



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



Section 5. Tshwane / PRETORIA Metropolitan Area

Background

This short report, which covers the period 1 January to 31 December 2005, describes the fatal injury profile in the Tshwane/Pretoria Metropolitan area, and includes data from two mortuaries: Pretoria and MEDUNSA.

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 Tshwane/Pretoria, 2001-2005										
Year	2001		2002		2003		2004		2005	
Population ^f	1 985 983		2 013 868		2 033 824		2 053 978		2 082 817	
	Total deaths	Rate/100,000 pop. ^g	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	653	29.6	629	28.5	549	24.2	596	26.4	464	20.7
- firearm violence	398	17.8	384	16.9	320	13.8	329	14.1	221	9.6
Suicide	308	15.2	278	13.3	293	13.5	341	15.7	286	13.5
- firearm suicide	124	6.4	118	5.7	122	5.9	121	5.6	86	4.5
- hanging	84	3.8	76	3.6	89	3.8	110	4.8	111	5.0
Transport	716	40.3	677	35.8	694	34.4	779	37.8	780	37.4
- road traffic	684	33.6	646	32.1	657	32.1	738	35.8	744	35.6
- pedestrian	238	11.9	237	11.7	231	11.9	250	12.4	269	13.1
- driver	95	4.5	106	5.3	118	5.4	135	6.6	154	7.0
- railway deaths	31	1.6	27	1.2	37	1.6	41	1.9	36	1.9
Unintentional	240	13.0	183	10.2	213	11.3	237	11.6	193	9.8
- burns	56	2.8	48	2.6	72	3.9	76	3.9	66	3.5
- drowning	37	1.9	30	1.6	30	1.5	31	1.5	19	1.0
ALL INJURIES^h	2235	110.4	2035	99.9	2028	97.7	2266	107.6	1998	96.0

* WHO World Standard Population Distribution

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

^g Totals adjusted for missing ages.

^h Includes apparent manner of death undetermined.

Acknowledgements

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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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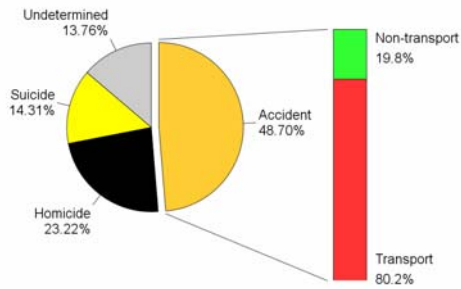
RESULTS

A total of 2373 cases were recorded in Tshwane/Pretoria for January 2005 to December 2005, including 375 (15.8%) cases that were due to natural causes. The rest of the analysis is restricted to the 1998 non-natural deaths that occurred in the catchment area.

1. Overall manner of death

The leading manner of death was transport fatalities (39%).

Figure 1. Overall manner of death (N = 1998)



Manner of death by age

The average age of the deceased was 35.3 (± 17 years). The leading manner(s) of death amongst the:

- 0-14 age group was transport (34.3%) followed by non-transport (32.3%);
- 15-24 age group was transport (34.3%)
- 25-34 age group was transport (36.1%) followed by violence (32.2%);
- 35-44 age group was transport (35.2%);
- 45-54 age group was transport (35.7%);
- 55-64 age group was transport (32.4%); and
- 65+ age group was transport (36%).

Figure 2.1. Violence/Homicide by age (n = 300)

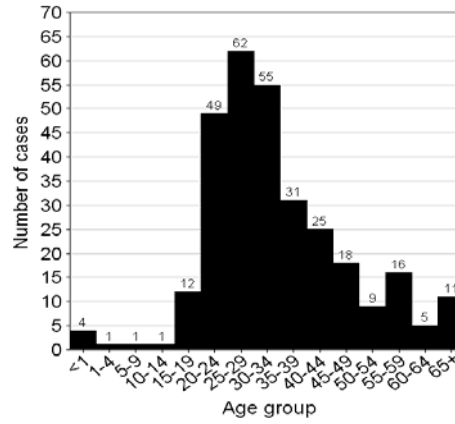


Figure 2.2. Suicide by age (n = 217)

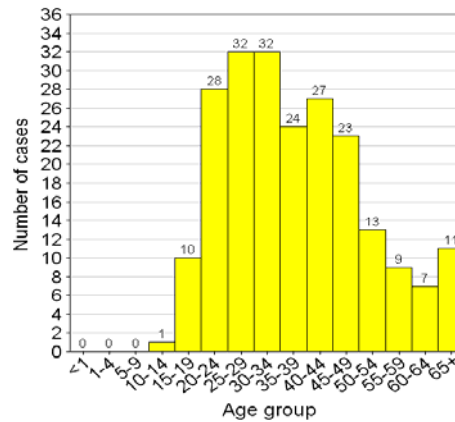


Figure 2.3. Transport deaths by age (n = 447)

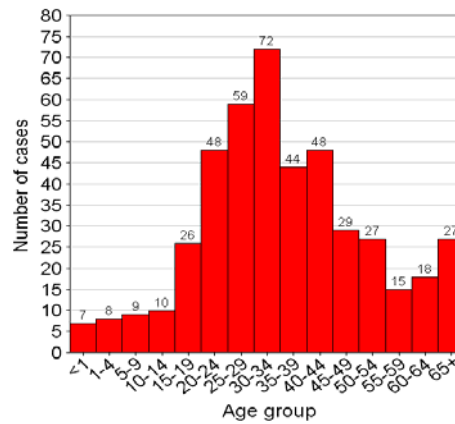


Figure 2.4. Other unintentional injury deaths (non-transport) by age (n = 136)

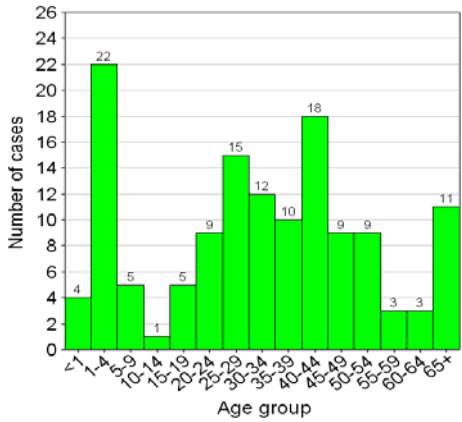
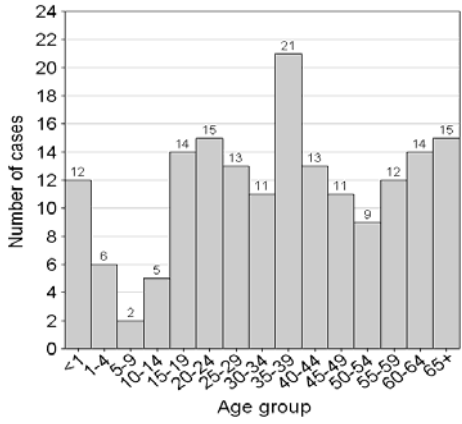


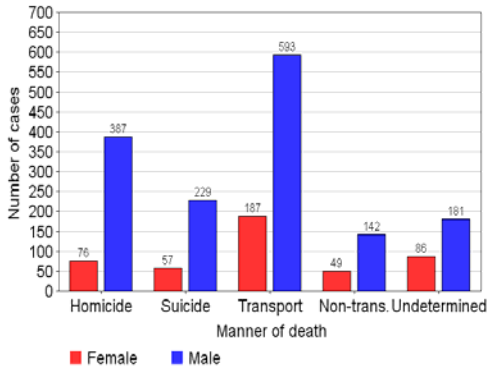
Figure 2.5. Undetermined deaths by age (n = 173)



Manner of death by sex

Of the cases recorded in Tshwane/ Pretoria, 1532 (77.1%) were male and 455 (22.9%) were female. The leading cause of death amongst males was transport (38.7%), as well as for females (41.1%).

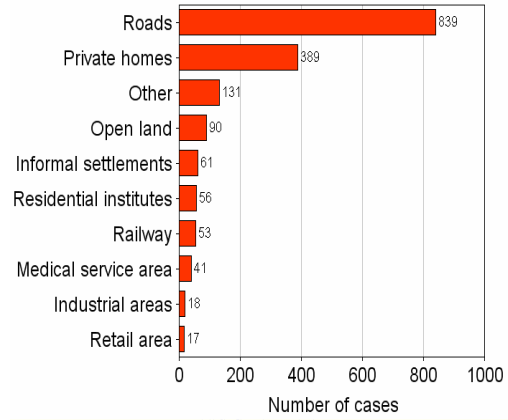
Figure 3. Manner of death by sex (n = 1987)



2. Scene of injury

The scene of injury was known in 1761 (88.1%) cases. The scene that accounted for the majority of deaths was roads (47.6%).

Figure 4. Top 10 scenes of injury (n = 1695)

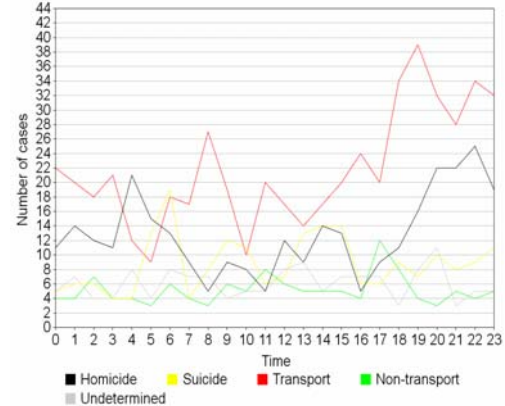


3. Time of death

The peak period(s) of death for:

- **violence** was 19h00 - 00h00 (33.6%) followed by 04h00 - 05h00 (6.8%);
- **suicide** was 13h00 - 16h00 (19.3%), followed by 05h00 - 07h00 (15.1%), followed by 09h00 - 11h00 (10.9%)
- **transport related deaths** was 18h00 - 00h00 (37.9%) followed by 08h00 - 09h00 (5.2%); and
- **other unintentional injury deaths (non-transport)** was 17h00 - 19h00 (16.2%), followed by 11h00 - 12h00 (6.5%).

Figure 5. Time of death (n = 1316)



4. Day of death

The peak days of death for:

- **violence** were Saturday (24.5%), followed by Sunday (19%), followed by Friday (12.6%);
- **suicide** were Saturday (19.1%), followed by Sunday (18.3%), followed by Monday (18%);
- **transport** related deaths were Saturday (23.8%), followed by Sunday (18.4%), followed by Monday (13.3%); and
- **other unintentional injury deaths (non-transport)** were Saturday (17.4%), followed by Sunday (16.8%), followed by Wednesday (14.7%).

Figure 6. Day of death (n = 1948)

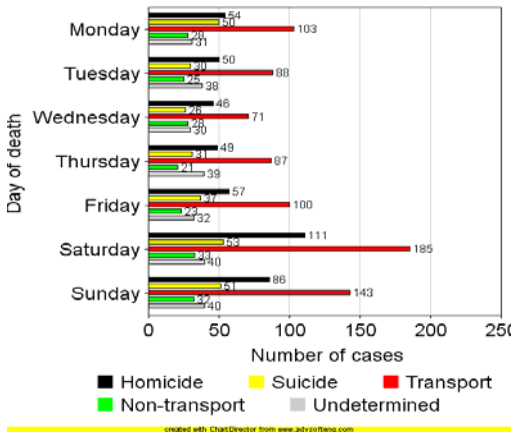


Figure 8. Day of suicide deaths by sex (n = 278)

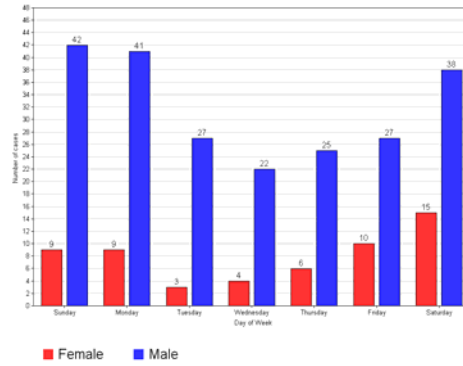
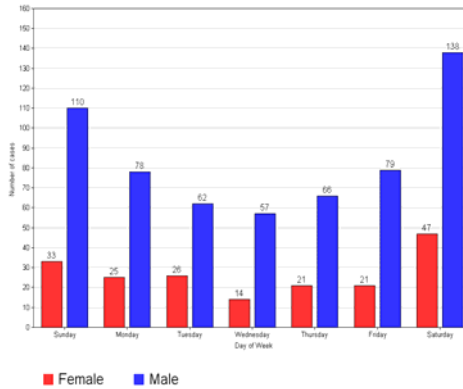


Figure 9. Day of transport deaths by sex (n = 777)



5. Seasonal variation

The peak month for:

- **violence** was December (12.4%), followed by September (10.2%), followed by April (8.8%);
- **suicide** was August (12.6%), followed by October (10.1%), followed by July (9.0%);
- **transport** related deaths was March (10.2%), followed by May (10.0%), followed by July (9.5%); and
- **other unintentional injury deaths (non-transport)** was July (13.2%), followed by November (12.6%), followed by September (10.5%).

Figure 7. Day of violence-related deaths by sex (n = 452)

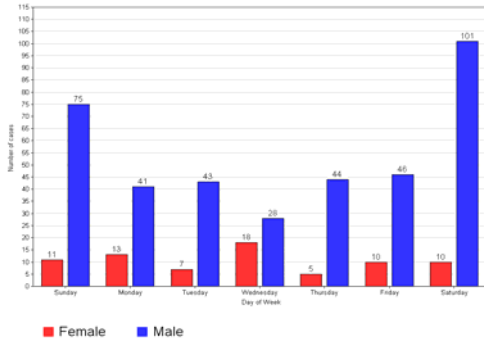
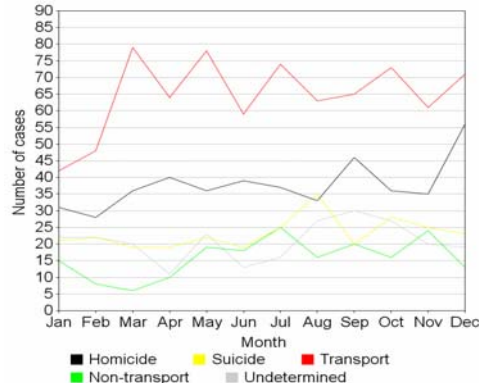


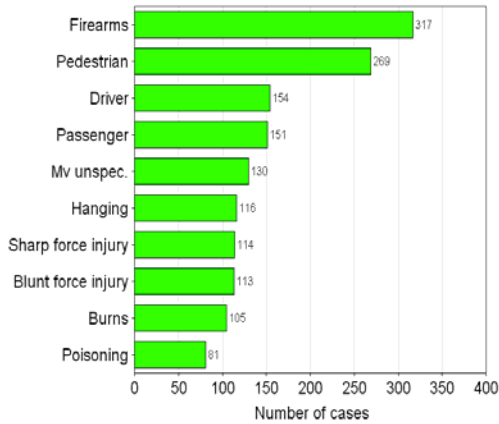
Figure 10. Seasonal variation (n = 1948)



6. External cause of death

The cause of death was unknown in 7.4% of the cases. The leading external cause of death was firearms (17.1%), followed by pedestrian injuries (14.5%), followed by motor vehicle driver (8.3%).

Figure 11. Top 10 external causes of death (n = 1550)



External cause of violence by age

Age was unknown in 164 of the 464 cases. Of the remaining cases, the average age of the deceased was 34 (± 13.9 yrs). The leading external cause of death for violence in the:

- **0-14** age group was poison ingestion (28.6%)
- **15-24** age group was firearms (47.5%) followed by sharp force injury (31.1%);
- **25-34** age group was firearms (48.7%);
- **35-44** age group was firearms (62.5%);
- **45-54** age group was firearms (37%) followed by blunt force injury (33.3%);
- **55-64** age group was blunt force injury (47.6%) followed by firearms (38.1%); and
- **65+** age group was blunt force injury (45.5%) followed by firearms (36.4%).

Figure 12.1. Firearm violence by age (n = 144)

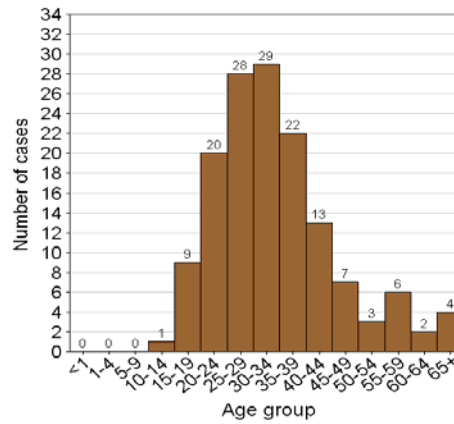


Figure 12.2. Sharp force violence by age (n = 69)

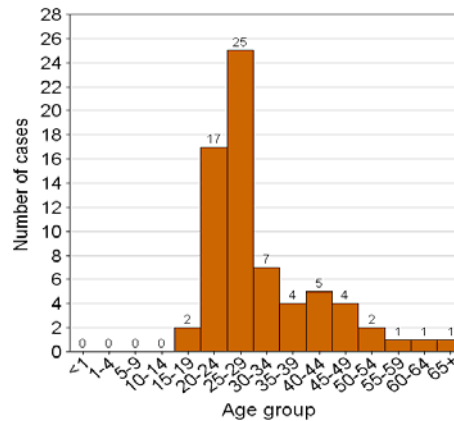
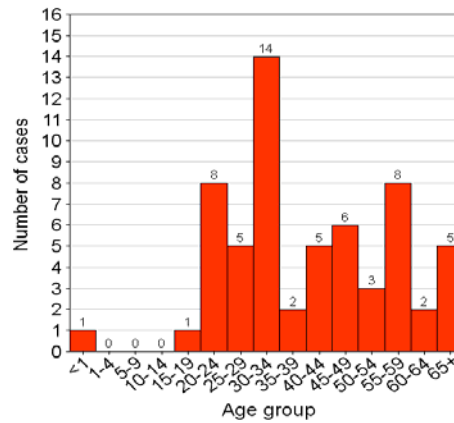


Figure 12.3. Blunt force violence by age (n = 60)



External cause of suicide by age

Age was unknown in 69 of the 286 cases. Of the remaining cases, the average age of the deceased was 37 (± 13.6 yrs). The leading external cause of death for suicide in the:

- 0-14 age group was hanging (100%);
- 15-24 age group was hanging (44.7%);
- 25-34 age group was hanging (37.5%) followed by firearms (26.6%);
- 35-44 age group was hanging (43.1%);
- 45-54 age group was firearms (41.7%);
- 55-64 age group was firearms (50%) followed by hanging (31.2%); and
- 65+ age group was firearms (63.6%).

Figure 13.1. Hanging suicide by age (n = 81)

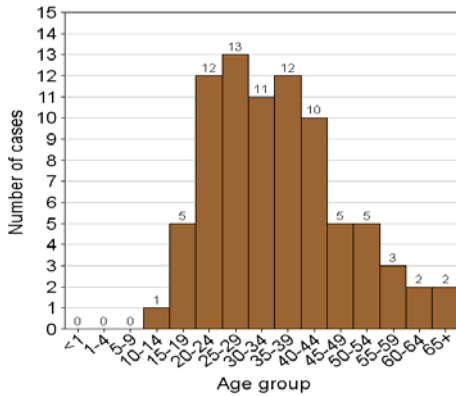


Figure 13.3. Poisoning suicide by age (n = 33)

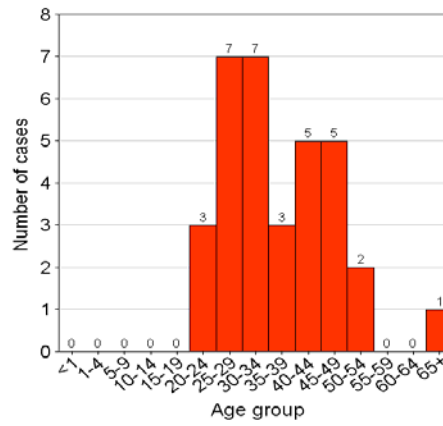


Figure 13.4. Gassing suicide by age (n = 17)

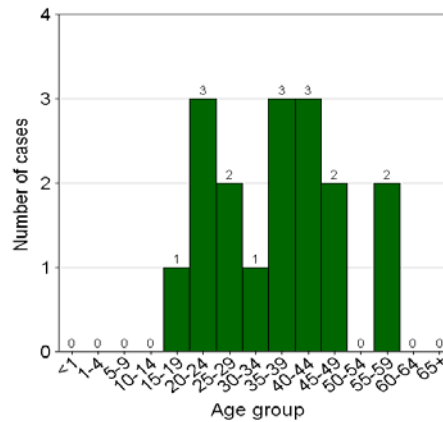


Figure 13.2. Firearm suicide by age (n = 69)

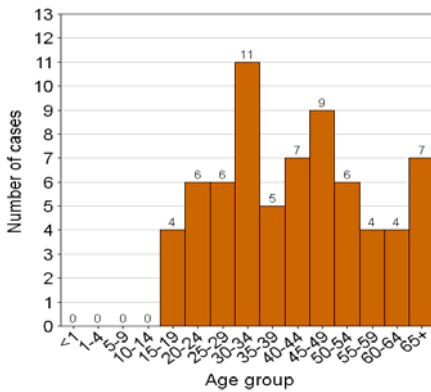
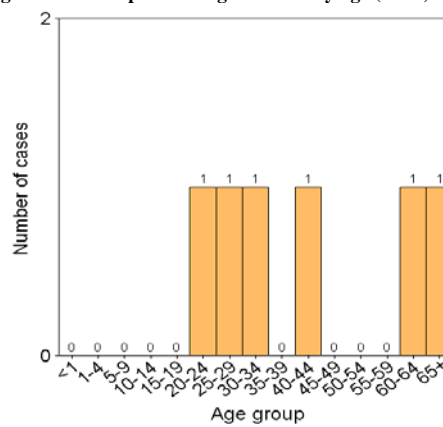


Figure 13.5. Jump from height suicide by age (n = 6)

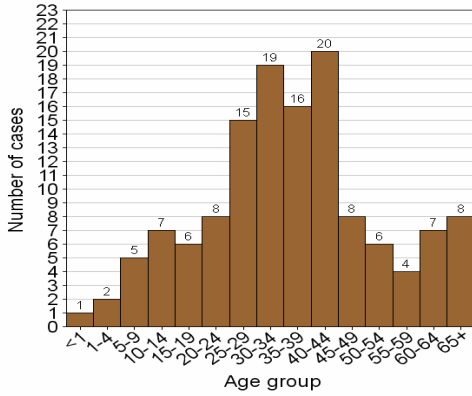


External cause of transport-related deaths by age

Age was unknown in 333 of the 780 cases. Of the remaining cases, the average age of the deceased was 35 (± 16.9 yrs). The leading external cause of death for transport in the:

- **0-14** age group was pedestrian injuries(44.1%) followed by motor vehicle passenger (32.4%);
- **15-24** age group was motor vehicle driver (21.6%), followed by pedestrian injuries(18.9%);
- **25-34** age group was pedestrian injuries (26%), followed by motor vehicle driver (26%), followed by motor vehicle unspecified (22.9%);
- **35-44** age group was pedestrian injuries(39.1%);
- **45-54** age group was motor vehicle unspecified (30.4%);
- **55-64** age group was pedestrian injuries(33.3%) followed by motor vehicle unspecified (30.3%); and
- **65+** age group was motor vehicle passenger (33.3%).

Figure 14.1. Pedestrian deaths by age (n = 132)



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

Age was unknown in 57 of the 193 cases. Of the remaining cases, the average age of the deceased was 31 (\pm 21.3 yrs). The leading cause for non-transported related deaths in the:

- 0-14 age group was drowning (34.4%);
- 15-24 age group was fall from height (14.3%) followed by poison ingestion (14.3%);
- 25-34 age group was burns (22.2%);
- 35-44 age group was burns (35.7%);
- 45-54 age group was burns (50%);
- 55-64 age group was burns (33.3%); and
- 65+ age group was burns (36.4%).

Figure 15.3. Fall from a height deaths by age (n = 15)

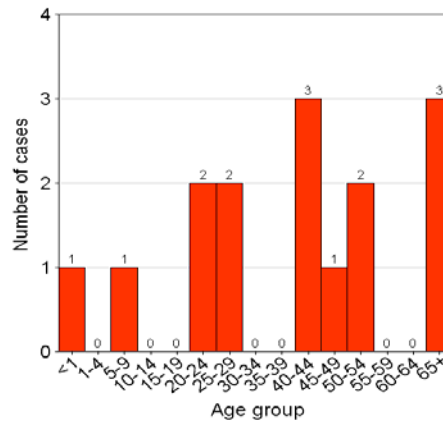


Figure 15.1. Burn deaths by age (n = 38)

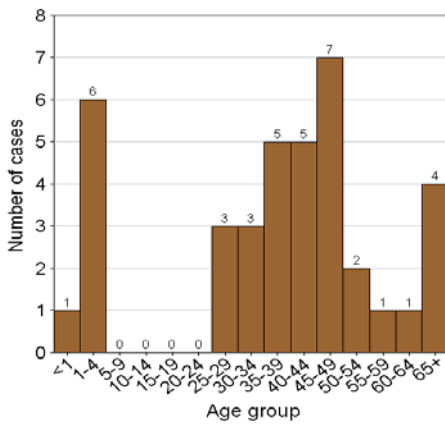


Figure 15.4. Poisoning deaths by age (n = 12)

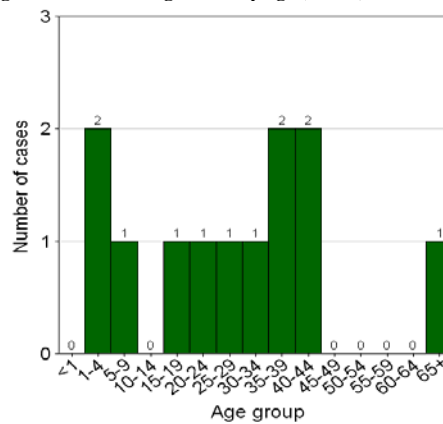
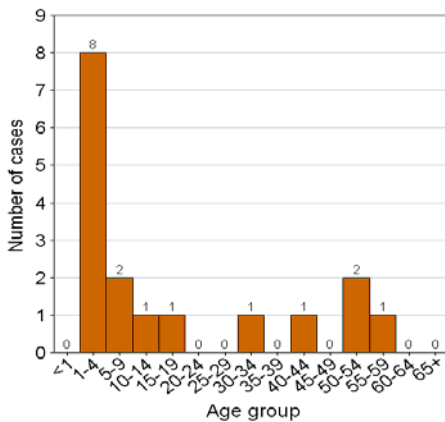


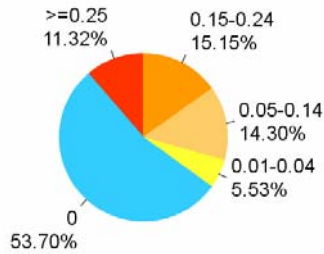
Figure 15.2. Drowning deaths by age (n = 17)



7. Blood alcohol levels

Blood alcohol concentration (BAC) levels were obtained in 1175 of the 1998 cases. The average BAC for those who tested positive was 0.17 ± 0.12 g/100ml.

Figure 16. Blood Alcohol Levels (n = 1175)



Blood alcohol level by apparent manner of death

Of the 1998 who were fatally injured, blood alcohol concentration were available in 1175 (58.8%).

Table II: Blood alcohol levels per apparent manner of death

Apparent manner	BAC's done n(%)	BAC positive n(%)	Mean BAC	Std. Dev.
Violence (464)	284 (61.21)	139 (48.94)	0.17	0.11
Suicide (286)	176 (61.54)	77 (43.75)	0.14	0.1
Transport (780)	505 (64.74)	251 (49.7)	0.19	0.13
Other unintentional (193)	84 (43.52)	30 (35.71)	0.15	0.12
Undetermined (275)	126 (45.82)	47 (37.3)	0.16	0.1
Total	1175	544	0.16	0.11

Blood alcohol level by transport user

Of the 780 who were fatally injured in transport collisions, blood alcohol concentration were available in 505 (64.7%) 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 (154)	104 (67.53)	54 (51.92)	0.17	0.09
Passenger (151)	103 (68.21)	37 (35.92)	0.15	0.12
Pedestrian (269)	182 (67.66)	106 (58.24)	0.22	0.16
Railway case (36)	27 (75)	7 (25.93)	0.21	0.12
Cyclist (41)	26 (63.41)	17 (65.38)	0.20	0.11
Unspecified (129)	63 (48.84)	30 (47.62)	0.15	0.1
Total	505	251	0.22	0.14