

## **COSTS FOR SOCIETY RELATED TO MAJOR BICYCLE ACCIDENTS IN FLANDERS (BELGIUM)**

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### **ABSTRACT**

**INTRODUCTION:** Utilitarian cycling is recognized as an excellent way of being physically active on a regular basis and maintaining good health [1]. Unfortunately, some cyclists will be involved in accidents, will need medical care and may incur temporal or permanent physical injuries, which will induce costs to the cyclist and society. Aertsens [2] estimated that, in Belgium, the average total cost of minor bicycle accidents at 841 euro (95% CI: 579-1205) per accident or 0.125 euro per kilometre cycled. The aim of this study is to provide more insight into the resulting costs of major bicycle accidents in Flanders (Belgium).

**METHODS:** Data were collected in a retrospective study design. In 2008, 2364 bicycle accidents in Flanders were registered by the National Trust for Accidents (FAO). From those 2364 invited participants, 289 returned the questionnaire and 26 were classified as a major accident (hospitalised > 24 hours) and used for data analysis. Direct costs, including material damage and medical costs, as well as indirect costs including productivity loss, intangible costs and Willingness To Pay (WTP) are calculated. For calculating of costs a differentiation was made between a recovery phase and a permanent disability phase.

**RESULTS:** Nine respondents fully recovered and 17 had permanent damage. The average cost excluding WTP (€2011) per respondent (N=26) is €60776±69433, €35190±39317 for those who fully recovered and €74322±78718 for those who had permanent damage. When including WTP, the amount increases with +54% for the total group, +91% for those who fully recovered and +45% for those who had permanent damage.

**DISCUSSION:** Using a fixed percentage of the value of safety per se of a fatal accident (13% of VSL for severe injuries), as proposed by e.a. Ricardo-AEA [3] and without making a distinction between transport modes is questionable.

**CONCLUSION:** Total annual bicycle injury costs are huge, but these costs must be balanced against the benefits of bicycling, related to health and environment.

**Keywords:** utilitarian cycling, major bicycle accidents, economic costs.

### **REFERENCES**

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