© UNDP/TAJIKISTAN/2006/MUMINOVA

A Tajik surgeon reviews the stump of this young man's right leg. Medical personnel must be properly trained to avoid complications, reduce pain and allow best fitting of the prosthetic limb.

Chapter 5
Child-focused Victim Assistance

Section 5.2
Emergency and continuing medical care

Explanatory Note

THIS document is one of **eight** PDF documents that comprise the Guidance on Child-focused Victim Assistance. All are available in PDF at <http://www.unicef.org/publications/>. The full document is also available.

The first PDF contains the Acknowledgements, Foreword, Acronyms and Chapters 1 through 4:

Chapter 1. Introduction: The Need for Child-focused Victim Assistance Guidance
Chapter 2. Mine Action, UNICEF and Guidance on Child Victim Assistance
Chapter 3. Victim Assistance: Stakeholders and International Standards
Chapter 4. Principles, Coordination and Cross-cutting Aspects of Victim Assistance

This stand-alone PDF document on ***Emergency and continuing medical care*** is one of the six technical components of Child-focused Victim Assistance Guidance. Together, they comprise Chapter 5 – Child-focused Victim Assistance. The other five parts of Chapter 5 are:

Section 5.1 Data collection and analysis
Section 5.3 Rehabilitation
Section 5.4 Psychological and psychosocial support
Section 5.5 Social and economic inclusion
Section 5.6 Laws and policies

The eighth and final PDF document, Chapter 6, contains resources and references that users may find helpful.

BETWEEN 1999 and 2012, 88,331 people living in some 60 countries are known to have been killed or injured by landmines or explosive remnants of war (ERW). Of these, at least 15,868 were under the age of 18 at the time of the accident. Although progress has been made in reducing the threat of unexploded ordnance worldwide, some 1,000 children – 90 per cent of them boys or young male adolescents[1] – are still killed or injured annually.

Cluster munition remnants and improvised explosive devices (IEDs) are particularly deadly for children. Blast and fragmentation injuries often cause long-lasting impairments including limb amputations, loss of eyesight and hearing, severe injuries to genitals, internal organs, face and chest, brain damage and spinal cord damage.

These physical injuries are aggravated by the psychosocial, socio-economic and protection consequences of the traumatic event of a blast accident as the survivors confront lifelong difficulties accessing education, livelihood opportunities and, like many vulnerable children with disabilities, are subject to violence, abuse and exploitation.

This Guidance was developed in response to requests for support in developing child-focused victim assistance programming. It provides support for:

- Developing new policies and programmes (or adapting existing ones) that assist child mine/ERW victims that are age- and gender-appropriate and promote the rights of children and young people[2] with disabilities.
- Promoting access for children directly and indirectly affected by landmines and ERW to comprehensive support in emergency situations, directly or through their families, communities and service providers.
- Designing programming for mine/ERW injured children that is mainstreamed into wider disability, economic and social development, and poverty reduction efforts.
- Supporting stakeholders to meet the needs and enhance the quality of life of children and their families affected by landmines and ERW by advocating for and facilitating access to affordable health care, rehabilitation, psychosocial support, social and economic inclusion (education, livelihood support and social assistance, etc.).
- Encouraging stakeholders to facilitate the empowerment and participation of children affected by armed conflict and of children with disabilities.

This Guidance will be useful to Governmental and non-governmental entities and civil society organizations that provide services or influence policy and budgeting related to survivors and victims of landmines/ERW and persons with disabilities; UNICEF and other UN programme and policy staff at all levels; children and people with disabilities and their families and other care givers; Mine Action actors; Governmental and non-governmental entities and international organizations, including UN actors, providing services for survivors and victims of landmines/ERW and persons with disabilities; and researchers and academics.

Acronyms

AIDS	acquired immune deficiency syndrome
APMBC	Anti-Personnel Mine Ban Convention
C4D	communication for development
CBR	community-based rehabilitation
CCM	Convention on Cluster Munitions
CCW	Convention on Certain Conventional Weapons
CDC	Centers for Disease Control and Prevention (United States)
CMC	Cluster Munition Coalition
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Persons with Disabilities
DFID	Department for International Development, Government of the United Kingdom of Great Britain and Northern Ireland
DPO	disabled people's organization
ERW	explosive remnants of war
GA	General Assembly (of the UN)
GICHD	Geneva International Centre for Humanitarian Demining
GMAP	Gender Mine Action Programme (A Swiss NGO)
HI	Handicap International
HIV	human immunodeficiency virus
ICBL	International Campaign to Ban Landmines
IDP	internally displaced persons
IED	improvised explosive device
IMAS	International Mine Action Standards
IMSMA	Information Management System for Mine Action
ISPO	International Society for Prosthetics and Orthotics
ISU	Implementation Support Unit (of the APMBC)
MA	mine action
MRE	mine risk education
NGO	non-governmental organization
NSA	non-state actor
PDR	People's Democratic Republic (as in Lao PDR)
PFA	psychological first aid
P&O	prosthetics and orthotics
UN	United Nations
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNMAS	United Nations Mine Action Service
UXO	unexploded ordnance
VA	victim assistance
WASH	water and sanitation and hygiene
WHO	World Health Organization

Boxes

Box 10: Mortality and Morbidity among Child Survivors by Age Group, Cambodia (2008-2012)

Box 11: Training of First Responders Reduces Mortality Rates

5.2 Emergency and continuing medical care

"The ground exploded around me. For a long time, I hoped my leg would grow back."
–Chan, aged 15, Cambodia

Source: UNICEF: <http://www.unicef.org/emergencies/index_landmines.html>

Introduction

BLAST injuries from landmines and explosive remnants of war (ERW) cause particularly severe effects in young children because the vital organs of their smaller bodies are closer to the centre of the blast, resulting in the increased likelihood of death. For children who survive, injuries include limb loss, spinal cord injury, fractures, burns and fragmentation injury, shrapnel remaining in the body, injury to the genitals, impairments of eye-sight and hearing, as well as head and brain injury. Psychological trauma is another major consequence of a blast accident. (See also Section 5.4, "Psychological and psychosocial care") Mortality rates differ greatly, based on the types of explosive devices typically encountered in a country, ease of access to adequate emergency first aid and other conditions.

The first objective of emergency medical care is to keep the victim alive, thus reducing the number of preventable deaths, and to take measures as early as possible to prevent longer-term impairment. Most affected countries do not have appropriate pre-hospital emergency medical care to save children's lives. First responders are often not adequately trained to stop severe bleeding, whether in adults or in children. Weapon-contaminated areas are often in remote areas, far away from better equipped medical services and transport from the accident site to the nearest available first aid (pre-hospital care) is particularly challenging.

Emergency care continues at the hospital: those directly affected from the explosive blast usually require lifesaving trauma care, including amputations (of lower limbs from a typical blast mine, of upper limbs from tampering with mines and unexploded ordnance and fragmentation injury from fragmentation mines or hand grenades). Many blast injury victims sustain multiple injuries and require a range of surgical interventions.

Post-operative care is oftentimes lengthy after a severe traumatic injury. Mine/ERW casualties typically require further medical care to allow healing of wounds and burns and physiotherapy. Physiotherapy is essential for persons who underwent amputations in order to avoid secondary complications and impairments and to facilitate the fitting of prosthetic limbs and gait training.

This initial period following the explosion is also the first and truly difficult phase of psychological trauma. Both the survivor and family members go through phases of shock and despair as they try to accept a new reality. Many survivors with limb loss or facing blindness or deafness report that they had thought of ending their lives while in hospital, a despair for which care givers must remain alert.

Finally, children may need ongoing medical interventions after the initial treatment of the physical trauma for corrective surgery, for pain treatment and physiotherapy or for the removal of shrapnel. Families of child survivors oftentimes struggle to afford medical and rehabilitative care. For cultural reasons, in countries where there are challenges of discrimination against women, boys and men are more likely than girls and women to receive high-cost medical attention and transport, as well as longer-term support for their inclusion in education, family, social and economically productive lives.

In armed conflict scenarios the available spectrum of service may be extremely limited and even sometimes non-existent when access is blocked.

Terminology matters

IMPAIRMENT is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual when involved in daily life situations.

DISABILITY is an evolving concept, resulting from the interaction between people with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others. *Convention on the Rights of Persons with Disabilities*

INJURY is the damage to the physical body of a person, resulting from an event (not from a disease or long-term process). It can result from various causes such as violence (for example, the immediate consequence of war, such as gunshot, shrapnel or torture), accidents, consequence of birth, attempted suicide etc.

HelpAge International/Handicap International (2014), Hidden victims of the Syrian crisis: disabled, injured and older refugees, *London/Lyon*

Box 10: Mortality and Morbidity among Child Survivors by Age Group, Cambodia (2008-2012)

Over the five-year period from 2008 to 2012 the Cambodia Mine/ERW Victim Information System (CMVIS) registered details on 365 mine/ERW child casualties: 81 (22 per cent) died and 284 (78 per cent) were injured. (For information on CMVIS, see Box 7 in Section 5.1, "Data collection and analysis".) Boys comprise 79 per cent of all child casualties, girls 21 per cent. Boys were more likely to be killed (24 per cent) than girls (16 per cent).

When analysing mortality and morbidity (the latter term in epidemiology describes the rate at which an illness occurs in a particular area or population) among four age groups, the general pattern for Cambodia was the same as the global pattern: adolescents (groups 12-14 and 15-17) make up the highest percentage, 57 per cent, followed by children aged 6-11 (31 per cent). The youngest children, aged 0-5, account for 12 per cent. (See Table 1 in the Introduction.)

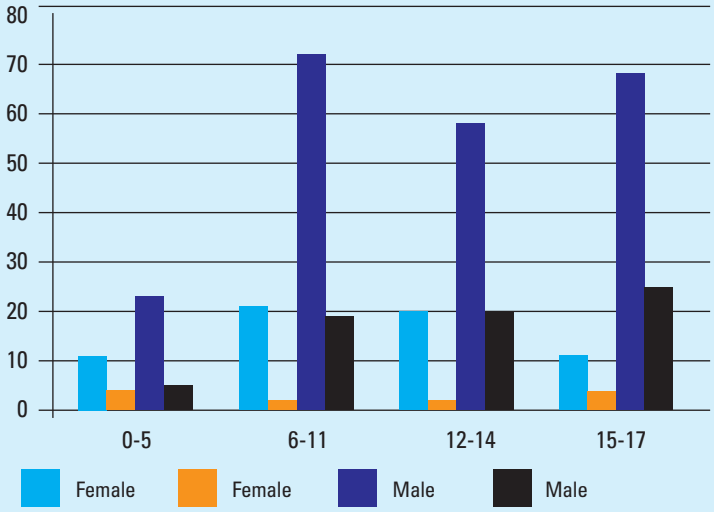
Comparing mortality and morbidity of boys and girls among the age groups does not reveal large differences, except to note that girls are killed less often than their male peers once they are older than 5.

Of 355 child survivors whose injuries were recorded, 255 (72 per cent) sustained wounds. Of those wounded, 42 (12 per cent) required amputations (some may have lost one or more limbs), and 26 (7 per cent) suffered burns; 20 (6 per cent) partially or fully lost their eye sight, 11 (3 per cent) have partially or fully impaired hearing and one adolescent remained paralyzed as a consequence of the blast injury. The nature of ten injuries was unknown.

Analysis of injuries by age groups reveals 1 child aged 0-5 years out of 36 in that age group who sustained an amputation. Of children aged 6-11 years, in total 95, 14 had amputations, 7 remained blind and 2 remained deaf as a consequence of the explosion. Adolescents aged 12-17 comprised the largest group of 198 survivors, 27 of whom underwent amputations, 1 was paralyzed, 13 remained blind and 9 remained deaf. Wounds make up the highest number and need to be further analysed as most may fully heal but some, for example shrapnel wounds, may cause long-term pain and complications. Similarly, burns can be severe and cause lifelong consequences.

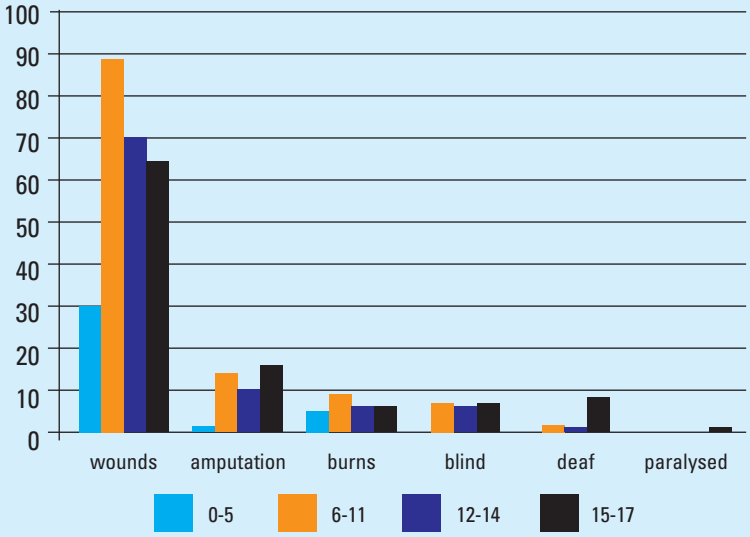
Further analysis by sex and severity of injuries would be needed to provide a deeper understanding of the consequences of blast injuries to boys and girls by age group. (For further details on the activities that led to the accidents and the device type for the same group of Cambodian child survivors, see Table 1 in Chapter 1 "Introduction".

Figure: Mortality and Morbidity among Child Survivors by Age Group, Cambodia (2008-2012)



Note: Here, the adolescents (12-17) are split in two sub-groups of 3-year brackets. If there were three same size age-groups depicted, the column for adolescents among those injured or killed would exceed the others by far.

Figure: Injuries by Age Group, Cambodia (2008-2012)



Note: Adolescents (12-17) are split in two sub-groups of 3-year brackets each. See Note to previous figure as well.

Source: Analysis by the author based on data provided by Cambodia Mine/ERW Victim Information System (CMVIS), February 2014

Goals

Improved first aid results in fewer children who die or sustain long-term impairments as a consequence of a blast injury. That they receive optimal emergency and continual hospital care, as needed, that facilitates rehabilitation and allows for full recovery. That child survivors and their caretakers receive psychosocial care and support as an integrated component of health care.

The role of emergency and continued medical care in child-focused victim assistance

The role of emergency and continued medical care in child-focused victim assistance is to ensure that:

- Medical practitioners, including emergency, continual and surgical care practitioners, are trained and have the capacity to address the specific complexities of child traumatic injury;
- First aid and emergency trauma care are adapted to the specific needs of children; and are available and accessible, with the objective of saving lives and preventing impairment and facilitating rehabilitation to the extent possible;
- Boys and girls are able to access age- and gender-appropriate medical care throughout their life-cycle, at the level and frequency that they require for optimal recovery and to facilitate rehabilitation;
- Health care practitioners are aware of potential gender-bias and discrimination in the demand and provision of emergency and continued medical care, and are sensitized and enabled to promote equal access and attention for girls and boys;
- Health care practitioners are aware and able to maintain family ties and prevent the separation of children from their families during medical evacuation or hospitalization;
- Child victims and their family members receive adequate psychosocial care by trained medical staff or social workers and peer-supporters (see below for further detail).

Key concepts

Emergency medical care for mine/ERW victims

The goal of emergency care is to provide acute trauma care including first aid, blood transfusions, and other immediate measures that prevent death and permanent impairments as much as possible.

Saving lives and limbs is a slogan commonly articulated as a key objective of mine action, often with respect to demining but which is equally relevant as a key objective of victim assistance. We know that fast and appropriate first aid, including specific skills required to treat children, not only saves lives but also limbs. For example, whether a first aid provider stops the bleeding by applying pressure dressing or by using a tourniquet will have a significant impact. Above the knee amputation can be avoided if the first rather than second approach is used.

Beyond first aid, adequate trauma care and surgery by medical staff specially trained in treating injuries to children is required. Medical practitioners must bear in mind that, "[A]ll children are extremely afraid after an accident – especially if they have trouble in breathing." The field manual on war surgery identifies three age categories for children in determining treatment: Age 1-2 years, 5-7 years, and 10-12 years.[3]

War Surgery – Field Manual
The injured child

Children are not small adults!

In particular, children are different in the way they react to blood loss.

Yet the basic rules for examination and treatment are the same as in adults: First airway, then breathing, and then blood circulation.

The normal values [of breathing rate, heart rate, approximate blood volume, etc.] for children are different from those for adults. You must know what is normal when you examine an injured child. [Tables are provided with normal values of breathing rate/minute, heart rate/minute, approximate blood volume, etc. for children age 1-2 years, 5-7 years, and 10-12 years]

Airways: Small children breathe through the nose, not by the mouth. If the nose is blocked they may become desperate …

Husum, Hans et al. 2011, War Surgery*, p.406*

Continuing medical care for mine/ERW survivors

The goal of continuing medical care is to promote the person's full recovery with measures such as corrective surgery as children grow and pain management. Many persons that have undergone limb amputations suffer from phantom limb pain.

Barriers to emergency and continuing medical care for mine/ERW victims

In the provision of VA for children, one of the critical gaps is a general lack of trained first aid providers at the village level. First aid providers, often lay persons or local health care workers, need specialized training on what techniques to use to save children, especially in less-resourced settings.

At the hospital level, surgeons often lack training in adequate amputation techniques and eyesight-saving measures required to treat children.

Inadequate transport is another serious barrier. No or inadequate transport leads to critical delay in getting first responders to the accident scene as well as getting the victim(s) to the nearest adequate medical facility. Long journeys, at times taking several days, may result in serious infections that eventually lead to death. Barriers to affordable transport also affect continuing medical care as child survivors with limb loss may need repeated adaptive surgery due to the continuous bone growth. Similarly children with eye or head injuries may require several surgeries.

In humanitarian settings, the issue of denied humanitarian access might also be a serious barrier.

Inclusive health

"Inclusive health means that all individuals can access health care irrespective of impairment, gender, age, colour, race, religion and socioeconomic status. To ensure this, health-care service providers need to have positive attitudes towards disability and people with disabilities and have appropriate skills, e.g. communication skills to accommodate the needs of people with different impairments. The whole environment needs to change so that nobody is actively, or passively, discriminated against; one way of achieving this is by ensuring that people with disabilities and disabled people's organizations (DPOs) are active participants in the planning and strengthening of health-care and rehabilitation services."[4] Disability issues should be further incorporated in training and policy guidelines for health workers. Deliberate efforts should be made to generate data on access to health care for people with disabilities to inform positive changes in inclusive health care delivery. CRPD Article 25 describes the rights to health services for all persons with disabilities.

Nutrition

Nutrition is important for the development of all children including children with disabilities and child victims in general. While malnutrition can be a cause of disability, it can also be a consequence. Malnutrition is very closely linked to poor hygiene and poor sanitation. Poor nutrition in early childhood can result in poor cognitive and educational performance. Specifically for survivors, adequate nutrition plays an essential role in children's healing and recovery, and caloric needs of children may need to be revised based on the impacts of injury (e.g. for children with amputations). Considerations for the impacts of injuries on the digestive system, including ability to eat due to injuries to the hands or mouth, should also be borne in mind, both in terms of medical attention as well as during the physical rehabilitation phase. UNICEF globally addresses Vitamin A deficiency, which, according to the World Health Organization (WHO), is the leading cause of preventable blindness in children and increases the risk of disease and death from severe infections. Children with disabilities should be included in all public health nutrition considerations.

Desirable outcomes

- Landmine and ERW casualties including children have access to specialized first aid within the critical first hour following the accident.
- First aid responders are adequately trained to save lives and limbs of severely injured children.
- Child deaths from a mine/ERW-accident are reduced and prevented thanks to improved access to and quality of first aid and emergency trauma care adapted to the specific needs of children.
- Long-term physical impairment and disability of children is prevented or reduced through appropriate emergency and longer-term medical and surgical care.
- Children who sustain severe blast injuries receive adequate medical care over their lifetime.
- Women and girls have equal access to medical services as men and boys.
- Injured persons and their family members understand the role and purpose of medical care, receive accurate information about the treatment available and participate in the decisions regarding their treatment.

Sony Kinyera, 17 years, is walking back from school in Gulu district, Northern Uganda. He lost his right leg after stepping on a landmine.

- Children who are medically evacuated or hospitalized maintain family ties and are not separated from their caregivers.
- Medical services and other related providers promote the psychosocial recovery and wellbeing of children and their families.
- Medical services and the access to specialized services are affordable.

Suggested activities

Strengthen first aid for children

- ✓ Increase disability prevention and child injury treatment capacity of 'first responders' (men and women) mainly in the pre-hospital phase of care primarily through training villagers and community volunteers with no medical background.
- ✓ Provide sufficient basic supplies to pharmacies and first aid responders at the community level.
- ✓ Integrate first aid training with other sector actors, including disaster risk management and school safety. Consider training mine risk education-providers as first aid trainers.
- ✓ Increase psychological first aid capacity.
- ✓ Ensure that children are not separated from their caregivers/families during emergency medical evacuations.
- ✓ Train drivers of formal and informal ambulances as first aid responders.

Facilitate access to first aid responders

- ✓ Address communication challenges regarding how to reach first aid responders and how to arrange transport for emergency evacuations. Pay attention to cost recovery issues.

Ensure access to appropriate medical and nutritional care

- ✓ Inform child victims/survivors, their caretakers and community members about existing services and how to access them.
- ✓ Assist with transport cost to reach adequate medical and nutritional care.
- ✓ Organize adequate referrals from primary care to higher level care.
- ✓ Ensure that social or case workers are kept informed and document and ensure information management of medical-related referrals.
- ✓ Aim at professional assessment of all possible medical and nutritional effects resulting from the blast accident; agree on a routine medical protocol if not existing; ensure child-specific medical care is incorporated.
- ✓ Aim at adequate and safe accommodation for children and their caregivers while receiving medical treatment.
- ✓ Ensure that children are not separated from their care givers or families when they are referred to required medical services.

Box 11: Training of First Responders Reduces Mortality Rates

In post-conflict, landmine-ridden rural areas of Cambodia and Iraq, there were no formal emergency medical services. An innovative programme by Trauma Care Foundation, Norway, from 1997-1999 created a two-tier network of village 'first responders' (villagers who had completed a two-day basic first aid course) and paramedics (trained on a 450-hour course). Each paramedic trained at least 50 first responders between each stage of their own training. At the end of the five-year intervention, 5,200 first responders had been trained in the villages. An additional, explicit aim of the training programme was to rebuild trust and repair broken social networks in these remote, rural areas.

At the end of the first five years, an in-depth assessment was conducted. A total of 1,061 trauma victims had been managed, most of them with severe injuries. The mean response time from injury to first medical contact was reduced from 2.9 hours in 1997 to 1.8 hours in 2001. Given the remote areas in which the work was conducted, the mean pre-hospital transit time did not change and remained 5.7 hours. Mortality among injured people declined dramatically, from 40 per cent to 9 per cent. This programme supplied training and basic equipment, but no ambulances or other vehicles. Over time, the systems in both countries grew and adapted to a changing epidemiological pattern, caring for increasing numbers of road traffic crash victims and other medical emergencies.

Source: World Health Organization (2010), *Strengthening care for the injured: success stories and lessons learned from around the world, Geneva*, pp. 3-7; see also Handicap International (2013), Victim Assistance Factsheet 1, Medical Care, Lyon

Continuing medical care for mine/ERW victims

- ✓ Provide training to medical staff on surgery, advanced trauma care and on psychological first aid and psychosocial support for children with severe injury and disability, including on the prevention/reduction of impairment. This training needs to address specific requirements when assisting children of various age-groups with traumatic injuries.
- ✓ Provide training to nutrition staff on specific nutritional needs of child survivors.
- ✓ Provide free or affordable medical and nutritional care to the highest attainable levels.
- ✓ Support healing, e.g. with the right nutrition, community-based sanitation and hygiene, follow-up care, psychosocial support for survivors, family members/care givers and medical staff.
- ✓ Provide child-friendly care, respecting privacy especially for girls and female caregivers.
- ✓ Ensure referrals to rehabilitation services, the provision of assistive devices and to (continued) psychosocial and nutritional care.
- ✓ Provide access especially for child survivors for continued specific medical care; several corrective surgeries may be needed throughout their childhood/adolescence due to continuous bone growth. (Programme budgets should include transport and other costs as required on an ongoing basis for families with low income).

Help to prevent secondary conditions

- ✓ Provide health promotion as early as possible after the accident on how to prevent secondary infections and joint contractions through physiotherapy and, ideally, occupational therapy.
- ✓ Provide psychosocial and where required more specialized psychological support to prevent depression, to reduce trauma and to minimize phantom limb pain.
- ✓ Provide specialized nutritional support to enhance healing and recovery.

Ensure access to healthcare services (inclusive health)

- ✓ Ensure access to standard medical and nutritional care for all children with disabilities as part of inclusive health provision.
- ✓ Provide access to general medical and nutritional care for survivors, families and their communities. Health services that are particularly necessary for children, adolescents and women, including victims and those with disabilities, include vaccinations, nutrition advice, early detection of impairments, contraception, HIV prevention and maternal and child care.
- ✓ Provide these health services as close as possible to people's own communities, including in rural areas.

Technical Resources

Documents are listed in ***inverse chronological order***, starting with the most recent ones.

Emergency and continuing medical care

Meddings, David (2013), 'Child Injury Prevention: An Overlooked Challenge for Child Survival', *International Journal of Environmental Research and Public Health* 2013 Vol. 10, pp. 568-570, <http://www.thehealthwell.info/journal/ijerph-vol-10-pages-568-570-child-injury-prevention-overlooked-challenge-child-survival-0?&content=journal_article&member=none&catalogue=none&collection=none&tokens_complete=true>

Handicap International (HI) (2013), *Victim Assistance Factsheets,* Lyon; here Factsheet 1 'Medical Care', <http://www.hiproweb.org/fileadmin/cdroms/VictimAssistance/Fact_Sheets/HI-FactSheets-HD.pdf>

Husum, Hans, Ang, Swee Chai & Fosse, Erik (2011), *War Surgery, Field Manual,* Third World Network, Trauma Care Foundation, 2nd revised edition, Penang [Chapter 19 is on 'Injuries to children and old people'], <http://traumacare.no/warsurgery-online/>

WHO/UNESCO/ILO/IDDC (2010), 'Health component', *Community-Based Rehabilitation: CBR Guidelines,* Geneva [Also: 'CBR and HIV/AIDS', In 'Supplementary booklet', pp. 21-32] <http://www.who.int/disabilities/cbr/guidelines/en/>

World Health Organization (2010), *Strengthening care for the injured: success stories and lessons learned from around the world,* Geneva, <http://whqlibdoc.who.int/publications/2010/9789241563963_eng.pdf>

Watts, Hugh G. (2009), 'The consequences for children of explosive remnants of war: Land mines, unexploded ordnance, improvised explosive devices and cluster bombs.' *Journal of Pediatric Rehabilitation Medicine: An Interdisciplinary Approach,* 2009, Vol. 2, pp. 217-227, <http://iospress.metapress.com/content/jp375t0l812026g4/>

WHO (2007), *Integrated Management for Emergency and Essential Surgical Care (IMEESC) e-learning tool kit,* Geneva, <http://www.who.int/surgery/publications/imeesc/en/>

International Committee of the Red Cross (2006), *First Aid in Armed Conflicts and Other Situations of Violence,* Geneva, <http://www.icrc.org/eng/assets/files/other/icrc-002-0870.pdf>

WHO (2005), *Prehospital trauma care systems,* Geneva, <http://whqlibdoc.who.int/publications/2005/924159294x.pdf>

WHO (2004), *Guidelines for essential trauma care,* Injuries and Violence Prevention Department, WHO and the International Association for the Surgery of Trauma and Surgical Intensive Care (IATSIC), Geneva, <http://www.who.int/violence_injury_prevention/publications/services/guidelines_traumacare/en/>

Husum, Hans, Gilbert M. & Wiborg T. (2000), *Save Lives, Save Limbs, Life support for victims of mines, wars, and accidents. A handbook for medics and medical teachers.* Penang (Third World Network), <http://traumacare.no/publications/>

ICRC (1998), *Surgery for victims of war,* Third Edition, Geneva, <http://www.icrc.org/eng/resources/documents/publication/p0446.htm>

Endnotes

1 Landmine & Cluster Munition Monitor (2013), *Fact Sheet Children & Landmines*, full source see References. These are reported casualties; the actual figure may be higher. Landmines are explosive devices. However, as conventions and protocols address landmines and ERW separately, the two are listed separately henceforth. Protocol V of the Convention on Certain Conventional Weapons defines ERW as unexploded and abandoned explosive ordnance. The data include casualties from remnants of cluster munitions, a specific type of ERW.

2 A "child" is defined in the Convention on the Rights of the Child as a person younger than 18 years of age. "Adolescents" are generally defined to be between 10 and 18 years old. Some definitions of "young people" go up to 24 years.

3 Husum, Hans, Ang, Swee Chai & Fosse, Erik, *War Surgery, Field Manual,* 2nd revised edition, Penang 2011, p. 406; Chapter 19 is on 'Injuries to children and old people'. See <http://traumacare.no/warsurgery-online/>.

4 WHO/UNESCO/ILO/IDDC (2010), *Community-Based Rehabilitation: CBR Guidelines,* 'Health component', p. 7.