Methodology Crash data for the years 2006–2009 were obtained from the traffic police, and were geocoded in ArcGIS over the digitised road map of Delhi. Kernel Density functions available in the spatial analyst extension of the ArcGIS software was used to identify hazardous locations of vehicle-pedestrian accidents in Delhi during 4 years 2006–2009. GIS-based queries were used to visualise crash data at the microscopic level.

Results Results showed that there was a high potential for GIS in studying accidents and highlighted five pedestrian fatal hotspot locations in Delhi. The analysis showed that the pedestrian fatalities at arterial intersections caused by private cars and buses were found to be 27% and 14% of all fatalities occurred by them on arterial roads respectively.

Conclusions Findings can be used to understand the correlation between built environment and pedestrian safety, to prioritise the high-density zones for intervention efforts, and to formulate research hypotheses for investigating pedestrian crashes.

12 USING GIS TO ASSESS PEDESTRIAN SAFETY IN DELHI

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Background Walking is the most sustainable and most used mode of transportation in Indian cities. From 2006–2009, an estimated 8503 fatalities due to accident occurred in Delhi in which pedestrians contribute almost 51% to the total road crash fatalities. Pedestrian high crash locations have to be identified to implement problem specific pedestrian safety countermeasures so as to improve pedestrian safety.

Objective The main objective of this work was to investigate the potential of utilising geographic information systems (GISs) in identifying hazardous pedestrian accident-prone locations.