

PRE-HOSPITAL TRAUMA COURSE

Program Rationale

Currently there is no formal training in pre-hospital trauma care in Australasia for physicians. Although Queensland Health have introduced the Pre-hospital Trauma Life Support Course from the US, it is essentially an out-of-hospital ATLS course which revisits many of the basic elements of trauma care common to both in and out of hospital environments. It fails to adequately address issues which physicians, who already have substantial trauma management training and experience, require. These issues include details of scene safety, extrication and prioritisation of management that is unique to the pre-hospital environment. For the safety of the individual physicians and their patients, these issues needed to be addressed.

Since the advent of paramedics in some Australian states more than 25 years ago, there has been a diminishing need for physician involvement in pre-hospital trauma care. The expertise of paramedics and other ambulance officers is widely acknowledged, but in regional, rural and remote locations where paramedics are not available, or in some situations where paramedics are unable to deliver required care due to protocol limitations, physician involvement may still be necessary. Additionally, some environments that are outside of normal EMS systems, such as the military, have an on-going need for physician involvement in pre-hospital care.

Physicians require adequate training for a number of reasons. There is a large emotional component to this work, and a degree of real and perceived responsibility falls on the physicians when they arrive at the scene. Appropriate training helps to minimise the impact of these stressors.

Furthermore, incident sites are dangerous and health professionals have been injured by not adhering to the principles of site safety, generally due to ignorance. Proper education about the common hazards can substantially mitigate this risk. The physician's employers also have obligations under the Occupational Health and Safety Act to train their employees in safe operating practices for any environment to which they may be exposed in the course of their employment.

Patients need doctors to be trained in pre-hospital trauma care because there are many documented examples of people suffering preventable mortality and morbidity due to lack of training, poor communication and poor organisation.

Target Group

The target group is physicians who work in areas where they are likely to be asked to be involved in pre-hospital trauma care.

There are 4 sub-groups of doctors:

- retrieval registrars who are going to work in the field for a short intense period
- regional, rural and remote doctors who will work where there is little ambulance backup
- those working for frontline organisations eg St John, CARS, Surf Life Saving
- doctors in the armed forces

All these groups have slightly different needs but all need to be competent at pre hospital trauma care.

Prerequisite Knowledge

This course assumes that the participants will have a basic level of knowledge and skill that is taught to hospital-based trauma doctors. In particular the Early Management of Severe

Trauma (EMST) course more than adequately covers the assumed knowledge. The principles taught in EMST are not re-taught in the PHTC as it is assumed knowledge. Many of the participants will have substantial experience in leading trauma teams and managing critically injured patients in the hospital setting. These physicians require the knowledge and skills to translate this into the pre-hospital environment. The course does not therefore aim to introduce basic concepts, but rather the difference in approach and priorities that is required to successfully work in the pre-hospital environment.

Program Aim

By the end of the course the participants should be able to work effectively in a pre-hospital setting in trauma care. In particular they should be aware of the differences that exist in a pre-hospital setting; be aware of and competent in providing the special, but limited, skill set that only doctors possess that can be useful at a scene; be familiar with the way the emergency services operate; and be safer in a pre-hospital setting.

General Objectives

By the end of this course it is anticipated that the participants will be better able to:

- understand the need for a trauma system
- conduct themselves safely at a scene
- demonstrate the attitudes and medical skills necessary to perform optimally at a pre-hospital trauma scene
- understand the principles of extraction
- describe the structure, roles, capabilities and hierarchy associated with the other emergency services at the site
- understand the concept of teamwork as it applies to pre-hospital trauma care
- identify appropriate personal and medical equipment for pre-hospital trauma medicine
- demonstrate the basic use of radios
- understand the basis of major incident medicine
- use triage in a major incident setting

Teaching and Learning Strategies

In traditional medical thinking, 'doctoring' as a profession, as with most other health professions, can be divided into two broad aspects, namely 'thinking' and 'doing'. Some niches in medicine, for example psychiatry, are almost exclusively 'thinking' while others, including surgery, are much more 'doing'.

Pre-hospital medicine is a combination of these aspects. Those who have fulfilled the prerequisites for the course should already possess the cerebral side to a large degree. The course is therefore predominantly about acquiring and honing skills.

As in in-hospital trauma care, an important component of patient management in pre-hospital care is teamwork. While this cannot be taught as such, there is an emphasis on teamwork in the course to encourage learners to model it.

Another way of viewing this is to say that in order to function adequately in a pre-hospital setting, physicians need to have a certain set of knowledge, skills and attitudes. Most of what needs to be imparted to competent in-hospital trauma practitioners is skills and attitudes, rather than knowledge.

Content

The course is an intensive two-day course with pre-reading beforehand. The course is currently held twice a year in January and July.

The course is run with 12 candidates, two full-time and three part-time medical instructors,

one full-time paramedic instructor, one full-time coordinator and five fire brigade instructors on Day 2.

The basic outline is:

Day 1

- AM: Skill stations and discussions. Subjects include trauma systems, initial assessment, packaging, circulation control, transport physiology, chest drains and splinting
- PM: Three scenarios on bush rescue, radio use and intubation in the field



Day 2

- AM: Extrication skills and scene assessment followed by three practical scenarios
- PM: Disaster skills discussion followed by three scenarios on disaster management, penetrating trauma and burns

