



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



Section 1. National Fatal Injury Profile

Background

This short report, which covers the period 1 January to 31 December 2005, is the seventh annual report of the National Injury Mortality Surveillance System (NIMSS).

As a result of the continuing expansion of the system, we have taken steps to improve our data management and reporting mechanisms. 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 analyses in the form of customised reports on request.

Acknowledgements

We wish to acknowledge the Department of Health and Department of Safety and Security for supporting this project. In particular, we would like to thank the forensic pathologists, data capture and police personnel at the various mortuaries who made these data available to us.

We also wish to acknowledge the MRC data capturers and Prof Mike Stewart and staff at the Forensic Chemistry laboratories.

Province	Number of mortuaries	Case total
Eastern Cape	5	4236
Gauteng	7	12285
KwaZulu Natal	3	6026
North West	2	891
Northern Cape	1	449
Western Cape	3	5709
Total		29596

* See Appendix 1 at the end of this section for a comprehensive list of participating mortuaries

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

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.

Although the system captures data from rural mortuaries in the Northern Cape and the North-West Province, the bulk of the caseload occurs through investigations at urban mortuaries, hence the data set is currently more representative of the urban rather than the rural mortality injury profile. Results for four of South Africa's largest cities, Johannesburg, Durban, Cape Town and Tshwane/Pretoria are presented in sections 2-5.

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This report is available online at:
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RESULTS

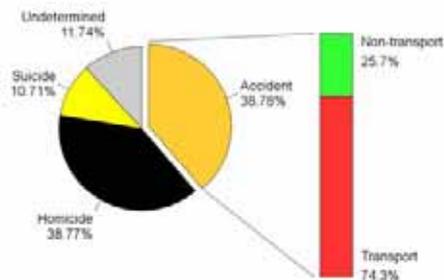
A total of 29596 cases were recorded at the 21 mortuaries that supplied data to the NIMSS in 2005, including 4800 (16.2%) cases that were due to natural causes and another 1255 (4.3%) cases that were either stored or viewed at the mortuaries.

It is estimated that there are approximately 60 000 non-natural deaths in South Africa annually that account for approximately 12% of all mortality. The analysis that follows is restricted to the 23541 non-natural deaths recorded by the NIMSS in 2005, representing approximately 39% of the non-natural deaths that occur in the country annually.

1. Overall manner of death

The leading causes of death was violence/homicide (38.77%) and accidental (or unintentional) injuries (38.78%), of which transport-related injuries accounted for the majority of deaths.

Figure 1. Overall manner of death (N = 23541)



Manner of death by age

The average age of the deceased was 33.2 (\pm 15.6 years). The leading manner(s) of death amongst the:

- 0-14 age group was transport (35%);
- 15-24 age group was violence (52.4%);
- 25-34 age group was violence (48.8%);
- 35-44 age group was violence (39.9%);
- 45-54 age group was transport (33.4%) followed by violence (32.6%);
- 55-64 age group was transport (35%); and
- 65+ age group was transport (29.7%), followed by undetermined (26.5%), followed by unintentional injury deaths (non-transport) (18.4%).

Figure 2.1. Violence/Homicide by age (n = 8223)

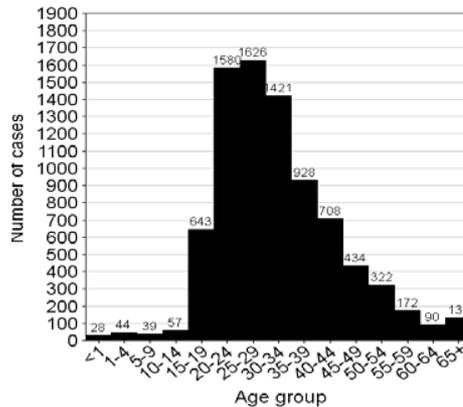


Figure 2.2. Suicide by age (n = 2239)

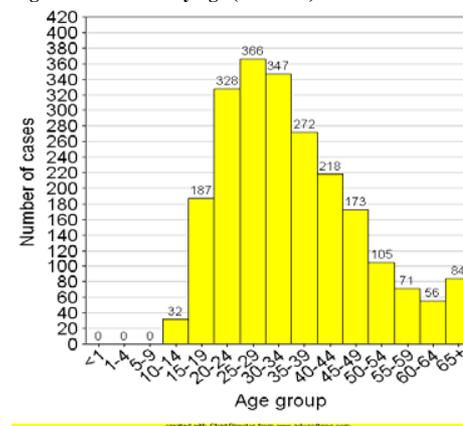


Figure 2.3. Transport deaths by age (n = 5675)

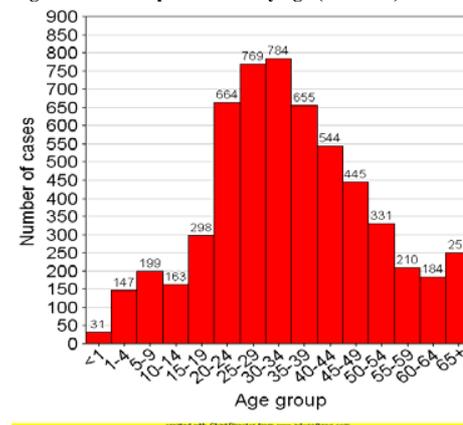


Figure 2.4. Non-transport deaths by age (n = 2074)

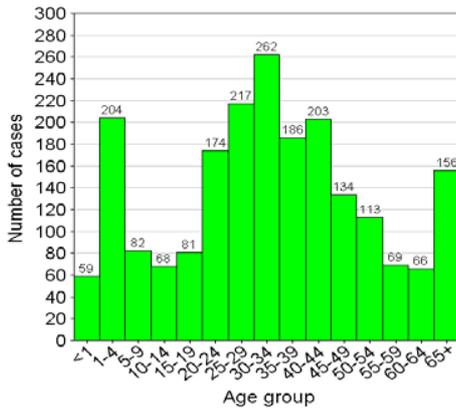
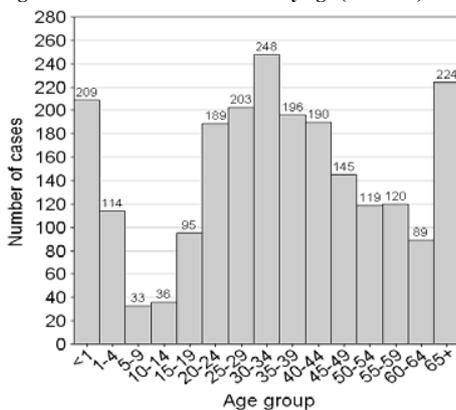


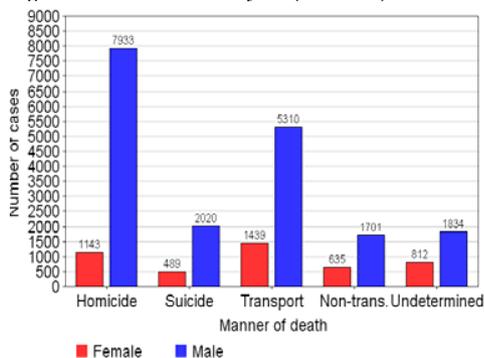
Figure 2.5. Undetermined deaths by age (n = 2210)



Manner of death by sex

Of the cases where sex was recorded, 18798 (80.6%) were male and 4518 (19.4%) were female. The leading cause of death amongst males was violence (42.2%). The leading cause of death amongst females was transport (31.9%).

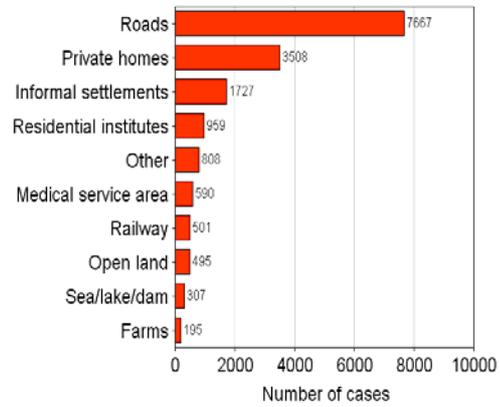
Figure 3. Manner of death by sex (n = 23316)



2. Scene of injury

The scene of injury was known in 17720 (75.3%) cases. The scene that accounted for the majority of deaths was roads (43.3%).

Figure 4. Top 10 scenes of injury (n = 16757)

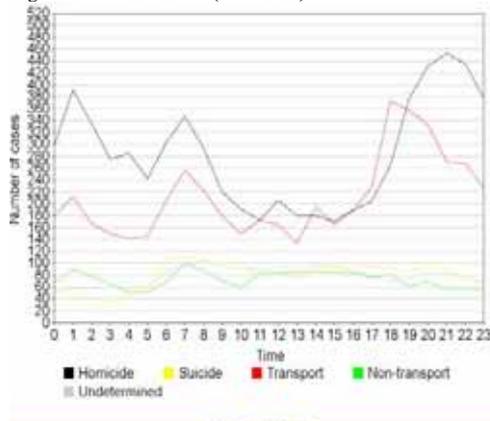


3. Time of death

The peak period(s) of death for:

- **violence** was 19h00 - 00h00 (30.3%), followed by 01h00 - 02h00 (5.7%), followed by 07h00 - 08h00 (5.1%);
- **suicide** was 06h00 - 09h00 (16.9%), followed by 10h00 - 11h00 (5.4%), followed by 17h00 - 18h00 (5%), followed by 20h00 - 21h00 (5%);
- **transport** related deaths was 18h00 - 23h00 (31.4%) followed by 07h00 - 08h00 (5%); and
- **other unintentional injury deaths (non-transport)** was 07h00 - 09h00 (10.7%) followed by 01h00 - 02h00 (5.1%).

Figure 5. Time of death (n = 17453)



4. Day of death

The peak days of death for:

- **violence** were Saturday (26.9%), followed by Sunday (21.7%), followed by Friday (12.7%);
- **suicide** were Sunday (16.2%), followed by Monday (16%), followed by Saturday (15.6%);
- **transport** related deaths were Saturday (22.2%), followed by Sunday (17.1%), followed by Friday (15.2%); and
- **other unintentional injury deaths (non-transport)** were Sunday (18.4%), followed by Saturday (16.3%), followed by Monday (15.5%).

Figure 6. Day of death (n = 23361)

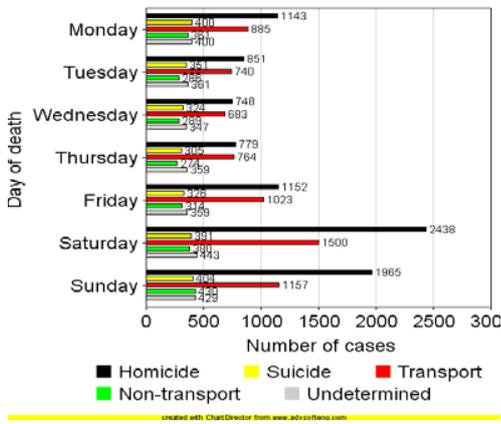


Figure 8. Day of suicide deaths by sex (n = 2489)

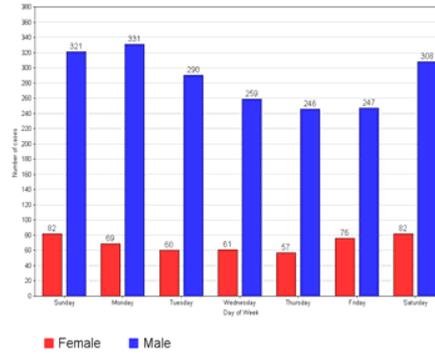


Figure 9. Day of transport deaths by sex (n = 6720)

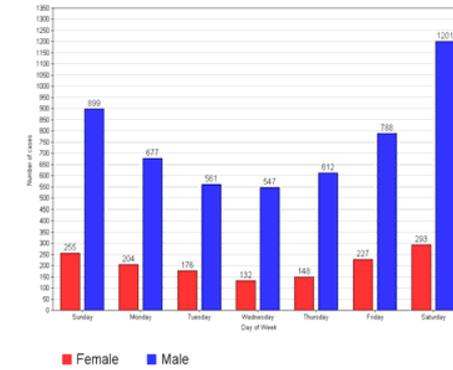
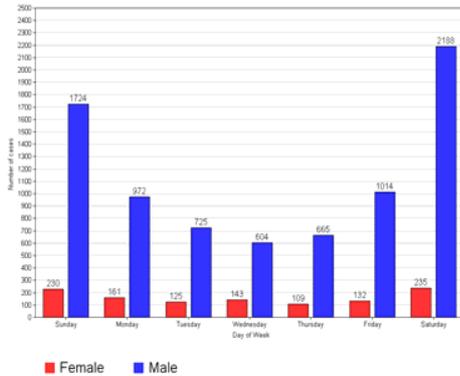


Figure 7. Day of violence deaths by sex (n = 9027)

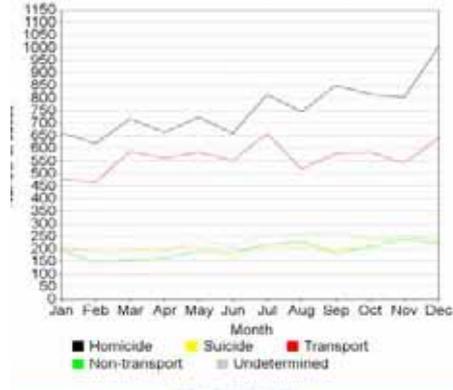


5. Seasonal variation

The peak month for:

- **violence** was December (11.1%), followed by September (9.4%), followed by October (9.0%);
- **suicide** was November (10.1%), followed by October (9.2%), followed by December (9.2%);
- **transport** related deaths was July (9.7%), followed by December (9.5%), followed by March (8.7%); and
- **other unintentional injury deaths (non-transport)** was November (10.2%), followed by August (9.8%), followed by December (9.6%).

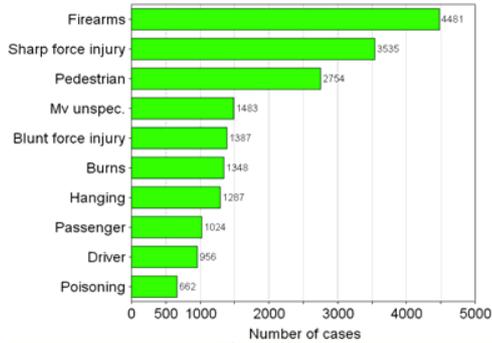
Figure 10. Seasonal variation (n = 23365)



6. External cause of death

The cause of death was unknown in 5.4% of the cases. The leading external cause of death was firearms (20.1%), followed by sharp force injury (15.9%), followed by pedestrian injuries (12.4%).

Figure 11. Top 10 external causes of death (n = 18917)



External cause of violence by age

Age was unknown in 903 of the 9126 cases. Of the remaining cases, the average age of the deceased was 31 (± 11.9 yrs). The leading external cause of death for violence in the:

- 0-14 age group was firearms (32.1%);
- 15-24 age group was sharp force injury (44.8%) followed by firearms (40.2%);
- 25-34 age group was firearms (45.2%) followed by sharp force injury (38.9%);
- 35-44 age group was firearms (42.1%) followed by sharp force injury (38.6%);
- 45-54 age group was firearms (42.5%) followed by sharp force injury (34.3%);
- 55-64 age group was firearms (45%); and
- 65+ age group was blunt force injury (29.8%), followed by firearms (26.7%), followed by sharp force injury (21.4%).

Figure 12.1. Firearm violence by age (n = 3487)

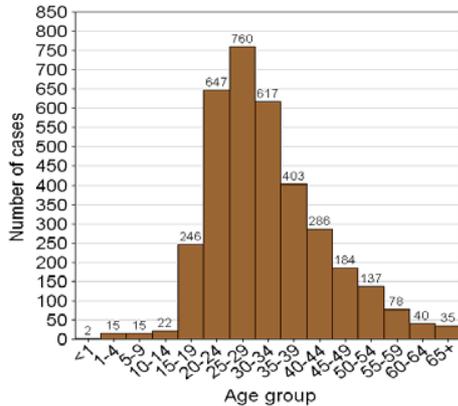


Figure 12.2. Sharp force violence by age (n = 3204)

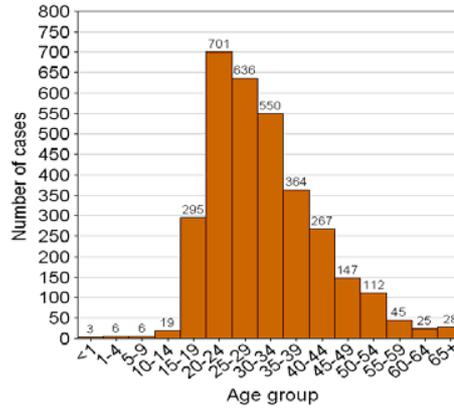


Figure 12.3. Blunt force injury homicide by victim age (n = 1048)

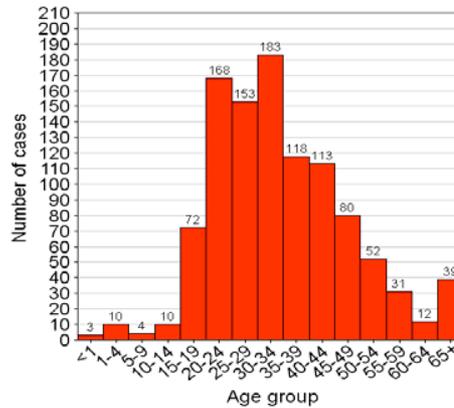


Figure 12.4. Strangulation or suffocation by age (n = 129)

