

266

RURAL AND ETHNIC DISPARITIES IN OUT-OF-HOSPITAL PATHWAYS AND CARE AFTER ROAD TRAFFIC-RELATED TRAUMA IN NEW ZEALAND

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Background There are many long-standing challenges in delivering equitable health care in Aotearoa-New Zealand's health-care system. Little is known about inequities in EMS delivered care and transport pathways to hospital-level care, and any overlapping disparities by location of injury incident and ethnicity.

Objective This study examines the inter-relationship between geographical location of injury and ethnicity in Emergency Medical Service (EMS) out-of-hospital processes and pathways following road traffic crashes (RTCs) in Aotearoa-New Zealand (NZ).

Methods This retrospectively-designed prospective cohort study on out-of-hospital care identified trauma cases injured in a RTC among those aged under 85 years with a status 1 or 2 triage from national EMS data. Analyses of care pathways were stratified by geographical location of injury (rural/urban) and combined ethnicity-geographical location (rural Ma'ori/rural non-Ma'ori and urban Ma'ori/urban non-Ma'ori) with comparisons of proportions undertaken.

Results A total of 746 major trauma cases injured following a RTC were attended by out-of-hospital EMS providers. Subsequently, 692 were transported to hospital. EMS pathways of transportation to in-hospital care was slower and longer for rurally located cases (47%). Indigenous Ma'ori comprised 28% of cases, with rurally located Ma'ori comparatively less likely to be triaged to priority transport pathways (allocated fastest dispatch, 92% rural-Ma'ori vs 97% rural non-Ma'ori, $p=0.05$); slowest to reach in-hospital care (≥ 113 minutes to reach first hospital, 55% vs 41%, $p=0.02$) and had lower levels of access to specialist trauma care (never reach L1 trauma hospital, 51% vs 73%, $p=0.02$).

Conclusion Among RTC cases attended and transported by EMS, there is variability in out-of-hospital EMS pathways through to specialist trauma care strongly patterned by intersecting rural and ethnic disparities. These findings provide a strong equity focused evidence-base to guide clinical and policy decision makers to optimise the delivery of EMS care and to reduce disparities associated with out-of-hospital EMS care.

268

MULTIPLE DEPRIVATION AND UNINTENTIONAL POISONING IN BRITISH COLUMBIA, CANADA

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Background Poisoning is the leading cause of injury death and the second leading cause for injury-related hospitalization in British Columbia (B.C.). Recent estimates show that unintentional poisoning (including misuse, abuse, or overdose of prescription and illicit drugs) is responsible for 84% of total poisoning costs in B.C. While previous research has demonstrated inequities in poisoning-related emergency department visits and hospital admission rates across social and material deprivation spectrums, the specific deprivation profile of the most vulnerable groups has not been previously described.

Objective To demonstrate the socio-demographic profile and involved substances in serious home-based unintentional poisonings in B.C. and to determine the hospitalization rates across neighbourhood deprivation quintiles.

Methods British Columbians who were hospitalized for unintentional poisoning at home from 2015 to 2019 were eligible for inclusion in this study, using the variables sex, age-group, substances involved, and the dissemination area of the place of residence. Using de-identified administrative data, we used the Canadian Index of Multiple Deprivation to categorize marginalization of the area of residence into quintiles (with quintile 5 representing the most deprived areas) across four dimensions of residential instability, economic dependency, ethno-cultural composition, and situational vulnerability.

Results A total of 4,559 British Columbians were admitted for unintentional poisoning occurring at home across the study period, of whom 50.5% were male (annual rate: 18.51 per 100,000). Some 13.3% were under 19 years of age, 31.3% were 19–44, 28.7% were 45–64 and 26.7% were 65 years of age or older. The most common involved substances were narcotics and hallucinogens (32.9%) followed by anti-epileptic and sedative-hypnotic drugs (24.4%). The highest hospitalization rates were observed for quintile 5 of situational vulnerability composition (33.44 per 100,000), followed by quintile 5 of economic dependency (28.7) and residential instability (27.39).

Conclusions The rate of serious unintentional poisoning was highest for quintile 5 of situational vulnerability, which reflects the most deprived areas regarding housing and education. Equity-oriented approaches are essential to decrease the observed gap between the least and the most deprived populations, by reducing differential exposures, vulnerability and consequences of unintentional poisoning among marginalized populations.

270

BUILDING EVIDENCE TO PROMOTE CHILD SAFETY IN CARS IN VIET NAM

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Background The accelerated annual increase of car ownership by over 10% in Vietnamese families has brought to light the alarming absence of regulatory frameworks governing Child Restraint Systems (CRS). Particularly concerning is the widespread practice of allowing young children to occupy the front seat without any safety measures. A 2019 observational study underscored the gravity of this issue, revealing that a mere 4 out of 10,000 vehicles were equipped with child safety seats, and a staggering 95% of drivers perceived such seats as unnecessary.