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CRASH FATALITY RISK DIFFERENCES BETWEEN ACCESS AND NON-ACCESS CONTROLLED HIGHWAYS IN PAKISTAN: A LOW-INCOME COUNTRY

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Background Urbanisation around highways is frequent in Low- and Middle-Income Countries (LMICs) and can affect traffic safety negatively if it is inadequately-planned. Access control has shown to reduce significantly highway crashes in developed countries but explored to less extent in LMICs.

Aims/Objectives/Purpose The study aimed to compare crash risk differences between an access-controlled highway sections with that of non-access controlled sections in Pakistan.

ABSTRACTS

Methods Using historical cohort design, crash fatality risk and pedestrian crash risks were compared between 397 km-long sections of access controlled Motorway 1&2 (M1&2) and 332-km-long non-access controlled road sections of N5 between cities of Attock and Lahore.

Results/Outcomes Approximately 47 persons died per billion vehicle-km travelled on both types of road sections, a rate over ten times higher than that observed in France on similar roads. Pedestrian crash risks were significantly higher on non-access controlled road sections compared with access controlled road sections (Risk ratio=3.43, $p<0.001$, attributable risk proportion=70.1%) suggesting that access control might reduce over two-thirds of pedestrian crashes on highways in Pakistan.

Significance/significance to Field High crash burden on highways indicated that vigorous efforts are required in legislating and enforcing international safety standards in Pakistan with regards to seat-belt or helmet use, vehicle checks, and educating safe road use to drivers and the population living around highways.