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UNDERSTANDING LOCAL MEDICAL EMERGENCIES AND TREATMENT OPTIONS TO IMPROVE PRE-HOSPITAL EMERGENCY MEDICAL CARE IN IGANGA DISTRICT, UGANDA

Peter G. Delaney

Mentor: Bradley Stoner

Through understanding local medical emergencies and treatment options, my research intends to improve pre-hospital emergency medical care in Iganga District, Uganda. Using an ethnoscientific approach, I completed 60 semi-structured interviews with local community stakeholders, distilling local conceptions of trauma and current treatment, informing how best to conduct interventional work, respecting the duality between western and traditional medicine present in the district. Data on 60,000 traumatic hospital patient encounters covering 26 months was collected to analyze the most prevalent injuries and sources of trauma. For road trauma, this was determined to be from motorcycle taxis, which comprised over 50% of the entire road trauma burden, becoming my main target for road traffic incident (RTI) treatment and reduction strategies. Leveraging the pre-existing transportation infrastructure of the motorcycle taxi network, I established a lay emergency first aid responder program in the municipality by training 154 motorcycle taxis in first aid and locally sourcing first aid kits to treat the road trauma burden. Within three months, 250 victims of trauma were treated by trainees, demonstrating a pre-hospital emergency medical system composed of lay first responders can be developed leveraging pre-existing transport organizations, offering a scalable alternative for low- and middle-income countries (LMICs). To reduce the road trauma burden, I propose a novel RTI mitigation strategy seeking to implement a financial incentive scheme to influence driver behavior, the most important factor in crashes. Developed in collaboration with a local advisory council of community stakeholders, the proposal is a low-cost, versatile program that can foreseeably be used to mitigate reckless motorcycle taxi driver behavior. In the final chapter, I hypothesize how breaking what I identify as the deleterious cycle of affordable transportation alternatives in LMICs could actually reduce endemic poverty, discussing several financing options for safer transportation systems, as investments in reductions of road trauma are of critical importance to a nation's economic and infrastructure development.