



ENSURING THE PREPAREDNESS AND SECURITY OF HEALTH-CARE FACILITIES IN ARMED CONFLICT AND OTHER EMERGENCIES

**HEALTH IT'S A
CARE MATTER
IN OF LIFE
DANGER & DEATH**



ICRC



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TABLE OF CONTENTS

FOREWORDS	5
ABOUT THIS PUBLICATION	9
THE HEALTH CARE IN DANGER PROJECT	10
ACKNOWLEDGEMENTS	11
1. SETTING THE SCENE	13
1.1 Context	13
1.2 What the law says	15
2. PLANNING AND ASSESSMENT	17
2.1 Introduction	17
2.2 Contingency planning	17
2.3 Understanding the context	17
2.4 Safety level of a health-care facility	18
2.5 Coordination	20
2.6 Advocacy	20
3. SECURITY AND WELL-BEING OF HEALTH-CARE PERSONNEL, PATIENTS AND RELATIVES	25
3.1 Introduction	25
3.2 Staff working conditions	25
3.3 Composition of the workforce	30
3.4 Staff preparedness	30
3.5 Safety of patients	30
3.6 Patients' relatives	31
3.7 Disruptive entries	31
3.8 Communities	33
3.9 Media relations	33
4. SECURITY OF HEALTH-CARE INFRASTRUCTURE	37
4.1 Introduction	37
4.2 Risk assessment	37
4.3 Balancing the need for physical security, access and positive perception	37
4.4 Site considerations	38
4.4.1 Location	38
4.4.2 Standoff distance	38
4.4.3 Facility configuration	39
4.5 Organization of buildings	40
4.6 Access and control of entries	40
4.6.1 First line of protection: The perimeter fence	41
4.6.2 Public entrance, security screening and triage	41
4.6.3 Second line of protection: Preventing intrusion and harm in critical areas	42
4.7 Safe rooms	42
4.8 Structure of buildings	43
4.9 Openings	44

4.10 Utilities network (water, power, sewage)	44
4.11 Self-sufficiency	45
4.12 Maintenance	45
4.13 Fire risk	46
4.14 Communications system	46
5. SECURITY OF THE SUPPLY CHAIN FOR HEALTH-CARE EQUIPMENT AND GOODS	49
5.1 Introduction	49
5.2 Human resources	49
5.3 Information and communications systems	49
5.4 Financial systems and resources	50
5.5 Planning and preparedness	50
5.6 Item selection	50
5.7 Demand forecasting and inventory control	51
5.8 Sourcing	52
5.9 Storage	52
5.10 Transportation	53
6. TEMPORARY RELOCATION FOR SECURITY REASONS	57
6.1 Introduction	57
6.2 Location	57
6.3 Available services and level of care	58
6.4 Preparing for the transfer	58
CONCLUDING REMARKS	61



FOREWORD

By Pascal Hundt, Head of Assistance Division, International Committee of the Red Cross

Respect for and protection of the wounded and sick, health-care personnel, facilities and medical transports have been at the heart of the development of international humanitarian law (IHL) since the first Geneva Convention was adopted in 1864. Today, however, various forms of violence continue to disrupt or endanger health care in many parts of the world.

Violence can disrupt health-care services when they are needed most; even one single attack can have serious knock-on effects. In a conflict situation, for instance, an act of violence may lead to the departure of health-care personnel and the closure of medical facilities, leaving people without access to health care. Entire communities may feel the impact if it proves difficult to offer even basic health care or to carry out public health activities, such as vaccination programmes, as a result of the violence. In terms of the number of people affected, the violent disruption of health-care provision is one of the most serious humanitarian issues of the day.

The formulation of practical recommendations to enhance the security of health-care facilities is at the core of the Health Care in Danger project. The concept of security needs to be understood broadly when applied to health care. For this reason, the recommendations set out in this publication cover everything from facilities and supplies to health-care personnel, patients and their relatives; in short, everything related to health-care provision that requires protection in the context of armed conflict and other emergencies. Implementing security measures that take into account all of these facets can help to ensure that patients are protected and receive a high quality of care, and that health-care personnel are respected and feel safe in their workplace.

This publication does not convey the views of any organization in particular; rather, it is the product of cross-organizational collaboration, building on the recommendations from experts' consultations with representatives of health-care providers, national authorities, and national and international organizations. Sharing these recommendations with partners in the field, governments and other organizations is integral to efforts to make the delivery of health care safer.

We would like to thank our partners in the Health Care in Danger project for their contributions to this work and encourage their continued engagement in the promotion of the messages of the project and in the implementation of practical measures to improve the safety of health-care delivery.

By Eric de Roodenbeke, Chief Executive Officer, International Hospital Federation

Access to health care is high on the international agenda. The objective of achieving universal health coverage will be a priority among the Sustainable Development Goals to be adopted by the United Nations in 2015. However, while there seems to be broad agreement in the United Nations arena that access to health care is a basic human right, this right is far from guaranteed in all circumstances. On the contrary, in the past 10 to 15 years, we have witnessed retrogression on key Geneva Convention principles and rules, and this is of major concern for all those involved in health-care provision. Reversing this trend requires significant effort.

For this reason, the International Hospital Federation has decided to offer strong support to the Health Care in Danger project, an initiative led by the International Committee of the Red Cross (ICRC). It is also raising awareness among health-care providers of their responsibility in taking measures to ensure that they can continue working even under the stress of armed conflict.

Urgent action is needed across the world, in particular steps to increase preparedness in countries at peace. We are witnessing a sharp rise in daily violence and disruptive intrusions in health-care facilities, not only by people seeking care and their relatives, but also by law-enforcement agents, who may be under media pressure to take action or cracking down on increased crime. Measures designed to limit and mitigate violence in health-care settings should already be given consideration during peacetime. As with disease, prevention is better than cure. In other words, it is preferable to put in place measures to prevent or dramatically reduce the impact of violence rather than simply to react to the incident once it has occurred. Nevertheless, prevention and cure are not mutually exclusive; it can prove effective to take both approaches together.

There are many small measures that can be taken to enhance the security of health-care facilities, as this publication makes clear. Ensuring that these measures are systematically and appropriately implemented will make a big difference when a crisis erupts. Preventive measures should be considered as early as possible, especially those concerning the layout of buildings and the protection of infrastructure. Reactive measures should be integrated into standard operating procedures and be regularly assessed, trialled and reviewed.

These actions will also help to develop a greater sense of preparedness. Although the routine of most health-care services is predictable and controlled, it can easily be disrupted by a major disaster or other mass-casualty situation. Adopting mitigation measures in a period of stability will go a long way towards ensuring that health-care facilities remain operational in times of critical need. It is also necessary to prepare staff to assess various risks, develop responses and implement measures, through exercises based on realistic scenarios. These should be repeated frequently enough to train all newcomers and to maintain a high level of competency among existing staff members.

It is important to consider this publication more of a practical manual than a simple source of information. It should help health-care facilities to prepare for situations of external stress, or to manage existing situations, and ultimately allow them to accomplish their mission: to care for those in need and to help maintain a healthy population.



ABOUT THIS PUBLICATION

This publication discusses issues relevant to the security of health-care facilities located in contexts prone to, or in the midst of, armed conflict and other emergencies. It contains recommendations of measures to take to enhance the preparedness and security of health-care facilities in order to mitigate the risk of disruption in the delivery of health care.

In addition, this publication promotes some key preventive measures for consideration during the early stages of designing a health-care facility, in order to increase its resilience to all kinds of major risk.

As part of the Health Care in Danger project, two experts' workshops were held on the theme of security of health-care facilities in armed conflict and other emergencies. One workshop was convened in Ottawa, Canada, in September 2013, and was co-organized by the ICRC and the Canadian Red Cross Society. The second workshop took place in Pretoria, South Africa, in April 2014, and was co-hosted by the ICRC and the Department of International Relations and Cooperation, Republic of South Africa. This publication builds on the outcomes of discussions among the diverse range of participants at these two workshops.

The target audience for this publication includes managers and administrators of health-care facilities, architects and civil engineers working on health-care infrastructure, health-care personnel, and national and international health-care providers who directly or indirectly deliver health-care services in contexts prone to, or in the midst of, armed conflict and other emergencies.

- **Chapter 1** gives an overview of the impact that violence may have on the delivery of health care, highlights the importance of enhancing the security of health-care facilities and discusses the protection afforded by international law.
- **Chapter 2** focuses on contingency planning for health-care facilities, measures to enhance coordination and cooperation between facilities, and advocacy for the safe delivery of health care.
- **Chapter 3** covers issues relating to the security and well-being of health-care personnel and patients, and methods for preparing for and dealing with stressful situations caused by an emergency.
- **Chapter 4** discusses a number of generally recognized architectural principles and engineering considerations relating to the design of health-care facilities and proposes measures that could increase the security level of infrastructure.
- **Chapter 5** outlines potential risks of disruption in the supply of health-care equipment and goods, and proposes measures to enhance the preparedness and resilience of health-care services.
- **Chapter 6** considers the implications of temporarily relocating health-care services to a safer place when security for staff and patients reaches a higher risk level than can be managed in the current location, and provides guidance on what to consider in such a process.

THE HEALTH CARE IN DANGER PROJECT

In November 2011, the 31st International Conference of the Red Cross and Red Crescent called upon the ICRC to initiate consultations with experts from States, the International Red Cross and Red Crescent Movement and other stakeholders in the health-care sector, with a view to formulating recommendations to make the delivery of health-care services in armed conflicts and other emergencies safer. The ICRC was also requested to report on progress made to the 32nd International Conference in 2015. This resolution was adopted against a backdrop of growing concern in the humanitarian community over the lack of respect for the protection afforded to health-care providers and their beneficiaries under international humanitarian law (IHL) and other bodies of law.

In fulfilment of this resolution, the Movement decided to launch the Health Care in Danger (HCiD) project in 2011. Led by the ICRC, in partnership with other components of the Movement, the project entails working with States and other influential stakeholders to improve the security and delivery of impartial and efficient health care during armed conflict and other emergencies. Its four priority issues are: (i) attacks on services and patients; (ii) unlawful obstruction to the delivery of health services; (iii) discrimination in the treatment of patients; and (iv) armed entry by weapon-bearers into health-care facilities.

The project tackles these issues through two approaches: through operational response and through consultation with experts and diplomacy. The latter approach focuses on building partnerships with major stakeholders to widen the scope of the project, establish sustainable solutions and ensure partners' commitment to achieving its goals. A communications campaign has been launched to support both approaches, with the aim of increasing public awareness of the lack of safe access to health care and of gaining support for the adoption and implementation of measures to improve the security and delivery of effective and impartial health care.

In order to maintain the momentum gained at the 31st International Conference and to build up to the 32nd International Conference, a series of international experts' consultations and workshops was held between 2012 and 2014. These workshops were organized by the ICRC, in cooperation with States, National Societies and non-governmental organizations from various countries, and covered the following issues:

- Rights and responsibilities of health-care personnel
- The role of National Societies in protecting health-care provision
- Military operational practice that ensures safe access to and delivery of health care
- Ambulance and pre-hospital care in risk situations
- Security of health-care facilities
- National legislation and penal repression
- The role of civil society and religious leaders in promoting respect for health care.

Each workshop brought together experts from between 10 and 25 countries, representing international governmental organizations, international and local non-governmental organizations, the health community and academia, and sought to devise practical recommendations and solutions to the above-mentioned issues.

The ethical principles of health-care provision in times of armed conflict and other emergencies have also been discussed within the context of the project. In addition, a number of bilateral and confidential consultations have been held with non-State armed groups about violence affecting health-care provision.

Other means by which the ICRC has been raising awareness and promoting solutions to these issues include gathering information on violent incidents affecting health care in a number of contexts with an ICRC presence¹ and developing training materials, such as the e-learning module entitled "The rights and responsibilities of health-care personnel working in armed conflict and other emergencies."²

¹ ICRC, *Health Care in Danger: Violent incidents affecting the delivery of health care, January 2012 to December 2014*, ICRC, Geneva, April 2015. This is the latest report on violent incidents affecting health care released by the ICRC. Similar reports were published in 2013 and 2014.

² ICRC, *Health Care in Danger: The rights and responsibilities of health-care personnel working in armed conflict and other emergencies* [e-learning module], ICRC, Geneva, 2014. Accessible online at: www.healthcareindanger.org/elearning (last accessed in April 2015).

ACKNOWLEDGEMENTS

The contributions of the Canadian Red Cross Society and the South African Department of International Relations and Cooperation to the HCiD workshops have been important sources of reference for this publication, along with the input of partner organizations and individuals, from both within and outside the Movement. Special thanks go to external contributors and to representatives of organizations taking part in the review process: Canadian Red Cross Society, Egyptian Red Crescent Society, Harvard Humanitarian Initiative, International Federation of Hospital Engineering, International Hospital Federation, Reference Centre for Psychosocial Support of the Federation, Médecins Sans Frontières, Pan American Health Organization and World Health Organization.

DEFINITIONS

As the HCiD project deals with a number of different situations, the terms used in this publication – for instance, health-care personnel and facilities and medical transports – should be understood more broadly than the terms “medical personnel,” “units” and “transports” under international humanitarian law (IHL), which applies during armed conflict. Medical personnel, units and transports fall within the IHL definition when they are “assigned exclusively to medical purposes by a competent authority of a party to the conflict.” In the context of the HCiD project, personnel, units or transports can fall within the scope of the definition even if they have not been assigned by a party to a conflict.

Health-care facilities include hospitals, laboratories, clinics, first-aid posts, blood transfusion centres, and the medical and pharmaceutical stores of these facilities.

Health-care personnel include:

- people with professional health-care qualifications, e.g. doctors, nurses, paramedics, physiotherapists and pharmacists;
- people working in hospitals, clinics and first-aid posts, ambulance drivers, hospital administrators, or personnel working in the community in their professional capacity;
- staff and volunteers of the International Red Cross and Red Crescent Movement involved in delivering health care;
- medical personnel of armed forces;
- personnel of health-oriented international and non-governmental organizations;
- first-aiders.

Medical transports include ambulances, medical ships or aircraft – whether civilian or military – and means of transport conveying the wounded and sick, health-care personnel and medical supplies or equipment. The term includes all vehicles used for health-care purposes, even if not assigned exclusively to medical transportation and under the control of a competent authority of a party to a conflict, such as private cars used to transport the wounded and sick to a health-care facility, transport vehicles for medical supplies, and people-carriers transporting medical staff (e.g. for local vaccinations or to work in mobile clinics).



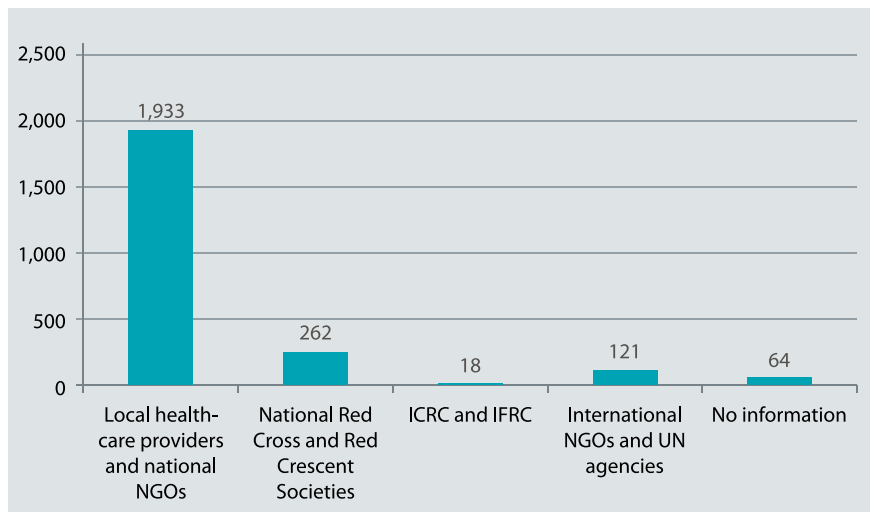
1. SETTING THE SCENE

1.1 Context

In armed conflict and other emergencies, violence disrupts health-care services at a time when they are needed most. Violence against the wounded and the sick, and against health-care facilities and personnel, is a crucial yet overlooked issue of humanitarian concern.

In 2012, the ICRC began collecting information on violent incidents affecting health-care provision in the context of armed conflict and other emergencies, as part of the HClD project.³ It recently released a report based on data gathered in 11 countries between January 2012 and December 2014, relating to a total of 2,398 incidents. The report presents a snapshot of these incidents, which involved the use or threat of violence against health-care personnel, the wounded and the sick, health-care facilities and medical transports.

Consistent with the findings of previous reports released in 2013 and 2014, the 2015 report highlights that local health-care workers, including staff of National Red Cross and Red Crescent Societies and local NGOs, were the category of providers most affected by violence, falling victim to 91% of the incidents recorded.



* No information: information not available or not applicable (when a provider was not subject to violence in the incident).

Furthermore, 1,222 (about 50%) of the documented incidents were directed against health-care facilities or occurred on their premises, thus disrupting normal activity. In relation to these incidents, the report found that:

- **patients were killed, wounded and/or beaten**, as were their relatives and other bystanders;
- **health-care personnel were threatened and coerced** to act against medical ethics and/or to provide free treatment;
- health-care personnel were also the victim of threats and physical assaults on the part of **patients and their relatives**;
- facilities were directly **fired at, bombed and/or burnt** or indirectly damaged during the conduct of hostilities;
- many of the incidents in which people were injured or killed involved the **use of explosives and/or bombing operations**;
- **disruptive armed entries** took the form of break-ins and entries with the purpose of perpetrating violence against people inside, including the forced removal of patients from the facility and arrest operations;

³ The data were collected from a broad range of sources: people directly affected by or involved in the incident (victims, witnesses, hospital directors, etc.), National Red Cross and Red Crescent Societies, mass media (local and international), other humanitarian organizations and local health-care communities.

- health-care facilities were subject to several acts of **looting and pillaging**, often accompanying a **break-in** to the facility, and there were frequent incidents of people inside the facility being robbed;
- health-care facilities were **occupied and misused**, with perpetrators forcing access to health-care services or using the buildings for military purposes;
- the impact of these incidents included **loss of resources and severe damage**, often leading to the **suspension of health services**.

Whether intentional or not, violence against, inside or on the grounds of health-care facilities can result in a disruption in the delivery of health-care services. Such interferences naturally affect health-care personnel in their daily work and may result in an aggravated level of stress unless measures are put in place to protect staff and prepare them for such situations.

In order to mitigate the risk of interruption in the delivery of health care, and to protect the integrity of services provided, the security of the facility needs to be considered from a number of angles. A combination of measures is required to boost the security of the infrastructure, to protect the services and supply-chain mechanisms, and to enhance the safety of staff and patients in their care. It is important to adopt such a holistic approach to preparedness planning if health-care facilities are to continue functioning in the face of different risks, regardless of whether these are posed by situations of armed conflict or by natural disasters and other hazards.

Security versus safety

Security: Freedom from direct or indirect harm or loss as a result of intentional acts in the context of armed conflict and other situations of violence. Sources of risk are often referred to as “threats.” Security measures are developed to protect people and property from injury or loss resulting from deliberate actions taken by other people.

Safety: Freedom from harm or loss as a result of inherent or unintentional acts in the context of accidents, natural disasters, etc. Sources of risk are often referred to as “hazards.” Safety measures are developed to protect people and property from injury or loss resulting from circumstance, accident or negligence.

Security measures could range from the very basic to the more sophisticated, depending on the context and available resources. It is critical, however, to ensure that applied measures do not have a negative impact on the perception and acceptance of the health-care facility among local communities. To this end, advocacy and dissemination activities should be undertaken to raise awareness of the impartial nature of the provision of health care and of the types of services offered. Regular communication could also help to encourage authorities and community leaders to take a more active role in disseminating information on these issues.

A call for safer access to health care

By Dr Rudi Coninx, Department of Emergency Risk Management and Humanitarian Action at the World Health Organization

There is an increasing lack of respect for health-care facilities, health-care workers and the right to health care. Violence against the health system limits access to medical services by the people who need them most and at a time they need them most. Attacks on health-care facilities not only have grave consequences for the patients and medical personnel directly involved, but also for public health in general. For example, if health-care workers are prevented from vaccinating people against polio and an outbreak then occurs, this constitutes a serious public health problem – a problem with potentially international ramifications.

Lack of respect for international humanitarian law, disregard for the sanctity of health care and deliberate targeting of health-care facilities, health-care workers and patients inevitably interfere with the delivery of health care and the accessibility of health services. Everyone has a right to health; this is a fundamental and non-negotiable right, which should be respected at all times. It is enshrined in the Constitution of the World Health Organization, signed by 193 Member States. If health-care provision is not respected and health-care workers and patients are attacked, then the right to health is compromised.

Member States need to take action to enhance preparedness and to develop solutions that can be implemented by their relevant ministries. The sanctity of health care and the right to health must be reaffirmed. The continuity of services needs to be monitored and measures applied to prevent attacks. Respect for health-care services must be promoted and consideration given to finding alternative ways of delivering health care where necessary.

1.2 What the law says

All possible measures must be taken to provide and facilitate essential health care in an impartial manner to the wounded and sick. This is stipulated both by international humanitarian law (IHL), which is only applicable in armed conflicts, and international human rights law (IHRL), which contains legal obligations for States in peacetime as well as wartime. IHL requires all parties to armed conflicts to provide the wounded and sick with impartial medical care and attention, subject to their resources and to the feasibility of such measures in the midst of hostilities.⁴ Under the right to health, IHRL requires States to ensure access to essential health facilities, goods and services; minimum essential food, basic shelter, housing and sanitation; and an adequate supply of safe and potable water; and to provide essential drugs. States are obliged to respect the principles of non-discrimination and equitable access in this regard. They must also design and implement public health strategies.⁵

With respect to the provision of health care, under IHL, medical facilities that are exclusively assigned by a competent authority of a party to the conflict must be respected and protected.⁶ This means that they must not be attacked or unduly prevented from fulfilling their functions.⁷ While armed entries into medical facilities are not prohibited *per se*, they must not be conducted in a manner that would unduly delay or outright deny the delivery of health care to the wounded and sick present in a facility. Furthermore, medical facilities must be protected from interferences by third persons and measures must be taken to assist them in the performance of their tasks.⁸ This includes facilitating the supply of resources that are critical to the functioning of the medical facility, such as water or electricity. In addition, health-care personnel must neither be compelled to perform activities contrary to health-care ethics or to refrain from conduct required by health-care ethics.⁹ In a similar vein, IHRL requires States to refrain from direct or indirect interferences with the enjoyment of the right of non-discriminatory access of the wounded and sick to health-care facilities, goods and services, and to take positive measures to prevent third parties from interfering with the provision of health-care services as well as to enable and assist individuals to enjoy their right to health.¹⁰

The red cross, red crescent and red crystal emblems shall not be employed except for the purposes of identifying protected health-care personnel or facilities authorized to use them or to indicate that persons or objects are linked to the International Red Cross and Red Crescent Movement.¹¹ All necessary measures must be taken to prevent and repress misuse of these emblems.¹²



⁴ See, in particular, First, Second, Third and Fourth Geneva Conventions (GC I-IV), common Art. 3; GC I, Art. 12; Additional Protocol I (AP I), Art. 10; Additional Protocol II (AP II), Art. 7; J.M. Henckaerts and L. Doswald-Beck, *Customary International Humanitarian Law*, ICRC/Cambridge University Press, 2005 (Customary IHL Study), Rule 110.

⁵ United Nations Committee on Economic, Social and Cultural Rights (CESCR), General Comment No. 14: The Right to the Highest Attainable Standard of Health, 11 August 2000 (General Comment No. 14), http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=E%2FC.12%2F2000%2F4 (last accessed on 20 January 2015).

⁶ GC I, Art. 19; GC IV, Art. 18; AP I, Art. 12; AP II, Art. 11; Customary IHL Study, Rule 28.

⁷ Jean S. Pictet (ed.), *Commentary on the First Geneva Convention*, ICRC, 1952, pp. 196, 220 and 280; Sandoz/Swinarski/Zimmerman (eds), *Commentary on the Additional Protocols*, ICRC, 1987, pp. 166 and 250 (AP I) and p. 1433 (AP II).

⁸ *Ibid.*

⁹ AP I, Art. 16; AP II, Art. 10; Customary IHL Study, Rule 26.

¹⁰ CESCR, General Comment No. 14, paras 33, 35, 37 and 43.

¹¹ GC I, Arts 39-44; AP I, Art. 18 (1) and (4); AP II, Art. 12; Additional Protocol III (AP III).

¹² GC I, Art. 54; AP II, Art. 12; AP III, Art. 6.



2. PLANNING AND ASSESSMENT

2.1 Introduction

When developing a contingency plan for a health-care facility, it is important to identify measures that are appropriate to the context. Careful consideration must be given to the way in which physical security measures may influence the accessibility and public perceptions of the facility.

The following chapter highlights key points to bear in mind when developing a contingency plan. Reference is also made to assessment tools and first-hand experience of responding to other types of emergency, including natural disasters.

2.2 Contingency planning

In the context of violence or poor security conditions, the delivery of health care may be at risk of disruption due to damage to health-care infrastructure or to a breakdown in essential services and supply-chain mechanisms. Contingency planning can help to reduce these risks. Such a process should ideally be led from within the health-care facility in order to foster ownership of the plans from the outset and to ensure that all relevant factors are borne in mind.

Considerations to take into account in the contingency planning process

- A broad range of stakeholders should be consulted in the planning process, including medical and non-medical staff as well as relevant external stakeholders.
- The focus in planning should first be on identifying ways **to strengthen the resilience of the health-care facility** in terms of its functioning and physical structure. It should then be on **strengthening coordination and cooperation** with other health-care providers, since a health-care facility rarely operates in isolation. To ensure coherence with other facilities, the contingency plan should be linked to existing national or regional plans. Particular attention should be given to enhancing cooperation with other health-care providers, with regard to specialist services, referrals, specialist medicine supplies and backup resources.
- Pragmatic and context-appropriate solutions should be sought. Measures identified must not adversely affect the **perception and acceptance** of the health-care facility among the general public.
- Before the final adoption of the plan, it is recommended to carry out a **mock exercise to test that the measures proposed are feasible** and can be effectively implemented should a crisis arise. Staff knowledge and understanding of responsibilities during a crisis are essential for effective implementation of a contingency plan. Conducting **preparedness training and mock exercises for all staff** on a regular basis will help to equip them to respond and adapt quickly in the event of an emergency.
- A contingency plan is not a static document; it needs to **be regularly reviewed** to accommodate for changes in the external situation. Mechanisms to reflect lessons learnt should be established as part of these regular reviews, to feed into and improve future operations.

2.3 Understanding the context

The level of vulnerability of a health-care facility and the types of risks to which it is exposed can be determined by means of a risk assessment. Risk assessments should ideally be conducted by security specialists or, if not available, by the facility managers.

A holistic approach must be adopted to identifying and analysing the different types of risks and the impact these may have on the facilities, staff and patients. For example, an assessment should be made of the potential consequences of incidents such as blasts, interruptions to the water or power supply, disruptive entries, floods and risks relating to the location of the facility. Such risk assessments should be undertaken systematically at existing facilities, during large-scale refurbishments and in advance of new construction projects, as it could prove more efficient and cost-effective to adopt certain measures before rather than after an emergency arises.

Key steps in a risk assessment

1. *Risk identification: What could happen? Who or what could possibly cause an incident affecting staff, patients and facilities? Describe these sources of risk. Describe the possible consequences for staff, patients and facilities should the risk event happen.*
2. *Risk analysis: How vulnerable or exposed are the staff and patients to these risks? Look at existing risk-mitigation measures, ranging from those designed to prevent the risk event from happening to those designed to increase preparedness to respond and recover from the event, should it happen. Look at the level of training of staff. Think about how effective these measures are in mitigating the risks and consider taking additional measures.*
3. *Risk evaluation: What are you going to do about these risks? Consider the expected impact of the activities and choose an appropriate line of action to deal with the issue(s).*
4. *Risk mitigation: Who is going to implement any additional measures and by when? Draw up a plan of action or follow-up chart to monitor implementation of additional risk-mitigation measures.*

2.4 Safety level of a health-care facility

The integrity of services provided in a health-care facility can only be protected if threats are addressed from a number of angles. It is necessary to understand the risks and vulnerabilities of the infrastructure and management of the health-care facility, and to have an appreciation of how a given situation may affect the health-care personnel and patients in their care. All of these considerations need to be taken into account when assessing the resilience of a health-care facility.

In the process of defining the most appropriate security measures, an assessment should be carried out to establish the baseline and current safety levels of the facility. Existing assessment tools, such as the Hospital Safety Index,¹³ developed by the Pan American Health Organization, would be useful for this task. Such an assessment would consider all types of risk and operational measures that are context-appropriate can be identified on the basis of the outcome.

Relevance of the Hospital Safety Index to armed conflicts

By Dr Ciro Ugarte, Pan American Health Organization (PAHO), Regional office of the World Health Organization (WHO)

When crisis or disaster strikes, critical services must remain operational in order to protect the affected population and limit or reduce the adverse impact of the event. In this scenario, the ability of health services to function without interruption is frequently a matter of life or death. When applied to conflict situations, the concept of “safe hospitals”¹⁴ acquires an even greater significance, encompassing the possibility of continuing to operate and care for those in need while protecting the facility’s own health-care personnel.

In theory, the health sector should be able to ensure that all health facilities are safe from the impact of crises and disasters. In practice, it is necessary to prioritize the safety of health-care facilities that provide essential life-saving services and that are located in high-risk areas. It is imperative that these health-care services be housed in building structures that can protect the patients, staff, and visitors; that the equipment and furnishings, as well as the basic utilities (water, electricity, medical gases, etc.), remain operational; and that the staff are safe and capable of providing health care when this is most needed, even under difficult circumstances.

Though it may not be possible to achieve a level of complete safety and security at a facility, measures can nevertheless be taken to progressively increase its protection. The first step is to ensure that the structure of the facility can withstand the effects of the hazard (natural or manmade) and does not collapse and kill or injure its occupants (patients, health-care workers and visitors). This first level of protection is referred to as “structural safety” or “life protection.”

¹³ Accessible online at: http://www.paho.org/disasters/index.php?option=com_content&view=category&layout=blog&id=907&Itemid=884 or http://www.who.int/hac/events/safe_hospitals_info.pdf or <http://www.safehospitals.info/> (last accessed on 20 January 2015).

¹⁴ A “safe hospital” is defined as a health facility whose services remain accessible and functioning at its maximum capacity and within the same infrastructure, both during and immediately after a disaster.

The second step is to ensure that the equipment, furnishings, utility services and architectural components (windows, wall divisions, ceilings, elevators, etc.) of the facility are secured and fully operational. This level of protection is known as “non-structural safety” or “investment protection.” The final step is to ensure that the emergency protocols and procedures of the health facility are properly implemented by adequately trained health-care personnel. This level of protection corresponds to “functional safety” or “operational protection.”

Several methodologies and tools are available for determining the safety level of a health facility, including: hospital vulnerability assessments; hazard and vulnerability analyses; structural assessments; non-structural assessments; equipment and critical lines studies; and organizational and functional evaluations. However, it is unrealistic to use these traditional approaches during conflicts and disasters, as their implementation may take several months and represent high financial costs. For that reason, a rapid and low-cost diagnostic tool has been developed, with input from several international and national experts, to assess the probability of a hospital or health facility remaining operational in emergency situations.

Known as the Hospital Safety Index, this tool enables countries and decision-makers to gauge the safety of a health facility, based on structural, non-structural and functional factors, including the environment and the health services network to which the facility belongs. It is therefore intended to avoid health facilities becoming a casualty of conflicts or disasters. As a comparison, the Hospital Safety Index is like an out-of-focus photograph, showing enough of the basic features of the facility to allow someone to quickly confirm or reject the presence of imminent risks.

By determining the Safety Index or score of a facility, health decision-makers will have an idea of its ability to continue functioning and to meet increased demand in the event of a major emergency or disaster. The Hospital Safety Index does not replace costly and in-depth vulnerability studies. However, because it is relatively inexpensive and easy to apply, it is an important first step towards prioritizing a country's investments in hospital safety.

There are a number of steps to calculating the Safety Index of a facility:

1. General information about the health facility: Usually completed by hospital staff prior to the evaluation. It includes information on the level of complexity of the facility, the population it serves, its medical specialties, other available services, and the type and number of health staff.
2. Safe Hospitals Checklist: Used by a team of evaluators to assess the level of safety of 145 items (grouped by: location, structural, non-structural and functional components of the health facility), as compared with a set of reference standards.
3. Safety Index: The results of the checklist are entered into a scoring calculator, which weighs each variable according to its relative importance to a hospital's ability to withstand a disaster and continue functioning. The safety score is calculated automatically.
4. Hospital safety levels: The final Safety Index score places a health facility into one of three categories of safety, helping authorities to determine which facilities most urgently need interventions. Category A is for facilities deemed able to protect the life of their occupants and likely to continue functioning in crisis and disaster situations. Category B is assigned to facilities that can withstand a hazard, but in which equipment and critical services are at risk. Category C is for health facilities where the lives and safety of its occupants are deemed at risk during emergencies and disasters, thus requiring immediate corrective measures.

Using the Safe Hospitals Checklist yields useful information about the strengths and weaknesses of a facility. The hospital staff will be the first people to implement the corrective measures needed to improve the hospital's safety level, within the recommended time frame.

The current PAHO/WHO Hospital Safety Index includes a series of considerations relating specifically to conflict, poor security conditions and complex emergencies:

1. Location of the health facility and possible scenarios of armed conflict, civil unrest, terrorist attack, violence and crime.
2. Level of security of the perimeter of the health facility.
3. Level of security at the hospital entrance and of its internal circulation.
4. Existence of provisions for the circulation of ambulances, other vehicles, staff, patients and visitors.
5. Specific identification and permits for health-care personnel according to their areas of responsibility.
6. Identification of areas of restricted or limited access inside the health facility.

7. Safety standards regarding the location of the hospital's emergency operations centre.
8. Security protocols and procedures for internal and external telecommunications.
9. Security against robbery and violence inside the health facility.
10. Protocols and procedures to prevent the kidnapping of patients and health-care workers.
11. Restrictions on the use of weapons inside the health facility.
12. Provisions to prevent, limit and respond to attacks on health-care workers inside and outside the health facility.

Even though all the above-mentioned elements of the Hospital Safety Index are applicable to armed conflicts and humanitarian or complex emergencies, it may be necessary to include several additional considerations in these situations. Once identified, these should be standardized for use in specific conflict scenarios and treated as supplementary to the Hospital Safety Index, in order to address the specific challenges faced by health services in light of the nature, intensity and magnitude of the conflict.

2.5 Coordination

Efforts should be made to coordinate with other facilities, through established local structures, and to align with existing national or regional coordination plans, in order to avoid a duplication of systems. Local emergency centres and local authorities can play a vital role in this, specifically those linked to the health ministry or those normally responsible for coordinating the public provision of health care.

Coordination mechanisms should be systematically put in place as early as possible, ideally during peacetime or in the initial stages of a conflict. It could prove more difficult to organize coordination in the middle of a crisis if stakeholders have had no routine practice of it beforehand.

2.6 Advocacy

Establishing a shared understanding of the role of health-care providers can help to foster a better appreciation of the impartial nature of health-care delivery and thus enhance the security of health-care facilities. Communication around the quality of care and the types of services provided should be included in regular awareness-raising efforts.

Dialogue with key stakeholders should involve authorities, armed actors, representatives of local communities and other influential figures. Pre-established communication channels and a shared understanding of the role of health-care providers are essential for ensuring access and security in times of crisis.

Furthermore, to enhance the security of a health-care facility, there should be a systematic and ongoing review of how the facility is perceived among stakeholders and the general public, and of its accessibility for staff, patients and other service-users. Regular monitoring will allow for any changes in the situation to be detected and signal the need to review and adapt the facility's security measures.

Checklist for monitoring perception

- *Is the health-care facility perceived as providing services without discrimination?*
- *What is the perception of the different types of security measures applied at the facility, among staff, patients, communities and armed actors?*
- *What are the respective roles of the managers, senior medical staff and security guards of the facility in ensuring its security? Are these roles well understood by all relevant stakeholders?*

Hospitals during disasters: Linking the Hurricane Katrina response to the ICRC's Health Care in Danger initiative

By Erin Downey, MPH, Sc.D., Affiliated Expert, Harvard Humanitarian Initiative, and Anjanette Hebert, CHPA, CHEP, Director of Security, Safety and Emergency Preparedness, Lafayette General Medical Center

Emergency process development

One of the overarching recommendations of the Health Care in Danger initiative is for hospitals to develop community networks to connect local responders to a more extensive range of resources. The development of such networks forms part of a broader strategy to strengthen local resilience and response capacities in times of armed conflict and other emergencies.

In Louisiana, the second poorest state in the United States, access to health-care is disproportionately low, racial and class inequalities are high, and gun violence is rife. All of these factors adversely affect the safety of its inhabitants. In light of this vulnerability, a "State Emergency Process" was initiated to assess and boost the resilience of the state's hospitals to disasters. This fell within the framework of the nationwide Hospital Preparedness Program that began in 2002, in the wake of the 9/11 attacks.

The focus of this process was on developing a statewide disaster-response network, which was accomplished through strengthening capabilities and resilience in:

- communication between hospitals, by identifying one facility to take the lead in developing relationships with others in the region;
- coordination between hospitals, by developing plans for how resources could be pooled or maximized;
- collaboration between hospitals, by developing plans for how and when resources would be shared.

The developing network in the New Orleans region was not prepared, however, for the isolation it experienced in the wake of Hurricane Katrina, in August 2005. Levee breaches caused sustained flooding following the passage of the hurricane, which elevated the status of the disaster to that of a catastrophe. At least 1.25 million people lost access to the three remaining operational hospitals with emergency departments (of a total of 20). Hurricane Rita, which followed Hurricane Katrina less than a month later, made landfall 365 miles (587 km) west of where Katrina had hit, directly affecting at least 11 more hospitals. All of these hospitals eventually evacuated in order to care for their patients elsewhere.

Using the newly formed network, hospitals systematically began transferring thousands of patients to the northern regions of the state for treatment. The 47 acute care hospitals in these regions absorbed as many patients as possible until they, too, reached capacity and began adding to the number of patients to be evacuated out of state. The effectiveness of this coordinated effort by a well-functioning network was diminished by the magnitude of the catastrophe.

Globally, the response by the United States to this particular hurricane season was considered catastrophic. One of the greatest lessons learned is the extent to which hospital shortages and deficiencies can be mitigated if facilities operate as a network rather than alone. After Hurricane Katrina, planning efforts in Louisiana were extended to include federal partners, ambulance planners, police, firefighters, public health workers and other emergency responders in the community. This expanded network was again activated in 2008 during Hurricane Gustav to treat and transfer thousands of patients in what became the largest hospital evacuation in the history of the United States. Such a feat would not have been possible prior to the development of an improved coordinated emergency process.

Now in its second decade, the Louisiana network is activated frequently, with some system components being used daily in the treatment of trauma patients and in matching resource needs to demands. Financial input at the national and state levels, policy mandates and an investment of time and effort on the part of the local community were all required in creating this network and implementing its systems. It was also essential to build trust and identify community leaders, which took several years and considerable financial investment to achieve. Today, these local community members are the strength and sustaining force of the network and are fundamental to the effectiveness of its systems.

It would be possible to develop similar models, within the framework of the Health Care in Danger initiative, for less developed communities facing sustained violence or disasters. As in Louisiana, the key is to create a scalable approach that is practical and realistic within individual communities, but which also fits into an overarching regional planning framework. Although the threats to health-care facilities in conflict situations are different from those in natural disasters, they can be tackled with a similar approach. Collaboration can be achieved if the development of community-based networks is informed by local people from a range of disciplines and with a good understanding of the challenges of their community. This network model must also be underpinned by a broader national and multinational commitment. Such approaches support the disaster risk reduction efforts being undertaken within the Hyogo Framework for Action of the United Nations International Strategy for Disaster Reduction, which is currently under discussion for a second decade (2015-2025).

Emergency plan development

Within the Health Care in Danger project, there was also discussion of developing emergency plans, covering people, processes and structures, with an emphasis on standardizing these plans across different geographical areas. When Hurricane Katrina hit, health-care staff did not have personal contingency plans in place, which undermined their ability to respond to the needs of the hospital. Personal obligations to family, loved ones and even pets often affected their capacity to contribute to the response. Staff also lacked a clear understanding of their role and responsibilities in responding to the disaster. Expectations had not been clearly defined in all cases, leaving hospitals short-staffed. Evacuation orders were issued in some communities, but the hospitals were asked to remain open, sending contradictory messages to the staff as to what they should do.

By 2008, when a second set of hurricanes (Gustav and Ike) struck Louisiana, there was a notable increase in staff response, which was attributed to the development of personal contingency plans. This directly improved the capability of hospitals to continue delivering health-care services. The formulation of hospital emergency plans also meant staff were prepared for a sustained response and for responsibilities that went beyond their typical roles, including security, maintenance and, in extreme cases, evacuation assistance. Also included in these plans were strategies for sheltering and feeding the staff so that they could provide care for extended periods of time. Most hospitals now have pre-identified “activation teams” and also “recovery teams” to relieve the first group once the process moves from response to recovery.

Coordinated emergency plans are essential for an effective response to a disaster or crisis situation. Although the Health Care in Danger initiative focuses on areas affected by conflict and crisis, much can be gained from the Louisiana experience of planning for disaster. By bringing together regional experts from many contexts, insight can be gained on the challenges of providing care in unstable environments. In 2002, when the Louisiana planning efforts began, participants were sceptical and slow to engage, pointing to the vast differences between regions. As local planning experts began to realize that they faced similar challenges and to see the benefits of devising shared strategies and solutions, the strength and power of the network grew. Furthermore, as the local participants began to engage with each other, their capacity for building realistic and workable planning strategies increased and a sense of community ownership and leadership was developed.



3. SECURITY AND WELL-BEING OF HEALTH-CARE PERSONNEL, PATIENTS AND RELATIVES

3.1 Introduction

In this chapter, the focus is on the security and well-being of health-care personnel, patients and relatives in situations of armed conflict and other emergencies. While it touches upon some of the responsibilities of health-care personnel in such situations, this is not the subject of the chapter as such. These responsibilities are discussed in more detail in the HCD publication, *The responsibilities of health-care personnel working in armed conflict and other emergencies*,¹⁵ and in training materials developed within the framework of the HCD project, such as the e-learning module entitled *The rights and responsibilities of health-care personnel working in armed conflict and other emergencies*.¹⁶

3.2 Staff working conditions

Any crisis situation can potentially destabilize the workings of a health-care facility. External pressures, community tensions and stressful encounters with patients and their relatives, parties to the conflict or other armed actors, are just some of the challenges with which health-care personnel may be confronted.

Staff stress can originate from a number of sources, ranging from the responsibilities of their job and their work environment to their personal situation. Staff members are just as likely to be affected by a crisis as the people they are treating. Concerns for their family's safety, worries about meeting their own basic needs (e.g. food and water) or even the trauma of being forced to leave their home may jeopardize their personal well-being and their ability to perform their duties.

For health-care personnel to be able to carry out their work and care for others, their own basic physiological and safety needs must be met. Every effort must therefore be made to create a supportive environment that is conducive to them performing their duties effectively. For example, incentive mechanisms could be created and material and non-material assistance could be offered to staff and their families. It is also important that shifts are organized in such a way that personnel can take time to make personal preparations for the crisis and to care for their family members.

Organizing recreational team exercises and other stress-relieving activities at work and finding ways of defusing stressful situations are other potentially effective means of managing staff stress.

¹⁵ ICRC, *Health Care in Danger: The responsibilities of health-care personnel working in armed conflicts and other emergencies*, ICRC, Geneva, April 2013.

¹⁶ ICRC, *Health Care in Danger: The rights and responsibilities of health-care personnel working in armed conflict and other emergencies* [e-learning module], ICRC, Geneva, 2014. Accessible online at: www.healthcareindanger.org/elearning (last accessed in April 2015).

Psychological and social support for personnel in health-care facilities

*By Anjana Dayal De Prewitt, Reference Centre for Psychosocial Support,
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Introduction

Health-care personnel working in conflict situations are vulnerable to trauma and stress. They should therefore be offered appropriate psychological and social support and be equipped with basic skills to provide support to others in turn (peers, patients and their families or caregivers). The Reference Centre for Psychosocial Support of the International Federation of Red Cross and Red Crescent Societies¹⁷ has been providing technical support to National Societies for the development and implementation of psychosocial support programmes in various contexts, including for the benefit of health-care personnel and volunteers. These programmes aim to foster greater resilience by strengthening people's inner resources, such as personal beliefs and value systems, and external resources, such as networks of family members, friends, community elders, religious leaders and professional support.¹⁸

There must be a combination of basic and professional support systems in place for the workforce. This section provides recommendations for the provision of psychosocial support for health-care personnel working in dangerous situations as well as for patients and their caregivers.

Challenges

People living in conflict zones are highly likely to experience psychological stress. Stress is often described as a feeling of being overloaded, tense and worried.¹⁹ If not managed properly, this can lead to distress and the failure of coping and adaptation strategies. Those most affected in health-care settings include: staff working in hospitals, laboratories, clinics, first-aid posts, blood-transfusion centres, and medical and pharmaceutical stores, along with patients and their caregivers. In most cases, health-care personnel are the only service-providers working for all parties in a conflict zone. They often find themselves pulled in all directions as they try to meet demands for their services from conflicting parties, try to manage the expectations of patients and their relatives, and try to provide adequate and timely information to the media and other stakeholders.

Common stress reactions²⁰ include a decrease in alertness and performance, psychosomatic problems – such as backaches, lethargy, a decrease or increase in appetite and/or sleep – poor judgement, and strain in personal relationships. Burnout²¹ is another common consequence of working in stressful situations over an extended period of time without practising adequate self-care. It is an emotional state characterized by chronic emotional exhaustion, depleted energy, impaired enthusiasm and motivation to work, reduced work efficiency, a diminished sense of personal accomplishment, pessimism and cynicism.

There are at least three factors that pose a challenge to providing support to health-care personnel, patients and caregivers in a conflict situation. Firstly, in the face of patients' immediate needs and life-and-death situations, the provision of basic psychological support for staff can easily be overlooked. Secondly, since stress is seen as a mental health issue, it is a taboo in many cultures. Thirdly, very few staff and supervisors are trained in psychosocial support techniques.

Stress prevention

Stress can be prevented for both staff and patients if appropriate measures are taken to mitigate stressors, which are factors that cause stress. Training for staff in managing changing demands and dealing with different people can help to prepare them for challenging situations and thus reduce their stress levels. There are also a number of practical steps that can be taken to help reduce stress and tension for staff, such as organizing the reception area of

¹⁷ For more information about the Reference Centre for Psychosocial Support, visit its webpage on the Federation website: <https://www.ifrc.org/en/what-we-do/health/psychosocial-support/> (last accessed on 13 March 2015).

¹⁸ International Federation of Red Cross and Red Crescent Societies, *Psychosocial Support: Towards safe and healthy living*, Reference Centre for Psychosocial Support of the International Federation of Red Cross and Red Crescent Societies, Copenhagen, 2009.

¹⁹ Australian Psychological Society, *Understanding and Managing Stress*, Australian Psychological Society, Melbourne, 2012.

²⁰ K. De Jong, *Psychosocial and mental health interventions in areas of mass violence: A community-based approach*, 2nd ed., Médecins Sans Frontières, Amsterdam, 2011.

²¹ D. Meichenbaum, "Resilience and posttraumatic growth: A constructive narrative perspective," in L.G. Calhoun and R.G. Tedeschi (eds), *Handbook of Posttraumatic Growth: Research and Practice*, Lawrence Erlbaum Associates, Mahwah, New Jersey, 2006, pp. 355–368.

the health-care facility in such a way as to ensure that access is properly managed and security measures are applied to control and reduce unwanted intrusions.

Stress management

The Reference Centre for Psychosocial Support recommends cross-sectoral and multi-layered approaches for dealing with reactions to trauma and stress. Most people will be able to recover from an adverse event with minimal support, such as calming, listening and/or basic psychological support. Family, peer and community support combined with self-care would be sufficient to facilitate healing. However, some cases may require more focused and specialized support from mental health professionals, social workers or spiritual leaders, if feasible.

For patients and their caregivers: One of the main stressors for health-care personnel working in conflict zones is dealing with patients and their accompanying caregivers, who are often concerned about their safety and the quality of treatment and take it out on the staff. Therefore, it is important for the staff to be trained in appropriately managing the stress reactions of patients, their caregivers and other visitors. The following recommendations may be helpful in this regard:

- **Offer basic psychological support:** Health-care facilities receive all kinds of visitors, ranging from patients and their families to inquirers from the national army and other armed actors. These people come with a variety of agendas and questions that may lead to unnecessary arguments. However, these can be avoided if staff members, including security staff, are trained in active listening. Listening calmly to an outburst can prevent the situation from escalating. Staff could also be trained in basic psychological support, which goes beyond active listening to include validating feelings expressed and assisting with immediate needs. In addition, training could be offered in basic techniques of emergency response and mental health intervention, and in identifying cases that require support or referral.
- **Provide information:** It is important that both patients and their caregivers have sufficient information about their stay and treatment in the health-care facility. They must be told how many caregivers can accompany a patient so that the number of people in the facility can be controlled. They should also be made aware of whether or not there is a waiting room, with basic facilities such as toilets and drinking water. If a patient's family distrusts the health-care personnel, the next of kin could be brought into the operating room, if feasible, for the sake of transparency. Most importantly, if the caregivers are given basic guidance in assisting the patient, they can prove to be a useful resource, particularly in contexts where facilities are short-staffed.
- **Involve social workers:** When a patient or their caregiver is highly stressed, it is advised to involve social workers, psychosocial workers or counsellors who have skills in basic psychological support.

For health-care personnel: Not all people react to the same event in the same manner. Some people may react quickly, while others may have delayed reactions. Therefore, regular assessment of the workforce and their needs is recommended so that timely support can be provided to all staff. It should also be borne in mind that different people have different coping mechanisms, based on their cultural background, belief system, age and gender. Interventions therefore need to be flexible and tailored to the context in order to be effective. Below are some simple recommendations for supervisors/managers, teams and individuals in dealing with stress reactions.

Supervisors/managers: Effective support starts with a commitment at the leadership level. It is recommended that protocols are developed for screening and orientation before, during and after a stressful event, with training or guidelines for peer support and self-care. However, it is important to note that severe traumatic experiences would require professional mental health interventions.

The following tips may be helpful:

- Provide guidance and support to team members.
- Conduct pre- and post-assignment evaluations or screenings of the workforce, if staff are being sent out to another location. For those who are stationed in one place, screening can be done biannually and after every stressful event.
- Respect confidentiality so that people feel safe enough to admit when they are stressed and to seek help.

- Emphasize the importance of self-care.
- Ensure staff take breaks between stressful events.
- Create a peer-support system for sharing experiences.
- Provide opportunities for the workforce to develop skills in basic psychological support and self-care.
- Provide supportive follow-up to team members.

Teams: There are many benefits to developing peer-support systems, including the prompt provision of support and assistance to staff in need by someone who knows the situation well. Peer support at an early stage may prevent further problems from arising, as it helps people to develop personal coping skills. By forming supportive groups, peers can pool their knowledge, perspectives and experiences for the benefit of one other.

A peer-support group can provide:

- informal support both during and after work;
- a formal framework for discussing work and solving problems together;
- space to talk, describe your thoughts and share your feelings with someone with whom you feel at ease;
- an opportunity to listen to others and share insights with them (e.g. What do you/they think about a particular stressful event?);
- a chance to encourage and support your colleagues and be available in a non-intrusive way;
- confidentiality (the cornerstone of all support);
- non-intrusive follow-up and referral to professional care if someone expresses the desire to harm him/herself or another person.

Individuals: Health-care personnel have a major role to play in managing their own stress. Often people do not pay attention to their psychological reactions to stressful situations because of a lack of time or awareness. It is recommended that staff members be trained in basic self-care.

The following tips may be helpful:

- Take special care of yourself, eat well, limit your intake of alcohol and tobacco, and stay fit.
- Do not try to hide your feelings.
- Share your feelings with trusted peers or your supervisor whenever you experience troubling incidents and after each work shift.
- Do not self-medicate.
- Continue to carry out routine tasks, such as going to work, cooking, bathing and spending time with family and friends.
- Look for a healthy outlet, such as sharing your feelings with friends, exercising or expressing yourself through writing.
- Go easy on yourself.
- Seek professional advice.
- Talk openly and share your problems without fearing the consequences.
- Take a break when you feel your tolerance levels diminishing.
- Stay in touch with family and friends.
- Avoid perfectionism, i.e. striving to do everything perfectly, as this often leads to disappointment and conflict.

Emotional, informational and instrumental support²²

Leaders and designated health-care personnel should provide emotional, informational and instrumental support to address fear, stress and anxiety, manage expectations and assist with the process of normalization. The measures presented in the table below should be taken where appropriate and relevant to the situation at hand, bearing in mind that all mental health programmes need to be tailored to the context.

Emotional	Informational	Instrumental
• Acknowledge the stress and added demands. • Provide stress-management tips and training in adaptive coping. • Set up a staff hotline for information and support in dealing with stress and anxiety. • Establish a buddy system to encourage staff to watch out for one another.	• Ensure clear, honest and frequent communication. • Provide written notices indicating staff care strategies, using language that conveys genuine concern for the workforce. • Provide opportunities for staff to ask questions, offer suggestions and be part of the process, such as regular lunchtime information sessions and emails. • Ensure proper and timely follow-up to staff questions and suggestions. • Ensure staff members are equipped with, or have access to, adequate information. • In the absence of internet access, distribute guidelines in hard copy.	• Develop a process for clear communication, contact with and updates for loved ones. • Address staff members' physical needs (e.g. food, transportation, child/elderly care, medication, equipment). • Establish respite spaces or centres for staff, with healthy snacks and telephone and computer access, especially when long working hours are required.

About the Reference Centre for Psychosocial Support:

The Reference Centre for Psychosocial Support works within the framework of the International Federation of Red Cross and Red Crescent Societies and supports National Societies in promoting and enabling the psychosocial well-being of beneficiaries, staff and volunteers. It is based in Copenhagen, in the office of the Danish Red Cross. The overall objective of the Federation's Psychosocial Support Programme is to help the International Red Cross and Red Crescent Movement to increase awareness of psychological reactions to disaster or social disruption, to facilitate psychological and psychosocial support, to promote the restoration of community networks and coping mechanisms, and to enhance emotional assistance to staff and volunteers. The Centre aims to ensure that psychosocial support becomes increasingly integrated into the work of National Societies, Federation responses and programmes as an effective means of alleviating human suffering, increasing psychosocial well-being, speeding up recovery and strengthening community resilience.²³

²² British Columbia Ministry of Health, *Pandemic Influenza Psychosocial Support Plan for Health Care Workers and Providers*, Ministry of Health, British Columbia, September 2012.

²³ The mission and strategy of the Federation's Reference Centre for Psychosocial Support can be accessed at: <http://pscentre.org/who-we-are/mission-strategy/> (last accessed in April 2015).

3.3 Composition of the workforce

The community's perception of a health-care facility may influence the level of security for staff and patients. From this perspective, it is important to consider the way in which the health-care facility is managed, particularly with regard to staffing. To increase the chances of acceptance by the community, recruitment processes should be transparent and the composition of the workforce carefully considered. The workforce should, to the extent possible, reflect the ethnic, cultural and religious diversity of the community as well as a gender balance.

3.4 Staff preparedness

It is impossible to avoid stress altogether when working in a health-care facility. However, by acknowledging that it exists and preparing people for likely challenges, stress levels can be better managed and potentially reduced.

Managers of health-care facilities need to ensure that working conditions for staff are as predictable as possible. However, during a crisis, staff may have to work flexibly and adapt quickly to changing needs. In preparation for such a situation, contractual obligations may need to be reviewed to allow for adjustments in responsibilities. In order to avoid confusion, the roles and responsibilities of staff and what may be expected of them in an emergency situation should be made as clear as possible.

Preparedness training and mock exercises should be carried out regularly and involve all staff, both medical and non-medical.

Key areas of skills training:

- *Protection and negotiation, understanding protection risks, the principle of “do no harm,” communication and social protection awareness.*
- *Communicating and dealing with patients, relatives and other key stakeholders, including the media. Include training on dealing with pressure from patients' relatives and other individuals, managing their expectations and handling aggressive behaviour.*
- *Basic psychological support and self-care strategies.*

Health-care personnel also need to be informed of their responsibilities in providing health care during armed conflict or other emergencies and of ethical dilemmas that they may encounter in carrying out their duties. This is discussed in more depth in the HCD publication entitled *The responsibilities of health-care personnel working in armed conflicts and other emergencies*.

3.5 Safety of patients

The standard of care and quality of services offered in a health-care facility can influence the perception of the facility among the community and other stakeholders and thus have an indirect effect on its security. With this in mind, it is essential to ensure that the delivery of health-care remains impartial and the quality of services remains high when crisis strikes.

Maintaining confidentiality is critical to ensuring the safety of patients and, for this reason, health-care personnel should remain cautious about sharing sensitive patient data. In certain circumstances, domestic law will override the requirement for absolute confidentiality. In some countries, health-care personnel may be obliged to report certain kinds of conditions to authorities, for example gunshot trauma and specific infectious diseases. In a military context, there are times when information about a patient's condition must be shared with a superior officer. The patient concerned must be informed that disclosing this information is a legal or military requirement. If the patient does not consent to sharing his or her health-care data, and it is not possible to comply with the patient's wishes, it is the

responsibility of the health-care personnel to explain why this is not possible and what the result of sharing that information is likely to be.²⁴

While health-care personnel need to ensure that patients in their care are protected and respected, they must also be sensitive to the risks that some patients can bring to the health-care facility. Some patients may pose a heightened security threat to other patients and staff within a health-care facility, as a result of their behaviour or affiliations, and it is important that staff remain mindful of this. It is recommended that they do not make distinctions between patients on this basis, as such an approach could ultimately undermine the security of the facility; rather, they should remain as neutral as possible in managing patients. However, in some exceptional circumstances, and when practically and medically feasible, it may be necessary to discharge high-risk patients earlier than usual.

3.6 Patients' relatives

It is important to be sensitive to the needs and experiences of patients' relatives. Not only are they dealing with the stress of the prevailing crisis but also with concerns over the health of their loved one. This naturally has a significant impact on them and may influence how they behave towards others. The relatives of patients must be engaged with in a welcoming and cooperative manner, with an understanding of their situation and an awareness of the potential risks and confrontations that may arise.

As a practical measure, it is advisable to ensure that the health-care facility has adequate waiting room facilities for relatives of patients, which can also function as a means of limiting the number of people onsite. Relatives can be helpful in providing additional support and care for patients, such as counselling or feeding; indeed, it is an established tradition to do so in many cultures. However, during an emergency, it is also important to manage the flow of individuals well to mitigate the risks of overcrowding.

Another step that could be taken to ease the workload of health-care personnel in dealing with relatives is to involve social workers as a source of emotional support.

It is important to communicate regularly with relatives about the treatment of their loved ones. In some cases, it may be advisable or necessary to seek consent from a relative for the treatment of a patient, either instead of or in addition to the patient's own consent. Such an approach can serve to avoid any potential misunderstandings at a later stage about which procedures have been carried out and why.

3.7 Disruptive entries

Disruptive armed entries and unwanted intrusions into health-care facilities could threaten the security of a facility. To the extent possible, health-care personnel should be trained in how to deal with such situations.

When discussing this issue, it is important to make a distinction between lawful and unlawful (or disruptive) armed entries. The latter are naturally considered intrusions to be prevented through physical security measures and systems to control entry to the site, as outlined in Chapter 3. Regular dialogue and advocacy efforts with parties to the conflict and other relevant stakeholders are also important preventive measures, serving to foster an understanding of the impartial nature of health care and of the services provided.

In most contexts, health-care facilities typically apply a no-weapons policy. This is a preventive measure to avoid tension or conflict from escalating within the facility. However, it may prove difficult to enforce such a policy in some cases, particularly if trust between community members has diminished. Efforts should nevertheless be made, to the extent possible, to encourage people to leave their weapons outside before entering the health-care facility.

²⁴ This section is based on the Health Care in Danger publication entitled *The responsibilities of health-care personnel working in armed conflicts and other emergencies*, ICRC, Geneva, April 2013. For more details on issues relating to medical confidentiality, please refer to the Health Care in Danger publication entitled *Domestic normative frameworks for the protection of health care*, ICRC, Geneva, January 2015.

Improving the security of hospital premises in Kaga Bandoro, Central African Republic

Context

When conflict broke out in the Central African Republic in 2012, Kaga Bandoro, in Nana Gribizi district, was one of the first towns to fall into the hands of the Séléka, a coalition of armed groups hailing mainly from the north and east of the country. After seizing the town in December 2012, the coalition made its way towards the capital, where it staged a coup d'état in March 2013.

Since its capture, daily life in Kaga Bandoro has been characterized by a prevailing lack of security, which has undermined access to health care and damaged the local economy.

There are a number of reasons why the situation has affected access to health care in this district. One reason is that poor security conditions have driven the majority of qualified health-care personnel away from Kaga Bandoro and into Bangui; another reason is that the local hospital and its vehicles have been deliberately looted. The presence of armed actors on the hospital premises has also dissuaded people from going to hospital and accessing the health-care services provided.

Instability in the area has also had a negative effect on the local economy. Frequent incidents on the main roads, including lootings, have dramatically reduced trade. Meanwhile, the non-payment of salaries for local civil servants has left many families unable to cover their own basic household needs.

The project

Kaga Bandoro hospital is the reference facility for health-care delivery in the district and serves around 134,000 citizens. With the support of the ICRC, a project was launched in 2013 to improve the security of the hospital.²⁵

The infrastructure of the hospital was particularly vulnerable, owing to the lack of any physical barrier or perimeter fence controlling access to the premises. The consequences of this were the following:

- Protection issues linked to the presence of armed actors in the hospital, which intensified the feeling of a lack of safety among staff and patients. In some cases, patients did not want to be hospitalized for this reason.
- Regular acts of vandalism (e.g. night-time looting of electric cables).

It was decided to build a perimeter wall around the hospital premises and to clearly delineate the area with appropriate signs and emblems in order to increase the level of protection of the hospital. This was organized as a cash-for-work programme, which engaged community members and financially supported low-income families affected by the prevailing instability in the district, with monthly payments of 2,000 CFA francs. In parallel to the construction work, awareness-raising sessions were held on the impartial nature of health-care provision. These sessions addressed a range of audiences, including armed actors, hospital staff and local inhabitants, and had the following key objectives:

- To urge armed actors and local inhabitants to respect and safeguard health-care personnel, facilities and vehicles, and to acknowledge that these are protected by IHL, IHRL and national legislation.
- To help health-care personnel and patients feel safer within the hospital.

Outcomes

The security of Kaga Bandoro hospital has been bolstered with the erection of a perimeter wall. Built with firm foundations, it should last for at least 25 years. The cash-for-work construction programme employed 160 people and contributed to their household income.

²⁵ Funded by the Swiss Government, within the framework of the HCiD project.

The principal outcome of the project is that weapon-bearers are no longer permitted to enter freely onto the hospital premises. An alarm system has also been installed, through which the hospital guards and staff can directly notify the ICRC or the local security patrol of any attempted forced entry into the hospital compound at night. Nighttime work had been suspended since the beginning of the crisis, for security reasons. With this alarm system in place, hospital staff now have the confidence to carry out night shifts. During periods of high tension in the town, the ICRC supported the hospital staff in coordinating the orderly arrival and admission of patients, often wounded weapon-bearers, in order to minimize the level of stress among staff and the other patients.

Information sessions were conducted to raise awareness of the impartial nature of health-care provision among a range of audiences and using various means of communication, including a short theatre production. The key messages shared during the sessions were the following:

The “No weapons” signs at the hospital entrance should be respected. This means that weapons should be deposited outside before entering the facility.

- Health-care personnel should be shown respect and not be threatened, so that they can continue their life-saving work.
- Hospitals are vitally important facilities for the community. Hospital property should be respected and never be looted. Ambulances and medicines save lives and, as such, should not be destroyed or pillaged.

It has been observed that, in times of tension, visiting family members often verbally threaten patients of other ethnic groups. The ICRC has gradually stepped up its dialogue and level of contact not only with armed actors, but also with members of civil society, such as youth groups, to sensitize them to this issue. Local Red Cross volunteers deliver awareness-raising sessions for visitors and patients alike twice weekly, the messages of which are reinforced with locally produced posters.

3.8 Communities

While overall responsibility for ensuring the security of a health-care facility lies with State authorities, the engagement of community leaders in advocacy and dissemination efforts can help to increase respect among community members for the services provided and foster an understanding of the impartial nature of health-care delivery. This, in turn, may help to improve security for staff, patients and facilities.

3.9 Media relations²⁶

Contact with the media is yet another potential source of stress and security risks for staff and patients. Nevertheless, if journalists have a realistic picture of what is happening in a given violent situation, they can also bring about positive change. Accurate media coverage may lead to increased resources for health care, may influence the nature and extent of the violence and may even help to end the conflict.

Engaging regularly with the media to foster a common understanding of how the facility operates can reduce tension when an emergency situation arises. Using different media channels to share information about available health-care services and to increase awareness and acceptance of the impartial delivery of health care can contribute positively to the overall security of a health-care facility. In any contact with the media, patient confidentiality must remain a priority.

Tips for dealing with the media:

- *Nominate a staff member within the health-care facility to be the contact person for all media affairs.*
- *Make sure a media policy is drawn up, with clear guidelines for the use of social media.*
- *Ensure that any journalist who wishes to interview a member of staff or enter the health-care facility has a copy of the media policy.*

²⁶ This section builds on extracts from the Health Care in Danger publication entitled *The responsibilities of health-care personnel working in armed conflicts and other emergencies*, ICRC, Geneva, April 2013.

Further points to bear in mind:

- *The well-being and privacy of the wounded and the sick should always take precedence over journalists' curiosity or needs.*
- *Shield the wounded and the sick from media scrutiny.*
- *Ask to see the credentials of anyone who introduces himself or herself as a journalist.*
- *Do not allow yourself to be intimidated into giving answers if you do not wish to do so.*
- *Do not respond to questions designed to provoke an emotional reaction.*
- *Make sure that you know when you are talking on and off the record. Be aware that a journalist may consider a conversation with you to have been an interview. If you cannot be certain, assume that you are talking on the record.*
- *Be aware of hidden recording devices and cameras.*
- *Take the initiative to talk to the media by organizing media briefings when there is an ongoing activity that attracts attention to the health-care facility.*
- *Before making any public statements, give careful consideration to their veracity and the implications for your own safety, that of the wounded and the sick, and that of your colleagues.*



4. SECURITY OF HEALTH-CARE INFRASTRUCTURE²⁷

4.1 Introduction

Armed conflict and other emergencies pose a threat to the physical security of health-care facilities. Attacks can sometimes result in damage to vital parts of the infrastructure, which can, in turn, lead to a disruption of health-care services.

No measure can completely protect a health-care facility from an attack by heavy artillery, an airstrike or a disruptive entry. However, protective measures can mitigate the consequences of such incidents and deter them from happening in the first place. Taking certain steps can help to protect the staff and patients within a health-care facility and limit the disruption to health-care services for the broader population.

This chapter provides an overview of a range of widely recognized architectural principles and engineering considerations that can influence the physical security of health-care infrastructure. While the measures outlined below go some way towards enhancing the security of health-care facilities, a high level of protection can only be achieved if all parties to the conflict, State authorities and the general population agree to spare health-care facilities and personnel from interference and attack.

4.2 Risk assessment

In order to establish which measures to take, a thorough risk assessment must first be conducted. Please refer to the key steps in a risk assessment contained in section 2.3.

The risks for health-care infrastructure can be direct or indirect:

- Direct risks include intrusions by armed groups and the targeting of health-care infrastructure.
- Indirect risks include disruptions to water or power supplies and obstructions to access for patients, staff or materials.

Whether the risks are direct or indirect, one of the key factors to take into account in the risk assessment is the importance of continuity in the provision of health-care services, as discussed in Chapter 1.

4.3 Balancing the need for physical security, access and positive perception

When taking measures to improve the physical protection of a health-care facility, it is essential to consider how these might affect the perception of the facility by the community and parties to the conflict. A health-care facility that looks like a fortress may be more vulnerable to attack than a less fortified structure, as it could be perceived to be a valuable military target or even a potential stronghold for one of the parties to the conflict. The appropriate degree of physical protection for health-care facilities may vary according to the context.

Security measures should not intimidate the users of the facility or make visitors feel unwelcome. Restrictions on access to certain areas within a facility should not disrupt the flow of patients and material supplies. The facility must also maintain adequate surge capacity for dealing with mass casualty situations.

²⁷ The content of this chapter is based on the outcome of the HCID experts' workshops and also draws on existing literature on this subject, with particular reference to publications by the Indian Institute of Technology Kanpur (*IITK-GSDMA Guidelines on Measures to Mitigate Effects of Terrorist Attacks on Buildings*, 2008), the United States Department of Defense (*UFC 4-023-07: Unified Facilities Criteria – Design to Resist Direct Fire Weapons Effects*, 2008) and the United States Federal Emergency Management Agency (*FEMA 453: Safe Rooms and Shelters – Protecting People Against Terrorist Attacks*, 2006).

4.4 Site considerations

4.4.1 Location

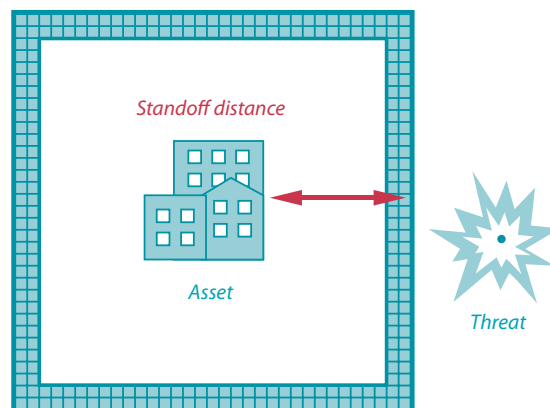
The location of a health-care facility may make it vulnerable to damage. If the facility is close to a potential target – such as a military camp, chemical plant, transportation hub or power station – then the risk of sustaining collateral damage is heightened. In these cases, enhanced protective measures may be necessary.

Assuming that a marked health-care facility will not be deliberately targeted, it is recommended to indicate the facility's presence clearly by visual or physical means in order to distinguish it from the rest of the conflict zone and to avoid confusion. Under IHL, there are no strict rules about how close weapons can be placed to a health-care facility, but there is a general obligation to take all feasible precautions to protect civilian objects under one's control, including health-care facilities, against the dangers resulting from military operations.²⁸

Alternative routes to and from the health-care facility should be mapped out as early as possible to ensure that patients, staff and supplies have at least two different ways of reaching the health-care facility or, in the worst-case scenario, of evacuating it. If possible, such considerations could be included in urban road network plans.

4.4.2 Standoff distance

The effects of an explosion drastically decrease with distance: the intensity of impact at a given point is inversely proportional to the cube of its distance from the source of the explosion. The most cost-effective means of protecting health-care facilities from blast damage is therefore to increase its distance from explosive threats, referred to as “standoff distance.”



The ideal standoff distance will vary according to the type of explosive threat, type of construction and desired level of protection. Conventional constructions with an appropriate layout and surrounded by a considerable amount of open space may be adequately protected against a blast. However, it may be more difficult to achieve a satisfactory standoff distance at a typical urban site, where the facility is in close proximity to other buildings or public spaces. In such cases, protective measures could be taken, in coordination with municipal authorities, for example erecting a reinforced perimeter wall, using sand bags or local equivalent (e.g. earthen barriers) and putting in place obstacles (e.g. roadblocks). These would serve to push out the perimeter line and strengthen the resilience of the facility. It may also be advisable to move patient wards further into the centre of the building and away from external walls, despite the fact that this may dramatically reduce the capacity of the health-care facility and deprive patients of natural light. Buildings with rooms facing into an internal atrium would be more suitable in this case.

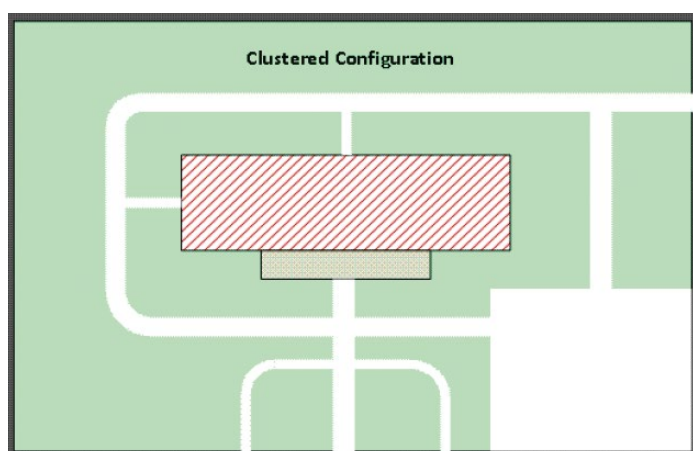
²⁸ AP I, Art. 58 (c), and Customary IHL Study, Rule 22. Furthermore, under IHL applicable to international armed conflicts, there are specific obligations that, whenever possible, parties to the conflict shall ensure that medical facilities are so sited that attacks against military objectives do not imperil their safety. See, in particular: GC I, Art. 19 (2); GC IV, Art. 18 (5); and AP I, Art. 12 (4).

4.4.3 Facility configuration

Rarely are entire hospitals or health-care facilities designed and constructed as whole units. It is often the case that facilities are instead built in several stages, with little consideration of how to rationalize the movement of staff, patients, visitors and supplies. Reconfiguring the internal layout and controlling the flow of people and goods more effectively can enhance security and improve the overall operation of the health-care facility. Wherever possible, design and construction plans should be drawn up with an idea of how the facility is likely to expand in the future, in order to maintain a consistent configuration and thus increase its security.

When a number of units are to be constructed on one site, there are two options: to cluster them together or to spread them apart. Each of these options has its advantages and disadvantages, depending on the context.

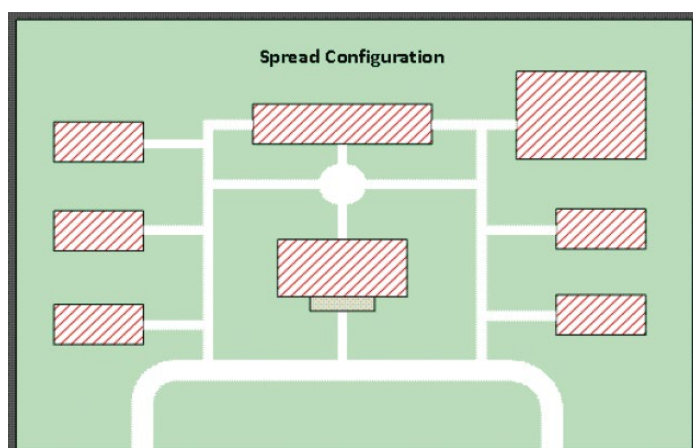
Clustered configuration



Clustering the units together maximizes the standoff distance from the perimeter for all units, minimizes the level of additional protection required at the perimeter and keeps the number of possible entry points and watch posts to a minimum. It is also easier to designate a particular part of a single multi-storey building as a secure shelter or safe room (e.g. the basement) in case of an attack.

The disadvantage of a cluster of units is that there is a higher concentration of people in one place than if units were spread apart. The number of casualties and degree of collateral damage in the event of an explosive attack could therefore be higher than in a spread configuration. A cluster of units in a multi-storey building is also more sensitive to utility breakdown: elevators for transferring patients from one part of the building to another will be unusable, for example, if the electricity supply is affected.

Spread configuration



A spread configuration offers several advantages. Whether subjected to an airstrike, bombing or a disruptive entry, a facility comprising a number of units spread out over a wide area will be less at risk of sustaining collateral damage than a facility with a cluster of units. Attempted attacks or disruptive entries can be delayed or prevented if the landscape around the buildings is properly designed and certain architectural features installed to make these attempts more difficult. A buffer zone can be created between publicly accessible areas and vital parts of the facility, for example, by means of a series of obstacles or physical barriers, a serpentine path and/or a division of units within the facility.

However, it is more difficult to secure a number of multiple single-storey buildings dispersed across a wide area than a single multi-storey building, unless the perimeter is controlled and access points monitored at all times. The perimeter wall would need to be built to a considerable height and at a significant distance from the health-care facility. Alternatively, plans could be made to secure the perimeter quickly, when necessary, though this would increase surveillance costs (guards, electronic devices, etc.) as the number of entry control points would multiply.

4.5 Organization of buildings

In order for a health-care facility to continue functioning effectively during a crisis, consideration must also be given to the positioning of areas such as the parking lot, fuel-storage zone and reception. These areas are deemed hazardous and should be kept separate from the secured parts of the facility. In an urban zone, hazardous areas should ideally be positioned outside the main building or at the outer edges of the building. Creating a separate reception area outside of the footprint of the main building, for example, protects the facility from damage or collapse in the event of an explosion at the entrance.

As a security measure, non-critical facilities, such as offices, could be located on upper floors while critical facilities, such as operating rooms, could be positioned towards the centre of the building.

Flammable fuel-storage areas should be located at a distance from publicly accessible areas like entrances or parking lots. If the facility is based on hilly terrain, fuel-storage areas should be located underground or downhill of the operational buildings and critical facilities, with due consideration also given to flood risks.

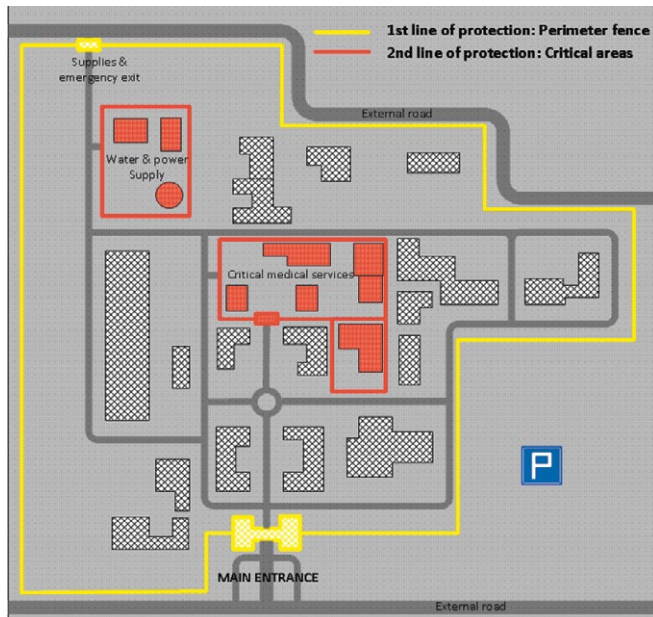
In some cases, lawful deception measures could be taken to disguise critical areas or to direct attackers to a non-critical part of the facility. For example, a critical building that is partly located underground, with concealed entrances and a covering of soil and vegetation (referred to as a “green roof”), will be less likely to attract the attention of an attacker in the event of a disruptive entry than a more prominent building with clearly marked entrances.

4.6 Access and control of entries

Measures need to be put in place to manage access, control entries and direct the flow of people within and around the health-care facility. Some critical areas within a health-care facility require additional protection in order to minimize the risk of unwanted intrusion or disruptive armed entries. A balance must be found between protecting health-care services from interruption and maintaining efficient access for patients, relatives and staff.

To prevent or mitigate the impact of disruptive armed entries and explosions, it is recommended to build concentric lines of control and protection, using physical and/or operational methods and providing progressively enhanced levels of security. In this way, several layers of security measures stand between the public entrance and critical areas, which increases the possibility of detaining an ill-intentioned intruder before he is able to compromise the functioning of the facility.

Health-care facility



4.6.1 First line of protection: The perimeter fence

The first layer of control should be at the site perimeter and consist of fences and other barriers, with guard-controlled entry points. The choice of fence type depends on the context, likely threats and the health-care facility itself. It could range from simple wire netting, supported by poles, to a reinforced concrete wall with barbed wire and anti-ram bollards and barriers.

Limiting the number of entry points will make it easier to monitor entries to the facility, though consideration should also be given to the need for readily accessible emergency exits. Adequate lighting could be set up along the perimeter fence and the main entrance in order to facilitate the identification of individuals or vehicles. While trees can guarantee some privacy and prevent the facility from being directly targeted by small-arms fire, they can also enable intruders to gain access to the facility by climbing up and jumping over the fence. Parking areas should ideally be located outside the standoff zone, especially if vehicles are not screened on entry.

4.6.2 Public entrance, security screening and triage

The location and layout of the public entrance to the health-care facility are crucial considerations from a security point of view. The public entrance should be monitored by or visible to security guards, whereas staff entrances can be situated away from the main reception area and closer to the parking lot. The public entrance should also be large enough to manage a surge in the number of patients and vehicles requiring access to the site in mass casualty situations. A separate entrance could be considered for ambulances. If the parking lot is located within the perimeter of the health-care facility, enhanced screening procedures for both people and vehicles must be implemented at the main entrance. Care should be taken to arrange this in such a way as to prevent vehicles that are waiting to enter the site from blocking surrounding roads.

Entrances should be organized in a way that avoids any overlap between security screening and medical triage. A clear distinction must be made between the role of guards and the role of health-care personnel. Guards should only deal with security and controlling access and have nothing to do with triage or any clinical matters. The security screening must be carried out before medical triage. If the two screenings are conducted at a significant distance from one another, health-care personnel should also be present in the security screening area in order to detect potential emergency cases.

An early-warning system must be set up to notify health-care staff in the event of an intrusion. Cameras and alarm systems could be installed, where appropriate. The suitability of electronic security systems should be decided, in part, on the basis of the number and skills of staff members available to operate them. A facility located in a region with low labour costs could use a security system that relies on a large number of security guards, whereas a facility in an area with high labour costs may be best suited to a more technologically advanced system that does not require as many security guards.

In order to prevent unrestricted access to the health-care facility and its patients, and limit the number of relatives, comrades-in-arms and wounded fighters onsite, consideration should be given to creating a waiting room with an intermediate level of security. Screening procedures at reception and security areas may need to be adapted to accommodate for cultural practices and gender considerations (e.g. separate screening for men and women).

Whenever feasible and relevant, plans should be made to make available a space and resources for the care of staff and their family members onsite, in case the security situation outside restricts movement to and from the facility.

4.6.3 Second line of protection: Preventing intrusion and harm in critical areas

Critical areas within the health-care facility should be protected against disruptive armed entries. A critical area is a physical space containing equipment, people or supplies that are essential to the continuity of emergency activities at the health-care facility. The areas deemed critical vary from one context to another, but may include:

- operating theatre;
- intensive care unit;
- pharmacy;
- water supply;
- power supply;
- communications room (radio, switchboard, server).

Depending on the type of health-care services provided by the facility, areas such as the laboratory, diagnostic imaging (x-ray, ultrasound, etc.) and blood-transfusion services might also be considered critical.

It may be difficult to avoid the risk of damage to critical areas in the event of a direct airstrike or artillery fire without undertaking significant reinforcement work. Another solution could be to move critical medical services to areas within the facility that have higher levels of protection. If this is not possible, measures could be taken to bolster the protection of the outer walls of the building. For example, sand bags could be placed in front of openings (windows, doors, etc.) and plastic film could be applied to windows to mitigate the impact of artillery fire or explosions.

Fences, doors and other openings can be adapted according to the level of protection required. Where appropriate, the use of access-control hardware, intrusion-detection systems, surveillance and, at selected entrances, guards to control access and oversee screening will increase the level of protection. Any hardware used should offer the option of easily locking doors from the inside. Providing a minimum level of lighting at night will enable security guards and staff to monitor entries by people and vehicles and to identify possible intruders and weapon-bearers more effectively.

Putting in place screening procedures and physical barriers, such as fences, at the entrance to critical areas will reduce the risk of disruptive entries.

4.7 Safe rooms

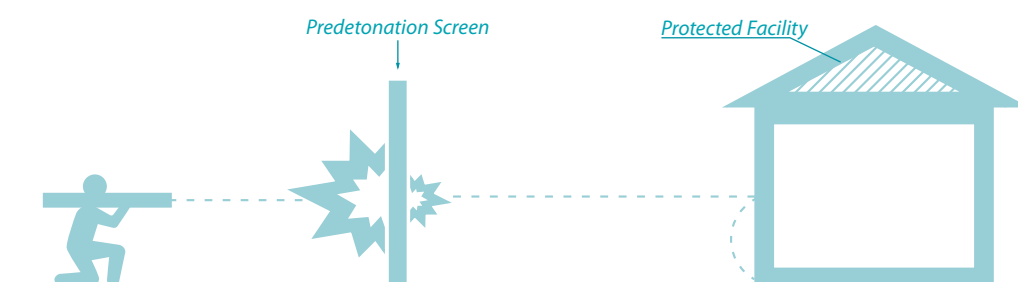
Depending on the context, it may be necessary to plan for the possibility of building safe rooms in the event of an emergency. It should be borne in mind that the minimum space required in a safe room per healthy person, for a stay of less than two hours, is five square feet (approximately 0.5 square

metres).²⁹ If a safe room is to accommodate patients or to be used for longer than two hours at a time, space requirements may significantly increase. A feasibility study will be necessary before any plans are made. Most health-care facilities would not have the capacity to create safe rooms large enough to accommodate all of its patients. It may therefore be necessary to seek alternative solutions in the event of an emergency, such as preventive evacuation.

The safe rooms should be located in the middle of the facility or in other locations that are quick and easy to access. Consideration should be given to ensuring adequate ventilation, which will depend on the potential number of occupants. Rooms used for medical services that do not require natural light, such as diagnostic imaging or surgery, could be located in the centre of the facility and converted into safe rooms, if need be.

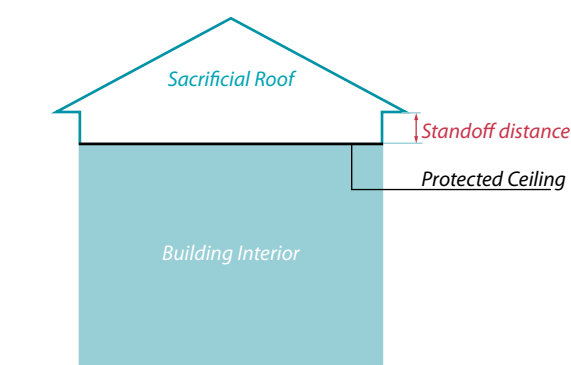
4.8 Structure of buildings

It is not feasible to outline all possible measures for protecting the physical structure of health-care facilities against explosive devices and anti-tank or high-calibre weapons, as this goes beyond the scope of this publication. Effective protection against these kinds of threat can only be achieved through expensive construction work. However, building pre-detonation screens around the facility can enhance protection against certain types of high-calibre artillery fire. If erected at an appropriate standoff distance from the facility, these act as a shield and help to reduce the impact of the explosives on the building itself.



Source: United States Department of Defense (UFC 4-023-07)

Pre-detonation screens can also be installed on roofs (referred to as “sacrificial roofs”):



Source: Indian Institute of Technology Kanpur (IITK-GSDMA Guidelines on Measures to Mitigate Effects of Terrorist Attacks on Buildings)

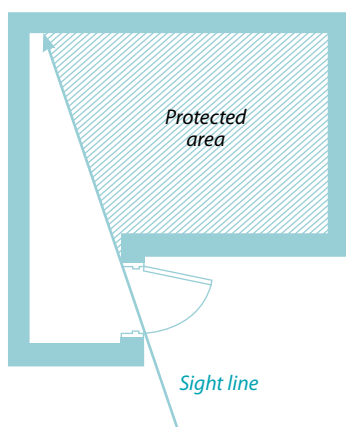
Reinforced masonry or concrete walls will provide resistance to the effects of weapons of a lower calibre. For example, reinforced masonry of a thickness of 200 mm or reinforced concrete of a thickness of 100 mm can offer protection from weapons up to a calibre of 7.62 mm.

²⁹ FEMA 453: Safe Rooms and Shelters – Protecting People Against Terrorist Attacks, Federal Emergency Management Agency, Washington D.C., 2006.

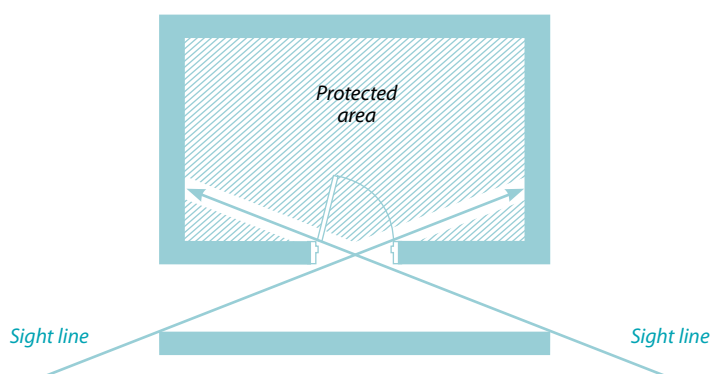
4.9 Openings

Openings, such as windows and doors, are some of the most vulnerable parts of any building. Measures should be taken to enhance the security of openings in order to prevent disruptive entries and protect against stray bullets or blast effects.

The best way to improve security is to limit the number of openings in the building. In order to achieve a balance between the need for security and the need for natural light, windows and doors should be strategically positioned or protected. For example, windows ideally should not face out onto hazardous areas and any that do should be adequately protected from direct artillery fire.



The most common method of protecting a facility from potential attacks through ground-floor windows or doors is to erect a protective wall at a distance from the opening. A stack of sand bags may also be used.



Such a construction will limit the risks of being hit by a stray bullet within the protected area and reduce the blast effects of any nearby explosions. In areas where the risk of explosion is high, applying plastic film to windows is another measure to consider. This reduces the risk of injury from fragments of glass, which is very common and can affect a large number of people at once.

To enhance protection against disruptive entries, ensure that each opening can be firmly secured from the inside or – for areas such as the pharmacy, fuel-storage area, generator room and water-pump room – from the outside. This can be achieved by installing armoured doors or shutters and also by putting up security grids along walls, doors and windows. These grids should be made of steel and be sufficiently robust and tightly meshed to prevent intrusions.

4.10 Utilities network (water, power, sewage)

Essential utilities must be located underground and/or properly enclosed to protect them from blast effects and sabotage. They should never be positioned along the perimeter wall of the health-care facility.

Unauthorized access to power and water supplies must be prevented through security measures, such as the installation of fences or other lockable barriers. If these supplies are housed in units above ground, they should be hidden from view to the extent possible.

Access to water-storage tanks and water-treatment plants must be controlled to prevent deliberate contamination attempts. Regular inspection and testing must also be carried out to ensure that the water has not been contaminated with a chemical or biological agent.

Whenever feasible, steps should be taken to ensure that health-care facilities have access to alternative water supplies that are independent of the local water network, since this network is vulnerable to damage in the context of an armed conflict or other emergency. A borehole equipped with a pumping system and storage capacity located within the perimeter of the health-care facility is an example of an alternative water source. If the health-care facility relies on a single water supply and cannot access alternative sources, plans should be made to truck water to the facility in an emergency. In such cases, the quality of the water brought to the facility must be carefully checked.

Similarly, measures should be taken to make sure that health-care facilities have access to alternative power supplies, such as a backup generator system, for critical medical services. Sustainable sources of energy, such as solar power, could also be considered. The alternative power supply should be kept separate from the original supply to avoid a situation in which both are compromised by an attack or intrusion. Fuel-storage areas should be secured and access to them restricted by the following means:

- lockable physical barrier (e.g. fence);
- guards, if appropriate;
- surveillance cameras, if feasible.

Closed rooms, such as operating theatres, should be adequately ventilated by mechanical or natural means. If the ventilation system used is mechanical, it must be connected to the backup power supply.

Finally, locating the sewage network underground and incinerating medical waste to reduce the risk of contamination can protect the waste-management system of a health-care facility.

4.11 Self-sufficiency

A minimum stock of fuel reserves must be available at all times in order to ensure that the health-care facility can continue functioning for a given period of time during an emergency (e.g. 10 days). In many contexts, fuel remains a strategic asset for military operations. Installing fuel-storage facilities in a discreet location could prevent theft by parties to the conflict. Health-care facilities could also consider having more than one fuel-storage site. However, the benefits of storing large quantities of fuel onsite should be weighed against the risk of a larger stock attracting lootings or attacks.

Consideration should also be given to how the health-care facility will maintain a sufficient supply of fuel during an armed conflict or other emergency. There should be contingency plans in place describing alternative routes and/or suppliers.

There should likewise be sufficient water-storage capacity onsite, depending on the size of the health-care facility, the different water-supply options and the reliability of these options. A minimum reserve of 48 hours' worth of water should be available.

4.12 Maintenance

The health-care facility should have a maintenance plan in place to enable it to continue operating in the event that armed conflict, attack or siege prevents external maintenance personnel from reaching the facility. The plan should ensure the availability of trained staff, procedures and spare parts.

4.13 Fire risk

There should be measures in place to protect the health-care facility against the risk of fire, including plans for the evacuation of patients and staff, detection of fire hazards and mitigation of fire risks. Exit doors, corridors and staircases must be kept free from obstruction at all times. Fire extinguishers, hose reels and fire alarms must be installed wherever appropriate. In addition, fire-rated doors could be fitted in strategic locations. As a general rule, priority must be given to the use of fire-resistant materials to minimize the spread of a fire.

The fire evacuation plan must be clearly displayed and well known by all staff. The ability of staff to act immediately at the onset of a fire is critical for its containment. Appropriate training and drills for the workforce are therefore standard fire-safety measures.

4.14 Communications system

Effective communication is essential during a crisis. Communications systems and technology – such as cell or satellite phones, radio transceivers and internet connections – must therefore be secured yet remain readily available for communicating both within the site and with the outside world in the event of an emergency. The use of solar energy as a backup power supply for the communications system is one way to protect it from shutdown.

Challenges faced in providing health care in a conflict situation: The experience of Médecins Sans Frontières in Tripoli, Lebanon

By Sergio Bianchi, Zeina Ghantous and Laurent Ligozat, Médecins Sans Frontières

In 2012, Médecins Sans Frontières (MSF) launched a programme in the Lebanese city of Tripoli, in response to the significant medical needs of the local population following a series of intense outbursts of violence.³⁰ As the Syrian crisis unfolded, Tripoli became the setting of clashes between the militias of Jabal Mohsen – an Alawite neighbourhood of the city – and the Sunni armed groups active in the adjacent neighbourhood of Bab al-Tabbaneh.³¹ Between 2011 and 2013, violence escalated and civilians in the two neighbourhoods began to be targeted by the armed militias. In 2013, 77 people died and 484 were wounded in the crossfire. More than 50% of injuries and deaths occurred during the last three months of 2013, the most violent period in the history of the conflict.

Concerned about the impact of the violence on civilians and about the potential loss of access to health care in Jabal Mohsen and Bab al-Tabbaneh,³² MSF launched a programme to cover primary and reproductive health services in two health-care centres. In so doing, it became exposed to violence against health-care services and documented the consequences of this for the city. It should be noted that Tripoli is just one of many parts of Lebanon in which violence affects health care.

MSF initially tried to negotiate the opening of one impartial health-care centre for patients from both sects.³³ Confronted with the denial of security guarantees for such a facility from the parties to the conflict, it took the pragmatic step of instead offering similar services in two existing facilities: one in Jabal Mohsen, for Alawite patients, and the other in Bab al-Tabbaneh, for Sunni patients.

Nevertheless, health-care providers in Tripoli (including MSF) have been targeted by violence on two accounts: because of their profession and because of their affiliation to one sect or the other. Patients have also suffered attacks due to their affiliation.

³⁰ This article is based on the results of a 2014 report by Z. Ghantous and S. Bianchi, entitled *Tripoli's fragmented health care: Consequences of fighting on the provision of medical assistance*. The report was produced within the framework of the "Medical Care under Fire" project, a global initiative launched by MSF in 2013 to address the issue of violence against health-care provision in humanitarian crises. In the preparation of this report, 53 semi-structured interviews were conducted with MSF staff, non-MSF health-care workers, patients and other health-care stakeholders in northern Lebanon, mainly in Tripoli, between February and July 2014.

³¹ Historically, the Sunni-Alawite armed confrontation began during the Lebanese civil war (1975-90). There were further violent confrontations between the two communities in 2008.

³² MSF is not the only humanitarian agency working in Tripoli. The ICRC, the Lebanese Red Cross and the Islamic Medical Association are also active in the city and the surrounding area. Moreover, there is already a health-care system in place, characterized by a predominance of expensive, private institutions alongside under-resourced, public facilities for primary and secondary health care.

³³ In Lebanon, religious collectivities (Sunnis, Shias, Alawites, Maronites, etc.) are referred to as "sects."

Violence on account of belonging to the medical profession included both verbal and physical assaults against MSF medical staff and staff of the Ministry of Public Health, triggered by simply carrying out one's duties. These assaults led to increased tensions between staff and patients, mental health problems and the resignation of staff, all of which disturbed the normal functioning of primary health centres and emergency rooms. It should nevertheless be noted that limitations to public health-care provision in facilities such as Tripoli General Hospital and primary health-care centres – including denial of access to health care and long waiting times – were largely due to structural factors³⁴ rather than to sectarian confrontations, even though the latter enhanced the intensity of the aggression.

In response to these incidents of violence and structural issues, MSF increased its human and material resources and modified the layout of its premises. It utilized the free space in front of the clinic's entrance to build a covered waiting area for prospective patients, thereby separating them from the consultation zone where medical staff work. These measures, together with health-promotion activities for waiting patients, helped to reduce stress levels among health staff at the clinic, thus improving their motivation and reducing conflict between clinic staff and patients. In turn, enhanced motivation and fewer conflicts guaranteed better access to health care for vulnerable patients.

Violence on account of affiliation resulted in the suspension of primary health-care services in the neighbourhood of Bab al-Tabbaneh, following a sustained exchange of fire between militias of the two sects. MSF staff were sometimes unable to reach the clinic in Bab al-Tabbaneh during outbursts of violence. In Jabal Mohsen, it became impossible to use traditional medical transportation for the transfer of severe cases to secondary health-care facilities. These limitations to health-care access were coupled with a division of medical services along sectarian lines, due to the widespread fear among patients and medical staff alike of being targeted because of their affiliation.³⁵ For example, Alawite patients stopped attending the nearest referral hospital, Tripoli General Hospital, as it was located in a neighbourhood ruled by Sunni militias. Similarly, Alawite doctors stopped working outside of Jabal Mohsen.

In taking the pragmatic step of carrying out medical activities in both communities, MSF aimed to mitigate these problems of access to care. Its initiatives proved effective in guaranteeing a certain degree of safety for MSF staff, facilities and patients, thus ensuring the ongoing provision of medical assistance in both neighbourhoods and improving access to primary health care for all. The MSF response was adapted to the city's prevailing sectarian divisions, which increasingly restricted access to the closest secondary health-care facilities for Alawite patients. A collective effort to address the underlying issue, namely the limitation of patients' access to health care based on their sectarian affiliation, is therefore needed. Simply put, the experience of MSF in Tripoli raises the question of how to provide all inhabitants of a city with unhindered access to health centres, emergency rooms and hospitals in a context of extreme violence and high risk for the civilian population.

³⁴ For instance, a lack of capacity to handle the sudden population increase in Tripoli, inadequate public funding, understaffing and poor organization of emergency wards.

³⁵ In the interviews, several attacks were reported to have occurred in and around Tripoli General Hospital due to the sectarian affiliation of patients and health professionals.

5. SECURITY OF THE SUPPLY CHAIN FOR HEALTH-CARE EQUIPMENT AND GOODS

5.1 Introduction

The continuous and reliable availability of quality health-care goods and equipment is just as important for the provision of health-care services as qualified staff, funding or infrastructure. Without contingency plans and specific measures to increase resilience, the supply of health-care goods may be impaired or even disrupted within a few days of a crisis breaking out. While it is natural to consider risks to the supply chain within and around the health-care facility itself, it is equally important to bear in mind possible upstream disruptions within the affected country or even abroad.

This chapter will discuss potential risks throughout the entire supply network, possible measures to enhance preparedness and resilience, and steps that could be taken to mitigate the impact of unavoidable disruptions.

5.2 Human resources

A lack of staff skilled in managing health-care supplies, or their temporary or permanent departure, is one potential cause of disruption to the supply chain. To mitigate such a risk, preparedness measures could include identifying and training staff members in basic stock management and replenishment to take over from the staff usually in charge of these tasks, if need be.

The complete absence of skilled staff during a crisis may be remedied by seeking support from other health-care facilities or advice from other competent professionals, such as pharmacists.

5.3 Information and communications systems

An interruption of the flow of information will inevitably disrupt the flow of materials. Disruptions to email services, phone services or the physical delivery of messages, orders and information about shipments (by post, courier or messenger) will quickly lead to shortages and eventually stockouts, even if there are no obstructions to the actual delivery of these supplies.

Within health-care facilities, particularly in central pharmacies and medical stores, physical stocks are almost useless without information on available quantities and their exact location. Any prolonged interruption of logistics information systems used for pharmacy management – whether caused by electrical power outage, technical faults, damage to computers and the network, or the absence of skilled staff – will quickly result in a loss of correct information on stock availability and location, and make accurate replenishment orders impossible. It would be extremely time-consuming to locate dozens of different items without detailed location information, especially if staff were not familiar with master cartons and supplier packaging.

In order to avoid a complete dependency on electronic information systems, preparedness measures should include:

- *ensuring that complete data backups of logistics information systems are made regularly on more than one device, including on external hard drives;*
- *ensuring that suppliers are able and willing to receive orders by telephone, if email services are disrupted, or by post, in case all means of telecommunication fail;*
- *ensuring that, if need be, stocks and orders can be managed with simple handwritten records;*
- *ensuring that items are arranged on shelves and pallets in a systematic order, enabling anyone to quickly locate any specific item;*

- *facilitating stock counts by not opening (all) supplier packaging and counting pallets and master cartons rather than small packages;*
- *ensuring that the most vital goods are identified and that enough staff members know where they are stored and how to manage their stock.*

If no preparedness measures have been taken, the impact of a loss of stock information (items, quantities and location) can be mitigated, in the event of an emergency, by immediately establishing manual records, such as stock cards. In the worst-case scenario, all items – or, at least, the most essential items – should be physically counted as quickly as possible. If random stock-allocation systems were in place, whereby goods are stored in any available storage location and in no particular order, essential stocks need to be rearranged into a systematic order.

5.4 Financial systems and resources

Any temporary or permanent disruption of financial systems, closure of banks or lack of cash will jeopardize supplier deliveries, as payments of invoices by bank transfer, cheque or cash may be delayed or even rendered impossible.

In order to mitigate the risk of disruption to financial systems, preparedness measures should include:

- *ensuring that health-care facilities have sufficient credit or bank guarantees with their suppliers;*
- *ensuring the availability of a minimum amount of cash for purchasing critical supplies.*

In case of disruption or collapse of financial systems, suppliers could be paid in cash. Alternatively, requests could be made to entities such as government bodies or humanitarian organizations to lend funds, pay invoices or vouch for future payments by the health-care facility. Establishing credit lines with trusted suppliers could be another option, which would also enhance security by reducing the need for keeping large amounts of cash on the premises.

5.5 Planning and preparedness

Anticipating and planning measures to mitigate the impact of armed conflict and other emergencies are equally important steps for ensuring a reliable supply of goods to health-care facilities. Without comprehensive and detailed preparedness plans, the facility may be wrong-footed by an acute crisis and unable to implement mitigation measures after its onset.

Preparedness measures should include:

- *establishing and implementing a detailed preparedness plan, which covers all aspects of supply-chain management;*
- *increasing supply-chain resilience.*

If an acute crisis is imminent and there is no preparedness plan in place, all possible risks should be identified as soon as possible to ensure that at least some basic measures can be quickly implemented.

5.6 Item selection

While the interruption of the supply of goods to health-care facilities is an obvious reason for shortages and stockouts, these can also occur as a result of a lack of planning or anticipation of changes in demand during an acute crisis.

Without a detailed list of essential items, it is impossible to ration them or prioritize their replenishment. Changes in the type of medical condition to be treated, such as certain infectious diseases or weapon wounds, can mean that health-care goods that were not frequently used or were unavailable before the crisis suddenly become necessary. In a similar vein, health-care facilities may suddenly be required to provide health-care services that they do not routinely offer, such as emergency surgery, paediatric care or obstetric care.

The selection of products with special transportation and storage requirements, such as hazardous goods or those requiring a cold chain, increases the probability of disruption to the supply chain.

The following preparedness measures should be considered:

- *establishing a list of indispensable and basic items for essential health-care services (surgery, paediatrics, obstetrics and treatment of life-threatening medical conditions);*
- *avoiding, as far as possible, drug products (including diagnostic tests) requiring the maintenance of a cold chain during transportation and storage;*
- *ensuring the availability of alternatives to bottled oxygen (local sources or oxygen concentrators);*
- *ensuring the availability of all items required for treating medical conditions that are common during armed conflict (weapon wounds, chemical injuries, burns, infectious diseases, obstetric emergencies, malnutrition, etc.);*
- *ensuring the availability of all items needed to respond to epidemics;*
- *stocking (additional) single-use surgical linen in case sterilization services are overwhelmed or interrupted.*

5.7 Demand forecasting and inventory control

Although demand forecasting and inventory control are much less obvious than, for example, ensuring that supply routes are unobstructed, these are no less important for a continuous and reliable supply of goods. Inaccurate or poorly adapted forecasts can quickly lead to shortages and stockouts if an acute crisis causes a sudden and significant increase in demand.

Demand for health care at a particular facility may increase during a crisis for a variety of reasons: the number of patients with acute medical conditions may increase, other health-care facilities may have been damaged or become inaccessible, or there may be an influx of displaced people to the area.

As the frequency of different medical conditions will inevitably change from crisis to crisis, basing forecasts purely on historic demand will inevitably lead to major errors. To increase forecasting accuracy, the morbidity method of quantifying drug requirements should be used; this involves determining the likely number of individual treatment episodes and needs for each episode.

Shortages may occur even though forecasts were accurately made and emergency stocks established if health-care personnel do not adhere to the standard treatment protocols on which the forecasts and stocks were based.

Among all possible preparedness measures, relating to demand forecasting and establishing contingency stocks, the following are the most important:

- *ensuring treatment protocols, in particular for medical conditions common during acute crises, are established and followed;*
- *preparing for the possibility of an influx of weapon-wounded, of a decrease in elective surgery and increase in emergency surgery, and greater demand for health care as a result of changes in the type of medical conditions requiring treatment and the arrival of displaced people in the area;*
- *increasing stocks of essential items (contingency stocks) in order to cover needs for a given period of time (e.g. 10 days) if the health-care facility is operating at full capacity or over capacity;*
- *increasing stock levels of items for which demand is forecast to increase, based on estimated numbers of patients and expected medical conditions.*

If a crisis erupts and no preparedness measures had been taken beforehand, stock levels must be carefully monitored during the emergency period, especially items with a high turnover, in order to anticipate shortages, ration their use and identify possible substitutes as soon as possible.

5.8 Sourcing

Managers of health-care facilities will naturally focus on their end of the supply chain when assessing risks, but it is important for them to consider the supply network as a whole, as the weakening or disruption of any link will inevitably have an impact on downstream facilities.

International trade sanctions against the conflict-affected country or government restrictions on imports within the country itself can suddenly disrupt the regular supply of health-care goods and replacement parts for health-care equipment. Qualified technicians and biomedical engineers may be unable to travel for the servicing and repair of health-care equipment. The disruption of national or local sources of quality health-care goods may be conducive to the emergence or increase of counterfeit and sub-standard health-care goods on the market.

Purchasing may be delayed or interrupted if there is a breakdown in law and order and it is impossible to conclude and enforce contracts with commercial suppliers or transporters.

In order to mitigate the risk of disruption to supply sources, the following preparedness measures should be considered before the emergence of a crisis:

- *confirming the willingness of commercial suppliers to continue deliveries during (acute) crises;*
- *identifying at least one alternative commercial supplier so as not to rely on a single supplier;*
- *identifying alternative sources of essential health-care goods (e.g. health ministry, nearby health-care facilities, emergency stocks and international organizations);*
- *establishing a system for exchanging and updating information on stocks available at other (nearby) health-care facilities and medical warehouses (belonging to the government, humanitarian organizations, etc.);*
- *ensuring that replacement parts are available and that all health-care equipment is in good condition, well maintained and serviced in accordance with recommended schedules;*
- *in the case of larger health-care facilities, hiring a biomedical technician or engineer to maintain the medical apparatus and other technical installations.*

It should be remembered that networks are more resilient than individual units. If preparedness measures at a given health-care facility prove insufficient in ensuring a reliable supply of health-care goods, items in short supply could be solicited from contingency stocks, the health ministry, other health-care facilities (which may even hold excess stocks of specific items) or humanitarian organizations.

5.9 Storage

Risks to medical storage facilities and medical stocks need to be considered not only within the health-care facility but at all other points in the supply chain – such as warehouses at border crossing points, customs facilities, the health ministry, commercial manufacturers, suppliers and humanitarian organizations – since damage to these facilities and stocks will have adverse consequences for the entire chain at whichever point it occurs.

The immediate impact of armed conflict, combined with a general breakdown of law and order, greatly increase the risk of crime, theft, robbery, looting, vandalism and wanton destruction of property by individuals or parties to the conflict.

Risks directly associated with armed conflict include confiscation of health-care goods and equipment by parties to the conflict as well as direct damage of medical storage facilities by explosive devices, shelling, bombing or fire. Any damage caused is likely to be exacerbated by the delay or absence of technical assistance, such as fire services.

There is also the risk of damage or destruction of temperature-sensitive goods (such as diagnostic tests or vaccines) due to electrical power outages or damage to (central) heating systems, air-conditioning equipment and refrigerators.

The following measures should help to increase the resilience of hospital buildings and utilities, and most are equally applicable to medical storage facilities:

- ensuring that parties to the conflict are aware of the vital importance of medical stocks throughout the supply network (e.g. at border crossing points, supplier bases, medical warehouses and health-care facilities);
- making sure that sufficient stocks of replacement parts, service parts and operating supplies to cover a period of one year are available for all (essential) items of health-care equipment;
- ensuring the availability of additional storage space for increased stock levels in anticipation of a crisis;
- making sure that all stocks have the longest possible remaining shelf life;
- ensuring the availability and use of ice-lined refrigerators with a maximum holdover time in case of power failures;
- placing medical storage facilities in locations that offer the highest available degree of protection from the direct effects of armed conflict;
- protecting medical storage facilities from forced entry by fitting them with steel doors and barring any window openings;
- applying physical security measures to buildings holding medical supplies (e.g. bricking up windows and protecting door openings) and power/water supply systems areas;
- ensuring that a rigorous fire-safety plan is in place (e.g. avoiding or removing flammable materials and ensuring the safety of electrical installations);
- storing flammable goods and medical gas cylinders (e.g. containing oxygen) in separate buildings that can contain the spread of a fire;
- in very hot or cold climates, moving temperature-sensitive stocks to a place inside the health-care facility where less or no air conditioning or heating is required.

5.10 Transportation

Interruptions to the transportation and delivery of supplies have just as detrimental an effect on health-care provision as the destruction of medical stocks or the obstruction of access to health-care facilities for staff and patients. Whether health-care goods are destroyed onsite or never arrive at all, the impact is the same for the patients and health-care personnel needing to use them.

Consideration must be given to any obstacles that might hamper or obstruct transportation along the entire supply chain, from commercial suppliers abroad to border crossing points, routes within the country and the final stretch to health-care facilities.

At the international level, transportation sanctions (e.g. restricting air transportation) may hamper or block deliveries by commercial suppliers or humanitarian organizations.

At the national level, transportation can be disrupted by the temporary or permanent closure of international borders and the unavailability or inefficiency of customs services (border crossing points, seaports and airports). Imports may be intentionally blocked or hampered by the government or other State authorities. Even fairly short delays at customs facilities can cause damage to temperature-sensitive health-care goods that are exposed to heat or cold while inappropriately stored, in particular those requiring an uninterrupted cold chain or sensitive to freezing.

Drug regulatory authorities may inadvertently cause significant delays by imposing unreasonable requirements on the quality and documentation of products or by effectively making importation impossible by imposing or tolerating lengthy delays for quality-control testing of batches of drug products and single-use medical devices.

Within the country, transportation may be hampered by the inability or unwillingness of commercial suppliers or transporters to deliver health-care goods and by the lack of or excessive cost of fuel for vehicles.

Air transportation may be impossible for lack of airport infrastructure, including air traffic control services, lack of over-flight clearances and lack of landing permits. Road transportation may be impaired due to the presence of landmines or the obstruction of infrastructure, such as roads, bridges, tunnels, seaports, airports and railheads. Blockages or damage to certain transportation routes may necessitate lengthy detours, significantly increasing journey times and costs.

Preparedness measures to consider include:

- *raising awareness among the authorities and parties to the conflict of the importance of keeping borders open and maintaining customs services during a crisis or conflict;*
- *advocating for and ensuring the exemption of health-care goods from transportation sanctions;*
- *studying procedures and preparing documents in anticipation of applying for exemptions from international trade sanctions;*
- *negotiating the waiving of importation procedures and quality-control inspections that cause unreasonable delays;*
- *negotiating alternative importation procedures in case of the absence of customs authorities;*
- *ensuring the availability of alternative transportation options (provided by authorities, humanitarian organizations, etc.);*
- *making sure that contingency fuel stocks are available for vehicles;*
- *planning alternative transportation routes in case usual routes are blocked;*
- *ensuring the availability of transportation resources for moving equipment and supplies in case the health-care facility must be relocated.*

Mitigation measures to consider if access is blocked include:

- *negotiating the free passage of vehicles transporting medical supplies;*
- *soliciting support, potentially at the international level;*
- *requesting that humanitarian organizations transport the necessary supplies;*
- *using ambulances to transport medical supplies;*
- *reducing the frequency of road travel by transporting health-care goods along with other essential goods, such as food.*



6. TEMPORARY RELOCATION FOR SECURITY REASONS

6.1 Introduction

When security measures at the current facility prove insufficient and risk levels for staff and patients become unmanageable, a temporary relocation of health-care services may be the only solution. One of the challenges in planning a relocation is not knowing for how long it will be necessary, owing to the unpredictability of the situation. Plans must therefore be flexible and be regularly revised to reflect the realities on the ground.

Specific information needs to be collected in preparation for the transfer of health-care services to a new location. As with contingency planning, it is crucial to engage and consult with a broad range of stakeholders in this process. Local authorities, community leaders, local public- and private-sector providers, relevant national and international organizations, staff and patients can all make important contributions to the analysis of the prevailing situation.

When a decision has been made to temporarily move to a safer location, there are several factors to bear in mind to ensure a smooth transfer of medical services, patients and staff. This chapter does not provide detailed technical recommendations for relocation, but rather guidance on what to take into account in such a process.

6.2 Location

The first step in preparing for a move is to conduct a site and security assessment of the proposed new location. Furthermore, it is important to have a sound understanding of the risks inherent in the current location and how moving to the new location will reduce these risks. Information gathered during this process may prove decisive in the choice of temporary location. It will guide the implementation of security measures and clarify whether the health-care services need to be moved to a recognizable or hidden site (i.e. a facility set up without the knowledge of the relevant authorities).

Legal issues relating to the temporary transfer of health-care services to a safe location

When considering a temporary relocation of health-care services in the context of armed conflict, it should be noted that setting up a hidden health-care facility – in other words, moving it to a new location without the knowledge of the relevant authorities – is the last resort. From a legal point of view, the risk is that the hidden facility will be more vulnerable to attack than facilities formally and exclusively assigned to medical purposes by a competent authority of a party to the conflict, since such authorization is a prerequisite for specific protection afforded to health-care facilities under international humanitarian law. The use of the red cross, red crescent or red crystal emblem is a visible sign of that specific protection. Without the required authorization, a hidden health-care facility would only enjoy the level of protection granted to civilian objects and parties to the conflict would not be obliged under IHL to give prior warning in case of attack. In situations where the choice has been made to hide a health-care facility owing to ongoing hostilities, the geographical coordinates have sometimes been shared with the parties to the conflict for identification purposes. However, the security risk inherent in sharing the coordinates of the facility must be carefully assessed for each specific situation.

In some contexts, national legislation may restrict the type of temporary relocation that can be undertaken, especially where the delivery of health care by certain providers or to certain segments of the population is criminalized. Advocacy efforts should be undertaken at the national and international levels to promote the impartial delivery of health-care services, in particular where national legislation restricts such impartiality.

When exploring the possibility of relocation, it is important to be aware that a range of options may be available, including moving to alternative buildings, to a basement or to underground facilities. The use of field hospitals or mobile services could also be considered in some contexts. While the physical security of the facility is an important consideration for the functioning of health-care services, so too is ease of access for staff, patients and service-providers.

Checklist – Considering the suitability of new locations

- *Conduct a security analysis, with the input of security experts, where available.*
- *Conduct a site analysis.*
- *Assess the availability of staff.*
- *Consider the degree of accessibility for patients and staff.*
- *Consider delivery possibilities for drugs, nursing materials, food and water, etc.*
- *Assess the level of acceptance of the health-care services in the community.*
- *Gather health data and surveillance information to determine which type of medical services will be required as a priority in the new location and any potential partners in the delivery of these services.*

6.3 Available services and level of care

One consequence of temporarily moving health-care services to a new location is that some services may have to be suspended. It could also prove difficult to maintain the same level of care as was provided in the original location. Nevertheless, the aim should be to strive to achieve the highest level of care possible at the new location. To this end, it is important to engage openly with the authorities, community leaders and the general population about the type of services that would be available in the new location. Gaining consent and acceptance among the community and relevant stakeholders can enhance the protection of the facility and prevent potential misunderstandings about the relocation of services and the impact of this on the impartiality of health-care provision.

Careful consideration should be given to determining which services to prioritize, besides life-saving services. An assessment of needs in the communities to be served must be carried out and a decision made in consultation with local authorities. There should also be coordination with other health-care providers in the area at this stage, in order to integrate with or establish appropriate referral systems. It will be important to regularly review the level and standard of care offered in the new, temporary health-care facility and to adapt services when necessary.

In some situations, international personnel are deployed to support the delivery of health care. The World Health Organization has produced reference guidelines for foreign medical teams working in sudden-onset disasters,³⁶ describing the different levels of care and minimum standards to which the personnel must adhere. If an international organization is not familiar with the specific context in which its teams will be working, it is advised to consult and coordinate with national health authorities when agreeing and defining the type of services to be provided.

6.4 Preparing for the transfer

There need to be plans in place to ensure a smooth transfer of services, accompanied by standard operating procedures that are as detailed as possible and based on likely scenarios. When developing standard operating procedures, during the contingency planning process, it is important to identify the constraints inherent in the temporary location, as these will determine the types of services that could be offered and the equipment that would need to be transferred to the new site.

³⁶ World Health Organization (WHO), *Classification and minimum standards for foreign medical teams in sudden onset disasters*, WHO, Geneva, 2013. Accessible online at: http://www.who.int/hac/global_health_cluster/fmt_guidelines_september2013.pdf (last accessed on 13 March 2015)

The logistics of transferring the services and setting up a temporary health-care facility need to be carefully planned, and safety, accessibility and transportation routes need to be assessed. Vulnerable patient groups must be identified and prioritized for relocation, in view of their special need for protection and care. A progressive transfer could be considered, if the security situation so permits, though this may pose additional risks for staff and patients.

Although temporarily relocating to a safer location could help to reduce the stress levels of health-care personnel working and living through a crisis, it may well give rise to a new set of stressors. For example, staff may have to travel further to the new location or take up temporary residence away from home. In order to retain staff during a relocation, it is therefore important to establish support mechanisms to create the best possible working conditions for the health-care personnel and to accommodate for their needs in the new location.

Checklist – Preparing for relocation

- *Assess the availability of energy and water supplies.*
- *Decide which equipment and medicines to transfer, considering the availability of storage space.*
- *Check transportation routes and accessibility.*
- *Prepare for a progressive transfer, if it is possible to use the old and new facilities simultaneously for a period of time.*
- *Bear in mind that delaying transfer may increase risks for certain patients and staff.*
- *Identify vulnerable groups who might need alternative care to that provided in the new health-care facility.*
- *Ensure that procedures are in place to maintain confidentiality of patient data and train staff in following these procedures.*
- *Identify and develop partnerships with other providers that could complement or replace certain health-care services.*
- *Ensure the availability of backup communication equipment and devise an evacuation plan.*
- *Consider developing mechanisms to support staff through the relocation.*



CONCLUDING REMARKS

The HClD project has created a forum for dialogue among a broad range of stakeholders engaged in the provision of health-care in contexts of armed conflict and other emergencies.

The outcomes of these discussions, in particular from the workshops held in Ottawa and Pretoria on ensuring the security of health-care facilities, have been a key source of reference for this publication. Representatives of national authorities, national and international organizations, the International Red Cross and Red Crescent Movement, various technical professions, health-care personnel and academia have also provided significant input. Since some of these stakeholders were not previously accustomed to working so closely together, this collaboration can be considered an achievement in its own right.

Though the focus of this publication has been on formulating recommendations to enhance the security of health-care facilities in situations of armed conflict, it is clear that links can be made with other types of emergencies. Many preparedness, preventive and mitigation measures may prove just as effective in building the resilience of the health-care system during natural disasters, for example, as in times of armed conflict.

It is hoped that this publication will not only serve as a guide for contingency planning processes in health-care facilities, but also promote the continued growth of and cooperation between the network of professionals established through the HClD project, and contribute to raising awareness of the importance of protecting health-care provision from the effects of armed conflict.



MISSION

The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. The ICRC also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. Established in 1863, the ICRC is at the origin of the Geneva Conventions and the International Red Cross and Red Crescent Movement. It directs and coordinates the international activities conducted by the Movement in armed conflicts and other situations of violence.

