

A Profile of
FATAL INJURIES IN
SOUTH AFRICA

THIRD ANNUAL REPORT
of the National Injury Mortality
Surveillance System

CRIME, VIOLENCE & INJURY
LEAD PROGRAMME



EDITOR
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EXECUTIVE SUMMARY

This is the third 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.

The first report covered 1 January to 31 December 1999 and described the 14 897 injuries that were registered at ten mortuaries in five provinces. The second report described the 18 876 fatal injuries that were registered at fifteen mortuaries in the same five provinces in 2000. This report covers 1 January to 31 December 2001, during which 25 361 fatal injuries were registered at 32 mortuaries in six provinces. Although the data were largely biased towards urban areas, data from 14 Mpumalanga mortuaries serving mainly rural areas were included in the NIMSS data set for the first time in 2001.

In the absence of accurate and reliable routinely collected data, current estimates for the national number of deaths that occur due to non-natural causes range from 68 930 to 80 000 per annum. This accounts for between 12 and 14 percent of the more than half a million deaths that occur annually from all causes of death. Therefore, the data collected by NIMSS in 2001 accounted for between 32 and 37 percent of all non-natural mortality. The NIMSS aims to progressively expand its geographical and case coverage until all injury deaths are included in what is intended to be an ongoing system for the epidemiological surveillance of fatal injuries.

SEX, AGE AND POPULATION GROUP. Of the 25 361 non-natural deaths, 80% were male and 20% female. Africans constituted 74% of all cases, Coloureds 12%, Whites 11%, and Asians 3%. The majority of deaths were young adults, with 36% of all cases aged 15 to 29, and 36% aged 30-44. Four % of the deaths were younger than 5 years, another 4% were aged 5 to 14 years, 14% were aged 45 to 59 years, and 6% were 60 years and older.

MANNER OF DEATH. Homicide was the major cause of death, accounting for 44% (N = 11 254) of all deaths. Transport-related deaths accounted for 27% (N = 6859), followed by suicide (10% or 2500 deaths) and other unintentional injuries (10% or 2485 deaths). For 9% (N = 2263) the manner of

death was undetermined. The leading manner of non-natural death for males was homicide (48%) and for females, transport-related death (32%).

EXTERNAL CAUSES OF DEATH. Firearms overshadowed all other external causes, and accounted for 28% of all cases. The total of 6993 firearm deaths was greater than the 6859 deaths due to all motor vehicle collision (MVC) categories combined. For children aged 1-4 years, burns were the major cause of death. For children aged 5 to 14 years and for the 65 year and older age group pedestrian injuries ranked first. For all other age groups older than 14 years, firearms ranked first, with sharp object deaths second for 15 to 44 year olds, and motor vehicle collision (MVC) pedestrian deaths ranking second for those aged 45 and older.

HOMICIDE. Over half of the 11 254 homicides were inflicted by firearms, and more than a quarter by sharp instruments. The number of homicides rose abruptly in the 15 to 19 year age group, peaked in the 25 to 29 age group, and remained high until 44 years. There were 6.6 male homicides for every female homicide. Of the males, 56% were killed using firearms, while firearms accounted for 43% of female homicides. Only homicide by strangulation was common among females than among males. Firearm homicides were the largest single external cause of homicide for all ages five years and older. Sharp instruments were the major external cause of homicide for infants younger than one year and the second major cause for those aged 10 to 54 years. Blunt objects were the major external cause of homicide for those aged 1 to 4 years and the second major cause for ages 55 years and older. Most homicides occurred in and around private homes. Nearly 80% of deaths from sharp instruments had positive blood alcohol concentrations (BACs) in contrast to the 40% of firearm deaths with positive BACs.

SUICIDE. Hanging accounted for 42% and firearms accounted for 29% of the 2500 suicides. More than half of all suicide victims were between 20 and 39 years of age. There were 4.7 male suicides for every female suicide. The major external causes of suicide among males were hanging (46%) and firearms (31%), and among females were poisoning (36%) and hanging (23%). Most suicides occurred in private homes. Under half of all suicides had elevated BACs.

FATAL UNINTENTIONAL INJURIES. Unintentional injury deaths due to transport, burns, falls and drowning, and other external causes accounted for 9344 or 37% of all fatal injuries. Of

these, 73% were transport-related, 9% were due to burns, 9% were due to other unintentional injuries, 5% due to drowning and 4% due to falls.

TRANSPORT-RELATED DEATHS. Of the 6859 transport-related deaths, pedestrians accounted for 37%, passengers 17%, drivers 14%, cyclists 8%, 7% were railway-related and 3% involved cyclists. A further 22% of transport-related deaths were due to motor vehicle collisions, but the user category was unknown. There were 3.3 males per female transport-related death. Pedestrian deaths ranked as the top external cause of death for children aged 5 to 14 years and among the elderly (65 years and older). Pedestrian deaths was among the three leading causes for all other age categories, except infants younger than one year. Most MVC-related deaths occurred between 17h00 and 22h00 and on the weekends. BAC was positive for 63% of pedestrians and 52% of drivers.

BURNS, FALLS, DROWNING AND OTHER UNINTENTIONAL INJURIES DEATHS. Of the 2485 deaths due to non-transport unintentional injuries, 34% were due to burns, 18% drowning, 13% falls and 34% were due to other unintentional injuries. Burns were the major external cause of death for children under 4 years of age, and the fourth major cause for children aged 5 to 9 years. There were 3.9, 3.0 and 1.5 males deaths for every female death for drowning, falls and burns, respectively. Most burn and fall deaths occurred in private homes, and drowning deaths in the sea, lakes and rivers, although a substantial percentage of drowning also happened at private homes (e.g. in swimming pools). BACs were positive in 65% of the burn deaths, 41% of the drowning deaths and 32% of the falls. There were 860 other unintentional injuries and electrocution, poisoning and crushing (mostly in mine accidents) were among the major causes.

MANNER OF DEATH UNDETERMINED. For 2263 cases the manner of death was undetermined. A large percentage of deaths due to medical procedures and burns were categorised as undetermined. Unlike the other categories, undetermined deaths peaked in the very young and very old age groups.

IN SUMMARY. The findings of the third annual report of the NIMSS confirms earlier concerns that fatal injuries, especially as a consequence of violence and transport crashes, constitute priority threats to the South African public's health. A considerable majority of these deaths occurred to African and Coloured males between the ages of 15 and 44 years. The leading manner of non-natural death for males was homicide, and for females, transport-related injuries. More than half of all homicides were inflicted by firearms and a further third by sharp instruments, the majority of these occurring in private homes. The most prominent external causes of death amongst the other age groups include burns for infants and children younger than 5 years, pedestrian injuries to children between 5 and 14, and then firearm injuries from 15 years onwards. Blood alcohol concentrations were particularly elevated in firearm and sharp instrument homicides, and the pedestrians and drivers who died in motor-vehicle crashes. The NIMSS data lends itself to the formulation of injury prevention policy and interventions. The data assists in the identification of potential victim groups, hazardous locations, times, and instruments, and selected high-risk behaviours such as alcohol consumption. Potential injury prevention interventions are outlined in the report.

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