

Annex I.

Advanced prehospital trauma care and care in fixed facilities.

The emergency way station

Advanced prehospital trauma care, also known as advanced life support (ALS), the third tier of prehospital support, involves using highly sophisticated interventions to sustain life. Because it is quite costly, it is most often provided in high-income countries.

Where the resources exist to fund ALS, it usually offered by special ambulances staffed by highly trained, professional prehospital providers. In many countries in western Europe, physicians fill this role. In Australia, Canada and the United States, the care is provided by non-physician paramedics.

In low-income and middle-income countries, an acceptable proxy for ALS may be created by formally incorporating village and community clinics into the prehospital care system, using them as emergency way stations where seriously ill and injured patients can be stabilized prior to being transported to a facility providing a higher level of care. Way stations may be especially important if the nearest hospital is far from the scene of the crash. Care at these clinics might include definitive airway management using endotracheal intubation or another airway adjunct, provision of intravenous hydration and administering parenteral pain medication and antibiotics.

When it is possible to adequately treat the victim without referral to a higher level of care, this should be done in order to conserve resources. If, however, the victim's injuries are too challenging or complex to be definitively managed at the local level, he or she should be promptly transferred to a regional hospital.

Skills required

To effectively function as an ALS way station, a village clinic must be staffed by health-care workers who have had supplemental training in trauma care. These individuals must also be given the supplies and equipment they need to evaluate and stabilize seriously injured patients. (Please refer to the resource matrix in section 5 for more information.)

Clinic-based ALS providers should be trained to provide all aspects of care rendered by bystanders and those trained to provide basic life support. In addition, they should be trained and equipped to perform the additional tasks outlined in the matrix in section 5.

Surgical care in fixed facilities

Every physician who treats seriously injured patients should receive core training in how to evaluate and stabilize their condition. An “Advanced Trauma Life Support[®]” course has been designed for this purpose by the American College of Surgeons. It has been taught throughout the world. This course, and others like it, is designed to help physicians acquire basic skills in injury assessment and stabilization. It does not teach physicians the surgical techniques needed to definitively manage severe injuries or burns. Because these courses are focused on resuscitation and stabilization, they form only part of a comprehensive strategy to improve trauma care. For this reason, physicians working in rural hospitals and remote areas where evacuation is extremely difficult will need additional surgical skills to definitively manage the majority of trauma patients. This will improve outcomes and minimize the number of patients who need to be transported to a facility providing a higher level of care.

Additional information can be found in *Guidelines for essential trauma care* (52) and *Surgical care at the district hospital* (53) for more information.

Regionalizing trauma care

Experts in developing trauma care systems recommend taking an inclusive approach to trauma care: one that involves all levels and types of health centres. This is preferable to an exclusive approach that commits most of a country’s resources to a small number of highly specialized trauma centres. In general, more good can be done for more people by establishing trauma teams within existing regional and municipal hospitals than by creating one or more national trauma hospitals. Within each hospital, doctors and nurses with expertise in trauma care should be identified and organized so they can efficiently provide high-quality trauma care to injured patients. The American College of Surgeons has developed criteria for designating hospitals as trauma centres (63). Where such expertise is not available, national or local governments must initiate training programmes in essential trauma care for doctors and nurses.