Kathmandu University Medical Journal (2007), Vol. 5, No. 1, Issue 17, 121-123

Review Article

Of what diseases are Nepalese people dying?

Suvedi BK
Measles / NT Surveillance Coordinator

The official health statistics of Nepal show that during the last four decades, the health indicators have improved to a great extent. From a mere 36.5 years of life expectancy at birth, this indicator has gone up to 62.2 years[1]. Similarly, the crude birth rate (CBR) has declined from 52 per 1000 to 33.1 per thousand populations. Similarly, crude death rate (CDR) has decreased from 27 per thousand in 1966[2] to 9.7. For a developing country like Nepal, these changes are definitely a good sign of "progress". However, these "national" indicators might vary across various age groups, geo-ecological region, social groups, and one to another district.

However, while seeking the specific causes of death in the country, there is paucity of information. Data on the mortality pattern in Nepal in absolute terms are almost non-available. It was not possible to get any information regarding the deaths, which were based on community survey. Besides, public health programs are designed to achieve the goal of "reducing the mortality" from specific diseases, but there is lack of information on mortality pattern in the medical/health literature encompassing a total scenario. Few "targeted" diseases mention the estimated number of deaths and are basically "program based" to highlight the issue and so might often be biased because these are often "generalized" from a limited study. Looking into the mortality pattern from different aspects has probably not been carried out so far. Above all there is no functioning system of collecting information on the cause of death. In this backdrop, this study has been carried out to explore the causes of death in Nepalese context.

Objectives
Overall objective of this study is to estimate the number of deaths by "categories". However, it also intends to:

1. Initiate brainstorming among the academicians, researchers and planners to look into the current gap in information pertaining to causes of death.
2. Stimulate to carry out studies to find out the causes of death to show real situation, and
3. Help the health planners in appropriately planning interventions in the future.

Materials and methods
This study uses data from various sources of information available. All the data come from secondary sources including the census of 2001. It also tries to focus the whole country as one unit using the data per se. Besides, extrapolation has been done whenever required based on global or regional scenario.

Limitation
This study is limited to analysis of secondary sources of information and uses extrapolation of data based on international/regional data. Obviously, it has many limitations due to very nature of the method used. So, interpreting or generalizing them should be done cautiously.

Findings
The latest census data show the following scenario regarding the demographic situation of Nepal

As seen from Table 1, the natural increase of population is calculated at 23.5. It can be translated into the absolute figures that 766,312 births take place each year and about 222,254 persons die each year in Nepal. That means everyday some 2100 births take place in Nepal and about 609 deaths occur.

Regarding the specific causes of death in Nepal, there is scarcity of information. The most quoted document presents the following figures for cause of death.

The given ratios are used extensively for planning of many interventions under the health sector reform initiation of Ministry of Health and Population. However, there is paucity of specific data regarding the important and probably most prevalent diseases/conditions. So, the following attempt has been made to translate the above figures in absolute terms for major diseases/conditions.

Correspondence
Dr. B. K. Suvedi
P. O. Box 2323, GPO
Kathmandu, Nepal
Email: bksubedi@healthnet.org.np

Table 1: Demographic Situation of Nepal

Indicators	Figures	Year	Source
Total Population	23151423	2001	NPC/CBS
Crude Birth Rate (CBR)	33.1/1000	2001	NPC/CBS
Crude Death Rate (CDR)	9.6/1000	2001	NPC/CBS

Source: NPC/CBS

Table 2: Causes of death[3]

Causes of death	Cause specific deaths as % of all deaths	Extrapolated figures
Group I: Infectious diseases and maternal, perinatal and nutritional problems	49.7%	110460
Group II: Non-communicable diseases and congenital problems	42.1%	93589
Group III: Injuries and accidents	7.9%	17559
Total	100%	221608

Table 3: Specific causes of death

Group	Disease/ Conditions	Weightage*	Number
I. Infectious diseases, maternal, perinatal and nutritional conditions	Tuberculosis	4.30	9557
	Sexually Transmitted infections	0.10	222
	HIV/AIDS	2.50	5556
	Diarrheal Diseases	1.90	4223
	Vaccine Preventable Diseases	2.00	4445
	Meningitis	0.50	1111
	Hepatitis B	0.20	445
	Hepatitis C	0.10	222
	Malaria	0.40	889
	Tropical diseases	0.30	667
	Encephalitis	0.10	222
	Intestinal worms	0.03	72
	Respiratory Infections	4.9	10890
	Maternal conditions	2.0	4445
	Perinatal conditions	7.5	16669
	Nutritional deficiencies	1.3	2889
	Other diseases	20.7	47936
	Total	**49.7**	**110460**
II. Non-communicable Diseases	Malignant neoplasms	6.2	13780
	Other neoplasms	0.1	222
	Diabetes mellitus	1	2223
	Nutritional/Endocrine disorders	0.2	445
	Neuro-psychiatric conditions	1.5	3334
	Cardiovascular disorders	21.0	46673
	Respiratory disorders	6.0	13335
	Digestive system disorders	4.0	8890
	Genito-urinary disorders	1.0	2223
	Musculoskeletol disorders	0.10	222
	Congenital disorders	1.0	2223
	Total	**42.1**	**93570**
III. Injuries and others	Unintentional injuries	5.5	12224
	Intentional injuries	2.4	5334
	Total	**7.9**	**17558**
	Grand Total	**99.7**	**221588**

Note: The weightage is based on the South East Asia (High Scenario)[4]. However, due to paucity of data, the weightage of few conditions have been adjusted to reflect the overall scenario, especially for non-communicable diseases and injuries.

Discussion

About 57 million deaths occur every year worldwide.[4] Of them more than three fourths (76.7%) is reported to occur in the developing countries.[4] South East Asia contributes to about 22% of the total global death.

Globally the communicable diseases contribute for 32.3% of total deaths, where as this is 41.1% for South Asia and 49.7% for Nepal indicating high prevalence of infectious and parasitic infections. However, the non-communicable diseases contribute for fewer deaths in Nepal (42.1%) compared to 48.9% for South Asia and 58.6% for the globe. Globally, injuries are reported to cause 9.1% of total deaths compared to 10% in South Asia and 7.9% in Nepal.

It is considered important to have the record of mortality pattern in demographic, economic and social processes for various purposes and it is stated that there is a South Asian Pattern of mortality with high incidence of infectious, parasitic, diarrhoeal and respiratory diseases in the older age groups.[5]

All industrialized countries transformed their health system by recording the vital statistics on age, sex and socio-economic distribution of births and deaths in late 19th and early 20th centuries. This helped them to see the changes in mortality pattern and also in detecting new epidemics such as HIV/AIDS. However, developing countries do not have systematic and functioning system to record the deaths and hence, there is paucity of data.

An overwhelming majority of deaths in Nepal occurs at home, and in most instances, the exact cause of death can not be established. Though the National Planning Commission/ Central Bureau of Statistics collect the information on death while collecting the information for census, it has not been published and consequently has not been used by planners for health interventions. As these data are not available, grouping them under various strata, e.g. by sex, age-group, locality, circumstances, geo-ecological or administrative division is not possible. Nepal falls under the category of "high mortality" developing countries as categorized by WHO. Besides, WHO considers that the coverage of registration of death is far less than 25%.

This study was carried out basically to stimulate various strata of society to take the issue seriously, as it will have many implications. Mortality measurement is easy in general terms but challenging in technical terms. The reliability and accuracy of information is very crucial in this respect. In the community deaths are attributed to terms like "old age" in case of elderly, "fever", "diarrhoea", "swelling of body", "paleness/yellowness of body" difficulty in breathing" etc. The exact cause of such syndromes might be different and various in different circumstance. Many documents reveal that child mortality and infant mortality has declined over the years thanks to various targeted interventions. The targeted interventions might have contributed significantly to the increase in the Life expectancy at birth. However, the pattern of death might have been changed from child to adult or the elderly. Tracking this dynamics is very important to plan for the health interventions in future.

Nepal is entering the phase of "epidemiological transition" from high incidence/prevalence of infectious diseases to increasing incidence/prevalence of non-communicable diseases. This is very important to all the stakeholders involved in health care for designing and providing future health interventions. Various risk factors are being added to the daily life of people: tobacco, alcohol, sedentary life, "junky foods" (highly purified) low-fibre diet, carbohydrate/ fat content rich food, insecticide/pesticide treated fruits and vegetables. The pollution of air and environment are other major factors in the morbidity in urban areas. All these factors are going to influence the "health" of people in future in the background of the primitive health infrastructure, focused solely to provide "primary health care" to population. It should be kept in mind that the given scenario of Group I, II and III will change over time with all the possibilities that group II and III will take more weightage in the mortality pattern of death in future.

Acknowledgement

My advance acknowledgement goes to all those who question the validity of this article. It is the prime intention of the author to stimulate those brains who would challenge the information contained herein by providing more accurate and valid data.

References

1. Nepal in Figures 2005. National Planning Commission/ Central Bureau of Statistics. 2005.
2. Worth RM, Shah NK. 1966. Nepal Health Survey 1965-66. University of Hawaii
3. Ministry of Health 2003. Nepal Health Sector Program- Implementation Plan. Kathmandu.
4. WHO Report: Reducing Risks: Promoting Healthy Life. WHO, Geneva. 2002.
5. Anon. Mortality Trends. Asia Pacific Journal Vol 1, No. 2.