

*A Profile of*  
**FATAL INJURIES IN  
SOUTH AFRICA**

**FIFTH ANNUAL REPORT 2003**  
*of the National Injury Mortality  
Surveillance System*

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...as fast as possible...  
...a pistol, right? AHE

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# Glossary

The APPARENT MANNER of death describes the intention prior to the injury that resulted in the death. The apparent manner of death is divided into five different categories: violence, suicide, transport death, unintentional injury death and undetermined death. This is the apparent manner of death according to the forensic pathologists and district surgeons who conduct the autopsies. The final manner of death is only determined after court proceedings, which can take between 2 and 5 years to complete.

The EXTERNAL CAUSE of death refers to the mechanism, circumstance or event that preceded the death. Examples of the external cause of death include firearms, stabbing, motor vehicle collisions, drowning, burns and poisonings, all of which may result in injury and eventually death.

An INJURY can be defined as damage to a person caused by an acute transfer of energy (mechanical/kinetic, thermal, chemical, electrical, radiation) or by a sudden absence of heat (hypothermia) or oxygen (asphyxiation, drowning)<sup>1</sup>.

NON-NATURAL deaths include all deaths that were not due to, or may not have been due to, natural causes and that in terms of the Inquests Act are subject to medicolegal investigation. We have grouped these non-natural deaths by external cause of death and apparent manner of death.

This report uses SEX rather than GENDER to distinguish between male and female deaths. In general the term sex is used to describe distinctive physiological features related to being male or female. In contrast, the term gender comprises different occupational, social and psychological attributes that are variously attributed to being male or female. The latter concept depends on societal norms and is not internationally comparative.

SUICIDE refers to fatal self-inflicted *intentional* injuries.

SURVEILLANCE is a process that involves the ongoing and systematic collection, analysis and interpretation of data relating to the occurrence of a health event and the timely dissemination of this information to those who need to know and those who need to apply it. In the NIMSS the health events that are described are attributable to injuries and are described as non-natural deaths.

TRANSPORT deaths are usually *unintentional* injury deaths, but may include deaths due to culpable homicide. As the NIMSS data are geared towards injury prevention rather than establishing culpability, all transport deaths have been grouped together to facilitate international comparison and the development and evaluation of prevention programmes.

UNDETERMINED deaths are those where the medical examiner is unable to determine whether the manner of death was due to violence, suicide, transport or unintentional injuries, or due to natural causes.

OTHER UNINTENTIONAL INJURY deaths include all other unintentional *non-transport* injuries such as those due to burns, falls, poisoning and drowning.

The NIMSS definition of VIOLENCE refers to *intentional* injuries inflicted by another person (perpetrator) and includes incidents of collective (e.g. political, legal intervention) and interpersonal violence.

# Executive summary

## INTRODUCTION

This is the fifth annual report of the National Injury Mortality Surveillance System (NIMSS). The NIMSS constitutes the beginnings of what is hoped will be a national mortuary-based system. The system currently captures 21 information items describing the who, what, when, where and how of fatal injuries. Despite its importance, such information has been missing from the national vital statistics on causes of death since 1991, and there are no indications that this situation will change in the near future.

This report describes 24 600 non-natural deaths in seven of South Africa's provinces, and includes for the first time city-level analyses of Pretoria/Tshwane, Johannesburg, Cape Town and Durban. Total injury deaths were estimated at 68 930 in 2000, although there have been indications that the annual number of non-natural deaths has been declining since 1996. So the 24 600 non-natural deaths recorded in the 2003 NIMSS data set represents at least 35% of all injury deaths.

## OVERVIEW OF FINDINGS

The analysis focuses on the 22 248 non-natural deaths due to violence, suicide, transport collisions and other unintentional injuries, i.e. deaths where the apparent manner of death was undetermined were excluded from the analysis. Of the 22 248 deaths 81% were male and 19% female.

**External cause of death.** The leading external cause of death among males was firearms (31%), followed by sharp force injuries (16%), pedestrian fatalities (11%) and blunt force injuries (7%). Among females, the leading external cause was pedestrian fatalities (16%) and firearms (16%), followed by burns (11%) and passenger fatalities (10%).

**Apparent manner of death.** Violence was the leading manner of death and accounted for 48% of deaths followed by transport (30%), suicide and other fatal unintentional injuries (both 11%). Violence was the leading manner of death for the 15-54 years age group, whereas transport-related injuries accounted for the most deaths in the 0-14 and older than 55 age groups. Deaths due to violence and suicide are particularly high in the 15-44 year age group with a peak in the 25-29 year age group.

**Violence.** Over half (52%) of the 10 499 violent deaths were inflicted by firearms, and nearly a third (31%) by sharp instruments. The number of deaths due to violence rose abruptly in the 15 to 19 year age group, peaked in the 25 to 29 age group, and remained high until 44 years. Of the males, 53% were killed using firearms, while firearms accounted for 40% of female homicides. Only homicide by strangulation was more common among females than among males.

**Suicide.** Hanging accounted for 43% and firearms accounted for 30% of the 2555 suicides. More than half of all suicide victims were between 20 and 39 years of age. There were 4.6 male suicides for every female suicide. The major external causes of suicide among males were hanging (46%) and firearms (33%), and among females were poisoning (34%) and hanging (27%). Most suicides occurred in private homes.

**Transport-related deaths.** Of the 6689 transport-related deaths, pedestrians accounted for 40%, passengers 15%, drivers 15% and 5% were railway-related. A further 21% of transport-related deaths were due to motor vehicle collisions, but the user category was unknown. There were 3.2 males per female transport-related death. Blood alcohol concentration was positive for 61% of pedestrians and 58% of drivers.

**Deaths from injury among children younger than 15 years.** Pedestrian deaths ranked as the top external cause of death for children aged 0 to 14 years (28%) followed by drowning (14%), burns (13%) and passenger fatalities (8%). Burns were the major external cause of death for children under 1 year of age, and the third major cause for children aged 1 to 14 years. Pedestrian deaths were the leading cause for children 1 to 14 years, followed by drowning in the 1-9 year age group and firearms among children between the ages of 10 and 14 years.

**City-level data.** Cape Town had the highest overall injury mortality rate of 146 deaths per 100 000 population, due largely to the high rates of fatal violence (73 per 100 000 population). Suicide rates were highest in Johannesburg (16 per 100 000 population), followed by Durban and Pretoria/Tshwane (14/100 000 population

each). Johannesburg had the highest transport mortality rate (37/100 000 population) as well as the highest road traffic mortality rate (36/100 000 population). Cape Town had the highest rate for unintentional injuries (15/100 000 population) followed by Johannesburg (14/100 000 population), which was largely due to the great number of deaths due to burns in these two cities. Brief city reports for Pretoria/Tshwane, Johannesburg, Cape Town and Durban are included in Chapters 3-6 of this report.

## **IN SUMMARY**

This report has established both the substantial prevalence and magnitude of injuries in South Africa's four largest metropolitan cities (Johannesburg, Durban, Cape Town and Pretoria/Tshwane), which impose a significant social and economic burden that threatens development strategies and undermines South Africa's potential as a general visitation and tourism destination.

Information is, however, only a single component in progressing towards safer and injury-free cities. This report therefore represents a challenge to local government, non-governmental organisations, community-based organisations, researchers, practitioners and other stakeholders to discuss ways through and by which such information can — and indeed must — be translated into the creation of concrete injury prevention policies and practices, in addition to strengthening existing safety promotion responses.