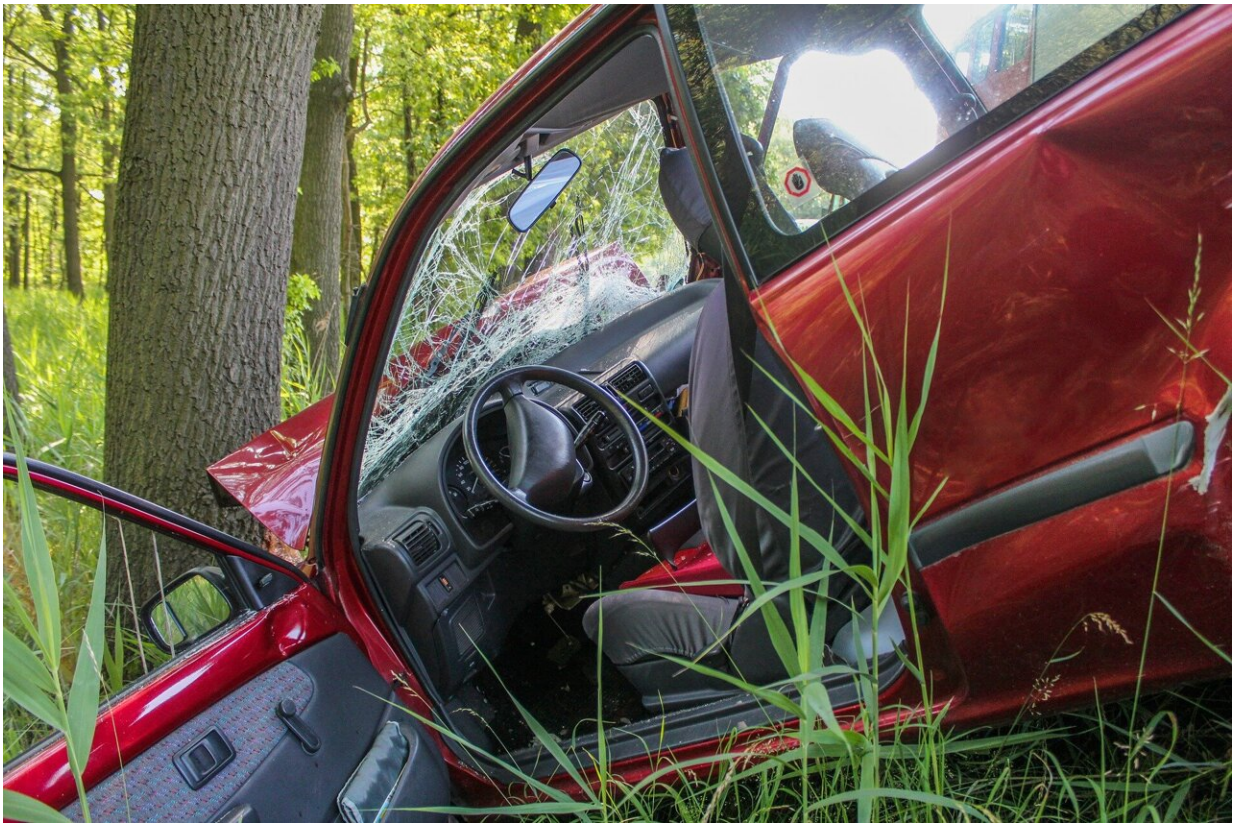


Study finds hospital data more detailed than police records of crash site data collection

February 14 2024



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A new study into the police and hospital data recorded after major road accidents has provided key insights into better management of traffic safety and public health strategies—particularly for the most vulnerable

road users.

Injury Studies researchers at Flinders University, with researchers from Queensland University of Technology and University of Adelaide, analyzed the road safety studies of police crash data compared to often more-detailed hospital reporting from traffic [injury](#) data collected worldwide in 25 English speaking countries between 1994 and 2023.

The article, "Police and hospital data linkage for traffic injury surveillance: A [systematic review](#)," has been [published](#) in *Accident Analysis & Prevention*.

"Focusing on improving the accuracy and completeness of injury data, we did find persistent biases, underreporting and lack of consistency in police-reported data, which highlights the critical need to combine multiple sources in future policy-setting around the world," says Flinders Health and Medical Research Institute researcher Dr. Ali Soltani.

"Our analysis highlights the superior role of hospital data over police records, particularly in identifying marginalized and vulnerable road users. The study not only identifies challenges but also proposes collaborative solutions involving legislators and public health specialists to formulate sophisticated linking plans. These plans aim to reduce traffic injuries worldwide by navigating hurdles such as linking rates, geographical variations, and harmonizing [law enforcement](#) and health care data gathering procedures."

To achieve these goals, researchers recommend the standardization of injury severity categorization and data—including the adoption of standardized coding systems, such as ICD, for more accurate comparative evaluations.

Diverse challenges in the field include variations in data sources and

techniques as well as the rising trend of merging primary data sources.

In the global systematic review, the FHMRI Injury Studies and fellow researchers also looked into rural road safety concerns, noting that an improved policy road map would lead to the development of more focused measures that could significantly lower the number of road fatalities and injuries.

In Australia, about one-third of hospitalized injuries from road crashes occur in regional and [remote areas](#) where the rate of road crash deaths is 9.6 per 100,000 people, compared to 2.2 per 100,000 in major cities. The average road fatality rate per 100,000 people in 2022, at 4.54, ranked Australia 18th out of 31 OECD countries.

Vulnerable road users include pedestrians, cyclists, motorcycle riders, children under 7 years old, the elderly and users of mobility devices. The National Road Safety Strategy aims to reduce the annual deaths by at least 50% by 2030. The Australian Institute of Health and Welfare reported 240 hospitalizations per 100,000 population of transport-related injuries in 2021–22, with males and [young people](#) particularly at risk, and fractures the most common type of injury sustained in hospital cases.

"The potential impact of this research on global road safety initiatives is undeniable as these measures would potentially improve the prospect of safer roads," concludes Dr. Soltani. "Improving the accuracy and completeness of injury data is the main goal of data linkage studies in the field of road traffic injury research."

More information: Ali Soltani et al, Police and hospital data linkage for traffic injury surveillance: A systematic review, *Accident Analysis & Prevention* (2024). [DOI: 10.1016/j.aap.2023.107426](https://doi.org/10.1016/j.aap.2023.107426)

Provided by Flinders University

Citation: Study finds hospital data more detailed than police records of crash site data collection (2024, February 14) retrieved 10 September 2024 from <https://medicalxpress.com/news/2024-02-hospital-police-site.html>

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