

Risk Mapping of Road Traffic Incidents in Greater Kampala Metropolitan Area for Planning of Emergency Medical Services

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Abstract : Road traffic incidents (RTIs) continue to be a serious public health and development burden around the globe. Compared to high-income countries (HICs), the low and middle-income countries (LMICs) bear the heaviest brunt of RTIs. Like other LMICs, Uganda, a country located in Eastern Africa, has been experiencing a worryingly high burden of RTIs and their associated impacts. Over the years, the highest number of all the total registered RTIs in Uganda has taken place in the Greater Kampala Metropolitan Area (GKMA). This places a tremendous demand on the few existing emergency medical services (EMS) to adequately respond to those affected. In this regard, the overall objective of the study was to risk map RTIs in the GKMA so as to help in the better planning of EMS for the victims of RTIs. Other objectives included: (i) identifying the factors affecting the exposure, vulnerability and EMS capacity for the victims of RTIs; (ii) identifying the RTI prone-areas and estimating their associated risk factors; (iii) identifying the weaknesses and capacities which affect the EMS systems for RTIs; and (iv) determining the strategies and priority actions that can help to improve the EMS response for RTI victims in the GKMA. To achieve these objectives, a mixed methodological approach was used in four phases for approximately 15 months. It employed a systematic review based on the preferred reporting items for systematic reviews and meta-data analysis guidelines; a Delphi panel technique; retrospective data analysis; and a cross-sectional method. With Uganda progressing forward as envisaged in its 'Vision 2040', the GKMA, which is the country's political and socioeconomic epicenter, is experiencing significant changes in terms of population growth, urbanization, infrastructure development, rapid motorization and other factors. Unless appropriate actions are taken, these changes are likely to worsen the already alarming rate of RTIs in Uganda, and in turn also to put pressure on the few existing EMS and facilities to render care for those affected. Therefore, road safety vis-à-vis injury prevention measures, which are needed to reduce the burden of RTIs, should be multifaceted in nature so that they closely correlate with the ongoing dynamics that contribute to RTIs, particularly in the GKMA and Uganda as a whole.

Keywords : emergency medical services, Kampala, risk mapping, road traffic incidents

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