



A profile of fatal injuries in South Africa 6th Annual Report of the NATIONAL INJURY MORTALITY SURVEILLANCE SYSTEM 2004



Section 4. Cape Town Fatal Injury Profile

Background

This short report, which covers the period 1 January to 31 December 2004, describes the fatal injury profile in the Cape Town Metropolitan area, and includes data from two mortuaries, Salt River and Tygerberg.

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.

Year	2001		2002		2003		2004	
Population [#]	2 893 247		2 939 810		2 981 898		3 024 589	
	Total deaths [§]	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.	Total deaths	Rate/100,000 pop.
Violence	2420	75.7	2421	73.9	2172	65.7	1782	53.5
- firearm violence	1113	34.1	1192	36.0	935	28.0	634	18.7
Suicide	303	10.3	289	10.0	324	10.8	320	10.5
- firearm suicide	79	2.7	68	2.4	83	3.0	65	2.3
- hanging	127	4.2	127	4.2	147	4.6	145	4.3
Transport	1125	39.7	1030	34.2	996	32.7	1021	33.8
- road traffic	978	33.3	900	30.0	862	28.4	911	30.1
<i>pedestrian</i>	604	20.7	522	17.7	522	17.3	577	19.3
<i>Driver</i>	110	3.8	120	4.0	116	3.9	119	3.9
- railway deaths	147	4.8	129	4.2	131	4.2	106	3.6
Unintentional	466	16.1	419	14.5	442	15.0	416	14.5
- burns	240	8.0	225	7.5	245	8.0	229	7.4
- drowning	81	2.8	76	2.6	69	2.2	55	1.9
ALL INJURIES^{&}	4645	152.5	4446	143.2	4313	138.0	3941	126.9

* WHO World Standard Population Distribution

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

[§] Totals adjusted for missing ages.

[&] Includes apparent manner of death undetermined.

Acknowledgements

We thank Profs Martin and Wadee, Mr Galant and Mrs Seals and the staff of the Depts of Forensic Medicine at UCT and Stellenbosch, as well as Mr Lengisi and Ms Joseph of the Salt River Forensic Chemistry Department, Cape Town for their valuable contributions.

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.

Contact details:

Megan Prinsloo

Crime, Violence and Injury Lead Programme
Medical Research Council
Tel: 021 938 0513
Fax: 021 938 0381
megan.prinsloo@mrc.ac.za

Hilton Donson

Crime, Violence and Injury Lead Programme
Medical Research Council
Tel: 021 938 0443
Fax: 021 938 0381
hilton.donson@mrc.ac.za

Motlagomang Maruping

Crime, Violence and Injury Lead Programme
Medical Research Council
Tel: 021 938 0440
Fax: 021 938 0381
motlagomang.maruping@mrc.ac.za

This report is available online at:

www.sahealthinfo.org.za/violence/nimss.htm

Published by the Medical Research Council/UNISA Crime, Violence and Injury Lead Programme

30 November 2005

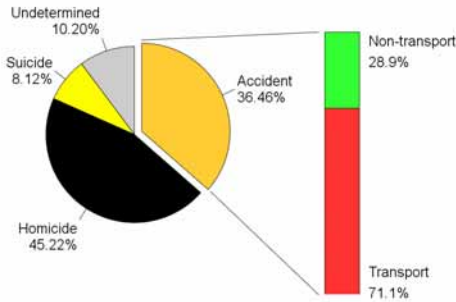
RESULTS

A total of 4964 cases were recorded in Cape Town from January 2004 to December 2004, including 1023 (20.6%) due to natural causes. The rest of the analysis is restricted to the 3941 non-natural deaths in the city.

1. Overall manner of death

The leading cause of non-natural death was violence / homicide (45%).

Figure 1. Overall manner of death (N = 3941)



Manner of death by age

The average age of the deceased was 33.3 (± 15.7 years).

The leading manner(s) of death amongst the:

- 0-14 age group was transport (39.8%);
- 15-24 age group was violence (63.4%);
- 25-34 age group was violence (55%);
- 35-44 age group was violence (43.5%);
- 45-54 age group was violence (35.2%) followed by transport (34.6%);
- 55-64 age group was transport (28%), followed by undetermined (23%), followed by violence (20.5%); and
- 65+ age group was transport (27.9%), followed by other unintentional injuries (non-transport) (27.3%).

Figure 2.1. Violence by age (n = 1721)

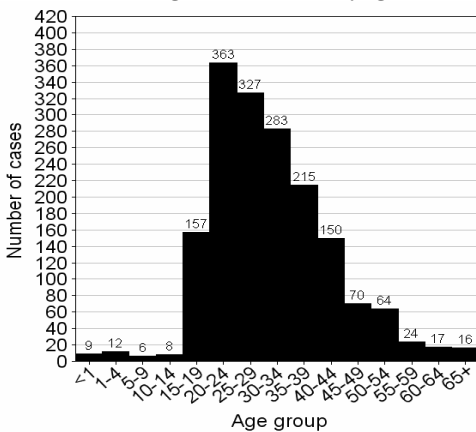


Figure 2.2. Suicide by age (n = 309)

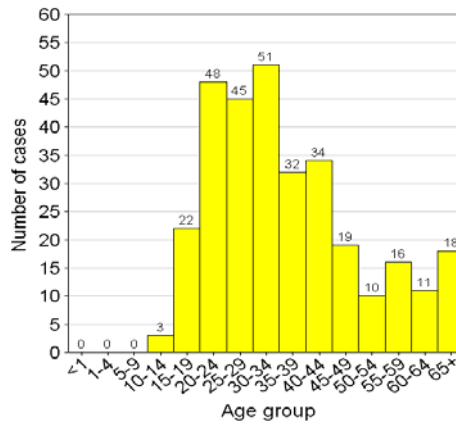


Figure 2.3. Transport deaths by age (n = 980)

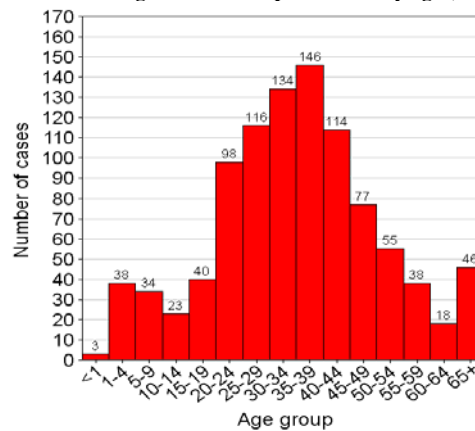


Figure 2.4. Other unintentional injury deaths (non-transport) by age (n = 393)

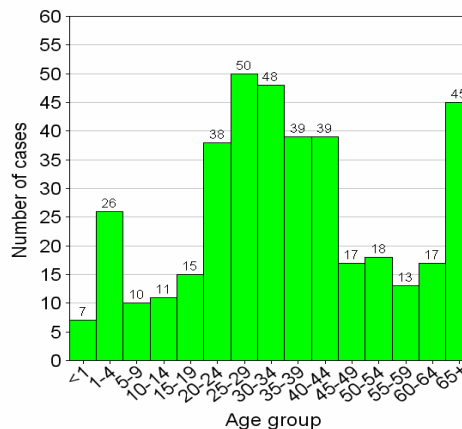
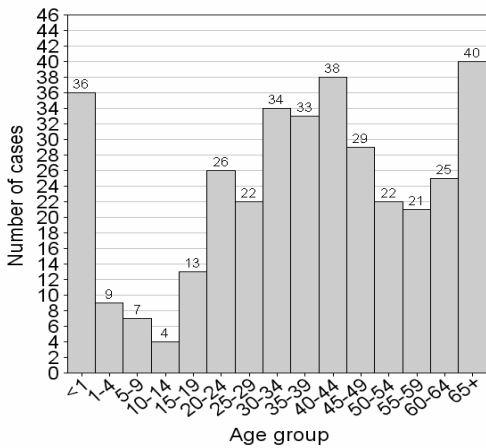


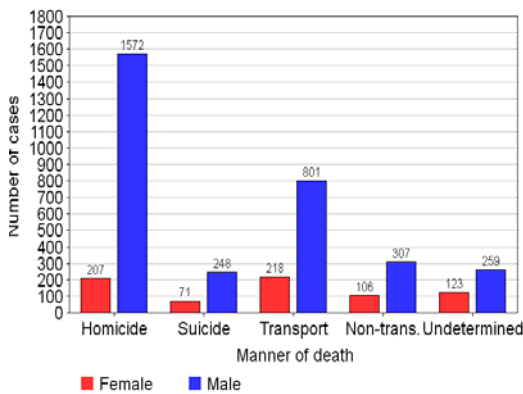
Figure 2.5. Undetermined deaths by age (n = 359)



Manner of death by sex

Of the cases recorded in Cape Town, 3187 (81.5%) were male and 725 (18.5%) were female. The leading cause of death amongst males was violence (49.3%). The leading cause of death amongst females was transport (30.1%).

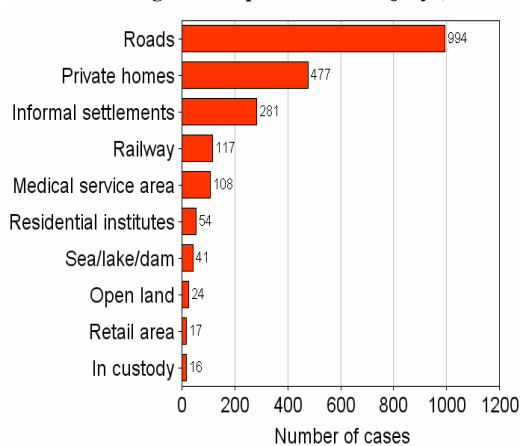
Figure 3. Manner of death by sex (n = 3912)



2. Scene of injury

The scene of injury was known in 2163 (54.9%) cases. Roads were the most common scene of death (46%).

Figure 4. Top 10 scenes of injury (n = 2129)

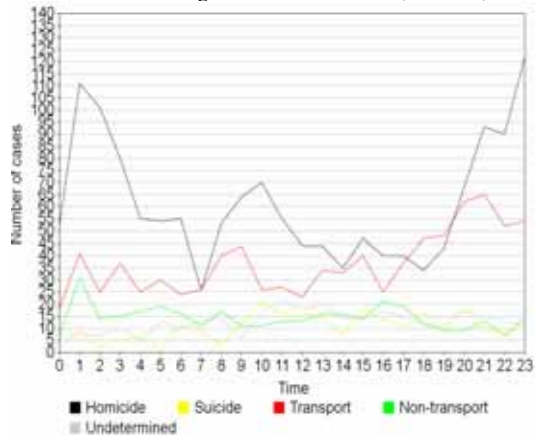


3. Time of death

The peak period(s) of death for:

- **violence** was 21h00 - 00h00 (20.7%) followed by 01h00 - 04h00 (19.7%);
- **suicide** was 10h00 - 14h00 (26.4%), followed by 15h00 - 17h00 (12.4%), followed by 20h00 - 21h00 (7.4%), followed by 18h00 - 19h00 (6.2%);
- **transport** related deaths was 18h00 - 00h00 (37.1%) followed by 09h00 - 10h00 (5%); and
- **other unintentional injury deaths (non-transport)** was 16h00 - 18h00 (11.6%), followed by 01h00 - 02h00 (9%).

Figure 5. Time of death (n = 3265)



4. Day of death

The peak days of death for:

- **violence** were Saturday (27.9%), followed by Friday (19.8%), followed by Sunday (18.8%);
- **suicide** were Friday (16.2%), followed by Wednesday (15.2%), followed by Sunday (14.9%);
- **transport** related deaths were Friday (19.8%), followed by Saturday (17.3%), followed by Thursday (14.1%); and
- **other unintentional injuries (non-transport)** were Sunday (20%), followed by Saturday (19.5%), followed by Friday (17%).

Figure 6. Day of death (n = 3766)

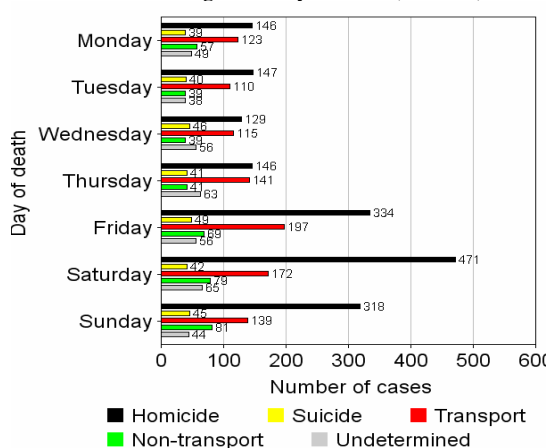


Figure 7. Day of violence-related deaths by sex (n = 1688)

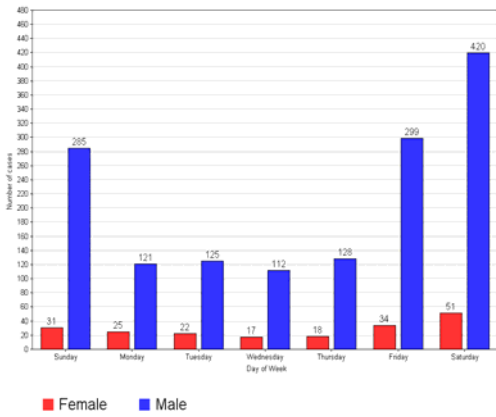


Figure 8. Day of suicide by sex (n = 301)

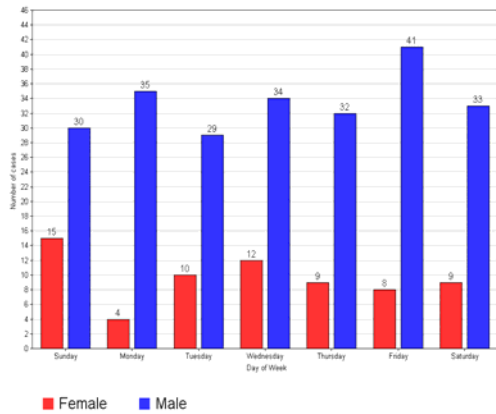
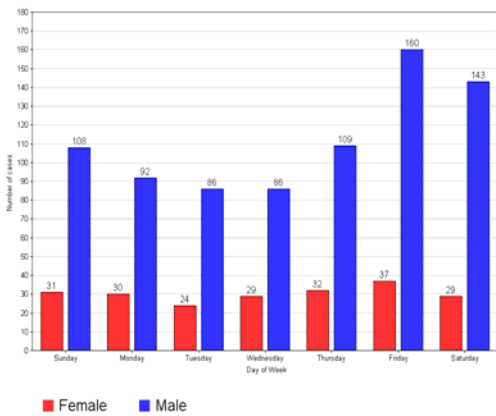


Figure 9. Day of transport-related deaths by sex (n = 996)

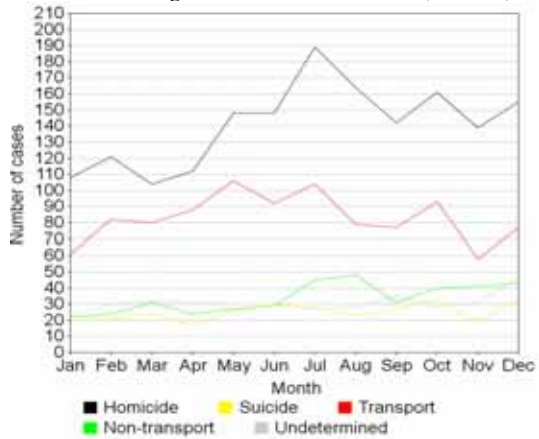


5. Seasonal variation

The peak month for:

- **violence** was July (11.2%), followed by August (9.7%), followed by October (9.5%);
- **suicide** was October (10.9%), followed by December (10.9%), followed by June (9.6%);
- **transport** related deaths was May (10.6%), followed by July (10.4%), followed by October (9.3%); and
- **other unintentional injury related deaths** (non-transport) was August (11.9%), followed by July (11.1%), followed by December (10.6%).

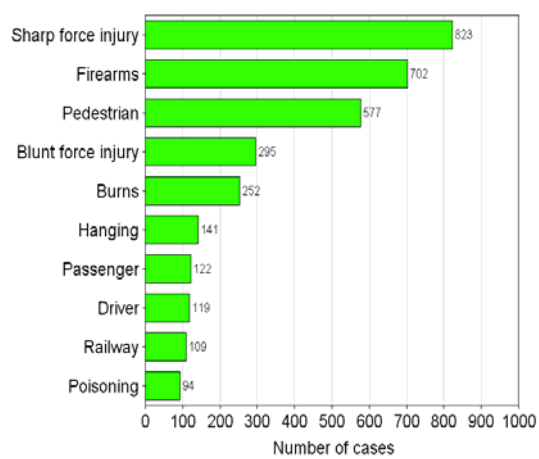
Figure 10. Seasonal variation (n = 3766)



6. External cause of death

The cause of death was unknown in 6.6% of the cases. The leading external cause of death was sharp force injury (22.4%), followed by firearms (19.1%), followed by pedestrian injuries (15.7%).

Figure 11. Ten most common external causes of death (n = 3234)



External cause of violence by age

Age was unknown in 61 of the 1782 cases. Of the remaining cases, the average age of the deceased was 30 (± 11.3 yrs).

The leading external cause of death for violence in the:

- **0-14** age group was blunt force injury (31.4%);
- **15-24** age group was sharp force injury (45.4%) followed by firearms (41.5%);
- **25-34** age group was sharp force injury (46.6%) followed by firearms (37.5%);
- **35-44** age group was sharp force injury (47.4%);
- **45-54** age group was sharp force injury (52.2%);
- **55-64** age group was firearms (39%); and
- **65+** age group was blunt force injury (37.5%).

Figure 12.1. Sharp force violence by age (n = 781)

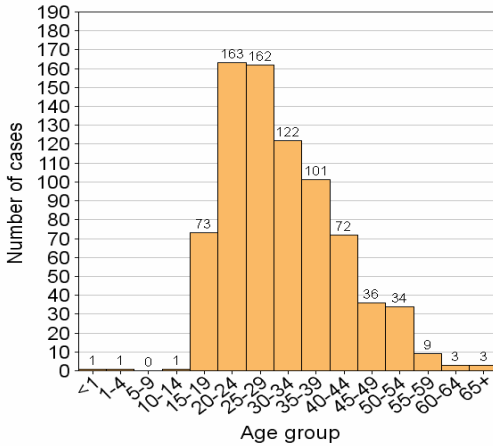


Figure 12.2. Firearm violence by age (n = 616)

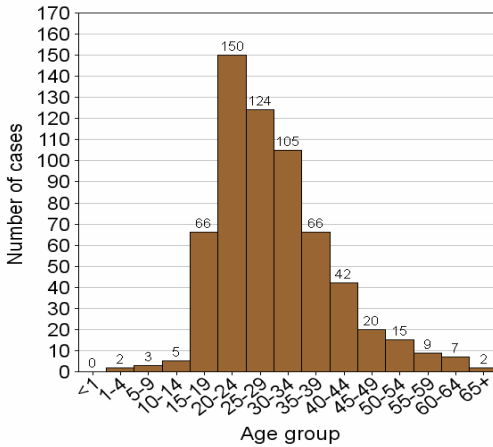


Figure 12.3. Blunt force violence by age (n = 273)

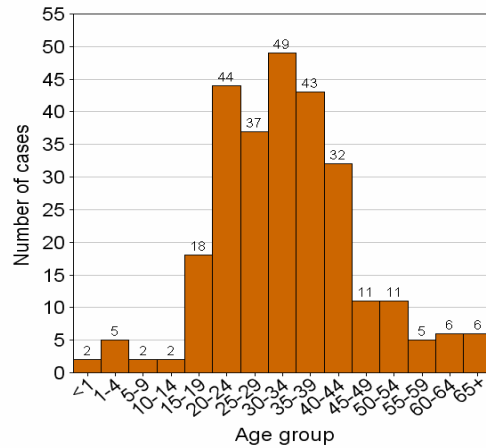


Figure 12.4. Strangulation by age (n = 27)

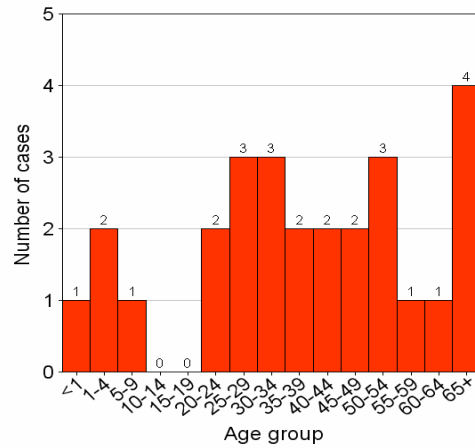
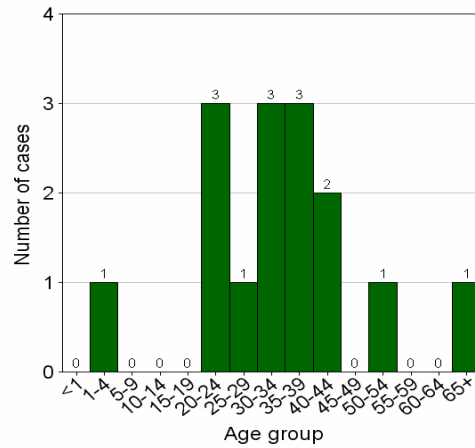


Figure 12.5. Burn violence by age (n = 15)



External cause of suicide by age

Age was unknown in 11 of the 320 cases. Of the remaining cases, the average age of the deceased was 36 (± 14.9 yrs).

The leading external cause of death for suicide in the:

- 0-14 age group was hanging (100%);
- 15-24 age group was hanging (54.3%);
- 25-34 age group was hanging (51%);
- 35-44 age group was hanging (42.4%);
- 45-54 age group was hanging (31%);
- 55-64 age group was firearms (37%); and
- 65+ age group was firearms (44.4%).

Figure 13.1. Hanging suicide by age (n = 137)

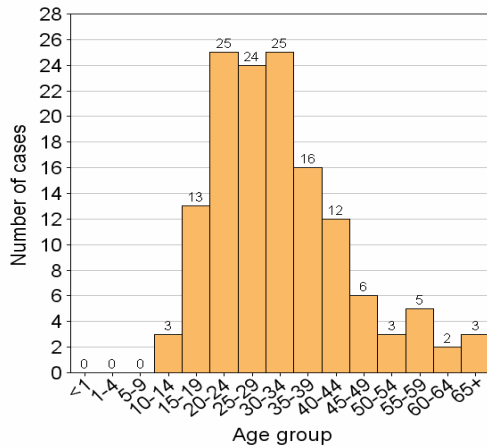


Figure 13.2. Firearm suicide by age (n = 63)

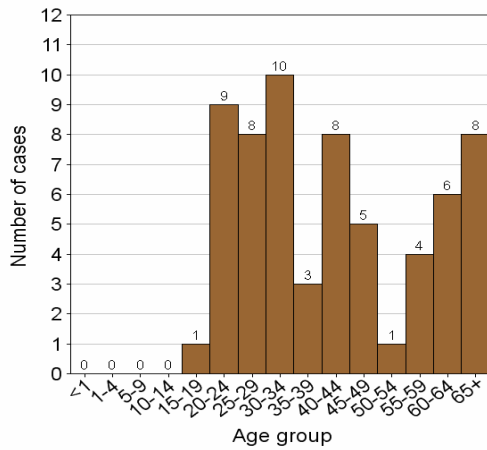


Figure 13.3. Poisoning suicide by age (n = 58)

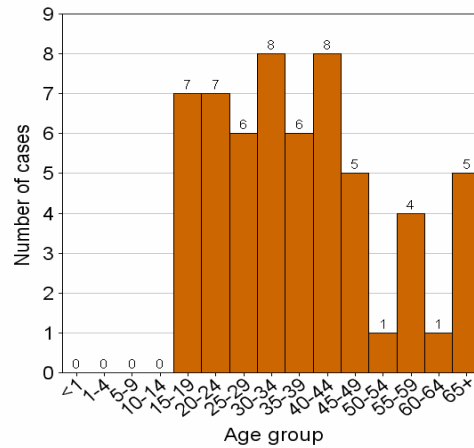


Figure 13.4. Gassing suicide by age (n = 22)

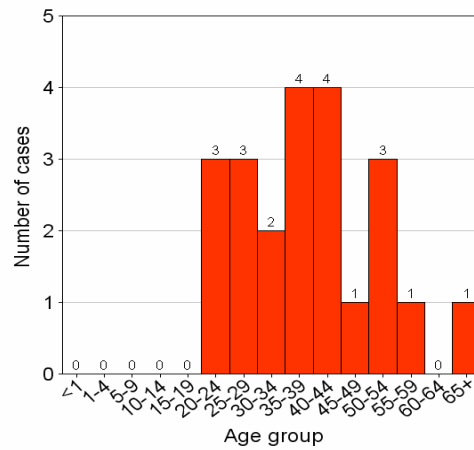
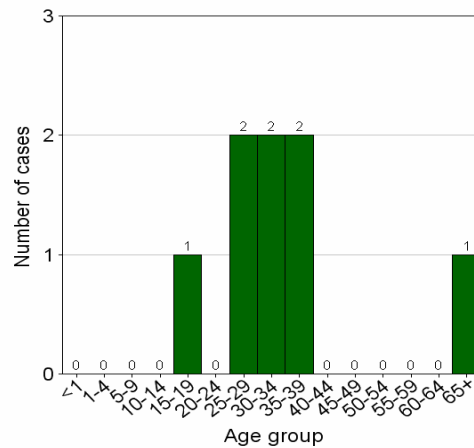


Figure 13.5. Unknown suicide by age (n = 8)



External cause of transport deaths by age

Age was unknown in 41 of the 1021 cases. Of the remaining cases, the average age of the deceased was 34 (± 16.2 yrs).

The leading external cause of death for transport in the:

- 0-14 age group was pedestrian injuries (84.7%);
- 15-24 age group was pedestrian injuries (48.6%);
- 25-34 age group was pedestrian injuries (49.2%);
- 35-44 age group was pedestrian injuries (57.7%);
- 45-54 age group was pedestrian injuries (56.1%);
- 55-64 age group was pedestrian injuries (55.4%); and
- 65+ age group was pedestrian injuries (58.7%).

Figure 14.1. Pedestrian deaths by age (n = 555)

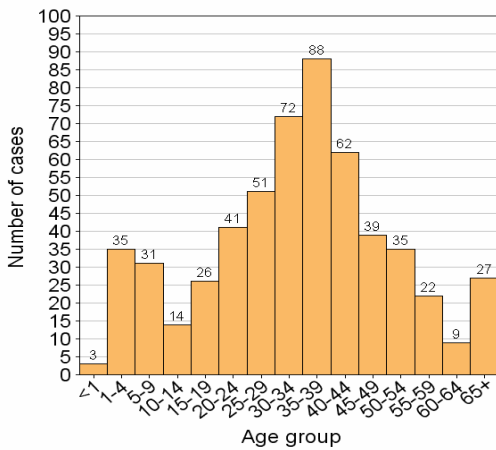


Figure 14.2. Passenger deaths by age (n = 119)

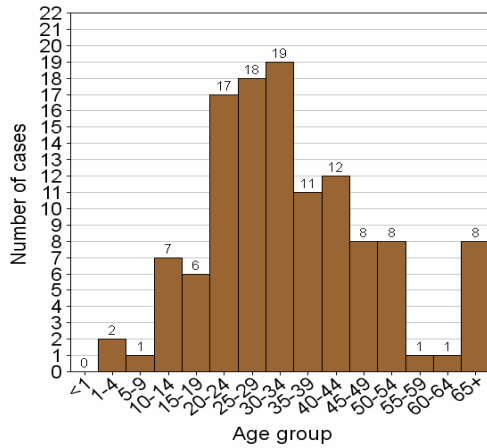


Figure 14.3. Driver deaths by age (n = 108)

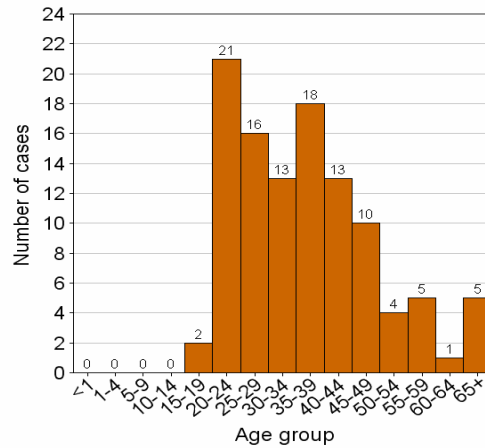


Figure 14.4. Railway deaths by age (n = 102)

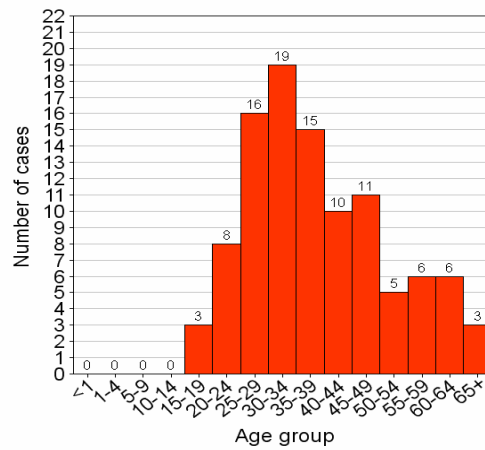
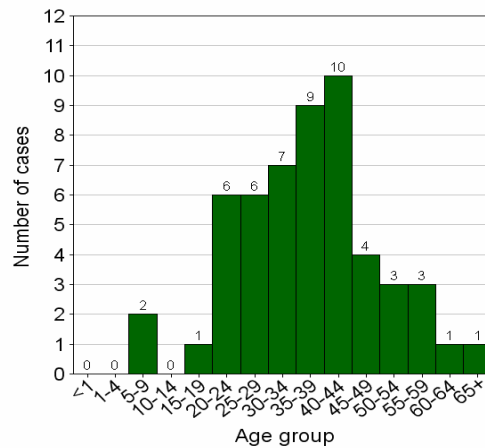


Figure 14.5. Unspecified motor vehicle deaths by age (n = 53)

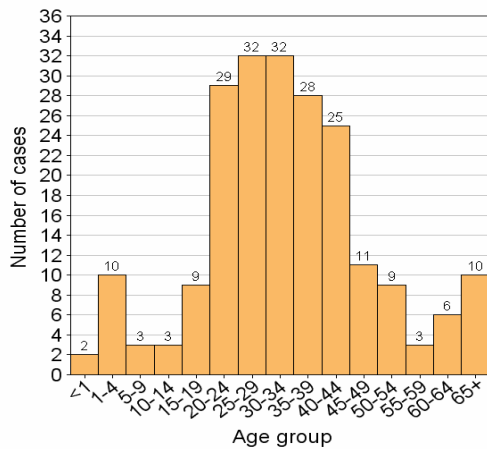


External cause of other unintentional injury deaths (non-transport) by age

Age was unknown in 23 of the 416 cases. Of the remaining cases, the average age of the deceased was 36 (± 21.2 yrs). The leading cause for other unintentional injury deaths (non-transport) in the:

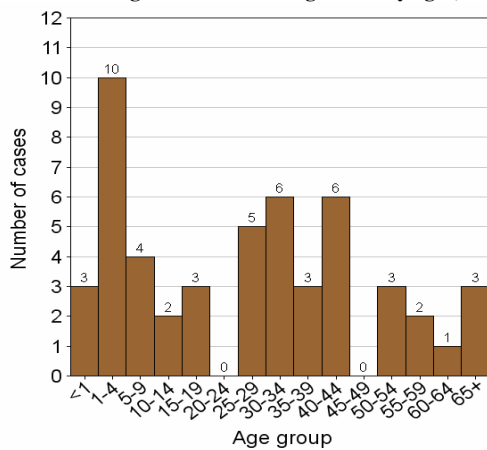
- 0-14 age group was drowning (35.2%) followed by burns (33.3%);
- 15-24 age group was burns (71.7%);
- 25-34 age group was burns (65.3%);
- 35-44 age group was burns (67.9%);
- 45-54 age group was burns (57.1%);
- 55-64 age group was burns (30%); and
- 65+ age group was fall/push/jump from height (28.9%), followed by burns (22.2%).

Figure 15.1. Burn deaths by age (n = 212)



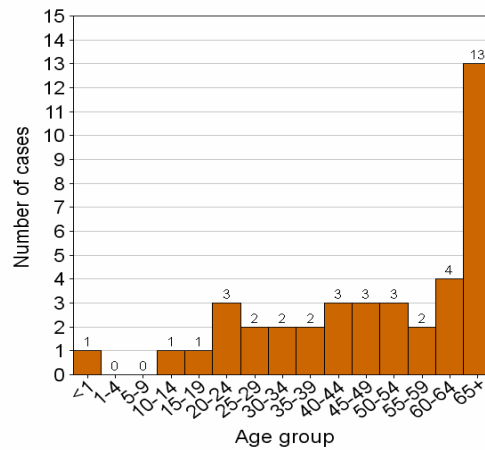
created with ChartDirector from www.advsofteng.com

Figure 15.2. Drowning deaths by age (n = 51)



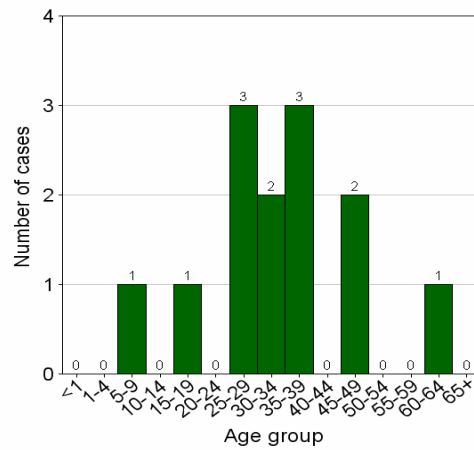
created with ChartDirector from www.advsofteng.com

Figure 15.3. Falling from a height deaths by age (n = 40)



created with ChartDirector from www.advsofteng.com

Figure 15.4. Unknown deaths by age (n = 13)

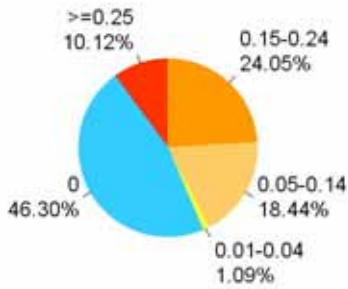


created with ChartDirector from www.advsofteng.com

7. Blood alcohol levels

Blood alcohol concentration (BAC) levels were obtained in 2391 of the 3941 cases. The average BAC for those who tested positive was 0.17 ± 0.07 g/100ml

Figure 16. Blood Alcohol Levels (n = 2391)



Blood alcohol level by apparent manner

Of the 3941 who were fatally injured, blood alcohol concentration were available in 2391 (60.7%).

Table II: Blood alcohol levels per apparent manner

Apparent manner	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Violence (1782)	1314 (73.74)	768 (58.45)	0.17	0.07
Suicide (320)	233 (72.81)	68 (29.18)	0.13	0.07
Transport (1021)	566 (55.44)	324 (57.24)	0.18	0.08
Other unintentional (416)	160 (38.46)	85 (53.12)	0.18	0.06
Undetermined (402)	118 (29.35)	39 (33.05)	0.17	0.09
Total	2391	1284	0.17	0.07

Blood alcohol level by transport user

Of the 1021 who were fatally injured in transport collisions, blood alcohol concentration were available in 566 (55.4%) 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 (119)	81 (68.07)	41 (50.62)	0.16	0.07
Passenger (122)	54 (44.26)	25 (46.3)	0.14	0.08
Pedestrian (577)	291 (50.43)	190 (65.29)	0.2	0.08
Railway (106)	88 (83.02)	43 (48.86)	0.19	0.08
Cyclist (39)	20 (51.28)	4 (20)	0.09	0.03
Unspecified (54)	30 (55.56)	20 (66.67)	0.18	0.06
Total	564	323	0.19	0.08