

## **ABSTRACT**

This study aimed to determine the economic burden and cost estimation of motorcycle road traffic injuries (RTI) from societal perspective in Kisumu and Kakamega Municipalities in Western Kenya. It was designed as a retrospective cross-sectional cost study of reported cases of motorcycle accidents, employing a micro-costing bottom-up approach. The study used Human Capital Approach (HCA) that tends to concentrate on the gross output of road accident victims. The costs were classified under three main parts, that is: victim casualty related injury cost; property damage costs; and administration costs.

This report presents the findings of an analysis of data collected in two steps: secondary and primary data collection. The secondary data involved the collection of data from the Kenya Traffic Police, official registered vehicles, official recorded accident cases which occurred in nine months between January and September 2012 in the two Municipalities, treated accident cases at hospitals. The primary data was collected from in-depth interviews and focus group discussions with motorcycle accident victims, service providers and key opinion leaders.

**Findings:** Only 16.9% of motorcycles riders were insured. Thirty three percent possessed valid licenses and 15% (10) of the motorcycle riders wore helmet at the time of the accident. Outcomes of motorcycle accidents are fatal. The majority fatalities occur in male riders within the productive age group of 18–29 years. The main injuries from these accidents were head injuries, fractures, lacerations and contusions. However head injuries and fractures form about 83% of the cases. This shows how serious these accidents could be.

A total of 15 (or 14 if adjusted) people died as a consequence of RTI during January and September 2012 (a mortality rate of 5.8% and 6.2% of total accidents for Kisumu and Kakamega respectively). About 34 and 38 (Kisumu and Kakamega respectively) were fatal, 75 and 61 (Kisumu and Kakamega

respectively) were serious injury and a total of 20 and 13 (Kisumu and Kakamega respectively) were slightly injured. A total of 4,158 and 3,531 Years of Potential Life Lost (YPLL) in Kisumu and Kakamega respectively due to premature death. All this translated in a total economic cost of USD **959,421** and **571,440** for Kisumu and Kakamega municipality respectively. This can be divided into 46% accident-related costs and 54% casualty-related costs for Kisumu municipality. Similarly, for Kakamega, about 34% were accident-related costs and 66.4% casualty-related costs. The average cost of road traffic injuries per injury patient was USD 7,268 and USD 4,969 for Kisumu and Kakamega respectively, using 2012 prices. From these results, the most significant cost component of the accident-related costs was property damage and administrative costs, whilst the main cost driver of the casualty-related costs was lost labour output and the intangible costs. To base decisions regarding road safety campaigns on savings of direct costs, particularly direct medical costs, is inadequate. Therefore, data on the complete cost of illness should be taken into account in the planning and creation of a road safety policy.

Finally, these results make evident the great problem that motorcycle RTI cause to Kenyan society as a whole, to the economy, health services and massive losses to individuals and families. With the high rate of motorcycle RTI in Western Kenya, there is a need to document the economic burden and cost estimation for the whole country. This economic cost estimations make it clear to gauge the monetary value of these losses in order to highlight the extent of damage incurred to society as a whole and the need to prevent RTI through a strategic and multisectoral approach. The socio-economic valuing of life and suffering in this report will help determine how much society is prepared to spend on policies to save life or reduce risk, morbidity and injury.