Reviewer’s report

Title: The injury epidemiology of cyclists based on a road trauma registry

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Reviewer: Thomas Goetschi

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Review of The injury epidemiology of cyclists based on a road trauma registry

This article presents a thoroughly conducted analysis of a trauma registry. Since studies and evaluations of cyclists are rare, and due to a steady increase in cycling, are becoming more relevant, this manuscript makes an important contribution.

The presented analysis also appears to reflect state of the art and is methodologically sound, within the limitations of the available data.

Current injury data on cycling are generally limited by two main factors, namely the completeness of trauma registries and/or accident reporting, and by a lack of exposure data.

This study benefits from a large and high quality trauma registry, which allows for interesting analysis, such as the use of proxies for different types of cycling, and the distinction of age groups.

The study is, however, limited in its value by the lack of exposure data, just like (almost) any other study in this field. As such, a number of comparisons are meaningless as indicators of injury risks, because they may in fact reflect differences in exposure (e.g. higher injury rates in summer represent higher levels of cycling, not more dangerous conditions).

The authors are therefore advised to:

- (Discretionary) Thoroughly search the literature for studies on injury risks which overcome the lack of exposure data (E.g. Lusk et al. Risk of injury for bicycling on cycle tracks versus in the street), and discuss the fact that the lack of exposure data is a common and unresolved issue in this field, and how it could be overcome for this type of study.

- (Compulsory) Exploit the available exposure data, i.e. the French travel survey to a maximum. In particular it would be interesting to know whether the observed reduction in injuries over time is a pure reflection of safety improvements (speed cameras, as the authors suggest), or whether there was also a declining trend in cycling over that period of time.

- (Compulsory) Complete the section on strengths and weaknesses by including a paragraph which discusses the issue of lack of exposure data. In particular, this should conclude that many comparisons, in particular those that could inform policy to improve safety, cannot be conducted soundly in light of missing exposure data.
- (Discretionary) Include some conclusions that go beyond just the descriptive injury patterns, but suggest what the study could mean for transport policy (ie. speed limits and other measures affecting traffic speed), as well as investments in further data collection, and exposure data in particular.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

No conflict of interest other than a profound interest in cycling exposure data.