

# 10. Conclusion

This document describes some of the essential and desired components of an effective prehospital trauma care system. The most basic elements of the system are easily affordable and will benefit large numbers of victims of serious and life-threatening injury. One of the most basic ways to provide prehospital care is by engaging community members. Involving them in this process may have the additional benefit of helping them identify and address hazardous conditions and behaviours in their local environment. Thus, promoting trauma treatment may further the goals of injury prevention.

This document can be used to define the minimum elements of an effective system of prehospital care for injured patients. We hope that it will help those planners and policy-makers who are responsible for implementing public health and medical-care systems on the national, regional or district level.

The different levels and components of prehospital trauma care described here should be considered incremental. Policy-makers interested in adopting these recommendations should strive to secure the most basic elements of a functioning prehospital and hospital-based trauma care system before committing scarce resources to more costly optional aspects of the system.

Widespread adoption of this monograph and its companion document, *Guidelines for essential trauma care* (52), will enable countries to provide emergency care affordably (Box 15). Implementing the cost-effective strategies and policies described in these two documents will not only increase the likelihood that injured victims survive to reach the nearest health-care facility but will also ensure that they benefit from their subsequent surgery, inpatient treatment and post-hospital care. Effective implementation will depend, in turn, on the ingenuity, commitment and leadership of WHO, its Member States, local governments, individual health-care providers and engaged citizens.

The financial and social benefits of reducing premature death and minimizing disability from injury are potentially enormous, and these benefits may play a major part in promoting a nation's economic and human development.

In addition to enhancing the health and well-being of injured individuals, effective prehospital trauma care systems clearly benefit patients with potentially life-threatening medical disorders, such as cardiovascular and infectious diseases, and other medical emergencies, such as paediatric emergencies and complications of childbirth.

Finally, adopting these principles will dramatically increase a nation's capacity to respond to natural and man-made disasters. The best way to prepare for mass casualty events is to establish a prehospital care system that functions efficiently and well and that is able to effectively manage emergency events on a daily basis.

**Box 15. The Essential Trauma Care Project: improving facility-based care of injured people (52, 66, 67)**

*Prehospital trauma care systems* has emphasized the care of the injured in the prehospital environment. Improvements in prehospital care must go hand in hand with an adequate level of facility-based trauma care – that is, improving the care of the injured at the scene only to bring them to facilities that cannot adequately care for them is less than optimal. Many of the injuries that cause disability and death are readily amenable to simple low-cost improvements in human resources (training and staffing), physical resources (equipment and supplies), and organization and planning.

It is with these improvements in mind that WHO and the International Society of Surgery established the Essential Trauma Care Project. The collaborative Working Group for Essential Trauma Care includes members of these organizations along with stakeholders from several countries, including trauma care clinicians from at least one country on every continent. A variety of other national stakeholders have also been involved, such as the Academy of Traumatology (India), the Mexican Association for the Medicine and Surgery of Trauma, the Ghana Medical Association and the Trauma Society of South Africa.

During the past 3 years, this Working Group has defined 14 core services that are essential to trauma care, such as ensuring that “obstructed airways are opened and maintained before hypoxia leads to death or permanent disability”. To deliver such services worldwide, 260 items of human and physical resources have been designated as either essential or desirable (that is, useful but not as cost effective as essential items) for different levels of facilities, ranging from rural clinics to tertiary care facilities. These have been described in *Guidelines for essential trauma care* (52), published by WHO in 2004. The guidelines also suggest ways to implement changes in areas such as training, quality assurance, hospital inspection and by encouraging interactions among stakeholders.

Some progress in using the guidelines in real-world circumstances has already been made. They have been used to assess trauma care needs in Ghana, Mexico and Viet Nam. In Gujarat State, India, and in Mexico, WHO country offices, local governments, professional societies and other stakeholders have adapted the guidelines to reflect local needs and have developed preliminary implementation plans.

We hope that use of the guidelines will increase and build on the examples provided by early pilot work. These efforts should be made along with efforts to improve prehospital care.