POLICY BRIEF NUMBER 46

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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 discuses the 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

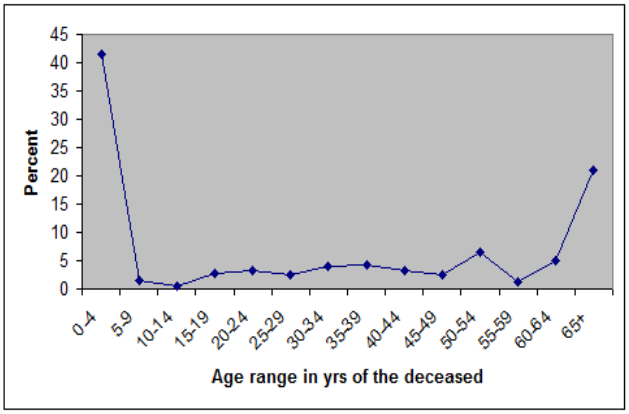
It is difficult to undertake census within a short period of intervals and to establish continuous vital registration system in developing countries like Ethiopia. Mortality reports from health institutions are also generally not reliable indicators of population mortality trends because of low utilization 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- and sex-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 cause of death diagnosed by physicians to ascertain 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. The biggest death, 80(16.1%), was associated to severe malnutrition, followed by intestinal infectious diseases including diarrheal diseases, 79 (15.9%), and acute lower respiratory infections (including pneumonia) accounting to 46 (9.3%). The next higher were tuberculosis, 30(6%), unspecified septicemia, 20(4%), malaria and chronic liver disease each accounting similarly, 17(3.4%). In this systematic continuous survey the attribute to HIV/AIDS was found to be 8(1.6%).

The 10 top known (excluding the unspecified) causes of deaths in KDS-HRC project site from October 1, 2007- September 30, 2008

Disease label as cause of death	Number	Percent (from N=433 that excludes the unspecified)
Severe malnutrition	80	18.48
Intestinal infectious diseases including diarrheal diseases	79	18.24
Acute lower respiratory infections (including pneumonia)	46	10.62
Tuberculosis	30	6.93
Unspecified septicemia	20	4.62
Chronic Liver Disease (CLD)	17	3.93
Malaria	17	3.93
Injury (exposure to force of nature)	15	3.46
Renal failure	13	3.00
Congestive Heart Failure	12	2.77
Total	**329**	**75.98**
Percent from the total 497		**66.2**



Percent of the death by age group in KDS-HRC project site from October 1, 2007- September 30, 2008

Conclusions

Mortality rates in Ethiopia are very high, but few deaths are attended by a health worker, resulting in underreporting. Lack of information on cause of death hampers the development of effective interventions in mortality reduction. Most deaths occurred in the home (87%). This may be due to lack of access to modern health care facility and lack of awareness about the causes of illnesses and the need to utilize modern health services.

This study revealed that the major cause of death in the study community was severe malnutrition (16.1%), followed by intestinal diseases including diarrheal diseases (15.9%), and acute infections of the lower respiratory systems. These are indicative of the fact that they are attributes of poverty and poor environmental health conditions. This is consistent with many studies conducted in other parts of rural Ethiopia.

When observing the five year age intervals of the deceased, it showed that most of the deaths occurred in the extreme ages; the children and the old which are the most vulnerable groups of the society. All in all the major causes of deaths in the study area were observed to be malnutrition, intestinal infections, tuberculosis and acute lower respiratory infections which may be related to draught and low farming outcomes, poor housing conditions and poor environmental sanitation.

Policy Recommendations

This study has revealed a population based causes of deaths in the project site. The larger proportion of deaths had occurred in the child age and 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:

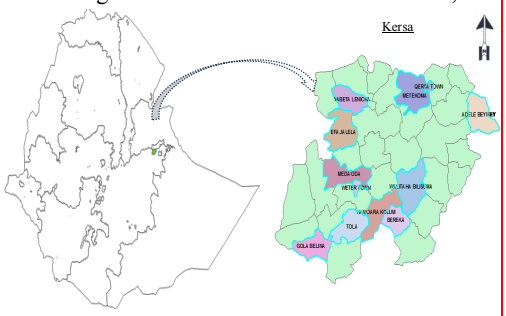
- Attention by local authorities and NGOs operating in the area to reduce the death due to malnutrition with supplementary feeding.
- Emphasis through intensive awareness creation on the major causes of intestinal and respiratory infections and improvement of environmental health conditions which is 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.
- Form linkage to information generated through the KDS-HRC longitudinal surveillance to benefit the local community and service givers.

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.

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