

Qualifying information on the deaths and serious injuries caused by road traffic in five Brazilian capitals using record linkage

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Introduction

Road traffic crashes (RTCs) represent an public health problem, accounting for 1.2 million deaths per year. However, these figures may be even greater if health databases are linked to police records.

underestimated in the absence of integration of databases that record

Objectives and Approach

Measure the numbers of deaths and seriously injured victims and to estimate the percentage of corrections of the underlying cause of death, cause of hospitalization, and injury severity of the victims in five representative state capitals of the five macro-regions of Brazil. This was cross-sectional, study using the Hospital Information System, Mortality Information System and Police Road Traffic database. The ReLink III was used for the record linkage by identifying true pairs to calculate the correction percentage of the underlying cause of death, cause of hospitalization, and injury severity of the victims in the traffic records.

Results

Change in the diagnosis of hospitalization in the Hospital Information System with percentage of correction of the cause at 24.4% for Belo Horizonte, 96.9% for Campo Grande, 100.0% for Palmas, and 33.2% for Teresina. The correction of the underlying cause of death in the Mortality Information System were 29.9%, 11.9%, 4.2%, and 33.5% for Belo Horizonte, Campo Grande, Curitiba, and Teresina, respectively. Change in the classification of injury severity was observed with an overall percentage of 100.0% for Belo Horizonte and Teresina, 48.0% for Campo Grande, and 51.4% for Palmas.

Conclusion/Implications

The results showed the importance of the record linkage between health and police databases for the qualification of the RTCs and the victims in the five capital cities studied. This implies that deaths and serious injuries caused by RTCs are

