

**Global Emergency Care  
Developing a Pre-Hospital Emergency Care System  
Project document 2023**

**Contact Information:**

Global Emergency Care, Tax ID 20-5319229  
Project Leader: Stacey Chamberlain, MD, MPH  
Email: [stacey@globalemergencycare.org](mailto:stacey@globalemergencycare.org)  
Website: [www.globalemergencycare.org](http://www.globalemergencycare.org)

**Project Description:**

The shortage of emergency care in sub-Saharan Africa results in a large burden of preventable deaths and disability. Despite the large burden of emergencies every day, the Ugandan health care system is unprepared to handle these emergencies. Uganda has created a Department of Emergency Medical Services within the Ministry of Health (MoH) and has developed a strategic plan to build an emergency care system for the country. As part of this plan, Uganda has launched a national ambulance service. To date there are 200 ambulances available; however, there are few trained staff to provide care on scene or en route to the hospital, and there is not a standardized training curriculum for these providers. Without trained first responders and pre-hospital providers, these ambulances are nothing more than a taxi service, providing transport but not needed medical care. As such, there is little to no pre-hospital care, delaying possibly critical life-saving interventions.

Over the past 15 years, Global Emergency Care, with significant support from the Freas Foundation, has been training nurses to assess, diagnose, and treat patients with emergency medical conditions. These trainees completed a rigorous two-year curriculum which includes classroom-based didactic learning, simulation-based exercises, and precepted bedside learning. This training has resulted in a new non-physician clinician cadre, known locally as Emergency Care Practitioners (ECPs). Our data demonstrate that ECPs provide high quality effective care in the emergency department, with improved mortality for numerous emergency conditions including malaria, pneumonia, diarrhea, and trauma, among others.

While GEC continues to train hospital-based emergency providers, there remains a gap in pre-hospital care and barriers to patients reaching the hospital. Emergency care should ideally span a continuum from “out-of-hospital” care (at the scene of accidents and emergencies, en route to the hospital, or during interfacility transfers) and “in-hospital” care. Expanding GEC’s training to address out-of-hospital emergency care will be a new phase in our programming, and it will fulfill the vision of the Ugandan Ministry of Health to rapidly build a pre-hospital care system over the next few years.

**Project Goals and Objectives:**

This project builds on our previous work on improving in-hospital emergency care and aims to improve out-of-hospital emergency care to save lives. This pilot program will have ECPs serve in two week rotations on the ambulance service in Kampala, providing full time coverage for the ambulances with a focus on responding to the most critical cases. Given their extensive experience, the ECPs will give input into how the model functions to provide effective

emergency care and allow the ECPs to gain pre-hospital experience to enable GEC to refine the ECP training curriculum for Uganda's future EMTs.

Specifically, our objectives are:

1. Test and refine the MoH model of staffing ambulances with non-physician emergency care providers through a pilot program utilizing ECPs.
2. Adapt GEC's current two-year ECP curriculum for EMT training.

**Methods:**

1. ECPs will work on two-week shifts, staffing the National Ambulance Service ambulances serving the District of Kampala.
2. Ambulance staff will log all patients, including pick-up location, chief complaints, critical time-based quality indexes (time to dispatch, time to intervention, time to hospital arrival), pre-hospital procedures performed, and resources utilized.
3. The GEC leadership team will analyze patient log data to identify opportunities for emergency care service and delivery improvement (e.g. training and resource needs, geospatial service coverage). The leadership team will conduct a focus group with ECPs to gather qualitative feedback information regarding staffing, skills, and resources needed for effective pre-hospital care.
4. In partnership with the Ministries of Health and Education, the GEC leadership team will update and refine the current ECP curriculum to include the knowledge and skills needed for EMTs to deliver quality effective out-of-hospital emergency care.

**Outcomes:**

ECPs staff ambulances and log patient data from January 2023- January 2024 (Objectives 1 and 2). Patient log data and provider feedback will be analyzed to adapt and refine pre-hospital training curriculum (Objectives 3 and 4).

**Proposed Budget:**

Expansion of GEC's scope of work and programming to the out-of-hospital sector will require a significant commitment of ground staff time and management. GEC requests the proposed \$20,000 donations

**Funding Required and Expected:**

As above, \$20,000 is requested to support pre-hospital system development and training.

**Evaluation of Results:**

GEC will evaluate outcomes based on:

1. Number of hours ambulances staffed by ECPs
2. Number of patients receiving pre-hospital care
3. Final pre-hospital training curriculum delivered to the Ministry of Health

