

US pedestrian wheelchair users third more likely to die in car crashes than general public

And men's risk is five times higher than women's, particularly among 50 to 64 year olds

Pedestrian wheelchair users in the US are a third more likely to be killed in road traffic collisions than the general public, finds research published in the online journal **BMJ Open**.

And men's risk is five times higher than women's, the findings show.

Every year nearly 5000 pedestrians are killed and another 76,000 injured in road traffic collisions on public roads in the US.

But it is not known what the risk of death is among pedestrian wheelchair users, and whether this is higher than that of the general population who don't use wheelchairs.

The researchers therefore used a technique that mines the overlap between two independent but incomplete data sources (capture-recapture) to estimate the total number of pedestrian deaths caused by car crashes between 2006 and 2012.

These were national news stories on car crash fatalities published on the LexisNexis US newspaper database; and the National Highway Traffic Safety Administration's Fatality Analysis Reporting System (FARS), which is based on police reports of road traffic collisions on US roads.

Based on these data, the researchers calculated that approximately 528 pedestrians using wheelchairs were killed in road traffic collisions in the US between 2006 and 2012. This equates to a risk of death for a pedestrian wheelchair user that is more than a third higher than for American pedestrians in general.

Furthermore, the risk of a car crash death was over five times higher for men in wheelchairs than for women, particularly among men aged 50 to 64, the analysis showed.

The figures are likely to be an underestimate of the true number of deaths because mobility devices were not always differentiated from recreational scooters and mopeds in news stories.

Around half (47.5%) of the fatal crashes occurred at intersections, and in almost four out of 10 (39%) of these cases, traffic flow was not controlled.

Many fatal crashes occurred at locations with inadequate pedestrian facilities. For example, crosswalks were unavailable at the site in one in five fatal crashes.

The police reports also indicated that drivers frequently failed to give way to wheelchair users, and that the wheelchair user was not sufficiently visible in 15% of the incidents.

it is important—and often required by the Americans with Disabilities Act—that there should be well-designed curb cuts, ramps, and sidewalks to enable people who use wheelchairs to safely traverse roads, say the researchers.

“[Our] findings underscore the need for policy-makers and planners to fully incorporate disability accommodations into pedestrian infrastructure and for persons who use wheelchairs—and others with disabilities—to remain a salient population when road safety interventions are designed,” they write.