

## Indian pedestrian, motorcycle deaths likely much higher than government data suggest

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Official government statistics on traffic deaths in southwest India significantly misrepresented the number of pedestrian and motorcycle deaths in the region over a two-year period, casting doubt on the reliability of that country's government data on traffic fatalities, a study led by researchers at the Johns Hopkins Bloomberg School of Public Health suggests.

Researchers compared police reports in Belgaum, Karnataka, a district in southwest India with a population of 4.7 million, with statistics released by India's National Crime Records Bureau in 2013 and 2014. The researchers found that the official statistics reported pedestrian deaths in the district as 9 percent of total traffic deaths versus 21 percent based on their review of the district's police reports. For motorcycle deaths, the national data reported that they made up 37 percent of traffic deaths while the researchers found the number was 49 percent.

The findings will be published online July 28 in the journal *Injury Prevention*.

"Our study suggests that taken together pedestrians and motorcyclists account for the vast majority of traffic deaths in India," says Kavi Bhalla, PhD, an assistant professor in the Department of International Health at the Bloomberg School and the study's lead author. "The official national statistics for 2014 put the proportion at less than a third. The Indian government claims that they intend to cut traffic deaths by half, but this is impossible to achieve without knowing how people die



on the roads."

Bhalla says the findings suggest that the Indian government could be misallocating its resources since it doesn't have a full picture of what is happening on the roads.

"These vulnerable groups need to be protected by providing appropriate infrastructure, such as sidewalks, raised crosswalks and segregated lanes," he says. "However, the Indian government's highway spending has focused primarily on making roads wider and faster, and thus much more dangerous for these vulnerable groups."

Many experts familiar with road traffic injuries in India have long suspected that the national numbers were misreporting categories of traffic deaths, although the reasons for these discrepancies are not clear. As a result of their findings, study authors recommend that government statistics on road traffic deaths among different types of road users should not be used for research and policy decision-making.

While the study is based in only one district, the process of reporting in this district is similar to that used by all districts in the country. Using police reports, individual police stations produce summary tables of the crashes that occur within their jurisdictions. These tables are submitted to the District Crime Records Bureau, which, in turn, submits them to the National Crime Records Bureau. It is unclear how the numbers changed during this process.

The researchers note that there wasn't a substantial discrepancy in the total traffic deaths between the official statistics for the district and their assessment. For example, in 2013, the National Crime Records Bureau reported 742 traffic fatalities in the Belgaum district while the district's records assessed by the research team suggest there were 759. This small difference - just two percent - reinforces the notion that the data issues



seem to arise from misclassification.

The researchers note that the Indian government reported more than 140,000 traffic deaths in 2014, with pedestrians accounting for only five percent of the fatalities. This is unusually low for a country where walking is the most common means of transportation. In neighboring Bangladesh and Pakistan, pedestrians account for more than 40 percent of traffic deaths. Global estimates of countries with similar levels of economic development estimate that pedestrians account for 40 percent of all traffic fatalities.

As part of this study, the authors also reviewed the scientific literature on traffic fatalities in India that were based on population surveys, hospital reports and autopsies. On average, pedestrians comprised 30 percent of traffic deaths in these studies compared to 13 percent of traffic deaths in official tabulations for the same time period. Motorcycle riders comprised 36 percent of traffic deaths in other data sources, but only 20 percent in official reports.

The reasons for these apparent discrepancies in official statistics are not clear, the researchers say. One possibility is that official statistics capture the mode of transport for the person judged responsible for the crash rather than reporting how the person who died was traveling.

Whatever the cause, until reporting procedures are fixed, researchers and policymakers in India should use data from police case files not official government statistics, Bhalla says.

**More information:** Kavi Bhalla et al. Official government statistics of road traffic deaths in India under-represent pedestrians and motorised two wheeler riders, *Injury Prevention* (2016). DOI: 10.1136/injuryprev-2016-042053



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