

Getting serious about road casualties. But how serious is serious?

David Davies, Executive Director, PACTS. November 2022



More and more countries and road safety authorities are adopting zero deaths or serious injuries as their vision. But how should this be defined? There is an international convention for fatalities – deaths recorded within 30 days of the collision. But for serious injuries, it is more complicated.¹

Like most countries, the UK uses three injury severity categories: fatal, serious and slight.² The “serious” category ranges from people who die more than 30 days after the collision to those who suffer only a minor fracture.

PACTS has recently adopted the vision of *A transport system free from death and life-changing injury, in which all users feel safe.*³ We believe this is the right vision, but it is even harder to define. “Life-changing” is not synonymous with “serious”. While some serious injuries are life-changing, others thankfully are not. Life-changing depends not only on the severity of the injury but also on the victim. An elderly pedestrian falling on the footway might suffer a broken hip, which may lead to fatal complications. To muddy the water further, footway falls are not counted within road casualty statistics.⁴ In another scenario, a child might be deterred from cycling by even a slight injury if the collision scared them badly.⁵



The EU set its target of reducing serious injuries by 50% from 2020 to 2030. It adopted MAIS3+ (a medical injury severity scale)⁶ as the benchmark. In 2011, there were around 5,000 MAIS3+ road traffic casualties in the UK. (The figures are based on hospital data from hospitals in England and then scaled up to cover Scotland, Wales and Northern Ireland using the police-recorded casualty data.)⁷ The severity distribution was different for different road user groups. In 2020 in England, it was estimated that 18% of hospital admissions for road traffic collisions were MAIS3+.⁸

The last report by the Department for Transport to the EU showed 5,349 MAIS3+ serious casualties compared with 22,069 Stats19 serious casualties (adjusted) in 2020 in Great Britain. This suggests

¹ [Road Safety thematic report Serious injuries final.pdf \(europa.eu\)](#)

² [Reported road casualties Great Britain, annual report: 2021 - GOV.UK](#)

³ [PACTS, Achieving-Our-Vision, 2022](#)

⁴ The walking charity Living Streets is undertaking work to address this deficit. Any data would sit outside Stats19 reported road casualty statistics.

⁵ See [E Heptinstall, Healing the hidden hurt: the emotional effects of children's accidents, Child Accident Prevention Trust, 1996](#)

⁶ Maximum Abbreviated Injury Score. See [Abbreviated Injury Scale - Wikipedia](#)

⁷ [DfT, Estimating clinically seriously injured \(MAIS3+\) road casualties in the UK, 2015](#)

⁸ [DfT, Other sources of information on road casualties - GOV.UK, 2021](#)

that around a quarter of the casualties recorded as serious in Reported Road Casualties Great Britain are serious under the MAIS3+ definition.

The majority of GB police forces now use injury-based reporting systems to record road collisions and casualties. These forces use CRASH except for the Metropolitan Police Service which has its own system (COPA). The recent review recommended that all police forces move to an injury-based reporting system with the simple fatal, serious and slight options removed.⁹

In CRASH and COPA, injuries are recorded on a 21-point scale.¹⁰ There are 13 categories which constitute a serious injury, of which 5 are classed as Very Serious. In 2021 these Very Serious accounted for 3.3% of all recorded casualties within forces using CRASH. This represents 16% of all seriously injured casualties within these forces.

The move to this system has resulted in a substantial increase in the number of casualties recorded as serious, which previously would have been recorded as slight. As around three times more slight casualties are recorded than serious, it takes only a small percentage of slight casualties to be re-classified for the number of serious to increase substantially. The total number of casualties (all severities) is unaltered.

Those police forces using injury-based reporting systems (currently 26, plus the MPS and growing all the time) should be able to analyse more accurately casualty severity. This might enable the road safety authorities to target locations or situations where the most severe injuries are occurring.

A less technical but more human metric is the impact on the lives of the casualties and their families. Based on police experience, Brake estimates that for every family affected by the death on the road of one of their own, there are another 1.3 families who have to deal with catastrophic injury and need long term support. This amounts to a total of around 4,000 families a year.

The DfT estimates the average value of prevention of a serious road casualty in 2021 was £237,614 with a total value of £5,559 million. Once emergency services, insurance and property damage costs are added it amounts to £5,755 million.¹¹ For motor insurers, claims involving very serious injuries tend to be the costliest, higher than those involving fatalities. Young drivers are the highest risk and third-party awards for long-term care can be many millions.^{12 13}

There is no simple answer to the question “How serious is serious?” There are a number of definitions of serious injury. They have different origins and serve different purposes. It seems worthwhile to try to understand them better, their advantages and disadvantages, how they compare and how they can be best used in injury prevention, trauma care and other fields. The more granular injury-based reporting systems offer new possibilities. So too does the Department for Transport’s work to link Stats19 and TARN¹⁴ records.

It is clear that the burden and cost of the most severe injuries is very high – for individuals, society and the economy. This argues for more resources to be directed at reducing these in a manner commensurate with those where a person loses their life.

⁹ [DfT, STATS19 review 2018 - final report, 2021](#) p15

¹⁰ [Reported road casualties Great Britain: Injury severity within injury-based reporting systems 2021 - GOV.UK](#)

¹¹ DfT, [RAS4001: Average and total value of prevention of collisions, 2022](#)

¹² [Starling, N, Motor Insurance Premiums for Young Drivers in the UK and Europe, RAC Foundation, 2017](#)

¹³ [abi-guide-to-improving-the-safety-of-young-drivers.pdf](#)

¹⁴ Trauma Audit Research Network. [TARN - Home](#)

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