

INJURY CAUSES, TRENDS & BURDEN, VICTORIA, 2009

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Introduction

This injury profile provides information on injuries in Victoria in 2009. Overall there were 2,223 injury deaths, 109,939 injury hospital admissions and 285,860 injury ED presentations in Victoria in 2009 (excluding complications of surgical and medical care, adverse effects of drugs in therapeutic use and late effects of injury).

Method

Data sources and case selection

The age groups (0-14, 15-24, 25-64, 65+) have been selected to match those in the *National Injury Prevention and Safety Promotion Plan: 2004 - 2014* (NIPSPP Plan).

Deaths

Deaths data provided in this report were sourced from the Australian Bureau of Statistics (ABS) Catalogue 3303.0 Causes of Death Australia, 2009, released May 2011. Note, the ABS introduced a new process for coding of deaths in 2007. Up to and including deaths registered in 2006, ABS Causes of Death processing was finalised at a point in time. To improve the quality of ICD coding, all coroner certified deaths registered after 1 January 2007 are now subject to a revisions process. Data for 2007 presented in this report have undergone two years of revision and are final, 2008 data have been revised and are subject to further revision and 2009 data are preliminary and subject to the full revision process. See 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information.

Hospital admissions

Hospital admissions data were extracted from the Victorian Admitted Episodes Dataset (VAED). The VAED records all hospital admissions in public and private hospitals in the state of Victoria. Cases were selected if the injury was unintentional, intentional or of other or undetermined intent (external cause code in the range V00-Y36). Deaths and transfers within and between hospitals were excluded to avoid over counting.

Emergency Department (ED) presentations

ED presentations data were extracted from the Victorian Emergency Minimum Dataset (VEMD). The VEMD records all presentations to Victorian public hospitals with 24-hour emergency departments (38 hospitals). Cases were excluded if the intent category was 8 'Adverse effect or complication'. Deaths and admissions were excluded to avoid over counting. For ease of comparison, where possible, VEMD cases were re-coded to match VAED cause of injury groups.

Special analyses: definitions and methods

Trend analysis

Trends were determined using a log-linear regression model of the rate data assuming a Poisson distribution of injuries. The statistics relating to the trend curves, slope and intercept, estimated annual percentage change, estimated overall change, 95% confidence intervals around these estimated changes and the p-value were calculated using the regression model in SAS® 9.2. A trend was considered to be statistically significant if the p-value of the slope of the regression model was less than 0.05.

Deaths

Rates per 100,000 population have been calculated for all years of the 2000-2009 decade but due to the revisions process outlined above, trend analysis was completed only for the 7-year period 2000-2006.

Hospital admissions

Rates per 100,000 population have been calculated for all years of the 2000-2009 decade for hospital admissions data (VAED). Trend data are reported for all admissions (including same-day admissions) and for admissions excluding same-day admissions. The exclusion of same-day admissions minimises the influence of admission policy changes across time and between hospitals.

ED presentations

Rates per 100,000 population have been calculated for the 6-year period 2004-2009 as not all public hospitals with 24-hour emergency departments have contributed to the VEMD data collection over the entire decade.

Costing

Hospital admissions

The National Hospital Costs Data Collection (NHCDC) is based on the principles of Casemix costing analysis which is a scientific approach to the classification of patient care whereby each hospital admission is assigned an Australian Refined Diagnosis Related Group (AR-DRG). AR-DRGs provide a clinically meaningful way of relating the types of patients treated in a hospital to the resources required by the hospital. The NHCDC contains component costs per DRG and enables DRG Cost Weights and average costs for DRGs (national and state/territory specific) for acute in-patients to be produced. The types of component costs included are ward medical, ward nursing, non-clinical salaries, pathology, imaging, allied health, pharmacy, critical care, operating rooms, ED, ward supplies and other overheads, specialist procedure suites, on-costs, prostheses, hotel and depreciation. For this analysis the average Victorian cost per AR-DRG (for 2009) was applied to each admission to estimate the direct hospital costs associated with injury admissions in Victoria.

ED presentations

The component costs included in the NHCDC DRG based cost estimates include a separately reported cost for the Emergency Department component of a hospital admission. For this analysis the average cost for the ED component of all admissions (\$202) was applied to each ED presentation to estimate the direct hospital costs for injury ED presentations in Victoria.

Years of potential life lost and years lost to disability

Years of potential life lost (YPLLs)

Years of Potential Life Lost (YPLL) measures the extent of 'premature' mortality, which is assumed to be any death between the ages of 1-78 years inclusive, and aids in assessing the significance of specific diseases or trauma as a cause of premature death. Estimates of YPLL were calculated by the ABS and sourced from the ABS Catalogue 3303.0 Causes of Death Australia, 2009, released Tuesday 3 May 2011.

Years lost to disability (YLDs)

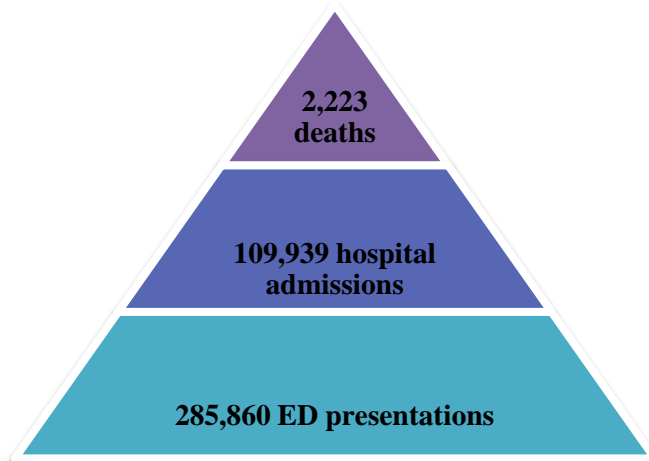
To estimate years lost to disability (YLDs) as a result of injury in 2009, the number of incident cases in that period was multiplied by the average duration of the injury and a weight factor that reflects the severity of the injury on a scale from 0 (perfect health) to 1 (dead) – that is, YLDs were calculated according to the formula $YLD = I * SW * L$ where I = the number of incident cases of injury in Victoria in 2009, SW = the severity weight of the injury and L = the average duration (in years) of the injury.

1. Injury pyramids, Victoria 2009

The following figures show the frequency of injury deaths, hospital admissions and ED presentations in Victoria in 2009, for injuries of all intents (Figure 1) and for unintentional injury only (Figure 2).

- For every injury death in Victoria, there are 49 hospital admissions and 129 ED presentations (Figure 1).
- For every unintentional injury death in Victoria, there are 70 hospital admissions and 168 ED presentations (Figure 2).

Figure 1 Frequency of all injury deaths, hospital admissions and ED presentations, Victoria 2009

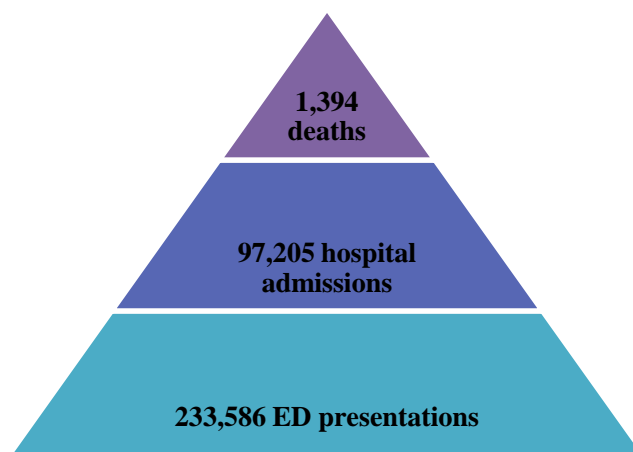


Ratio: 1 Death: 49 Hospital admissions: 129 ED presentations

Sources: (1) Deaths - Australian Bureau of Statistics 3303.0 - Causes of Death, Australia, 2009; (2) Hospital admissions -VAED, 2009; (3) ED presentations - VEMD, 2009

Note: The death count is subject to revision (see 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information)

Figure 2 Frequency of UNINTENTIONAL injury deaths, hospital admissions and ED presentations, Victoria 2009



Ratio: 1 Death: 70 Hospital admissions: 168 ED presentations

Sources: (1) Deaths - Australian Bureau of Statistics 3303.0 - Causes of Death, Australia, 2009; (2) Hospital admissions -VAED, 2009; (3) ED presentations - VEMD, 2009

Note: The death count is subject to revision (see 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information)

2. Trends in injury deaths, hospital admissions and ED presentations, Victoria 2000-2009

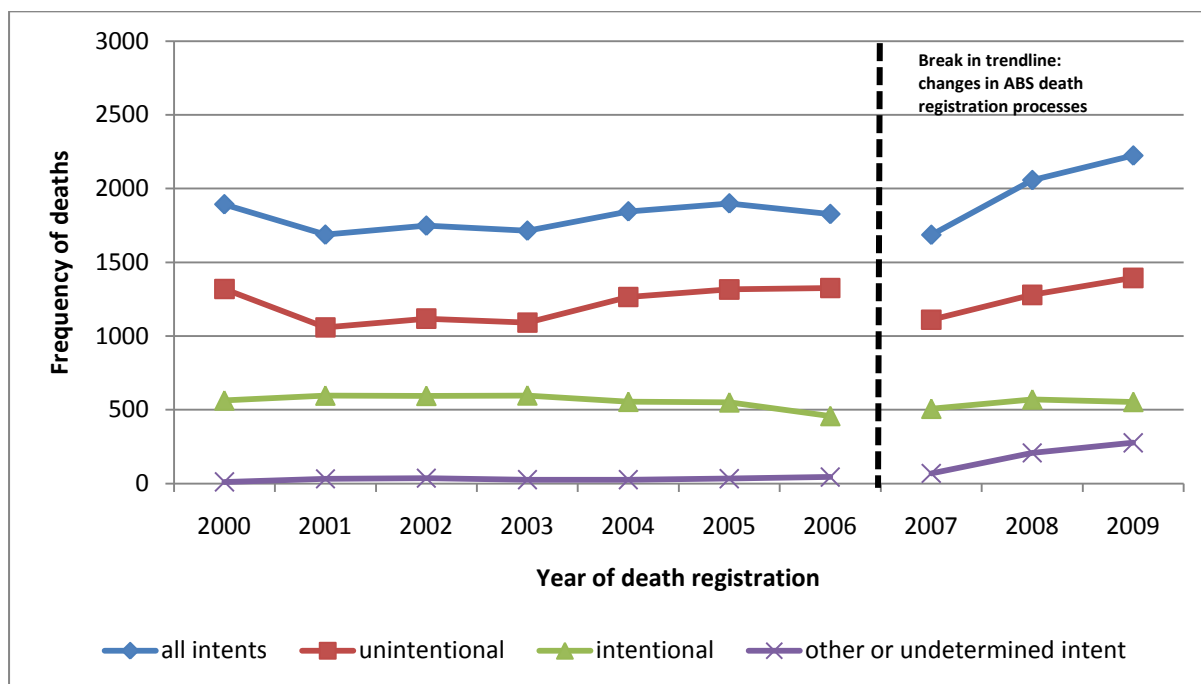
Trend in the frequency and rate of injury deaths

Deaths data were sourced from the Australian Bureau of Statistics (ABS) Catalogue 3303.0 Causes of Death Australia, 2009, released May 2011. The ABS introduced a new process for coding of deaths in 2007 and all coroner certified deaths registered after 1 January 2007 are now subject to a revisions process (see Method for more detail).

Figure 3 shows the trend in the frequency of injury deaths over the decade 2000-2009. Due to the revisions process outlined above, trend analysis was completed only for the seven year period 2000-2006. Analysis showed:

- the trend in frequency of all injury deaths was fairly stable, showing a non-significance increase of 5% over the 7-year period (95% confidence intervals -8% to +19%);
- although the frequency of unintentional injury deaths and injury deaths of other and undetermined intent increased over the period, neither increase reached statistical significance (unintentional: by 15%, -11% to +47%; other and undetermined intent: by 117%, -6% to +327%); and
- the frequency of intentional injury deaths decreased significantly over the period by an estimated 2.8% annually (-5.6% to -0.2%) and 18% overall (-33% to -1%).

Figure 3 Trend in the frequency of injury deaths, Victoria 2000-2009



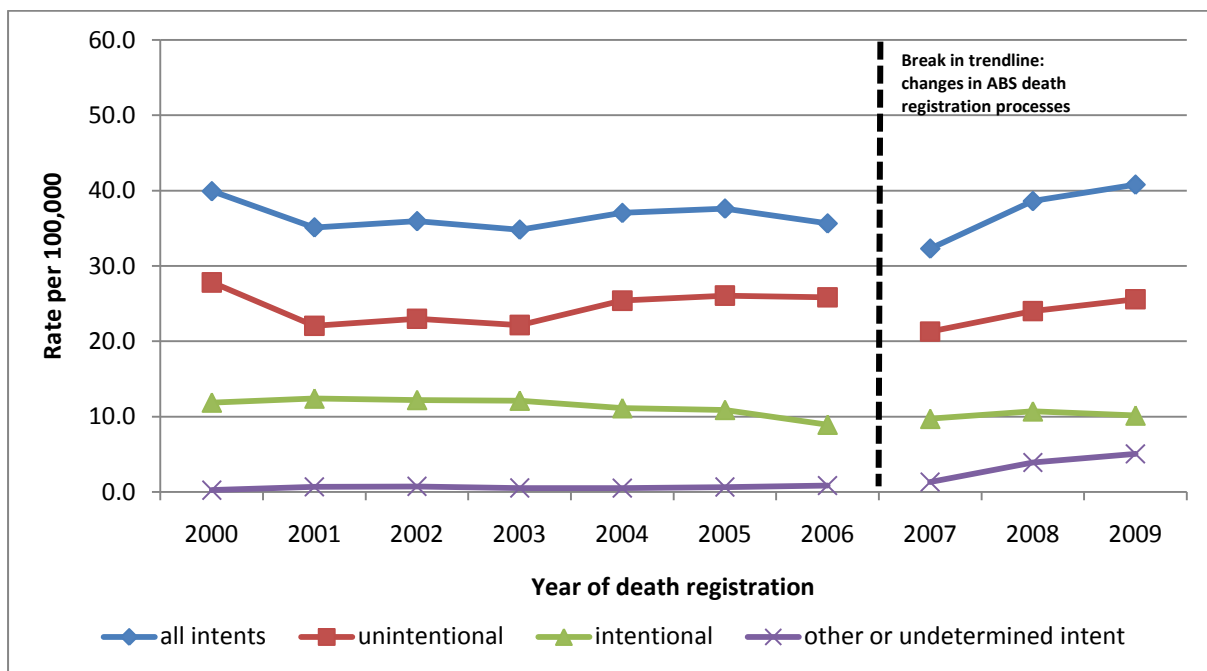
Source: Australian Bureau of Statistics 3303.0 - Causes of Death, Australia, 2009

Note: Cause of Death data for 2007 have undergone two years of revision and are final. Cause of Death data for 2008 and 2009 are subject to further revision. (See 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information)

Figure 4 shows the trend in injury death rates per 100,000 population over the decade 2000-2009. Again, due to the changes in ABS death registration processes, trend analysis was completed only for the 7-year period 2000-2006. Analysis showed:

- the rate of all injury deaths was fairly stable, showing a non-significance decrease of 5% over the period (95% confidence intervals -17% to +9%);
- the rate of unintentional injury deaths and injury deaths of other and undetermined intent increased over the period although neither increase reached statistical significance (unintentional: by 5%, -20% to +35%; other and undetermined intent: by 123%, -13% to +371%); and
- the rate of intentional injury deaths decreased significantly over the period by an estimated 4% annually (-6.8% to -1.4%) and 25% overall (-39% to -10%).

Figure 4 Trend in injury death rates per 100,000 population, Victoria 2000-2009



Source: Australian Bureau of Statistics 3303.0 - Causes of Death, Australia, 2009

Note: Cause of Death data for 2007 have undergone two years of revision and are final. Cause of Death data for 2008 and 2009 are subject to further revision. (See 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information)

Trend in the frequency and rate of injury hospital admissions

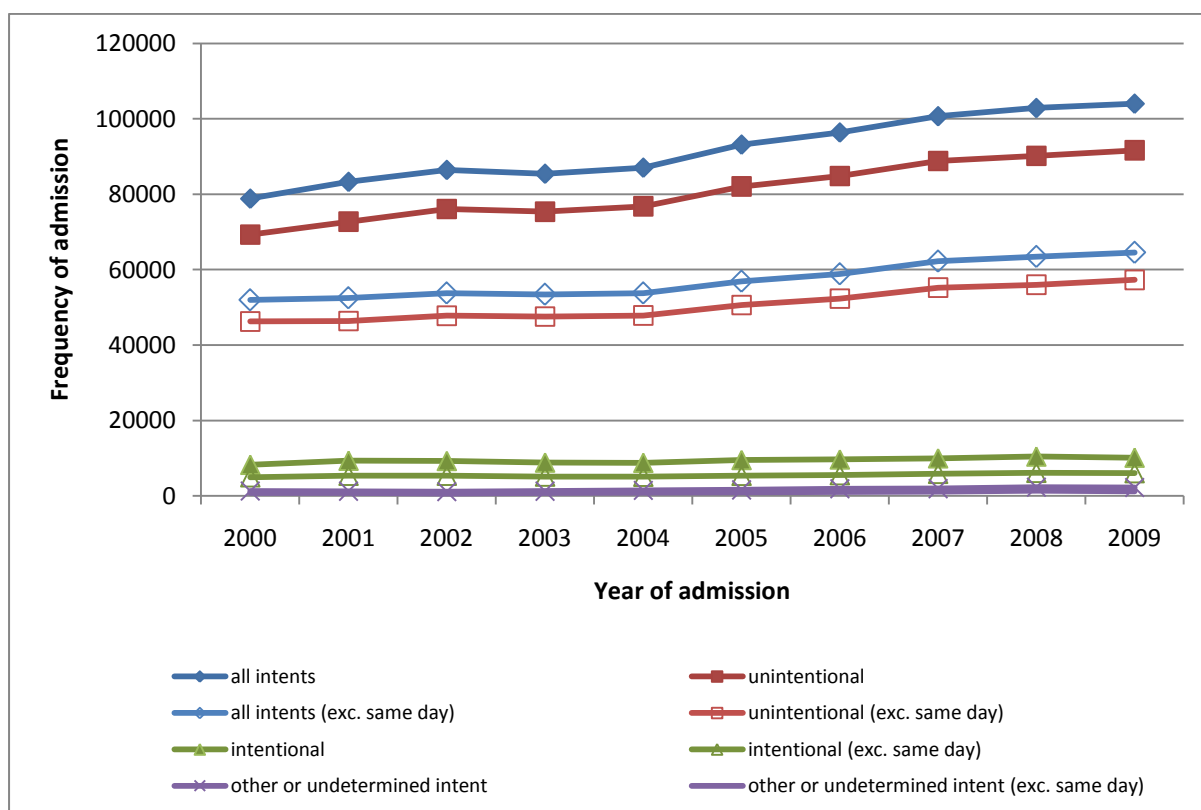
Figures 5 and 6 show the trends in the frequency and rate of injury hospital admissions over the decade 2000-2009. Trend data are reported for all admissions (including same-day admissions) and for admissions excluding same-day admissions. The exclusion of same-day admissions minimises the influence of admission policy changes across time and between hospitals.

The frequency of injury hospital admissions increased significantly over the decade for injuries of all intents, unintentional injuries, intentional injuries and injuries of other and undetermined intent – the upward trend was evident when same-day admissions were included or excluded from the analysis. Trend analysis showed:

- all intents injury admissions (including same-day admissions) increased significantly by an estimated 3.2% annually (95% confidence intervals 2.7% to 3.5%) and 37% overall (31% to 41%), reducing to 2.7% annually (2.2% to 3.2%) and 31% overall (24% to 36%) when same-day admissions were excluded;
- unintentional injury admissions (including same-day admissions) increased significantly by an estimated 3.2% annually (2.8% to 3.5%) and 37% overall (32% to 41%), reducing to 2.7% annually (2.2% to 3.1%) and 30% overall (24% to 36%) when same-day admissions were excluded;
- intentional injury admissions (including same-day admissions) increased significantly by an estimated 2.1% annually (1.2% to 2.8%) and 23% overall (13% to 32%), reducing to 2.2% annually (1.3% to 2.9%) and 24% overall (14% to 33%) when same-day admissions were excluded; and
- other and undetermined intent injury admissions (including same-day admissions) increased significantly by an estimated 8.6% annually (6.4% to 10.1%) and 128% overall (86% to 161%), reducing to 7.8% annually (5.5% to 9.5%) and 111% overall (71% to 147%) when same-day admissions were excluded.

Figure 5

Figure 5 Trend in the frequency of injury hospital admissions, Victoria 2000-2009



Source: Victorian Admitted Episodes Dataset, 2000-2009

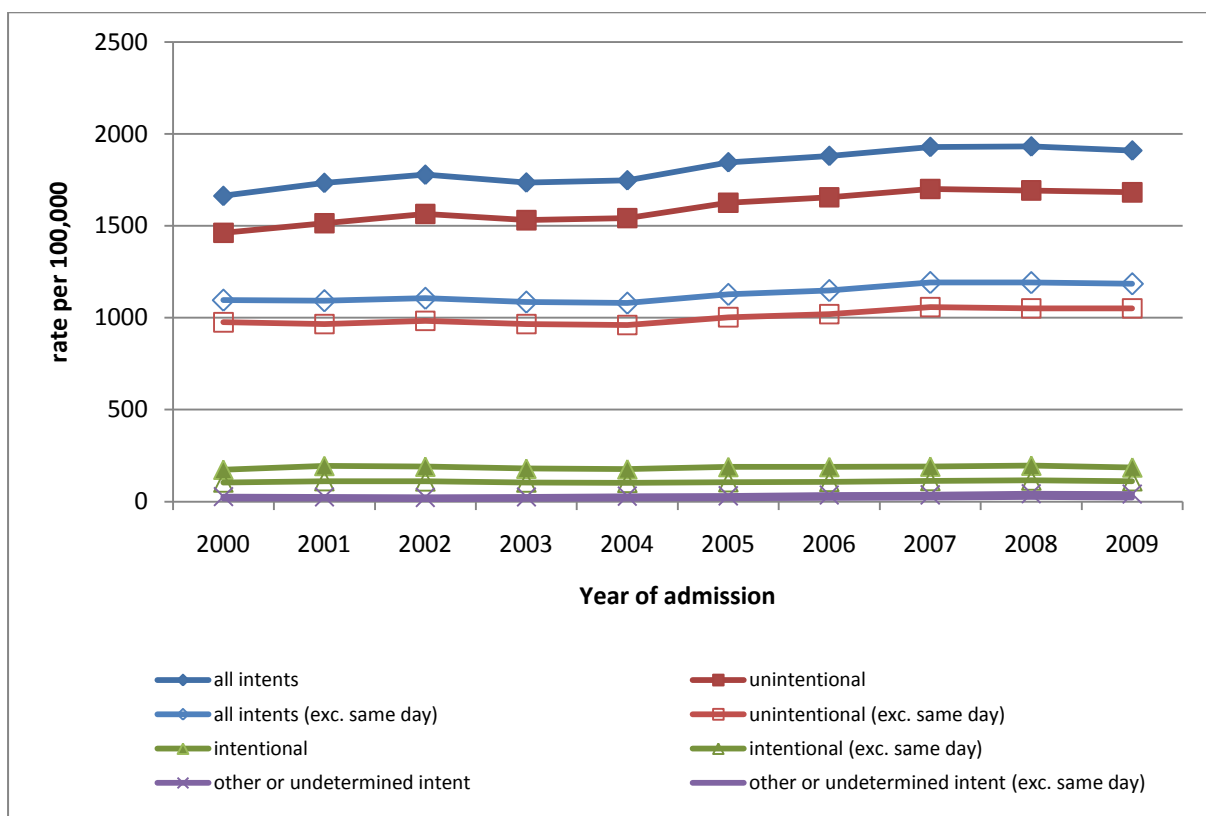
The injury hospital admission rate increased significantly over the decade for injuries of all intents, unintentional injuries, and injuries of other and undetermined intent whether same-day admissions were included or excluded. Trend analysis showed:

- the all intents injury admission rate (including same-day admissions) increased significantly by an estimated 1.6% annually (95% confidence intervals 1.2% to 2%) and 18% overall (13% to 22%), reducing to 1.2% annually (0.7% to 1.6%) and 12% overall (8% to 17%) when same-day admissions were excluded;
- the unintentional injury admission rate (including same-day admissions) increased significantly by an estimated 1.7% (1.3% to 2.1%) annually and 18% overall (13% to 23%), reducing to 1.1% annually (0.7% to 1.5%) and 12% overall (7% to 17%) when same-day admissions were excluded; and
- the other and undetermined intent injury admission rate (including same-day admissions) increased significantly by an estimated 6.9% annually (4.8% to 8.5%) and 95% overall (61% to 126%), reducing to 6.1% annually (3.9% to 7.9%) and 81% overall (47% to 114%) when same-day admissions were excluded.

Figure 6

The intentional injury admission rate also increased over the decade but the increase did not reach statistical significance (Figure 6).

Figure 6 Trend in hospital admission rates per 100,000 population, Victoria 2000-2009



Source: Victorian Admitted Episodes Dataset, 2000-2009

Trend in the frequency and rate of injury ED presentations

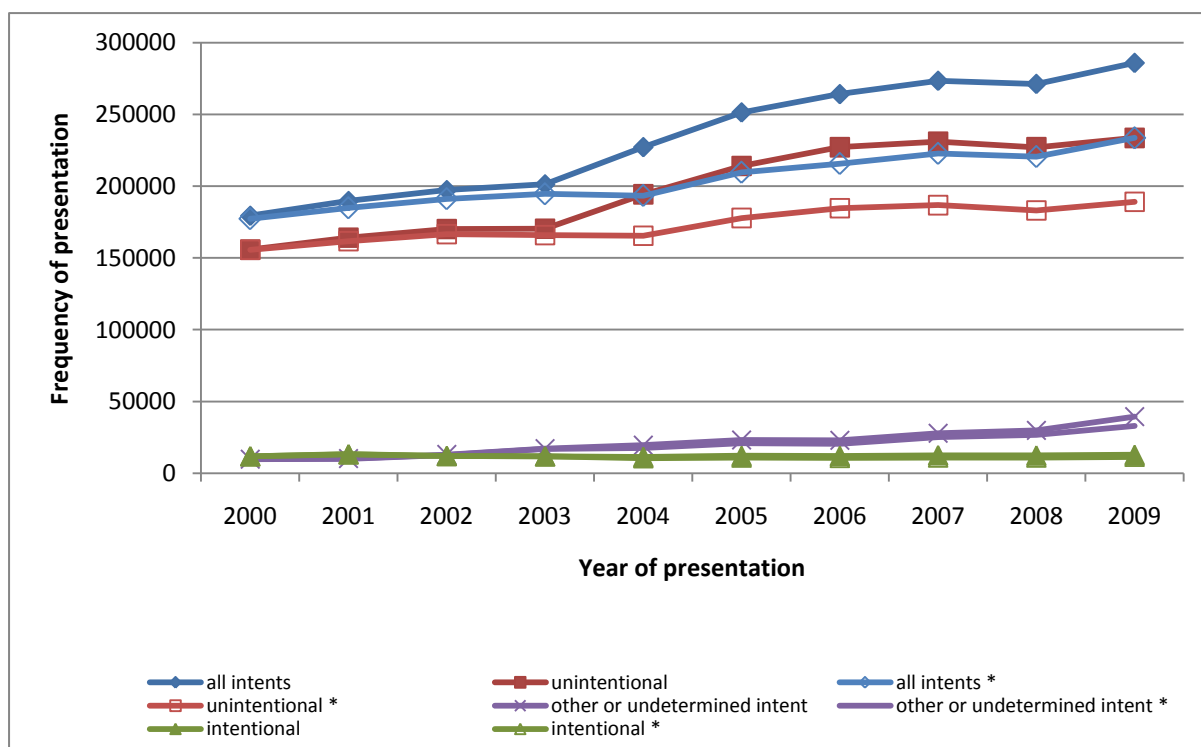
Figure 7 shows the trend in the frequency of injury ED presentations over the decade 2000-2009. Trends are shown for all ED presentations and separately for only ED presentations to hospitals that have contributed to the VEMD over the entire decade (27 of the current 38 hospitals).

Trend analysis was based on data from the 27 hospitals that contributed over the entire decade and showed:

- all intents injury ED presentations increased significantly by an estimated 3% annually (95% confidence intervals 2.6% to 3.3%) and 34% overall (29% to 39%);
- unintentional injury ED presentations increased significantly by an estimated 2.2% annually (1.7% to 2.6%) and 24% overall (19% to 19%);
- other and undetermined intent injury ED presentations increased significantly by an estimated 13.8% annually (11.3% to 14.5%) and 264% overall (192% to 289%); and
- the frequency of intentional injury ED presentations decreased significantly, by an estimated 1.5% annually (-2.7% to -0.2%) and 14% over all (-24% to -2%) – although this is likely due to the increase in cases being coded to other and undetermined intent.

Figure 7

Figure 7 Trend in the frequency of injury ED presentations, Victoria 2000-2009



Source: Victorian Emergency Minimum Dataset, 2000-2009

Note: (1) * denotes data from hospitals that have contributed to the VEMD over the entire decade 2000-2009

ED presentation rates have been calculated for the 6-year period 2004-2009 because all Victorian hospitals with 24-hr EDs have contributed data to the VEMD over this period (Figure 8).

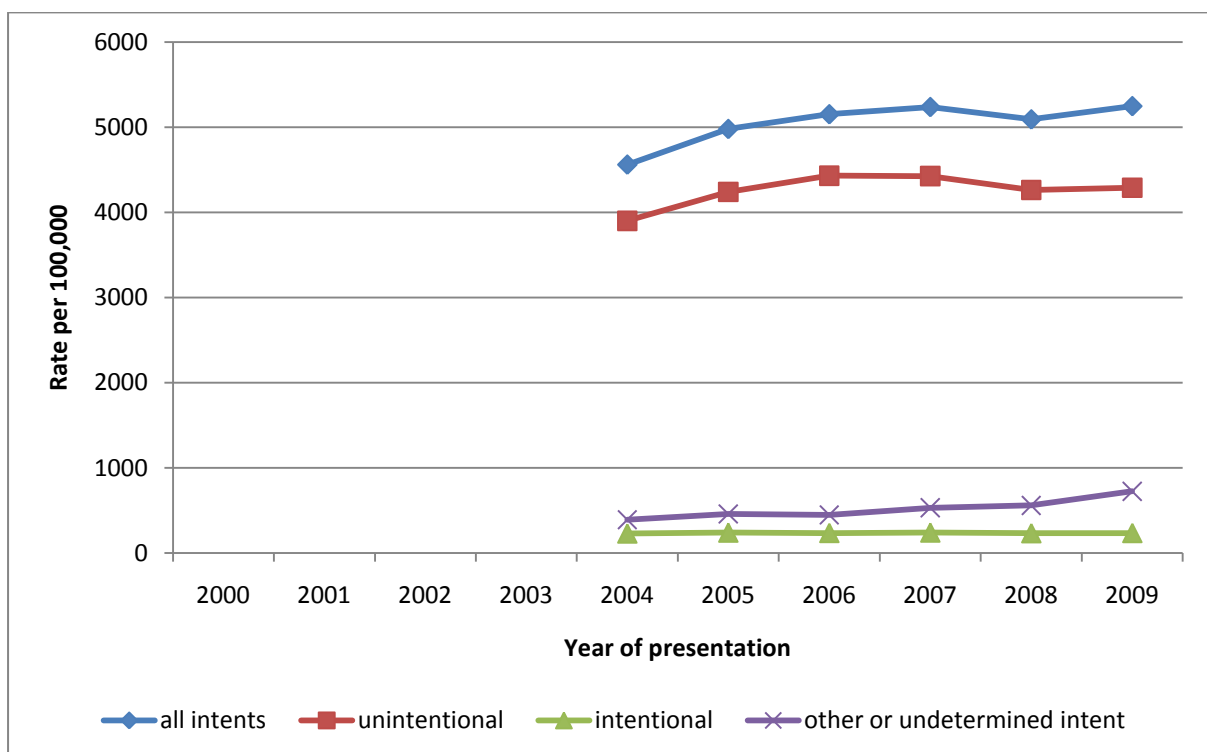
Injury ED presentation rates increased significantly over the 6-year period for injuries of all intents and injuries of other and undetermined intent. Trend analysis showed:

- the all intents injury ED presentation rate increased significantly by an estimated 2.2% annually (95% confidence intervals 0.4% to 4%) and 14% overall (2% to 26%); and
- the other and undetermined intent injury ED presentation rate increased significantly by an estimated 12% annually (7.5% to 15.2%) and 98% overall (55% to 134%).

The unintentional and intentional injury ED presentation rates also increased over the 6-year period but the increases did not reach statistical significance.

Figure 8

Figure 8 Trend in ED presentation rates per 100,000 population, Victoria 2004-2009



Source: Victorian Emergency Minimum Dataset, 2004-2009

Note: Rates are provided for years when all Victorian hospitals with 24-hr EDs have contributed data to the VEMD

3. Causes of injury deaths, hospital admissions and ED presentations, Victoria 2009

Causes of injury deaths

Table 1 shows the major causes of injury deaths in 2009 by frequency and years of potential life lost (YPLLs).

- There were 2,223 injury deaths, 63% were unintentional (n=1,394) and 25% were intentional (suicide and homicide).
- The highest ranking causes of injury death were falls (24% of all injury deaths, n=536), suicide (23%, n=512) and transport (14%, n=313).
- Premature mortality due to injury was responsible for 56,542 years of potential life lost (27,923 YPLLs for unintentional injury deaths and 18,776 YPLLs for intentional injury deaths).
- Suicide (17,187 YPLLs), transport (10,490 YPLLs), poisoning (6,735 YPLLs) and fires/burns/scalds (5,592 YPLLs) made the greatest contribution to premature mortality due to injury
- Intentional injury contributed a greater average number of years of life lost per death (homicide: 38.8 YPLLs; suicide 33.6 YPLLs) than unintentional injury (20 YPLLs).

Table 1 Causes of injury deaths – ranking by frequency and years of life lost, Victoria 2009

Frequency of deaths			Years of potential life lost (YPLLs)			
	Frequency	%		Total YPLLs	Mean	%
fall	536	24.1	transport	10,490	19.6	18.6
transport	313	14.1	poisoning	6,735	21.5	11.9
poisoning	187	8.4	fires/burns/scalds	5,592	29.9	9.9
fires/burns/scalds	181	8.1	fall	1,550	8.6	2.7
unspecified unintentional	50	2.2	drowning	1,012	20.2	1.8
choking/suffocation	47	2.1	choking/suffocation	889	18.9	1.6
natural/environmental/animals	33	1.5	unspecified unintentional	766	23.2	1.4
drowning	24	1.1	hit/struck/crush	374	15.6	<1
hit/struck/crush	17	<1	natural/environmental/animals	359	21.1	<1
explosions/firearms	*	<1	explosions/firearms	91	30.3	<1
machinery	*	<1	cutting/piercing	34	17.0	<1
cutting/piercing	*	<1	machinery	31	31.0	<1
ALL UNINTENTIONAL	1,394	62.7	ALL UNINTENTIONAL	27,923	20.0	49.4
self-harm (suicide)	512	23.0	self-harm (suicide)	17,187	33.6	30.4
assault (homicide)	41	1.8	assault (homicide)	1,589	38.8	2.8
ALL INTENTIONAL	553	24.9	ALL INTENTIONAL	18,776	34.0	33.2
OTHER & UNDETERMINED INTENT	276	12.4	OTHER & UNDETERMINED INTENT	9,843	35.7	17.4
ALL INTENTS	2,223	100.0	ALL INTENTS	56,542	25.4	100.0

Source: ABS catalogue 3303.0 - Causes of Death, Australia, 2009

Note: (a) Data are preliminary and subject to a revisions process. (See 3303.0 Causes of Death Australia, 2009 Explanatory Notes for further information)

(b) Data cells with small values have been randomly assigned to protect the confidentiality of individuals. As a result, some totals may not equal the sum of their components.

Causes of injury hospital admissions

All ages injury admissions

Table 2 gives an overview of the frequency, direct costs, years lost to disability (YLDs) and hospital bed days for injury hospital admissions in Victoria in 2009.

- There were 109,939 injury hospital admissions, 89% of these were unintentional (n=97,205) and 10% were intentional (self harm and assaults). The highest ranking causes of injury hospital admissions were falls (39% of all injury hospital admissions, n=42,346), transport (12%, n=13,093) and unspecified unintentional causes (11%, n=11,805).
- The direct hospital costs of injury admissions that occurred in 2009 is estimated at \$527m., mostly for unintentional injury admissions (\$486m.). Falls made the greatest contribution to the direct hospital costs (\$242m., 46%), followed by transport (\$71m., 13%) and unspecified unintentional causes (\$56m., 11%).
- Injury hospitalisations were responsible for 19,668 years lost to disability (17,455 YLDs for unintentional injury admissions and 2,100 YLDs for intentional injury admissions). Transport and falls accounted for 61% of all years lost to disability (transport: 6,284 YLDs; falls: 5,678 YLDs).
- The total number of bed days for injury hospitalisations was 413,105 days, 92% of which were for unintentional injury. Falls accounted for more than half of all bed days for injury hospitalisations (53%, 217,895 days).

Table 2 Causes of injury hospital admissions – ranking by frequency, direct costs, years lost to disability and hospital bed days, Victoria 2009

Frequency of hospital admissions			Direct costs of hospital admissions				Years lost to disability (YLDs)				Hospital bed days			
	Frequency	%		Total cost	Mean	%		Total YLDs	Mean	%		Total beddays	Mean	%
fall	42,346	38.5	fall	\$242,096,069	\$5,717	45.9	transport	6,283.6	0.48	31.9	fall	217,895	5.1	52.7
transport	13,093	11.9	transport	\$70,623,265	\$5,394	13.4	fall	5,678.4	0.13	28.9	transport	42,790	3.3	10.4
unspecified unintentional	11,805	10.7	unspecified unintentional	\$55,671,509	\$4,716	10.6	hit/struck/crush	1,627.7	0.20	8.3	unspecified unintentional	34,752	2.9	8.4
hit/struck/crush	8,008	7.3	hit/struck/crush	\$28,049,671	\$3,503	5.3	unspecified unintentional	778.4	0.07	4.0	hit/struck/crush	16,970	2.1	4.1
cutting/piercing	5,322	4.8	cutting/piercing	\$17,708,479	\$3,327	3.4	cutting/piercing	640.5	0.12	3.3	choking/suffocation	15,093	11.0	3.7
natural/environmental/animals	3,075	2.8	choking/suffocation	\$12,633,109	\$9,215	2.4	fires/burns/scalds	450.5	0.37	2.3	cutting/piercing	8,773	1.6	2.1
overexertion/strenuous movement	2,807	2.6	overexertion/strenuous movement	\$11,663,050	\$4,155	2.2	overexertion/strenuous movement	406.7	0.14	2.1	natural/environmental/animals	8,728	2.8	2.1
poisoning	2,450	2.2	natural/environmental/animals	\$11,208,827	\$3,645	2.1	machinery	334.1	0.24	1.7	poisoning	7,122	2.9	1.7
other specified unintentional	2,382	2.2	other specified unintentional	\$8,699,866	\$3,652	1.6	natural/environmental/animals	298.1	0.10	1.5	fires/burns/scalds	6,924	5.6	1.7
foreign body - natural orifice	1,735	1.6	fires/burns/scalds	\$8,288,509	\$6,750	1.6	other specified unintentional	265.6	0.11	1.4	overexertion/strenuous movement	6,904	2.5	1.7
machinery	1,394	1.3	poisoning	\$7,729,578	\$3,155	1.5	foreign body - natural orifice	257.2	0.15	1.3	other specified unintentional	6,022	2.5	1.5
choking/suffocation	1,371	1.2	foreign body - natural orifice	\$5,741,324	\$3,309	1.1	choking/suffocation	207.2	0.15	1.1	foreign body - natural orifice	3,564	2.1	<1
fires/burns/scalds	1,228	1.1	machinery	\$5,089,456	\$3,651	1.0	near drowning	85.0	1.08	<1	machinery	2,938	2.1	<1
explosions/firearms	110	<1	explosions/firearms	\$830,387	\$7,549	<1	poisoning	73.6	0.03	<1	explosions/firearms	435	4.0	<1
near drowning	79	<1	near drowning	\$374,254	\$4,737	<1	explosions/firearms	68.0	0.62	<1	near drowning	267	3.4	<1
ALL UNINTENTIONAL	97,205	88.4	ALL UNINTENTIONAL	\$486,407,353	\$5,004	92.2	ALL UNINTENTIONAL	17,454.8	0.18	88.7	ALL UNINTENTIONAL	379,177	3.9	91.8
self harm	5,781	5.3	assault	\$17,327,132	\$3,739	3.3	assault	1,761.9	0.38	9.0	self harm	17,631	3.0	4.3
assault	4,634	4.2	self harm	\$16,179,154	\$2,799	3.1	self harm	338.4	0.06	1.7	assault	10,303	2.2	2.5
ALL INTENTIONAL	10,415	9.5	ALL INTENTIONAL	\$33,506,286	\$3,217	6.4	ALL INTENTIONAL	2,100.3	0.20	10.7	ALL INTENTIONAL	27,934	2.7	6.8
OTHER & UNDETER. INTENT	2,319	2.1	OTHER & UNDETER. INTENT	\$7,444,768	\$3,210	1.4	OTHER & UNDETER. INTENT	113.0	0.05	0.6	OTHER & UNDETER. INTENT	5,994	2.6	1.5
ALL INTENTS	109,939	100.0	ALL INTENTS	\$527,358,407	\$4,797	100.0	ALL INTENTS	19,668.1	0.18	100.0	ALL INTENTS	413,105	3.8	100.0

Source: Victorian Admitted Episodes Dataset, 2009

Child injury admissions (0-14 years)

Table 3 gives an overview of the frequency, direct costs, years lost to disability (YLDs) and hospital bed days for child injury hospital admissions in Victoria in 2009.

- There were 13,151 injury hospital admissions, 98% of these were unintentional (n=12,827) and only 2% were intentional (self harm and assaults). The highest ranking causes of child injury hospital admissions were falls (43% of all injury hospital admissions, n=5,589), hit/struck/crush incidents (15%, n=1,912), transport (10%, n=1,352) and unspecified unintentional causes (10%, n=1,273).
- The direct hospital costs of child injury admissions that occurred in 2009 is estimated at \$42m., overwhelmingly for unintentional injury admissions (\$41.1m.). Falls made the greatest contribution to the direct hospital costs (\$18.1m., 43%), followed by hit/struck/crush incidents (\$5.3m, 13%), transport (\$5m., 12%) and unspecified unintentional causes (\$4m., 9%).
- Child injury hospitalisations were responsible for 2,381 years lost to disability (2,230 YLDs for unintentional injury admissions and only 147 YLDs for intentional injury admissions). Falls and transport accounted for 58% of all years lost to disability (falls: 882 YLDs; transport: 497 YLDs).
- The total number of bed days for child injury hospitalisations was 19,975 days, 97% of which were for unintentional injury. Falls accounted for more than a third of all bed days for injury hospitalisations (37%, 7,377 days) and transport accounted for a further 14% (2,837 bed days).

Table 3 Causes of child injury hospital admissions – ranking by frequency, direct costs, years lost to disability and hospital bed days, Victoria 2009

Frequency of hospital admissions			Direct costs of hospital admissions				Years lost to disability (YLDs)				Hospital bed days			
	Frequency	%		Total cost	Mean	%		Total YLDs	Mean	%		Total beddays	Mean	%
fall	5,589	42.5	fall	\$18,063,462	\$3,232	43.0	fall	882.0	0.16	37.0	fall	7,377	1.3	36.9
hit/struck/crush	1,912	14.5	hit/struck/crush	\$5,348,040	\$2,797	12.7	transport	497.2	0.37	20.9	transport	2,837	2.1	14.2
transport	1,352	10.3	transport	\$4,980,418	\$3,684	11.9	hit/struck/crush	294.2	0.15	12.4	hit/struck/crush	2,342	1.2	11.7
unspecified unintentional	1,273	9.7	unspecified unintentional	\$3,961,141	\$3,112	9.4	fires/burns/scalds	144.1	0.50	6.0	unspecified unintentional	1,850	1.5	9.3
foreign body - natural orifice	513	3.9	fires/burns/scalds	\$1,390,475	\$4,795	3.3	overexertion/strenuous movement	125.9	0.65	5.3	fires/burns/scalds	803	2.8	4.0
cutting/piercing	485	3.7	foreign body - natural orifice	\$1,341,625	\$2,615	3.2	unspecified unintentional	86.4	0.07	3.6	foreign body - natural orifice	752	1.5	3.8
natural/environmental/animals	384	2.9	cutting/piercing	\$1,293,103	\$2,666	3.1	foreign body - natural orifice	67.3	0.13	2.8	poisoning	744	2.2	3.7
poisoning	337	2.6	natural/environmental/animals	\$1,175,544	\$3,061	2.8	cutting/piercing	42.4	0.09	1.8	cutting/piercing	599	1.2	3.0
other specified unintentional	331	2.5	other specified unintentional	\$1,036,900	\$3,133	2.5	other specified unintentional	39.5	0.12	1.7	natural/environmental/animals	571	1.5	2.9
fires/burns/scalds	290	2.2	poisoning	\$921,746	\$2,735	2.2	natural/environmental/animals	34.3	0.09	1.4	choking/suffocation	492	5.9	2.5
overexertion/strenuous movement	193	1.5	choking/suffocation	\$744,739	\$8,973	1.8	machinery	8.8	0.21	<1	other specified unintentional	479	1.4	2.4
choking/suffocation	83	<1	overexertion/strenuous movement	\$675,391	\$3,499	1.6	poisoning	5.3	0.02	<1	overexertion/strenuous movement	300	1.6	1.5
machinery	43	<1	machinery	\$131,434	\$3,057	<1	near drowning	1.4	0.04	<1	machinery	71	1.7	<1
near drowning	32	<1	near drowning	\$52,297	\$1,634	<1	explosions/firearms	0.7	0.07	<1	near drowning	35	1.1	<1
explosions/firearms	10	<1	explosions/firearms	\$21,636	\$2,164	<1	choking/suffocation	0.0	0.00	<1	explosions/firearms	14	1.4	<1
ALL UNINTENTIONAL	12,827	97.5	ALL UNINTENTIONAL	\$41,137,951	\$3,207	97.9	ALL UNINTENTIONAL	2,229.7	0.17	93.6	ALL UNINTENTIONAL	19,266	1.5	96.5
assault	125	1.0	assault	\$390,057	\$3,120	<1	assault	146.6	1.17	6.2	assault	304	2.4	1.5
self harm	105	<1	self harm	\$165,502	\$1,576	<1	self harm	0.5	0.00	<1	self harm	154	1.5	<1
ALL INTENTIONAL	230	1.7	ALL INTENTIONAL	\$555,559	\$2,415	1.3	ALL INTENTIONAL	147.0	0.64	6.2	ALL INTENTIONAL	458	2.0	2.3
OTHER & UNDETER. INTENT	94	<1	OTHER & UNDETER. INTENT	\$330,350	\$3,514	<1	OTHER & UNDETER. INTENT	4.7	0.05	<1	OTHER & UNDETER. INTENT	251	2.7	1.3
ALL INTENTS	13,151	100.0	ALL INTENTS	\$42,023,860	\$3,195	100.0	ALL INTENTS	2,381.4	0.18	100.0	ALL INTENTS	19,975	1.5	100.0

Source: Victorian Admitted Episodes Dataset, 2009

Adolescent and young adult injury admissions (15-24 years)

Table 4 gives an overview of the frequency, direct costs, years lost to disability (YLDs) and hospital bed days for adolescent and young adult injury hospital admissions in Victoria in 2009.

- There were 17,344 adolescent and young adult injury hospital admissions, 78% of these were unintentional (n=13,449) and 19% were intentional (self harm and assaults). The highest ranking causes of injury hospital admissions were transport (18% of all injury hospital admissions, n=3,193), falls (14%, n=2,428), unspecified unintentional causes (13%, n=2,284), hit/struck/crush incidents (12%, n=2,057), assault (10%, n=1,680) and self-harm (9%, n=1,575).
- The direct hospital costs of adolescent and young adult injury admissions that occurred in 2009 is estimated at \$65m., mostly for unintentional injury admissions (\$53.3m.). Transport made the greatest contribution to the direct hospital costs (\$16.8m., 26%).
- Adolescents and young adult injury hospitalisations were responsible for 5,651 years lost to disability (4,852 YLDs for unintentional injury admissions and 764 YLDs for intentional injury admissions). Transport accounted for close to half of all years lost to disability (2,779 YLDs, 49%).
- The total number of bed days for adolescent and young adult injury hospitalisations was 32,873 days, three quarters of which were for unintentional injury. Transport accounted for one-quarter of all bed days for injury hospitalisations (8,305 days) and falls accounted for a further 13% (4,333 days).

Table 4 Causes of adolescent and young adult injury hospital admissions – ranking by frequency, direct costs, years lost to disability and hospital bed days, Victoria 2009

Frequency of hospital admissions			Direct costs of hospital admissions				Years lost to disability (YLDs)				Hospital bed days			
	Frequency	%		Total cost	Mean	%		Total YLDs	Mean	%		Total beddays	Mean	%
transport	3,193	18.4	transport	\$16,752,929	\$5,247	25.8	transport	2,779.2	0.87	49.2	transport	8,305	2.6	25.3
fall	2,428	14.0	unspecified unintentional	\$9,433,321	\$4,130	14.5	hit/struck/crush	632.8	0.31	11.2	fall	4,333	1.8	13.2
unspecified unintentional	2,284	13.2	fall	\$9,324,415	\$3,840	14.4	fall	586.5	0.24	10.4	hit/struck/crush	3,015	1.5	9.2
hit/struck/crush	2,057	11.9	hit/struck/crush	\$6,428,766	\$3,125	9.9	cutting/piercing	200.1	0.17	3.5	unspecified unintentional	2,954	1.3	9.0
cutting/piercing	1,198	6.9	cutting/piercing	\$3,878,336	\$3,237	6.0	unspecified unintentional	182.7	0.08	3.2	cutting/piercing	1,638	1.4	5.0
overexertion/strenuous movement	478	2.8	overexertion/strenuous movement	\$1,938,533	\$4,056	3.0	natural/environmental/animals	115.0	0.34	2.0	poisoning	934	2.0	2.8
poisoning	466	2.7	other specified unintentional	\$1,397,018	\$3,272	2.2	machinery	89.4	0.42	1.6	overexertion/strenuous movement	679	1.4	2.1
other specified unintentional	427	2.5	poisoning	\$972,283	\$2,086	1.5	other specified unintentional	72.8	0.17	1.3	other specified unintentional	641	1.5	1.9
natural/environmental/animals	336	1.9	natural/environmental/animals	\$901,820	\$2,684	1.4	fires/burns/scalds	61.2	0.36	1.1	natural/environmental/animals	593	1.8	1.8
machinery	215	1.2	fires/burns/scalds	\$801,827	\$4,717	1.2	overexertion/strenuous movement	58.9	0.12	1.0	fires/burns/scalds	549	3.2	1.7
fires/burns/scalds	170	1.0	machinery	\$752,181	\$3,499	1.2	foreign body - natural orifice	40.0	0.31	<1	choking/suffocation	393	13.1	1.2
foreign body - natural orifice	131	<1	foreign body - natural orifice	\$364,450	\$2,782	<1	explosions/firearms	19.5	0.75	<1	machinery	355	1.7	1.1
choking/suffocation	30	<1	explosions/firearms	\$188,476	\$7,249	<1	poisoning	9.8	0.02	<1	foreign body - natural orifice	207	1.6	<1
explosions/firearms	26	<1	choking/suffocation	\$143,160	\$4,772	<1	choking/suffocation	3.1	0.10	<1	explosions/firearms	95	3.7	<1
near drowning	10	<1	near drowning	\$31,305	\$3,131	<1	near drowning	1.2	0.12	<1	near drowning	22	2.2	<1
ALL UNINTENTIONAL	13,449	77.5	ALL UNINTENTIONAL	\$53,308,820	\$3,964	82.0	ALL UNINTENTIONAL	4,852.2	0.36	85.9	ALL UNINTENTIONAL	24,713	1.8	75.2
assault	1,680	9.7	assault	\$6,231,860	\$3,709	9.6	assault	700.4	0.42	12.4	self harm	4,049	2.6	12.3
self harm	1,575	9.1	self harm	\$3,643,139	\$2,313	5.6	self harm	63.6	0.04	1.1	assault	3,054	1.8	9.3
ALL INTENTIONAL	3,255	18.8	ALL INTENTIONAL	\$9,874,999	\$3,034	15.2	ALL INTENTIONAL	764.0	0.23	13.5	ALL INTENTIONAL	7,103	2.2	21.6
OTHER & UNDETER. INTENT	640	3.7	OTHER & UNDETER. INTENT	\$1,793,272	\$2,802	2.8	OTHER & UNDETER. INTENT	34.3	0.05	<1	OTHER & UNDETER. INTENT	1,057	1.7	3.2
ALL INTENTS	17,344	100.0	ALL INTENTS	\$64,977,091	\$3,746	100.0	ALL INTENTS	5,650.6	0.33	100.0	ALL INTENTS	32,873	1.9	100.0

Source: Victorian Admitted Episodes Dataset, 2009

Adult injury admissions (25-64 years)

Table 5 gives an overview of the frequency, direct costs, years lost to disability (YLDs) and hospital bed days for adult injury hospital admissions in Victoria in 2009.

- There were 46,053 adult injury hospital admissions, 83% of these were unintentional (n=38,085) and 14% were intentional (self harm and assaults). The highest ranking causes of injury hospital admissions were falls (23% of all injury hospital admissions, n=10,636), transport (16%, n=7,132), unspecified unintentional causes (12%, n=5,707), self-harm (8%, n=3,835) cutting/piercing (7%, n=3,235) and hit/struck/crush incidents (7%, n=3,215).
- The direct hospital costs of adult injury admissions that occurred in 2009 is estimated at close to \$200m., mostly for unintentional injury admissions (\$174m.). Falls and transport made the greatest contributions to the direct hospital costs (falls: \$51.6m., 26%; transport: \$39.7m., 20%).
- Adult injury hospitalisations were responsible for 9,563 years lost to disability (8,311 YLDs for unintentional injury admissions and 1,181 YLDs for intentional injury admissions). Transport and falls accounted for more than half (56%) of all years lost to disability (transport: 2,864 YLDs; falls: 2,533 YLDs).
- The total number of bed days for adult injury hospitalisations was 129,551 days, 83% of which were for unintentional injury. Falls accounted for more than one-quarter of all bed days for adult injury hospitalisations (28%, 36,773 days) and transport accounted for a further 18% (23,502 days).

Table 5 Causes of adult injury hospital admissions – ranking by frequency, direct costs, years lost to disability and hospital bed days, Victoria 2009

Frequency of hospital admissions			Direct costs of hospital admissions				Years lost to disability (YLDs)				Hospital bed days			
	Frequency	%		Total cost	Mean	%		Total YLDs	Mean	%		Total beddays	Mean	%
fall	10,636	23.1	fall	\$51,556,939	\$4,847	25.8	transport	2,863.5	0.40	29.9	fall	36,773	3.5	28.4
transport	7,132	15.5	transport	\$39,655,083	\$5,560	19.9	fall	2,532.5	0.24	26.5	transport	23,502	3.3	18.1
unspecified unintentional	5,707	12.4	unspecified unintentional	\$26,099,836	\$4,573	13.1	hit/struck/crush	677.0	0.21	7.1	unspecified unintentional	12,142	2.1	9.4
cutting/piercing	3,235	7.0	hit/struck/crush	\$11,699,710	\$3,639	5.9	unspecified unintentional	403.8	0.07	4.2	hit/struck/crush	6,681	2.1	5.2
hit/struck/crush	3,215	7.0	cutting/piercing	\$10,972,960	\$3,392	5.5	cutting/piercing	380.8	0.12	4.0	cutting/piercing	5,373	1.7	4.1
natural/environmental/animals	1,547	3.4	overexertion/strenuous movement	\$6,130,209	\$4,044	3.1	machinery	230.1	0.24	2.4	natural/environmental/animals	3,896	2.5	3.0
overexertion/strenuous movement	1,516	3.3	natural/environmental/animals	\$5,305,544	\$3,430	2.7	fires/burns/scalds	224.3	0.39	2.3	choking/suffocation	3,570	10.0	2.8
other specified unintentional	1,227	2.7	other specified unintentional	\$4,317,004	\$3,518	2.2	overexertion/strenuous movement	195.9	0.13	2.0	fires/burns/scalds	3,539	6.2	2.7
poisoning	1,111	2.4	fires/burns/scalds	\$4,251,396	\$7,394	2.1	choking/suffocation	185.7	0.52	1.9	overexertion/strenuous movement	3,034	2.0	2.3
machinery	978	2.1	choking/suffocation	\$3,561,971	\$10,006	1.8	other specified unintentional	150.0	0.12	1.6	other specified unintentional	2,859	2.3	2.2
foreign body - natural orifice	748	1.6	machinery	\$3,527,430	\$3,607	1.8	foreign body - natural orifice	141.0	0.19	1.5	poisoning	2,750	2.5	2.1
fires/burns/scalds	575	1.2	poisoning	\$3,292,985	\$2,964	1.6	natural/environmental/animals	140.9	0.09	1.5	machinery	2,000	2.0	1.5
choking/suffocation	356	<1	foreign body - natural orifice	\$2,489,096	\$3,328	1.2	near drowning	82.4	2.75	<1	foreign body - natural orifice	1,274	1.7	1.0
explosions/firearms	72	<1	explosions/firearms	\$608,020	\$8,445	<1	poisoning	55.2	0.05	<1	explosions/firearms	312	4.3	<1
near drowning	30	<1	near drowning	\$184,352	\$6,145	<1	explosions/firearms	47.7	0.66	<1	near drowning	142	4.7	<1
ALL UNINTENTIONAL	38,085	82.7	ALL UNINTENTIONAL	\$173,652,535	\$4,560	87.0	ALL UNINTENTIONAL	8,310.9	0.22	86.9	ALL UNINTENTIONAL	107,847	2.8	83.2
self harm	3,835	8.3	self harm	\$11,362,766	\$2,963	5.7	assault	908.6	0.33	9.5	self harm	11,899	3.1	9.2
assault	2,730	5.9	assault	\$10,137,725	\$3,713	5.1	self harm	272.9	0.07	2.9	assault	6,249	2.3	4.8
ALL INTENTIONAL	6,565	14.3	ALL INTENTIONAL	\$21,500,491	\$3,275	10.8	ALL INTENTIONAL	1,181.4	0.18	12.4	ALL INTENTIONAL	18,148	2.8	14.0
OTHER & UNDETER. INTENT	1,403	3.0	OTHER & UNDETER. INTENT	\$4,496,086	\$3,205	2.3	OTHER & UNDETER. INTENT	70.7	0.05	<1	OTHER & UNDETER. INTENT	3,556	2.5	2.7
ALL INTENTS	46,053	100.0	ALL INTENTS	\$199,649,112	\$4,335	100.0	ALL INTENTS	9,563.0	0.21	100.0	ALL INTENTS	129,551	2.8	100.0

Source: Victorian Admitted Episodes Dataset, 2009

Older adult injury admissions (65 years and older)

Table 6 gives an overview of the frequency, direct costs, years lost to disability (YLDs) and hospital bed days for older adult injury hospital admissions in Victoria in 2009.

- There were 33,391 older adult injury hospital admissions, almost all of these were for unintentional injury (98%, n=32,844).
- Falls accounted for 71% of all hospital admissions for injury in this age group (n=23,693).
- The direct hospital costs of older adult injury admissions that occurred in 2009 is estimated at \$221m.
- Older adult injury hospitalisations were responsible for 2,073 years lost to disability (YLDs).
- The total number of bed days for older adult injury hospitalisations was 230,706 days.
- Falls made the greatest contribution to the direct hospital costs (\$163m., 74%), years lost to disability (1,677 YLDs, 81%) and hospital bed days (73%, 169,412 days).

Table 6 Causes of older adult injury hospital admissions – ranking by frequency, direct costs, years lost to disability and hospital bed days, Victoria 2009

Frequency of hospital admissions			Direct costs of hospital admissions				Years lost to disability (YLDs)				Hospital bed days			
	Frequency	%		Total cost	Mean	%		Total YLDs	Mean	%		Total beddays	Mean	%
fall	23,693	71.0	fall	\$163,151,253	\$6,886	73.9	fall	1,677.4	0.07	80.9	fall	169,412	7.2	73.4
unspecified unintentional	2,541	7.6	unspecified unintentional	\$16,177,211	\$6,366	7.3	transport	143.8	0.10	6.9	unspecified unintentional	17,806	7.0	7.7
transport	1,416	4.2	transport	\$9,234,835	\$6,522	4.2	unspecified unintentional	105.5	0.04	5.1	choking/suffocation	10,638	11.8	4.6
choking/suffocation	902	2.7	choking/suffocation	\$8,183,239	\$9,072	3.7	overexertion/strenuous movement	26.0	0.04	1.3	transport	8,146	5.8	3.5
hit/struck/crush	824	2.5	hit/struck/crush	\$4,573,155	\$5,550	2.1	hit/struck/crush	23.7	0.03	1.1	hit/struck/crush	4,932	6.0	2.1
natural/environmental/animals	808	2.4	natural/environmental/animals	\$3,825,919	\$4,735	1.7	fires/burns/scalds	20.9	0.11	1.0	natural/environmental/animals	3,668	4.5	1.6
overexertion/strenuous movement	620	1.9	overexertion/strenuous movement	\$2,918,917	\$4,708	1.3	choking/suffocation	18.4	0.02	<1	overexertion/strenuous movement	2,891	4.7	1.3
poisoning	536	1.6	poisoning	\$2,542,564	\$4,744	1.2	cutting/piercing	17.4	0.04	<1	poisoning	2,694	5.0	1.2
cutting/piercing	404	1.2	other specified unintentional	\$1,948,944	\$4,909	<1	foreign body - natural orifice	8.8	0.03	<1	other specified unintentional	2,043	5.1	<1
other specified unintentional	397	1.2	fires/burns/scalds	\$1,844,811	\$9,559	<1	natural/environmental/animals	8.0	0.01	<1	fires/burns/scalds	2,033	10.5	<1
foreign body - natural orifice	343	1.0	cutting/piercing	\$1,564,080	\$3,871	<1	machinery	5.7	0.04	<1	foreign body - natural orifice	1,331	3.9	<1
fires/burns/scalds	193	<1	foreign body - natural orifice	\$1,546,153	\$4,508	<1	other specified unintentional	3.4	0.01	<1	cutting/piercing	1,163	2.9	<1
machinery	158	<1	machinery	\$678,411	\$4,294	<1	poisoning	3.2	0.01	<1	machinery	512	3.2	<1
near drowning	7	<1	near drowning	\$106,300	\$15,186	<1	explosions/firearms	0.0	0.02	<1	near drowning	68	9.7	<1
explosions/firearms	*	<1	explosions/firearms	\$12,255	\$6,128	<1	near drowning	0.0	0.00	<1	explosions/firearms	14	7.0	<1
ALL UNINTENTIONAL	32,844	98.4	ALL UNINTENTIONAL	\$218,308,047	\$6,647	98.9	ALL UNINTENTIONAL	2,062.1	0.06	99.5	ALL UNINTENTIONAL	227,351	6.9	98.5
self harm	266	<1	self harm	\$1,007,747	\$3,789	<1	assault	6.4	0.06	<1	self harm	1,529	5.7	<1
assault	99	<1	assault	\$567,490	\$5,732	<1	self harm	1.4	0.01	<1	assault	696	7.0	<1
ALL INTENTIONAL	365	1.1	ALL INTENTIONAL	\$1,575,237	\$4,316	<1	ALL INTENTIONAL	7.8	0.02	<1	ALL INTENTIONAL	2,225	6.1	1.0
OTHER & UNDETER. INTENT	182	<1	OTHER & UNDETER. INTENT	\$825,060	\$4,533	<1	OTHER & UNDETER. INTENT	3.2	0.02	<1	OTHER & UNDETER. INTENT	1,130	6.2	<1
ALL INTENTS	33,391	100.0	ALL INTENTS	\$220,708,344	\$6,610	100.0	ALL INTENTS	2,073.1	0.06	100.0	ALL INTENTS	230,706	6.9	100.0

Source: Victorian Admitted Episodes Dataset, 2009

Causes of injury ED presentations

All ages injury ED presentations

Table 7 gives an overview of the frequency, direct costs and years lost to disability (YLDs) for injury ED presentations in Victoria in 2009.

- There were 285,860 injury ED presentations, 82% of these were unintentional (n=233,586), 4.5% were intentional (self harm and assaults) and 14% were injuries of other and undetermined intent (n=39,481). The highest ranking causes of injury ED presentations were falls (27% of all injury ED presentations, n=77,916) and hit/struck/crush incidents (17%, n=49,368).
- The direct hospital costs of injury ED presentations that occurred in 2009 is estimated at \$57.7m., mostly for unintentional injury ED presentations (\$47.2m.). Falls made the greatest contribution to the direct hospital costs (\$15.7m., 27%), followed by hit/struck/crush incidents (\$10m., 17%).
- Injury ED presentations were responsible for 37,041 years lost to disability (30,754 YLDs for unintentional, 815 YLDs for intentional, and 5,472 for other and undetermined intent injury ED presentations). Hit/struck/crush incidents accounted for a quarter of all years lost to disability (9,281 YLDs).

Table 7 Causes of injury ED presentations – ranking by frequency, direct costs and years lost to disability, Victoria 2009

Frequency of hospital ED presentations			Direct costs of hospital ED presentations			Years lost to disability (YLDs)			
	Frequency	%		Total cost	%		Total YLDs	Mean	%
fall	77,916	27.3	fall	\$15,739,032	27.3	hit/struck/crush	9,281.2	0.19	25.1
hit/struck/crush	49,368	17.3	hit/struck/crush	\$9,972,336	17.3	foreign body- natural orifice	5,107.4	0.73	13.8
other specified unintentional	25,608	9.0	other specified unintentional	\$5,172,816	9.0	other specified unintentional	3,897.6	0.15	10.5
cutting/piercing	24,453	8.6	cutting/piercing	\$4,939,506	8.6	fall	3,462.3	0.04	9.3
unspecified factor	16,554	5.8	unspecified factor	\$3,343,908	5.8	cutting/piercing	2,902.5	0.12	7.8
transport	15,827	5.5	transport	\$3,197,054	5.5	unspecified factor	2,475.4	0.15	6.7
foreign body- natural orifice	7,040	2.5	foreign body- natural orifice	\$1,422,080	2.5	machinery	1,401.8	0.68	3.8
natural/environmental/animals	6,927	2.4	natural/environmental/animals	\$1,399,254	2.4	transport	902.6	0.06	2.4
fires/burns/scalds	5,181	1.8	fires/burns/scalds	\$1,046,562	1.8	fires/burns/scalds	810.6	0.16	2.2
poisoning	2,156	<1	poisoning	\$435,512	<1	natural/environmental/animals	306.8	0.04	<1
machinery	2,072	<1	machinery	\$418,544	<1	poisoning	171.3	0.08	<1
choking/suffocation	393	<1	choking/suffocation	\$79,386	<1	choking/suffocation	29.3	0.07	<1
near drowning	59	<1	near drowning	\$11,918	<1	near drowning	3.7	0.06	<1
explosions/firearms	32	<1	explosions/firearms	\$6,464	<1	explosions/firearms	0.8	0.02	<1
ALL UNINTENTIONAL	233,586	81.7	ALL UNINTENTIONAL	\$47,184,372	81.7	ALL UNINTENTIONAL	30,753.5	0.13	83.0
assault	8,687	3.0	assault	\$1,754,774	3.0	assault	776.3	0.09	2.1
self harm	4,106	1.4	self harm	\$829,412	1.4	self harm	38.7	0.01	<1
ALL INTENTIONAL	12,793	4.5	ALL INTENTIONAL	\$2,584,186	4.5	ALL INTENTIONAL	815.0	0.06	2.2
OTHER & UNDETERMINED INTENT	39,481	13.8	OTHER & UNDETERMINED INTENT	\$7,975,162	13.8	OTHER & UNDETERMINED INTENT	5,472.6	0.14	14.8
ALL INTENTS	285,860	100.0	ALL INTENTS	\$57,743,720	100.0	ALL INTENTS	37,041.0	0.13	100.0

Source: Victorian Emergency Minimum Dataset, 2009

Notes: (a) overexertion & strenuous movements not able to be identified in VEMD

(b) mean/average cost per ED presentation not shown - \$202 was applied to all ED presentations

Child injury ED presentations (0-14 years)

Table 8 gives an overview of the frequency, direct costs and years lost to disability (YLDs) for child injury ED presentations in Victoria in 2009.

- There were 77,783 child injury ED presentations, 88% of these were unintentional (n=68,082), less than 1% were intentional (self harm and assaults, n=520) and 12% were injuries of other and undetermined intent (n=9,181). The highest ranking causes of child injury ED presentations were falls (39% of all injury ED presentations, n=29,958) and hit/struck/crush incidents (19%, n=14,934).
- The direct hospital costs of child injury ED presentations that occurred in 2009 is estimated at \$15.7m., mostly for unintentional injury ED presentations (\$13.8m.). Falls made the greatest contribution to the direct hospital costs (\$6m., 39%), followed by hit/struck/crush incidents (\$3m., 19%).
- Injury ED presentations were responsible for 8,446 years lost to disability (7,491 YLDs for unintentional, 36 YLDs for intentional, and 920 for other and undetermined intent injury ED presentations). Hit/struck/crush incidents accounted for 28% of all years lost to disability (2,329 YLDs) and falls for a further 26% (2,178 YLDs).

Table 8 Causes of child injury ED presentations – ranking by frequency, direct costs and years lost to disability, Victoria 2009

Frequency of hospital ED presentations			Direct costs of hospital ED presentations			Years lost to disability (YLDs)			
	Frequency	%		Total cost	%		Total YLDs	Mean	%
fall	29,958	38.5	fall	\$6,051,516	38.5	hit/struck/crush	2,329.3	0.16	27.6
hit/struck/crush	14,934	19.2	hit/struck/crush	\$3,016,668	19.2	fall	2,177.9	0.07	25.8
other specified unintentional	7,092	9.1	other specified unintentional	\$1,432,584	9.1	other specified unintentional	895.7	0.13	10.6
unspecified factor	3,821	4.9	unspecified factor	\$771,842	4.9	foreign body- natural orifice	700.9	0.34	8.3
cutting/piercing	3,817	4.9	cutting/piercing	\$771,034	4.9	cutting/piercing	479.9	0.13	5.7
transport	2,421	3.1	transport	\$489,042	3.1	unspecified factor	412.5	0.11	4.9
foreign body- natural orifice	2,069	2.7	foreign body- natural orifice	\$417,938	2.7	transport	204.0	0.08	2.4
natural/environmental/animals	1,709	2.2	natural/environmental/animals	\$345,218	2.2	fires/burns/scalds	119.1	0.08	1.4
fires/burns/scalds	1,419	1.8	fires/burns/scalds	\$286,638	1.8	natural/environmental/animals	102.9	0.06	1.2
poisoning	665	<1	poisoning	\$134,330	<1	poisoning	64.2	0.10	<1
choking/suffocation	120	<1	choking/suffocation	\$24,240	<1	machinery	4.5	0.15	<1
machinery	31	<1	machinery	\$6,262	<1	choking/suffocation	0.0	0.00	<1
near drowning	20	<1	near drowning	\$4,040	<1	explosions/firearms	0.0	0.00	<1
explosions/firearms	6	<1	explosions/firearms	\$1,212	<1	near drowning	0.0	0.00	<1
ALL UNINTENTIONAL	68,082	87.5	ALL UNINTENTIONAL	\$13,752,564	87.5	ALL UNINTENTIONAL	7,490.9	0.11	88.7
assault	375	<1	assault	\$75,750	<1	assault	35.3	0.09	<1
self harm	145	<1	self harm	\$29,290	<1	self harm	0.5	0.00	<1
ALL INTENTIONAL	520	<1	ALL INTENTIONAL	\$105,040	<1	ALL INTENTIONAL	35.8	0.07	<1
OTHER & UNDETERMINED INTENT	9,181	11.8	OTHER & UNDETERMINED INTENT	\$1,854,562	11.8	OTHER & UNDETERMINED INTENT	919.6	0.10	10.9
ALL INTENTS	77,783	100.0	ALL INTENTS	\$15,712,166	100.0	ALL INTENTS	8,446.3	0.11	100.0

Source: Victorian Emergency Minimum Dataset, 2009

Notes: (a) overexertion & strenuous movements not able to be identified in VEMD

(b) mean/average cost per ED presentation not shown - \$202 was applied to all ED presentations

Adolescent and young adult injury ED presentations (15-24 years)

Table 9 gives an overview of the frequency, direct costs and years lost to disability (YLD) for adolescent and young adult injury ED presentations in Victoria in 2009.

- There were 62,082 injury ED presentations, 77% of these were unintentional (n=48,024), 8% were intentional (self harm and assaults, n=5,126) and 14% were injuries of other and undetermined intent (n=8,932). The highest ranking causes of adolescent and young adult injury ED presentations were hit/struck/crush incidents (20% of all injury ED presentations, n=12,651) and falls (19%, n=12,040).
- The direct hospital costs of adolescent and young adult injury ED presentations that occurred in 2009 is estimated at \$12.5m., mostly for unintentional injury ED presentations (\$9.7m.). Hit/struck/crush incidents made the greatest contribution to the direct hospital costs (\$2.6m., 20%), followed by falls (\$2.4m., 19%).
- Injury ED presentations were responsible for 7,965 years lost to disability (6,463 YLD for unintentional, 341 YLD for intentional, and 1,161 for other and undetermined intent injury ED presentations). Hit/struck/crush incidents accounted for 27% of all years lost to disability (2,164 YLD) and foreign bodies in natural orifices for a further 14% (1,137 YLD).

Table 9 Causes of adolescent and young adult injury ED presentations – ranking by frequency, direct costs and years lost to disability, Victoria 2009

Frequency of hospital ED presentations			Direct costs of hospital ED presentations			Years lost to disability (YLDs)			
	Frequency	%		Total cost	%		Total YLDs	Mean	%
hit/struck/crush	12,651	20.4	hit/struck/crush	\$2,555,502	20.4	hit/struck/crush	2,164.3	0.17	27.2
fall	12,040	19.4	fall	\$2,432,080	19.4	foreign body- natural orifice	1,136.5	1.28	14.3
cutting/piercing	5,834	9.4	cutting/piercing	\$1,178,468	9.4	cutting/piercing	741.0	0.13	9.3
other specified unintentional	5,188	8.4	other specified unintentional	\$1,047,976	8.4	other specified unintentional	723.8	0.14	9.1
transport	4,705	7.6	transport	\$950,410	7.6	fall	411.3	0.03	5.2
unspecified factor	3,342	5.4	unspecified factor	\$675,084	5.4	unspecified factor	372.7	0.11	4.7
natural/environmental/animals	1,240	2.0	natural/environmental/animals	\$250,480	2.0	machinery	309.6	0.77	3.9
fires/burns/scalds	1,139	1.8	fires/burns/scalds	\$230,078	1.8	transport	285.7	0.06	3.6
foreign body- natural orifice	889	1.4	foreign body- natural orifice	\$179,578	1.4	fires/burns/scalds	238.9	0.21	3.0
poisoning	523	<1	poisoning	\$105,646	<1	natural/environmental/animals	49.1	0.04	<1
machinery	404	<1	machinery	\$81,608	<1	poisoning	29.9	0.06	<1
choking/suffocation	50	<1	choking/suffocation	\$10,100	<1	choking/suffocation	0.0	0.00	<1
near drowning	14	<1	near drowning	\$2,828	<1	near drowning	0.0	0.00	<1
explosions/firearms	5	<1	explosions/firearms	\$1,010	<1	explosions/firearms	0.0	0.00	<1
ALL UNINTENTIONAL	48,024	77.4	ALL UNINTENTIONAL	\$9,700,848	77.4	ALL UNINTENTIONAL	6,462.9	0.13	81.1
assault	3,542	5.7	assault	\$715,484	5.7	assault	329.8	0.09	4.1
self harm	1,584	2.6	self harm	\$319,968	2.6	self harm	10.9	0.01	<1
ALL INTENTIONAL	5,126	8.3	ALL INTENTIONAL	\$1,035,452	8.3	ALL INTENTIONAL	340.7	0.07	4.3
OTHER & UNDETERMINED INTENT	8,932	14.4	OTHER & UNDETERMINED INTENT	\$1,804,264	14.4	OTHER & UNDETERMINED INTENT	1,161.0	0.13	14.6
ALL INTENTS	62,082	100.0	ALL INTENTS	\$12,540,564	100.0	ALL INTENTS	7,964.6	0.13	100.0

Source: Victorian Emergency Minimum Dataset, 2009

Notes: (a) overexertion & strenuous movements not able to be identified in VEMD

(b) mean/average cost per ED presentation not shown - \$202 was applied to all ED presentations

Adult injury ED presentations (25-64 years)

Table 10 gives an overview of the frequency, direct costs and years lost to disability (YLD) for adult injury ED presentations in Victoria in 2009.

- There were 122,250 injury ED presentations, 80% of these were unintentional (n=97,266), 6% were intentional (self harm and assaults, n=7,006) and 15% were injuries of other and undetermined intent (n=17,978). The highest ranking causes of adult injury ED presentations were falls (20% of all injury ED presentations, n=24,773) and hit/struck/crush incidents (16%, n=19,849).
- The direct hospital costs of adult injury ED presentations that occurred in 2009 is estimated at \$24.7m., mostly for unintentional injury ED presentations (\$19.6m.). Falls made the greatest contribution to the direct hospital costs (\$5m., 20%), followed by hit/struck/crush incidents (\$4m., 16%).
- Injury ED presentations were responsible for 19,849 years lost to disability (16,156 YLD for unintentional, 437 YLD for intentional, and 3,257 for other and undetermined intent injury ED presentations). Hit/struck/crush incidents accounted for 23% of all years lost to disability (4,631 YLD) and foreign bodies in natural orifices for a further 16% (3,181 YLD).

Table 10 Causes of adult injury ED presentations – ranking by frequency, direct costs and years lost to disability, Victoria 2009

Frequency of hospital ED presentations			Direct costs of hospital ED presentations			Years lost to disability (YLDs)			
	Frequency	%		Total cost	%		Total YLDs	Mean	%
fall	24,773	20.3	fall	\$5,004,146	20.3	hit/struck/crush	4,630.6	0.23	23.3
hit/struck/crush	19,849	16.2	hit/struck/crush	\$4,009,498	16.2	foreign body- natural orifice	3,181.4	0.87	16.0
cutting/piercing	13,301	10.9	cutting/piercing	\$2,686,802	10.9	other specified unintentional	2,190.6	0.19	11.0
other specified unintentional	11,491	9.4	other specified unintentional	\$2,321,182	9.4	cutting/piercing	1,632.4	0.12	8.2
transport	7,959	6.5	transport	\$1,607,718	6.5	unspecified factor	1,604.2	0.21	8.1
unspecified factor	7,778	6.4	unspecified factor	\$1,571,156	6.4	machinery	1,068.2	0.71	5.4
foreign body- natural orifice	3,642	3.0	foreign body- natural orifice	\$735,684	3.0	fall	746.5	0.03	3.8
natural/environmental/animals	3,503	2.9	natural/environmental/animals	\$707,606	2.9	fires/burns/scalds	444.0	0.18	2.2
fires/burns/scalds	2,407	2.0	fires/burns/scalds	\$486,214	2.0	transport	406.6	0.05	2.0
machinery	1,515	1.2	machinery	\$306,030	1.2	natural/environmental/animals	141.9	0.04	<1
poisoning	832	<1	poisoning	\$168,064	<1	poisoning	75.6	0.09	<1
choking/suffocation	175	<1	choking/suffocation	\$35,350	<1	choking/suffocation	29.3	0.17	<1
near drowning	23	<1	near drowning	\$4,646	<1	near drowning	3.7	0.16	<1
explosions/firearms	18	<1	explosions/firearms	\$3,636	<1	explosions/firearms	0.7	0.04	<1
ALL UNINTENTIONAL	97,266	79.6	ALL UNINTENTIONAL	\$19,647,732	79.6	ALL UNINTENTIONAL	16,155.6	0.17	81.4
assault	4,674	3.8	assault	\$944,148	3.8	assault	409.9	0.09	2.1
self harm	2,332	1.9	self harm	\$471,064	1.9	self harm	27.1	0.01	<1
ALL INTENTIONAL	7,006	5.7	ALL INTENTIONAL	\$1,415,212	5.7	ALL INTENTIONAL	437.0	0.06	2.2
OTHER & UNDETERMINED INTENT	17,978	14.7	OTHER & UNDETERMINED INTENT	\$3,631,556	14.7	OTHER & UNDETERMINED INTENT	3,256.7	0.18	16.4
ALL INTENTS	122,250	100.0	ALL INTENTS	\$24,694,500	100.0	ALL INTENTS	19,849.3	0.16	100.0

Source: Victorian Emergency Minimum Dataset, 2009

Notes: (a) overexertion & strenuous movements not able to be identified in VEMD

(b) mean/average cost per ED presentation not shown - \$202 was applied to all ED presentations

Older adult injury ED presentations (65 years and older)

Table 11 gives an overview of the frequency, direct costs and years lost to disability (YLD) for older adult injury ED presentations in Victoria in 2009.

- There were 23,745 injury ED presentations, 85% of these were unintentional (n=20,214), less than 1% were intentional (self harm and assaults, n=141) and 14% were injuries of other and undetermined intent (n=3,390). The highest ranking cause of older adult injury ED presentations was falls (47% of all injury ED presentations, n=11,145).
- The direct hospital costs of older adult injury ED presentations that occurred in 2009 is estimated at \$4.8m., mostly for unintentional injury ED presentations (\$4m.). Falls made the greatest contribution to the direct hospital costs (\$2.3m., 47%).
- Injury ED presentations were responsible for 781 years lost to disability (644 YLD for unintentional, 1.5 YLD for intentional, and 135 for other and undetermined intent injury ED presentations). Hit/struck/crush incidents accounted for 20% of all years lost to disability (157 YLD) and falls for a further 16% (127 YLD).

Table 11 Causes of older adult injury ED presentations – ranking by frequency, direct costs and years lost to disability, Victoria 2009

Frequency of hospital ED presentations			Direct costs of hospital ED presentations			Years lost to disability (YLDs)			
	Frequency	%		Total cost	%		Total YLDs	Mean	%
fall	11,145	46.9	fall	\$2,251,290	46.9	hit/struck/crush	157.0	0.08	20.1
hit/struck/crush	1,934	8.1	hit/struck/crush	\$390,668	8.1	fall	126.7	0.01	16.2
other specified unintentional	1,837	7.7	other specified unintentional	\$371,074	7.7	foreign body- natural orifice	88.5	0.20	11.3
unspecified factor	1,613	6.8	unspecified factor	\$325,826	6.8	other specified unintentional	87.5	0.05	11.2
cutting/piercing	1,501	6.3	cutting/piercing	\$303,202	6.3	unspecified factor	86.1	0.05	11.0
transport	742	3.1	transport	\$149,884	3.1	cutting/piercing	49.1	0.03	6.3
natural/environmental/animals	475	2.0	natural/environmental/animals	\$95,950	2.0	machinery	19.5	0.16	2.5
foreign body- natural orifice	440	1.9	foreign body- natural orifice	\$88,880	1.9	natural/environmental/animals	13.0	0.03	1.7
fires/burns/scalds	216	<1	fires/burns/scalds	\$43,632	<1	fires/burns/scalds	8.7	0.04	1.1
poisoning	136	<1	poisoning	\$27,472	<1	transport	6.3	0.01	<1
machinery	122	<1	machinery	\$24,644	<1	poisoning	1.6	0.01	<1
choking/suffocation	48	<1	choking/suffocation	\$9,696	<1	explosions/firearms	0.0	0.01	<1
explosions/firearms	3	<1	explosions/firearms	\$606	<1	choking/suffocation	0.0	0.00	<1
near drowning	2	<1	near drowning	\$404	<1	near drowning	0.0	0.00	<1
ALL UNINTENTIONAL	20,214	85.1	ALL UNINTENTIONAL	\$4,083,228	85.1	ALL UNINTENTIONAL	644.1	0.03	82.5
assault	96	<1	assault	\$19,392	<1	assault	1.3	0.01	<1
self harm	45	<1	self harm	\$9,090	<1	self harm	0.2	0.00	<1
ALL INTENTIONAL	141	<1	ALL INTENTIONAL	\$28,482	<1	ALL INTENTIONAL	1.5	0.01	<1
OTHER & UNDETERMINED INTENT	3,390	14.3	OTHER & UNDETERMINED INTENT	\$684,780	14.3	OTHER & UNDETERMINED INTENT	135.2	0.04	17.3
ALL INTENTS	23,745	100.0	ALL INTENTS	\$4,796,490	100.0	ALL INTENTS	780.9	0.03	100.0

Source: Victorian Emergency Minimum Dataset, 2009

Notes: (a) overexertion & strenuous movements not able to be identified in VEMD

(b) mean/average cost per ED presentation not shown - \$202 was applied to all ED presentations