



Tour de Trauma

Cycling Injuries Presenting to an Irish Emergency Department



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Background

The Road Safety Authority (RSA) reported that 636 cyclists were injured on Irish roads in 2012. This was a 56% increase compared to 2011. This data represents any collision on a public road involving a cyclist that was reported to the police. The RSA does not include hospital statistics in its data collection.

The aim of this study is to describe the cycling related injuries presenting to the Emergency Department (ED) of a suburban university adult hospital.

Patients and Methods

This is a retrospective study of cycling injuries presenting to the ED of St. Vincent's University Hospital in 2014. This ED serves a catchment population of 300,000 and an annual census of approximately 55,000 over the age of 14. Subjects were identified by interrogating triage records for keywords including: bike, bicycle, cyclist and cycling. The medical notes were then screened to identify cycling related injuries.

Results

Demographics

534 cycling related injuries were identified which represented 1.0% of all attendances for 2014. The mean age was 36.6 years (SD 14.3). 389 cyclists (71.2%) were male. The highest number of presentations was in September (62, 13.5%) as shown in Figure 1.

There were various mechanisms of injury as shown in Figure 2. Fall unspecified refers to the documentation of the mechanism as a fall from bike without further details.

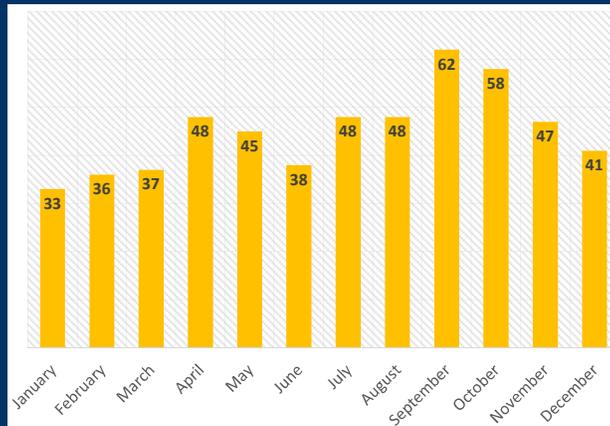


Figure 1: Distribution of attendances

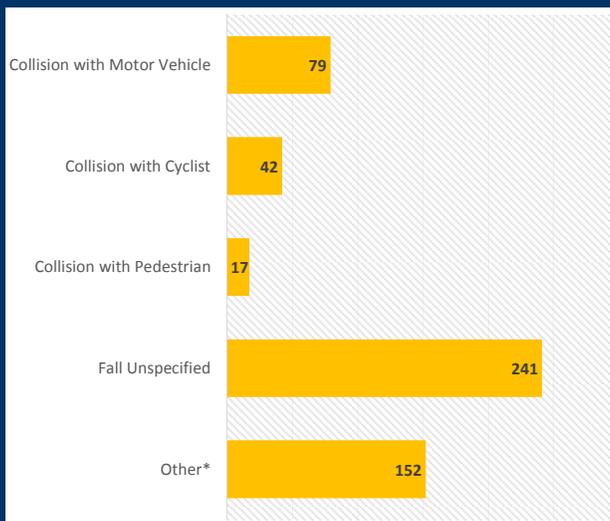


Figure 2: Mechanism of injury

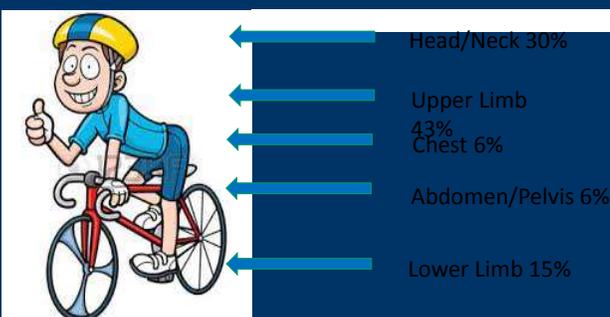


Figure 3: Pattern of injuries sustained

Injuries

162 patients (30.2%) sustained a fracture, with the upper limb (n=119) most frequently affected.

83 patients (15.5%) had a head injury with 4 had an intracranial haemorrhage (ICH). There were 2 fatalities in this study due to ICH and basal skull fractures. 5 patients had an ISS >15. The pattern of injuries is shown in Figure 3.

Outcomes

The mean length of stay (LOS) for patients in the ED was 4.3 hours (SD 3.9). 40 patients (7.5%) were admitted to hospital, with 6 admitted to the Intensive Care Unit (ICU). The mean LOS for admitted patients was 4.6 (SD 4.9) days, with a mean ICU LOS of 5.0 (SD 5.7) days. 29 patients (5.4%) had surgery. 16 patients (3%) were admitted to the Clinical Decision Unit (ED short-stay unit). 143 patients (26.8%) required outpatient follow up.

Discussion

In 2012 the RSA identified 636 injuries for all of Ireland. We identified 534 injuries in one Dublin hospital in 2014 which suggests there is under-reporting of cycling injuries. 14.8% of cycling collisions in this study involved a motor vehicle, while in 2012 83% of the cycling collisions identified by the RSA involved a motor vehicle.

Cycling injuries have a significant impact on Irish EDs and hospitals. EDs may provide a vector for guiding injury prevention strategies for what is an increasingly popular means of transport and leisure activity in Ireland.