Taxi driver training in Madagascar: the first step in developing a functioning prehospital emergency care system

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ABSTRACT

Background Prehospital care in developing countries is severely lacking. Few countries can afford the relatively expensive formalised Western model of a prehospital emergency medical system. The WHO has highlighted the development of layperson first responder programmes as the most basic step in the development of a functioning prehospital system.

Aim To describe the first training programme of its kind, run in Mahajanga, Madagascar. The faculty was invited by Mahajanga Medical School.

Methods and Results Local input was taken into account in developing the curriculum. 26 taxi drivers were invited to attend in cooperation with the local municipality. The faculty consisted of five instructors from the Division of Emergency Medicine and EMSSA, plus local doctors from University Hospital Mahajanga. The 1-day course included workshops on prehospital scene management, bleeding and broken bones, immobilisation and patient movement, and labour and delivery. The workshops made use of commonly available items only including packets, string and towels; French and Malagasy translators were available throughout.

Conclusions Both faculty and candidates deemed the course a success and plans for formal evaluation of knowledge and skill retention are underway. Future plans are to continue the training using local instructors and in rural districts.

Prehospital care in developing countries is severely lacking. In Africa there are very few countries with robust prehospital services. Given the large emergency care burden within Africa, the role of transferring people to hospitals often falls to bus, taxi and truck drivers. As previous studies have shown, the prehospital mortality rates are higher in these developing countries than in the developed world. It has been shown that a prehospital emergency care system saves lives but few countries can afford the relatively expensive formalised Western model. The WHO has highlighted prehospital care (particularly trauma care) as a priority and has issued guidelines on the development of prehospital care systems. Inherent in the guidelines is the development of layperson First Responder programmes as the most basic step in the development of a functioning prehospital system. This paper describes the first training programme of its kind, run in Mahajanga, Madagascar.

Madagascar is an island nation of 19 million people, situated in the Indian Ocean off the east coast of Mozambique. Best known for the export of Vanilla, Madagascar is ranked 210th in terms of GNP per capita. The World Bank Development Indicators estimate the malnutrition rate at 36% for children under 5 years, and the under-5 mortality rate is 106 per 1000. The average life expectancy at birth is 57 years for men and 61 years for women. Although the country has two medical schools (in Antananarivo and Mahajanga), there are still only three doctors per 10 000 population and <1 healthcare worker per 10 000 population. Along with infectious diseases such as tuberculosis and malaria, road traffic deaths account for a significant part of the mortality (5 per 1000 deaths). There is no formal prehospital medical system on the island and the large distances and rugged terrain hamper access to the central hospitals.

The Malagasy culture and history has strong French and Asian links but academics are now looking to form ties with their Southern African neighbours. Such ties were recently formed for Emergency Medicine with the University of Cape Town. In January 2010, a contingent of emergency physicians and emergency nurses from the Emergency Medicine Society of South Africa (EMSSA) were invited by the Paediatric Faculty of Mahajanga University Medical School to teach a layperson First Responder course as part of the Emergency Medicine outreach programme.

BACKGROUND

Mahajanga is a city on the west coast of Madagascar. It has a population of around 150 000. The central university hospital is the referral centre for the district and the home of the medical school. The medical school trains undergraduates and has postgraduate training programmes in medicine, surgery, paediatrics, and obstetrics and gynaecology.

Within the borders of Mahajanga, there is no functioning ambulance system, although in the university hospital grounds a vehicle transports patients between wards and the radiology department. Patients arrive at the hospital via private transport, buses and taxis. An ambulance vehicle had been donated to the Red Cross Service on the island but financial and mechanical constraints had left this non-operational. It had been staffed by a first aider and a driver. Prior to the training, discussions were held with local stakeholders including the district health managers, the medical school, local doctors and nurses, and the mayor’s office. Development of an effective prehospital
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Competing interests None.

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REFERENCES