



A profile of fatal injuries in South Africa
7th Annual Report of the
NATIONAL INJURY MORTALITY SURVEILLANCE SYSTEM
2005



Section 4. Cape Town Metropolitan Area

Background

This short report, which covers the period 1 January to 31 December 2005, describes the fatal injury profile in the Cape Town Metropolitan area, and includes data from three mortuaries, Salt River, Tygerberg and Stellenbosch.

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 1. Age standardised* injury mortality rates for Cape Town, 2001- 2005										
Year	2001		2002		2003		2004		2005	
Population#	2 893 247		2 939 810		2 981 898		3 024 589		3 068 024	
	Total deaths	Rate/ 100,000 pop. [§]	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	2478	77.5	2454	74.9	2195	66.5	1823	54.7	2046	60.0
- firearm violence	1123	34.4	1198	36.2	937	28.1	645	19.0	720	20.9
Suicide	320	11.0	299	10.4	328	11.0	326	10.7	354	11.4
- firearm suicide	86	3.0	68	2.4	85	3.1	65	2.3	66	2.3
- hanging	132	4.4	137	4.5	147	4.6	146	4.5	163	4.9
Transport	1150	39.0	1052	34.9	1005	33.0	1034	34.2	1051	33.8
- road traffic	1002	34.2	920	30.6	871	28.7	924	30.5	954	30.8
<i>pedestrian</i>	614	21.0	526	17.8	528	17.5	585	19.5	552	18.0
<i>driver</i>	116	4.1	127	4.2	117	3.9	123	4.0	138	4.4
- railway deaths	148	4.8	131	4.2	131	4.2	106	3.6	97	3.0
Unintentional	487	16.8	441	15.2	449	15.2	442	15.3	466	15.6
- burns	252	8.4	239	7.9	247	8.0	243	7.8	271	8.7
- drowning	86	3.0	84	2.8	71	2.3	61	2.1	75	2.4
ALL INJURIES*	4783	157.3	4554	146.7	4357	139.4	4030	129.6	4467	141.0

* 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.

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 end goal is to establish a permanent system that will record all such deaths that occur annually in South Africa. The NIMSS will at a local level, regional and national level, provide 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

Acknowledgements

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This report is available online at:
www.sahealthinfo.org.za/violence/nimss.htm

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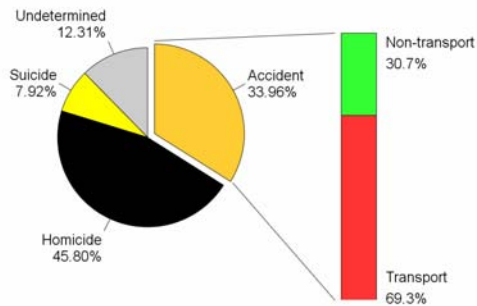
RESULTS

A total of 5369 cases were recorded in Cape Town for January 2005 to December 2005, including 902 (16.8%) cases that were due to natural causes. The rest of the analysis is restricted to the 4467 non-natural deaths that occurred in the catchment area.

1. Overall manner of death

The leading manner of death was violence/homicide (45.8%).

Figure 1. Overall manner of death (N = 4467)



Manner of death by age

The average age of the deceased was 32.2 (\pm 15.6 years).
The leading manner(s) of death amongst the:

- **0-14** age group was undetermined (34.9%) followed by transport (32.2%);
- **15-24** age group was homicide (66.1%);
- **25-34** age group was homicide (56.9%);
- **35-44** age group was homicide (42.4%) followed by transport (30.1%);
- **45-54** age group was transport (32.4%);
- **55-64** age group was undetermined (26.6%), followed by transport (25.2%), followed by homicide (23.8%); and
- **65+** age group was undetermined (44.5%)

Figure 2.1. Violence/Homicide by victim age (n = 2030)

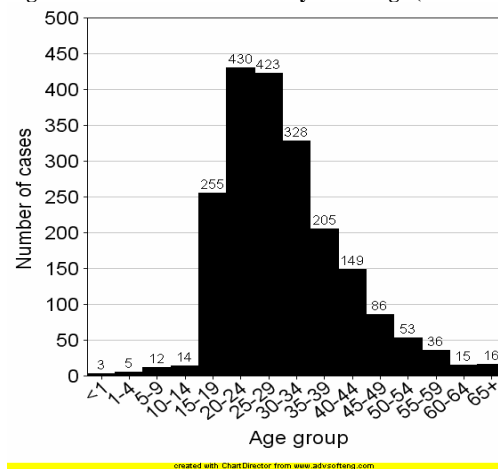


Figure 2.2. Suicide by age (n = 349)

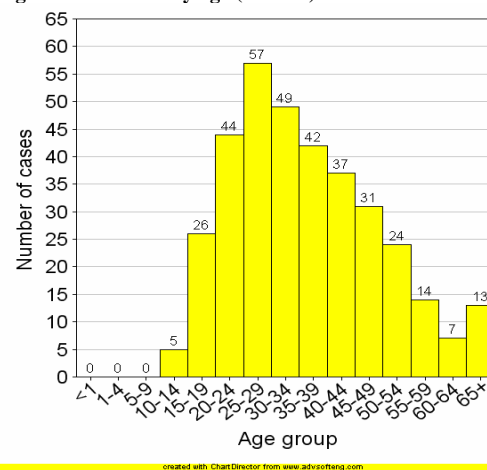


Figure 2.3. Transport deaths by age (n = 1040)

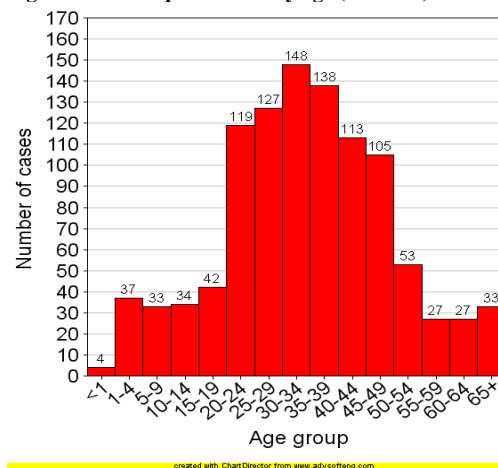


Figure 2.4. Other unintentional injury (non-transport) deaths by age (n = 454)

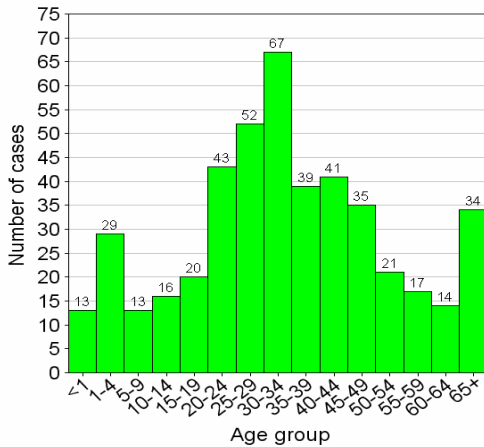
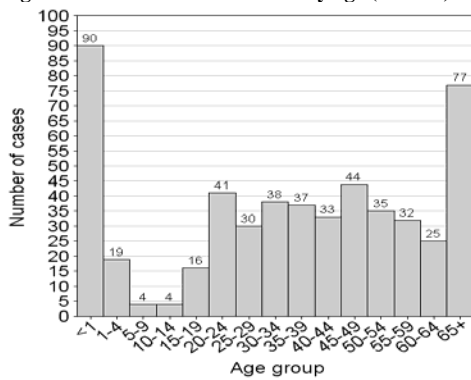


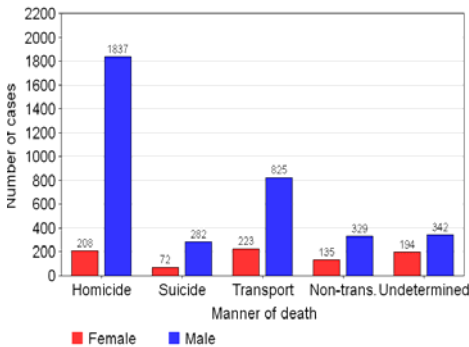
Figure 2.5. Undetermined deaths by age (n = 525)



Manner of death by sex

Of the cases recorded in Cape Town, 3615 (81.3%) were male and 832 (18.7%) were female. The leading cause of death amongst males was violence (50.8%). The leading cause of death amongst females was transport (26.8%), followed by violence (25%).

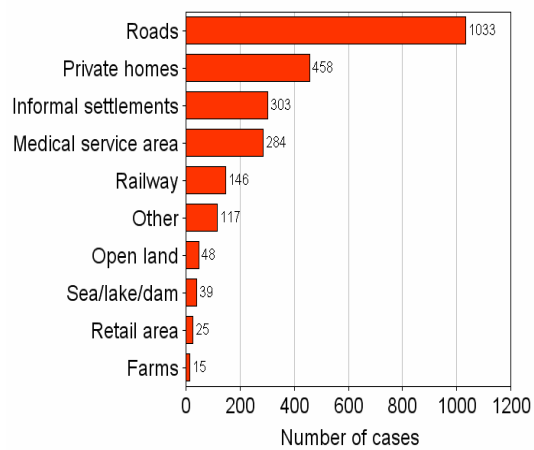
Figure 3. Manner of death by sex (n = 4447)



2. Scene of injury

The scene of injury was known in 2507 (56.1%) cases. The scene that accounted for the majority of deaths was roads (41.2%).

Figure 4. Top 10 scenes of injury (n = 2468)

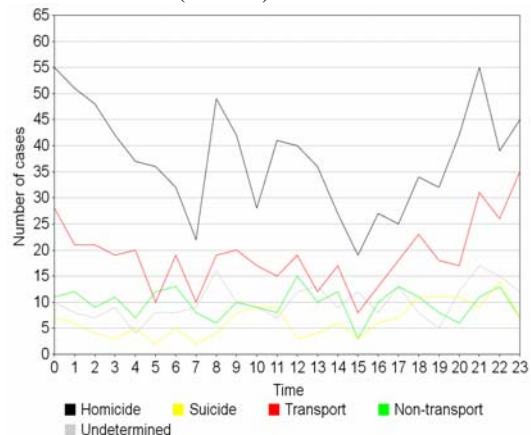


3. Time of death

The peak period(s) of death for:

- **violence** was 00h00 - 03h00 (17%), followed by 21h00 - 22h00 (6.1%), followed by 08h00 - 09h00 (5.4%), followed by 23h00 - 00h00 (5%);
- **suicide** was 18h00 - 23h00 (36.1%) followed by 09h00 - 12h00 (16.7%);
- **transport** related deaths was 21h00 - 00h00 (20.2%), followed by 00h00 - 01h00 (6.1%), followed by 18h00 - 19h00 (5%); and
- **other unintentional injury deaths (non-transport)** was 05h00 - 07h00 (10.6%), followed by 12h00 - 13h00 (6.4%), followed by 17h00 - 18h00 (5.5%).

Figure 5. Time of death (n = 1992)



4. Day of death

The peak days of death for:

- **violence** were Saturday (29.2%), followed by Sunday (27.1%), followed by Monday (11.9%);
- **suicide** were Monday (18.5%), followed by Friday (15.6%), followed by Sunday (14.5%);
- **transport** related deaths were Saturday (22.4%), followed by Sunday (18.6%), followed by Friday (14.8%); and
- **other unintentional injury deaths (non-transport)** were Saturday (19.8%), followed by Sunday (18.5%), followed by Monday (15.5%).

Figure 6. Day of death (n = 4447)

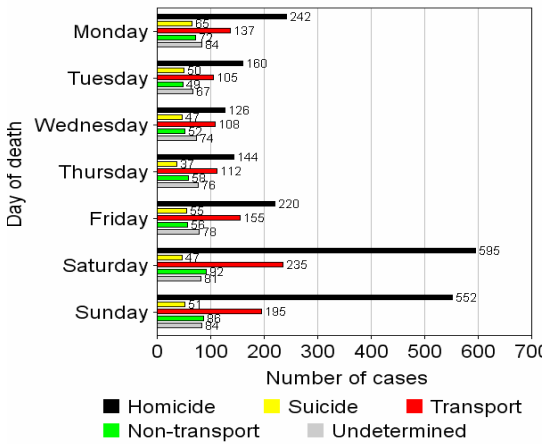


Figure 7. Day of violence-related deaths by sex (n = 2038)

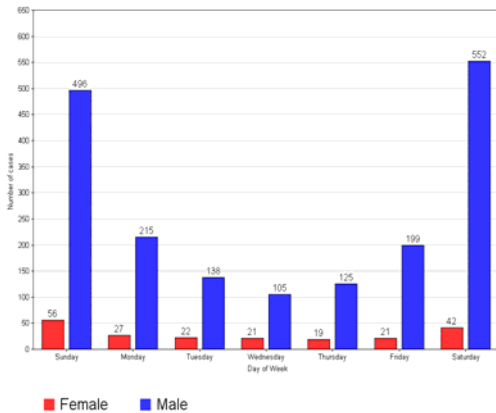


Figure 8. Day of suicide deaths by sex (n = 352)

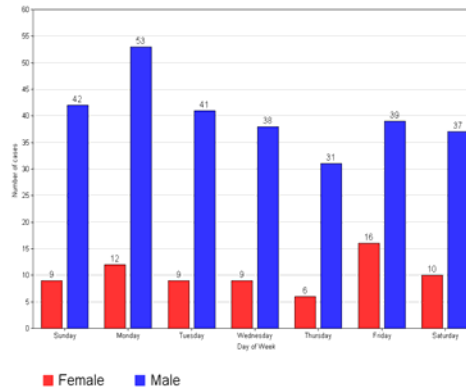
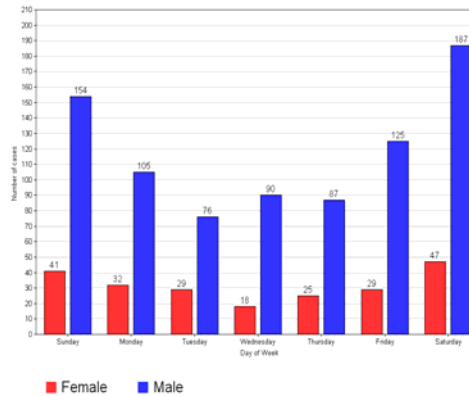


Figure 9. Day of transport deaths by sex (n = 1045)

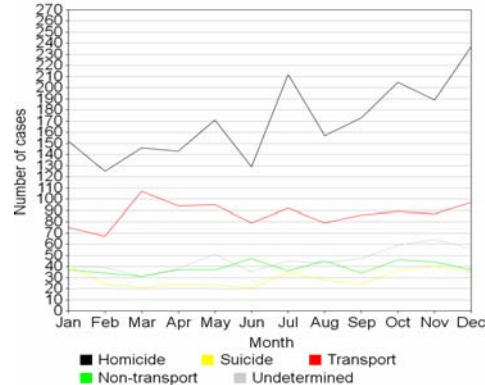


5. Seasonal variation

The peak month for:

- **violence** was December (11.6%), followed by July (10.4%), followed by October (10.1%);
- **suicide** was January (11.6%), followed by November (11.4%), followed by October (10.5%);
- **transport** related deaths was March (10.2%), followed by December (9.3%), followed by May (9.1%); and
- **other unintentional injury deaths (non-transport)** was June (10.1%), followed by October (9.9%), followed by August (9.7%).

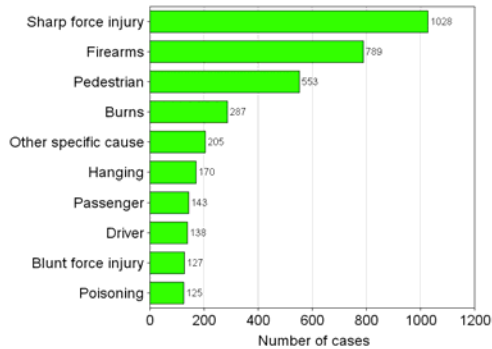
Figure 10. Seasonal variation (n = 4451)



6. External cause of death

The cause of death was unknown in 6.7% of the cases. The leading external cause of death was sharp force injury (24.7%), followed by firearms (18.9%), followed by pedestrian injuries (13.3%).

Figure 11. Top 10 external causes of death (n = 3565)



External cause of violence by age

Age was unknown in 16 of the 2046 cases. Of the remaining cases, the average age of the deceased was 29 (± 10.9 yrs). The leading external cause of death for violence in the:

- **0-14** age group was firearms (38.2%);
- **15-24** age group was sharp force injury (51.8%) followed by firearms (37.2%);
- **25-34** age group was sharp force injury (50.9%) followed by firearms (37.3%);
- **35-44** age group was sharp force injury (52.5%);
- **45-54** age group was sharp force injury (41%) followed by firearms (30.9%);
- **55-64** age group was sharp force injury (35.3%) followed by firearms (35.3%); and
- **65+** age group was sharp force injury (37.5%).

Figure 12.1. Sharp force violence by age (n = 1012)

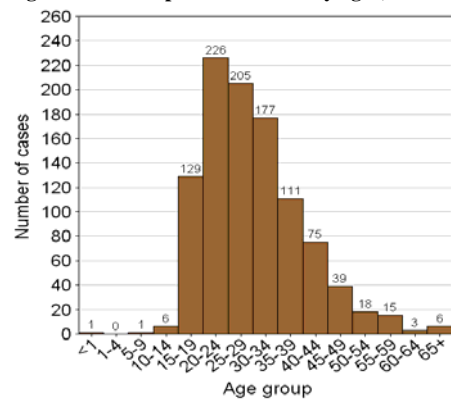


Figure 12.2. Firearm violence by age (n = 713)

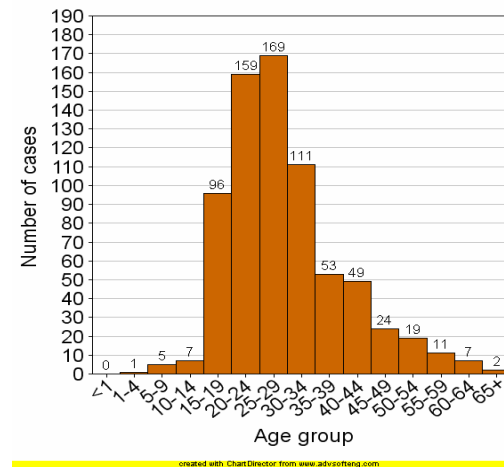


Figure 12.3. Blunt force injury violence by age (n = 124)

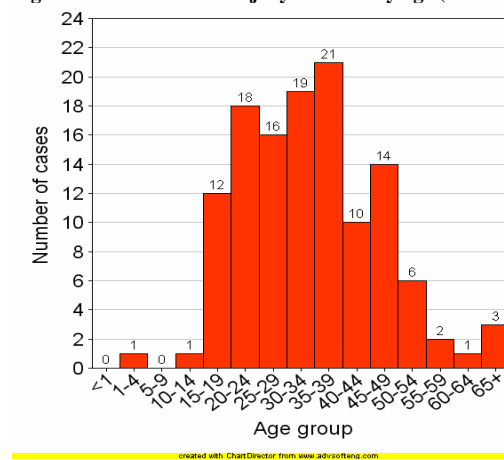
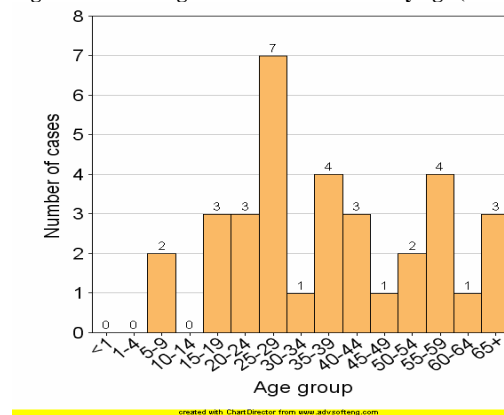


Figure 12.4. Strangulation or suffocation by age (n = 34)



External cause of suicide by age

Age was unknown in 5 of the 354 cases. Of the remaining cases, the average age of the deceased was 35 (± 13.8 yrs). The leading external cause of death for suicide in the:

- **0-14** age group was hanging (40%) followed by firearms 40%);
- **15-24** age group was hanging (60%);
- **25-34** age group was hanging (57.5%);
- **35-44** age group was hanging (40.5%);
- **45-54** age group was hanging (34.5%);
- **55-64** age group was poisoning (38.1%); and
- **65+** age group was poisoning (38.5%) followed by firearms (30.8%).

Figure 13.1. Hanging suicide by age (n = 162)

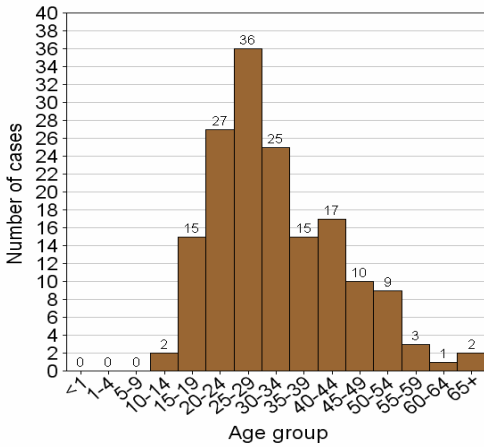


Figure 13.2. Poisoning suicide by age (n = 78)

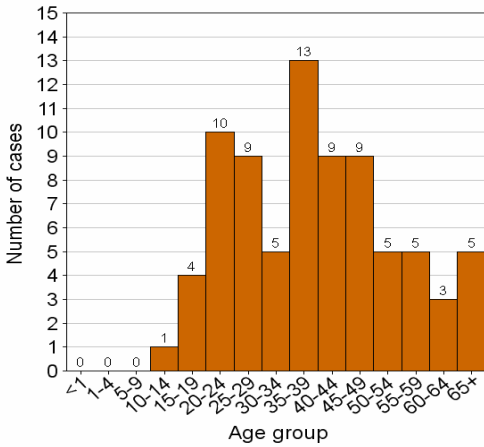


Figure 13.3. Firearm suicide by age (n = 64)

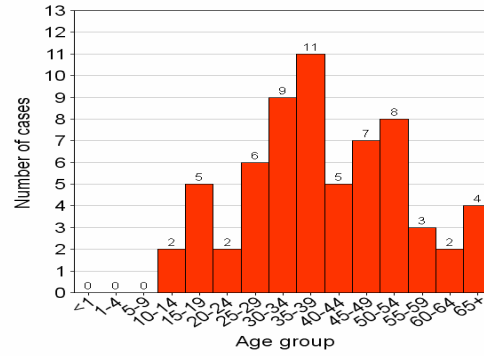


Figure 13.4. Gassing suicide by age (n = 21)

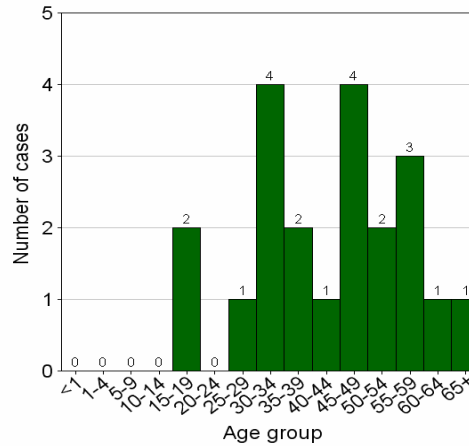
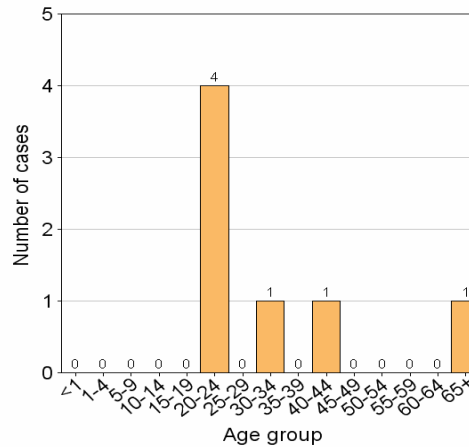


Figure 13.5. Jump from height suicide by age (n = 7)



External cause of transport deaths by age

Age was unknown in 11 of the 1051 cases. Of the remaining cases, the average age of the deceased was 33 (\pm 15.2 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 (40.4%);
- 25-34 age group was pedestrian injuries (44.4%);
- 35-44 age group was pedestrian injuries (57.8%);
- 45-54 age group was pedestrian injuries (57%);
- 55-64 age group was pedestrian injuries (51.9%); and
- 65+ age group was pedestrian injuries (57.6%).

Figure 14.1. Pedestrian deaths by age (n = 550)

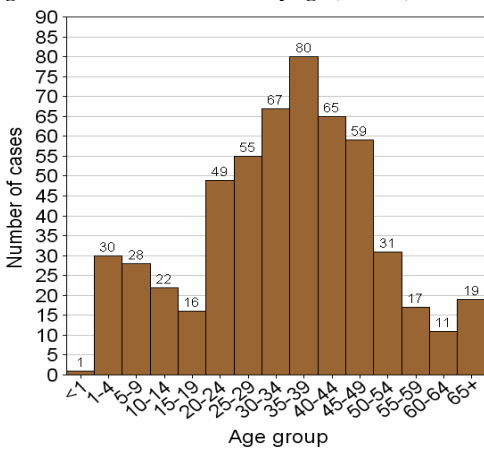


Figure 14.3. Driver deaths by age (n = 134)

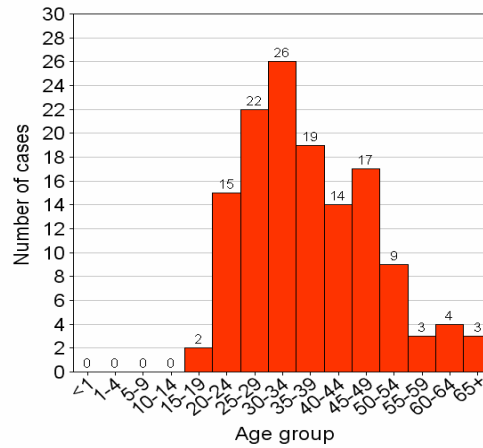


Figure 14.4. Railway deaths by age (n = 95)

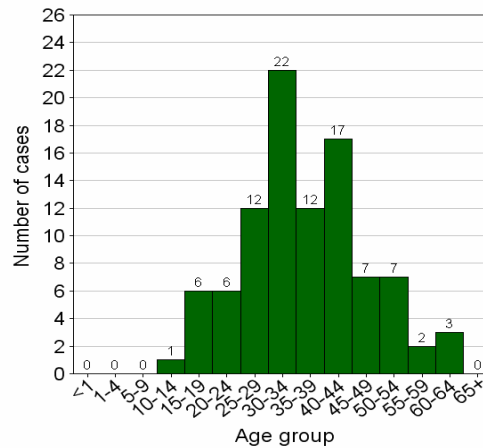


Figure 14.2. Passenger deaths by age (n = 140)

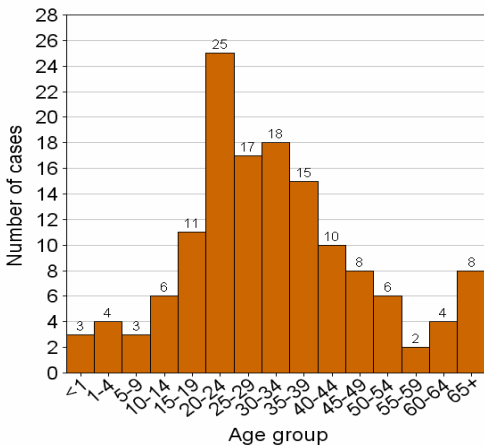
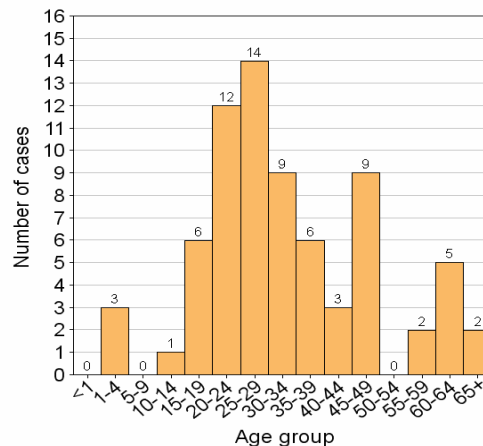


Figure 14.5. Unspecified motor vehicle deaths by age (n = 72)



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

Age was unknown in 12 of the 466 cases. Of the remaining cases, the average age of the deceased was 34 (± 19.7 yrs). The leading cause for non-transported related deaths in the:

- 0-14 age group was burns (52.1%);
- 15-24 age group was burns (52.4%);
- 25-34 age group was burns (74.8%);
- 35-44 age group was burns (58.8%);
- 45-54 age group was burns (55.4%);
- 55-64 age group was burns (35.5%); and
- 65+ age group was fall from height (47.1%) followed by burns (32.4%).

Figure 15.1. Burn deaths by age (n = 259)

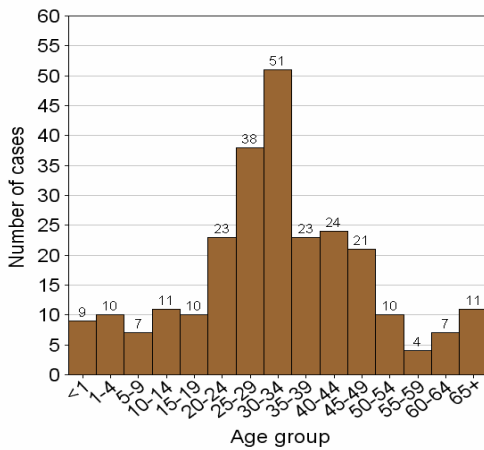


Figure 15.2. Drowning deaths by age (n = 75)

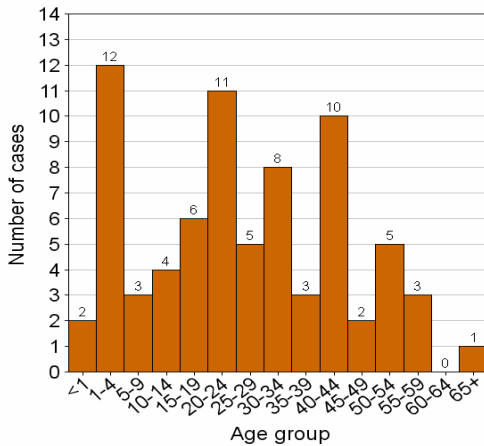


Figure 15.3. Fall from a height deaths by age (n = 51)

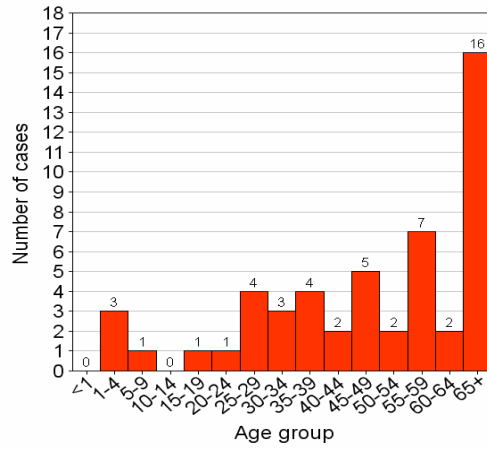


Figure 15.4. Other fall related deaths by age (n = 15)

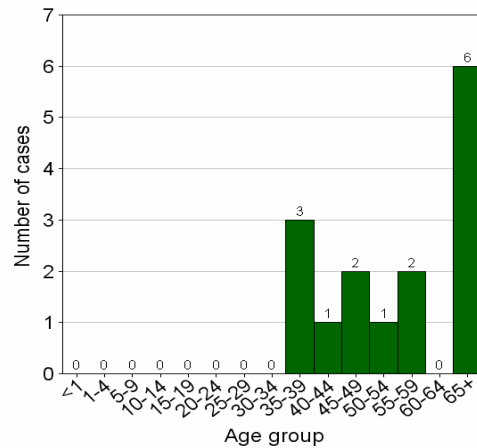
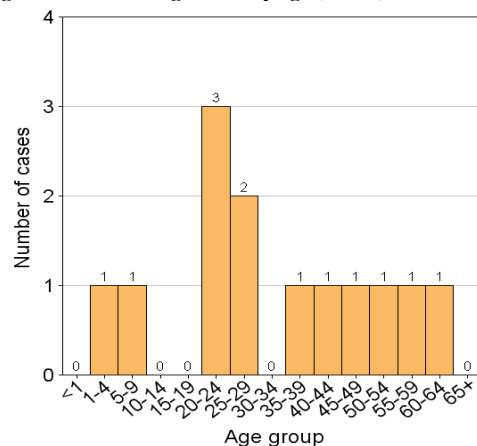


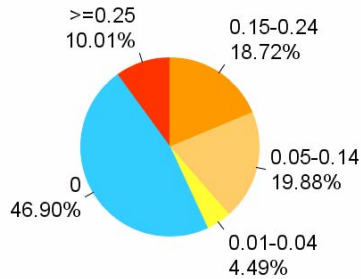
Figure 15.5. Crushing deaths by age (n = 13)



7. Blood alcohol levels

Blood alcohol concentration (BAC) levels were obtained in 2158 of the 4467 cases. The average BAC for those who tested positive was 0.16 ± 0.09 g/100ml.

Figure 16. Blood Alcohol Levels (n = 2158)



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Blood alcohol level by apparent manner

Of the 4467 who were fatally injured, blood alcohol concentration were available in 2158 (48.3%).

Table II: Blood alcohol levels per apparent manner

Apparent manner	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Violence (2046)	1195 (58.41)	725 (60.67)	0.15	0.08
Suicide (354)	223 (62.99)	57 (25.56)	0.13	0.07
Transport (1051)	445 (42.34)	237 (53.26)	0.17	0.1
Other unintentional (466)	177 (37.98)	89 (50.28)	0.18	0.1
Undetermined (550)	118 (21.45)	38 (32.2)	0.2	0.16
Total	2158	1146	0.17	0.1

Blood alcohol level by transport user

Of the 1051 who were fatally injured in transport collisions, blood alcohol concentration were available in 445 (42.3%) 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 (138)	71 (51.45)	37 (52.11)	0.14	0.07
Passenger (143)	60 (41.96)	25 (41.67)	0.13	0.08
Pedestrian (552)	229 (41.49)	145 (63.32)	0.2	0.1
Railway case (97)	38 (39.18)	13 (34.21)	0.15	0.12
Cyclist (49)	22 (44.9)	8 (36.36)	0.12	0.06
Unspecified (72)	25 (34.72)	9 (36)	0.15	0.07
Total	445	237	0.18	0.1