HANDBOOK ON PROCEDURES

FOR EMERGENCY MEDICAL SERVICES AND MEDICAL TRANSPORT IN CRISIS SITUATIONS

COMPLIMENTARY ISSUE

Interreg
Współfinansowany przez Unię Europejską
NEXT Polska – Ukraina
RescueCars

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CHAPTER 1. INTRODUCTION

1.1. Purpose of the handbook

The purpose of this handbook is to develop coherent and practical procedures for emergency medical services and medical transport in crisis situations where ambulances of the National Emergency Medical Services (EMS) do not operate normally or are overloaded.

The document is instructional and implementation-oriented — it serves as a tool supporting both the staff of the Poviat Hospital in Łosice and the partner hospital in Ukraine in planning, organising, and conducting rescue operations under conditions of limited resource availability. It is not a document that supersedes the applicable Crisis Management Plans.

The handbook also aims to:

- indicate algorithms and procedures that can be implemented locally without conflicting with the existing EMS system;
- develop a set of good practices for responding to extraordinary events, including infrastructure failures, mass-casualty incidents and wartime operations;
- provide training materials and templates for exercises in emergency medicine crisis response.

1.2. Scope of the document

Hospitals play a key role in providing basic medical care to the population in the event of any type of disaster. Depending on the scale and type of disaster, there may be a sudden increase in demand for services that exceeds hospital capacities and threatens the safety of hospitals and the entire healthcare system.

Priority actions the implementation of which will help hospital management and those planning rescue operations to ensure:

- ontinuity of basic services delivery;
- proper coordination of hospital activities at every level;
- clear and correct internal and external communication;
- rapid adaptation to increased demands;
- effective use of limited resources;
- a safe environment for healthcare workers.

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The handbook covers:

- **procedures for medical teams** in situations of limited ambulance availability, including use of alternative forms of patient transport;
- **organisational and decision-making schemes** for hospitals — activation of internal crisis plans, patient flow management, cooperation with local government units and security services;
- **proposals for operational solutions** applicable locally (e.g., internal patient transport, support from other medical entities);
- **case studies and** response **scenarios** for situations when the national emergency medical system isoverloaded or partially unavailable;
- **an integrated set of tools** (checklists, forms, algorithms) supporting staff in operational decision-making.

The territorial scope covers the area of operation of the Poviat Hospital in Łosice and the partner Ukrainian hospital, with the possibility of extension to interregional cooperation.

1.3. Definitions and key terms

EMS — National Emergency Medical Services — the system established in Poland to provide medical assistance to persons in a state of acute health threat.

EMT — Emergency Medical Team — a unit of the EMS system performing emergency medical procedures in out-of-hospital conditions, meeting the requirements set out in the EMS Act. EMT are divided into:

1. specialist teams, composed of at least three persons authorised to perform emergency medical procedures, including a system physician and a system nurse or a paramedic;
2. basic teams, composed of at least two persons authorised to perform emergency medical procedures, including a system nurse or a paramedic.

An emergency medical team is equipped with a specialised medical transport vehicle that meets the technical and quality characteristics specified in the Polish Standards transposing the harmonised European standards. The head of a specialist EMT is a system physician, whereas the head of a basic EMT is a person designated by the unit dispatcher, being a paramedic or a system nurse with at least 5,000 hours of experience in the last 5 years in an emergency medical team, an air ambulance team, or a hospital emergency department.

System overload – a situation in which the number of calls and demand for medical assistance exceed the current capabilities of the EMS system in terms of available emergency medical teams (EMT), personnel, transport means and infrastructure.

System disruption – partial or complete suspension of EMS system components in a given area due to technical, organisational or environmental factors (e.g., loss of communications, IT system failure, destruction of transport infrastructure).

Critical event — any event in which the hospital cannot provide care routinely or according to accepted standards, revealing a disparity between the hospital's capabilities, resources and infrastructure and demand (patient needs) and requiring the hospital to activate emergency measures to meet that demand.

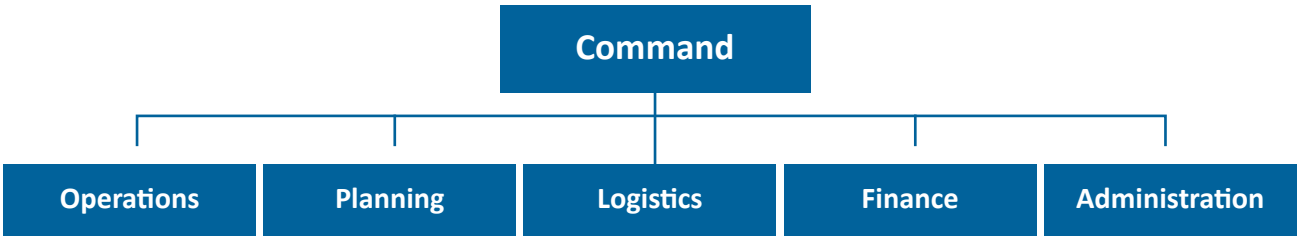
Inter-facility transport – organised transfer of a patient from one healthcare facility to another while maintaining continuity of medical care, including transport carried out under limited ambulance availability or using alternative transport means (e.g., hospital vehicles, military transport, rail).

Hospital contingency plan – a set of procedures and tools to ensure continuity of facility operations in crisis situations, including cooperation with other medical entities and services.

Rapid response capability – the ability of medical services to exceed their normal capabilities to meet increased clinical care demand.

Capabilities – the combination of all the strengths, characteristics and resources available in an organisation that can be used to achieve agreed objectives.

Command and control – the decision-making system responsible for activating, coordinating, implementing, adapting and terminating a pre-established response plan. A well-functioning command and control system is essential for effective management of emergency medical services in hospitals.



Hospital Crisis Response Team (HCRT) – a multi-functional unit created for command needs in crisis situations. Its purpose is overall technical management of actions and supervision of all aspects of crisis management, coordinating response, approving action plans, responding and mitigating effects, and overseeing all activities and decisions.

Cooperation agreement – a formal document defining a firm commitment of at least two parties to participate in an undertaking, containing general principles of such commitment but not constituting a detailed contract or agreement.

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Mutual aid agreement – an agreement between entities, organisations and authorities defining a mechanism for rapid provision of assistance in a crisis, including allocation of personnel, equipment, materials, transport means and other relevant services. The main goal is immediate support before, during and after an event.

Standard Operating Procedure (SOP) – a complete guidance document or instruction describing the preferred method, performing a specific function or a set of related functions, standardised and containing information on action duration, responsible bodies and other essential details.

1.4. Systemic and international context

Emergency medical system in Poland

The Polish EMS system operates under the Act of 8 September 2006 on National Emergency Medical Services. It includes integrated elements: medical dispatch centres, emergency medical teams, Hospital Emergency Departments (ERs) and admission wards, supported by the Polish Medical Air Rescue (LPR).

In cases of system overload or failure, it becomes necessary to implement substitute solutions — e.g., local crisis plans, internal transport teams, use of hospital infrastructure for emergency tasks.

Poland–Ukraine cross-border cooperation

In the context of the war and the ongoing humanitarian crisis in Ukraine, it is important to create a joint bilingual handbook based on experiences of both countries. The emergency medical system in Ukraine, overseen by the Ministry of Health, is undergoing intensive transformation — both in ambulance coordination and organisation of patient transport under wartime conditions. Polish–Ukrainian cooperation enables:

- exchange of crisis response experience;
- development of common standards;
- building interoperability of rescue systems in crisis situations;
- mutual training support and simulation exercises.

CHAPTER 2.
CRISIS SITUATION ANALYSIS – OVERLOAD OF THE EMERGENCY SERVICES SYSTEM

2.1. Causes of the overload of the emergency medical services system

The emergency medical system is a key element of national health security, but its functioning strongly depends on availability of personnel, transport infrastructure, communications and efficient management.

Ambulance system overload can occur as a result of sudden large-scale events, as well as long-term processes that gradually weaken operational capacity.

Common causes of an overload include:

a) Mass events and disasters

- transport, industrial, construction, chemical or ecological disasters where the number of casualties exceeds local response capacity;
- natural disasters (floods, fires, storms, avalanches) causing difficulties in ambulance access and loss of communications.

b) Population-level health crises

- epidemics and pandemics (e.g., COVID-19) where the EMS system experiences a sharp increase in calls and reduced personnel availability;
- increased demand for inter-facility medical transport with simultaneous shortage of transport means.

c) Infrastructure and systemic factors

- insufficient number of Emergency Medical Teams (EMT) relative to population needs;
- failures of ICT and dispatch systems;
- lack of coherent cooperation between EMS units, ERs and hospitals during increased load.

d) Geopolitical and military factors

- military operations or armed situations causing destruction of road, bridge or energy infrastructure;
- civilian evacuations and the need to organise medical transport under limited security;
- patient migrations and influx of refugees requiring immediate medical assistance.

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In practice, these causes often occur simultaneously, generating a cascading effect — e.g., a pandemic weakens staff and lengthens response times, which during a natural disaster leads to an actual system failure.

2.2. Consequences of emergency services system overload

EMS system overload has operational, organisational and social consequences. Most commonly observed effects include:

a) **Prolonged response times and delays in EMT teams arrival**

Exceeding response time standards delays the start of prehospital treatment and increases mortality in emergencies.

b) **Need to limit intervention priorities**

Dispatch centres are forced to modify priorities – lower-risk interventions are suspended or redirected to other providers (e.g., Night and Holiday Healthcare).

c) **Increased workload for ERs and admission wards**

Patients who did not receive field assistance report to hospitals. This leads to case accumulation and emergency department infrastructure overload.

d) **Disruptions in communication and coordination**

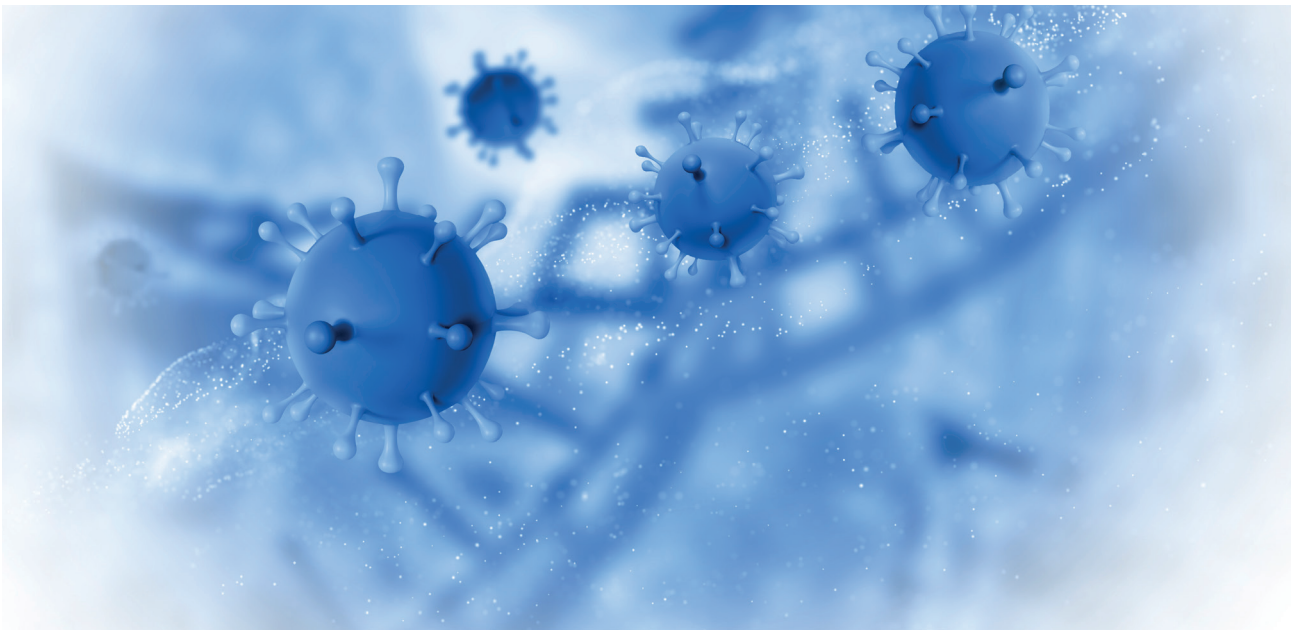
Under time pressure and an overload of calls, the risk of decision-making errors, inappropriate resource allocation, and communication difficulties between dispatchers, hospitals, and support services increases.

e) **Occupational burnout and reduced staff effectiveness**

Long-term functioning in conditions of overload leads to the phenomenon of so-called compassion fatigue – a decrease in empathy, motivation and mental resilience in paramedics, doctors and nurses.

f) **Threat to hospital continuity**

When ambulances are unable to transport patients, hospitals become the first and last point of care. Lack of ability to transfer patients to other units causes case buildup, longer hospitalisations and limited bed availability.



2.3. Case studies — Poland and Ukraine

A. Poland — the COVID-19 pandemic (2020–2022)

At the peak of the pandemic in 2021, the EMS system in Poland recorded a record number of calls. In some regions (e.g., Lesser Poland, Mazovia) ambulance waiting times exceeded 60 minutes. Measures introduced included:

- additional "COVID ambulances" funded from the Ministry of Health reserve;
- use of transport and military ambulances;
- temporary patient segregation centers at ERs;
- mobile rescue teams formed from hospital staff.

Analyses by the National Health Fund and the Supreme Audit Office showed that response effectiveness increased where **internal crisis plans and hospital transport teams** operating independently of EMS were in place.

B. Ukraine — armed conflict (2022–present)

As a result of the war, the emergency system in Ukraine was forced to reorganise. Infrastructure destruction and ambulance overload led to **alternative medical transport systems**:

- patient transport by medical trains;
- local evacuation teams at regional hospitals using civilian and military vehicles;
- network of evacuation and triage points at the border;
- interregional coordination via the central *e-Health Ukraine* portal.

Polish–Ukrainian cooperation, especially in transporting patients from the areas near the border, confirmed the effectiveness of contingency plans based on simple, clear algorithms that can be implemented locally independent of the national system.

CHAPTER 3. PREPAREDNESS

3.1. Purpose and basis

The aim of preparedness is to build a local operational "cushion" for the hospital (Łosice + UA partner hospital), which is activated when the EMS is overloaded or temporarily ineffective - without conflicting with its competences. The foundations are: the EMS Act, the medical activity Act, WHO guidelines on hospital preparedness, the National Crisis Management Plan (NCMP) and other applicable documents within the framework of the local crisis management plans.

3.2. Alternative transport matrix

Source/partner	Use	Requirement/notes
Medical transport (medical entities + private companies)	Inter-facility transfers of stable and 'yellow' patients with medical security.	Conclusion of framework agreements; vehicles and personnel meet the requirements (including PN-EN 1789/ambulance equipment, qualifications), in accordance with the law on medical activities and guaranteed services.
National Fire Service (NFS) / Volunteer Fire Service (VFS) as units cooperating with the EMS system	Delivery/evacuation, logistical support, transport of equipment and personnel, patient transport in emergency situations (after consultation with the dispatch center/ Poviat Crisis Management Centre (PCMC).	Cooperation procedures for units cooperating with EMS; joint exercises; radio communications agreed.
Territorial Defence Forces/ Army (at the voivodship/ poviat level)	Medical convoys, evacuation of „yellow" and „green" patients, communications and logistics support.	Cooperation agreement; activation by Voivodship Crisis Management Centre/PCMC within the NCMP logic.
Municipal transport (vans, social vehicles, and other local government units)	Evacuation of „green" patients/families, transportation of dialysis patients/chemotherapy patients (without intensive medical supervision).	Loan/rental agreements, driver lists, alternative routes; coordination by the PCMC
Logistics companies /suppliers with a fleet	Delivery of oxygen, fluids, medications; transportation of beds, tents, generators; optional transport of „green" patients with a medical escort.	Crisis clauses in contracts; in the case of patient transport – the presence of medical personnel and basic medical equipment (not an ambulance).

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Note (PL): medical transport is a medical service with personnel and an appropriately equipped vehicle; other transports of sick persons (e.g., local government bus) may be used only for "green" patients and with medical escort — to avoid imitating an ambulance and violating regulations.

3.3. With whom to conclude agreements/arrangements

Private medical transport providers (2–3 companies within 60–90 km; defined guaranteed service level and readiness limits).

Regional medical entities — mutual transport support agreements (matrix of available resources + on-call contact).

National Fire Service (NFS) / Volunteer Fire Service (VFS) — formal cooperation procedure as units cooperating with EMS; exercise schedule, shared communication channels.

Local government units (municipality/poviat) — vehicle loan agreements, driver and fuel support; access to evacuation centres.

Territorial Defence Forces / army — agreements on convoys and assembly points (in line with applicable crisis management plans).

3.4. What to procure/secure (surge stock) — minimum list

Mobile kits for "Mini-EMT"/medical escorts

- folding stretcher + board + collars; R1/R2 bags; oxygen cylinders + reducers; oxygen masks of various sizes; suction machine; AED; pulse oximeters; blood pressure monitors; dressing materials; isothermal blankets; headlights; radiotelephone.

Communications

- PMR/DMR radios compatible with the National Fire Service (with a fixed channel); satellite phones or a satellite gateway for the command; paper triage forms and all other forms in accordance with the medical activity act and internal SOPs.

Pharmacy and Oxygen

- Stock of infusion fluids and medications (resuscitation bag equipment); contract for priority oxygen supplies.

3.5. Readiness registers and maps (update every 30 days)

- **Register of means of transport**: ambulances (type, equipment, staff), hospital vehicles, local government unit fleet, private companies (24/7 contact, response time, load capacity).
- **Partner map**: hospitals, outpatient clinics/primary care facilities, dialysis centres, hospices (on-call contact).
- **List of contacts**: radio channels, emergency phones, and on-duty personnel.

3.6. Procedures and training

- **Monthly communications test** (radio/backup, 10 min, test protocol).
- **Quarterly exercises with partners** (**National Fire Service/Territorial Defence Forces/Local government units/NGO**: scenarios, communications failure, evacuation.
- **Semi-annual audit of the surge stock** + inspection of portable equipment (oxygen, AED, generators).
- **Position-based training**: START/SALT triage; simplified documentation; safety of transport in non-ambulance vehicles (roles and limitations).

3.7. Legal compliance checklist (PL) — "green light" before plan activation

- **Agreements** with medical transport entities (terms, liability, insurance).
- **Record of cooperation** with units cooperating with EMS (National Fire Service (NFS)/Volunteer Fire Service (VFS)) + exercise register.
- **Crisis clauses** in contracts with fleet/logistics providers (priority deliveries, 24/7 access).
- **Instruction for use of non-ambulance transport**: only "green"/"yellow-stable" patients, **with medical escort**; no "ambulance" markings, no privileged signals.
- **Compliance of medical vehicles** with requirements (equipment, standards, personnel qualifications).
- **Protection of data and documentation** offline in accordance with medical activity regulations.

3.8. Minimum document package "for immediate use"

- **Framework agreements** (medical transport, local government, National Fire Service/ Territorial Defence Forces, logistics companies).
- **24/7 contact list** (on-call staff, dispatch, Poviat Crisis Management Centre/Voivodship Crisis Management Centre, drivers, oxygen warehouse).
- **Emergency communications plan** (frequencies, daily passwords, spare radios).
- **Triage procedure + forms** (PL/ENG/UA) — using applicable SOPs.
- **Bed and equipment matrix** (update every 30 days).

CHAPTER 4. MEDICAL AND OPERATIONAL PROCEDURES IN CRISIS SITUATIONS

4.1. General assumptions

The purpose of the procedures described in this chapter is to ensure continuity and safety of medical care in conditions of overload or partial failure of the emergency medical services (EMS) system.

In such situations, it is necessary to switch from standard mode to crisis mode, based on the principles of simplified command, patient prioritisation and mobilisation of local resources.

Basic principles:

1. Safety of staff and patients is paramount.
2. Decisions must be quick and based on available data, not ideal conditions.
3. Every medical professional should know their place in the action algorithm.
4. Communication between teams must be two-way and continuous — even with loss of IT systems, backup communications (radio, telephone, courier) must be used.

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4.2. Hospital response phases

When the emergency system is overloaded, a three-stage response model is recommended:

Phase	Description	Main action
I. Alert	Increase in the number of calls, delays in ambulance arrival, signal from the dispatch centre or poviat authorities.	Activation of the hospital crisis team; review of resources (beds, oxygen, staff); preparation of admission areas.
II. Response	The EMS system is not performing all tasks, some ambulances are not arriving; patients are going directly to the hospital.	Activation of the internal emergency plan; reorganisation of the emergency department; activation of internal transport; triage of patients.
III. Recovery	The system is slowly regaining its efficiency; possible transfer of patients to other units.	Assessment of losses, staff rotation, restoration of resources, final report.

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CHAPTER 5. GOOD PRACTICES AND IMPLEMENTATION SOLUTIONS FOR HOSPITALS

5.1. Purpose and scope of local solutions

The purpose of this chapter is to present a set of practical measures that can be implemented at hospital level in order to:

- ensure continuity of care in conditions of EMS system overload,
- create an internal crisis response system,
- strengthen cooperation with local and international entities,
- increase the resilience of medical infrastructure to emergencies and war.

All the solutions presented are complementary to the EMS system – they do not replace it, but complement and support its activities in situations where the availability of ambulances or emergency resources is limited.

5.2. Organisation of the Hospital Crisis Response Team (HCRT)

In order to prepare the hospital to respond to the overload of the emergency medical system, it is recommended to establish a Hospital Crisis Response Team (HCRT) – an internal operational structure with clearly defined roles, responsibilities and communication channels.

HCRT structure:

Role	Responsibility	Person / individual
Incident Commander	Makes strategic decisions, activates the emergency plan.	Hospital director / Medical director / Emergency department manager.
Command Team	Managing operational activities, triage, transport, logistics.	Doctor on duty, charge nurse, logistics specialist, IT specialist.
Medical Transport Unit	Organising internal and inter-facility transport.	Drivers, paramedics, technicians.
Communication Cell	Ensuring radio, telephone and backup communication.	Communications technician, IT specialist.
Records Unit	Patient registration, triage, reports.	Registrar, dispatcher, medical secretary, archivist.

When organising the HCRT, consideration should be given to including representatives of the following hospital units: hospital administration, nursing administration, human resources, infection control department, transport registration, IT, and communications. In addition, the group should include medical personnel involved in emergency medicine, intensive care, internal medicine and paediatrics.

CHAPTER 6. CASE STUDY AND CONTINGENCY PLAN

6.1. General assumptions

The emergency plan is an operational document the purpose of which is to:

- ensure the continuity of hospital operations in the event of a failure of the emergency medical services (EMS) system,
- standardise actions in emergency situations on the Polish and Ukrainian sides,
- indicate practical methods of evacuation, triage, communication and patient transport,
- minimise decision-making chaos in the first hours of a crisis.

The plan is **modular**, which means that it can be activated in whole or in part, depending on the scale of the incident.

6.2. Structure of the emergency plan

Stage	Module name	Main activities	Response time
I	Alarm and assessment of the situation	Reporting EMS failure or sudden influx of patients	0–15 min
II	Activation of the emergency plan	Activation of the Hospital Crisis Response Team (HCRT), assignment of roles.	15–30 min
III	Organisation of transport	Securing alternative means of transport, equipment, organisation of human resources	30–60 min
IV	Operational activities	Treatment, evacuation, transport, communication.	1–6 h
V	Stabilisation and data transfer	Organising documentation, assessing losses, report.	6–24 h

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6.3. Case study: Hospital in Łosice

Situation: Mass road accident + overloaded EMS ambulances.

Background: A bus collides with a truck on national road no. 19, leaving 15 people injured, 3 in serious condition. All EMS teams from the poviat are already in the field. Dispatch reports that it will take at least 45 minutes for the ambulances to arrive.

Goal: Organise a local hospital response until the ambulances arrive – admit, stabilise, and transfer patients.

Stage 1. Plan activation

1. The emergency room physician on call declares a crisis alert.
2. The hospital director activates the Hospital Crisis Response Team (HCRT).
3. The National Fire Service and the Police are notified of the need to transport the injured in replacement vehicles.

Stage 2. Organising the space

- The parking lot in front of the ER is transformed into a triage zone.
- Three zones are designated:
  - Red (R1) – for patients requiring immediate intervention;
  - Yellow (R2) – stable patients;
  - Green (R3) – patients with minor injuries awaiting transport.
- Two additional observation rooms are prepared inside the hospital (adaptation of procedure rooms).

Stage 3. Mobilising the resources

- Alternative patient transport means are activated.
- The hospital transport team departs for the scene, collecting basic equipment (stretchers, oxygen, R1 bags).
- Departments are notified of a possible increased patient intake.
- The charge nurse compiles a list of available beds and staff.

Stage 4. Operational activities

- Patients are classified on-site by a triage paramedic and admitted to the hospital according to their classification.
- Documentation is maintained on paper cards marked with the patient number and triage colour, in accordance with applicable SOPs.

Stage 5. Communication coordination

- Every 30 minutes, a situation report is sent to the National Emergency Medical Services (EMS) dispatch centre and the Poviat Crisis Management Center.
- Backup channels: cell phone/National Fire Service radio.

Stage 6. Stabilisation

After the EMS ambulances arrive and the patients are transferred for further treatment in the triage order, the hospital director prepares a report on the course of action, conclusions, and recommendations for updating the plan.

6.4. Case study: Partner Hospital in Ukraine

Situation: city shelling and patient evacuation.

Background:

A regional hospital is located in a shelling zone. Part of the infrastructure has been damaged, and there is no electricity. Ambulances are unable to reach the area due to a damaged road.

Goal:

Evacuate patients to a railway station and provide basic care until transport.

Stage 1. Alarm

- The hospital director announces the "ALFA" code – immediate evacuation.
- A patient gathering point is designated in a basement/shelter.

Stage 2. Evacuation team

- Doctor + nurse + paramedic + two medics.
- Patients are sorted by priority (R1–R3).
- Seriously injured patients are transported first in civilian vehicles (bus, pick-up).

Stage 3. Transfer point

- A medical station (MSF container) has been set up at the railway station.
- The hospital team transfers patients to the railway crew (ambulance train).
- Documentation is exchanged in a simplified format (ID form + triage card).
- A "black zone" point is established in a safe, covered area for casualties whose treatment outcomes are questionable due to the severity/nature of the injury or the patient's emergency condition, coupled with a lack of resources to provide comprehensive medical care. The "black zone" should be organised to ensure pain relief for patients.

Stage 4. Communication and reporting

- A report on the number of evacuated patients is forwarded to MOH Ukraine and the partner in Poland (Łosice Hospital).
- A list of needs (medicines, equipment, fuel) is sent via satellite.

Stage 5. Cross-border support

- Patients in critical condition are transported by medical train to the reception point in Poland (e.g., Lublin/Chełm).
- The team from Łosice receives notification of the number of admitted patients and the types of injuries.
- The HCRT plan is being implemented on the Polish side.

6.5. Decision algorithm – Emergency plan (diagram)

EMS FAILURE NOTIFICATION

↓

ACTIVATION OF THE HOSPITAL EMERGENCY PLAN

↓

APPOINTMENT OF A CRISIS TEAM

↓

ORGANISING TRIAGE AND TRANSPORT ZONES

PATIENT PRIORITIES (R1–R3)

↓

OPERATIONAL ACTIVITIES:
– on-site treatment
– alternative transport
– evacuation to partners

REPORTING AND STABILISATION

↓

ANALYSIS AND UPDATE OF THE PLAN

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CHAPTER 7. USE OF ALTERNATIVE MEANS OF TRANSPORT – OPERATIONAL GUIDELINES

7.1. General Assumptions

In situations where ambulances within the emergency medical system are overloaded or unavailable, it is necessary to utilise alternative means of transport—hospital, civilian, military, or municipal. To minimise the impact of such transport on the patient's condition, optimal stabilisation of the patient prior to transfer and awareness of the limitations of the means of transport are crucial.

Patient transport cannot be simply a logistical transfer from point A to B – it is a continuation of the therapeutic process in a changing environment. It requires clinical, technical, and organisational preparation.

7.2. Principles of stabilisation before transport

Optimal patient preparation for transport encompasses four interrelated elements:

Injury control

All actual and potential injuries – particularly those threatening the stability of the spine, pelvis, chest, or airway – must be identified and secured.

When possible, the following should be performed:

- orthopaedic immobilisation,
- spinal stabilisation (collar, board, belts),
- bleeding control (tourniquets, compression dressings, tamponade).

This step should be completed before the patient is transferred.

Resuscitation and physiological stabilisation

The patient's condition should be brought as close to normal as possible before transport begins.

This means:

- optimising ventilation and oxygenation,
- equalising pressure and tissue perfusion, oxygen saturation levels,
- temperature and pain control,
- administering fluids, oxygen, or life-sustaining medications.

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Resuscitation can be continued during transport, but should be initiated earlier – in stable conditions, before the patient is transferred to the vehicle.

Additional treatment

All possible therapeutic measures that **do not require immediate implementation in the vehicle** should be performed at the patient's pickup location.

It is not recommended to:

- initiate new, complex, or non-standard interventions during transport,
- perform procedures requiring precise conditions (e.g., inserting a central line) in a vehicle without a stable base.

All planned activities must be **completed or secured** before departure.

Preventing deterioration during travel

Transportation always carries a risk of deterioration. Therefore, potential complications should be anticipated and the patient protected with appropriate procedures before departure, for example:

- decompression of pneumothorax if there is a risk of its progression,
- insertion of drains, tubes, catheters, or vacuum dressings,
- ensuring effective analgesia and sedation.

Understanding the nature of the injury and the transport conditions (e.g., shocks, vibration, pressure changes, lack of access to equipment) helps minimise risks en route.

7.3. Preparing the patient for transport by alternative means

Patient preparation is not only a medical matter – it also involves logistical security and the safety of the transport itself.

One must:

- properly position the patient and immobilise them with belts or a restraint system,
- secure all intravenous lines, drains, and tubes against movement,
- ensure airway access (masks, tubes, suction),
- provide the patient with an individual triage / transport card,
- label bags and portable equipment (oxygen, medications, documents).

Before departure, the medical team should verify the completeness of the preparation – the checklist should be signed by the person responsible for the transport (e.g., a paramedic or a nurse).

7.4. Selecting the means of transport and crew

Transport can be carried out in various configurations – from an ambulance, through a hospital vehicle, to civilian or military vehicles.

Each of these means has different capabilities and limitations:

Vehicle Type	Advantages	Limitations
Ambulance (Type B/C)	Full medical equipment, monitoring, personnel	Limited availability in a crisis
Hospital/transport vehicle	Locally available, easily adaptable	Lack of equipment, securing the patient required
Civilian vehicle (bus, municipal vehicle)	High availability, mobility	Lack of stabilisation systems, medical escort required
Military / Territorial Defense Force / National Fire Service transport	Terrain resistance, transport capacity	Task prioritisation, limited number of medical personnel
Rail/air transport	Long range, mass evacuation capability	Requires loading points and external coordination

The choice of means of transport should be based on:

- patient condition,
- route length,
- availability of equipment and personnel,
- terrain and weather conditions.

7.5. Patient Movement Items (PMI)

Each means of transport should be equipped with a minimal life-support kit. Equipment should be selected based on the nature of the mission and available space.

Example PMI kit:

disposable materials for oxygen administration – oxygen masks, nasal cannulas,

- AED,
- portable ventilator or self-inflating bag,
- pulse oximeter and blood pressure monitor,
- portable medical suction device,
- infusion solutions, CPR medications,
- a set of fluids and infusion pumps,
- foldable/negative pressure stretcher,
- a bag with life-saving medications,
- oxygen therapy kit (cylinder, regulator, masks),
- disposable materials: gloves, dressings, infusion sets, filters.

Rule: Equipment taken on the road should be used to maintain vital functions throughout the expected transport duration, without the need for replenishment in the field.

7.6. Organisation and communication

The dispatch centre or the person directing the evacuation operation must receive a complete set of data

about the patient and the transport mission.

This information is provided in the form of a transport report (compliant with the “9-line” procedure used in medical evacuations):

1. Patient pickup location
2. Evacuation number and priority
3. Number and condition of patients (R1/R2/R3)
4. Required equipment and personnel
5. Type of landing/stopping location
6. Existing hazards
7. Special requirements (e.g., oxygen, ventilation)
8. Direction of transport/destination
9. Person responsible for coordination

This data allows the logistics centre or dispatcher to select the most appropriate means of transport and appropriately prepare the patient pickup team.

CHAPTER 8. ATTACHMENTS, CHECKLISTS AND FORMS

8.1. Purpose of this chapter

The purpose of this chapter is to provide ready-made tools to support the implementation of the procedures described in the previous sections of the handbook.

These materials are practical and should be stored in:

- paper form – in crisis files in each department,
- electronic form – on on-call computers and in the hospital's internal system.

Each document should be understandable, simple, and bilingual (PL / ENG) so that it can also be used in international situations (PL–UA).

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8.2. Hospital emergency plan activation checklist

Step 1. Receiving information about the EMS system failure

- Verify the source of the information (dispatch room, Government Security Centre, media, staff).
- Notify the hospital director/ER head.
- Declare a “Crisis situation – Level 1” alert.

Stage 2. Establishing the Hospital Crisis Response Team (HCRT)

- Convene key personnel (on-duty physician, charge nurse, logistician, IT specialist, drivers).
- Designate a communications coordinator and a person responsible for documentation.
- Activate backup communications (radio, Private Mobile Radio, National Fire Service channels).

Stage 3. Operational actions

- Organize alternative transport.
- Conduct triage according to regulations.
- Secure the most seriously ill patients (R1) and begin stabilisation treatment.
- Report every 30 minutes to the command centre.

Stage 4. Completion and report

- Collect the data on the number of patients admitted and transferred.
- Prepare a post-implementation report.
- Update the plan based on the conclusions from the operation.

8.3. Triage form – template (PL / ENG) – consistent with the current hospital format

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8.4. Situation report form (PL / ENG)

Title: SITUATION REPORT (SITREP)

Date / time: ……

Unit: Hospital in Łosice / Hospital Partner (Ukraine)

Section A – General data

- Total number of casualties: ……
- Number of those admitted to the hospital: ……
- Number of those evacuated / transferred: ……
- Number of deaths: ……
- Infrastructure condition:

  ☐ stable

  ☐ partially damaged

  ☐ severely damaged

Section B – Actions taken

- Activation of the emergency plan
- Triage initiation
- Organisation of alternative transport
- Cooperation with the National Fire Service / Territorial Defence Forces / NGOs
- Patient evacuation
- Other: ……

Section C – Needs and resources

- Medical personnel: …… available / …… missing
- Vehicles: …… available / …… unavailable
- Medicines and equipment: ……
- Oxygen / fuel supply:

  ☐ sufficient

  ☐ low

  ☐ critical

Section D – Comments and recommendations

……

Signature of the person preparing the report: ……

Position: ……

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8.5. Contact list (PL / UA)

Category	Institution name	Contact Person	Telephone	Email / emergency communication
Main Hospital (PL)	SPZOZ Łosice	Emergency department physician on call	...	...
Partner Hospital (UA)	District Hospital [name]	Medical director	...	...
PRM / Dispatch Centre	Masovian Dispatch Centre	Chief dispatcher	...	...
National Fire Service	KP PSP Łosice	Shift commander	...	Radio channel 15
Territorial Defense Forces	5. Mazowiecka Brygada OT	Duty officer	...	...
NGO	Polish Red Cross / MSF / IOM	Medical coordinator	...	...
Government Security Centre / Voivodeship Crisis Management Centre	Operational duty officer	...	...	

Recommendation: Copies of the contact list must be kept: in the Emergency Department on-call room, in the management office, in the emergency storage room.

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8.6. Post-action report template (PL / ENG)

- Date and location of incident: .....

Type of incident:

☐ accident

☐ system failure

☐ armed conflict

☐ other

Number of patients: .....

Duration of activities: .....

- Section 1 – What worked well
- Section 2 – What requires improvement
- Section 3 – Recommendations for updating the plan
- Approved by: Hospital director / Crisis coordinator

Date and signature: .....