ESTIMATING THE BURDEN OF INJURIES IN MOÇAMBIQUE

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BACKGROUND

Reliable statistics are essential for describing the public health burden of injuries, evaluating the impact of safety policies and benchmarking achievements. Analytical methods have been developed for triangulating a national snapshot from multiple data sources including mortuary, DSS, hospital and national surveys. Data sources should include fatal or non-fatal injuries, demographic information (age, sex, urban/rural), among other injury variables including external cause and nature of injury.

The extrapolations provide a valuable intermediate while more complete health-sector data systems can be developed. The estimates will contribute to the 2005 revision of the Global Burden of Disease study.

- **Population**: 20.5 million (2005 est)
  Age structure: 0-14 yrs: 44%; 15-64: 53%; 65+: 3%
  Population growth rate: 1.7% (2007)
  Life expectancy at birth: 47.6 years (2007)
  Urbanization: 36% (rate of change: 0.0%)
  45% of population live in north-central region (Zambezia and Nampula)

Geography: Located in southeastern Africa, bordered by the Indian Ocean (east), Tanzania (north), Malawi and Zambia (northwest), Zimbabwe (west), Swaziland and South Africa (south)

- **Economy:** In 2008, the GDP was $18.6 billion and per capita income was $896. Natural resources include: hydroelectric power, coal, natural gas, titanium.

METHODS

To produce a comprehensive assessment of injuries in Moçambique data from several sources were analyzed.

Unit record, de-identified data or tabulations were provided by in-country partners in Moçambique. Codebooks and translations were provided as well.

Fatal injury sources included:

URBAN: Maputo Central Hospital Mortuary
RURAL: Manhiça Demographic Surveillance Site (DSS)
NATIONAL: INCAM 2007 mortality survey

Fatal injury sources typically included: age, sex and external cause. National surveys provide information about urban/rural and total injury death envelopes to which we can apply the distributions from other sources.

Non-fatal injury sources included:

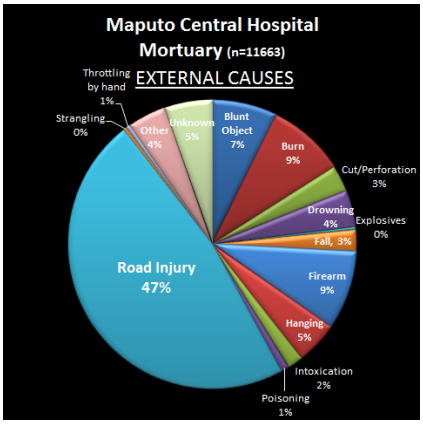
URBAN: Maputo Central Hospital Injury Surveillance System (ISS)
RURAL: N/A
NATIONAL: 2003 Demographic and Health Survey Injury Module (DHS)

Non-fatal injury data sources typically included: age, sex, external cause and nature of injury. National surveys provide information on the total non-fatal injury envelope as well as information on disability due to injury.

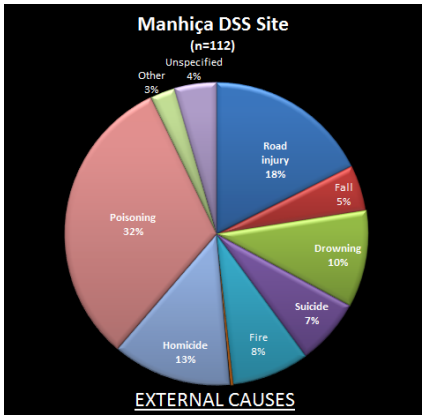
Both fatal and non-fatal data sources must be assessed for completeness of the dataset and coverage (regional or municipal, etc). The country data, when possible, was then mapped to GBD categories for external cause and nature of injuries.

FATAL Data Sources

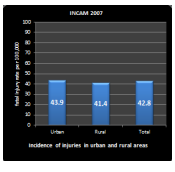
Maputo Central Hospital Mortuary
Time period: 1994-2003 (10 years)
Data Source: FATAL INJURY SURVEILLANCE pseudo-representative
Data Collection: Retrospective
Variables: age, sex, intent and injury mechanism
Intent and mechanism were mapped to GBD injury categories.

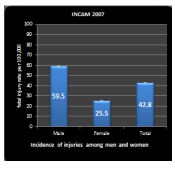


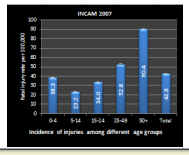
Manhiça Demographic Surveillance Site (DSS)
Time period: 1999-2002 (3 years)
Data Source: VERBAL AUTOPSY
Data Collection: Prospective
Variables: age, sex and injury
Rural population with 36,600 habitants



Inquérito Sobre Causas de Mortalidade (INCAM)
Time period: 2007 (1year)
Data Source: Nationally-representative, population-based mortality survey
Variables: age, sex, urban/rural, cause of death

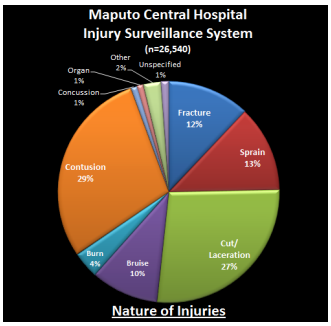




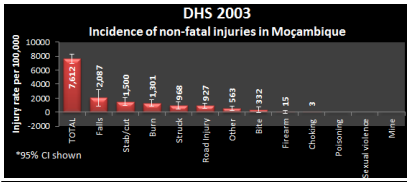


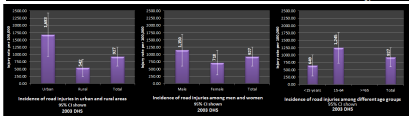
NON-FATAL Data Sources

Maputo Central Hospital Injury Surveillance System (WHO-sponsored)
Time period: 2001-2002 (1 year)
Data Source: NON-FATAL INJURY SURVEILLANCE (non-representative)
Data Collection: Prospective
Variables: age, sex, external cause of injury and nature of injury



Mozambique Demographic and Health Survey DHS Injury Module (WHO-sponsored)
Time period: 2003 (1 year)
Data Source: Nationally-representative, population-based survey
Variables: age, sex, urban/rural and injury





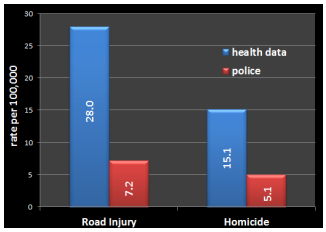
CONCLUSIONS

The estimated total of FATAL injuries in Moçambique in 2005:

Urban: 8,557 (43.9/100,000)
Rural: 13,717 (41.4/100,000)
TOTAL: 22,274 (42.8/100,000)

The estimates developed using health sector data were then compared to the police estimates for road injuries and homicides. Analysis suggests significant under-reporting in the police data.

Health sector data are essential for developing more accurate burden of injury estimates in Moçambique.



ACKNOWLEDGMENTS

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