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01 FEASIBILITY OF A ROAD TRAFFIC INJURY SURVEILLANCE INTEGRATING POLICE AND HEALTH INSURANCE DATASETS IN THE DOMINICAN REPUBLIC

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Background Road traffic injuries (RTIs) are underreported in low- and middle-income countries (LMICs). Previous work from some LMICs estimated the RTI burden by manually matching records in capture–recapture methods.

Aims/Objectives/Purpose This study assessed the feasibility of semi-automated matching of RTI cases in different datasets in a LMIC.

Methods Study population consisted of RTI reported cases in the Dominican Republic in 2010. After removing duplicates and correcting fatality reporting using forensic data, the police and health insurance RTI records were matched if they had same province, date of crash, and gender of RTI cases and similar age (within 5 years). A multinomial logistic regression model assessed likelihood of being unmatched in either dataset.

Results/Outcomes Duplicates represented 21.1% of 6396 police and 16.2% of 6178 insurance records. Health insurance recorded 43 of 417 deaths as only injured. Capture–recapture estimated that both datasets recorded one of five cases. Characteristics associated with being unmatched in police dataset were female gender (OR=2.5), age≥16 years (OR=1.7), crash in the regions of Cibao-Northeast (OR=4.1) and Valdesia (OR=6.4), Tuesday to Saturday (1.5≤OR≤2.9), October to December (1.6≤OR≤4.5), and occupant of four-wheeled (OR=5.4) or trucks (OR=5.3).

Significance/Contribution to the Field Semi-automated matching is feasible to reliably ascertain RTI burden in the Dominican Republic, but could be improved by standardised coding of police and health insurance reporting.