Road danger reduction – and why it is needed

Part A of Volume 7 of this journal was a special issue on road danger reduction. In their editorial, Hine and Tight (2017) explained that road danger reduction aims to develop a street environment that enables people to travel by any mode without the risks currently imposed by motor vehicles in too many places. Although the Global Burden of Disease Estimates of 2010 are considered an overestimate of road travel deaths (Bhalla and Harrison, 2015), there is no doubt that road travel casualties are a major cause of death and disability worldwide (Davies, 2015).

This volume continues this subject, with a themed section on road danger reduction. Among the five papers published here, the *Editor's Choice* is a short report of the large improvement in road travel casualties seen in Serbia following implementation of road safety legislation (Vranes et al, 2018). The situation in Serbia was similar to many countries around the world, with road travel fatalities more frequent in men, in young adults, and in car occupants and pedestrians.

MacLeod and colleagues (2018) showed that although features of the built environment, particularly a Complete Streets approach, can reduce road danger, but personal factors, particularly alcohol ingestion, remain important regardless of the street features. Thomas and Jones (2018) found that more than two-fifths of pedestrian fatalities in Georgia (USA) had significant blood alcohol levels and one-third tested positive for legal or illegal drugs.

It is significant, then, that elsewhere in this volume we publish two papers reporting on methodological tools to assess these various factors. Götschi et al (2018) report on new technology that can combine objective measures of road danger with subjective perceived safety when assessing infrastructure for cyclists. This could be complemented by the Bicycle Rider Behavior Questionnaire (BRBQ) (Hezvadi et al, 2018).

Numbers of incidents or people are important when planning services, whether for healthcare, emergency vehicles, or managing queues at supermarkets. However, comparisons require rates not numbers, as has been reviewed recently by Vanparijs and colleagues (2015). We have rejected a number of manuscripts because although the authors provided interesting information about the numerators, the lack of denominators made their results unreliable, at best.

Similarly, confounding by age and sex are so important that comparisons of rates usually need to be stratified by sex and be age-specific or age-standardised. This is demonstrated by two of the general papers in this volume. Feleke et al (2018) provide road travel fatality rates by age, sex, deprivation and travel mode, showing that fatality rates vary more by the demographic factors than by travel mode. When pedestrian falls in the street are included, as has been advocated (e.g. Methorst et al, 2017), fatality rates for cycling and walking are similar. Meanwhile, Scholes et al (2018) have calculated the number of other road users killed in collisions with cars and/or cycles, by the age and sex of the person in charge of a vehicle. Readers will not be surprised to learn that more people (pedestrians, cyclists, and car occupants) are killed when in collision with a car or van than with a pedal cycle but quantifying these 'third party' deaths is important to provide an overall assessment of risk by travel mode.

Conflict of interest

JM is the co-author of two papers published in this volume. As is our standard practice, the manuscripts were handled in the normal way but she was not involved at all in any decisions.

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