



January 2009

## Age Specific Causes of Deaths in Kersa Demographic Surveillance and Health Research Center (KDS-HRC) Project Site; Findings of a One Year Continuous Observation

This policy brief discuss the age specific causes of deaths in the community of KDS-HRC project site from October 1, 2007 to September 30, 2009.

Based on continuous data collected throughout the year by the Research Team of the Faculty of Health Sciences, Haramaya University

### Introduction

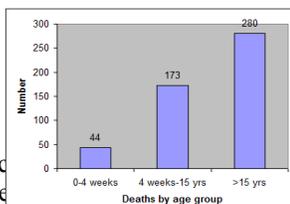
It is difficult to undertake census within a short period of intervals and to establish continuous vital registration system in developing countries like Ethiopia. Mortality reports from health institutions are also generally not reliable indicators of population mortality trends because of low utilization and the likelihood of changes in utilization patterns over time. Longitudinal demographic and health surveillance system provides scientific and factual database essential to inform decision makers and provide strategic information to guide public health interventions.

The current study provides valuable information on trends in age specific mortality in the project site by using standard formats for interviews of the relatives of the dead—referred to as verbal autopsy (VA) and finally assessed by physicians to diagnose the probable cause of death.

In the KDS-HRC project site a total of 497 deaths have been reported during the year and causes of the deaths verified. The Crude Death Rate (CDR) was found to be 10.3 per 1000. Only 64 (12.9%) of the cause of deaths were un-specified and the rest were labeled to 32 different attributes.

#### Causes of deaths as related to different age groups: Age group < 4 weeks, 4 weeks -15 years and above 15 years

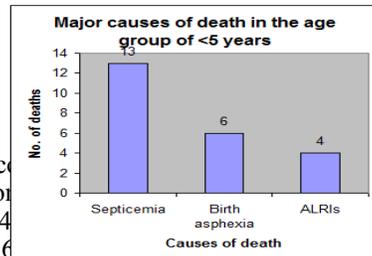
The following bar graph shows the distribution of the deaths among the three age groups



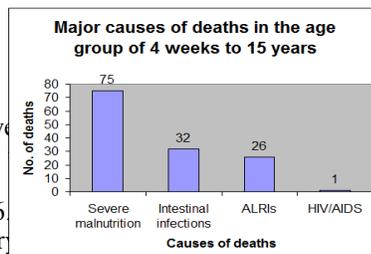
Observing the distribution of deaths to the age grouping of under 4 weeks, 4 weeks and above 15 years shows the following as the major causes for their deaths:

- In the under 4 weeks in comparison with the other groups shows that septicemia was highest, 65%, followed by birth asphyxia, 100%, and acute lower respiratory infections (ALRIs) including pneumonia, 8.7%.

For the 4 weeks to 15 years age group, the major causes of deaths were severe malnutrition, 47.5%, followed by intestinal infections, 40%, and ALRIs, 26%.

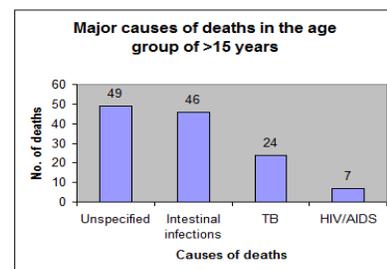


For the >15 years age group, the major causes of deaths were severe malnutrition, 80%, followed by intestinal infections, 12.5%, and HIV/AIDS, 2.5%.



- In the above comparison, the major cause of death was un-specified diseases, 56%.

In the >15 years age category, the major causes of deaths, accounting to 87.5% from the other age groups.



**Top three causes of deaths as related to the age groups <5 years, 5-9 years, 10-24 years, 25-34 years, 35-64 years and above 64 years:**

Analysis for the top three causes of death in the observation period for the age categories indicated above in comparison to each other is revealed in the following table:

S. No	Age group in Years	Top 3 causes of deaths in relation to the other age groups		
		1st	2nd	3rd
1	<5	Severe Malnutrition, 72 (90%)	ALRIs, 30(65%)	Septicemia, 17(85%)
2	5-9	Severe malnutrition, 5 (6.2%)	Injury, 1(6.7%); Intestinal infections, 1 (1.3%); Unspecified cause, 1(1.6%)	-
3	10-24	Chronic liver disease, 4(23.5%)	Intestinal infections, 4 (5.1%)	Obstructed labor, 3 (75%), Injury, 3 (20%)
4	25-34	Injury, 6(40%)	Unspecified cause, 4 (6.3%)	Tuberculosis, 3 (10%); ALRIs, 3 (6.5%)
5	35-64	Unspecified cause, 16(25%)	Tuberculosis, 15 (50%), Intestinal infections, 15(19%)	Asthma, 7(70%); Gastric and duodenal ulcer, 7(63.6%), Chronic liver disease, 7(41%)
6	65+	Unspecified cause, 27 (42.2%)	ALRIs 7(15.2%)	Renal failure, 5 (38.5%), Tuberculosis, 5 (16.7%)

The most frequently observed causes of deaths in the different ages include severe malnutrition and this was especially in the <10 years old children. Acute Lower Respiratory Infections (ALRIs) including pneumonia were also higher in children <5 years of age and the elderly (>65 years). In the productive ages (25-64 years) tuberculosis was prominently observed. Intestinal infectious diseases were also commonly observed. Injury was also among the common causes of death.

The data is indicative that most causes of death were due to preventable causes such as due to malnutrition especially in children and due to poor hygiene and environmental conditions including poor housing.

**Policy**

**Recommendations**

This study has revealed a population based causes of deaths in the project site. The attributes of most of the deaths were malnutrition and communicable diseases related to poor hygiene and environmental health conditions. Therefore, this policy report recommends the following:

- Attention by local authorities and None Governmental Organizations (NGOs) operating in the area to reduce the death due to malnutrition with supplementary feeding and by availing other essential health care services.
- Emphasis on improvement of environmental health conditions which is the major attribute to most of the intestinal and respiratory infections observed. This includes focus to improved housing, water supply and sanitation.
- Conduct further in-depth studies in the project area around the observed major causes of deaths.
- Empower health extension workers through training and refresher courses.
- Feedback to local authorities on the major causes of death for planning intervention works to reduce preventable causes of deaths.

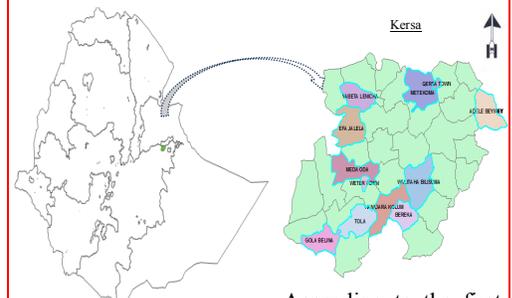
**Kersa Demographic Surveillance and Health**

**Research Center (KDS-HRC),**

**Haramaya University:**

The surveillance site was established in September 2007 in Kersa district, Eastern Hararge of Oromia region, East Ethiopia with aim of tracking demographic changes like death, birth, migration and marital status change. The surveillance activities further extended by adding surveys in Nutrition, Reproductive Health, Environmental Health, HIV/AIDS, Morbidity/health seeking behavior and health care utilization during the month of January-March 2008.

The surveillance activity is instituted in 12 kebeles (the smallest administrative unit in Ethiopia with approximate population Size of 4-5 thousand). Two of the kebeles are semi urban and the remaining 10 are rural kebeles.



According to the first census there were 10,256 households and 53,482 people in the study site with an average household size of 5.2 and sex ratio of 104.5. In the study area the crude birth and death rates were 26.8 and 9.2 per 1000 population. Infant and under five mortality rates were 44.9 and 108.2 per 1000 live births respectively.

The activities of the surveillance are lead by a coordinator and a group of six staff members from the College of Health and Medical Sciences.

