



MONASH
University

INJURY DEATHS VICTORIA 2015-2017

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Health
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Services

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SUMMARY OF INJURY DEATHS, VICTORIA 2015-2017

ALL AGES

- In the three-year period 2015-2017, 7761 Victorians died as a result of injury. Seventy-two percent of these deaths were unintentional (71.6%, n=5555), 27.0% were intentional (n=2093: suicide=1932 & homicide=161) and the remaining 1.5% were classified as undetermined intent (n=113).
- The overall average annual injury death rate was 41.9 per 100,000 population.
- Males were overrepresented accounting for 56.5% (n=3137) of unintentional injury deaths, 73.0% (n=1528) of intentional injury deaths and 56.6% (n=64) of undetermined intent injury deaths.
- Three causes: falls (39.2%, n=3039), suicide (24.9%, n=1932) and unintentional poisoning (12.8%, n=991) combined accounted for approximately three-quarters of injury deaths.

CHILDREN (0-14 YEARS)

- In the period 2015-2017, 73 Victorian children died as a result of injury. More than two-thirds of these deaths were unintentional (n=49, 67.1%) and 32.9% were intentional (n=24).
- The overall average annual injury death rate was 2.1 per 100,000 children.
- Boys were overrepresented among all injury (65.8%) and unintentional injury (71.4%) deaths.
- Children aged 0-4 years accounted for 58.9% of child injury deaths (n=43) and 65.3% of unintentional injury deaths (n=32). Children aged 10-14 years accounted for the highest proportion of intentional injury deaths (54.2%, n=13).
- The leading causes of child injury death were transport (31.5%, mainly as car occupants and pedestrians), and homicide and drowning (each 17.8%).

ADOLESCENTS AND YOUNG ADULTS (15-24 YEARS)

- In the period 2015-2017, 482 Victorian adolescents and young adults died as a result of injury. More than half of these deaths were intentional (52.7%, n=254), 44.6% were unintentional (n=215) and the remaining 2.7% were classified as undetermined intent (n=13).
- The overall average annual injury death rate was 19.5 per 100,000 adolescents and young adults.
- Males were overrepresented, accounting for 78.1% of unintentional and 72.8% of intentional injury deaths.
- Suicide (48.3%) and transport incidents (32.0%) were the leading causes of injury deaths among adolescents and young adults (n=233 and n=154, respectively).

ADULTS (25-64 YEARS)

- In the period 2015-2017, 3275 Victorian adults died as a result of injury. More than half of these deaths were unintentional (51.6%, n=1691), 45.9% were intentional (n=1501) and the remaining 2.5% were classified as undetermined intent (n=83).
- The overall average annual injury death rate was 33.2 per 100,000 adults.
- Males were overrepresented accounting for approximately three-quarters of unintentional (76.2%) and intentional (73.1%) injury deaths.
- Suicide accounted for 42.4% of injury deaths (most commonly by hanging). Other common causes of injury death were unintentional poisoning (27.7%) and transport incidents (15.0%, most commonly car occupants).

OLDER ADULTS (65+ YEARS)

- In the period 2015-2017, 3931 Victorian older adults died as a result of injury. Ninety-two percent of these deaths were unintentional (n=3600), 8.0% were intentional (n=314: suicide=300 & homicide=14) and 0.4% were classified as undetermined intent (n=17).
- The overall average annual injury death rate was 141.2 per 100,000 older adults.
- Females were slightly overrepresented in unintentional injury deaths (54.3%, n=1954) while males accounted for almost three-quarters of intentional injury deaths (74.2%, n=233).
- Falls accounted for almost three-quarters of injury deaths among older persons (73.7%, n=2899), followed by suicide (7.6%, n=300) and transport incidents (6.5%, n=254). A high proportion of the fall deaths were coded to 'unspecified fall' (n=2226, 76.8%) but of those with a specified fall mechanism (n=673), more than half were falls on the same level from slipping, tripping or stumbling (54.7%, n=368).

INTRODUCTION

This E-bulletin provides a detailed overview of Victorian injury deaths in the three-year period 2015-2017: the latest available cause of death data held by the Victorian Injury Surveillance Unit (VISU). The E-bulletin shows trends in injury deaths for the period 2007-2017, although the focus is the latest three-year period.

METHODS

DATA SOURCE

Data have been extracted from the VISU-held Cause of Death (COD) dataset supplied by the Australian Coordinating Registry (ACR) and based on the Australian Bureau of Statistics (ABS) cause of death data.

DATA SELECTION

Inclusions:

Main section: deaths recorded for Victorian residents with a reference year of 2015-2017, coded according to the WHO International Classification of Diseases 10th revision (ICD-10).

Trends section: deaths recorded for Victorian residents with a reference year of 2007-2017.

Deaths must have an ICD-10 underlying cause of death code in the range V00–Y84 (unintentional, intentional and undetermined intent injury deaths).

Exclusions:

Deaths resulting from medical causes (adverse events and medical misadventure) have been excluded (ICD-10 codes in the range Y40–Y84).

Child deaths occurring over the 3-year period 2015-2017 coded as 'undetermined intent' were removed from the entire analysis for reasons of confidentiality ($n=1-4$ deaths over the 3-year period). Child 'undetermined intent' deaths were also excluded for the period 2007-2014.

State of residence rather than registration was chosen considering that population rates were to be calculated (see Appendix 2 Table 24 for the influence of this on the data selected). Reference year rather than year of death was chosen, to be consistent with ABS publications of COD data (see Appendix 2 Table 25 for the influence of this on the data selected).

DATA ISSUES

To improve the quality of ICD coding, the ABS introduced a revisions process for all coroner certified deaths registered after 1 January 2006. The process means data are *preliminary* when published for the first time, *revised* when published the following year and *final* when published two years after initial publication. For more detailed information regarding the ABS causes of death coding and revisions processes, readers are directed to the ABS website and in particular:

<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/3303.0Technical+Note12012>

As a result of the revisions process, the current release of data from the ACR contains final data for the period 2006 to 2015, revised data for 2016, and preliminary data for 2017. Data for the 2006 reference year has not been included in this E-bulletin because the revisions process was different to that of the 2007-2017 reference years.

Data for main analysis covers the 3-year period 2015-2017 and as a result of the revisions process, the numbers for two of the three years are subject to revision and will likely change in future E-bulletin editions. Consequently, only nine of the years presented in trend figures are final and statistical analysis of trends has not been conducted. However, trend figures have been provided to give an indication of current trends in Victorian injury deaths. The following symbols have been used throughout this report to distinguish between the data at different stages of the revisions process:

Frequency (final) (◆);

Frequency (revised) (◈);

Frequency (preliminary) (◊).

Rate (final) (●);

Rate (revised) (⊕); and

Rate (preliminary) (○).

The age groups used in this E-bulletin (0-14, 15-24, 25-64, 65+ years) have been selected to match those in the *National Injury Prevention and Safety Promotion Plan: 2004 - 2014* (NIPSP Plan) and will be maintained for consistency.

STATISTICAL ANALYSIS

Age specific rates per 100,000 population have been calculated for all years. The denominators used for calculating rates were June population estimates from the Australian Bureau of Statistics (Source: 3101.0 Australian Demographic Statistics. TABLE 52. Estimated Resident Population by Single Year Of Age, Victoria). Age standardisation of the rates was considered unnecessary for the purpose of this report, as the shifts in the Victorian age distribution over the period 2007-2017 were minor (Appendix 2, Figure 26). Age-group specific rates are presented throughout this report. Where direct comparisons between groups are made, differences in rate have been tested using chi-square tests (results not shown); P-values of <0.05 were considered statistically significant.

ALL AGES

An overview of injury deaths in Victoria over the 3-year period 2015-2017 is provided in Appendix 1 (Table 22). Due to the preliminary/revised nature of the 2016 & 2017 data held by VISU, the most recent three years of data will be presented in this E-bulletin. Any differences between these three years as presented in Table 22 (Appendix 1) should be interpreted with caution: these can be indicative of an underlying trend in injury deaths, an artefact of the step-wise data revisions process, or both. However, overall injury intent proportions did not differ significantly between the year that is final (2015), that which is revised (2016) and the year that is preliminary (2017), with more than 70% of deaths being unintentional in all years of the period (70.2% in 2015, 72.5% in 2016 and 72.0% in 2017); more than a quarter being intentional (28.2% in 2015, 26.4% in 2016 and 26.3% in 2017); and less than 2% coded as undetermined (1.5% in 2015, 1.1% in 2016 and 1.7% in 2017); (chi-square test $p=0.08$). Overall, males accounted for over sixty percent of injury deaths (60.9%, $n=4729$). One quarter of injury deaths were due to suicide (24.9%): 1932 Victorians died by suicide in the period 2015-2017.

Overall, there were 7761 injury deaths recorded for Victoria over the period 2015-2017: an average annual rate of 41.9 deaths per 100,000 Victorians (Table 1).

- All intents annual injury death rates were highest in older adults (141.2 per 100,000 older adults) and lowest in children (2.1 per 100,000 children).
- The all ages unintentional annual injury death rate was 30.0 per 100,000 Victorians; rates were highest in older adults (129.3 per 100,000 older adults) and lowest in children (1.4 per 100,000 children).
- The all ages intentional annual injury death rate was 11.3 per 100,000 Victorians (comprising a 10.4/100,000 suicide rate and a 0.9/100,000 homicide rate). Intentional death rates were highest in adults (15.2 per 100,000 adults) and lowest in children (0.7 per 100,000 children). Suicide and homicide rates both followed this age pattern.
- The all ages undetermined intent annual injury death rate was 0.6 per 100,000 Victorians and rates were highest in adults (0.8 per 100,000 adults).

Over the period 2015-2017, the male average annual age-specific unintentional injury death rate was higher than the female rate in all 5-year age groups. Overall, rates rose after childhood, were fairly stable to age 65 years before increasing dramatically and peaking in the oldest adults (Figure 1).

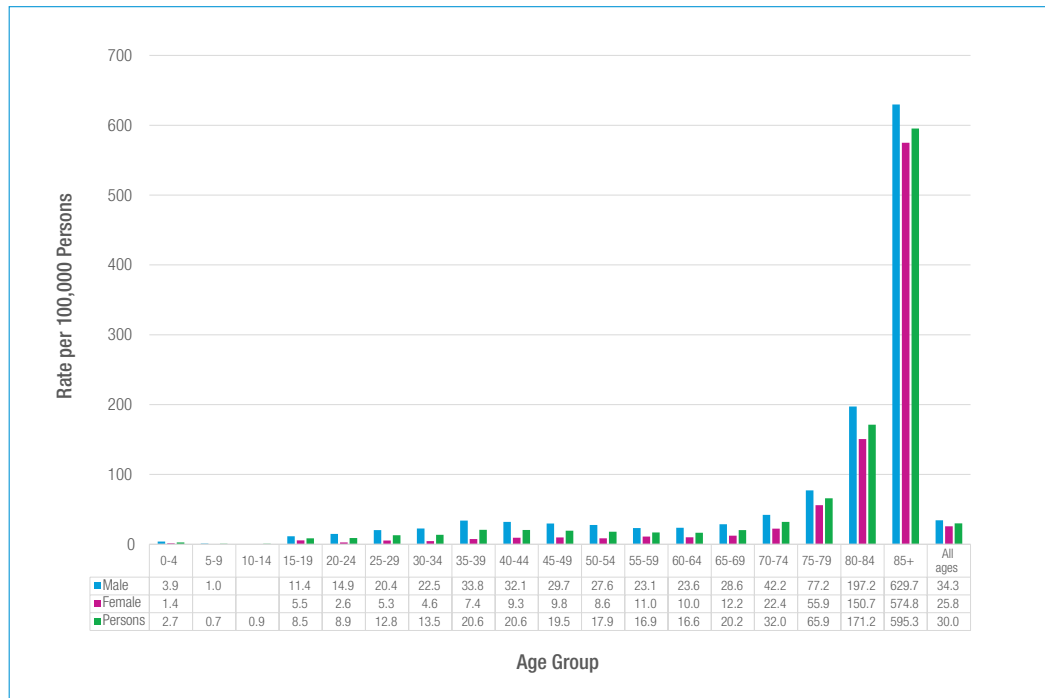
Over the period 2015-2017, the male average annual age-specific intentional injury death rate was higher than the female rate in all 5-year age bands except 0-4 years. Age-specific intentional injury death rates were lowest in children aged 5-9 years and 10-14 years (suppressed in figure) and were highest in adults aged 85+ years (Figure 2).

TABLE 1: FREQUENCY AND AVERAGE ANNUAL RATES OF INJURY DEATHS BY INTENT AND BROAD AGE GROUPS, VICTORIA 2015-2017

	CHILDREN (0-14 YEARS)		ADOLESCENTS AND YOUNG ADULTS (15-24 YEARS)		ADULTS (25-64 YEARS)		OLDER ADULTS (65+ YEARS)		ALL AGES	
	n	RATE PER 100,000	n	RATE PER 100,000	n	RATE PER 100,000	n	RATE PER 100,000	n	RATE PER 100,000
Unintentional	49	1.4	215	8.7	1691	17.2	3600	129.3	5555	30.0
Intentional	24	0.7	254	10.3	1501	15.2	314	11.3	2093	11.3
Suicide	11	0.3	233	9.4	1388	14.1	300	10.8	1932	10.4
Homicide	13	0.4	21	0.9	113	1.1	14	0.5	161	0.9
Undetermined intent	NA	NA	13	0.5	83	0.8	17	0.6	113	0.6
Total	73	2.1	482	19.5	3275	33.2	3931	141.2	7761	41.9

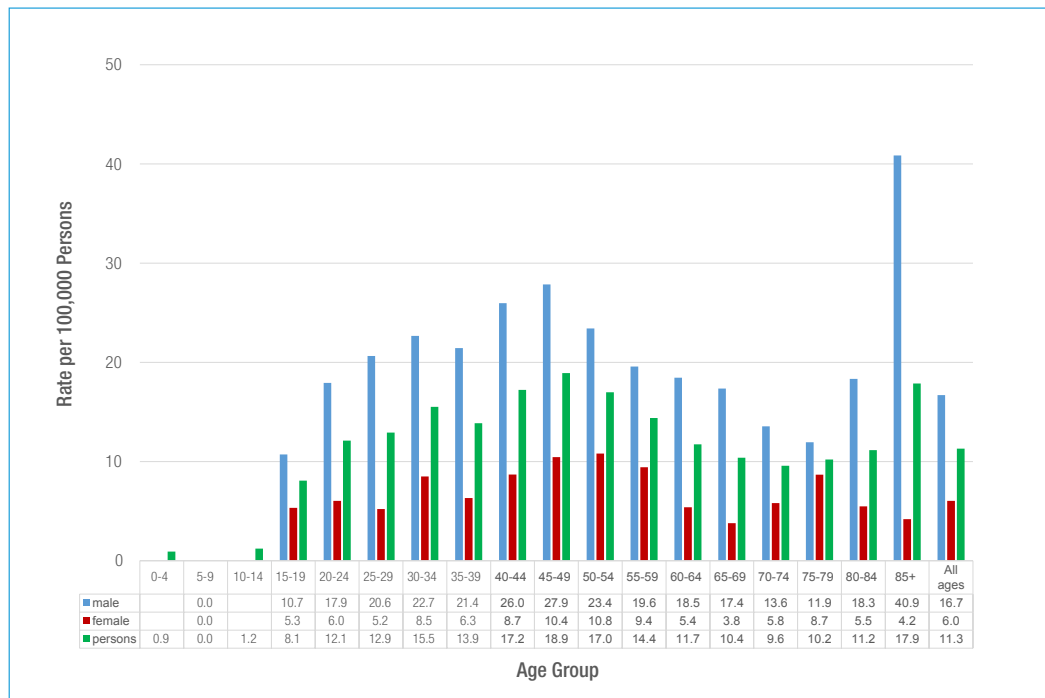
Note: NA = Child deaths coded to 'undetermined intent' were deleted from the entire analysis (see methods section)

FIGURE 1: AVERAGE ANNUAL UNINTENTIONAL INJURY DEATH RATES BY AGE GROUP AND GENDER, VICTORIA 2015-2017



Note: Blank cells indicate suppressed rates due to frequency less than 10.

FIGURE 2: AVERAGE ANNUAL INTENTIONAL INJURY DEATH RATES BY AGE GROUP AND GENDER, VICTORIA 2015-2017



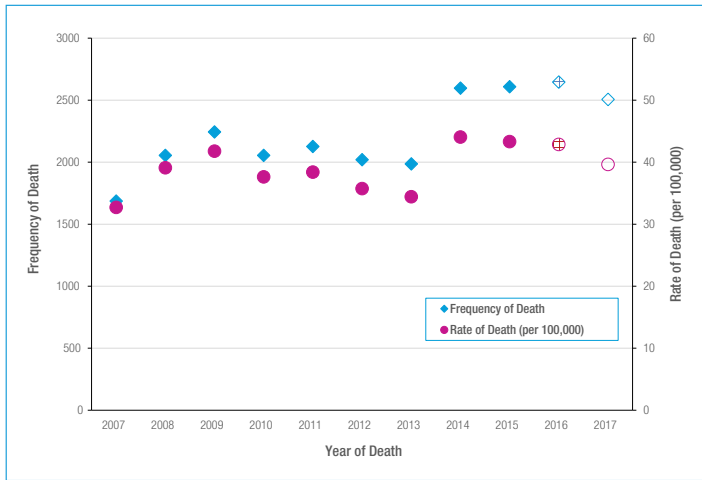
Note: Blank cells indicate suppressed rates due to frequency less than 10.

TREND IN INJURY DEATHS (2007-2017)

Data presented for the years 2016-2017 are not final and subject to revision (see page 2 for more information). Consequently, statistical analysis of trends has not been conducted but figures have been provided here to give an indication of current trends in Victorian injury deaths.

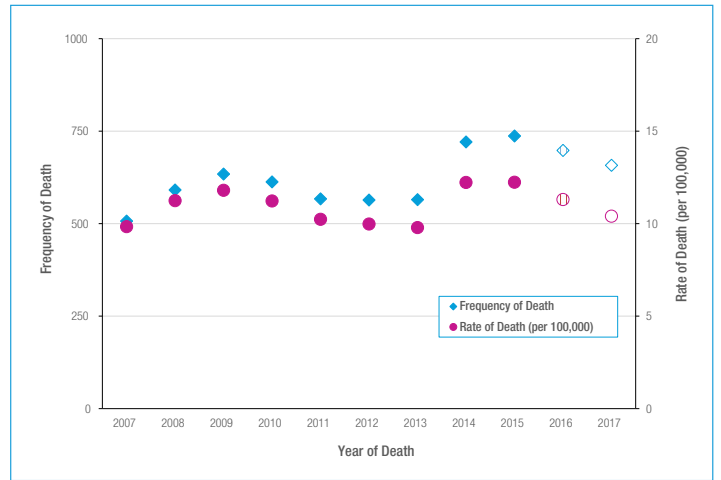
ALL INTENTS INJURY DEATHS

FIGURE 3: TREND IN FREQUENCY AND ANNUAL RATE OF ALL INJURY DEATHS, VICTORIA 2007-2017



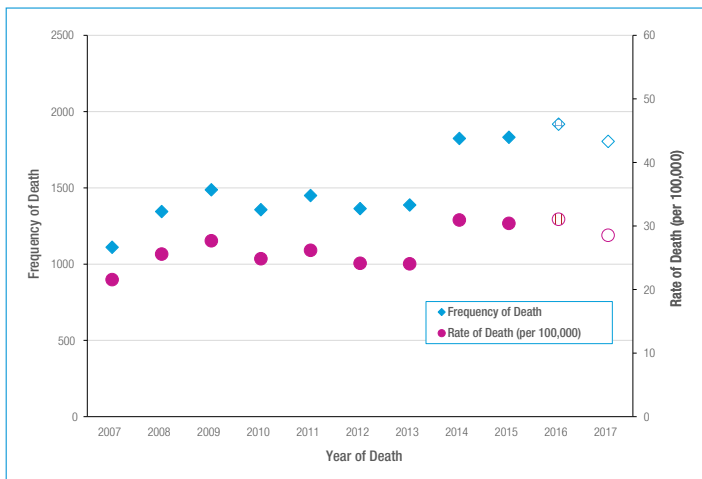
INTENTIONAL INJURY DEATHS

FIGURE 5: TREND IN FREQUENCY AND ANNUAL RATE OF INTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



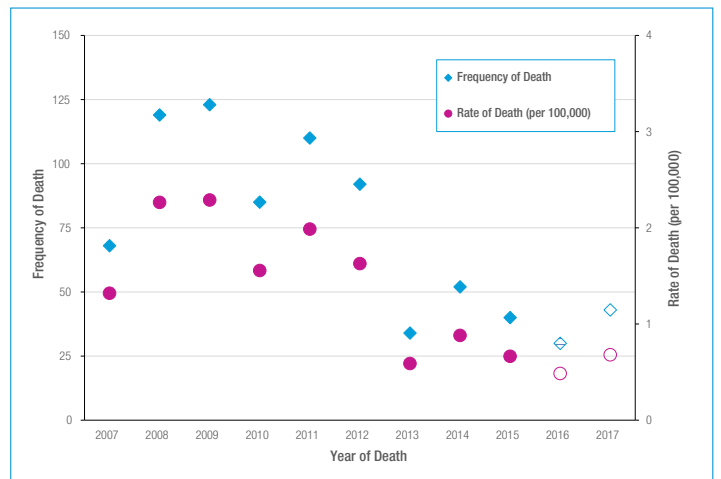
UNINTENTIONAL INJURY DEATHS

FIGURE 4: TREND IN FREQUENCY AND ANNUAL RATE OF UNINTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



UNDETERMINED INTENT INJURY DEATHS

FIGURE 6: TREND IN FREQUENCY AND ANNUAL RATE OF UNDETERMINED INTENT INJURY DEATHS, VICTORIA 2007-2017



- ◆ Frequency (final)
- ◆ Frequency (revised)
- ◆ Frequency (preliminary)
- Rate (final)
- ⊕ Rate (revised)
- Rate (preliminary)

PATTERN OF INJURY DEATHS (2015-2017)

GENDER DISTRIBUTION

- Males were overrepresented accounting for 56.5% of unintentional injury deaths (n=3137), 73.0% of intentional injury deaths (n=1528) and 56.6% of undetermined intent injury deaths (n=64) in Victoria over the period 2015-2017 (Table 2).
- The average annual male injury death rate was 1.6 times higher than the female death rate (51.7/100,000 vs. 32.4/100,000). Men's higher death rates were observed in unintentional, intentional and undetermined intent deaths (by 1.3 times, 2.8 times and 1.3 times, respectively) (Table 2).

AGE DISTRIBUTION

- Persons aged 65 years and older had the highest annual all injury (141.2/100,000) and unintentional injury death rates (129.3/100,000) whereas children aged 0-14 years had the lowest (2.1 and 1.4/100,000, respectively) (Table 3).
- Adults aged 25-64 years had the highest intentional (15.2/100,000) and undetermined intent annual injury death rates (0.8/100,000) and children aged 0-14 years had the lowest intentional annual injury death rate (0.7/100,000) (Table 3).

LEADING CAUSES OF INJURY DEATHS

- Figure 7 shows the leading causes of injury deaths. Falls (39.2%, n=3039), suicide (24.9%, n=1932) and unintentional poisoning (12.8%, n=991) accounted for approximately three-quarters of all injury deaths and transport for a further 11.9% (n=921).
- For more detail on causes of injury deaths see Appendix 1 Table 23.

FIGURE 7: LEADING CAUSES OF INJURY DEATHS, VICTORIA 2015-2017 (N=7761)

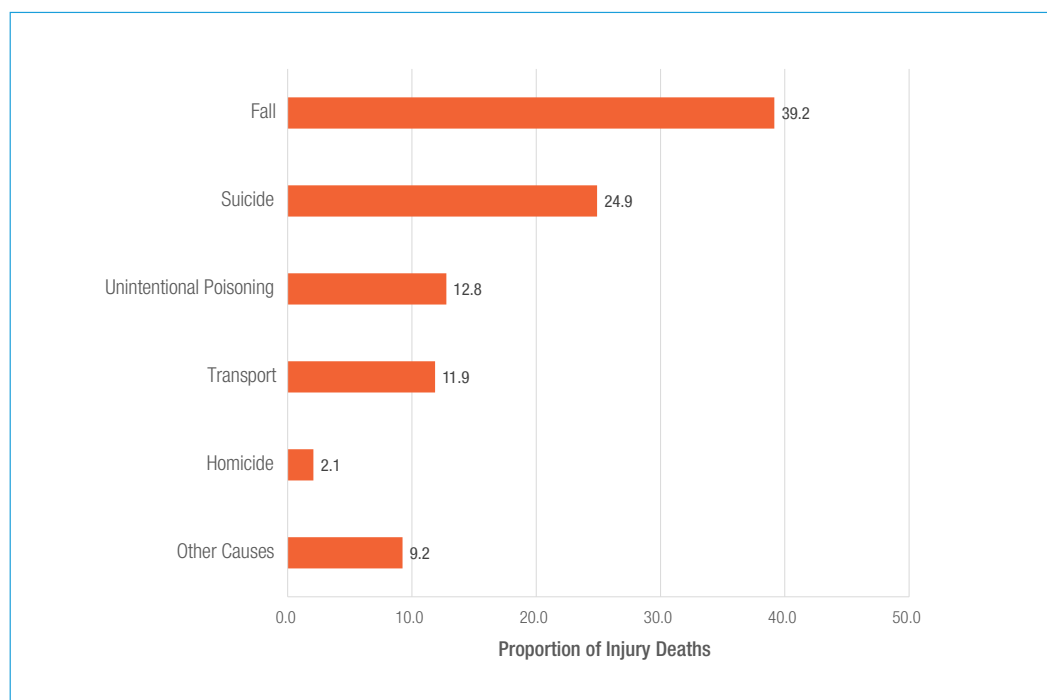


TABLE 2: FREQUENCY AND AVERAGE ANNUAL RATE OF INJURY DEATHS BY INTENT AND GENDER, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
Male	3137	56.5	34.3	1528	73.0	16.7	64	56.6	0.7	4729	60.9	51.7
Female	2418	43.5	25.8	565	27.0	6.0	49	43.4	0.5	3032	39.1	32.4
Persons	5555	100.0	30.0	2093	100.0	11.3	113	100.0	0.6	7761	100.0	41.9

TABLE 3: FREQUENCY AND AVERAGE ANNUAL RATE OF INJURY DEATHS BY INTENT AND AGE GROUP, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
0-14	49	0.9	1.4	24	1.1	0.7	NA	NA	NA	73	0.9	2.1
15-24	215	3.9	8.7	254	12.1	10.3	13	11.5	0.5	482	6.2	19.5
25-64	1691	30.4	17.2	1501	71.7	15.2	83	73.5	0.8	3275	42.2	33.2
65+	3600	64.8	129.3	314	15.0	11.3	17	15.0	0.6	3931	50.7	141.2
All ages	5555	100.0	30.0	2093	100.0	11.3	113	100.0	0.6	7761	100.0	41.9

Note: NA child deaths coded to 'undetermined intent' were deleted from the entire analysis (see methods section)

LEADING CAUSES IN MORE DETAIL

- A high proportion of fall deaths were coded to 'unspecified fall' (n=2295, 75.5%). Of those with a specified fall mechanism (n=744), more than half were falls on the same level from slipping, tripping or stumbling (52.6%, n=391) (Table 4).

TABLE 4: UNINTENTIONAL FALL INJURY DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Same Level: Slipping, Tripping, Stumbling	391	12.9
Involving Bed	103	3.4
On and from Stairs and Steps	63	2.1
Involving Chair	58	1.9
Other Fall on Same Level	35	1.2
On and from Ladder	23	0.8
From, Out of or Through Building or Structure	23	0.8
Involving Wheelchair	17	0.6
Other Fall from One Level to Another	13	0.4
Involving Other Furniture	6	0.2
Other Specified Fall	12	0.4
Unspecified Fall	2295	75.5
All Falls	3039	100.0

- Hanging was the most common method of suicide (n=1024, 53.0%), followed by poisoning by pharmaceuticals (n=289, 15.0%) or another substance (n=144, 7.5%) (Table 5).

TABLE 5: SUICIDES, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Hanging, Strangulation & Suffocation	1024	53.0
Poisoning- Pharmaceuticals	289	15.0
Poisoning Other Substances	144	7.5
Jumping or Lying Before Moving Object	134	6.9
Firearms	97	5.0
Jumping from a High Place	78	4.0
Sharp Object	65	3.4
Crashing of Motor-Vehicle	31	1.6
Drowning & Submersion	28	1.4
Smoke, Fire & Flames	27	1.4
Other Specified Means	*	*
Unspecified Means	*	*
All Suicides	1932	100.0

Note: Frequency less than 5 has been suppressed with an "*". Other cells may be suppressed in order to maintain confidentiality

Narcotics & psychodysleptics (hallucinogens) were the most common specific agents involved in unintentional poisoning deaths (n=209, 21.1%) (Table 6).

TABLE 6: UNINTENTIONAL POISONING DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Narcotics & Psychodysleptics (Hallucinogens) Not Elsewhere Classified	209	21.1
Antiepileptic, Sedative-Hypnotic, Antiparkinsonism & Psychotropic Drugs, Not Elsewhere Classified	102	10.3
Alcohol	64	6.5
Nonopioid Analgesics, Antipyretics & Antirheumatics	8	0.8
Other Specified Poisonings	6	0.6
Other & Unspecified Drugs, Medicaments & Biological Subs	602	60.7
All Poisonings	991	100.0

- Unintentional transport deaths mostly involved car occupants (n=506, 54.9%), motorcycle riders (n=138, 15.0%) or pedestrians (n=133, 14.4%). (Table 7).

TABLE 7: UNINTENTIONAL TRANSPORT DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Car Occupant Injured in Transport Incident	506	54.9
Motorcycle Rider Injured in Transport Incident	138	15.0
Pedestrian Injured in Transport Incident	133	14.4
Other Land Transport Incident	41	4.5
Pedal Cyclist Injured in Transport Incident	34	3.7
Water Transport Incident	22	2.4
Air and Space Transport Incident	21	2.3
Occupant of Heavy Transport Vehicle	13	1.4
Other Specified Transport Incident	13	1.4
All Transport Deaths	921	100.0

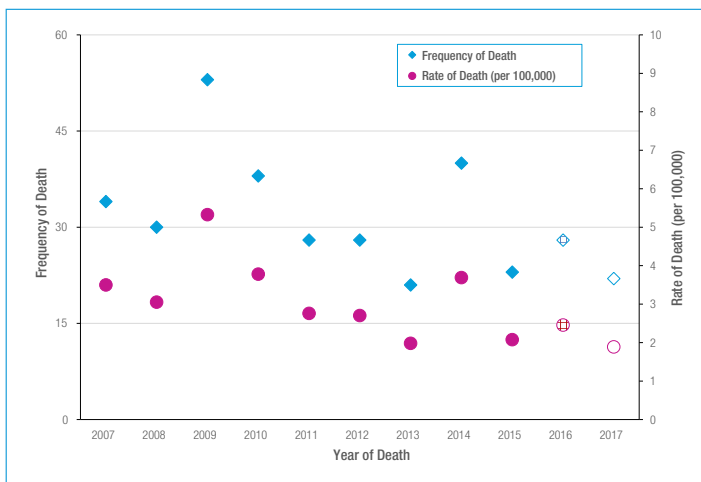
CHILDREN (0-14 YEARS)

TREND IN INJURY DEATHS (2007-2017)

Data presented for the years 2016-2017 are not final and subject to revision (see page 2 for more information). Consequently, statistical analysis of trends has not been conducted but figures have been provided here to give an indication of current trends in Victorian child injury deaths. Trend figures are presented for all injury and unintentional injury deaths only, due to there being less than five intentional deaths among children for most years of the nine year period. (Note: undetermined intent child deaths have been excluded from the entire analysis for reasons of confidentiality)

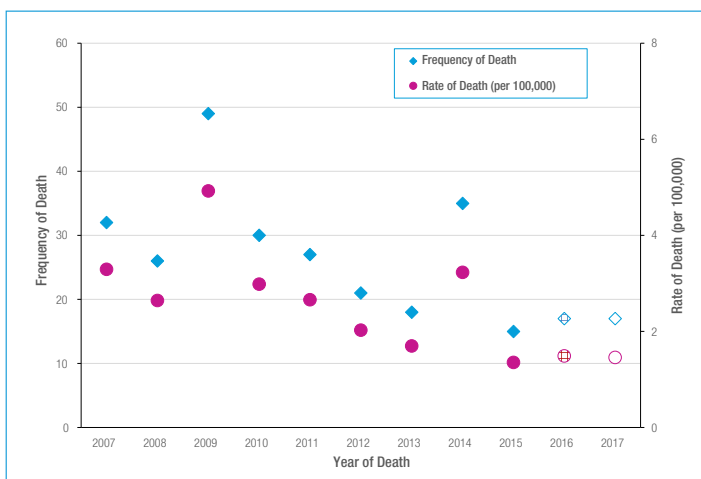
ALL INTENTS INJURY DEATHS

FIGURE 8: TREND IN FREQUENCY AND ANNUAL RATE OF CHILD INJURY DEATHS, VICTORIA 2007-2017



UNINTENTIONAL INJURY DEATHS

FIGURE 9: TREND IN FREQUENCY AND ANNUAL RATE OF CHILD UNINTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



PATTERN OF INJURY DEATHS (2015-2017)

In the period 2015-2017, 73 Victorian children died as a result of injury. More than two-thirds of these deaths were unintentional (67.1%, n=49) (Table 8).

Gender Distribution

- Boys were overrepresented among all injury (65.8%), and unintentional injury deaths (71.4%) (Table 8).
- The annual all injury and unintentional injury death rates were also higher for boys than girls (2.7 & 2.0/100,000 vs. 1.5 & 0.8/100,000 respectively) (Table 8).

Age Distribution

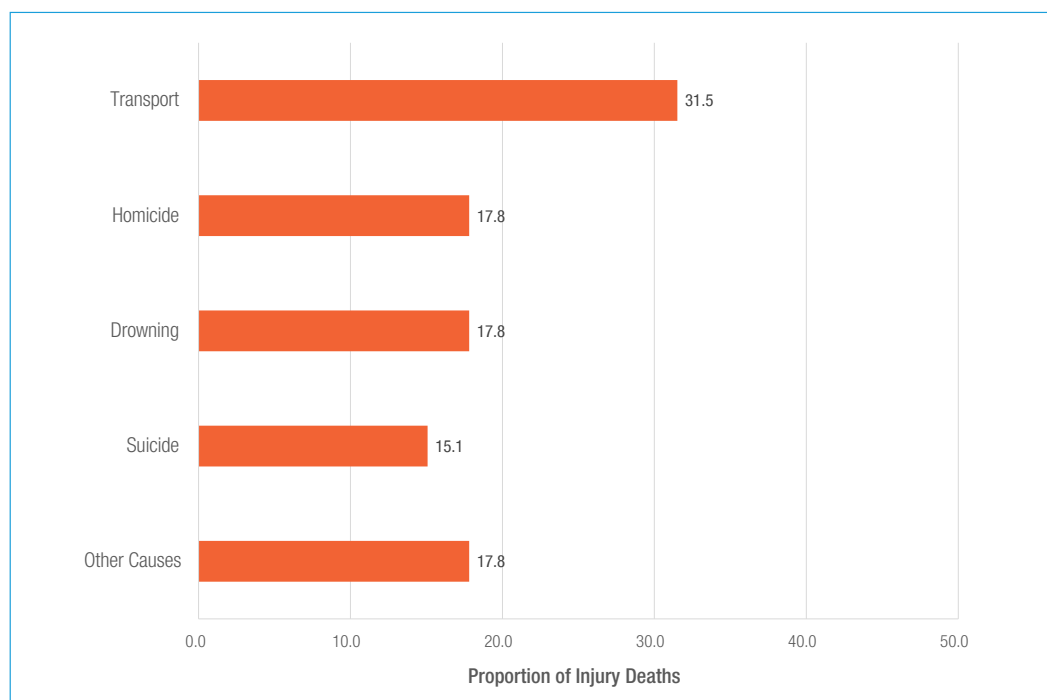
- Children aged 0-4 years accounted for 58.9% of child injury deaths (n=43) and 65.3% of unintentional injury deaths (n=32). Children aged 10-14 years accounted for the highest proportion of intentional injury deaths (54.2%, n=13) (Table 9).
- Unintentional annual injury death rates were highest in children aged 0-4 years (2.7 per 100,000) (Table 9).

Leading Causes of Child Injury Deaths

- Figure 10 shows the leading causes of child injury deaths. Transport accounted for 31.5% of injury deaths (n=23), followed by homicide and drowning (each 17.8%, n=13).
- Child transport deaths mainly involved car occupants (n=12) and pedestrians (n=10).
- For more detail on causes of injury deaths see Appendix 1 Table 23.

◆	Frequency (final)	●	Rate (final)
◇	Frequency (revised)	⊕	Rate (revised)
◊	Frequency (preliminary)	○	Rate (preliminary)

FIGURE 10: LEADING CAUSES OF CHILD INJURY DEATHS, VICTORIA 2015-2017 (N=73)



Note: The cause categories “other specified unintentional”, “unspecified unintentional” were included in the “other causes” category.

TABLE 8: FREQUENCY AND AVERAGE ANNUAL RATE OF CHILD INJURY DEATHS BY INTENT AND GENDER, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			ALL*		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
Male	35	71.4	2.0	13	54.2	0.7	48	65.8	2.7
Female	14	28.6	0.8	11	45.8	0.7	25	34.2	1.5
All	49	100.0	1.4	24	100.0	0.7	73	100.0	2.1

Notes: * Child deaths coded to ‘undetermined intent’ were deleted from the entire analysis (see methods section)

TABLE 9: FREQUENCY AND AVERAGE ANNUAL RATE OF CHILD INJURY DEATHS BY INTENT AND AGE GROUP, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			ALL*		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
0-4	32	65.3	2.7	11	45.8	0.9	43	58.9	3.6
5-9	8	16.3	**	0	0.0	0.0	8	11.0	**
10-14	9	18.4	**	13	54.2	1.2	22	30.1	2.1
All	49	100.0	1.4	24	100.0	0.7	73	100.0	2.1

Notes: Rates based on frequency less than 10 have been suppressed with “**”.

* Child deaths coded to ‘undetermined intent’ were deleted from the entire analysis (see methods section)

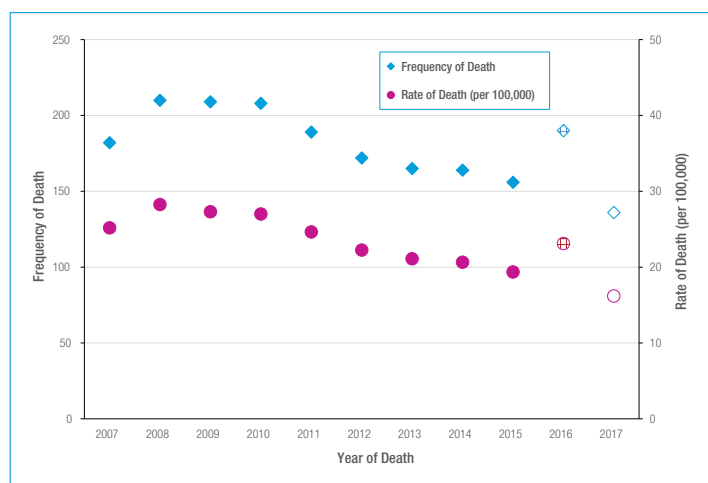
ADOLESCENTS AND YOUNG ADULTS (15-24 YEARS)

TREND IN INJURY DEATHS (2007-2017)

Data presented for the years 2016-2017 are not final and subject to revision (see page 2 for more information). Consequently, statistical analysis of trends has not been conducted but figures have been provided here to give an indication of current trends in Victorian injury deaths among adolescents and young adults.

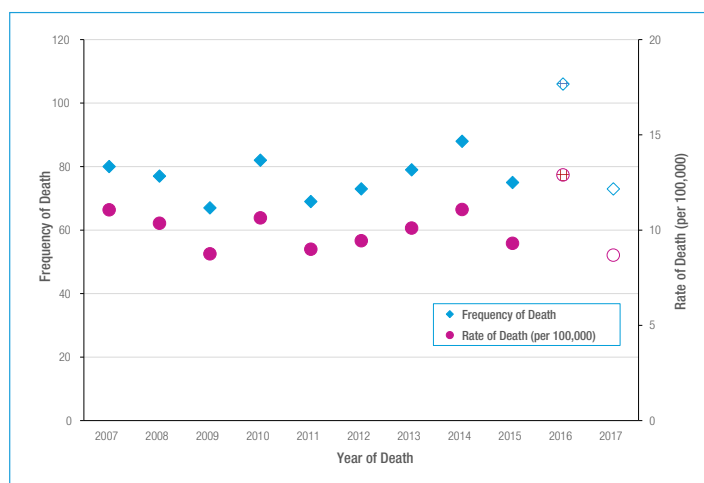
ALL INTENTS INJURY DEATHS

FIGURE 11: TREND IN FREQUENCY AND ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT INJURY DEATHS, VICTORIA 2007-2017



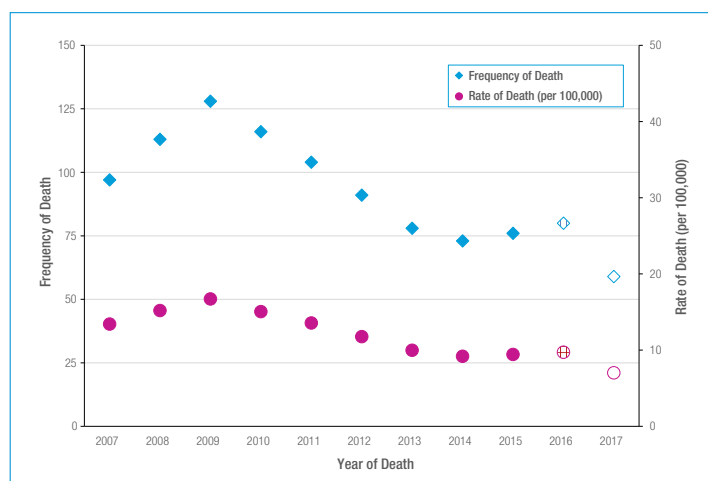
INTENTIONAL INJURY DEATHS

FIGURE 13: TREND IN FREQUENCY AND ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT INTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



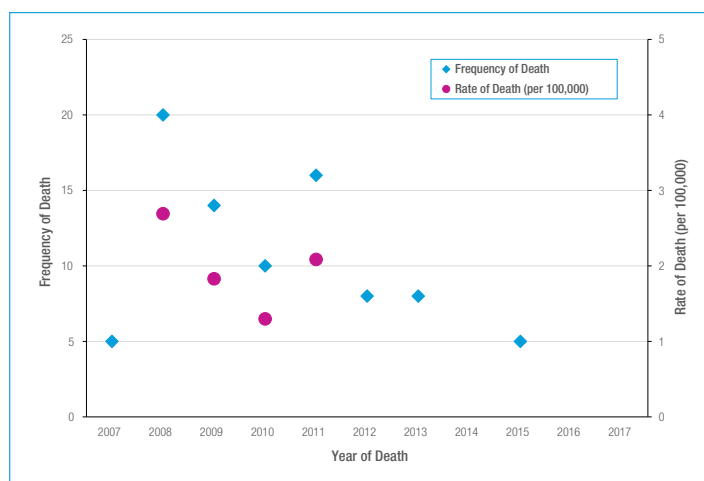
UNINTENTIONAL INJURY DEATHS

FIGURE 12: TREND IN FREQUENCY AND ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT UNINTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



UNDETERMINED INTENT INJURY DEATHS

FIGURE 14: TREND IN FREQUENCY AND ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT UNDETERMINED INTENT INJURY DEATHS, VICTORIA 2007-2017



Note: Frequency of less than 5 and rates based on frequency less than 10 have been suppressed

- ◆ Frequency (final)
- ◆ Frequency (revised)
- ◆ Frequency (preliminary)
- Rate (final)
- ⊕ Rate (revised)
- Rate (preliminary)

PATTERN OF INJURY DEATHS (2015-2017)

In the period 2015-2017, 482 Victorian adolescents and young adults died as a result of injury. More than half of the deaths were intentional (52.7%, n=254), 44.6% were unintentional (n=215) and 2.7% were classified as undetermined intent (n=13) (Table 10).

Gender Distribution

- Males were overrepresented, accounting for 78.1% of unintentional (n=168) and 72.8% of intentional (n=185) injury deaths among adolescents and young adults (Table 10).
- The corresponding adolescent and young adult unintentional and intentional annual injury death rates were also higher for males than females (13.3 & 14.7/100,000 vs. 3.9 & 5.7/100,000 respectively) (Table 10).

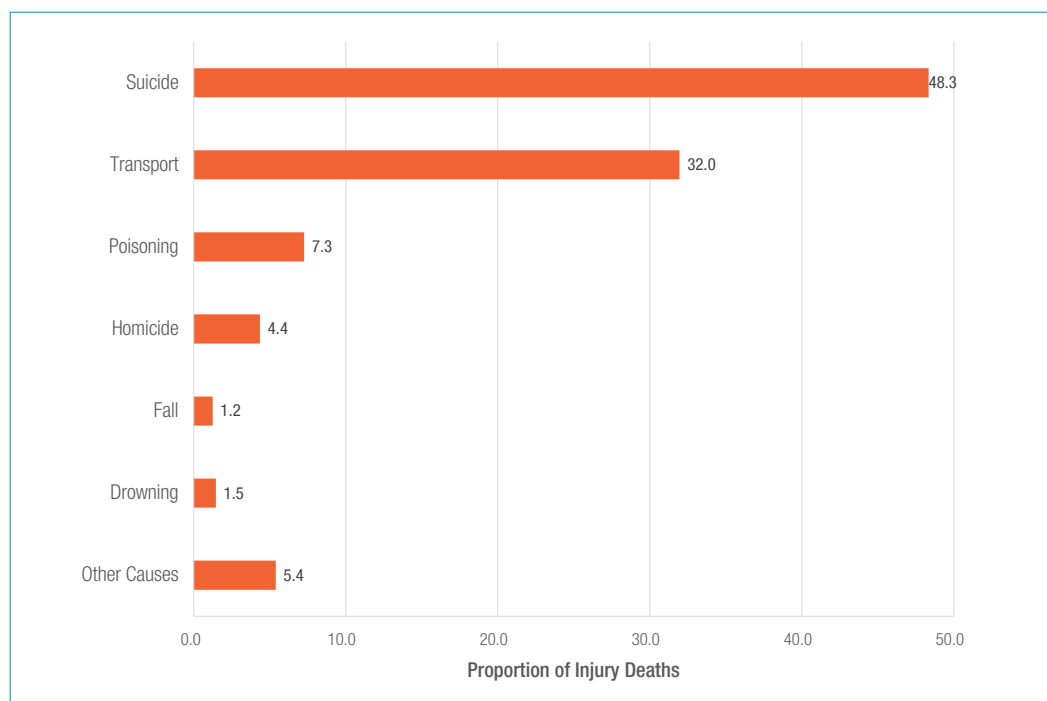
Age Distribution

- Intentional annual injury death rates were higher among persons aged 20-24 years than persons aged 15-19 years (12.1/100,000 vs. 8.1/100,000) (Table 11).

Leading Causes of Adolescent and Young Adult Injury Deaths

- Figure 15 shows the leading causes of adolescent and young adult injury death. Suicide accounted for 48.3% of injury deaths (n=233), followed by transport incidents (32.0%, n=154) and unintentional poisoning (7.3%, n=35).
- For more detail on causes of injury deaths see Appendix 1 Table 23.

FIGURE 15: LEADING CAUSES OF ADOLESCENT AND YOUNG ADULT INJURY DEATHS, VICTORIA 2015-2017 (N=482)



Note: The cause categories "other specified unintentional", "unspecified unintentional" and "undetermined intent" were included in the "other causes" category.

TABLE 10: FREQUENCY AND AVERAGE ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT INJURY DEATHS BY INTENT AND GENDER, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
Male	168	78.1	13.3	185	72.8	14.7	8	61.5	**	361	74.9	28.6
Female	47	21.9	3.9	69	27.2	5.7	5	38.5	**	121	25.1	10.0
All	215	100.0	8.7	254	100.0	10.3	13	100.0	0.5	482	100.0	19.5

Note: Rates based on frequency less than 10 have been suppressed with “**”

TABLE 11: FREQUENCY AND AVERAGE ANNUAL RATE OF ADOLESCENT AND YOUNG ADULT INJURY DEATHS BY INTENT AND AGE GROUP, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
15-19	95	44.2	8.5	90	35.4	8.1	5	38.5	**	190	39.4	17.1
20-24	120	55.8	8.9	164	64.6	12.1	8	61.5	**	292	60.6	21.6
All	215	100.0	8.7	254	100.0	10.3	13	100.0	0.5	482	100.0	19.5

Note: Rates based on frequency less than 10 have been suppressed with “**”

LEADING CAUSES IN MORE DETAIL

- Hanging was the most common method of suicide among adolescents and young adults (n=131, 56.2%) (Table 12).

TABLE 12: SUICIDES, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Hanging, Strangulation & Suffocation	131	56.2
Jumping or Lying Before Moving Object	41	17.6
Poisoning- Pharmaceuticals	20	8.6
Jumping from a High Place	10	4.3
Poisoning Other Substances	8	3.4
Firearms	8	3.4
Sharp Object	7	3.0
Other Specified Means	8	3.4
All	233	100.0

- Unintentional transport deaths among adolescents and young adults mostly involved car occupants (n=114, 74.0%) (Table 13).

TABLE 13: TRANSPORT INJURY DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Car Occupant	114	74.0
Motorcycle Rider	16	10.4
Pedestrian	12	7.8
Other Transport	12	7.8
All Transport	154	100.0

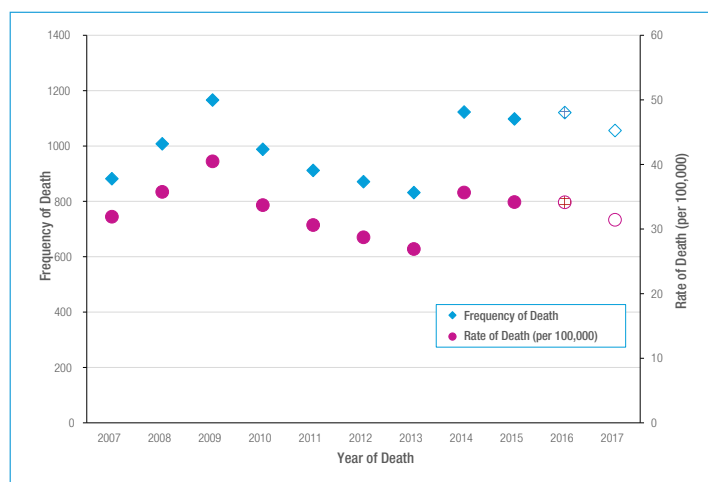
ADULTS (25-64 YEARS)

TREND IN INJURY DEATHS (2007-2017)

Data presented for the years 2016-2017 are not final and subject to revision (see page 2 for more information). Consequently, statistical analysis of trends has not been conducted but figures have been provided here to give an indication of current trends in Victorian adult injury deaths.

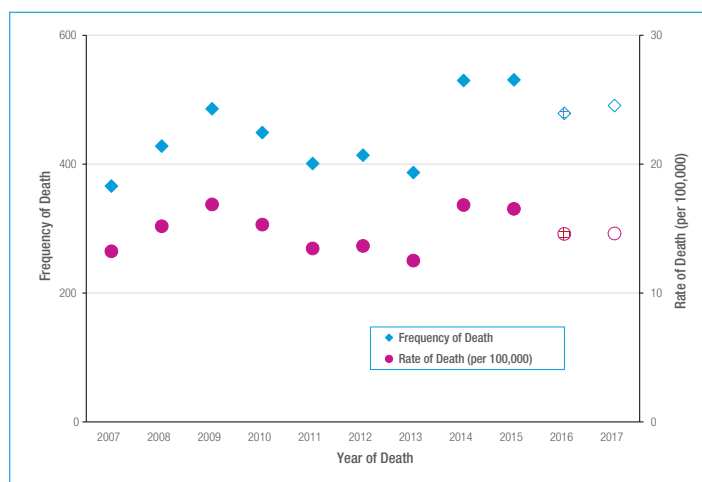
ALL INTENTS INJURY DEATHS

FIGURE 16: TREND IN FREQUENCY AND ANNUAL RATE OF ADULT INJURY DEATHS, VICTORIA 2007-2017



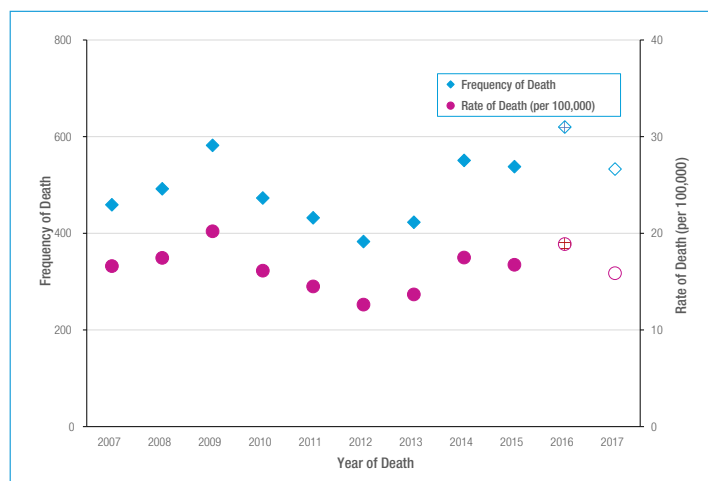
INTENTIONAL INJURY DEATHS

FIGURE 18: TREND IN FREQUENCY AND ANNUAL RATE OF ADULT INTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



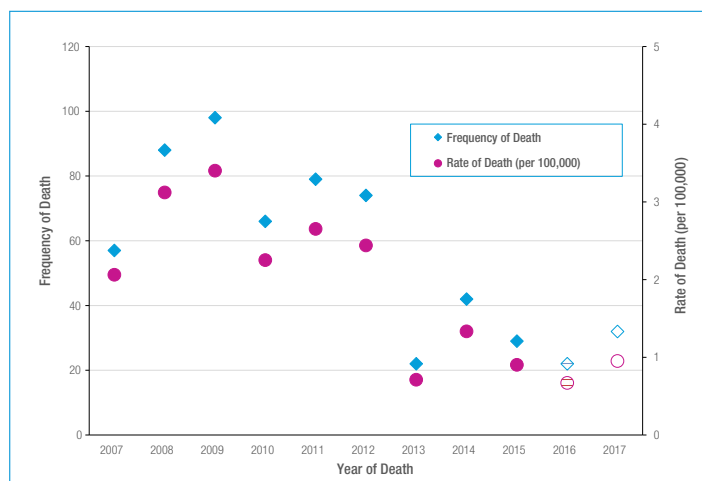
UNINTENTIONAL INJURY DEATHS

FIGURE 17: TREND IN FREQUENCY AND ANNUAL RATE OF ADULT UNINTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



UNDETERMINED INTENT INJURY DEATHS

FIGURE 19: TREND IN FREQUENCY AND ANNUAL RATE OF ADULT UNDETERMINED INTENT INJURY DEATHS, VICTORIA 2007-2017



- ◆ Frequency (final) ● Rate (final)
- ◇ Frequency (revised) ⊕ Rate (revised)
- ◇ Frequency (preliminary) ○ Rate (preliminary)

PATTERN OF INJURY DEATHS (2015-2017)

In the period 2015-2017, 3275 Victorian adults died as a result of injury. More than half of these deaths were unintentional (51.6%, n=1691), 45.9% were intentional (n=1501) and the remaining 2.5% were classified as undetermined intent (n=83) (Table 14).

Gender Distribution

- Males were overrepresented in adult injury deaths, accounting for around three-quarters of unintentional (76.2%, n=1288) and intentional injury deaths (73.1%, n=1097) (Table 14).
- The unintentional and intentional injury annual death rates were higher for males than females (26.5 & 22.6/100,000 vs. 8.1 & 8.1/100,000, respectively) (Table 14).

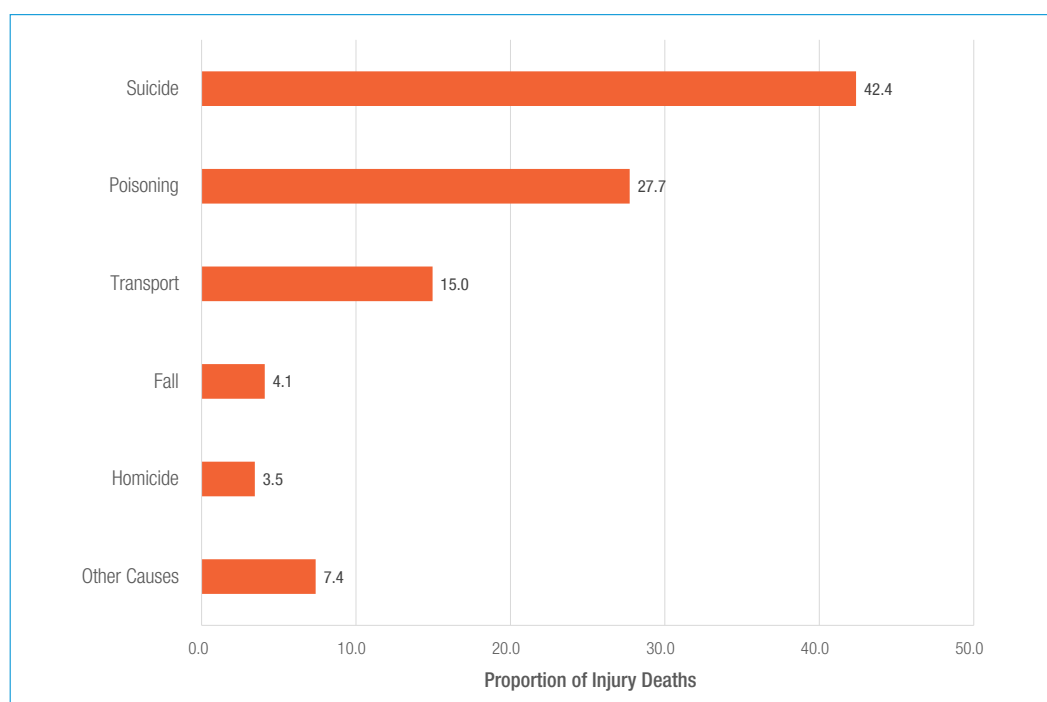
Age Distribution

- Average annual rates were fairly evenly spread across the adult age groups for both unintentional injury and intentional injury deaths (Table 15).

Leading Causes of Adult Injury Deaths

- Figure 20 shows the leading causes of adult injury death. Suicide accounted for 42.4% of injury deaths (n=1388), followed by unintentional poisoning (27.7%, n=908) and transport (15.0%, n=490).
- For more detail on causes of injury deaths see Appendix 1 (Table 23).

FIGURE 20: LEADING CAUSES OF ADULT INJURY DEATHS, VICTORIA 2015-2017 (N=3275)



Note: The cause categories “other specified unintentional”, “unspecified unintentional” and “undetermined intent” were included in the “other causes” category.

TABLE 14: FREQUENCY AND AVERAGE ANNUAL RATE OF ADULT INJURY DEATHS BY INTENT AND GENDER, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
Male	1288	76.2	26.5	1097	73.1	22.6	46	55.4	0.9	2431	74.2	50.1
Female	403	23.8	8.1	404	26.9	8.1	37	44.6	0.7	844	25.8	16.9
All	1691	100.0	17.2	1501	100.0	15.2	83	100.0	0.8	3275	100.0	33.2

TABLE 15: FREQUENCY AND AVERAGE ANNUAL RATE OF ADULT INJURY DEATHS BY INTENT AND AGE GROUP, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
25-29	187	11.1	12.8	188	12.5	12.9	7	8.4	**	382	11.7	26.2
30-34	192	11.4	13.5	221	14.7	15.5	9	10.8	**	422	12.9	29.6
35-39	260	15.4	20.6	175	11.7	13.9	17	20.5	1.3	452	13.8	35.8
40-44	257	15.2	20.6	215	14.3	17.2	16	19.3	1.3	488	14.9	39.1
45-49	240	14.2	19.5	233	15.5	18.9	7	8.4	**	480	14.7	39.0
50-54	208	12.3	17.9	197	13.1	17.0	14	16.9	1.2	419	12.8	36.1
55-59	186	11.0	16.9	158	10.5	14.4	6	7.2	**	350	10.7	31.9
60-64	161	9.5	16.6	114	7.6	11.7	7	8.4	**	282	8.6	29.0
All	1691	100.0	17.2	1501	100.0	15.2	83	100.0	0.8	3275	100.0	33.2

Note: Rates based on frequency less than 10 have been suppressed with "**".

LEADING CAUSES IN MORE DETAIL

- Hanging was the most common method of suicide (n=772, 55.6%) among adults, followed by poisoning with pharmaceutical substances (n=199, 14.3%) and non-pharmaceutical substances (n=112, 8.1%) (Table 16).

TABLE 16: SUICIDES, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Hanging, Strangulation & Suffocation	772	55.6
Poisoning- Pharmaceuticals	199	14.3
Poisoning- Other Substances	112	8.1
Jumping or Lying Before Moving Object	78	5.6
Jumping from a High Place	62	4.5
Firearms	48	3.5
Sharp Object	46	3.3
Crashing of Motor-Vehicle	24	1.7
Smoke, Fire & Flames	20	1.4
Drowning and Submersion	18	1.3
Other Specified Means	*	*
Unspecified Means	*	*
All Suicides	1388	100

Note: Frequency less than 5 has been suppressed with an "*". Other cells may be suppressed in order to maintain confidentiality.

- Narcotics & psychodysleptics (hallucinogens) were the most common specific agents involved in unintentional poisoning deaths among adults (n=204) (Table 17).

TABLE 17: UNINTENTIONAL POISONING DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Narcotics & Psychodysleptics {Hal-Lucinogens} Not Elsewhere Classified	204	22.5
Antiepileptic, Sedative-Hypnotic, Antiparkinsonism & Psychotropic Drugs, Not Elsewhere Classified	87	9.6
Alcohol	55	6.1
Nonopioid Analgesics, Antipyretics & Antirheumatics	*	*
Other Drugs Acting On The Autonomic Nervous System	*	*
Other & Unspecified Chemicals & Noxious Substances	*	*
Other & Unspecified Drugs, Medicaments & Biological Subs	553	60.9
All Poisoning	908	100.0

Note: Frequency less than 5 has been suppressed with an “*”. Other cells may be suppressed in order to maintain confidentiality.

- Unintentional transport deaths among adults mostly involved car occupants (48.4%, n=237) and motorcycle riders (23.9%, n=117) (Table 18).

TABLE 18: UNINTENTIONAL TRANSPORT DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Car Occupant Injured in Transport Incident	237	48.4
Motorcycle Rider Injured in Transport Incident	117	23.9
Pedestrian Injured in Transport Incident	51	10.4
Pedal Cyclist Injured in Transport Incident	23	4.7
Other Land Transport Incident	22	4.5
Water Transport Incident	13	2.7
Occupant of Heavy Transport Vehicle	12	2.4
Air and Space Transport Incident	*	*
Other Specified	*	*
All Transport	490	100.0

Note: Frequency less than 5 has been suppressed with an “*”. Other cells may be suppressed in order to maintain confidentiality.

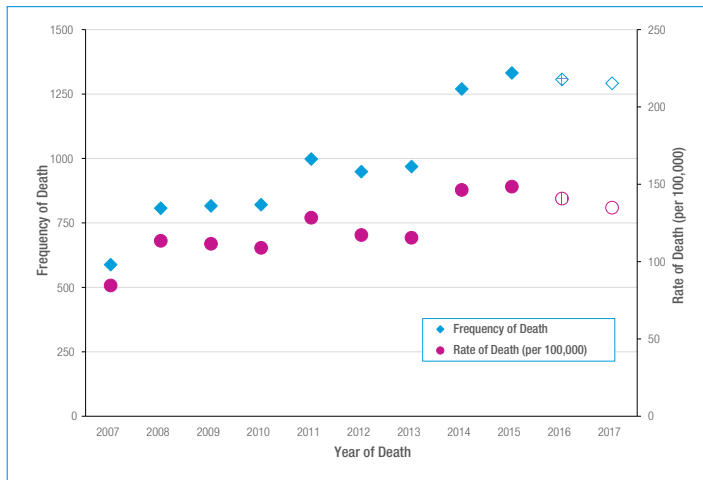
OLDER ADULTS (65 YEARS+)

TREND IN INJURY DEATHS (2007-2017)

Data presented for the years 2016-2017 are not final and subject to revision (see page 2 for more information). Consequently, statistical analysis of trends has not been conducted but figures have been provided here to give an indication of current trends in Victorian injury deaths among older adults.

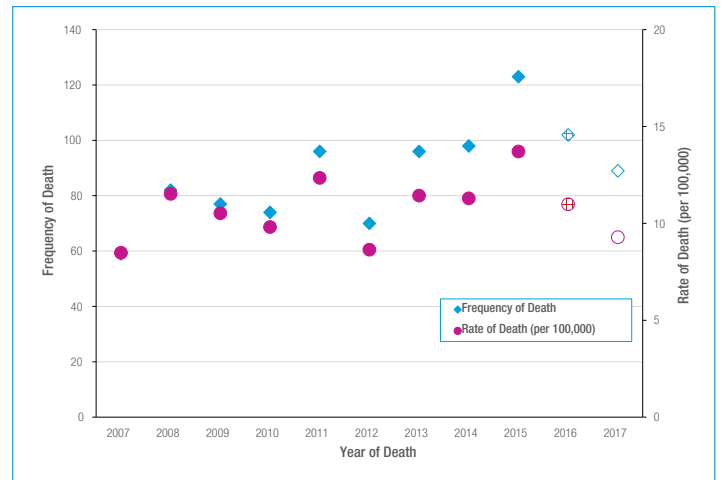
ALL INTENTS INJURY DEATHS

FIGURE 21: TREND IN FREQUENCY AND ANNUAL RATE OF OLDER ADULT INJURY DEATHS, VICTORIA 2007-2017



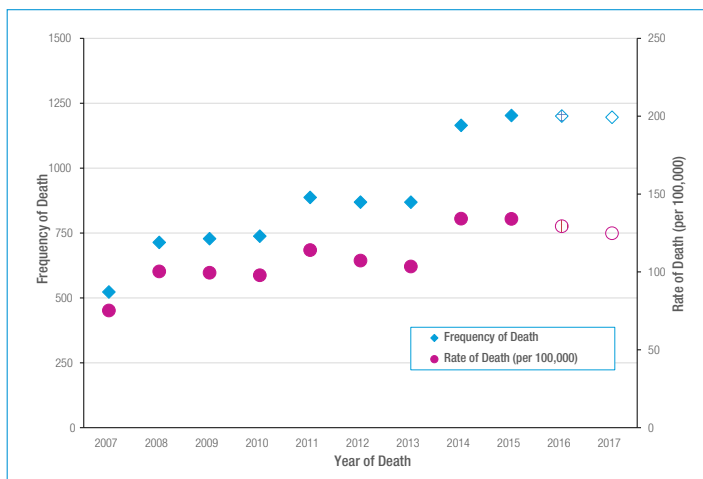
INTENTIONAL INJURY DEATHS

FIGURE 23: TREND IN FREQUENCY AND ANNUAL RATE OF OLDER ADULT INTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



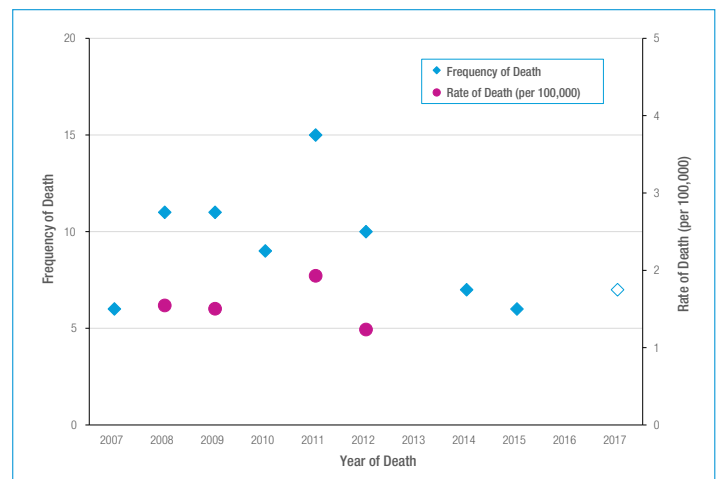
UNINTENTIONAL INJURY DEATHS

FIGURE 22: TREND IN FREQUENCY AND ANNUAL RATE OF OLDER ADULT UNINTENTIONAL INJURY DEATHS, VICTORIA 2007-2017



UNDETERMINED INTENT INJURY DEATHS

FIGURE 24: TREND IN FREQUENCY AND ANNUAL RATE OF OLDER ADULT UNDETERMINED INTENT INJURY DEATHS, VICTORIA 2007-2017



Note: Frequency less than 5 and rates based on frequency less than 10 have been suppressed.

- ◆ Frequency (final)
- ◆ Frequency (revised)
- ◆ Frequency (preliminary)
- Rate (final)
- ⊕ Rate (revised)
- Rate (preliminary)

PATTERN OF INJURY DEATHS (2015-2017)

In the period 2015-2017, 3931 Victorian older adults died as a result of injury. Ninety-two percent of these deaths were unintentional (91.6%, n=3600), 8.0% were intentional (n=314) and 0.4% were classified as undetermined intent (n=17) (Table 19).

Gender Distribution

- More than half of the unintentional injury deaths (54.3%, n=1954) were among females, while males accounted for approximately three-quarters of intentional injury deaths (74.2%, n=233) (Table 19).
- The all injury and unintentional injury annual death rates were similar for males (146.9 & 128.0/100,000) and females (136.3 & 130.5/100,000, respectively) (Table 19).
- The intentional injury annual death rates were higher for males (18.1/100,000) compared to females (5.4/100,000) (Table 19).

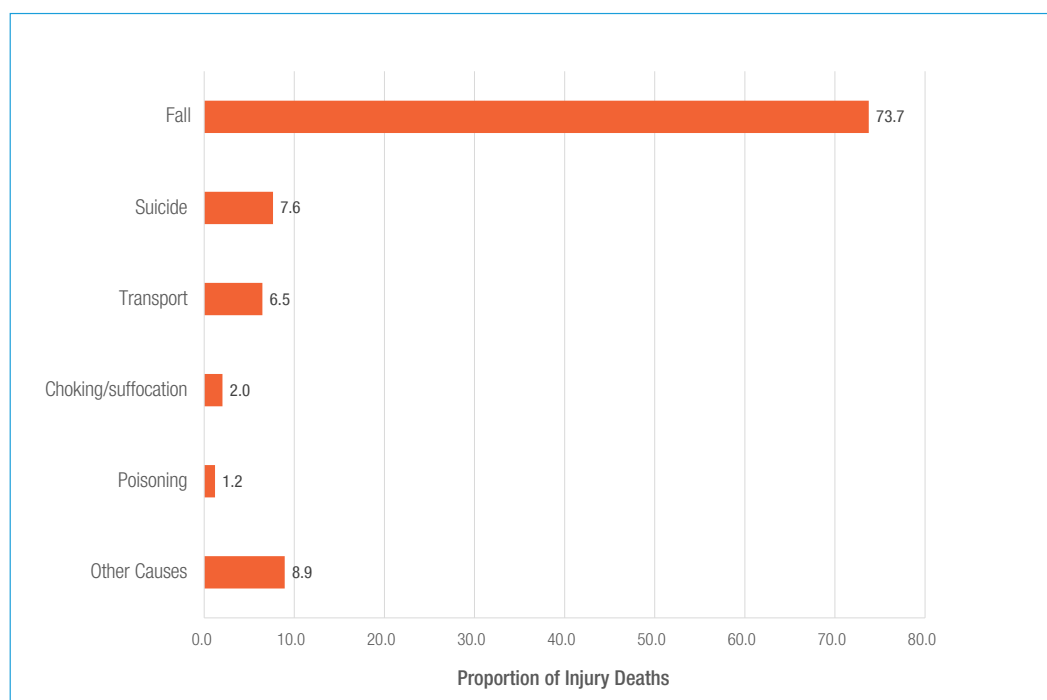
Age Distribution

- Unintentional injury annual death rates increased as age increased with the highest rates observed in persons aged 85 years and older (595.3/100,000) (Table 20).
- Intentional injury annual death rates were fairly consistent across the older adult age groups in the 65-84 year range but were higher among those aged 85 years and older (17.9/100,000) (Table 20).

Leading Causes of Older Adult Injury Deaths

- Figure 25 shows the 5 leading causes of older adult injury deaths. Falls accounted for almost three-quarters of injury deaths (73.7%, n=2899), followed by suicide (7.6%, n=300), transport incidents (6.5%, n=254), choking/suffocation (2.0%, n=80), and unintentional poisoning (1.2%, n=47).
- For more detail on causes of injury deaths see Appendix 1 Table 23.

FIGURE 25: LEADING CAUSES OF OLDER ADULT INJURY DEATHS, VICTORIA 2015-2017 (N=3882)



Note: The cause categories "other specified unintentional", "unspecified unintentional" and "undetermined intent" were included in the "other causes" category.

TABLE 19: FREQUENCY AND AVERAGE ANNUAL RATE OF OLDER ADULT INJURY DEATHS BY INTENT AND GENDER, VICTORIA 2015-2017

	UNINTENTIONAL			INTENTIONAL			UNDETERMINED INTENT			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
Male	1646	45.7	128.0	233	74.2	18.1	10	58.8	0.8	1889	48.1	146.9
Female	1954	54.3	130.5	81	25.8	5.4	7	41.2	**	2042	51.9	136.3
All	3600	100.0	129.3	314	100.0	11.3	17	100.0	0.6	3931	100.0	141.2

Note: Rates based on frequency less than 10 have been suppressed with "**".

TABLE 20: FREQUENCY AND AVERAGE ANNUAL RATE OF OLDER ADULT INJURY DEATHS BY INTENT AND AGE GROUP, VICTORIA 2015-2017*

	UNINTENTIONAL			INTENTIONAL			ALL		
	n	%	RATE PER 100,000	n	%	RATE PER 100,000	n	%	RATE PER 100,000
65-69	177	4.9	20.2	91	29.0	10.4	268	6.8	30.6
70-74	214	5.9	32.0	64	20.4	9.6	278	7.1	41.6
75-79	329	9.1	65.9	51	16.2	10.2	380	9.7	76.1
80-84	614	17.1	171.2	40	12.7	11.2	654	16.7	182.4
85+	2266	62.9	595.3	68	21.7	17.9	2334	59.6	613.2
All	3600	100.0	129.3	314	100.0	11.3	3914	100.0	140.6

Note: * undetermined intent deaths (n=17) excluded from this table and from the "ALL" column to maintain confidentiality

LEADING CAUSE IN MORE DETAIL

- A high proportion of fall deaths among older adults were coded to 'unspecified fall' (n=2226, 76.8%) (Table 21). Of those with a specified fall mechanism (n=673), more than half were falls on the same level from slipping, tripping or stumbling (54.7%, n=368).

TABLE 21: UNINTENTIONAL FALL DEATHS, VICTORIA 2015-2017

DETAILED CAUSE	n	%
Same Level from Slipping, Tripping, Stumbling	368	12.7
Involving Bed	97	3.3
Involving Chair	58	2.0
On and from Stairs and Steps	52	1.8
Other Fall on Same Level	33	1.1
On and from Ladder	18	0.6
Involving wheelchair	15	0.5
From, out of or Through Building or Structure	12	0.4
Other Fall from One Level to Another	9	0.3
Involving Other Furniture	6	0.2
From Cliff	*	*
Other Specified	*	*
Unspecified Fall	2226	76.8
All Falls	2899	100.0

Note: Frequency less than 5 has been suppressed with an "*". Other cells may be suppressed in order to maintain confidentiality.

APPENDIX 1

TABLE 22: OVERVIEW OF INJURY DEATHS, VICTORIA 2015-2017

		2015 ⁽¹⁾		2016 ⁽²⁾		2017 ⁽³⁾		TOTAL	
		n	%	n	%	n	%	n	%
	ALL	2609	100.0	2646	100.0	2506	100.0	7761	100.0
Age	0-14	23	0.9	28	1.1	22	0.9	73	0.9
	15-24	156	6.0	190	7.2	136	5.4	482	6.2
	25-64	1098	42.1	1121	42.4	1056	42.1	3275	42.2
	65+	1332	51.1	1307	49.4	1292	51.6	3931	50.7
Sex	Male	1618	62.0	1624	61.4	1487	59.3	4729	60.9
	Female	991	38.0	1022	38.6	1019	40.7	3032	39.1
Cause	UNINTENTIONAL	1832	70.2	1918	72.5	1805	72.0	5555	71.6
	Fall	1019	39.1	1016	38.4	1004	40.1	3039	39.2
	Poisoning	303	11.6	361	13.6	327	13.0	991	12.8
	Transport	316	12.1	325	12.3	280	11.2	921	11.9
	Choking/Suffocate	36	1.4	47	1.8	34	1.4	117	1.5
	Drowning/Near Drowning	26	1.0	33	1.2	25	1.0	84	1.1
	Fires/Burns/Scalds	16	0.6	14	0.5	10	0.4	40	0.5
	Hit/Struck/Crush	12	0.5	14	0.5	7	0.3	33	0.4
	Natural/Environmental/Animals	6	0.2	9	0.3	13	0.5	28	0.4
	Explosions/Firearms	*	*	6	0.2	*	*	11	0.1
	Machinery	*	*	*	*	0	0.0	6	0.1
	Cutting/Piercing	*	*	*	*	*	*	6	0.1
	Foreign Body - Natural Orifice	*	*	*	*	0	0.0	*	*
	Overexertion and/or Strenuous Movements	0	0.0	0	0.0	*	*	*	*
	Other Specified Unintentional	*	*	*	*	7	0.3	21	0.3
	Unspecified Unintentional	80	3.1	79	3.0	94	3.8	253	3.3
	INTENTIONAL	737	28.2	698	26.4	658	26.3	2093	27.0
	Suicide	678	26.0	636	24.0	618	24.7	1932	24.9
	Homicide	59	2.3	62	2.3	40	1.6	161	2.1
	UNDETERMINED INTENT*	40	1.5	30	1.1	43	1.7	113	1.5
Event of Undetermined Intent	40	1.5	30	1.1	43	1.7	113	1.5	

Notes: Data for different years are at different stages of the ABS revisions process: (1) Final, (2) Revised & (3) Preliminary.

Frequency less than 5 has been suppressed with an "*". Other cells in the same row and/or column may be suppressed in order to maintain confidentiality.

* Child deaths coded to 'undetermined intent' were deleted from the entire analysis (see methods section)

TABLE 23: RANKING OF CAUSES OF INJURY DEATHS (ALL AGES), VICTORIA 2015-2017

RANK	AGE GROUPS (YEARS)																				
	0-4yrs	5-9yrs	10-14yrs	15-19yrs	20-24yrs	25-29yrs	30-34yrs	35-39yrs	40-44yrs	45-49yrs	50-54yrs	55-59yrs	60-64yrs	65-69yrs	70-74yrs	75-79yrs	80-84yrs	85+ yrs	ALL		
1	n 12 27.9%	transport 5 62.5%	suicide 11 50.0%	transport 82 43.2%	suicide 151 51.7%	suicide 178 46.6%	suicide 203 48.1%	poisoning 181 40.0%	suicide 195 40.0%	suicide 210 43.3%	poisoning 189 45.1%	suicide 150 42.9%	suicide 106 37.6%	suicide 89 32.6%	fall 126 44.4%	fall 242 63.5%	fall 502 76.6%	fall 1965 84.0%	fall 3039 39.2%	ALL	
2	n 11 25.6%	drowning *	transport 6 27.3%	suicide 82 43.2%	transport 72 24.7%	transport 86 22.5%	poisoning 118 28.0%	suicide 157 34.7%	poisoning 162 33.2%	poisoning 145 30.2%	poisoning 108 25.8%	poisoning 83 23.7%	fall 52 18.4%	fall 64 23.4%	suicide 59 20.8%	suicide 47 12.3%	transport 46 7.0%	unspec. unint. 161 6.9%	suicide 1932 24.9%	unspec. unint.	
3	n 10 23.3%	drowning 10 23.3%	nat./ envir./ animals *	homicide 8 4.2%	poisoning 29 9.9%	poisoning 72 18.8%	transport 60 14.2%	transport 69 13.1%	transport 70 14.3%	transport 70 14.6%	transport 57 13.6%	transport 48 13.7%	transport 40 14.2%	transport 61 22.3%	transport 40 14.1%	transport 43 11.3%	unspec. unint. 38 5.8%	suicide 67 2.9%	poisoning 991 12.8%	poisoning	
4	n *	choking/ suffocation *	drowning *	poisoning 6 3.2%	homicide 13 4.5%	drowning 12 3.1%	homicide 18 4.3%	homicide 18 4.0%	homicide 20 4.1%	homicide 23 4.8%	fall 24 5.7%	fall 33 9.4%	poisoning 39 13.8%	poisoning 18 6.6%	choking/ suffocation 12 4.2%	unspec. unint. 14 3.7%	suicide 64 5.8%	transport 64 2.7%	transport 921 11.9%	transport	
5	n *	nat./ envir./ animals *	poisoning *	oth. or undet. intentional 5 2.6%	homicide 10 2.6%	homicide 7 1.8%	oth. or undet. intentional 9 2.1%	oth. or undet. intentional 17 3.8%	oth. or undet. intentional 16 3.3%	fall 9 1.9%	oth. or undet. intentional 14 3.3%	homicide 8 2.3%	homicide 8 2.8%	unspec. unint. 10 3.7%	unspec. unint. 11 3.9%	choking/ suffocation 11 1.7%	choking/ suffocation 11 1.7%	choking/ suffocation 41 1.8%	unspec. unint. 253 3.3%	unspec. unint.	
6	n *	fires/ burns/ scalds *	oth. unintentional *	fall *	fall 5 1.7%	oth. or undet. intentional 7 1.4%	drowning 6 1.3%	drowning 6 1.3%	drowning 7 1.4%	oth. or undet. intentional 7 1.5%	homicide 8 1.9%	oth. or undet. intentional 6 1.7%	unspec. unint. 7 2.5%	drowning 6 2.2%	poisoning 9 3.2%	poisoning 5 1.3%	poisoning 6 0.9%	fires/ burns/ scalds 11 0.5%	homicide 161 2.1%	homicide	
7	n *	foreign body *	choking/ suffocation *	drowning *	oth. unintentional 5 1.7%	oth. unintentional 7 1.8%	fall 6 1.3%	fall 6 1.3%	fall 6 1.2%	hit/ struck/ crush 5 1.0%	choking/ suffocation 7 1.7%	choking/ suffocation 5 1.4%	choking/ suffocation 7 2.1%	choking/ suffocation 5 1.8%	drowning 5 2.1%	fires/ burns/ scalds 5 1.3%	fires/ burns/ scalds 5 0.2%	hit/ struck/ crush 9 0.4%	choking/ suffocation 117 1.5%	choking/ suffocation	
8	n *	explosions/ firearms *	choking/ suffocation *	explosions/ firearms *	fall *	fall *	choking/ suffocation *	cutting/ piercing *	fires/ burns/ scalds *	choking/ suffocation *	drowning 5 1.2%	unspec. unint. 5 1.4%	choking/ suffocation 6 2.1%	choking/ suffocation 5 1.8%	homicide 6 2.1%	homicide 6 2.1%	fires/ burns/ scalds 5 0.2%	hit/ struck/ crush 5 0.2%	oth. or undet. intentional 113 1.5%	oth. or undet.	
9	n *	fires/ burns/ scalds *	fall *	explosions/ firearms *	choking/ suffocation *	fall *	oth. unintentional *	oth. unintentional *	hit/ struck/ crush *	fires/ burns/ scalds *	fires/ burns/ scalds *	drowning *	hit/ struck/ crush 6 2.1%	hit/ struck/ crush *	hit/ struck/ crush *	nat./ envir./ animals *	nat./ envir./ animals *	oth. or undet. intentional 84 1.1%	drowning 84 1.1%	drowning	
10	n *	choking/ suffocation *	choking/ suffocation *	choking/ suffocation *	choking/ suffocation *	choking/ suffocation *	fires/ burns/ scalds *	fires/ burns/ scalds *	unspec. unint. *	hit/ struck/ crush *	hit/ struck/ crush *	fires/ burns/ scalds *	hit/ struck/ crush *	hit/ struck/ crush *	nat./ envir./ animals *	nat./ envir./ animals *	fires/ burns/ scalds 40 0.5%	fires/ burns/ scalds 40 0.5%	hit/ struck/ crush 33 0.4%	hit/ struck/ crush	
11	n *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	cutting/ piercing *	unspec. unint. *	hit/ struck/ crush *	nat./ envir./ animals *	oth. unintentional *	oth. unintentional *	homicide *	homicide *	explosions/ firearms 11 0.1%	explosions/ firearms 11 0.1%	explosions/ firearms	
12	n *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	hit/ struck/ crush *	machinery *	machinery *	machinery *	explosions/ firearms *	explosions/ firearms *	explosions/ firearms *	fires/ burns/ scalds *	fires/ burns/ scalds *	hit/ struck/ crush *	strenuous movements 28 0.4%	strenuous movements 28 0.4%	explosions/ firearms 28 0.4%	nat./ envir./ animals 28 0.4%	nat./ envir./ animals	
13	n *	machinery *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	foreign body *	foreign body *	cutting/ piercing *	foreign body *	foreign body *	explosions/ firearms *	explosions/ firearms *	homicide *	oth. or undet. intentional *	oth. or undet. intentional *	oth. or undet. intentional *	oth. or undet. intentional 21 0.3%	oth. or undet. intentional 21 0.3%	oth. or undet.	
14	n *	machinery *	unspec. unint. *	unspec. unint. *	unspec. unint. *	unspec. unint. *	unspec. unint. *	unspec. unint. *	unspec. unint. *	machinery *	machinery *	machinery *	foreign body *	cutting/ piercing *	explosions/ firearms *	homicide *	homicide *	explosions/ firearms 11 0.1%	explosions/ firearms 11 0.1%	explosions/ firearms	
15	n *	machinery *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	oth. unintentional *	machinery 6 0.1%	machinery 6 0.1%	machinery
16	n *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing *	cutting/ piercing 6 0.1%	cutting/ piercing 6 0.1%	cutting/ piercing	
17	n *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body *	foreign body
18	n *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements *	strenuous movements
all	43	8	22	190	292	382	422	452	488	480	419	350	282	273	284	381	655	2338	7761	7761	

Note:
 Oth/ undet. intent = other or undetermined intent; nat./ envir./ animals = natural/ environmental/animals; oth. unintentional = other specified unintentional; unspec. unintentional = unspecified unintentional; strenuous movements = overexertion/ strenuous movements
 Frequency less than 5 has been suppressed with an *.*. Other cells in the same row and/or column may be suppressed in order to maintain confidentiality.
 * child deaths coded to 'undetermined intent' were deleted from the entire analysis (see methods section)

APPENDIX 2

TABLE 24: INJURY DEATHS: STATE OF RESIDENCE VS STATE OF DEATH REGISTRATION, 2015-2017

STATE OF RESIDENCE	REGISTRATION STATE								
	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
NSW	8730	81	128	11	7	8	*	73	9041
VIC	100	7591	26	17	12	7	6	*	7761
QLD	96	23	6259	*	13	*	11	*	6412
SA	12	15	8	2414	7	*	5	0	2465
WA	7	8	15	5	3841	*	8	*	3888
TAS	*	*	*	*	5	815	*	0	831
NT	*	*	5	5	*	0	438	0	453
ACT	27	*	*	0	0	*	*	375	411
Other**	0	0	0	0	*	0	0	*	*
Total	8976	7727	6447	2457	3889	841	474	455	31266

Notes: Excludes medical injury and late effects. Also excludes undetermined intent injury deaths among children aged 0-14 years.

Frequency less than 5 has been suppressed with an "**". Other cells in the same row and/or column may be suppressed in order to maintain confidentiality.

** Other Territories (Cocos (Keeling) Islands, Christmas Island, Jervis Bay Territory)

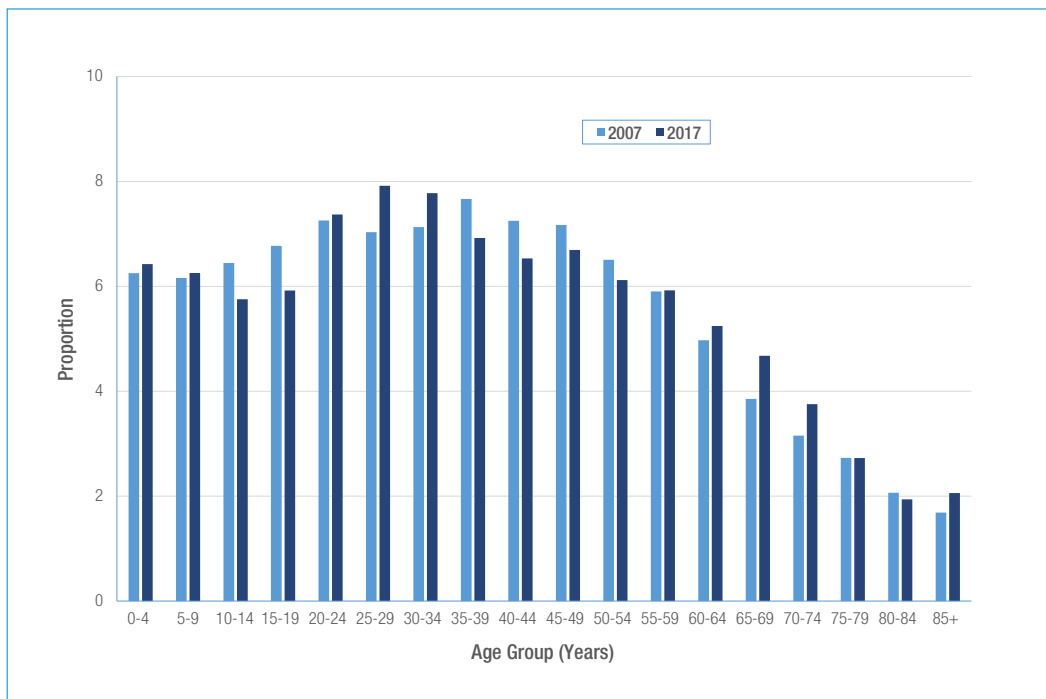
TABLE 25: REFERENCE YEAR OF INJURY DEATH VS ACTUAL YEAR OF INJURY DEATH FOR VICTORIAN RESIDENTS

DEATH YEAR	REFERENCE YEAR											Total
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<2005	16	5	*	5	*	*	*	*	*	*	*	39
2005	11	*	0	*	0	*	0	0	0	*	0	19
2006	122	*	*	0	0	0	*	0	0	0	0	127
2007	1537	352	7	*	0	0	*	0	0	0	0	1899
2008		1692	330	*	*	*	0	*	*	*	0	2034
2009			1903	319	21	*	*	*	0	*	0	2248
2010				1724	286	*	*	0	*	0	0	2015
2011					1814	252	7	*	0	*	*	2079
2012						1759	334	8	*	*	*	2109
2013							1640	524	6	*	*	2175
2014								2060	333	9	*	2404
2015									2263	319	*	2583
2016										2307	341	2648
2017											2153	2153
Total		2055	2244	2055	2127	2020	1987	2597	2609	2646	2506	24532

Notes: Excludes medical injury and late effects. Also excludes undetermined intent injury deaths among children aged 0-14 years.

Frequency less than 5 has been suppressed with an "**".

FIGURE 26: HISTOGRAM OF AGE DISTRIBUTION OF THE RESIDENT POPULATION OF VICTORIA, 2007-2017



Source: ABS June 2019; catalogue no: 3101.0 - Australian Demographic Statistics; TABLE 52 - Estimated Resident Population by Single Year of Age, Victoria.

How to Access VISU Data

VISU collects and analyses information on injury problems to underpin the development of prevention strategies and their implementation. VISU analyses are publicly available for teaching, research and prevention purposes. Requests for information can be lodged via the data request form on the VISU website (www.monash.edu/muarc/visu) or by contacting the VISU office by phone (03 9905 1805).

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