



**A profile of fatal injuries in South Africa**  
**6<sup>th</sup> Annual Report of the**  
**NATIONAL INJURY MORTALITY SURVEILLANCE SYSTEM**  
**2004**



**Section 3. Durban Fatal Injury Profile**

**Background**

This short report, which covers the period 1 January to 31 December 2004, describes the fatal injury profile in the Durban Metropolitan area, and includes data from three mortuaries: Gale Street, Phoenix and Chatsworth.

This report has been generated by a software programme that interfaces with our database and produces a number of standard outputs. The Crime, Violence and Injury Lead Programme can provide more detailed analysis on request.

Table I. Age standardised* injury mortality rates for Durban, 2001- 2004								
Year	2001		2002		2003		2004	
Population <sup>#</sup>	2 893 247		2 939 810		2 981 898		3 024 589	
	Total deaths <sup>§</sup>	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.
<b>Violence</b>	2097	63.2	2175	65.1	2080	60.9	1905	55.2
- firearm violence	1273	38.2	1304	38.9	1197	34.9	1045	29.9
<b>Suicide</b>	328	10.5	417	13.2	445	14.2	434	13.5
- firearm suicide	62	2.0	88	2.8	121	4.2	76	2.3
- hanging	192	5.9	233	7.0	223	6.6	239	7.2
<b>Transport</b>	1072	35.3	1072	35.1	1070	34.4	1149	35.8
- road traffic	1008	33.0	1038	33.5	1005	32.3	1077	33.4
<i>pedestrian</i>	408	13.3	598	19.5	534	17.1	582	18.4
<i>Driver</i>	88	2.9	99	3.1	114	3.7	134	4.1
- railway deaths	63	2.0	66	2.0	63	2.0	72	2.3
<b>Unintentional</b>	275	9.7	329	11.8	265	9.2	307	10.6
- burns	49	1.7	59	2.1	68	2.3	99	3.6
- drowning	60	1.8	68	2.1	61	1.8	80	2.4
<b>ALL INJURIES<sup>&amp;</sup></b>	4187	132.4	4187	131.1	4244	131.3	4144	126.6

\* WHO World Standard Population Distribution

<sup>#</sup> City populations adjusted from 2001 Census using Actuarial Society of South Africa's provincial growth estimates ([www.assa.org](http://www.assa.org))

<sup>§</sup> Totals adjusted for missing ages.

<sup>&</sup> Includes apparent manner of death undetermined.

**Acknowledgements**

We thank Dr. S.R Naidoo (Dept. of Forensic Medicine, UKZN), all attending pathologists as well as staff involved in collating and capturing the data at Albert Luthuli Hospital (Ms P. Singh, Ms S. Rawsthorne, Ms M. Irving, Ms T. Pillay and Mr L. Naidoo) and at Phoenix Mortuary (Mr E. Naidoo and Ms F. Ahmed).

**Purpose and Scope**

The NIMSS produces and disseminates descriptive epidemiological information for deaths due to non-natural causes that, in terms of existing legislation, are subject to medico-legal investigation. The NIMSS provides information to:

- describe the incidence, causes and consequences of non-natural deaths;
- prioritise injury and violence prevention action directed at high risk groups and socio-economic risk factors;
- identify new injury trends and emerging problem areas;
- monitor seasonal and longitudinal changes in the profile of non-natural fatalities; and
- evaluate direct and indirect violence and injury.

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This report is available online at:  
[www.sahealthinfo.org.za/violence/nimss.htm](http://www.sahealthinfo.org.za/violence/nimss.htm)

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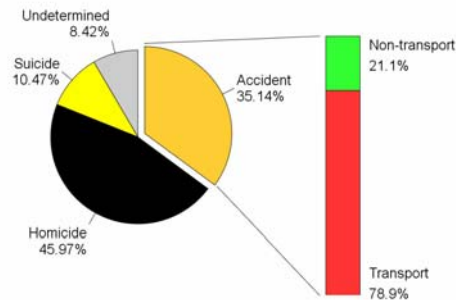
## RESULTS

A total of 5790 cases were recorded in Durban from January 2004 to December 2004, including 437 (8%) cases that were due to natural causes and another 1209 that were either viewed or stored at the mortuaries (21%). The rest of the analysis is restricted to the 4144 non-natural deaths that occurred in the city.

### 1. Overall manner of death

The leading cause of death was violence / homicide (46.0%).

Figure 1. Overall manner of death (N = 4144)



### Manner of death by age

The average age of the deceased was 32.2 ( $\pm$  14.5 years).

The leading manner(s) of death amongst the:

- 0-14 age group was transport (48.9%);
- 15-24 age group was violence (56.3%);
- 25-34 age group was violence (53.9%);
- 35-44 age group was violence (46.9%);
- 45-54 age group was violence (40%);
- 55-64 age group was transport (28.7%), followed by violence (27.7%), followed by undetermined (15.8%); and
- 65+ age group was transport (26.8%), followed by violence (23.2%).

Figure 2.1. Violence by age (n = 1888)

Figure 2.2. Suicide by age (n = 433)

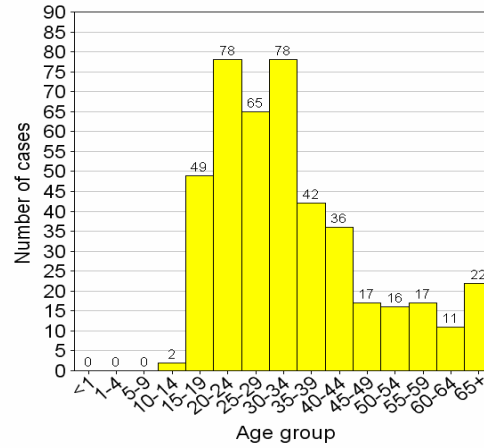


Figure 2.3. Transport deaths by age (n = 1127)

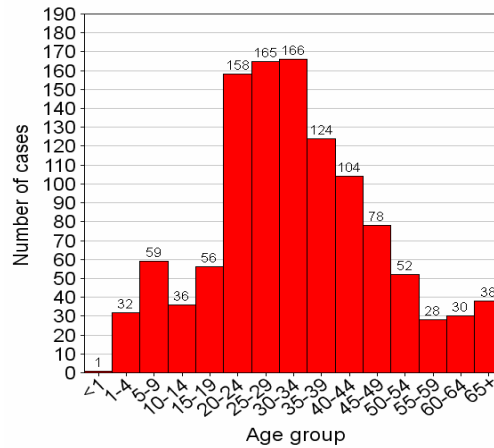
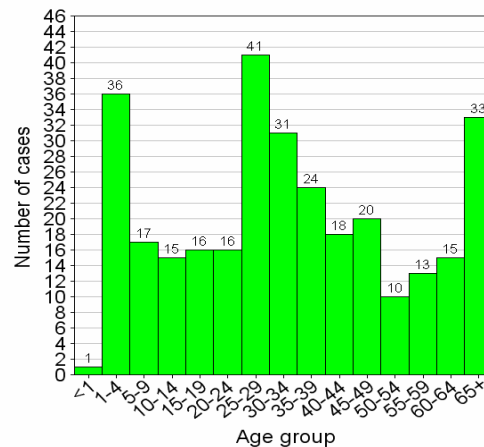
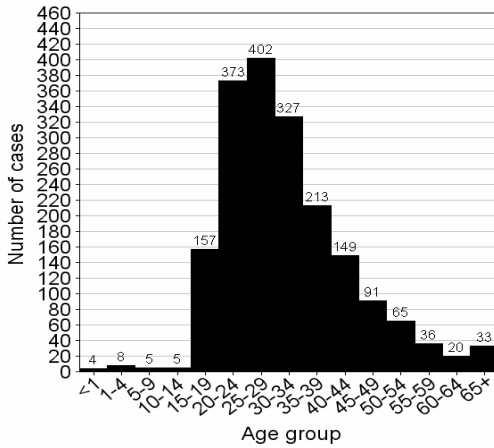


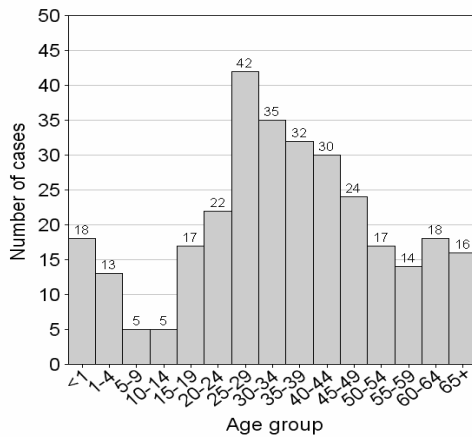
Figure 2.4. Other unintentional injury deaths (non-transport) deaths by age (n = 306)





created with ChartDirector from www.advsofteng.com

Figure 2.5. Undetermined deaths by age (n = 308)

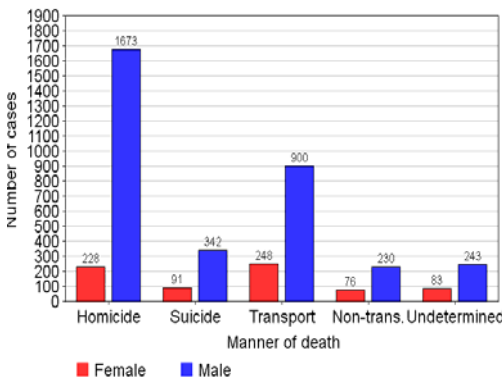


created with ChartDirector from www.advsofteng.com

### Manner of death by sex

Of the cases recorded in Durban, 3388 (82%) were male and 726 (18%) were female. The leading cause of death amongst males was violence (49%) and amongst females it was transport (34%), followed by violence (31%).

Figure 3. Manner of death by sex (n = 4114)



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## 2. Scene of injury

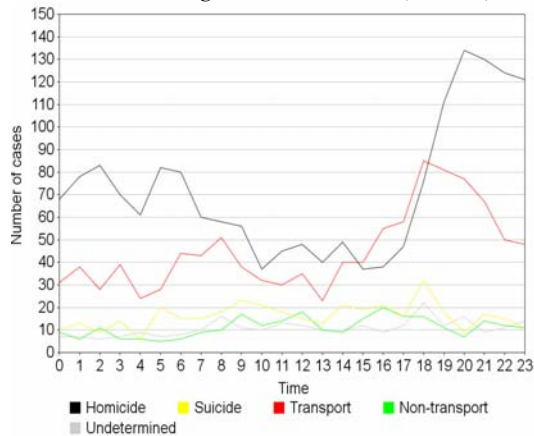
The scene of injury was known in 3330 (80%) cases. Roads

## 3. Time of death

The peak period(s) of death for:

- **violence** was 19h00 - 00h00 (35.8%);
- **suicide** was 09h00 - 11h00 (11.3%), followed by 18h00 - 19h00 (8.2%), followed by 14h00 - 15h00 (5.4%), followed by 16h00 - 17h00 (5.4%), followed by 05h00 - 06h00 (5.1%);
- **transport** related deaths was 16h00 - 22h00 (39%); and
- **other unintentional injury deaths (non-transport)** was 15h00 - 19h00 (24.8%), followed by 11h00 - 13h00 (11.9%), followed by 09h00 - 10h00 (6.3%), followed by 21h00 - 22h00 (5.2%).

Figure 5. Time of death (n = 3737)



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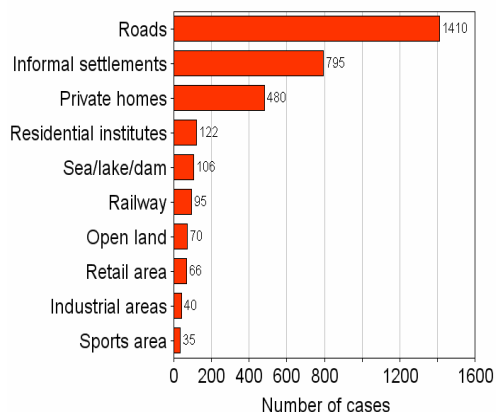
## 4. Day of death

The peak days of death for:

- **violence** were Saturday (24.4%), followed by Sunday (19.9%), followed by Friday (13.6%);
- **suicide** were Tuesday (15.7%), followed by Monday (15.7%), followed by Saturday (15.4%);
- **transport** related deaths were Saturday (21.7%), followed by Sunday (18.3%), followed by Monday (13.8%); and
- **other unintentional injury deaths (non-transport)** were Saturday (20.7%), followed by Friday (17.3%), followed by

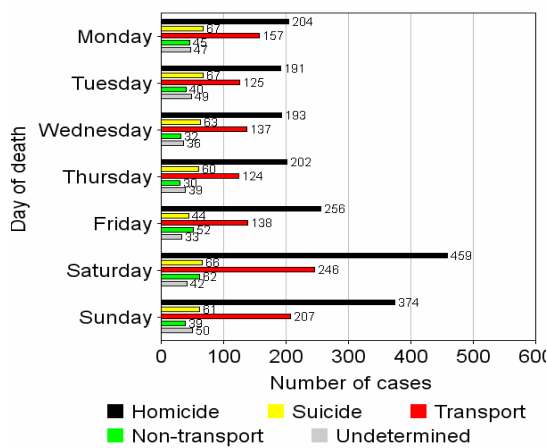
were the most common scene of death (42%).

**Figure 4. Top 10 scenes of injury (n = 3219)**

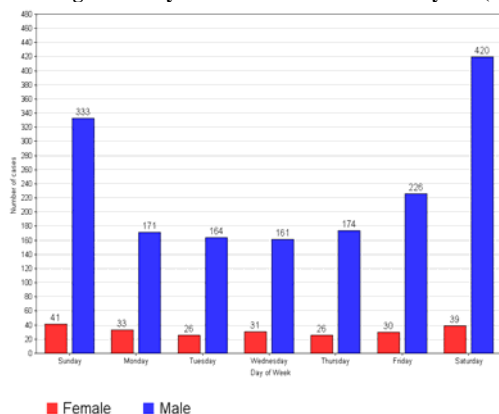


Monday (15%).

**Figure 6. Day of death (n = 4037)**



**Figure 7. Day of violence-related deaths by sex (n = 1875)**

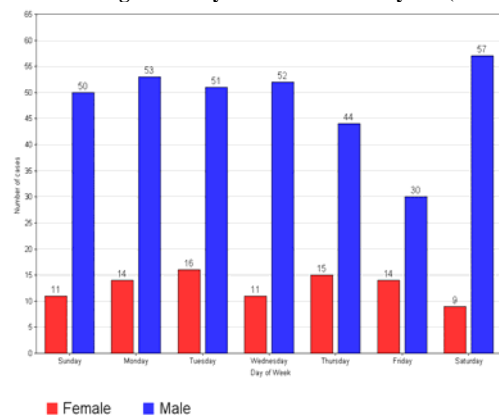


## 5. Seasonal variation

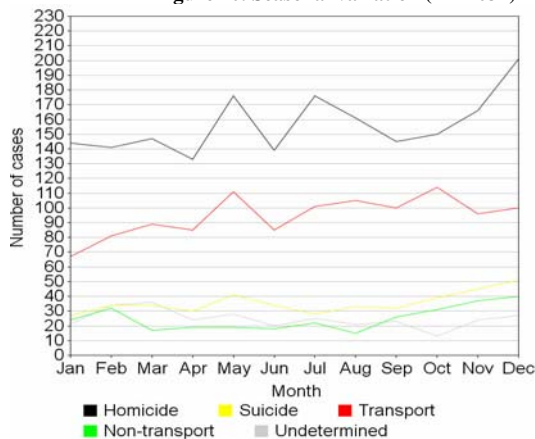
The peak month for:

- **violence** was December (11%), followed by May (9%), followed by July (9%);
- **suicide** was December (12%), followed by November (11%), followed by May (10%);
- **transport** related deaths was October (10%), followed by May (10%), followed by August (9%); and
- **other unintentional injury deaths (non-transport)** was December (13%), followed by November (12%), followed by February (11%).

**Figure 8. Day of suicide deaths by sex (n = 427)**



**Figure 10. Seasonal variation (n = 4037)**



**Figure 9. Day of transport deaths by sex (n = 1133)**

## 6. External cause of death

The cause of death was unknown in 3.8% of the cases. The leading external cause of death was firearms (28.8%), followed by sharp force injury (15.7%), followed by pedestrian injuries (14.6%).

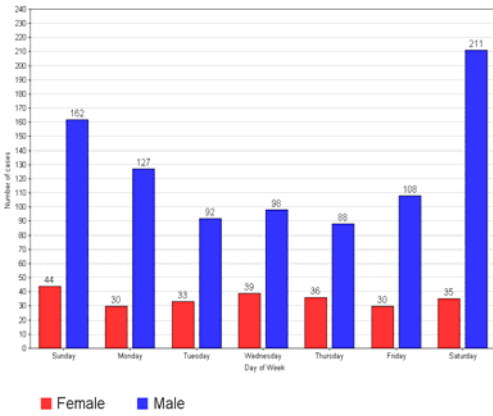
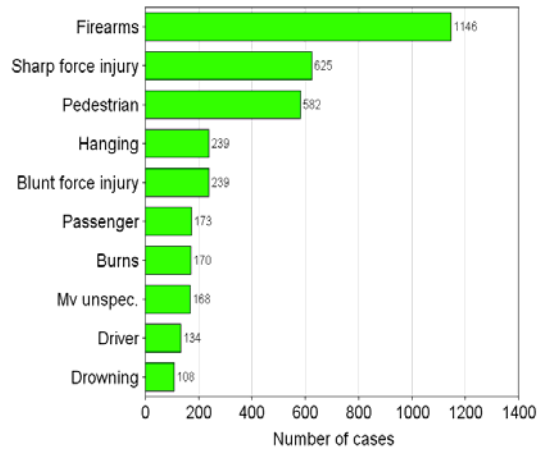


Figure 11. Ten most common external causes of death (n = 3584)



### External cause of violence by age

Age was unknown in 17 of the 1905 cases. Of the remaining cases, the average age of the deceased was 31 ( $\pm 11.6$  yrs).

The leading external cause of death for violence in the:

- **0-14** age group was firearms (45.5%);
- **15-24** age group was firearms (52.3%) followed by sharp force injury (36.6%);
- **25-34** age group was firearms (59.1%) followed by sharp force injury (31.1%);
- **35-44** age group was firearms (53.3%) followed by sharp force injury (33.4%);
- **45-54** age group was firearms (55.1%) followed by sharp force injury (32.1%);
- **55-64** age group was firearms (53.6%); and
- **65+** age group was sharp force injury (27.3%), followed by firearms (27.3%), followed by strangulation (21.2%).

Figure 12.3. Blunt force violence by age (n = 196)

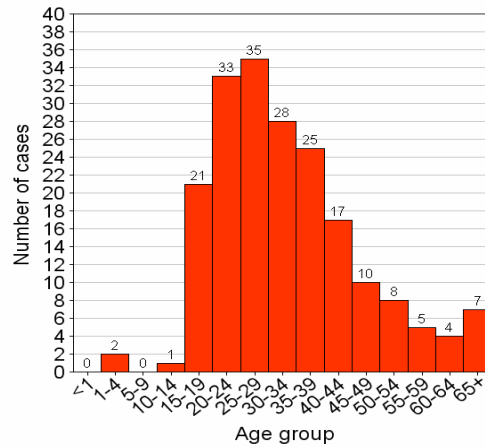


Figure 12.1. Firearm violence by age (n = 1036)

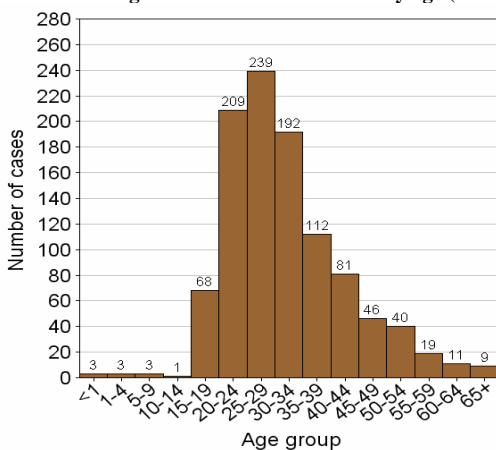


Figure 12.4. Strangulation by age (n = 24)

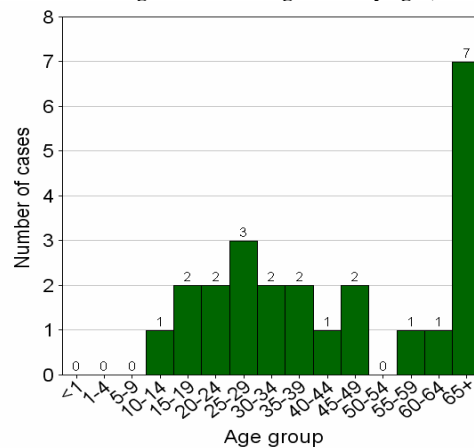
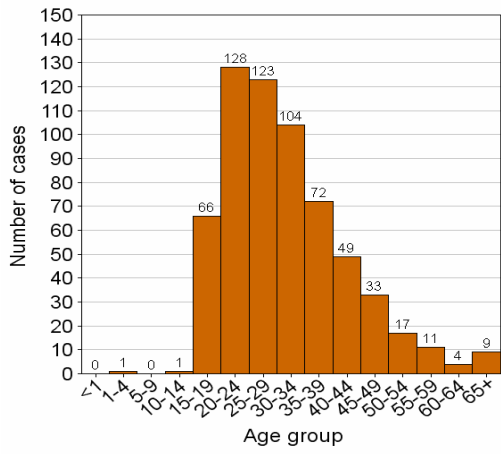
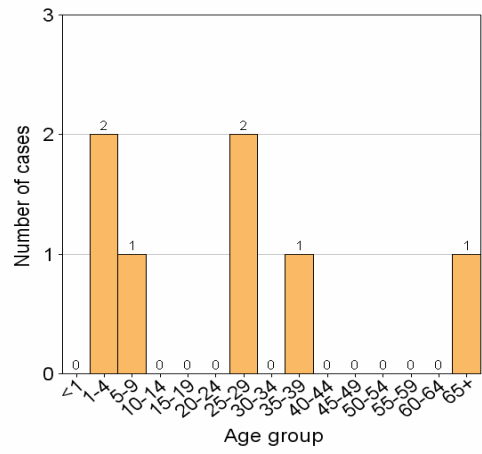


Figure 12.2. Sharp force violence by age (n = 618)

Figure 12.5. Burn violence by age (n = 7)



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### External cause of suicide by age

Age was unknown in 1 of the 434 cases. Of the remaining cases, the average age of the deceased was 33 ( $\pm 14.5$  yrs).

The leading external cause of death for suicide in the:

- 0-14 age group was poisoning (100%);
- 15-24 age group was hanging (63%);
- 25-34 age group was hanging (57.3%);
- 35-44 age group was hanging (46.2%);
- 45-54 age group was hanging (42.4%);
- 55-64 age group was hanging (60.7%); and
- 65+ age group was hanging (40.9%).

Figure 13.1. Hanging suicide by age (n = 238)

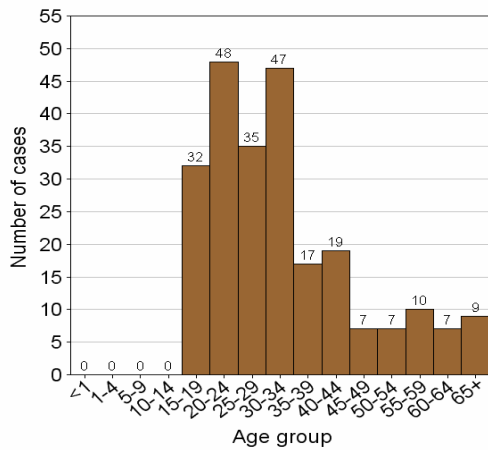


Figure 13.2. Firearm suicide by age (n = 76)

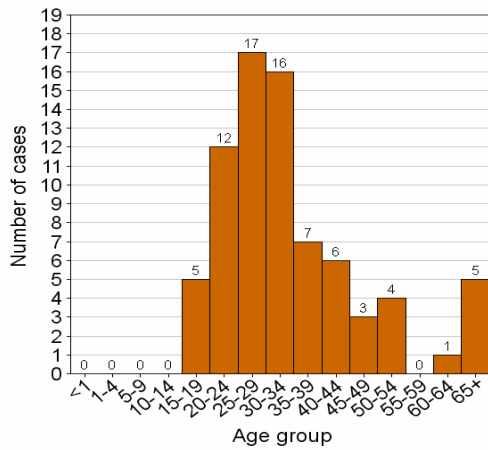


Figure 13.3. Poisoning suicide by age (n = 64)

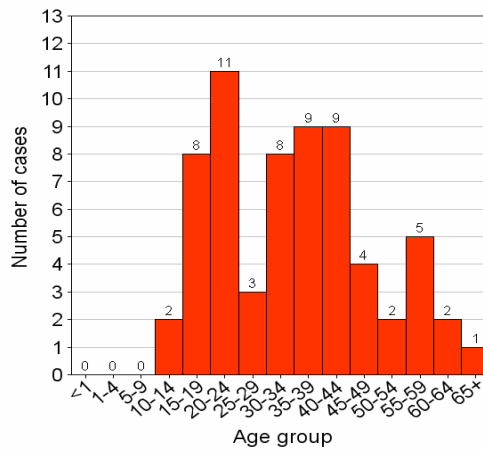


Figure 13.4. Gassing suicide by age (n = 20)

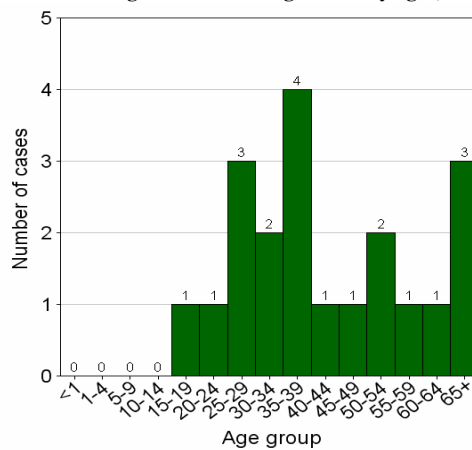
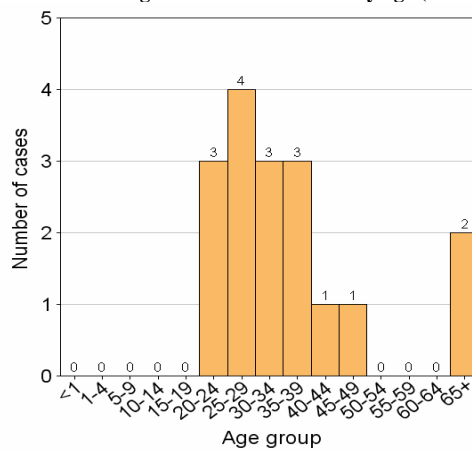


Figure 13.5. Burn suicide by age (n = 17)



### External cause of transport by age

Age was unknown in 22 of the 1149 cases. Of the remaining cases, the average age of the deceased was 32 ( $\pm 15.3$  yrs).

The leading external cause of death for transport in the:

- 0-14 age group was pedestrian injuries (75%);
- 15-24 age group was pedestrian injuries (42.1%);
- 25-34 age group was pedestrian injuries (48.6%);
- 35-44 age group was pedestrian injuries (46.1%);
- 45-54 age group was pedestrian injuries (49.2%);
- 55-64 age group was pedestrian injuries (56.9%); and
- 65+ age group was pedestrian injuries (55.3%).

Figure 14.1. Pedestrian deaths by age (n = 570)

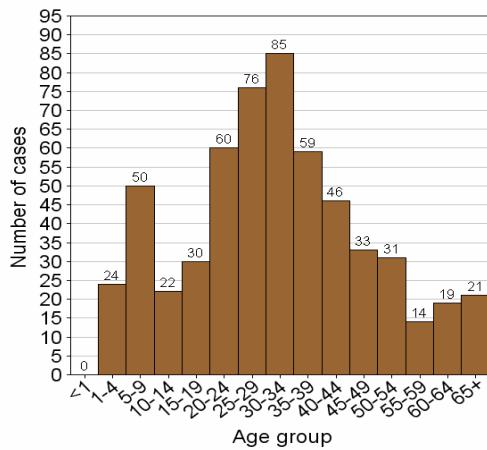


Figure 14.2. Passenger deaths by age (n = 173)

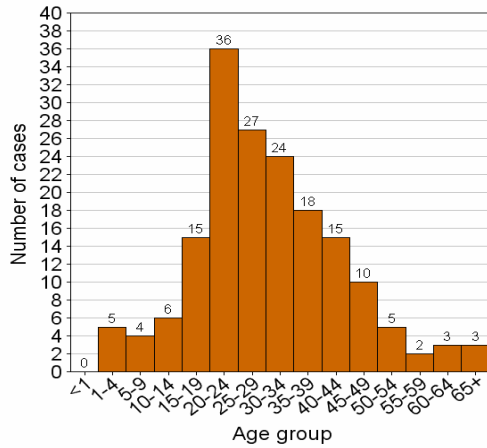


Figure 14.3. Unspecified motor vehicle deaths by age (n = 164)

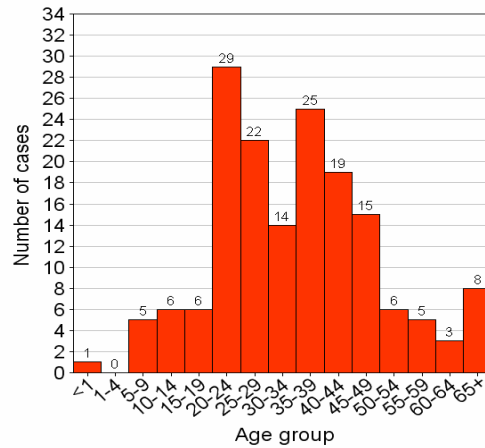


Figure 14.4. Driver deaths by age (n = 132)

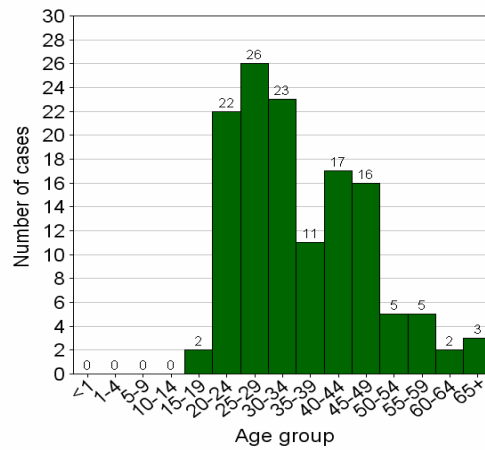
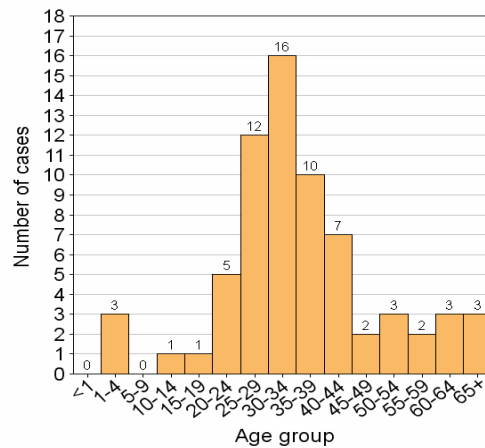


Figure 14.5. Railway deaths by age (n = 68)



### External cause of other unintentional injury deaths (non-transport) by age

Age was unknown in 1 of the 307 cases. Of the remaining cases, the average age of the deceased was 33 ( $\pm 21$  yrs). The leading cause for other unintentional injury deaths in the:

- 0-14 age group was drowning (42%);
- 15-24 age group was drowning (43.8%);
- 25-34 age group was burns (38.9%);
- 35-44 age group was burns (28.6%), followed by falling from a height (26.2%), followed by other (23.8%);
- 45-54 age group was other (40%);
- 55-64 age group was burns (50%); and
- 65+ age group was burns (42.4%) followed by falling from a height (30.3%).

Figure 15.1. Burn deaths by age (n = 98)

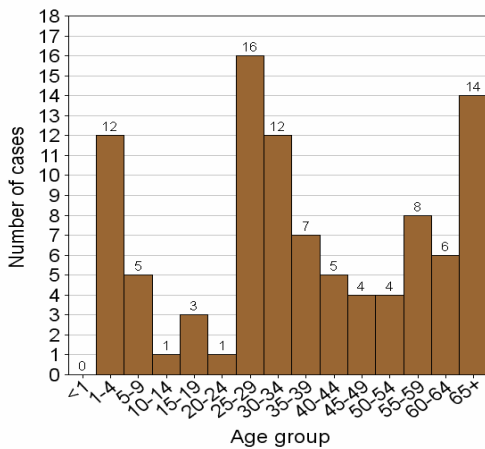


Figure 15.2. Drowning deaths by age (n = 80)

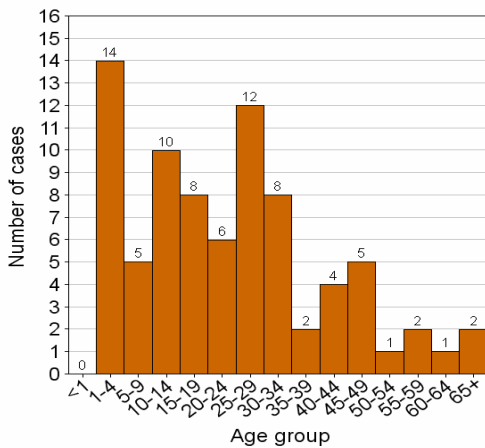


Figure 15.3. Falling from a height deaths by age (n = 49)

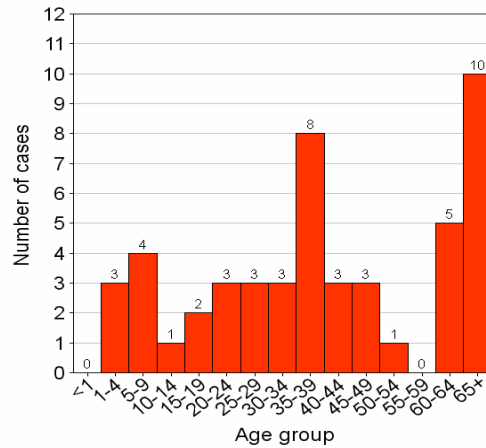


Figure 15.4. Blunt force injury deaths by age (n = 14)

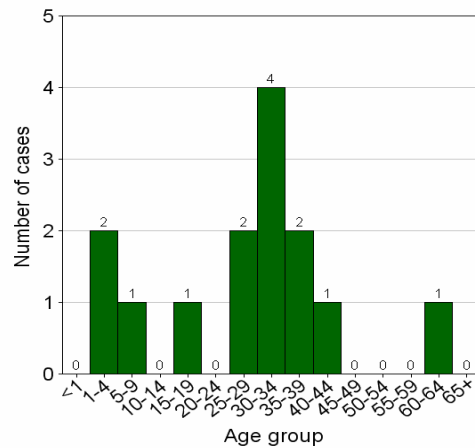
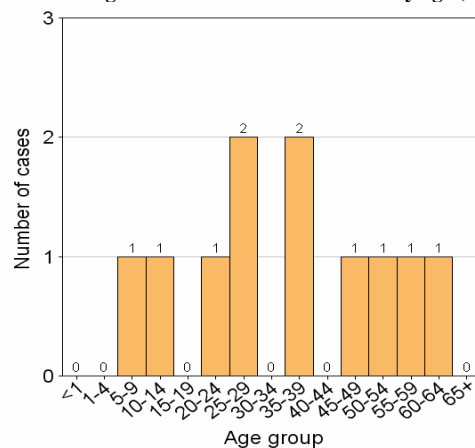


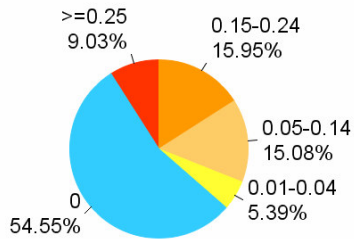
Figure 15.5. Electrocution deaths by age (n = 11)



## 7. Blood alcohol levels

Blood alcohol concentration (BAC) levels were obtained in 1373 of the 4144 cases. The average BAC for those who tested positive was  $0.16 \pm 0.09$  g/100ml.

Figure 16. Blood Alcohol Levels (n = 1373)



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## Blood alcohol level by apparent manner

Of the 4144 who were fatally injured, blood alcohol concentration were available in 1373 (33.1%).

Table II: Blood alcohol levels per apparent manner

Apparent manner	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Violence (1905)	773 (40.58)	364 (47.09)	0.15	0.09
Suicide (434)	82 (18.89)	22 (26.83)	0.14	0.09
Transport (1149)	414 (36.03)	203 (49.03)	0.18	0.09
Other unintentional (307)	53 (17.26)	18 (33.96)	0.14	0.14
Undetermined (349)	51 (14.61)	17 (33.33)	0.16	0.1
Total	1373	624	0.15	0.1

## Blood alcohol level by transport user

Of the 1149 who were fatally injured in transport collisions, blood alcohol concentration were available in 414 (36.0%) of the cases.

Table III: Blood alcohol levels per transport user

Transport user	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Driver (134)	57 (42.54)	24 (42.11)	0.15	0.08
Passenger (173)	33 (19.08)	17 (51.52)	0.15	0.09
Pedestrian (582)	220 (37.8)	112 (50.91)	0.2	0.09
Railway case (72)	30 (41.67)	15 (50)	0.19	0.1
Cyclist (20)	12 (60)	2 (16.67)	0.1	0.06
Unspecified (168)	62 (36.9)	33 (53.23)	0.17	0.09
Total	414	203	0.19	0.1