

ABSTRACT

Pre-hospital Emergency Medical Service (EMS) is a branch of emergency services dedicated to provide emergency medical support for the patient with sudden illness or injuries at the scene before transferring the patient for definitive care.

Two distinct models of EMS are being practiced in the world, which are named by their location of origin. The doctor based Franco German System (FGS) and paramedic driven Anglo American System (AAS) ((Dick, 2003). The Main difference between the two systems is that in the AAS, the patient is brought to the doctor, where as in the FGS, the doctor is brought to the patient.

Impact of Pre-hospital Emergency care system on reduction of mortality and morbidity of acute and chronic non-communicable diseases is very well established in other countries (Ornato et al., 1985). In Sri Lanka traumatic injuries continue to be the leading cause of hospitalization since 1995. In 2007, there were 606,889 admissions in the government hospitals due to traumatic injuries. In addition, ischemic heart disease including myocardial infarction is the leading cause of mortality in government hospitals at present (Annual Health statistics 2008).

Though Pre-hospital Emergency Care was seen in some areas to some extent in Sri Lanka, an organized form of EMS was developed after 2005, after the bitter experience of tsunami. This was a result of combined effort by both the government

and the private sector. Pre-hospital Emergency Care is recognized by the Trauma Secretariat of Ministry of Health as an essential core component of their Trauma Management System Development (Trauma Secretariat web site, 2010).

Objective of this study was to assess the Pre-hospital Emergency medical Service Systems in Sri Lanka. Identified EMSs were categorized in to 5 groups based on the lead organization and a purposive sample of 6 systems was selected for the detailed study. In-depth interviews were conducted among 13 experts to obtain detailed information on each system; self administered questionnaire was used to assess the human resources and a check list to assess physical resources. WHO trauma matrix was used to assess the adequacy of each of the systems.

EMS in Sri Lanka is more in favor of Anglo American than Franco German System but differ from each other in number of ways including the lead organization involved, type of emergency conditions they handle, type of service providers involved as well as the user payment system.

Non-availability of an authoritative structure or appropriate legislation were the main drawbacks in the existing system. None-availability of standards and protocols, a recognized training institute or career development programs for the service providers were some of the other deficiencies identified. There was gross mal-distribution of physical resources between the systems and under-utilization as well as over-utilization of the resources was evident.

EMS Anuradhapura had a mean decision time of 01.39 (SD 0.64) while the mean response time was 8.63 minutes (SD 4.85). Average on-scene time was 8.10 (range 1-31) which had no significant difference between trauma patients, patients with medical emergencies or obstetric complications. ($p= 0.26$). There was no statistically significant difference ($p=0.15$) in the time spent at the scene for patients with chest pain and trauma.

Except for the couple of pockets of areas where EMS equals to the level III in WHO trauma matrix, country as a whole is still in level I in pre-hospital EMS provision. The results of the present study clearly highlight the need of implementing Pre -Hospital EMS in a systematic way with the mediation of government, ensuring equity and the sustainability of the service provision.