

Time for Change: The State of Emergency Medical Services in South Korea

Christopher C. Lee,¹ Mark Im,¹ and Gil-Joon Suh²

¹Department of Emergency Medicine, Stony Brook University Hospital School of Medicine, NY, USA;

²Department of Emergency Medicine, Seoul National University College of Medicine, Seoul, Korea.

Trauma is the leading cause of death among people younger than 40 years of age in South Korea. This demographic represents the productive members of Korean society, yet little is being done to correct this growing problem. The preventable death rate in Korea is estimated to be approximately 60%, which is unacceptable given Korea's growing economy and available resources.

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Trauma is the leading cause of death among people younger than 40 years of age in South Korea. This demographic represents the productive members of Korean society, yet little is being done to correct this growing problem. The preventable death rate in Korea is estimated to be approximately 60%,¹ which is unacceptable given Korea's growing economy and available resources. At the same time, trauma is only one aspect of the state of Emergency Medical Services System (EMSS) in South Korea. Currently there are limited data regarding cardiac arrest and resuscitation rates, trauma survival rates and specific emergency service needs in both urban and rural areas. Data collection must be uniform and complete to better understand the emergent medical needs of specific areas. The current EMSS is at a crossroads where sophisticated technology and medical support is available but the leadership required for implementation is inadequate.

The state of EMSS in Korea is in its infancy. Paramedic training programs in Korea are intensive and on similar levels as their US counterparts. Advanced Cardiac Life Support (ACLS) training such as electrocardiogram (ECG) interpretation and advanced airway techniques is required in Korean paramedic training. In spite of this fact, Korean paramedics operate essentially as Basic Life Support (BLS) crews with limited physician support, protocols and medications that can be administered in the pre-hospital setting.

Korean paramedics are being underutilized. They are often discouraged from assessing patients, performing procedures and providing medication until they reach a hospital setting, which can be attributed to the prevailing belief that non-physician personnel cannot perform pre-hospital care competently. However, the concept of an EMSS should be seen as an integral component of the continuum of medicine from the scene of an accident or illness through the definitive stages of emergent medical care. Physicians must utilize oversight of paramedics to provide rapid, life-saving pre-hospital care to patients.

An organized methodical effort to improve Korea's EMSS must begin at once. Korea's technology is highly sophisticated and yet underutilized in the realm of pre-hospital care. Although several university hospitals have cutting edge technology for mobile and satellite communication, ambulances and EMTs in rural or isolated areas rarely have access to these services. Pre-hospital care in the field can be seen as a "scoop and run" mentality with many patients arriving unannounced not only by ambulance, but also by

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Reprint address: requests to Dr. Christopher C. Lee, Department of Emergency Medicine, Stony Brook University Hospital, HSC, Level 4, Rm 080, Stony Brook, NY 11794-8350, USA. Tel: 631-444-2829, Fax: 631-444-3919, E-mail: christolee@notes.cc.sunysb.edu

taxi, bus and private cars. Response times for pre-hospital providers are poor due to the terrain of both urban and rural settings. In particular, Seoul is a bustling metropolis where narrow streets with one-way restrictions are common. In certain areas of the city, massive traffic congestion (auto and pedestrian) can be detrimental to critical patients in need of pre-hospital stabilization and efficient transport. EMSS command centers within specific regions are essential to coordinate transport and pre-hospital care. In addition, first response teams must be strategically placed throughout urban settings and rural satellite clinics must have contingency plans to stabilize and transport unstable patients.

Korea must also develop a dedicated trauma center and registry with dedicated trauma surgeons. A trauma registry or database will consolidate information and can identify hospitals that require certain emergent services such as orthopedics, trauma surgery or neurosurgery. Again, little is known about specific demographics and patient needs in certain areas due to a lack of communication and data collection among hospitals.

Any solution will require universal recognition from the Korean Fire Department, hospitals, universities and the Ministry of Health that this problem is being ignored. By implementing dedicated trauma centers and including financial and prestigious incentives, hospitals and physicians can attract emergency medical and trauma services to improve preventable death rates. Trauma and emergency services are recognized as a specialty with long hours and little compensation, requiring incentives to provide the country with the medical services that the population needs.

There is much debate in Korea about who will implement this change. As of now, the Korean Fire Department has taken over pre-hospital care in Korea, but responsibility must be shared by both physicians and pre-hospital care providers so that a system of mutual respect and understanding of capabilities can be utilized in the field. Pre-hospital care must be seen as a tool used by physicians to provide care to critical patients. As the governing body of medical oversight in Korea,

the Ministry of Health is in a unique position to provide leadership for emergency medical and trauma services.

Trauma and cardiac arrest are preventable. With the advent of the updated guidelines from the American Heart Association, this is an opportune time to introduce and implement these guidelines into Korean society. By providing EMS first responders, emergency medical technicians (EMTs) and even lay people with this education, we can hope to improve survival rates.

The current state of the Korean EMSS is a result of the lack of pre-hospital protocols and physician oversight, the need for uniform data collection to develop dedicated trauma centers, and the failure of public policy to expand resources.²⁻⁷ An efficient and functional EMSS will serve a critical role in the continuing development and urbanization of South Korea. The US style of medical practice currently in use must translate to pre-hospital care as well. The EMSS system in Korea is in its infancy, and as awareness, medical education, political and ideological change is implemented, pre-hospital survival rates will improve.

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