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Deaths from chronic diseases now hitting poorest households hard in Bangladesh

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The number of people in Bangladesh dying from chronic diseases such as cancer, diabetes and hypertension—long considered diseases of the wealthy because the poor didn't tend to live long enough to develop them—increased dramatically among the nation's poorest households over a 24-year period, suggests new research from the Johns Hopkins Bloomberg School of Public Health.

The study, published Oct. 13 in the *International Journal of Epidemiology*, found that the rate of people dying from chronic conditions between 1982 and 2005 fell among the richest 20 percent while rising dramatically among the poorest 20 percent. The shift underscores how chronic diseases, once referred to as "diseases of affluence," have become diseases of poverty, as lower-income people live longer but often lack the resources to prevent and treat these illnesses.

This research, believed to be the first long-term study of its kind, also finds that chronic disease can worsen poverty, underscoring the importance of including chronic disease prevention and management in strategies to alleviate poverty. Instead of dying from infectious diseases at a young age or dying soon after birth, many more children are instead living far longer than before. As life expectancy increases around the world, other countries will likely experience a shifting burden of chronic diseases, with poorer households spending a disproportionate amount of their income on health care costs than better-off households.

"Our study is the first moving picture of the epidemiologic transition that is occurring in low- and middle-income countries. Instead of a single snapshot, we were able to track the changes in the same population over the course of two decades," says study leader David Peters, MD, MPH, DrPH, professor and chair of the Department of International Health at the Bloomberg School. "While the proportions of people dying from chronic diseases are rising across all groups, the poor are suffering disproportionately."

Peters and his colleagues analyzed data collected in a health and demographic surveillance system in Matlab, Bangladesh, which is maintained by the International Centre for Diarrhoeal Disease Research. The study site is located in a rural area of the country and covers a population of about 225,000 people. The survey routinely collected demographic information such as births, deaths, marriages and migration. Socioeconomic censuses were conducted in 1982, 1996 and 2005.

Between 1982 and 2005, results show that chronic disease mortality rates rose overall from 646 to 670 per 100,000 people. The rate, however, fell among the richest 20 percent, from 697 to 615 per 100,000, a decline of 12 percent. At the same time, the rate rose dramatically among the poorest 20 percent, from 546 to 752 per 100,000, an increase of 38 percent. For the poorest 60 percent, chronic disease mortality rates also rose, but they decreased slightly for the upper 40 percent.

Researchers also looked at the change in socioeconomic status over time in relation to chronic disease mortality. They found economic status more likely to drop if there had been a death in the household caused by a chronic disease. In 1996, for instance, a household was one-third more likely to be in poverty if there had been a death from a chronic disease in the household in 1982.

These findings, Peters says, are reminders that special attention should be paid to the poor when addressing the rising rates of chronic disease mortality. Chronic diseases are not only beginning to affect the poor disproportionately, they are also dragging more people into poverty.

More information: "Distribution of chronic disease mortality and deterioration in household socioeconomic status in rural Bangladesh: an analysis over a 24-year period" was written by Jahangir A.M. Khan, Antonio J. Trujillo, Sayem Ahmed, Ali Tanweer Siddiquee, Nurul Alam, Andrew J. Mirelman, Tracey Perez Koehlmoos, Louis Wilhelmus Niessen and David H. Peters.

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