

World's Largest Study On Causes Of Death – Tracking The Health Of 6 Million Indians

A Landmark Study of Public Health in India

The world's largest prospective study will examine causes of death in a population of 6.3 million people in India, from which 150,000 deaths are expected between 2001-2003.

The study is being conducted within the Registrar General of India (RGI)'s Sample Registration System (SRS). The SRS, operational since 1969-70, is India's flagship monitoring system for fertility and mortality indicators. Field investigations under the SRS consist of the continuous enumeration of births and deaths, followed by an independent twice-yearly survey. Approximately 1.1 million households in about 7000 small areas from across India are included in this survey.

The proportion of people who die while under medical care in India is low (about three-quarters of adult deaths attributable to medical causes occur at home, more so in rural areas). Of these, well over half involve no medically-certified cause. Thus, "verbal autopsy" (structured interview with family members and others on the symptoms, conditions, duration and circumstances of death) can be of substantial help in assessing the underlying cause of death. Methods of assigning causes to deaths by verbal autopsy have recently been developed and validated in India, and are especially useful for deaths in early adult life and middle age (but less useful in old age).

Cause of death information is essential for health planners, administrators and medical professionals to identify the public health importance of different diseases, evaluate the impact of ongoing health interventions, and appropriately

allocate resources for disease control. Such data are also required to study trends in causes of mortality and the socio-economic, demographic and lifestyle risk factors associated with them.

This project will utilize verbal autopsy to assign underlying causes to 150,000 deaths. It will yield much better evidence than is currently available on cause-specific child, maternal and adult deaths in India (including from diseases such as tuberculosis and HIV/AIDS). Deaths will be classified by education levels, occupation and socioeconomic groups. The study will highlight household characteristics and personal risk factors that are important in predicting cause-specific mortality.

Quick Facts:

- *One in five of the world's child deaths occurs in India, i.e. over 2 million deaths every year.*
- *Indirect estimates suggest that 272,000 South Asians died from AIDS in 2001. This study will be the first to provide direct evidence of AIDS mortality in India*
- *About one in two male tuberculosis deaths and one in four of all male deaths in India may be attributable to smoking.*
- *Childbirth is still a leading cause of death for women in India: more than 100,000 women are estimated to die each year from causes related to pregnancy.*

Progress to date:

- 40,000 of the 150,000 deaths within the SRS have been surveyed and entered into a computerized database; follow-up for the 110,000 remaining deaths is underway.
- Standardized training of 800 field surveyors has been completed.

Sponsoring Agencies:



- Measurement and validation of household characteristics and personal risk factors recorded at baseline. Of special interest are smoking status and alcohol consumption of household members, levels of indoor air pollution and fertility history of ever-married women.
- Preliminary analyses of data on mortality, fertility and risk factors from 1.1 million households (results to be released in Fall, 2004).
- Training of 100 physicians to assign causes of death based on lay reporting by RGI survey staff will commence shortly.

The RGI will continue to use the verbal autopsy instruments and methods for assigning causes of death within a larger and enhanced SRS. This new sample frame of 7.6 million people, instituted on January 1, 2004, will be followed until 2014. About 600,000 deaths from this population will be reviewed for cause-specific mortality outcomes.

The study is funded by the NIH (Grant RWA 01991 T) and the University of Toronto. Co-partners include the RGI, World Health Organisation and Indian Council of Medical Research.

For further information on this study please visit: www.cghr.org/project.htm or www.censusindia.net.

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“The Indian Government has committed to reducing child mortality and improving public health. This study should enable representative, reliable, routine, low-cost, and long-term measurement of child, maternal and adult mortality in India.”

-- **Shri. J.K. Banthia**, Census Commissioner and Registrar General of India

“The RGI has shown great vision in mounting this study. They have so successfully completed the 2001 Census of the Living, and will now tackle successfully this Census of the Dead.”

-- **Shri. JVR Prasada Rao**, Secretary of Health and Family Welfare, India

“The study is unique in not only documenting the causes of death, but the determinants of death -- such as smoking. For example, a recent study in Tamil Nadu suggested that about half the male tuberculosis deaths in India are caused by smoking, and three-quarters of the smokers who become ill with tuberculosis would not have done so if they had not smoked. There is a need to document risk factors also.”

-- **Dr. Prabhat Jha**, Principal Investigator of the study and Director of the Centre for Global Health Research, St. Michael's Hospital, University of Toronto