5 Work-related community injury

ICD-10-AM inclusion criteria:

- Principal diagnosis S00–T75 or T79, and
- Activity code U73.0, and
- Mode of admission other than 'transfer from another acute hospital'.

Table 5.1: Key indicators for hospitalised work-related injury: males, females and persons, Australia 2004–05

Key indicators	Males	Females	Persons
Total number of hospital separations due to work-related injury	21,052	3,128	24,180
Work-related separations as proportion of all community injury separations	9.4%	1.9%	6.3%
Estimated number of work-related injury cases [(a)]	19,553	2,959	22,512
Cases per 100,000 population	194.6	29.1	111.4
Cases per 100,000 population—age-standardised [(b)]	193.1	29.1	111.3
Total patient-days due to work-related injury [(c)]	52,866	7,308	60,174
Mean patient-days per case	2.7	2.5	2.7

(a) Excludes records with a mode of admission of 'transfer from another acute hospital'.

(b) Standardised to the Australian estimated resident population 30th June 2001.

(c) Includes records with a mode of admission of 'transfer from another acute hospital' as contributing to hospital burden due to injury.

This chapter includes all hospitalised community injury cases in 2004–05 that were recorded as occurring while working for income. These cases were also covered in the previous chapters, but are brought together here to enable this aspect of hospitalised injury to be seen more clearly.

An estimated 22,512 community injury cases in 2004–05 were sustained while working for income (Table 5.1). The age-standardised rate of hospitalised work-related injuries was 111.3 per 100,000 population.

Work-related injury—age and sex

Most work-related community injures involved males (86.9%, *n* = 19,553). Accordingly, the age-standardised rate of hospitalised injuries due to work-related injury was much higher for males (193.1 per 100,000 population) than for females (29.1 per 100,000). Similarly,
age-specific rates for males were significantly higher than those for females for most age groups (Figure 5.1).

The lowest age-specific rates of hospitalised work-related injury cases (for both males and females) were observed for children under the age of 15. As expected, adults over the age of 65 years also had quite low rates of work-related injuries requiring hospitalisation.

The highest rate of hospitalised work-related injury was observed for males aged 20–24 years (347.2 per 100,000 population). While rates of work-related injury for adult males consistently declined with increasing age, they did not drop below 200 per 100,000 until the age of 60 years. A relatively high rate of work-related injury was also noted for females aged 20–24 years (51.0 per 100,000) but an even higher rate was observed for females in the 50–54 years age group (54.6 per 100,000 population).

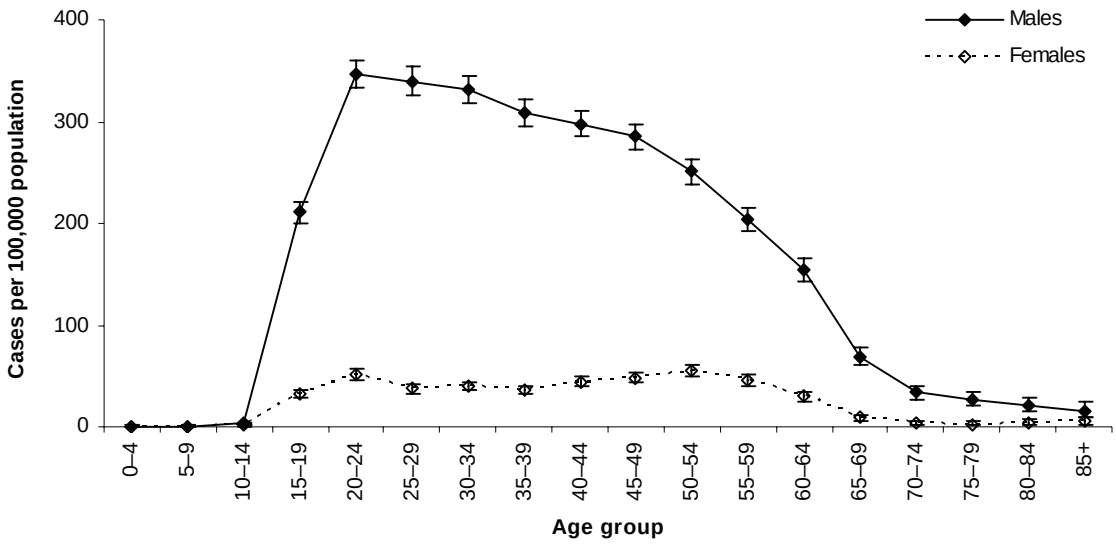

Figure 5.1: Age-specific rates (± 95% CI) for work-related injury cases: males and females, Australia 2004–05

Work-related injury—industry types

The fourth edition of the ICD-10-AM includes codes that describe the broad industry type in which the person was working (for income) when injured (NCCH 2004). The types of industries attributed to work-related injuries differed markedly according to the sex of the injured person. Males were more commonly injured while working for income in the agriculture, forestry and fishing and construction industries whereas females were more commonly injured while working for income in the wholesale and retail trade and health services industries (Table 5.2).

The agriculture, forestry and fishing industry was also the most commonly specified industry for work-related injuries involving children younger than 15 years (although case counts are small) and adults aged 45 years and older (Table 5.3). The construction industry was the most commonly specified industry for work-related injuries involving people aged 15–44 years. As expected, the largest proportion of injuries while working for income where observed for adults aged 25–44 years in all industry sectors other than the health services industry. In the health services industry, however, work-related injuries were most common for adults aged 45–64 years.

Table 5.2: Industry type for work-related injury cases: males, females and persons, Australia 2004–05

Industry	Males	Females	Persons
Agriculture, forestry & fishing	2,011 (10.3%)	241 (8.1%)	2,252 (10.0%)
Mining	570 (2.9%)	16 (0.5%)	586 (2.6%)
Manufacturing	1,655 (8.5%)	128 (4.3%)	1,783 (7.9%)
Construction	2,345 (12.0%)	38 (1.3%)	2,383 (10.6%)
Wholesale & retail trade	1,054 (5.4%)	353 (11.9%)	1,407 (6.3%)
Transport & storage	1,102 (5.6%)	49 (1.7%)	1,151 (5.1%)
Government administration & defence	271 (1.4%)	49 (1.7%)	320 (1.4%)
Health services	124 (0.6%)	317 (10.7%)	441 (2.0%)
Other specified work for income	3,884 (19.9%)	766 (25.9%)	4,650 (20.7%)
While working for income, unspecified	6,537 (33.4%)	1,002 (33.9%)	7,539 (33.5%)
Total	**19,553**	**2,959**	**22,512**

Note: Shading denotes two highest specific categories for each sex.

Table 5.3: Industry type for work-related injury cases by age, Australia 2004–05

Industry	0–14	15–24	25–44	45–64	65+	All ages
Agriculture, forestry & fishing	8	427	885	727	205	2,252
Mining	*	83	341	159	*	586
Manufacturing	*	441	863	455	*	1,783
Construction	*	588	1,109	653	*	2,383
Wholesale & retail trade	6	433	594	357	17	1,407
Transport & storage	*	101	554	457	*	1,151
Government administration & defence	*	66	169	84	*	320
Health services	0	34	169	220	18	441
Other specified work for income	20	956	2,237	1,363	74	4,650
While working for income, unspecified	7	1,429	3,616	2,347	140	7,539
Total	**47**	**4,558**	**10,537**	**6,822**	**548**	**22,512**

Note: Shading denotes highest specific category for each age group.

* Small cell counts have been suppressed.

Work-related injury–external cause

While the industries in which males and females were working for income when they were injured differed markedly (described above), the types of injuries sustained were broadly similar; the majority of cases were classified as 'other unintentional injuries' while falls were the second most common type of injury sustained while working for income (Table 5.4). Falls were proportionately more common for females (28.8% vs. 14.6% for males) however, while other unintentional injuries were more common for males (70.3% of cases vs. 54.3% for females).

'Other unintentional injuries' were also the most common type of injury sustained while working for income in each of the different industry groups (Table 5.5). The proportion of cases attributed to 'other unintentional injuries' differed somewhat by industry however; accounting for 86.0% of cases in the manufacturing industry but only 40.9% of cases in the transport and storage industry. Interestingly, 'other unintentional injuries' sustained while working for income in the transport and storage industry (n = 471) were as numerous as injuries attributed to transportation external causes for this industry sector (n = 467).

Falls were proportionately most common for people injured while working for income in the health services and construction industries (30.4% and 28.5% of cases attributed to these industries, respectively). Falls were least common for people injured working for income in the manufacturing industry (6.2% of cases attributed to manufacturing).

Table 5.4: Major external cause groups for work-related injury cases: males, females and persons, Australia 2004–05

External cause	Males	Females	Persons
Transportation	1,884 (9.6%)	292 (9.9%)	2,176 (9.7%)
Drowning	5 (0.0%)	0 (0.0%)	5 (0.0%)
Poisoning, pharmaceuticals	8 (0.0%)	19 (0.6%)	27 (0.1%)
Poisoning, other substances	280 (1.4%)	48 (1.6%)	328 (1.5%)
Falls	2,855 (14.6%)	853 (28.8%)	3,708 (16.5%)
Fires, burns & scalds	354 (1.8%)	69 (2.3%)	423 (1.9%)
Other unintentional injuries	13,747 (70.3%)	1,606 (54.3%)	15,353 (68.2%)
Intentional, self inflicted (self-harm)	17 (0.1%)	14 (0.5%)	31 (0.1%)
Intentional, inflicted by another (assault)	370 (1.9%)	52 (1.8%)	422 (1.9%)
Undetermined intent	* (0.1%)	* (0.1%)	25 (0.1%)
Other & missing	* (0.1%)	* (0.1%)	14 (0.1%)
Total	**19,553**	**2,959**	**22,512**

* Small cell counts have been suppressed.

Table 5.5: Major external cause groups for work-related injury cases by industry group, Australia 2004–05

External cause	Agriculture, forestry & fishing	Mining	Manufacturing	Construction	Wholesale & retail trade	Transport & storage	Government administration & defence	Health services	Other & unspecified work for income	Total
Transportation	487	68	31	65	70	467	77	39	872	2,176
Drowning	0	0	0	0	0	*	*	0	*	5
Poisoning, pharmaceuticals	*	*	*	0	*	*	0	6	13	27
Poisoning, other substances	26	29	38	30	24	8	5	15	153	328
Falls	209	47	110	680	237	147	62	134	2,082	3,708
Fires, burns & scalds	31	19	63	21	65	9	*	*	211	423
Other unintentional injuries	1,483	418	1,533	1,581	937	471	156	218	8,556	15,353
Intentional, self inflicted (self-harm)	*	0	*	0	*	0	0	*	24	31
Intentional, inflicted by another (assault)	7	*	*	6	65	46	17	24	253	422
Undetermined intent	*	0	*	0	*	0	*	0	18	25
Other & missing	*	*	*	0	*	*	0	0	*	14
Total	**2,252**	**586**	**1,783**	**2,383**	**1,407**	**1,151**	**320**	**441**	**12,189**	**22,512**

Note: Shading denotes most common external cause category for each industry group.

* Small cell counts have been suppressed.

As 'other unintentional injuries' were so common for hospitalised work-related injury cases, further analysis of these cases was undertaken. Similar to other unintentional injuries overall, exposure to inanimate mechanical forces was the most common type of other unintentional work-related injury for every industry category coded other than for people injured while working for income in the health services industry (n = 10,695 cases overall, see Figure 5.2). Exposure to inanimate mechanical forces external causes describe such situations as being struck by objects, injured in explosions or through contact with tools and machines, thus it is quite understandable that many work-related injuries would be of this type. Similarly, it is not surprising to observe that exposure to animate mechanical forces (e.g. accidentally struck by other people or non-venomous animals) was a relatively common cause of 'other unintentional injury' for people working in the agriculture, forestry and fishing industry (20.6% of such cases). Work-related injuries due to contact with venomous animals and plants were also most frequent for people working for income in the agriculture, forestry and fishing industry (4.6% of 'other unintentional' cases vs. 0.3–2.6% for people working in other industries).

While exposure to inanimate mechanical forces was still a common cause of 'other unintentional injury' for people working in the health services industry (29.4% of such cases), injuries due to overexertion, travel and privation were most frequent for this industry sector (34.4%). In comparison, overexertion, travel and privation external causes accounted for less than 10% of 'other unintentional injuries' for people injured while working in the other industry categories described by the ICD-10-AM.

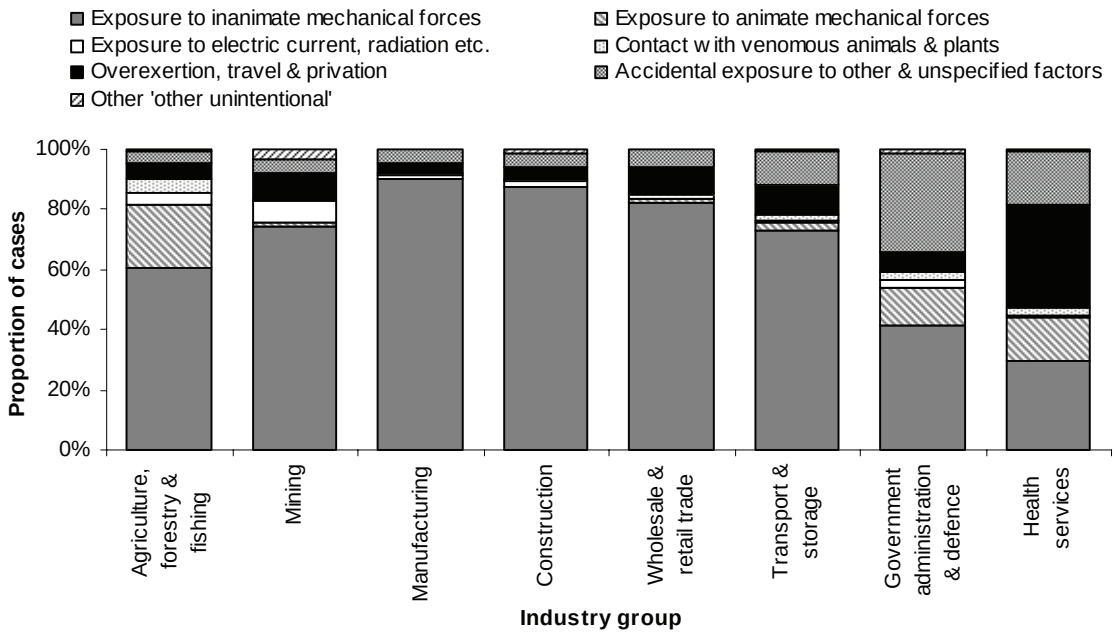

Figure 5.2: External cause groups for work-related 'other unintentional injury' cases for specific industry groups, Australia 2004–05

Work-related injury—place of occurrence

The recorded place of occurrence for injuries sustained while working for income was largely as expected. For example; 81.9% of injuries involving people working in the mining industry occurred in mines, 72.5% of injuries in the manufacturing industry were sustained in factories, and 64.3% of injuries for people working the agriculture, forestry and fishing industry occurred on farms. Somewhat unexpectedly, however, a relatively large proportion of work-related injuries recorded an unspecified place of occurrence (38.0% of cases overall). This proportion is similar to that for community injury more generally (39.9%, see Table 2.4), but was surprising given the presumed increased level of information supplied/required regarding injuries which may be compensable. The proportion of cases assigned an unspecified place of occurrence differed markedly according to the particular industry in which the person was working for income however, ranging from only 2.4% for people injured while working in the mining industry to 33.6% for people injured while working in the construction injury. More understandably, the majority (68.5%) of people injured 'while working for income, unspecified' recorded an unspecified place of occurrence.

Work-related injury—principal diagnosis

Injuries to the wrist and hand were the most common result of an injury while working for income in 2004–05 (n = 8,457, Table 5.6). Such injuries accounted for between 15–62% of cases for each industry group and 37.6% of work-related community injuries overall. In comparison, only 13.3% of community injuries from any activity had a principal diagnosis of injuries to the wrist and hand. Injuries to the wrist and hand were proportionately most common for people injured while working for income in the manufacturing (62.0% of cases) and wholesale and retail trade (43.5%) industries.

Injuries to the knee and lower leg were another frequent result of an injury while working for income (13.9%, *n* = 3,124), and were more common than wrist and hand injuries for people injured while working in government administration and defence (24.2%) and the health services industries (16.3%).

Table 5.6: Principal diagnosis groups for work-related injury cases by industry group, Australia 2004–05

Principal diagnosis	Agriculture, forestry & fishing	Mining	Manufacturing	Construction	Wholesale & retail trade	Transport & storage	Government administration & defence	Health services	Other & unspecified work for income	Total
Injuries to the head	312	84	92	231	136	184	45	55	1,087	2,226
Injuries to the neck	47	32	18	36	27	55	16	14	180	425
Injuries to the thorax	131	20	19	84	33	78	15	20	244	644
Injuries to the abdomen *	148	49	61	150	84	103	20	68	619	1,302
Injuries to the shoulder & upper arm	142	25	36	95	64	73	19	38	876	1,368
Injuries to the elbow & forearm	172	21	95	199	123	85	20	38	928	1,681
Injuries to the wrist & hand	519	148	1,105	935	612	227	59	67	4,785	8,457
Injuries to the hip & thigh	87	9	24	62	28	49	6	13	250	528
Injuries to the knee & lower leg	331	59	120	318	119	185	78	72	1,842	3,124
Injuries to the ankle & foot	98	28	43	136	48	43	17	12	481	906
Burns	47	29	90	47	80	23	0	8	340	664
Toxic effects of non-medical substances	89	27	25	21	24	16	11	17	179	409
Other principal diagnoses	129	55	55	69	29	30	14	19	378	778
Total	**2,252**	**586**	**1,783**	**2,383**	**1,407**	**1,151**	**320**	**441**	**12,189**	**22,512**

Note: Shading denotes most common external cause category for each industry group.

* Includes lower back, lumbar spine and pelvis.

Work-related injury—funding source

Three in five hospitalised injuries sustained while working for income in 2004–05 were recorded as expected to be funded by workers compensation (61.6%, Table 5.7). The highest proportions of workers compensation-funded injury cases were observed for people injured while working in the mining (76.8%) or manufacturing (76.7%) industries while the lowest proportion of workers compensation-funded cases was observed for people injured in the agriculture, forestry and fishing industry (38.7%). The proportion of cases funded under Australian Health Care Agreements told the reverse story; with a high proportion of AHCA-funded cases observed for the agriculture, forestry and fishing industry (44.7%) and substantially lower proportions for the mining and manufacturing industries (19.1% and 16.8%, respectively).

These findings are likely related to the proportion of self-employed workers operating in each of these industry groups.

Table 5.7: Funding source for work-related injury cases by industry group, Australia 2004–05

Industry	Australian Health Care Agreements	Private health insurance	Self-funded	Workers compensation	Motor vehicle third party personal claim	Other funding source	Total	Per cent workers compensation
Agriculture, forestry & fishing	1,006	297	22	871	21	35	2,252	38.7%
Mining	112	13	8	450	*	*	586	76.8%
Manufacturing	300	67	36	1,368	*	*	1,783	76.7%
Construction	847	142	30	1,337	6	21	2,383	56.1%
Wholesale & retail trade	380	65	31	913	8	10	1,407	64.9%
Transport & storage	294	54	15	704	46	38	1,151	61.2%
Government administration & defence	36	39	23	137	5	80	320	42.8%
Health services	100	44	8	275	6	8	441	62.4%
Other specified work for income	1,284	297	75	2,890	32	72	4,650	62.2%
While working for income, unspecified	1,570	474	427	4,916	57	95	7,539	65.2%
Total	**5,929**	**1,492**	**675**	**13,861**	**184**	**371**	**22,512**	**61.6%**

* Small cell counts have been suppressed.

Work-related injury—length of stay

The total number of patient-days attributed to hospitalised cases of injuries sustained while working for income in 2004–05 was 60,714. Two in five work-related injury separations were discharged from hospital on the same day as admitted; 40.3%, *n* = 9,735. Including these, 70.0% of work-related injury separations had a length of stay of only one day (*n* = 16,922). This was a higher proportion of one-day stays than observed for all community injury in 2004–05 (62.5%, see previous section). As expected, then, the mean length of stay for work-related injury cases was quite short, 2.7 days per case, and shorter than that observed for all community injuries (4.0 days per case, see Table 2.1).

Mean lengths of stay per case differed somewhat according to the type of industry in which the person was working for income when injured (Table 5.8). Work-related injuries sustained in the transport and storage industry had the longest stays on average (3.8 days per case) while injuries sustained while working for income in the wholesale and retail industry had the shortest hospital stays (2.2 days per case). Lengths of stay per case increased with age for most industry groups, with injuries sustained while working for income in the transport and storage industry for people aged 65 years and older (*n* = 35) having a particularly long mean length of stay per case; 7.8 days (Table 5.8).

Table 5.8: Mean days stay per work-related injury case by age and industry group, Australia 2004–05

Industry	0–14	15–24	25–44	45–64	65+	Total
Agriculture, forestry & fishing	1.1	2.7	3.1	4.2	6.9	3.7
Mining	–	2.2	3.9	2.6	3.7	3.3
Manufacturing	1.0	2.0	2.1	3.1	2.9	2.3
Construction	2.0	2.1	3.0	4.1	7.0	3.1
Wholesale & retail trade	4.2	2.0	2.3	2.2	3.5	2.2
Transport & storage	3.0	2.7	3.4	4.1	7.8	3.8
Government administration & defence	1.0	2.7	2.5	3.6	–	2.8
Health services	–	2.3	2.6	2.6	6.9	2.8
Other specified work for income	1.8	1.9	2.5	3.0	4.6	2.6
While working for income, unspecified	1.1	1.9	1.9	2.7	4.9	2.2
Total	**1.9**	**2.0**	**2.5**	**3.2**	**5.9**	**2.7**