

response, the country began to develop a national emergency medical services (EMS) and trauma system.

**Methods:** Based on the recommendations made by the World Health Organization and experiences of other developing nations, a plan for developing a system was devised and implemented. This included the creation of a universal access number and a standardized emergency medical technician curriculum. Emergency medical services personnel were trained and ambulances were purchased and outfitted. Trauma centers were designated and protocols were developed to ensure patients arrived at appropriate locations.

**Results:** The program was initiated with a pilot project in Hikkaduwa. Over the next two years, the system was expanded to include the major population centers of Colombo, Galle, Jaffna, and Kandy (total population 3.5 million). Paramedics have responded to >1,000 calls with an average response time of <10 minutes for the large population centers. Patients receive prehospital care and arrive at appropriate hospitals in time to receive definitive treatment.

**Conclusions:** Emergency medical services/trauma systems can be implemented in developing countries with limited resources. Further study is required to determine the impact of this program in reducing trauma morbidity and mortality.

**Keywords:** developing countries; emergency health; emergency medical services; Sri Lanka; trauma

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### Unintentional Injury Outcomes Secondary to Pedestrian Traffic Crashes in Southwestern Nigeria: A Descriptive Analysis from One Major Medical Center

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**Introduction:** An environment where traffic regulations are not strictly enforced often is characterized by motor vehicular carnage, severe injuries, and high mortality. This study evaluated the descriptive demographics and injury characteristics of pedestrian road crash victims presenting to a tertiary hospital in southwestern Nigeria to provide baseline epidemiology as a first step to determine areas of potential mitigation of unintentional injury care.

**Methods:** Consecutive pedestrian road traffic injury patients presenting between March 2007 and February 2008 to the Accident and Emergency Department of a tertiary hospital were reviewed prospectively to determine baseline demographics and clinical outcomes.

**Results:** A total of 184 patients (mean age = 31.4 years) were seen; 27% of these were <11 years of age. The male:female ratio was 1.6:1. Fifty-four percent were struck by automo-

biles and 29% by motorcycles. Sixty-five percent were struck while crossing the road. Head injury occurred in 61% of patients. The mortality rate was 30.4% (56 subjects). The clinical course leading to death identified: 22.8% having initially experienced hemorrhagic shock; 17.5% severe head injury; and 17.5% aspiration. Brainstem herniation occurred in 28.1%. The average interval between injury and death was 5.5 ± 13.6 days.

**Conclusions:** In this setting, three out of every ten patients experiencing pedestrian vehicular trauma will die before leaving the hospital. The elderly are at the highest risk of mortality. This raises serious questions about the prehospital and hospital-based emergency services for vehicular road crash victims in our environment and confirms the report by the World Health Organization (WHO) that Africa has the highest incidence of unintentional injury deaths in the world. A system-wide program must be established that addresses proven prevention measures across all sectors of the community.

**Keywords:** emergency medical services; mortality; Nigeria; pedestrian injuries; road crashes; trauma; unintentional injury deaths

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### Emergency Medical Services and a Community Development Medicinal Unit: An Overview

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Without organized effort, no emergency medicine services are effective. Therefore, in 1984, some of the health professionals working in eastern part of India created the "Community Development Medicinal Unit" (CDMU). It is a large, community-based organization with many actively involved local professionals working in the health sector.

The CDMU is a non-governmental organization (NGO) that provides essential medicines to non-profit NGOs working in the health services. The services are provided during emergencies and normal times to ensure the availability of essential medicines to the population. During medical emergencies, the CDMU always plays an important role to ensure the availability of essential medicines to the NGOs during medical emergencies. The CDMU also is working on emergency preparedness activities for different targeted populations.

Usually, the CDMU procures essential medicines directly from the manufacturers and stores them in a central location. A pooled procurement system is used to obtain large quantities of medicines from the manufacturers to ensure a lower cost, but good quality. Members get medicine from CDMU >40% to 60% cost than market. Therefore, people get access to cheap, high-quality drugs from a reliable source. These drugs are available at all times, even during emergencies. The large network is self-sustained, so it does not require outside assistance.

**Keywords:** Community Development Medicine Unit; drugs; emergency health; emergency medical services; India; non-governmental organization

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