

A road safety quartet and the road ahead

What are the key observations made by the new analytical series on road safety published in *The Lancet*?

G. ANANTHAKRISHNAN

The story so far: In spite of several years of policymaking to improve road safety, India remains among the worst-performing countries in this area with a toll of 1,47,913 lives lost to road traffic accidents in 2017 as per Ministry of Road Transport and Highways statistics. The National Crime Records Bureau (NCRB) figure for the same year is 1,50,093 road accident deaths. Further, India's data on road crash mortality are seen as an undercount, and the Global Burden of Disease report for 2017 estimates, based on verbal autopsy sources, that there were 2,18,876 deaths. The persistently high annual death toll brings into question the country's ability to meet Sustainable Development Goal (SDG) 3.6, which aims to halve the fatalities and injuries from road traffic accidents by 2030. The United Nations is holding a high-level meeting on Global Road Safety on June 30 and July 1, 2022 to review the progress and challenges.

What are the new findings on road safety?

A new analytical series on road safety worldwide, published by *The Lancet*, proposes that India and other countries could cut accident-related deaths by 25 to 40% based on evidence that preventive interventions produce good outcomes when applied to four well-known risk factors – high speed, driving under the influence of alcohol, not using proper helmets, not wearing seat-belts and not using child restraints. Globally, about 14

lakh people die in traffic accidents annually, and nearly five crore are injured; over half of those killed are pedestrians, cyclists and motorcyclists; Low and Middle Income Countries (LMIC) bear the maximum burden of road fatalities and injuries, with high economic costs – an average of three to five per cent of GDP – suffered by these countries in 2014.

India amended its law on motor vehicles in 2019, but its implementation by State governments is not uniform or complete. A National Road Safety Board was constituted under the Motor Vehicles Act, with advisory powers to reform safety. The focus of State governments, however, remains conventional, with an emphasis on user behaviour (drivers and other road users), education and uneven enforcement. Low emphasis is placed on structural change such as raising engineering standards for roads, signages, signals, training for scientific accident investigation, raising policing skills and fixing responsibility on government departments for design, creation and maintenance of road infrastructure.

How can four factors improve safety outcomes?

The authors of *The Lancet* study used common predictors for individual countries, such as GDP per capita, population density, and governmental effectiveness measured through the Worldwide Governance Indicators, and built a statistical estimate of how interventions on the identified risk



factors would influence injuries and death.

Using the Global Burden of Disease data, a statistical model was constructed to estimate the number of lives that could be saved with interventions in the respective areas for each country. An average of 20,554 lives could have been saved in India with a reduction in speeds, 5,683 with helmet interventions and 3,204 with seatbelts. The savings for curbs on driving under the influence of alcohol were not quantified because the country does not report the percentage of such fatalities.

In addition, the study series in *The Lancet* also calculates that 17% of road traffic injury-related deaths in LMICs could be avoided if trauma care facilities improved. This is significant as several accidents take place in rural areas on highways, and victims are taken to poorly-equipped district hospitals or medical college hospitals.

While positive user behaviour – slower travel, wearing of helmets, seat belts and so on – could save thousands of lives, the structural problems linked to unplanned motorisation and urbanisation remain. In

India, speedy highway construction without reconciling fast and slow-moving traffic, presence of ramshackle vehicles, rampant wrong-side driving, absence of adequate police forces to monitor vehicles and curb drunk driving, and poor trauma care in non-urban centres contribute to high death and disability rates.

According to the Transport Ministry, more than 65% of those killed in road accidents in 2019 were in rural areas. Yet, the substantial death toll in densely populated urban centres – 32.9% – indicates that better engineering and enforcement can easily cut fatalities in the current decade, in the run up to the SDG goal year of 2030. This would be in consonance with the World Health Organization's (WHO) decade of action on road safety, recognising it as a major public health issue, launched last year.

What can be done to cut death and injury rates?

The ambitious amendments to the Motor Vehicles Act in 2019 (MV Act) have not yielded significant results, although the restrictions on vehicular movement for COVID-19 temporarily slowed the rising graph of fatalities and injuries. In many countries, post-COVID-19 driving has turned more unruly, leading to a rise in pedestrian deaths.

Major interventions in India, first suggested by the Sundar Committee (2007) and ordered by the Supreme Court in *S. Rajasekaran vs Union of India* have not made a dent in the problem. The measures include setting up of an

apex national body for road safety, and fixing decentralised responsibility at the district level.

The Sundar Committee pointed out that India lacked a technically competent investigation arm that could determine the cause of accidents; the National Road Safety Board Rules, 2021, provide for the formation of technical working groups covering, among other things, crash investigation and forensics. There is little clarity on whether the States have formed such units to aid traffic investigation, or whether the insurance industry has pressed for these to accurately determine fault. In the absence of scientific investigation, perceptions usually guide the fixing of liability. The MV Act stipulates only a fine up to one lakh for failure to follow norms and stipulations by the designated authority, contractor, consultant or concessionaire, leading to death or disability, and there is little evidence that even this has been enforced after a public inquiry.

The authors of *The Lancet* point out that legislation without enforcement ends in failure. Moreover, while proven interventions are proposed by WHO, absorptive capacities vary in LMICs. This is evident even in fast-growing India, since no single department bears responsibility to make roads safe. In the short term, slowing down traffic, particularly near habitations, segregating slower vehicles, enforcing seat belt and helmet use and cracking down on drunken drivers could produce measurable gains.

THE GIST

■ A new analytical series on road safety worldwide, published by *The Lancet*, proposes that India could cut accident-related deaths by 25 to 40% based on evidence that preventive interventions produce good outcomes when applied to well-known risk factors.

■ Using the Global Burden of Disease data, a statistical model was constructed to estimate the number of lives that could be saved with interventions in the respective areas for each country. An average of 20,554 lives could have been saved in India with a reduction in speeds, 5,683 with helmet interventions and 3,204 with seatbelts.

■ The authors of *The Lancet* point out that legislation without enforcement ends in failure. India amended its law on motor vehicles in 2019, but its implementation by State governments is not uniform or complete.