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ROAD TRAFFIC INJURIES IN KENYA: A HOSPITAL-BASED SURVEILLANCE STUDY

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Background Road Traffic Injuries (RTIs) are a leading cause of disability and mortality worldwide with a disproportionate burden in Low-and Middle-Income Countries (LMICs). RTIs account for 3.6 percent of the global mortality burden [1]. Additionally, the risk of death from injuries in LMICs is six times more likely than in High Income Countries (HICs)[2]. RTIs are estimated to be the fifth leading cause of disability-adjusted life-years (DALYs) lost by 2030 worldwide[3]. Data defining the burden of injury, risk factors and outcomes of RTIs in LMICs are limited. Our study analyses RTIs seen in the casualty departments at four regional referral hospitals in Kenya.

Methods Electronic-based trauma registries were developed at four regional hospitals in Kenya: Kenyatta National, Thika, Meru and Machakos. Information on mechanism of injury, injury severity, patient outcomes, and patterns of care (pre-hospital and hospital-based) was collected prospectively between January 2014 to September 2015.

Results A total of 6429 patients were enrolled. Patients were predominantly male (78.5%), young (median age 27.6 years) and arrived mainly by car/taxi (49.4%), mini bus (18.9%) or an ambulance (16.2%). Injuries were common amongst pedestrians (40.8%) and passengers (36.7%). Seatbelts were used by 7.2% of passengers. Body regions most commonly injured were the extremities (54%) and head (22.7%). The overall mortality rate was 2.2%. Predictors of RTI deaths were moderate head injury [GCS 9–12] (OR 6.4, 95% CI: 4.0–10.1), severe head injury [GCS ≤ 8] (OR 71.5, 95% CI: 49.7–102.8), moderate ISS [ISS 9–15] (OR 3.6, 95% CI: 2.5–5.1) and severe ISS [ISS > 15] (OR 9.4, 95% CI: 5.7–15.2).

Conclusions RTIs contribute significantly to the burden of disease in Kenya. A renewed focus on addressing this burden through the development of a trauma care system is necessary. Trauma registries can be used as a plausible tool to identify priority areas for quality improvement and injury prevention.

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BICYCLE ACCIDENTS: A NEW TREND FOR HOSPITAL ADMISSIONS?

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Background Bicycle riding is an increasing trend in many countries, so accidents connected with cycling activities are also on the rise.

Data from the National Agency for Road Safety shows that in 2013 there were 1708 victims in accidents where a bicycle was involved, rising from 1405 in 2003.

While most accidents are not reported and do not require healthcare, more severe ones can be a cause for admission in Hospitals. Limb injuries are the most frequent, but chest/abdomen injuries and head injuries are also common.

Methods Data was collected from the Portuguese National Hospital Registry (GDH), where all admissions to hospitals in Portugal are registered and coded with ICD9 codes. We gathered data on all admissions, external cause admissions and admissions for ICD9 E826 code (Pedal cycle accident). We compared data between 2003 and 2013 from all hospitals in Portugal.

Results Between 2003 and 2013 there were a total 7170 admissions for bicycle related accidents (651 average each year).

In 2003 there were 652 admissions related to bicycling accidents, while in 2013 there were 725 (an 11% increase). Male patients account for 83,4% of those admissions in 2003 and 87,0% of those in 2013. When compared to the total external cause admissions, bicycle related admissions represent 0,57% in 2003 and 0,42% in 2013 (a 25,6% decrease). Comparison on proportions for total admissions also presents a 30,0% decrease: from 0,060% in 2003 to 0,043% in 2013.

Conclusions During the last 10 years there has been an increase in the total number of hospital admissions connected with bicycle accidents and injuries. Potential explanations include an increase in cycling as a radical sport (such as mountain biking or downhill riding) and as daily mean of transportation (mostly in the urban setting), but further studies are required.

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BUILT ENVIRONMENT ANALYSIS FOR ROAD TRAFFIC HOTSPOT LOCATIONS IN MOSHI, TANZANIA

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Background Road traffic injuries (RTI) are a significant cause of morbidity and mortality in low and middle income countries (LMIC). Further investigations of the high risk areas for RTIs in LMIC are needed to guide improvements in road safety planning. This study aims to provide a built environmental analysis of road traffic crash hotspots within Moshi, Tanzania.

Methods After ethical and police permission, Moshi police data was collected and descriptive statistics were tabulated. Hotspots were identified through spatial analysis and relevant patterns in environmental characteristics determined using Qualitative Comparative Analysis (QCA).