



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



Section 3. eThekweni Metropolitan Area, DURBAN

Background

This short report, which covers the period 1 January to 31 December 2005, describes the fatal injury profile in the eThekweni Metropolitan area, Durban and includes data from three mortuaries: Gale Street, Phoenix and Pinetown.

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- 2005										
Year	2001		2002		2003		2004		2005	
Population [#]	3 090 122		3 121 406		3 158 907		3 189 667		3 221 960	
	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	2097	63.2	2175	65.1	2080	60.9	1905	55.2	1874	53.8
- firearm violence	1273	38.2	1304	38.9	1197	34.9	1045	29.9	980	28.3
Suicide	328	10.5	417	13.2	445	14.2	434	13.5	440	13.4
- firearm suicide	62	2.0	88	2.8	121	4.2	76	2.3	79	2.5
- hanging	192	5.9	233	7.0	223	6.6	239	7.2	273	8.0
Transport	1072	35.3	1072	35.1	1070	34.4	1149	35.8	1134	35.5
- road traffic	1008	33.0	1038	33.5	1005	32.3	1077	33.4	1083	34.0
<i>pedestrian</i>	408	13.3	598	19.5	534	17.1	582	18.4	508	15.8
<i>driver</i>	88	2.9	99	3.1	114	3.7	134	4.1	87	2.7
- railway deaths	63	2.0	66	2.0	63	2.0	72	2.3	51	1.5
Unintentional	275	9.7	329	11.8	265	9.2	307	10.6	238	7.2
- burns	49	1.7	59	2.1	68	2.3	99	3.6	42	1.3
- drowning	60	1.8	68	2.1	61	1.8	80	2.4	54	1.6
ALL INJURIES[¶]	4187	132.4	4187	131.1	4244	131.3	4144	126.6	4083	123.9

* 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 Dr S. Aiyer, 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 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.

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31 July 2007

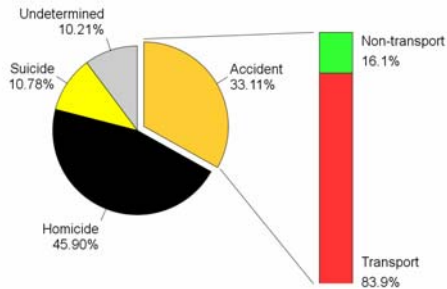
RESULTS

A total of 5676 cases were recorded in Durban for January 2005 to December 2005, including 510 (9.0%) cases that were due to natural causes and another 1083 (19.1%) that were either viewed or stored at the mortuaries. The rest of the analysis is restricted to the 4083 non-natural deaths that occurred in the catchment area.

1. Overall manner of death

The leading cause of death was violence/homicide (45.9%).

Figure 1. Overall manner of death (N = 4083)



Manner of death by age

The average age of the deceased was 32.5 (\pm 14.5 years). The leading manner(s) of death amongst the:

- 0-14 age group was transport (45.8%);
- 15-24 age group was violence (56.4%);
- 25-34 age group was violence (54.9%);
- 35-44 age group was violence (47.1%) followed by transport (30.3%);
- 45-54 age group was violence (38.7%) followed by transport (32.1%);
- 55-64 age group was transport (37.6%); and
- 65+ age group was transport (31.8%).

Figure 2.1. Violence/Homicide by age (n = 1845)

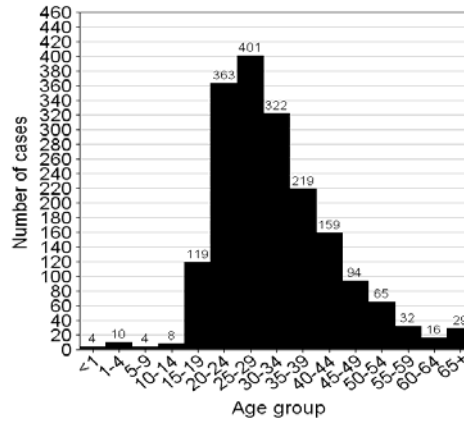


Figure 2.2. Suicide by age (n = 436)

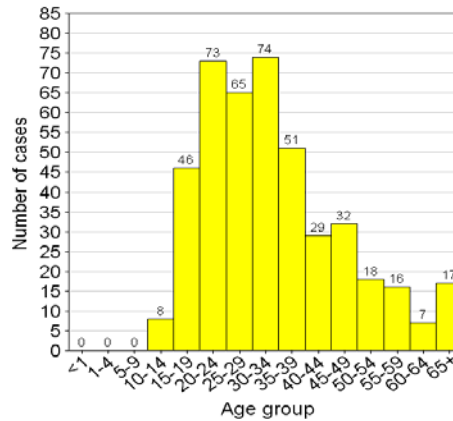


Figure 2.3. Transport deaths by age (n = 1109)

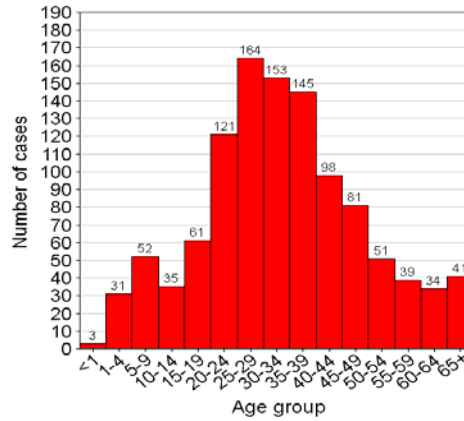


Figure 2.4. Other unintentional injury deaths (non-transport) by age (n = 214)

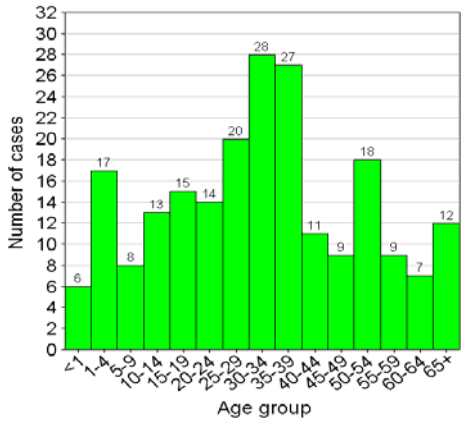
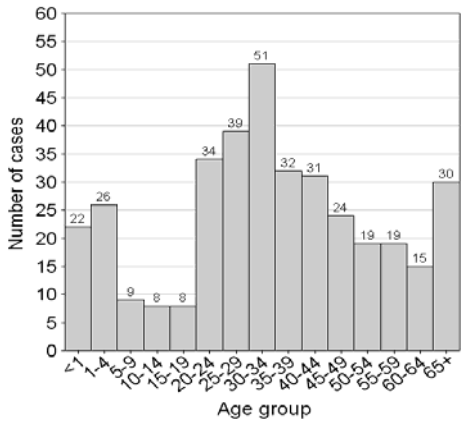


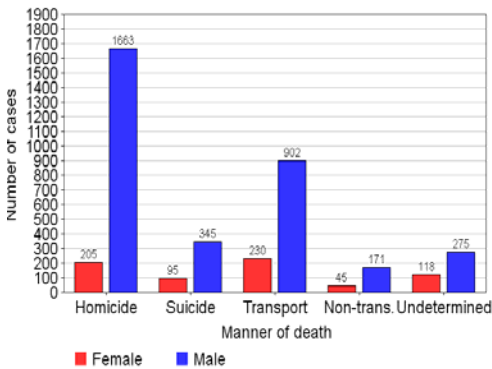
Figure 2.5. Undetermined deaths by age (n = 367)



Manner of death by sex

Of the cases recorded in Durban, 3356 (82.9%) were male and 693 (17.1%) were female. The leading cause of death amongst males was violence (49.6%) and amongst females it was transport (33.2%).

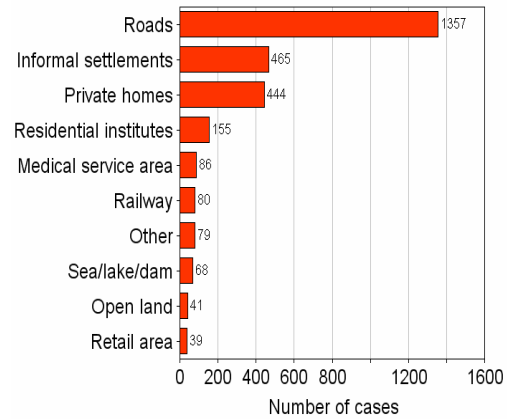
Figure 3. Manner of death by sex (n = 4049)



2. Scene of injury

The scene of injury was known in 2931 (71.8%) cases. The scene that accounted for the majority of deaths was roads (46.3%).

Figure 4. Top 10 scenes of injury (n = 2814)

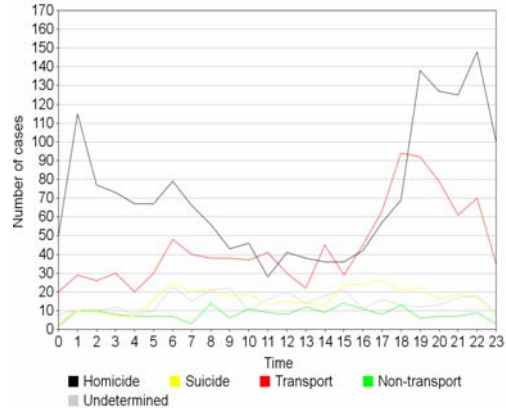


3. Time of death

The peak period(s) of death for:

- **violence** was 19h00 - 00h00 (37.1%) followed by 01h00 - 02h00 (6.7%);
- **suicide** was 15h00 - 20h00 (30.2%) followed by 06h00 - 09h00 (17%);
- **transport** related deaths was 17h00 - 23h00 (43.2%); and
- **other unintentional injury deaths (non-transport)** was 15h00 - 17h00 (12.5%), followed by 01h00 - 03h00 (10%), followed by 08h00 - 09h00 (7%), followed by 18h00 - 19h00 (6.5%).

Figure 5. Time of death (n = 3722)



4. Day of death

The peak days of death for

- **violence** were Saturday (28.4%), followed by Sunday (19.1%), followed by Friday (15.2%);
- **suicide** were Saturday (16.7%), followed by Sunday (16.3%), followed by Monday (16.1%);
- **transport** related deaths were Saturday (23.7%), followed by Friday (18.7%), followed by Sunday (14.3%); and
- **Other unintentional injury deaths (non-transport)** were Monday (18%), followed by Sunday (16.1%), followed by Wednesday (15.2%).

Figure 6. Day of death (n = 4043)

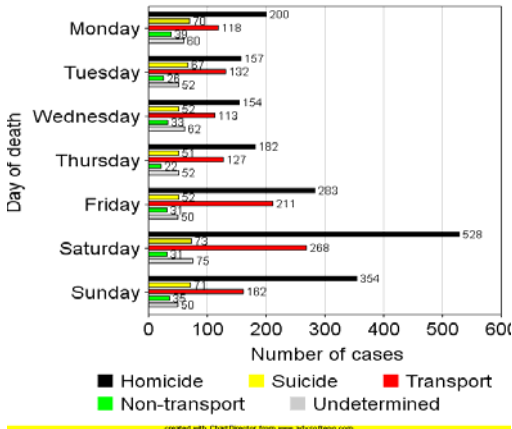


Figure 7. Day of violence-related deaths by sex (n = 1852)

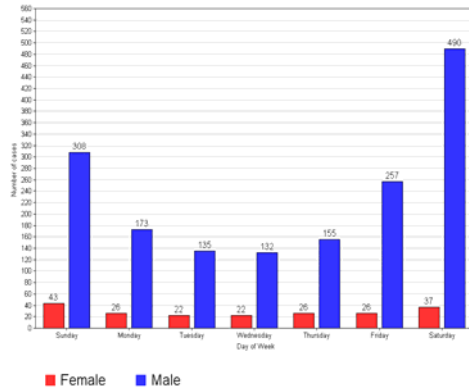


Figure 8. Day of suicide deaths by sex (n = 436)

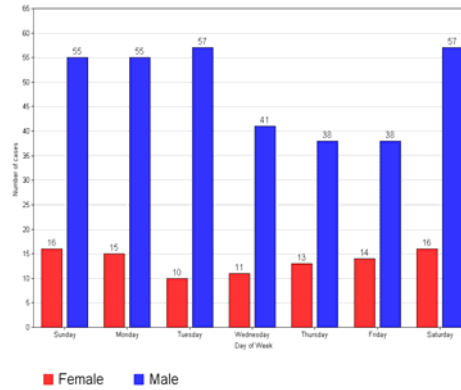
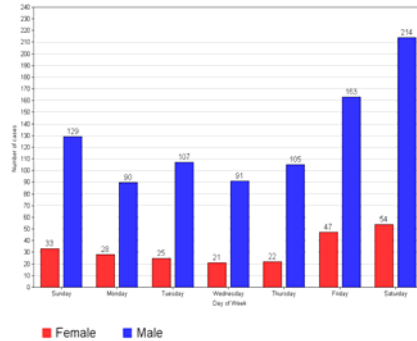


Figure 9. Day of transport deaths by sex (n = 1129)

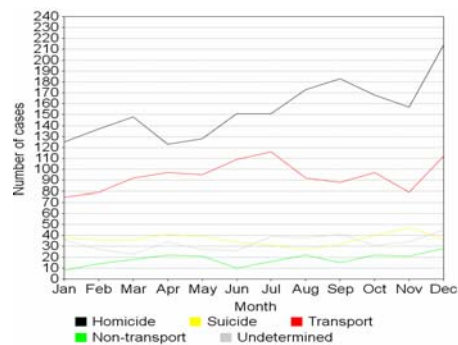


5. Seasonal variation

The peak month for:

- **violence** was December (11.5%), followed by September (9.8%), followed by August (9.3%);
- **suicide** was November (10.8%), followed by April (9.4%), followed by October (9.2%);
- **transport** related deaths was July (10.3%), followed by December (9.9%), followed by June (9.6%); and
- **other unintentional injury deaths (non-transport)** was December (12.9%), followed by April (10.1%), followed by August (10.1%).

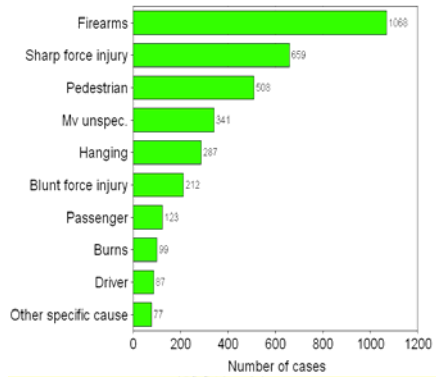
Figure 10. Seasonal variation (n = 4043)



6. External cause of death

The cause of death was unknown in 4.2% of the cases. The leading external cause of death was firearms (27.3%), followed by sharp force injury (16.9%), followed by pedestrian injuries (13%).

Figure 11. Top 10 external causes of death (n = 3461)



External cause of violence by age

Age was unknown in 29 of the 1874 cases. Of the remaining cases, the average age of the deceased was 31 (± 11.4 yrs). The leading external cause of death for violence in the:

- 0-14 age group was firearms (50%);
- 15-24 age group was firearms (48.8%) followed by sharp force injury (41.1%);
- 25-34 age group was firearms (52.7%) followed by sharp force injury (35.3%);
- 35-44 age group was firearms (54.5%) followed by sharp force injury (32.8%);
- 45-54 age group was firearms (57.2%);
- 55-64 age group was firearms (68.8%); and
- 65+ age group was firearms (44.8%).

Figure 12.1. Firearm violence by age (n = 972)

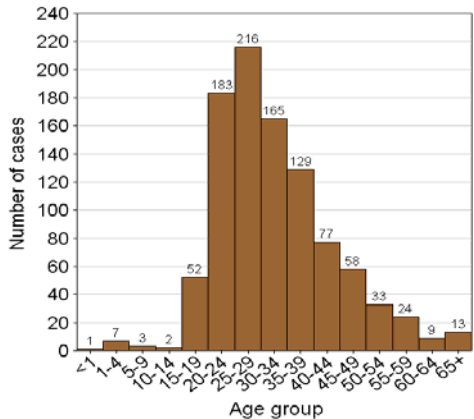


Figure 12.2. Sharp force violence by age (n = 641)

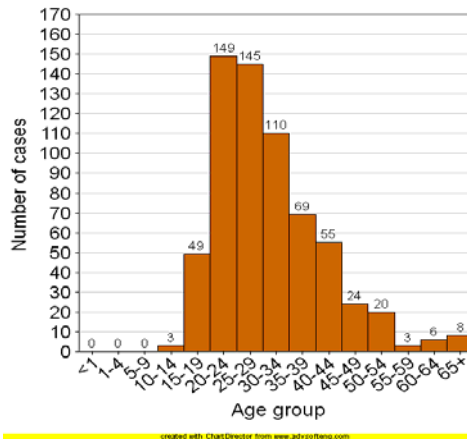


Figure 12.3. Blunt force violence by age (n = 176)

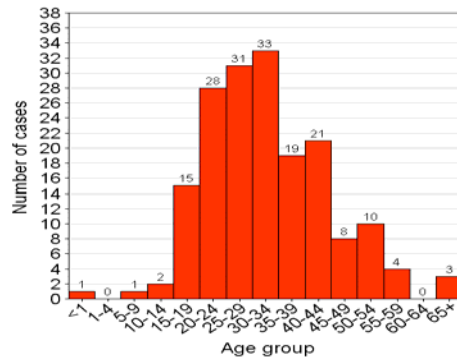
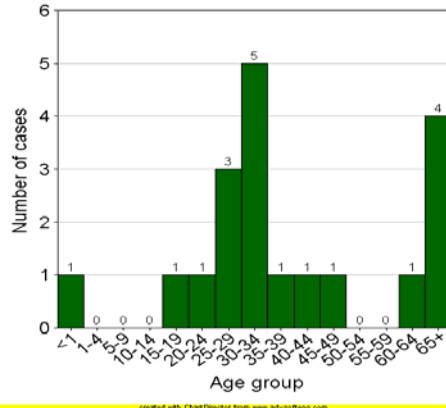


Figure 12.4. Strangulation by age (n = 19)



External cause of suicide by age

Age was unknown in 4 of the 440 cases. Of the remaining cases, the average age of the victims was 33 (± 13.8 yrs). The leading external cause of death for suicide in the:

- **0-14** age group was poisoning (50%) followed by hanging (37.5%);
- **15-24** age group was hanging (64.7%);
- **25-34** age group was hanging (69.8%);
- **35-44** age group was hanging (58.8%);
- **45-54** age group was hanging (56%);
- **55-64** age group was hanging (47.8%) followed by firearms (39.1%); and
- **65+** age group was hanging (41.2%).

Figure 13.1. Hanging suicide by age (n = 270)

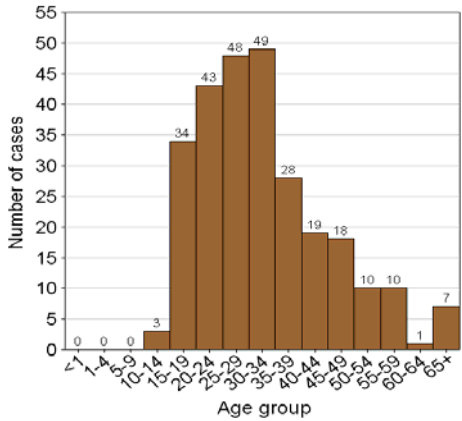


Figure 13.3. Poisoning suicide by age (n = 46)

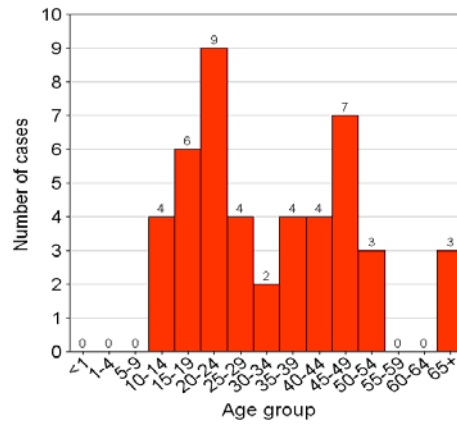


Figure 13.4. Jump from height suicide by age (n = 12)

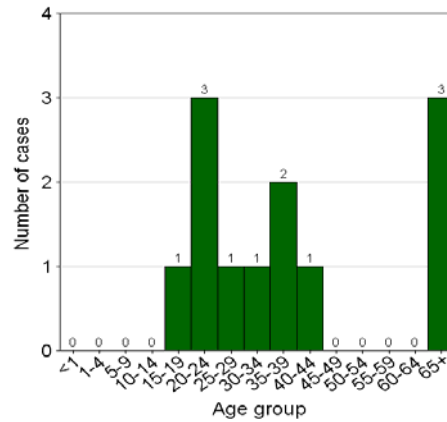


Figure 13.2. Firearm suicide by age (n = 78)

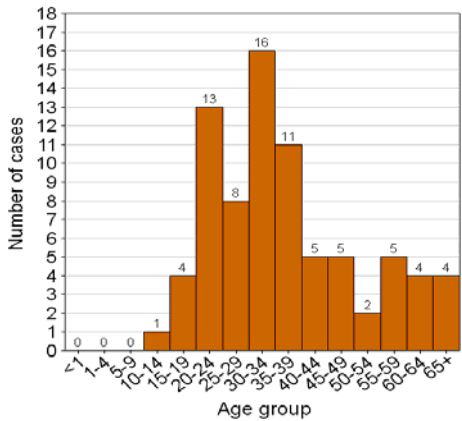
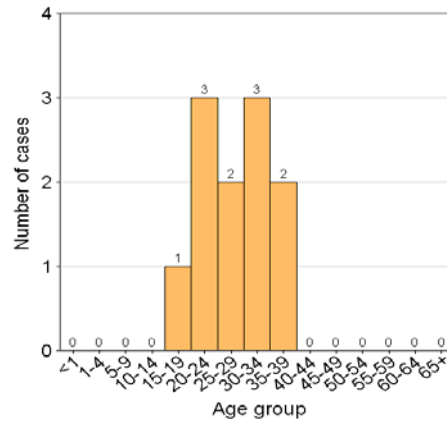


Figure 13.5. Burn suicide by age (n = 11)



External cause of transport-related deaths by age

Age was unknown in 25 of the 1134 cases. Of the remaining cases, the average age of the deceased was 33 (± 15.8 yrs). The leading external cause of death for transport in the:

- **0-14** age group was pedestrian injuries (58.7%);
- **15-24** age group was pedestrian injuries (36.8%) followed by motor vehicle unspecified (31.9%);
- **25-34** age group was pedestrian injuries (43.2%) followed by motor vehicle unspecified (31.5%);
- **35-44** age group was pedestrian injuries (52.7%);
- **45-54** age group was pedestrian injuries (40.2%) followed by motor vehicle unspecified (34.8%);
- **55-64** age group was pedestrian injuries (46.6%); and
- **65+** age group was motor vehicle unspecified (41.5%)

Figure 14.1. Pedestrian deaths by age (n = 502)

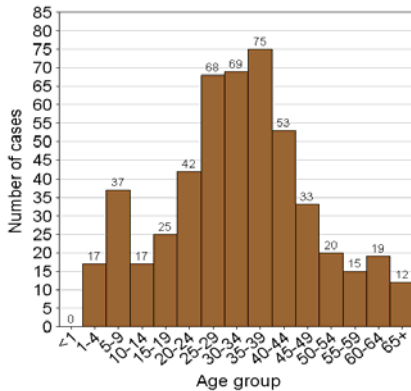


Figure 14.2. Unspecified motor vehicle deaths by age (n = 328)

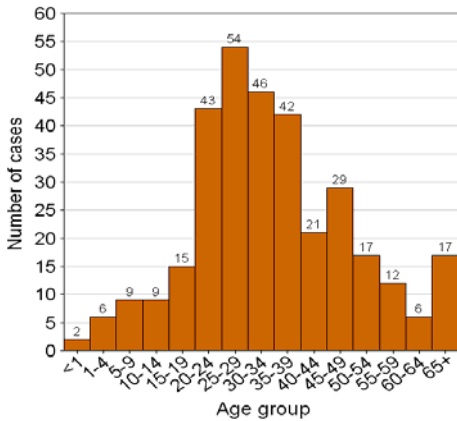


Figure 14.3. Passenger deaths by age (n = 122)

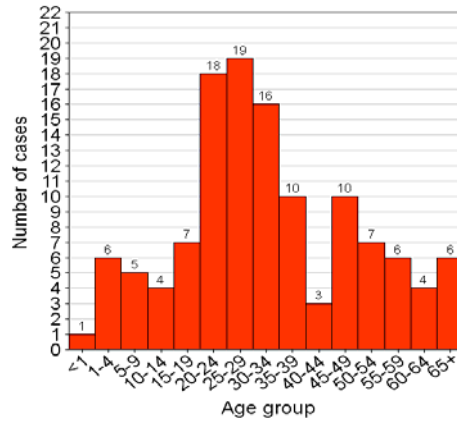


Figure 14.4. Driver deaths by age (n = 85)

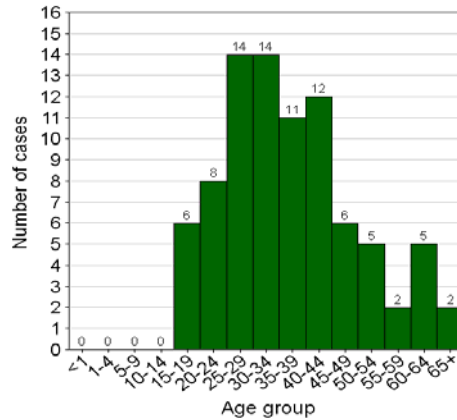
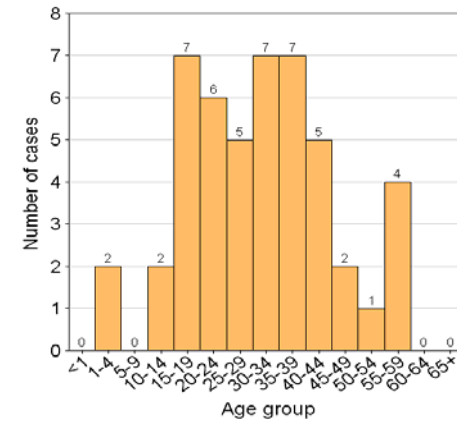


Figure 14.5. Railway deaths by age (n = 48)



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

Age was unknown in 4 of the 218 cases. Of the remaining cases, the average age of the deceased was 31 (\pm 19.4 yrs). The leading cause for non-transported related deaths in the:

- 0-14 age group was drowning (40.9%)
- 15-24 age group was drowning (20.7%);
- 25-34 age group was drowning (31.2%), followed by burns (25%);
- 35-44 age group was fall/push/jump from height (26.3%), followed by drowning (21.1%);
- 45-54 age group was crushing (22.2%);
- 55-64 age group was drowning (18.8%) and crushing (18.8%); and
- 65+ age group was fall/push/jump from height (50%).

Figure 15.1. Drowning deaths by age (n = 54)

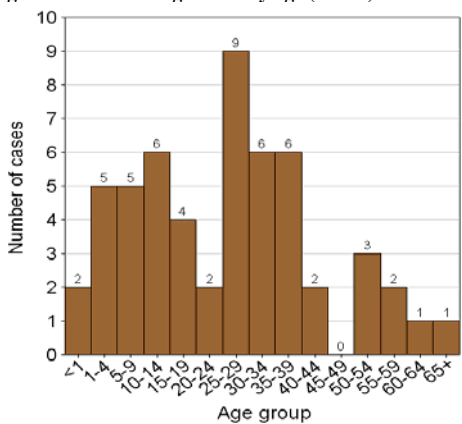


Figure 15.3. Fall from a height deaths by age (n = 24)

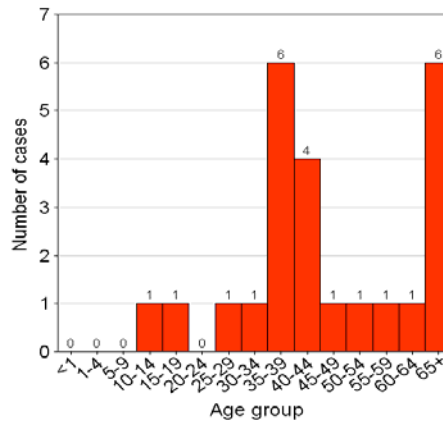


Figure 15.4. Blunt force injury deaths by age (n = 20)

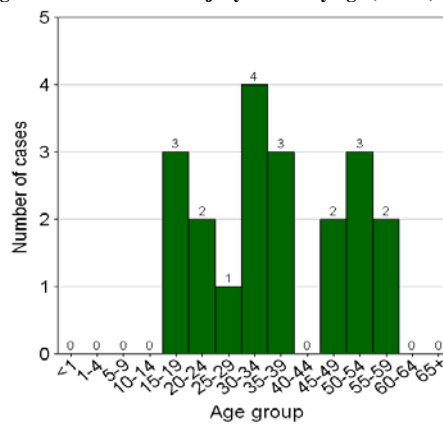


Figure 15.2. Burn deaths by age (n = 40)

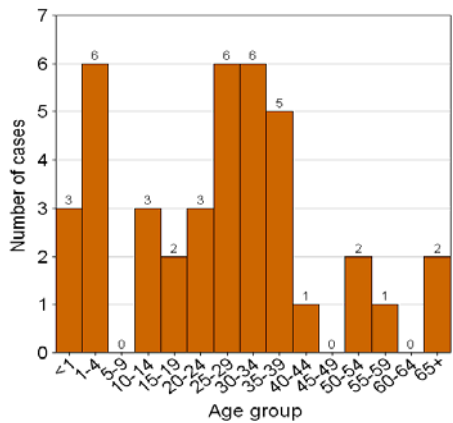
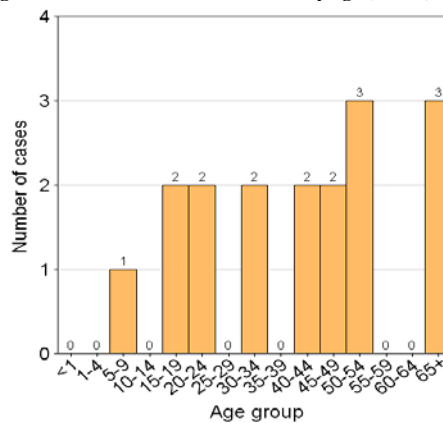


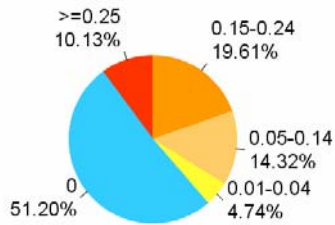
Figure 15.5. Other fall-related deaths by age (n = 17)



7. Blood alcohol levels

Blood alcohol concentration (BAC) levels were obtained in 1836 of the 4083 cases. The average BAC for those who tested positive was 0.17 ± 0.09 g/100ml.

Figure 16. Blood Alcohol Levels (n = 1836)



Blood alcohol level by apparent manner of death

Of the 4083 who were fatally injured, blood alcohol concentration were available in 1836 (45.0%).

Table II: Blood alcohol levels per apparent manner of death

Apparent manner	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Violence (1874)	1023 (54.59)	515 (50.34)	0.16	0.08
Suicide (440)	143 (32.5)	52 (36.36)	0.12	0.08
Transport (1134)	547 (48.24)	285 (52.1)	0.19	0.09
Other unintentional (218)	64 (29.36)	19 (29.69)	0.18	0.08
Undetermined (417)	59 (14.15)	25 (42.37)	0.18	0.12
Total	1836	896	0.17	0.09

Blood alcohol level by transport user

Of the 1134 who were fatally injured in transport collisions, blood alcohol concentration were available in 547 (48.2%) 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 (87)	60 (68.97)	24 (40)	0.17	0.07
Passenger (123)	53 (43.09)	17 (32.08)	0.13	0.06
Pedestrian (508)	316 (62.2)	190 (60.13)	0.20	0.09
Railway case (51)	33 (64.71)	13 (39.39)	0.21	0.1
Cyclist (24)	11 (45.83)	4 (36.36)	0.11	0.06
Unspecified (341)	74 (21.7)	37 (50)	0.17	0.09
Total	547	285	0.20	0.09