

PREDIT 3 – G03 - Nouvelles connaissances pour la sécurité

Projet de recherche n°70 *"Redéfinition des victimes de la route"*

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In France, up until 2005, the only available indicator for injury severity in the official statistics was “the threshold of 6 or more days in hospital”, because the medical data coded under the ICD-WHO¹ classification is not systemized.

It is true that the length of hospitalisation is recognised as a good indicator of the cost of road traffic crashes and of the related public health issues. The length of hospitalisation duration is both a selection criterion and a severity indicator commonly used in official road accident statistics on an international level.

In consideration of increased European harmonisation, firstly the main indicators and then the data collection, it is necessary to re-examine the pertinence of the criterion severely injured² used in the French road safety statistics and to consider changing it so that it is more coherent with European practice. For example, this could be a victim “hospitalised for more than 24 hours” or one of its variants.

Methodology

In this study we have used a variety of information sources:

- The international practice by looking at international databases (CARE, IRTAD,...) which we tackle in the review of international experiences
- The data from the national road accidents statistical file, the BAAC
- The lessons learnt from the Rhône road trauma registry and from the research done on injury classification and severity indicators, which we will touch on below

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¹ ICD : International Statistical Classification of Diseases and Related Health Problems, carried out under the authority of the WHO, 10th revision, ed 2003.

² In the BAAC, a victim is said to be seriously injured if his state justifies a hospital stay of 6 or more days.

The creation of the Rhône road trauma registry has made it possible to record in detail all casualties from road crashes in the Rhône county who seek medical attention in its health facilities and their different injury tables. This registry has also made it possible to follow up the victim during their stay in the different hospital services and to know about their clinical evolution.

During the course of this research project the Ministry adopted from the 1st of January 2005 the criteria "hospitalised for more than 24 hours". This led to a reorientation of the study towards the analysis of this indicator. On one hand it was compared to the former seriously injured criterion and on the other hand compared to the injury severity criteria used in trauma.

This evaluation was carried out in one part of France, the Rhône county where, thanks to the data available in the Registry, we have injury tables for all those injured in a road crash in the Rhône.

Results

The analysis of the Registry data shows that on average in the Rhone county:

- the relationship between the victims hospitalised for more than 24 hours and the number of killed at 30 days is in the order of 9.60 [7.85; 11.35], close to the average ratio obtained by the OECD.
- The relationship between the new criterion "hospitalised for more than 24 hours" and the former "hospitalised or more than 6 days" is in the order of 2.22 [2.02 – 2.42]

As for injury severity criteria (AIS) used in trauma, a hospitalisation of more than 24 hours roughly corresponds to an Injury Severity Score of 9 or more (the injured person having suffered moderate to serious lesions) whereas the precedent criterion corresponded mainly to the victims having an ISS of 16 or above.

Perspectives

In reality there are several variations of the notion of hospitalisation according to the type of medical service: out patient, short-stay hospitalisation. It is also important to distinguish between a hospitalisation for observation or for treatment.

The indicator "hospitalisation for more than 24 hours" was proposed in order to eliminate the short stay hospitalisations for things which aren't directly linked to the seriousness of the injury and the treatment needed. For example, for simple observation (children suffering from a head trauma without loss of consciousness, elderly people, ...) or to be prudent (trauma victim under the influence of alcohol or drugs illicit or not).

On the practical level, it remains to be seen how this new criterion will be collected, once this variable has been well incorporated in the BAAC.