



# Trauma registries: towards global standardisation and outcome evaluation

Roderick Marijn Houwert<sup>1</sup> · Zsolt Janos Balogh<sup>2,3,4</sup> · Rolf Lefering<sup>5</sup>

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Trauma registries comprise demographic, clinical and outcome data on injured patients above certain injury severity threshold. While they tend to feed into a larger (national) pool, they can be also relatively independent hospital, regional or state level initiations with various inclusion and exclusion criteria and content (number and details of data-points collected). Regardless of the possible variation in the mentioned aspects, trauma registries have been established in several countries around the world, with similar aims: to better understand the causes, patterns, and outcomes of traumatic injuries. Structured and granular reporting about the present care and trends of trauma patients can influence preventive efforts, treatment strategies, and resource allocation from prehospital care to rehabilitation. Healthcare professionals, hospital administrators, scientific societies, healthcare policy makers and ultimately, the injured patient will benefit from regular reassessment of the data provided by the trauma registry.

In this issue, four national trauma registries are described in separate papers following a pre-defined template [1–4]. The result of these papers is a global overview of the

different trauma registries, their similarities and differences, their obstacles and possibilities and their future prospects. Furthermore, some examples were given about scientific results from registry data. These papers should be an encouragement for future global collaboration on trauma registry research. Some aspects of a national trauma system could not be evaluated within an existing system, for example, the potential benefit of a physician at scene. Global standardisation is mandatory where the Utstein Trauma Template might be used as a solid basis which needs to be updated on the new global trends and ambitions to enable up to date cross-border comparisons [5].

Trauma registries can improve care for injured patients in several ways which is illustrated in this special issue with three studies from the German TraumaRegister DGU (TR-DGU). Firstly, trauma registries can provide healthcare professionals with valuable data on the causes, patterns, and outcomes of traumatic injuries. In this issue, changes in injury patterns, injury severity and hospital mortality in motorized vehicle crashes are described through 19,225 cases derived from TR-DGU [6]. Secondly, trauma registries can inform about decisions related to the management of traumatic injuries. Within this domain, early total care or damage control orthopaedics for major fractures are compared using data from TR-DGU [7]. Finally, trauma registries can help to monitor and improve the quality of care provided to injured patients [8]. By tracking patient outcomes and comparing them to established benchmarks, healthcare professionals can identify areas where improvements can be made and implement changes to improve patient care. This correlates with the recommendation of the researchers from all four described trauma registries: increase the focus on outcome studies of trauma patients with specific focus on the quality of life.

National trauma registries are a valuable tool for monitoring and improving patient outcomes and while they are not primarily a research tool, they are excellent for hypothesis generation and power calculation for interventional studies.

✉ Roderick Marijn Houwert  
R.M.Houwert@umcutrecht.nl

Zsolt Janos Balogh  
Zsolt.Balogh@health.nsw.gov.au

Rolf Lefering  
Rolf.Lefering@uni-wh.de

<sup>1</sup> Department of Traumasurgery, University Medical Center Utrecht, Utrecht, The Netherlands

<sup>2</sup> Department of Traumatology, John Hunter Hospital, Newcastle, NSW, Australia

<sup>3</sup> Discipline of Surgery, School of Medicine and Public Health, University of Newcastle, Newcastle, NSW, Australia

<sup>4</sup> Injury and Trauma Research Program, Hunter Medical Research Institute, Newcastle, NSW, Australia

<sup>5</sup> Faculty of Health, IFOM-Institute for Research in Operative Medicine, University Witten/Herdecke, Cologne, Germany

Additionally, by enabling researchers to identify new trends and patterns in injury occurrence and severity, as well as the effectiveness of different treatment and management strategies, national trauma registries play a critical role in advancing the field of trauma care and improving patient outcomes. Without questioning the need for tailoring registries for the local priorities and specifics, it would be essential to have minimum comparable dataset collected across countries and continents in their registries for benchmarking, stimulating peer-comparison and global trauma care improvement.

## Declarations

**Conflict of interest** The author(s) declare no competing interests.

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