



RSA

Serious injuries in Ireland using hospital and An Garda Síochána data

Period 2014-2022

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Background



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- This report provides an overview of serious injuries over 2014-2022.
- The EC has requested all EU Member States to report on serious injuries using hospital data, to complement police data on serious injuries. It is internationally acknowledged that police data alone will understate the number of serious injuries from road traffic collisions; therefore it is important that both sources of data are reported in Ireland to provide a holistic picture of the serious injury problem.
- For the preparation of this report, two sources of data were used:
 - **Hospital records** from the **Hospital In-Patient Enquiry (HIPE) database**, and
 - **Collision records** from the **Irish Road Traffic Collision database**, transferred from An Garda Síochána (AGS) to the RSA.
- The HIPE database is managed by the HSE and includes demographic and clinical information on casualties admitted to acute hospitals in Ireland.
- AGS information is provisional and subject to change. This means that AGS serious injury numbers presented here may change at a later date when new information becomes available.
- Details on the **methodology** that we use to report on serious injuries from hospital data can be found in a separate report: "*Serious injuries data in Ireland. Methodology report*"*.

*The methodology report can be found at https://www.rsa.ie/docs/default-source/road-safety/serious-injuries-using-hospital-data/methodological-report-fv-27.03.24.pdf?sfvrsn=11fae6b_4



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Definitions of injury

Hospital data

- We follow a medical definition of a serious injury, based on an international validated injury severity scoring scale, the **Abbreviated Injury Scale (AIS)***.
- The AIS scale allows to assign an injury severity score between 1 (minor) to 6 (critical) to each hospitalised casualty.
- A casualty may have one or more injuries recorded in their hospital chart. We first assign an AIS score to each injury, and then determine the maximum AIS score assigned to each casualty.
- **Seriously injured casualties are those with at least one injury with a maximum AIS score of 3 or more (MAIS3+).**
- Casualties with a maximum AIS score of 2 or less (**MAIS2-**) are defined as having injuries of minor-to-moderate severity.
- We add the number of casualties having MAIS3+ and MAIS2- scores to obtain the total number of **hospitalised casualties**.
- Please see “*Serious injuries data in Ireland. Methodology report*” for more details on the definitions of injury.

*Association for the Advancement of Automotive Medicine (2016). Abbreviated Injury Scale (c) 2005 Update 2008. (T. Gennarelli, & e. Woodzin, Eds.) Chicago, Illinois.





Definitions of injury

An Garda Síochána data

- The definition of a serious injury followed by AGS is as follows:
 - A serious injury is an injury for which the person is **detained in hospital as an ‘in-patient’**, or has any of the following injuries **whether or not detained in hospital**: fractures, concussions, internal injuries, crushing, severe cuts and lacerations, or severe general shock requiring medical treatment.
 - All hospitalised casualties fall into the AGS definition of a serious injury, as they are all ‘in-patients’.
 - Please see “*Serious injuries data in Ireland. Methodology report*” for more details.

Report Outline

 Hospitalised casualties and AGS serious injuries (2014-2022)

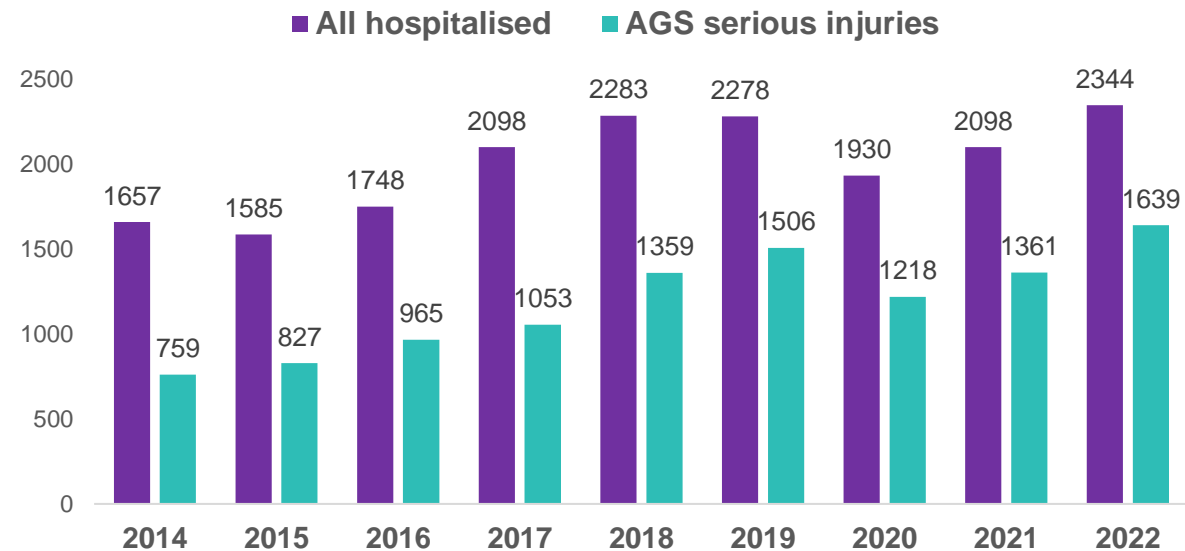
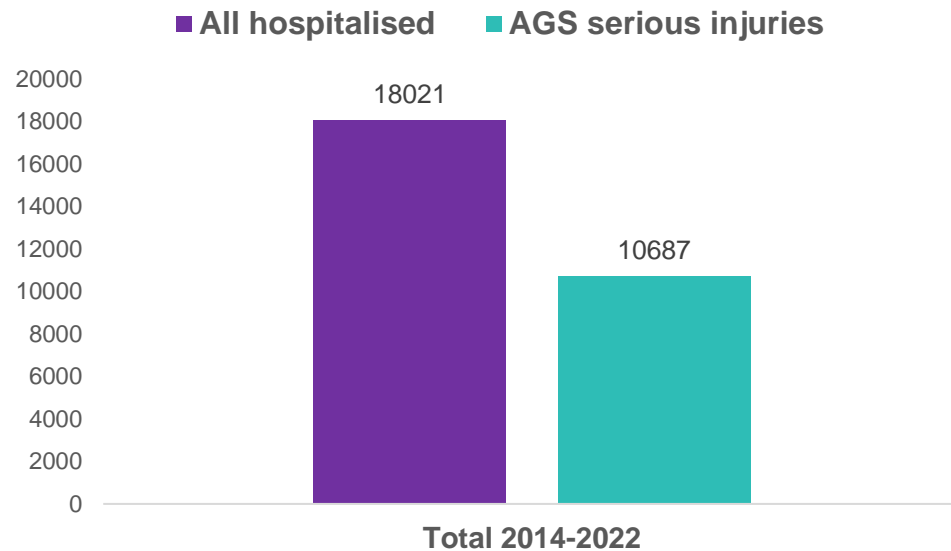
 Hospitalised casualties and AGS serious injuries by road user type (2014-2022)



Total and trend

All hospitalised and AGS serious injuries – 2014-2022

- Over 2014-2022, a total of 18,021 casualties were hospitalised with injuries from road traffic collisions. Over the same period, AGS recorded 10,687 serious injuries.
- The absolute number of hospitalised casualties and AGS serious injuries increased up to 2019, declined during 2020, and continued to increase in 2022.
- The number of hospitalised casualties and AGS serious injuries recorded in 2022 was the highest of the period.



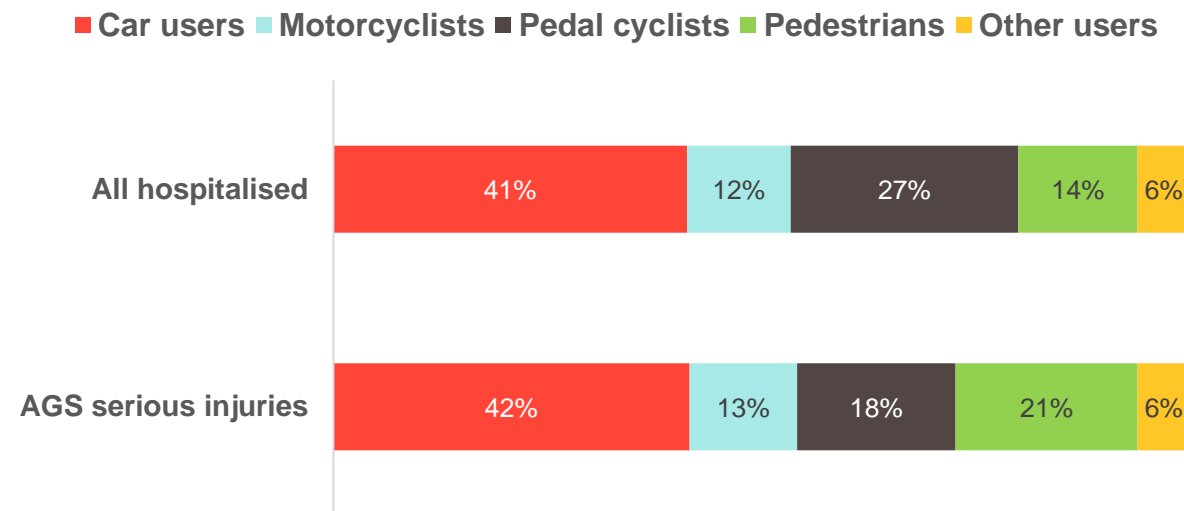
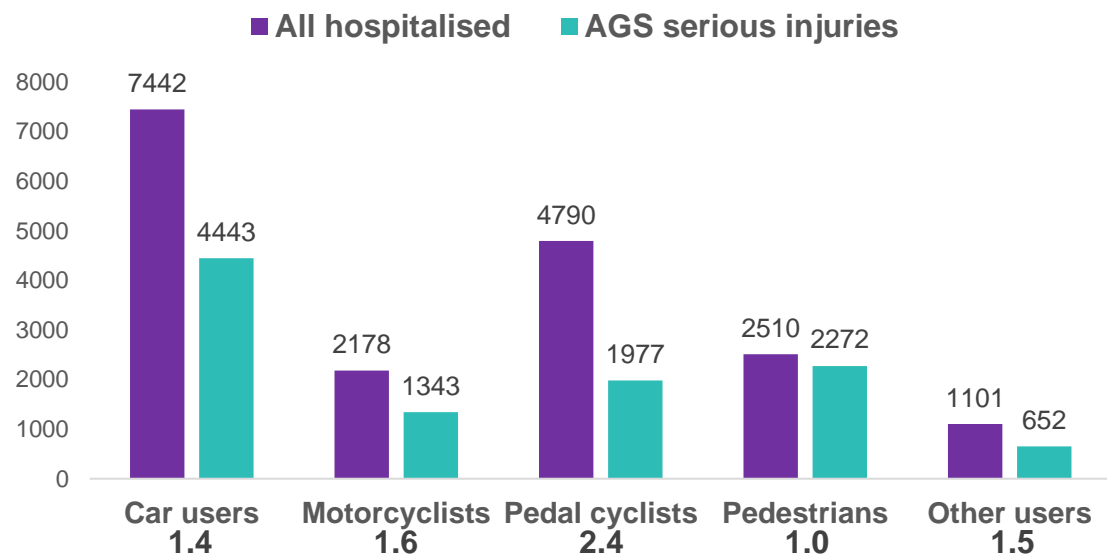
AGS data is current as of 7 April 2024. Data for 2020 onwards is provisional and subject to change.



Total by road user type

All hospitalised and AGS serious injuries – 2014-2022

- The discrepancy between the number of hospitalised casualties and AGS serious injuries recorded over 2014-2022 was observed for each road user type separately.
- The highest discrepancy between the data sources was observed for pedal cyclists: there were between 2 and 3 hospitalised cyclists for each cyclists recorded by AGS as seriously injured.
- Cyclists accounted for 27% of hospitalised casualties and 18% of AGS serious injuries.



AGS data is current as of 7 April 2024. Data for 2020 onwards is provisional and subject to change.

Serious injuries in hospital and AGS records

2014-2022



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A future series of reports will describe the characteristics of serious injuries as recorded in hospital and AGS data for each road user type separately.

The first report of this series focuses on cyclists, and has been published at [RSA.ie](https://www.rsa.ie)*

Acknowledgements

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- RSA Research Department.

*The cyclist report can be found at https://www.rsa.ie/docs/default-source/road-safety/serious-injuries-using-hospital-data/cyclists-report-on-serious-injuries_fv_27.03.24.pdf?sfvrsn=99d38f21_4



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