

Injury in Ethiopia: Architecture of Data Sources

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Country Background

Population: 73.9 million (M: F ratio of 1.02). Average annual growth rate is 2.6%.

Geography: Ethiopia is a land locked country in the horn of Africa covering an area of 1.1 million sq. km. Capital city: Addis Ababa (pop. 2.7 million)

Economy: Ethiopia has shown a fast-growing annual GDP and it was the fastest-growing non-oil-dependent African nation in 2007 and 2008.



Mortality Data Sources

Fatal Injury Surveillance:

Scope and method: Data is collected from the only forensic hospital for the whole country using a pre-designed data collection format. On average about 2000 cases were examined every year. The aim is to identify the pattern and common causes of fatal injuries

Results: Road traffic injuries accounted for most causes of injury related deaths.

Cause/mechanism	N	%
RTI	782	37.2
Blunt Object	368	17.5
Hanging	187	8.9
Firearm	155	7.4
Drowning	105	5.0
Others	510	24
Total (%)	2107	100

Population and Housing Census (2007):

Scope and method: Includes questionnaire on permanent disability from some injury types (notably, road traffic injuries)

Rural Demographic Surveillance Database:

Scope and method: Collects information from predominantly rural communities on selected variables like birth, death, marriage, new household, out-migration, in-migration, and internal move. Information on the circumstances leading to death was not routinely collected by the surveillance system. Data were collected monthly, by trained village based enumerators, through household visits.

Results:

Proportion of injury related deaths from Butajira Rural Health Program Surveillance data for the years 1996-2004, Ethiopia

Deaths	Male	Female	Rural	Urban	Total	% of all
Injury related	57	21	15	63	78	1.5
All deaths	2542	2525	4474	593	5067	100

Total population covered is about 60 000. However, this is not a denominator for the above figures since the study population is a dynamic cohort. Total person years of observation were 416558.

Health Management Information System (HMIS):

Scope and method: National health data compilation instrument that collects routine information from all health facilities on all types of visits and consultations including information on health infrastructure and human resources. Data is compiled and reported on annual bulletin as 'Health and Health Related Indicators'. Morbidity and mortality data from outpatient and inpatient records are summarized and reported as 'top ten' diseases.

Results: RTI are among the top ten leading causes of deaths.

TOP 10 Leading Causes of Mortality (2009)

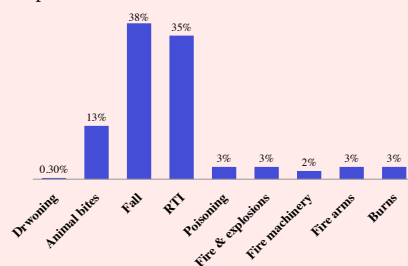
Rank	Diagnosis	Case	%
1	Pneumonia	379	12.4
2	Other or unspec effects of external causes	215	7.1
3	Tuberculosis	213	7.0
4	Human immunodeficiency virus [HIV]	154	5.1
5	Anaemias	119	3.9
6	Other or unspecified diseases of the circulatory system	115	3.7
7	Hypertension and related diseases	108	3.5
8	Malaria (Clinical without lab confirm)	96	3.1
9	Malaria (Confirmed with P.falciparum)	76	2.5
10	Road traffic injuries	71	2.3
Total of leading causes IPD death		1,546	50.8
Total of all causes of IPD death		3,045	100.0

District Health Information system (DHIS):

Scope and method: Collects information on morbidity, admission, discharges and deaths from routine health facility visits (all hospitals and health centers in Addis Ababa).

Results: Data is not regularly analyzed by the government. However, the World Health Organization (WHO) in collaboration with Addis Ababa Health Bureau has conducted analysis on a one year extract of injury related data in 2008. During the study period there were 40,752 out-patient department visits, of which 956 were hospitalizations with 35 deaths occurring as a results of injury which accounted for 27% of all emergency and 4% of all regular visits, 5% of all hospitalizations and 3% of deaths.

Causes of unintentional injuries by intent in Addis Ababa Health Facilities from July 2005-June 2006, Ethiopia



Hospital Death Records:

Scope and methods: All hospitals record death that occurs in the hospital using the standard and uniform format developed by the ministry of health. However, it is only one hospital (Menelik II Hospital) in the country that has the capacity to conduct forensic investigation and documentation. Often dead bodies that require legal evidence for the cause of death are presented to this hospital. A test of linkage of the mortuary at Menelik II Hospital (Addis Ababa, Ethiopia) with all injury deaths that occur at other hospitals in the city was done for a period July 2006 – June 2007. Linking variables: Age, sex, date of death, and cause of death were used as linking variables.

Results: A high fraction of the injury deaths from other hospitals were found in the mortuary data. Burn was not adequately captured in mortuary data

Multi-hospital Injury Surveillance:

Scope and Method: A prospective study of all cases of traumatic emergencies during a month of November, 2009, presented to eight major hospitals in the country.

Results: 2283 cases of trauma were seen. 66% unintentional injuries. 53% occurred on road mainly due to RTA.

Community Based Injury Survey:

Scope and method: A cross sectional community based study covering 698 households in rural and semi-urban towns in South West Ethiopia. WHO instrument on injuries and violence survey was adapted and used for data collection. The enumerated population of these sample households was 3,909 (1,962 males and 1,947 females) with average family size of 5.6 (SD=2.3).

Results: This study showed an injury prevalence rate of 8.9% per year with an average injury of 1.07 for injured person and 0.09 per person per year for the sampled population.

Transport and Police Records:

Scope and Method: Ethiopia has a national road safety coordination office that coordinate and manage all road traffic injury data from transport and police sources. Information related to vehicle, road conditions and road users are regularly compiled and reported. A national RTI data collection format has been developed and being used. However, a link with data from health facilities is very weak. Police record all traffic crash events on the site. Follow up of traffic crash related deaths in health facilities need to be matched with police records.

Results: 2009 annual report summary

- 2,500 people died due to road traffic crash
- Above 8,000 people are crippled or injured
- 53 % of deaths involve pedestrians
- 27 % of pedestrian deaths are students
- The death rate is 70 per 10,000 vehicles, which is one of the highest in the world
- Over 50 Million USD is lost yearly

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