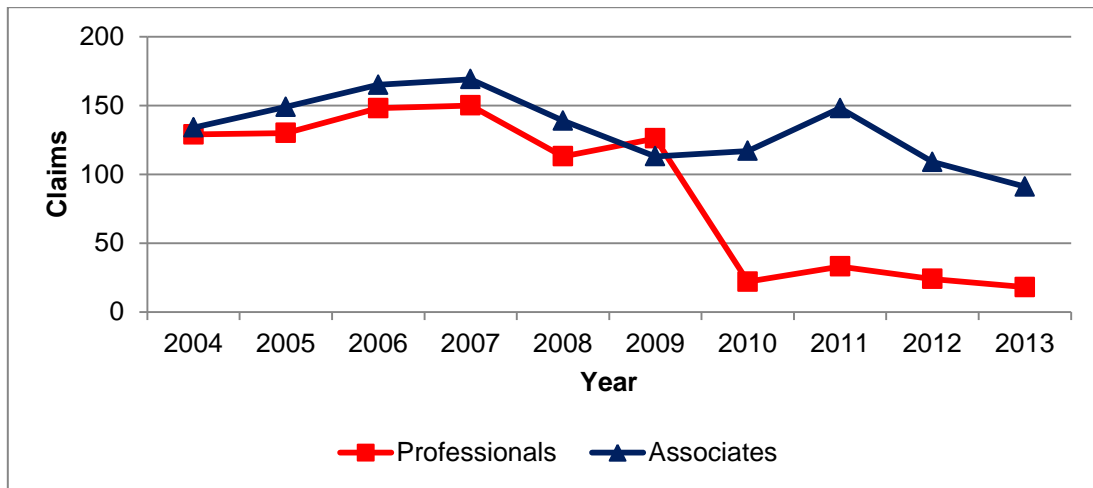
Between 2004 and 2013, professional claims decreased for falls, slips and trips (Figure 13), body stressing (Figure 14), being hit by a moving object (Figure 15) and mental stress (Figure 16). Similar patterns are apparent for body stressing and mental stress among associates.



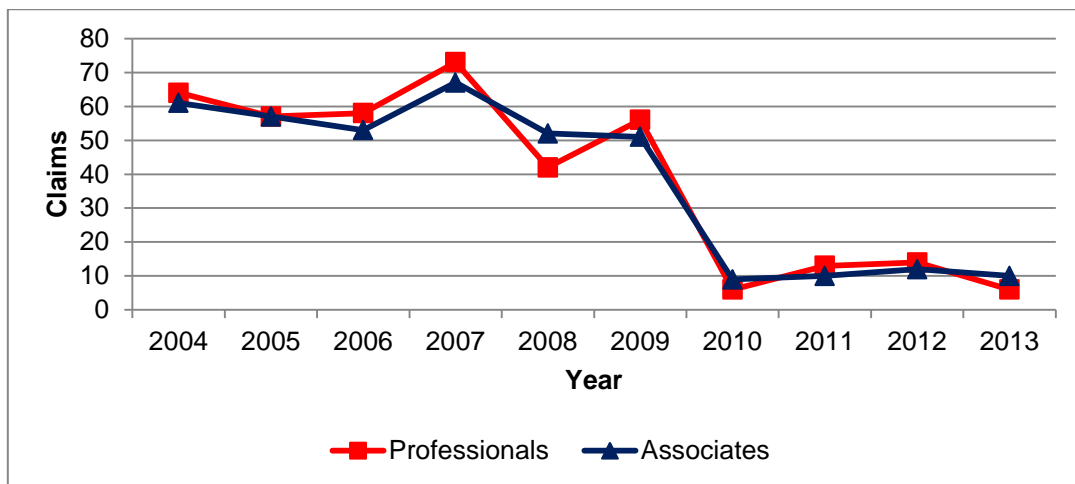
**Figure 13 Health and welfare workers' compensation claims for falls, trips and slips as the mechanism of injury, 2004-2013**



**Figure 14 Health and welfare workers' compensation claims for body stressing as the mechanism of injury, 2004-2013**



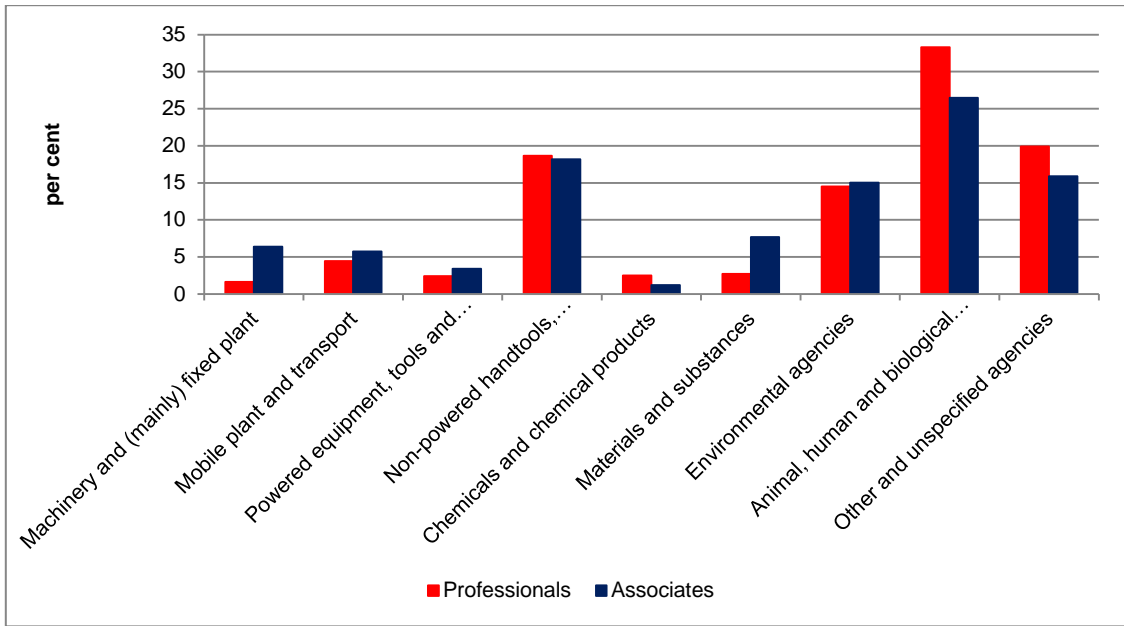
**Figure 15 Health and welfare workers' compensation claims for being hit by a moving object as the mechanism of injury, 2004-2013**



**Figure 16 Health and welfare workers' compensation claims for mental stress as the mechanism of injury, 2004-2013**

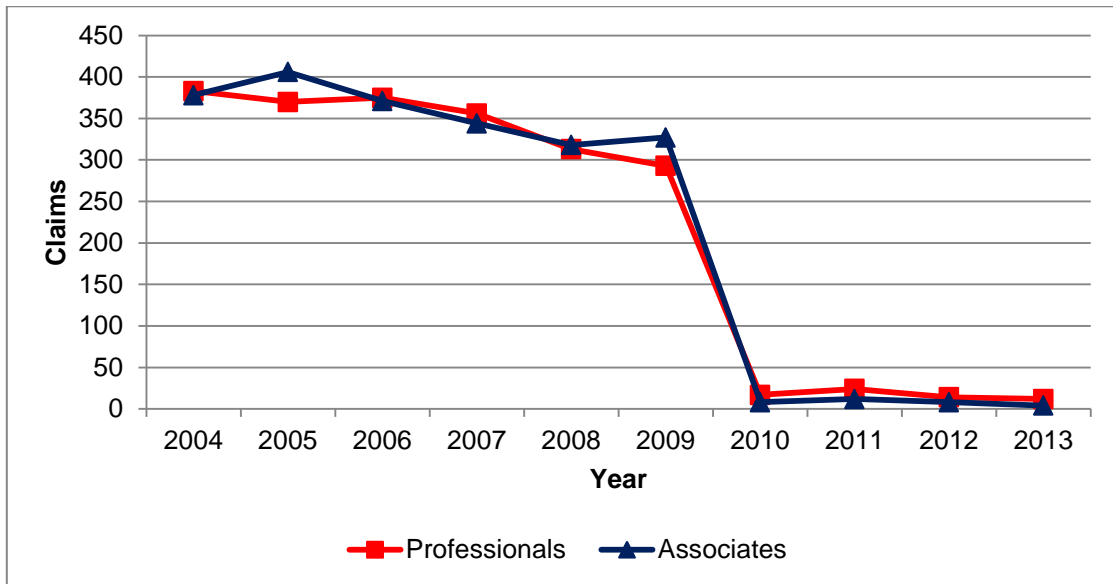
### Agency of Injury

Over the period 2004 to 2013, the agency of injury most commonly cited in professional claims was animal, human and biological agencies (33.31%) followed by non-powered hand tools, appliances and equipment (18.64%), and environmental agencies (14.49%). These were also the most common agency of injury cited by associates (animal, human and biological agencies: 26.49%, non-powered hand tools, appliances and equipment: 18.19% and environmental agencies: 15.04%) (Figure 17).

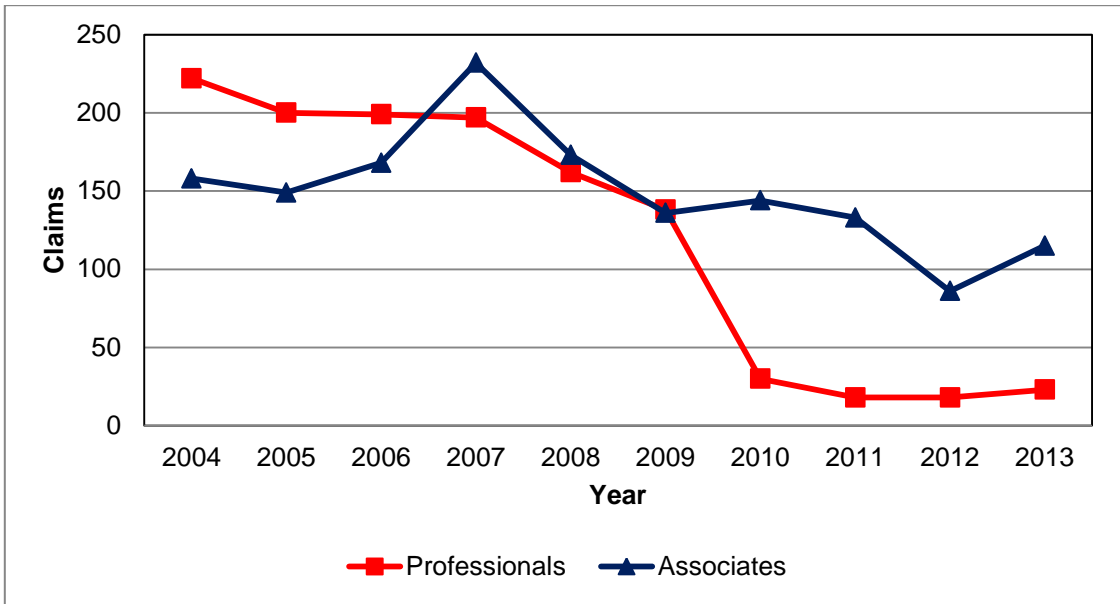


**Figure 17 Health and welfare workers' compensation claims by agency of Injury, 2004-2013**

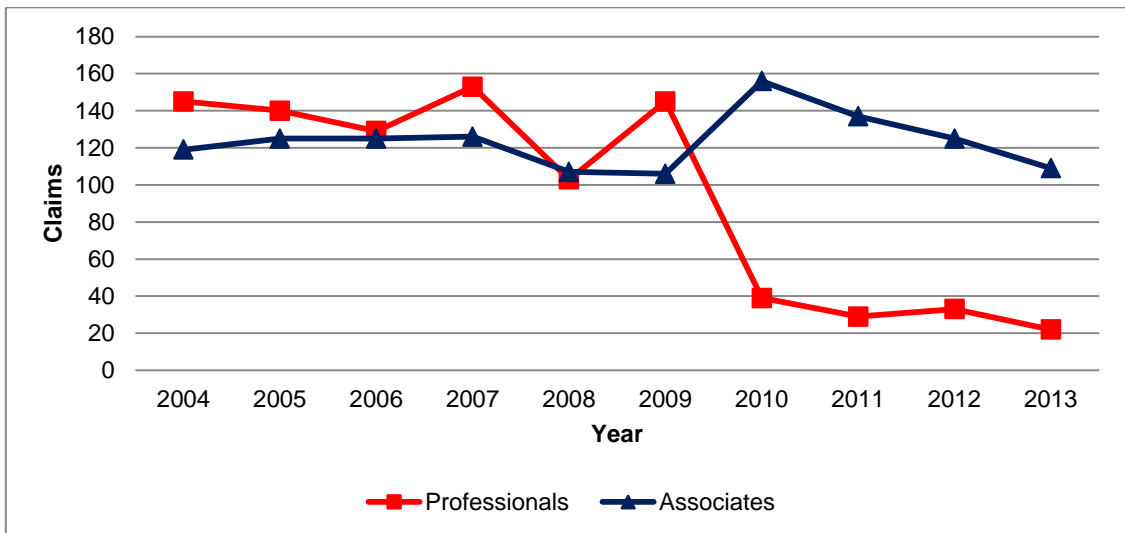
Between 2004 and 2013, professional claims for animal, human and biological agencies (Figure 18), non-powered hand tools, appliances and equipment (Figure 19) and environmental agencies (Figure 20) declined. Similarly, these agencies of injury have declined in claims made by associates, apart for environmental agencies which have increased.



**Figure 18 Health and welfare workers' compensation claims for animal, human and biological agencies as the agency of injury, 2004-2013**



**Figure 19 Professionals and associates workers' compensation claims for non-powered handtools, appliances & equipment as the agency of injury, 2004-2013**



**Figure 20 Professionals and associates workers' compensation claims for environmental agencies as the agency of injury, 2004-2013**

### 5.3 INJURY OUTCOMES

This section considers injury outcomes of health and welfare workers (health professionals and health and welfare associate professionals combined). The injury outcomes examined are hospitalisation, days off work and expenditure.

### 5.3.1 Health and welfare workers vs all other occupation groups

#### Hospitalisation

Between 2004 and 2013, 1.44% (N=2,481) of claimants were hospitalised as a result of their injury/accident. Of these hospitalised claimants, 2.62% were health and welfare workers (n=65) (Table not shown).

#### **Hospitalisation rate per 1,000 South Australian workers**

In both 2006 and 2011, the hospitalisation rate was fairly similar for both health and welfare workers and all other occupations. For example, in 2011, the hospitalisation rate among health and welfare workers was 0.41 claimants per 1,000 compared to 0.46 among other occupations (Table 15).

**Table 15 Rate of health and welfare workers' hospitalisation per 1,000 South Australian health and welfare workers, 2006 & 2011**

Census Year	Occupational Group	SA Working Population N <sup>2</sup>	Claimants		Claims	
			N <sup>3</sup>	Per 1,000	N <sup>3</sup>	Per 1,000
2006	Health & welfare workers <sup>1</sup>	37,359	2	0.05	2	0.05
	All other occupations <sup>4</sup>	652,541	271	0.42	293	0.45
	Total	689,900	273	0.40	295	0.43
2011	Health & welfare workers <sup>1</sup>	44,137	18	0.41	18	0.41
	All other occupations	695,223	322	0.46	350	0.50
	Total	739,360	340	0.46	368	0.50

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Australian Bureau of Statistics 2006, Labour Force (2006 Census), TableBuilder. Findings based on use of ABS TableBuilder data; and Australian Bureau of Statistics 2011, Employment, Income and Unpaid Work Classifications (2011 Census), TableBuilder. Findings based on use of ABS TableBuilder data; <sup>3</sup> 2006 and 2011 claimant and claim ReturnToWorkSA Tabulator data; <sup>4</sup> Excluding professionals and associates

#### Days Off Work

Health and welfare worker claimants had less time off work for a work-related accident/injury than other occupational groups (median: 3 days vs 5 days) (Table 16).

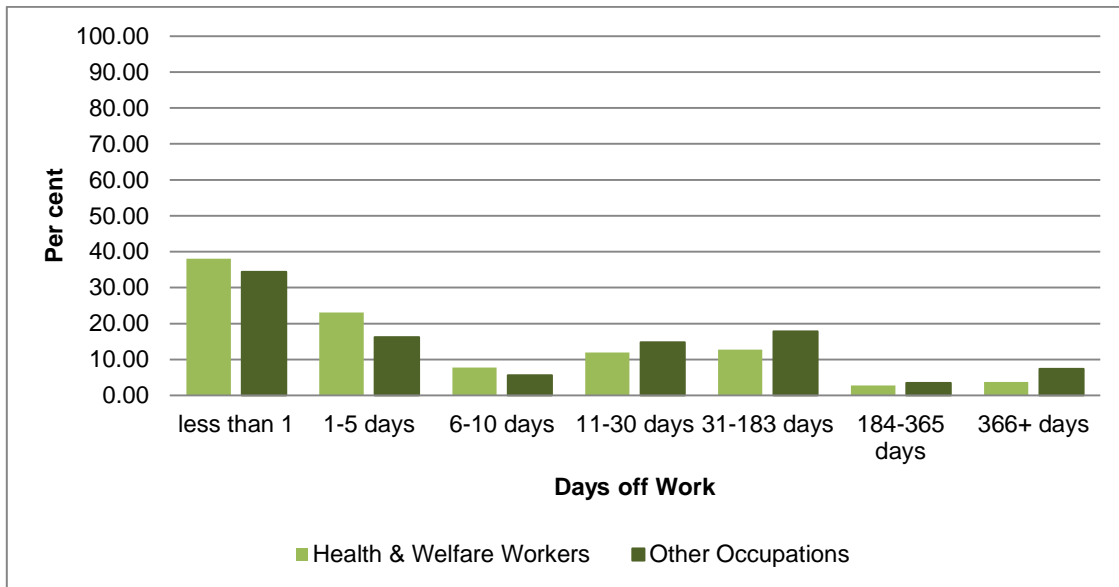
**Table 16 Health and welfare workers' compensation number of days off work, 2004-2013**

Characteristics	Occupational Group	
	Health & Welfare Workers <sup>1</sup>	All Other Occupations <sup>2</sup>
Mean	43.69905	79.54266
Standard Deviation	151.0674	226.7065
Median	3	5
Minimum	0	0
Maximum	2515	7786

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Excluding professionals and associates

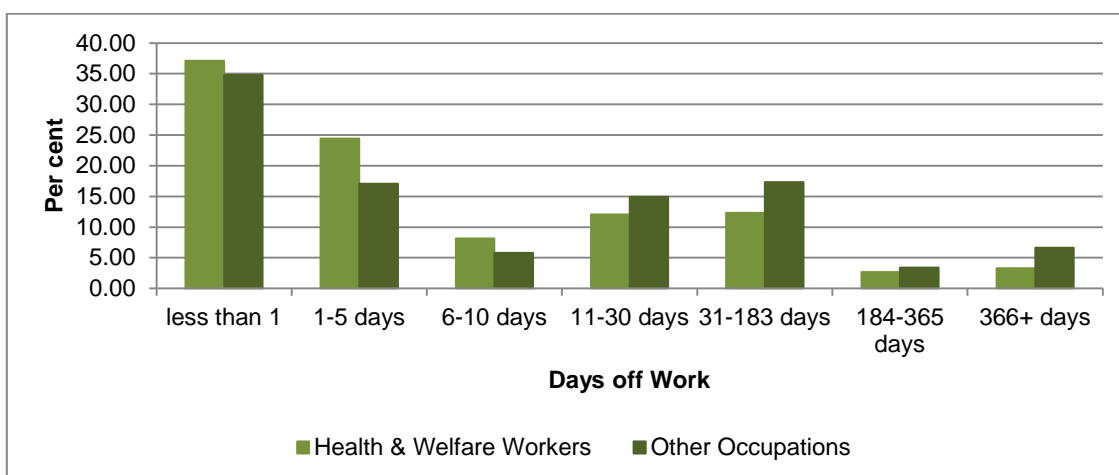


During the period 2004 to 2013, health and welfare worker claimants most commonly had less than one day off work (38.04%, followed by 1-5 days off work (23.05%), and 31 to 183 days off work (17.78%). In contrast, other occupations most commonly had less than one day off of work (34.35%), followed by 31-183 days off (17.78%) and 1-5 days off work (16.18%)



**Figure 21 Health and welfare workers<sup>1</sup> compensation claimants days off work, 2004-2013**  
<sup>1</sup> Professionals and associates combined

Health and welfare worker claims were most commonly associated with less than one day off (37.02%) followed by 1-5 days off (24.45%). Claims from workers in other occupations were also most commonly associated with less than one day off work (34.82%), followed by 1-5 days off work (17.07%).



**Figure 22 Health and welfare workers<sup>1</sup> compensation claims days off work, 2004-2013**  
<sup>1</sup> Professionals and associates combined

## Rate of South Australian health and welfare workers' days off work

In 2006, health and welfare workers reported more days off compared to workers in all other occupations. However, in 2011, health and welfare workers reported fewer days off. In 2006, the rate of at least one day off per claim was 26.90 per 1,000 health and welfare workers, compared to 15.71 for all other occupations. In contrast, in 2011 the rate of at least one day off per claim was 4.87 per 1,000 health and welfare workers, compared with 12.12 for all other occupations (Table 17).

**Table 17 Rate of health and welfare workers' days off work per 1,000 South Australian health and welfare workers, 2006 & 2011**

Census Year	Age Group	SA Working Population N <sup>2</sup>	Claimants		Claims	
			N <sup>3</sup> Who had at least one day off work	Per 1,000	N <sup>3</sup> Who had at least one day off work	Per 1,000
2006	Health & welfare workers <sup>1</sup>	37,359	906	24.25	1,005	26.90
	All other occupations <sup>4</sup>	652,541	9,169	14.05	10,254	15.71
	Total	689,900	10,075	14.60	11,259	16.32
2011	Health & welfare workers <sup>1</sup>	44,137	196	4.44	215	4.87
	All other occupations <sup>4</sup>	695,223	7,511	10.80	8,426	12.12
	Total	739,360	7,707	10.42	8,641	11.69

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Australian Bureau of Statistics 2006, Labour Force (2006 Census), TableBuilder. Findings based on use of ABS TableBuilder data; and Australian Bureau of Statistics 2011, Employment, Income and Unpaid Work Classifications (2011 Census), TableBuilder. Findings based on use of ABS TableBuilder data; <sup>3</sup> 2006 and 2011 claimant and claim ReturnToWorkSA Tabulator data; <sup>4</sup> Excluding professionals and associates

## Expenditure

The mean cost of claims per worker was similar for health and welfare workers (\$15,154.38; SD: \$56,229.91) compared to other occupations (\$15,247.43; SD: \$55,420.19). Given the wide standard deviation (SD), the median expenditure for claims is also reported. The median claim for health and welfare workers was \$944.97 whilst for other occupation groups it was \$727.69 (Table 18).

**Table 18 Health and welfare workers' compensation claims, cost of injury, 2004-2013**

Expenditure Characteristics	Occupational Group	
	Health & Welfare Workers <sup>1</sup> \$	All Other Occupations <sup>2</sup> \$
Mean	15,154.38	15,247.43
Standard Deviation	56,229.91	55,420.19
Median	944.97	727.69
Minimum	3.26	0.01
Maximum	1,613,024.00	5,318,894.00

<sup>1</sup> Professionals and associates combined; <sup>2</sup> Excluding professionals and associates

### 5.3.2 Professionals vs associates

#### Hospitalisation

Between 2004 and 2013, a total of 65 health and welfare claimants (0.47% of all health and welfare worker claimants) were admitted to hospital as a consequence of a work-related injury or accident. Of these 65 claimants, 14 were professionals and 51 were associates.

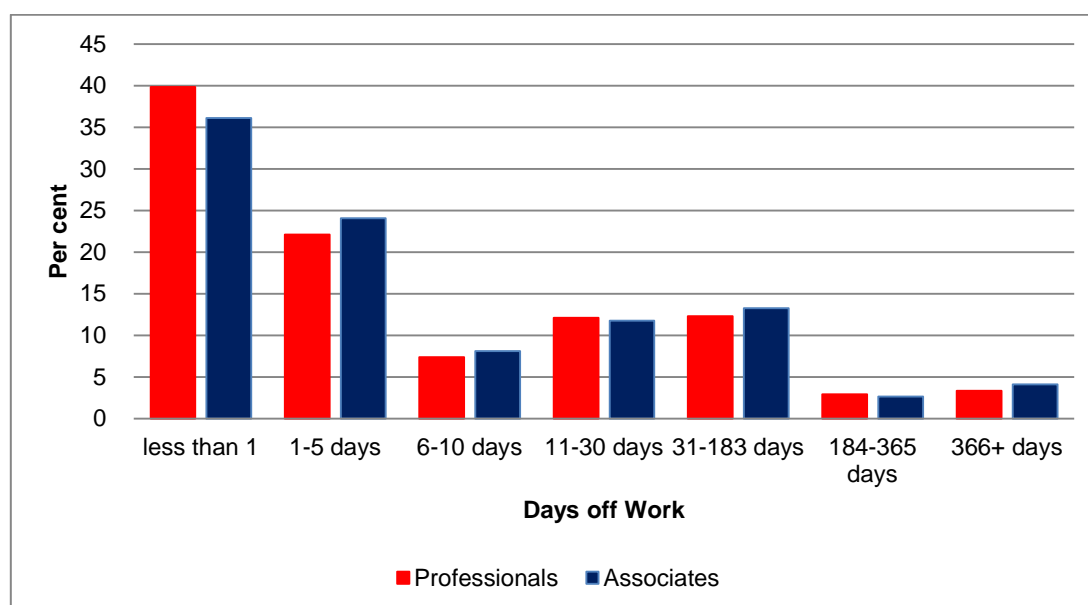
#### Days Off Work

Health professional claimants had similar amounts of time off work for a work-related accident/injury as associates (median: 2 days vs 3 days) (Table 19).

**Table 19 Health and welfare workers' compensation number of days lost to Injury, 2004-2013**

	Health & Welfare Workers	
	Professionals	Associates
Mean	43.69	43.71
Standard Deviation	156.81	146.17
Median	2	3
Minimum	0	0
Maximum	2515	2129

During the period 2004 to 2013, professional claimants most commonly had less than one day off work (39.83%), followed by 1-5 days off work (22.12%). Similarly, associates most commonly had less than one day off of work (36.11%), followed by 1-5 days (24.05%) (Figure 23).



**Figure 23 Health and welfare workers' compensation claimants days off work, 2004-2013**

Professional claims were most commonly associated with less than one day off (38.82%) followed by 1-5 days off (22.89%). Associate claims also most commonly had less than one day off work (35.66%), followed by 1-5 days off work (25.73%) (Figure 24).

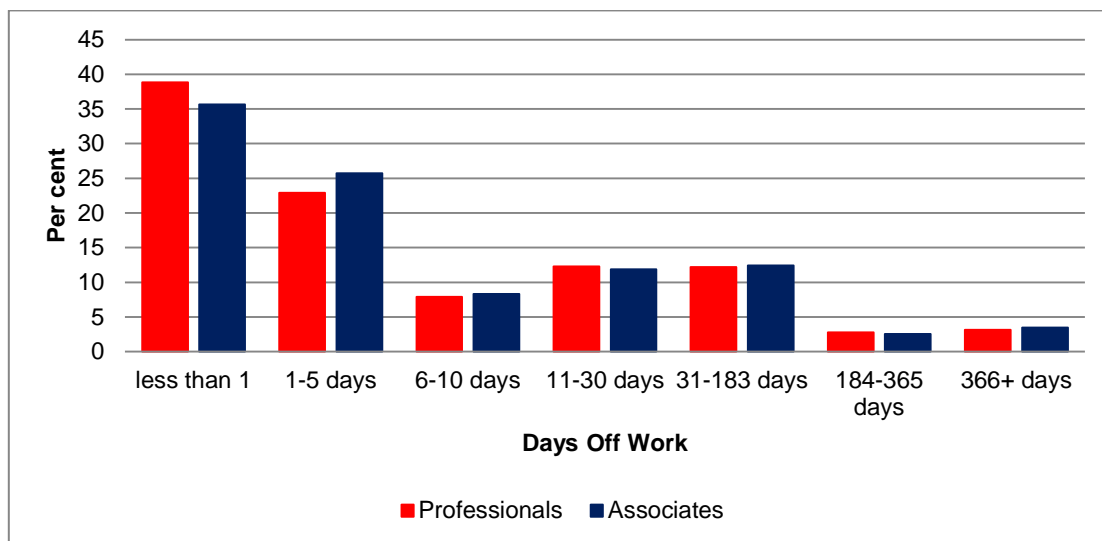


Figure 24 Health and welfare workers' compensation claims days off work, 2004-2013

## Expenditure

The mean cost of claims per worker was higher for professionals (\$17,224.27; SD: \$63,685.91) compared to associates (\$13,563.97; SD: \$49,693.48). Given the wide standard deviation (SD), the median expenditure for claims is also reported. The median claim for professionals was \$988.14 whilst for associates it was \$900.27 (Table 20).

Table 20 Health and welfare workers' compensation claims cost of injury, 2004-2013

Expenditure Characteristics	Health & Welfare Workers	
	Professionals \$	Associates \$
Mean	17,224.27	13,563.97
Standard Deviation	63,685.91	49,693.48
Median	988.14	900.27
Minimum	3.26	5.00
Maximum	1,021,562.00	1,613,024.00

## 6. DISCUSSION

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The purpose of this study was to examine South Australian health and welfare workers' compensation claims. Health and welfare workers are defined here as comprising Australian Standard Classification of Occupations (ASCO) (ABS, 1997) categories of health professionals and health and welfare associate professionals (see Appendices 1 and 2). The main findings are discussed below.

### 6.1 NUMBER OF COMPENSATION CLAIMANTS AND CLAIMS

There was a substantial decline in claims from health and welfare workers during the period 2004-2013. There was a greater decline in the rate of workers' compensation claims submitted by health and welfare workers compared to all other occupational groups. The reasons for the larger decrease in health and welfare workers' compensation claims relative to all other workers are uncertain.

### 6.2 INJURY CHARACTERISTICS

The occupational subsets within health and welfare workers were health professionals and associate health professionals. Both occupational subsets have similar injury characteristics. Both subsets consistently cited similar body locations and nature, agency and mechanism of injuries in their compensation claims. Professionals and associates most commonly cited the following in their workers' compensation claims:

- The upper limbs, lower limbs and trunk as the body location of injury
- Traumatic joint/ligament and muscle/tendon injury and wounds, lacerations, amputations and internal organ damage as the nature of injury
- Body stressing, falls, trips and slips and being hit by moving objects as the mechanism of injury
- Animal, human and biological agencies and non-powered hand tools, appliances and equipment as the agency of injury.

Mental stress as the mechanism of injury was relatively uncommon among health and welfare workers' claimants and claims. This finding was unexpected given the central role of mental and emotional labour in health and welfare work (Grandey, 2003).

### 6.3 INJURY OUTCOMES

Professionals and associates had slightly different injury outcomes. Fewer professionals had days off work, but their compensation claim costs were higher. In contrast, more associates were hospitalised and had more days off work, but their workers' compensation claim costs were lower. The differential cost of claims may be due to professionals having generally higher incomes than associates.

Further research is required into a broader range of injury outcome variables, such as severity of injury, work hours, age and gender. For example, among health and welfare workers, work hours can be variable. The work may involve significant levels of casual, part-

time and shift work. It is uncertain how employment hours may confound the relationship between specific occupations and injury outcomes.

## **6.4 LIMITATIONS**

This study has several limitations. These limitations, described below, detail technical issues, submission of compensation claims and analyses that were not able to be carried out.

### **Technical Issues**

There are a number of limitations associated with the Tabulator data used. For example, Kloeden and colleagues (Kloeden et al., 2015) argued that Tabulator data is not designed for research purposes. Therefore, it is not possible to obtain a comprehensive temporal understanding of the context in which work-related injuries occur. Rather, the purpose of the Tabulator is for managing claims, tracking premiums and assisting injured workers to return to work. Furthermore, during the study period (2004-2013) there were changes in Tabulator coding requirements as a consequence of national initiatives. There were also legislative amendments in South Australia resulting in changes to compensation policies and procedures. These changes may impact the overall precision of the results provided.

### **Submission of Compensation Claims**

To be eligible for workers' compensation benefits a worker must be able to demonstrate a causal link between the injury or disease and their work. Tabulator data also does not include the self-employed, minor injuries that do not result in lost time, or injuries suffered by those who, for various reasons, do not make a claim (Mitchell and Boufous, 2005). In addition, the data provide little insight into how illnesses and injuries sustained outside the workplace may impact productivity and/or willingness to work.

### **Analyses Not Undertaken**

In this study, only population data for 2006 and 2011 were available, as these were the only two years in which census data were concurrent with the workers' compensation data examined here. Therefore, annual changes in the SA working population over the period 2004-2013 were not able to be calculated.

Detailed analyses taking into account demographic (e.g., gender) and work characteristics (e.g., number of hours worked) were beyond the scope of this project. Rather the purpose of this project was to provide a broad overview of compensation claims submitted by South Australian health and welfare workers.

## 7. CONCLUSION

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The number of workers' compensation claims submitted by South Australian health and welfare workers has declined over time. Workers in health professional and associate occupations experienced similar injuries, although injury outcomes varied. Future research should examine the work roles of health professionals and associates to determine the workplace context in which injuries occur.

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## APPENDIX

Appendix 1: Health and welfare workers: health professionals and health and welfare associate professional occupational categories, Australian Standard Classifications of Occupations (ASCO) (ABS 1997), Sub-Major Occupational Groups included

Sub-Major Group		Minor Group		Unit Group	
ASCO Code	Name	ASCO Code	Name	ASCO Code	Name
23	Health Professionals	231	Medical Practitioners	2311	Generalist Medical Practitioners
				2312	Specialist Medical Practitioners
		232	Nursing Professionals	2321	Nurse Managers
				2322	Nurse Educators & Researchers
				2323	Registered Nurses
				2324	Registered Midwives
				2325	Registered Mental Health Nurses
				2326	Registered Developmental Disability Nurses
		238	Miscellaneous Health Professionals	2381	Dental Practitioners
				2382	Pharmacists
				2383	Occupational Therapists
				2384	Optometrists
				2385	Physiotherapists
				2386	Speech Pathologists
				2387	Chiropractors & Osteopaths
				2388	Podiatrists
2391	Medical Imaging Professionals				
2392	Veterinarians <sup>1</sup>				
34	Health and Welfare Associate Professionals	341	Enrolled Nurses	3411	Enrolled Nurses
				342	Welfare Associate Professionals
		349	Miscellaneous Health and Welfare Associate Professionals	3491	Ambulance Officers and Paramedics
				2493	Dental Associate Professionals
				2493	Aboriginal and Torres Strait Islander Health Welfare Workers
				2494	Massage Therapists

Note:

<sup>1</sup> The ASCO Unit group Veterinarians (#2392) was excluded from the analysis.

Source:

- Australian Bureau of Statistics. (1997). *Australian Standard Classification of Occupations (ASCO) Second Edition*. Canberra: Australian Bureau of Statistics.

**Appendix 2: South Australian health professional and health and welfare associate occupational categories, Australian and New Zealand Standard Classification of Occupations (ANZSCO) (ABS 2006), extracted from the 2006 and 2011 Australian census**

SUB-MAJOR		MINOR		UNIT GROUP			
ANZSCO Code	Name	ANZSCO Code	Name	ANZSCO Code	Name		
25	Health Professionals	253	Medical Practitioners	2531	Generalist Medical Practitioners		
				2532	Anaesthetists		
				2533	Specialist Physicians		
				2534	Psychiatrists		
				2535	Surgeons		
				2539	Other Medical Practitioners		
		254	Nursing Professionals	NS		NS	Medical Practitioners nfd
						2543	Nurse Managers
						2542	Nurse Educators and Researchers
						2544	Registered Nurses
						251	Midwives
		251 & 252	Miscellaneous Health Professionals	NS		NS	Midwifery and Nursing Professionals nfd
						2523	Dental Practitioners
						2515	Pharmacists
						2524	Occupational Therapists
						2514	Optometrists and Orthoptists
						2525	Physiotherapists
						2527	Speech Professionals and Audiologists
						2521	Chiropractors and Osteopaths
						2526	Podiatrists
2512	Medical Imaging Professionals						
2511	Dietitians						
2522	Complementary Health Therapists						
2519	Other Health Diagnostic and Promotion Professionals <sup>2</sup>						
2513	Occupational and environmental health professionals <sup>3</sup>						
NS	Health Therapy Professionals nfd <sup>3</sup>						
NS	Health Professionals nfd <sup>3</sup>						
NS	Health Diagnostic and Promotion Professionals nfd <sup>3</sup>						
41 <sup>1</sup>	Health & Welfare Support Workers	411	Health & Welfare Support Workers	4114	Enrolled and Mothercraft Nurses		
				4117	Welfare Support Workers		
				4111	Ambulance Officers and Paramedics		
				4112	Dental Hygienists, Technicians and Therapists		
				4115	Indigenous Health Workers		
				4116	Massage Therapists		
				4113	Diversional therapists <sup>3</sup>		
				NS	Health and Welfare Support Workers nfd		

Notes:

- <sup>1</sup> Health and Welfare Associate Professionals, ASCO Second Edition Sub-Major Group 34, are classified according to ANZSCO Community and Personal Service Workers, Sub-Major Group 41 Health and Welfare Support Workers (ABS, 2006 page: 12)
- <sup>2</sup> Health promotion is not an identified occupation group in the ASCO, however health promotion is a specified activity under various health professional occupations
- <sup>3</sup> The following ANZSCO Unit groups were excluded from the analysis, as they did not directly correspond with ASCO (ABS, 1996) occupational groups (2006: N= 1,377; 2011: N=2,572):
  - Occupational and environmental health professionals (#2513) (2006: n=878; 2011: n=557)
  - Health therapy professionals nfd, health professionals not further defined (nfd), health diagnostic and promotion professionals nfd (2006: n=122; 2011: n= 156)
  - Diversional therapists (#4113) (2006: n=377;2011: n=405)

<sup>NS</sup> Unit group not specified in ANZSCO (ABS 2006), but are categories in the 2006 and 2011 ABS census TableBuilder

Sources:

- Australian Bureau of Statistics. (2006). *Labour Force (2006 Census)*, TableBuilder. Findings based on use of ABS TableBuilder data
- Australian Bureau of Statistics. (2011). *Employment, Income and Unpaid Work Classifications (2011 Census)*, TableBuilder. Findings based on use of ABS TableBuilder data
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