Accuracy of Communication Between Pre-Hospital & Hospital Staff: Cuenca, Ecuador

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Background & Objectives

- Interpersonal violence and road injuries remain leading causes of mortality in Ecuador, accounting for 20-40% of Emergency Department (ED) visits[1,2,5]
- Post-trauma mortality is 25% higher in places with inconsistent EMS responses[3]
- A 2012 initiative formed SIS ECU 911, which promised to remediate causes of poor past performance of Ecuador's Emergency Response (EMS) system
- Past EMS issues included limited training of healthcare providers; poor communication; and lack of any quality improvement programs[4]
- Following the formation of SIS ECU, physicians at Cuenca, Ecuador's only trauma center (HVCM) requested an updated assessment of the EMS system

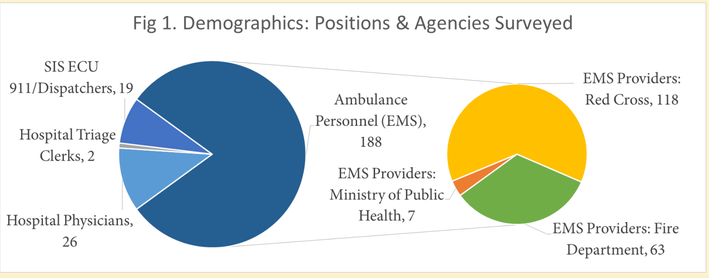
Objectives:

- Gain a detailed understanding of EMS communication between all stakeholders
- Assess knowledge, practice, and attitudes of care providers regarding trauma guidelines, communication, and decision-making
- Identify barriers to effective communication; trauma protocol implementation; and effective trauma patient care
- Collaboratively develop potential solutions to identified problem areas in the trauma response system

Methods

- IRB-approved, voluntary, anonymous survey was administered to prehospital providers of four ambulance services, 911 dispatchers, and HVCM ED staff
- The survey questions asked about demographics; attitudes, knowledge and practice of the MIVT (Mechanism/Injuries/Vital signs/Treatment) trauma care communication protocol; and perceptions of existing trauma communication
- Comparative & descriptive analyses of the data were performed in SPSS, using a thematic approach (administration/organization; qualifications/competencies; resource availability; communication/transportation; and stakeholder input)[6]

Fig 1. Demographics: Positions & Agencies Surveyed



For questions, please contact Michael Rains at rainsm@vcu.edu

Results

Fig 2. Method of Communication of Patient Information

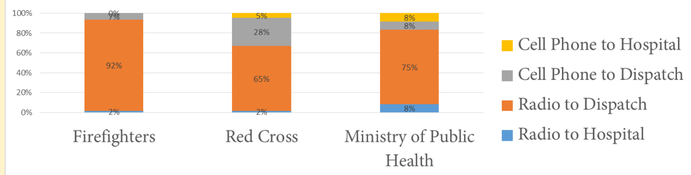


Fig 3. Reports of Patient Data Transmitted/Received by Provider Role

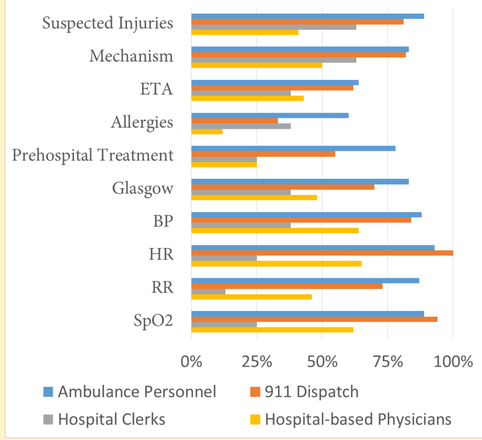


Fig 4. Identified Barriers to MIVT Utilization by EMS

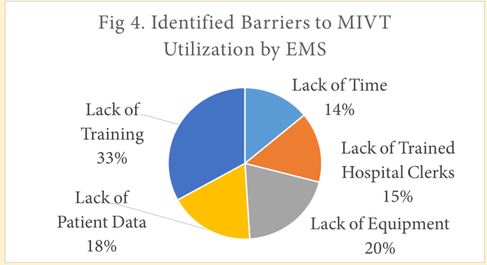


Fig 5. Ambulance Personnel Perspectives on who has Responsibility for Medical Decisions regarding:

Fig 5a. Patient Destination

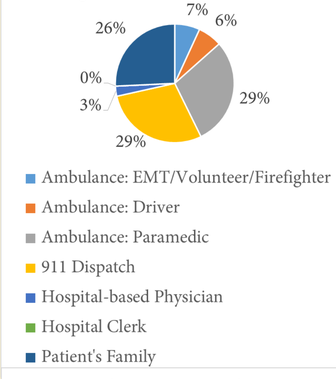
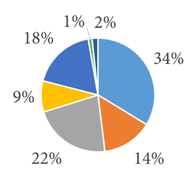


Fig 5b. Patient Condition



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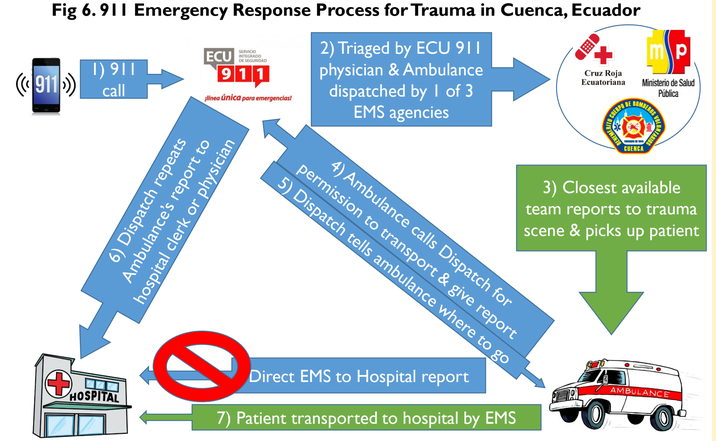
Discussion & Future Directions

Fig 6. 911 Emergency Response Process for Trauma in Cuenca, Ecuador



Identified Areas of Potential Growth

Allocation of trained medical resources	. Limited triage resolution at dispatch level . Limited ability to mobilize appropriate level of EMS care
On-site Medical Decision Making	. Lack of coordination of on-site & system leadership . Inconsistent knowledge base for in-field patient assessment
Inconsistent quality of communication of patient information	. Inconsistent use of standardized form of communication . Lack of direct communication between EMS and hospital
Inconsistent receiving hospital preparation	. Lack of consistent individual who receives all EMS calls . Lack of training for hospital clerks regarding trauma alerts

Possible Solutions for Consideration

Short-Term:

- Flowchart/Checklist at ECU 911 for receiving calls, possibly computer-based
- Corresponding mobile application or reference card for EMS use in the field
- Dedicated nurse or trained clerk for receiving EMS calls with reference checklist

Long-Term:

- Implement centralized radio and direct EMS-hospital communication systems
- Standardize criteria & protocols for alert levels on a per-chief complaint basis
- Training for prehospital staff, hospital triage clerk/nurse, and ECU 911 staff