Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Defence,
Civil Protection and Sport DDPS

Federal Office for Civil Protection FOCP
National Emergency Operations Centre NEOC
National Network for Disaster Medicine KATAMED

Report: Reorientation of the Coordinated Medical Services CMS – National Network for Disaster Medicine KATAMED

August 2025

Authors

Dr Tenzin Lamdark, KATAMED delegate, head of the National Network for Disaster Medicine KATAMED
Dr Gwendolyn Graf, deputy head of the National Network for Disaster Medicine KATAMED
Ms Patricia Fuhrer, office manager, KATAMED
Mr Severin Gerfin, scientific advisor, KATAMED

Assisted by PwC Switzerland

Date

20 August 2025

CONTENTS

Summary 5
1 Introduction 11
1.1 Historical development of the CMS 11
1.2 Aims and content of the report 12
1.3 Procedure and methodology 12
2 Preliminary work 14
2.1 Findings from the expert opinion on future needs in the Coordinated Medical Services for the DDPS 14
2.2 Findings from the report on future needs in the Coordinated Medical Services by the Swiss Safety Network 15
2.3 Summary of preliminary work 15
3 Framework 16
3.1 Legal basis 16
3.2 Transfer of the CMS from the Defence Group to the FOCP 16
3.3 Crisis Organisation of the Federal Administration (COFA) 17
3.4 Possible organisational structure of the FOPH in a pandemic 19
4 Challenges 20
4.1 Switzerland's federal structure 20
4.2 Limited capacity of the healthcare system 20
4.3 Insufficient capabilities for managing exceptional situations in the healthcare system 21
4.4 Government and administrative health and security areas 22
4.5 Limited resources of the CMS after the transfer 22
4.6 Neglect of medical protection facilities (Med S facilities) 23
5 Reorientation 24
5.1 KATAMED network 24
5.2 Vision 'Together. Stronger. Support.' 25
5.3 Mission statement 25
5.4 Organisation and governance in planning and preparedness 26
5.5 Organisation and leadership when managing an incident 28
5.6 Contribution of the FOCP 29
5.7 Factors for successful implementation of the reorientation 29
5.8 Goals of the reorientation 30
6 The healthcare system in exceptional situations 32
6.1 Normal situation in the healthcare system 32
6.2 Exceptional situations in the healthcare system 32
6.3 Emergencies in the healthcare system 33
6.4 Special features in the healthcare system in exceptional situations 33
6.5 Foundations in the healthcare system for incident management 36
7 Major incident based on the example of a terrorist attack 37
7.1 Procedures for management 37
7.2 Areas of action 39
8 Incident scenarios 41
8.1 Scenario I 'Conventional attack' 42
8.2 Scenario II 'Earthquake' 46

8.3 Scenario III 'Armed conflict' ... 50
8.4 Scenario IV 'Influenza pandemic' ... 54
8.5 NBC (nuclear, biological, chemical) incidents ... 58
9 Analysis and results ... 60
9.1 Education ... 60
9.2 Leadership and training ... 61
9.3 Incident and emergency concepts ... 62
9.4 Resources for managing incidents – Personnel ... 63
9.5 Resources for managing incidents – Logistics ... 64
9.6 Resources for managing incidents – Strategic patient distribution ... 65
9.7 Resources for managing incidents – Infrastructure ... 66
10 Conclusion ... 68
10.1 Resources for the reorientation ... 68
10.2 Political and legal implementation ... 69
10.3 Consultation by the cantons and KATAMED partners ... 69
10.4 Next steps ... 70
ANNEX ... 71
KATAMED partners ... 71
Glossary (excluding KATAMED partners) ... 73

LIST OF DIAGRAMS

Figure 1: Crisis Organisation of the Federal Administration ... 17
Figure 2: Organisational structure of the Operational Crisis Management Unit in a pandemic scenario (National Pandemic Plan Switzerland) ... 19
Figure 3: Healthcare provision ... 21
Figure 4: Vision of the KATAMED network ... 25
Figure 5: Agencies of the KATAMED network ... 26
Figure 6: Governance in preparedness in the KATAMED network ... 27
Figure 7: Interaction of leadership in the KATAMED network and embedding in the Crisis Organisation of the Federal Administration (COFA) ... 28
Figure 8: Healthcare provision in exceptional situations (adapted from Prof. Virginia Murray) ... 36
Figure 9: Patient pathway based on the example of a violent incident ... 37
Figure 10: Areas of action ... 39
Figure 11: 'Conventional attack scenario' factsheet ... 42
Figure 12: 'Earthquake scenario' factsheet ... 46
Figure 13: 'Armed conflict scenario' factsheet ... 50
Figure 14: 'Influenza pandemic scenario' factsheet ... 54
Figure 15: Risk diagram of harm and plausibility, FOCP risk files as part of the national risk analysis 'Disasters and Emergencies in Switzerland' 2020 ... 59

LIST OF TABLES

Table 1: Treatment standards and their special features ... 35
Table 2: Areas of action with a detailed description ... 40
Table 3: Special requirements for scenario I by action area ... 45
Table 4: Special requirements for scenario II by area of action ... 49
Table 5: Special requirements for scenario III by area of action ... 53

Preliminary note: a list of all KATAMED partners and a detailed glossary can be found at the end of this report.

Summary

Assessment and reorientation

The remit of the Coordinated Medical Services (CMS) network covers the management of exceptional situations in the healthcare system and its partner organisations, particularly incidents of national significance. In this report, we summarise these tasks under the umbrella term ‘disaster medicine’ (the acronym KATAMED comes from the German word *Katastrophenmedizin*). The term ‘KATAMED’ includes all affected areas, such as: rescue services; emergency, tactical and military medicine; nursing; pharmacy; emergency psychology; paramedical services; and other supporting fields. The network consists of all partners in the CMS-KATAMED, i.e. all authorities, organisations, institutions, associations and conscript service organisations with a role in dealing with exceptional situations in the healthcare system.

The ongoing deterioration of the security situation, the increasing likelihood of disasters resulting from climate change and the risk of another pandemic necessitate a review and a new strategic direction for the CMS network, the aim being to strengthen the network’s ability to cope with crises.

This reorientation faces a host of complex challenges. Switzerland’s federal structure makes nationwide, coordinated crisis management more difficult. Constitutionally, responsibility for healthcare lies with the cantons in all situations, and there are no clear federal powers of direction – the Federal Act on Combating Communicable Human Diseases (Epidemics Act) is the only exception. At the same time, the healthcare system is already under strain due to limited human and financial resources in normal circumstances, and there is an additional need for adequate preparedness for extraordinary situations. Population growth and demographic ageing will put further pressure on the system, and there are capability gaps in key areas such as training, logistics and planning. Coordinating the health and security sectors, which the cantons organise differently, is likewise challenging. Furthermore, substantial investment is required to upgrade medical protection facilities, which have been neglected for decades. The KATAMED network’s current resources are insufficient to cover the additional measures required for reorientation.

A realistic, workable approach to reorientation is needed to address the challenges. The cantons and KATAMED partners need to be closely involved and synergies created, with priority given to measures that deliver the greatest added value. The goal is to provide benefits for the healthcare system even under normal conditions. Implementing the reorientation requires clarification of the resources available between the Confederation, the cantons and third parties.

The current situation highlights the urgent need to strengthen and future-proof the network.

Methodology

A step-by-step approach was chosen for the reorientation process, the foundations for which were laid by a new Ordinance on the Coordination of Medical Services (MSCO). This report provides the Federal Council with an overview of the KATAMED network and its vision and mission statement and identifies the strategic actions needed for implementation. In the next step, the National Action Plan on Disaster Medicine will be finalised jointly by the Confederation, the cantons and the KATAMED partners and will prioritise the measures already developed by the steering committee and clearly define the responsibilities and resources required at policy level.

The report builds on a 2018 expert opinion on future needs in the Coordinated Medical Services *(Gutachten ‘Zukünftiger Bedarf im Bereich Koordinierter Sanitätsdienst’)* and a corresponding 2021 report *(Bericht ‘Zukünftiger Bedarf im Bereich des Koordinierten Sanitätsdiensts’)*. Both emphasise the need for better preparedness, particularly through coordinated planning and the expansion of capacities to ensure an adequate crisis response. They also highlight the importance of adapting structures and legal frameworks and strengthening cooperation, particularly with the cantons. Cantonal stakeholders are highlighted as key partners in crisis situations.

Comparisons were also made with existing structures and plans abroad, and the foundations of disaster medicine were analysed. Direct discussions and an online survey were carried out with CMS-KATAMED partners to assess the current situation. A steering committee was set up, modelled on the body proposed in the Swiss Security Network report, and was extended to include operational crisis management representatives. In three workshops, the committee validated the areas of action and the measures developed before prioritising them for inclusion in a measures catalogue. To this end, the FOCP's national risk analysis scenarios of 'conventional attack', 'earthquake', 'armed conflict' and 'influenza pandemic' were used, each with its own specific requirements for the network.

Vision

The CMS network must be reoriented to meet future requirements. This will involve adopting a holistic approach and establishing the National Network for Disaster Medicine KATAMED. Following this reorientation, the term 'Coordinated Medical Services' (CMS) will be replaced by 'National Network for Disaster Medicine' (KATAMED). Discussions with CMS partners at events and in bilateral exchanges have revealed that the term 'Coordinated Medical Services' is not widely recognised in the healthcare sector, is often misunderstood, and is sometimes viewed negatively. By contrast, 'KATAMED' is a new, inclusive term that encompasses all individuals and professional groups involved in preparing for, planning, managing or following up on exceptional situations in the healthcare system. Therefore, KATAMED stands not only for medical care in disaster situations but also for a broader, integrated approach that draws on a wide range of disciplines, skills and expertise. Close cooperation across all areas is essential to ensure a comprehensive and coordinated response in times of crisis. KATAMED takes this broader understanding into account and ensures that all relevant stakeholders can work together in an interdisciplinary way to handle exceptional healthcare situations as effectively as possible.

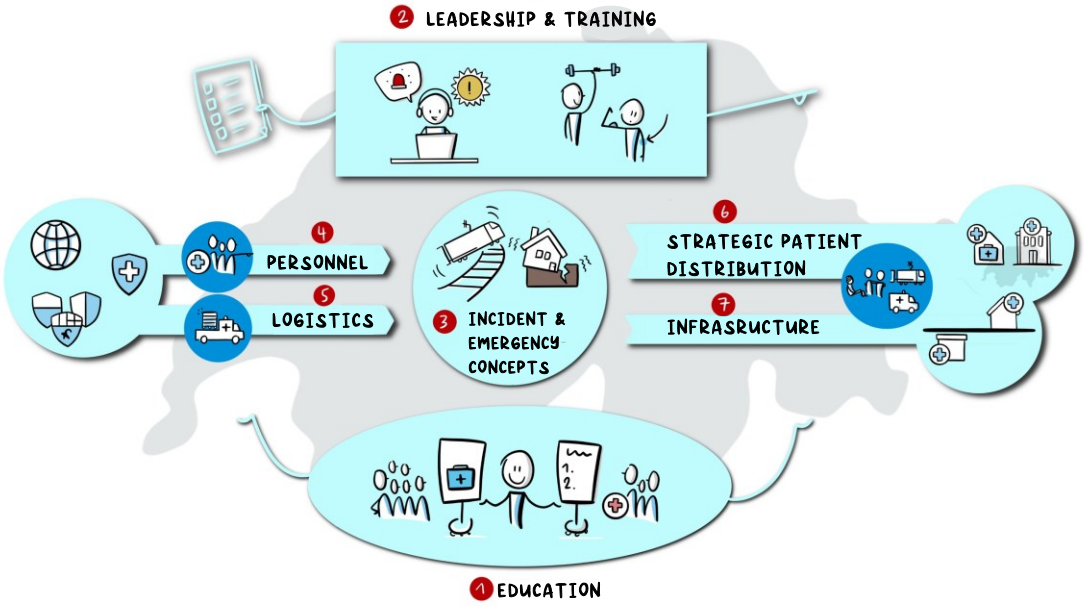
The new vision '**Together. Stronger. Support.**' also considers these aspects. It highlights the importance of cooperation within KATAMED and of strengthening existing shared capabilities in order to act efficiently and purposefully in exceptional healthcare situations.

Before an incident:
Closer cooperation between the Confederation and the cantons enables the KATAMED network to fulfil its prevention and preparedness tasks. The expanded structures of the Swiss Security Network (SSN) are being used during the preparatory phase to support the governance of KATAMED, allowing the Confederation and the cantons to work together more closely at both policy/strategic and operational level. The National Action Plan on Disaster Medicine allocates responsibilities to the KATAMED partners. Within the KATAMED network, resources for managing incidents relating to personnel, logistics, infrastructure and strategic patient distribution are made available at the national level, while measures in training, leadership, networking and the development of concepts further strengthen the healthcare system's ability to cope with incidents.

During an incident:
When an incident occurs, the structures and processes of the KATAMED network – which have been prepared and practised – come into play. The stakeholders involved know one another, and their roles are clearly defined, making coordinated and efficient management possible. Existing structures and processes from everyday operations are also used, and the cantons can provide mutual support. Cooperation with the Confederation is channelled through the National Emergency Operations Centre (NEOC), with its Reporting and Situation Centre, the Confederation's resource management service ResMaB, and Medical Services Staff. Concepts and plans that have been developed and coordinated can be applied nationwide. Incidents of national significance will trigger the activation of the Crisis Organisation of the Federal Administration, of which the KATAMED network forms part.

After an incident:
In addition to recovery measures, there is a follow-up process in which the way the incident was handled is reviewed and lessons learned for the future. These findings are then incorporated into the KATAMED network's prevention and preparedness work.

Areas of action
The tasks involved in the prevention, preparedness, management, recovery and follow-up of exceptional situations affecting the healthcare system, as well as the related responsibilities of the KATAMED network, can be grouped into seven areas of action:



1. ***Education:*** the focus here is on strengthening the resilience of healthcare professionals and raising awareness among the population and local communities in the event of an incident. Existing channels and programmes will be reinforced and new ones developed where necessary. Disaster medicine (KATAMED) will play a more prominent role in the basic, advanced and continuing training of healthcare professionals, and a shared platform will be created to coordinate existing training opportunities and connect all KATAMED partners.
2. ***Leadership and training:*** this area is about improving inter-cantonal cooperation and, where necessary, enabling national coordination within the KATAMED network during major incidents or incidents of national significance. Regional cooperation will be encouraged so that incidents can be dealt with within a region or with support from neighbouring regions if required. International partnerships will also enable mutual support in the event of an incident. If needed, in addition to the existing capabilities of the NEOC, a dedicated Medical Services Staff could be activated to provide broader national coordination for both planned and unplanned major incidents. Exercises will be promoted within the KATAMED network and internationally in order to test preparations and plans and strengthen cooperation.
3. ***Incident and emergency concepts:*** this area covers the plans developed by KATAMED partners for managing incidents and activating crisis organisations. Harmonised plans are intended to provide a clear framework for responding to exceptional situations in the healthcare system. The Information and Operations System – Next Generation (IOS-NG) will support coordination and management along the entire patient pathway and will also be able to serve, in a limited form, as a basic hospital information system.
4. ***Resources for managing incidents – Personnel:*** the aim here is to meet additional personnel needs by drawing on resources beyond the existing pool of healthcare professionals. This includes strengthening the involvement of associations and volunteers, who can play a key role in supporting their communities during an incident; another option is to establish regional medical reserve corps comprising retired healthcare professionals. The remit of civil protection will be expanded. The Armed Forces will be able to provide support on a subsidiary basis (after around 72 hours). However, it should be noted that some conscript and career soldiers are healthcare professionals in their civilian lives, and their deployment would mean they are no longer available to the civilian healthcare system. The establishment of self-organised teams that can be deployed at national level, modelled on disaster medical assistance teams or the World Health Organization's emergency medical teams, is also being considered.
5. ***Resources for managing incidents – Logistics:*** relevant materials and equipment should be stored in a decentralised manner within existing institutional supply chains to enable rapid deployment in an emergency. Fast transport capability will be in place for when it is required.
6. ***Resources for managing incidents – Strategic patient distribution:*** this involves transporting a large number of patients from the scene of an incident in Switzerland or abroad to healthcare facilities or from one healthcare facility to another. Existing emergency transport resources are not to be used for this purpose. This area of action also includes political decisions on transport as well as the allocation and admission of patients to an existing healthcare system and all resulting implications. In addition to political coordination at inter-cantonal and national level, operational coordination by a central body is required, as are the necessary transport resources.
7. ***Resources for managing incidents – Infrastructure:*** this area is focused on ensuring that the healthcare system has sufficient protected and secure treatment facilities in the event of an incident in terms of both the provision of care in exceptional situations and basic healthcare for Switzerland's population. The new focus is on the ability to actually deliver appropriate treatment, rather than simply counting the number of beds, meaning that such facilities should be attached to existing hospitals if possible.

Drawing on the National Risk Analysis of Disasters and Emergencies in Switzerland, the 'conventional attack', 'earthquake', 'armed conflict' and 'influenza pandemic' scenarios were selected to examine the requirements in various areas of action. A capability and needs analysis was then carried out together with the steering committee, leading to the development of specific measures that were then ranked in order of priority. They will form the basis for the finalisation of the future National Action Plan on Disaster Medicine by the Confederation and the cantons.

The focus is on ensuring that the measures deliver tangible benefits in everyday life, which will strengthen the healthcare system in both exceptional and normal situations and make it easier to apply the measures if an incident occurs.

Goals of the reorientation
The KATAMED network will be better prepared to deal with exceptional situations following the reorientation:

1. Clear structures and legal framework

The tasks, roles and cooperation between the federal authorities, cantons and organisations are clearly defined, and legislation has been adapted where necessary. Building on the structures used in normal conditions, cross-cantonal cooperation has been increased in the areas of prevention, preparedness, response, recovery and follow-up. Regular exercises ensure that these structures and processes work effectively in the event of an incident, while jointly developed national guidelines enable better and more efficient cooperation.

2. Public awareness and professional skills development

Targeted measures in preparedness, awareness-raising, and education and training enable the population and healthcare professionals to cope more independently with exceptional situations. KATAMED partners share knowledge and experience and make use of synergies by coordinating their preparedness when developing plans and providing resources.

3. Greater room for manoeuvre

Within the KATAMED network, a shared understanding of leadership and response has been established and is supported by the Information and Operations System – Next Generation (IOS-NG). There is increased cooperation across regions, while jointly coordinated resources in the areas of personnel, operational logistics, infrastructure and strategic patient distribution enhance the network's room for manoeuvre.

4. Role of the FOCP
The FOCP coordinates the KATAMED network and provides system-wide support. It monitors trends and developments, analyses risks and reviews existing plans in collaboration with partners. The FOCP promotes education and training in disaster medicine. It supports the organisation of exercises and runs the IOS-CMS (ISO-NG in future). The FOCP issues guidelines and develops the overarching plan for renewing medical protection facilities and coordinates nationwide preparedness in psychological first aid.

5. Sustainable cooperation and funding
Close cooperation between the Confederation, the cantons and other partners is firmly established within the KATAMED network. As part of the National Action Plan on Disaster Medicine, measures are jointly prioritised and mandated, and the allocation of the necessary resources and funding for implementation is ensured in a sustainable way between the Confederation, the cantons and other partners. Any inter-cantonal services provided for the benefit of the KATAMED network are settled between the cantons.

Conclusion
Opportunities
Reorienting the CMS to form the KATAMED network will strengthen Switzerland's healthcare system and help it prepare better for exceptional situations. Guided by the vision '**Together. Stronger. Support.**', the aims are to:

- strengthen cooperation and networking among KATAMED partners;
- ensure the necessary capabilities for coordinated leadership at all levels;
- build up the required resources for response (personnel, logistics, strategic patient distribution and infrastructure) across regions;

- enhance the ability of the population and healthcare professionals to manage such situations and build resilience through knowledge transfer.

The reorientation is therefore about identifying workable solutions that the KATAMED partners can put into practice together. These solutions must take account of the specific features of Switzerland's federal system, with its strong involvement of the cantons and KATAMED partners, while also recognising the limited financial and personnel resources available in healthcare.

Resources
The reorientation aims to strengthen the KATAMED network's capacity to cope with exceptional situations in a forward-looking way. Additional resources will be needed to build capabilities and address any gaps identified within the network.

Stronger inter-cantonal and national cooperation and coordination will allow for more targeted and efficient action, enabling synergies to be exploited and redundancies avoided.

When implementing the reorientation towards a national KATAMED network, the KATAMED division within the FOCP can facilitate and drive change. However, successful implementation will require the active involvement of all network partners (including financial contributions).

Once the report has been adopted, the Confederation and the cantons, together with their partners, must approve the National Action Plan (NAP) on Disaster Medicine. The steering committee has already prioritised measures, elaborated on them in detail and provided cost estimates, on the basis of which the Confederation and the cantons will decide on the measures to be implemented in the National Action Plan on Disaster Medicine, including clarifying the provision of the necessary resources.

Step-by-step political and legal implementation

1. New CMS ordinance
The new Ordinance on the Coordination of Medical Services (MSCO) uses the structures of the Swiss Security Network (SSN) to strengthen cooperation between the Confederation and the cantons and adapt the organisation and tasks within the FOCP. The Ordinance entered into force on 1 May 2025 and will provides the foundation for further work.

2. KATAMED report
This report on the reorientation of the CMS into the National Network for Disaster Medicine KATAMED underwent extensive consultation and was then revised accordingly. It provides a reference framework and will also be submitted to the Federal Council and a mandate requested to continue the work in line with the directions that it sets out.

3. National Action Plan on Disaster Medicine
The Confederation and the cantons will draw up the National Action Plan on Disaster Medicine together with their partners, making use of the Swiss Security Network (SSN) structures. The measures to be implemented will be prioritised and decided at political level. The action plan will cover five years, with implementation reviewed annually and the KATAMED delegate to provide regular reports.

1 Introduction

The fundamental task of the Coordinated Medical Services (CMS) is to ensure medical care in the event of a major incident (e.g. attack, natural disaster, armed conflict or pandemic). With regard to the incident, the CMS acts as a link between the civilian healthcare system, the partners and associations involved in incident management, the cantons as the bodies with primary responsibility for healthcare, the Federal Administration and the Armed Forces. In this role, however, the CMS has limited influence to initiate or drive changes and developments in incident prevention, preparedness, management, recovery or follow-up. Furthermore, the role of the CMS was originally established by the Armed Forces as a civilian/military interface, which is why the civilian system still has limited knowledge of its existence.

The Confederation's efforts to bring the CMS closer to the civilian healthcare system and the population resulted in a realignment on 1 January 2023, which saw the CMS transferred from the Armed Forces to the responsibility of the Federal Office for Civil Protection (FOCP). At the same time, the CMS delegate was mandated to identify strategic aims and key approaches in the context of a reorientation in order to adapt the CMS's role to the needs of the population and the civilian healthcare system. A capability analysis was also undertaken to identify gaps in the current incident management setup and formulate areas of action that, when implemented, will play a key role in closing existing gaps and align the CMS with the strategic aims more effectively in future.

This introductory chapter deals with the development, organisation and challenges of the CMS as well as explaining the reasons why a reorientation is essential and setting out the aims of this report.

This report assesses the needs and special requirements of the healthcare system, including its partners, in exceptional situations, focusing on incidents with a national impact. The term 'disaster medicine' as used in the report has a wider meaning and application than is usually the case, also covering emergency medicine, tactical medicine and military medicine as well as pharmaceutical and nursing aspects and auxiliary fields such as logistics and leadership.

1.1 Historical development of the CMS

The CMS was established in order to ensure close cooperation between civilian and military institutions when managing crises involving large numbers of patients. In the 1960s, it was recognised that civilians would be increasingly affected by conflicts due to advances in weapons, which prompted the Federal Military Department (FMD) in 1968 to ask the Federal Council to create combined medical services, renamed the Coordinated Medical Services in 1973. The concept was published in 1980 and covered cooperation between federal authorities, cantons, the Armed Forces, the civil protection service and private organisations. The CMS was established in order to ensure nationwide coordination of medical resources in war, disaster or crisis situations.

The CMS was originally based in the Defence Group, as the Armed Forces were the main security policy instrument for crisis management at the time. Although efforts have been made in recent years to foster closer cooperation between the cantons and transfer coordination tasks to the CMS in the civilian sphere, challenges remain unclear responsibilities, insufficient spare capacity, a lack of emergency and contingency plans, and ageing infrastructure.

The healthcare system is under pressure due to an ageing population, limited resources and the growing risk of crisis scenarios, necessitating measures to improve coordination and increase efficiency. The Department of Defence, Civil Protection and Sport (DDPS) carried out an assessment in 2018 to ascertain whether the organisation of the CMS was up to date, given the development of the threat situation and the healthcare system as well as the various reforms of the Armed Forces. The resultant expert opinion concluded that the CMS should be incorporated in the FOCP on account of changed requirements and challenges. Its absorption into the FOCP was completed on 1 January 2023, and the reorientation of the CMS was conceived and set in motion there.

1.2 Aims and content of the report

This report on the reorientation of the CMS – National Network for Disaster Medicine KATAMED intends to create an understanding of the need for a reorientation of the CMS, setting out the current situation of the healthcare system in the context of exceptional situations and using this as a basis for identifying concrete professional measures. These measures were devised in conjunction with the multidisciplinary steering committee and highlight the direction in which the CMS must evolve in order to meet future challenges effectively. The report therefore lays a conceptual foundation and sets out a clear approach for the evolution process. However, this report does not define specific measures, responsibilities or financial resources. Instead, in-depth development will be carried out as a next step in conjunction with the Confederation, the cantons and partners in the context of a National Action Plan (NAP) on Disaster Medicine.

Further on in the report, remits are set out clearly, the special features of disaster medicine are described – partly on the basis of scenarios – and ultimately grouped into areas of action, and specific, feasible measures for a subsequent National Action Plan on Disaster Medicine are developed. The report is intended to communicate the needs of the CMS-KATAMED network externally, while also helping the partners of the CMS-KATAMED to gear themselves up for their work in the field of disaster medicine.

In particular, the report sheds light on the following content:

1. *Presenting the reorientation of the KATAMED network*
   Section 5 sets out the vision, mission statement and areas of action for a functioning KATAMED network. These form the basis for a shared understanding of the overarching aims of all stakeholders involved, such as ensuring robust healthcare provision when an incident occurs, being able to respond quickly and effectively to incidents with a national impact, and improving response capability through extraordinary measures such as triage or adapting treatment standards. In addition, the factors essential to successful implementation are set out.
2. *Establishing a basic understanding of disaster medicine on the basis of scenarios*
   Sections 6 to 8 establish a shared understanding of the fundamentals and special features of disaster medicine and the differences from healthcare in a normal situation as well as illustrating the special features and requirements on the basis of the following scenarios: ‘terrorist attack’, ‘earthquake’, ‘war’ and ‘influenza pandemic’.
3. *Describing the current capabilities and structures and indicating the need for action*
   Section 9 describes the current situation of the CMS network and analyses the areas of action by evaluating the current capacities, structures, processes and resources of the CMS network. Gaps, resource bottlenecks and vulnerabilities are identified in order to define the actions required for the reorientation.
4. *Consequences*
   Section 10 presents the next steps of the CMS in order to improve its efficiency in terms of its remit, structure and governance as well as mapping out the next steps of the transfer, including a proposal to the Federal Council and the transition to the new structure of the Confederation and the cantons. This comprises the process for the ‘National Action Plan on Disaster Medicine’, linking the objectives to measurable indicators in order to monitor the success of the realignment and setting out the joint measures within the network to achieve the defined goals.

1.3 Procedure and methodology

A step-by-step approach was chosen for the reorientation process, whose foundations were laid by a new Ordinance on the Coordination of Medical Services (MSCO). This report provides the Federal Council with an overview of the KATAMED network and its vision and mission statement and identifies the strategic actions needed for implementation. Questions regarding specific implementation and the provision of resources will then be answered jointly between the Confederation, the cantons and the KATAMED partners in the National Action Plan on Disaster Medicine. In the NAP, the measures already devised with the steering committee will be prioritised in terms of policy, and the responsibilities and essential resources will be assigned.

The methodology selected for this report mainly pursues three key aims:

- Getting relevant stakeholders involved early and extensively
- Identifying the most pragmatic way possible of implementing the devised measures
- Ranking sustainable approaches in order of priority

This strategy ensures sound and practical development of the action recommendations.

The editorial team contributed a wide range of specialist and prior knowledge – from internal medicine and tactical, disaster and emergency medicine to contingency planning in hospitals, surgery, trauma surgery and care of severely injured people – that was used as a basis for making relevant assumptions and decisions.

Existing reports and analyses in the field of disaster medicine and on the CMS were researched extensively, which included contacting international bodies in order to ensure dialogue regarding proven incident management methods. An informal comparison was made between the situation in Switzerland and that in other countries. A structured scientific analysis and comparison with the structures in our neighbouring countries and selected countries worldwide could conceivably form part of a subsequent study.

As one of the next steps, an online questionnaire was sent to the members of the steering committee in order to obtain targeted feedback and assessments regarding the existing incident management capability. In-depth direct dialogue was conducted with the partners. To ensure structured involvement in developing the reorientation, a wide-ranging CMS-KATAMED steering committee was additionally convened in order to represent the partners of the CMS-KATAMED. This steering committee was set up as per the recommendations of the Swiss Security Network (SSN) but with the deliberate addition of representatives of the partners with a key role in healthcare-related incident management.

The steering committee was involved in three workshops to enable the work to be discussed and validated. The first workshop, which coincided with the work getting under way on 18 April 2024, examined the areas of action. In the second workshop on 14 August 2024, the scenarios and the reorientation were addressed in more detail. In the third workshop on 24 October 2024 – the last one for the time being –the recommended actions were ranked in order of priority and evaluated with regard to the complexity of implementation.

2 Preliminary work

Prof. Thomas Zeltner was commissioned in 2018 to draw up an analysis of future needs of the CMS (*'Zukünftiger Bedarf im Bereich Koordinierter Sanitätsdienst'* dated 18 December 2018), which in turn formed the basis for the report by the Swiss Security Network entitled *'Zukünftiger Bedarf im Bereich des Koordinierten Sanitätsdiensts'* dated 9 November 2021. Both reports identified weaknesses and made recommendations for improving the crisis management structures. In particular, these recommendations included clarifying the roles and responsibilities of stakeholders, optimising the resources of the CMS and strengthening cooperation between the cantons, the Confederation and other partners. It must be stressed here that both reports were written before the start of the war in Ukraine, and the first one dates from before the COVID-19 pandemic, although its relevance remains undiminished.

2.1 Findings from the expert opinion on future needs in the Coordinated Medical Services for the DDPS[1]

The main challenges and key messages from the expert opinion by Prof. Zeltner, which form the basis for reflection, are:

Challenges

1. *Unclear responsibilities in the healthcare system*
   The cantons are primarily responsible for healthcare, both in normal conditions and in times of crisis. Too little attention is paid to emergency and crisis situations in the cantonal hospital plans, particularly in terms of spare capacity.
2. *Inadequate civil protection infrastructure*
   Most of the medical infrastructure in civil protection is ageing or no longer fit for purpose. Repair would involve substantial costs, which is why a strategic review of further requirements and future use is needed. In addition, there is no guidance on how the infrastructure can be operated. This also applies to the medical equipment, which is ageing and can no longer be used by the staff.
3. *Lack of coordination between cantonal and federal authorities*
   There are gaps in cooperation between the stakeholders at cantonal and federal level, particularly in the coordination of civilian and military resources in the event of a crisis.

Key messages

1. *Strengthening regional cooperation*
   Increased efficiency in healthcare provision requires greater inter-cantonal cooperation and the formation of healthcare regions across cantons.
2. *Optimising crisis management structures*
   Increased efficiency in the event of a crisis can only be achieved through improved coordination between cantonal, civilian and military stakeholders.
3. *Reviewing the tasks and role of the CMS*
   A strengthened CMS can support the day-to-day processes for coordination of the healthcare system at cantonal level, particularly when an incident occurs. This is in keeping with the principle that, in a crisis, routinely applied processes are far more resilient than those that are only activated when an incident occurs.

[1] Future Needs in the Coordinated Medical Services *(Zukünftiger Bedarf im Bereich des Koordinierten Sanitätsdiensts)*. Expert opinion by Prof. Thomas Zeltner for the head of the Federal Department of Defence, Civil Protection and Sport (DDPS), 2018.

2.2 Findings from the report on future needs in the Coordinated Medical Services by the Swiss Safety Network[2]

The main challenges and key messages from the report, which form the basis for reflection, are:

Challenges

1. *Complex responsibilities*
   The division of responsibilities between the civil protection service, the armed forces and the CMS is unclear and leads to inefficiencies in crisis management.
2. *Staffing and infrastructure gaps*
   There is already a fundamental shortage of medical personnel, especially those who are trained in disaster medicine or in medical equipment. Many of the protected medical facilities are no longer fit for purpose either, thus making it harder to respond to major incidents.
3. *Lack of adjustments to legislation*
   The current legal framework is not sufficient to meet the modern requirements of the healthcare system in the event of a crisis.

Key messages

1. *Better planning and coordination*
   Ensuring more seamless crisis management requires closer networking between the cantonal authorities and the federal agencies.
2. *Need for adjustments to legislation*
   Efficiency improvements can be made via legal and organisational changes to the structures of the CMS.
3. *Future prospects*
   Crisis management can be improved and the challenges in medical care in crises met by putting long-term strategic planning in place.

2.3 Summary of preliminary work

Both reports stress the need for better preparedness for disasters, particularly through coordinated planning and capacity expansion, in order to enable an adequate response to crises as well as stressing the importance of improved cooperation with cantonal and civilian bodies. The cantonal stakeholders in particular are emphasised as key partners in exceptional situations. The preliminary reports also point out that adjustments to legislation on the remit and organisation of the CMS are required before the CMS can play a more efficient and targeted role in incident management.

[2] Future Needs in the Coordinated Medical Services *(Zukünftiger Bedarf im Bereich des Koordinierten Sanitätsdiensts)*, Swiss Security Network, 2021

3 Framework

3.1 Legal basis

The responsibilities and duties of the CMS are set out in various legal bases and cover core topics, including in particular:

1. *The principle of subsidiarity*
   Essentially, the cantons are responsible for healthcare unless the Federal Constitution (Cst.) explicitly assigns responsibilities to the Confederation (Art. 3, 5a, 42 and 43a Cst.).
2. *Limited federal responsibilities in the healthcare system*
   The Confederation's powers in civilian healthcare are piecemeal and chiefly relate to primary medical care and training, with the cantons retaining responsibility for general healthcare provision in all circumstances (Art. 117a ff. Cst.).
3. *Tasks*
   According to the existing ordinance, the CMS's task is to ensure the best possible medical care for all patients in all circumstances (Art. 1 (3) MSCO), something that can only be done by the entire CMS network (partners).
4. *Civil protection*
   The Confederation has extensive responsibilities for legislation on civil protection, particularly for the protection of people and property in armed conflicts as well as in disasters and emergency situations. The cantons are responsible for enforcement (Art. 61 Cst.).
5. *Security coordination*
   The Confederation and the cantons are jointly responsible for the security and protection of the population and must coordinate their efforts. This also includes healthcare, which is part of medical care (Art. 57 Cst., Art. 3 (2) of the Federal Civil Protection Act (CivPA)).
6. *Medical protection facilities*
   The Confederation regulates the construction, equipping, maintenance and renewal of medical protection facilities, protected hospitals (PH) and protected medical facilities (Art. 67–70 CivPA; cf. Annex A).
7. *CMS and coordination*
   The Confederation has the task of coordinating the activities of the partner organisations in civil protection, including those of medical rescue units (Art. 6 (1) in conjunction with 3 (2) (c) CivPA).

3.2 Transfer of the CMS from the Defence Group to the FOCP

Based on the recommendations, the CMS was integrated into the FOCP on 1 January 2023. This measure, together with the reorientation, is intended to bring the CMS closer to the civil protection service. While the CMS has been transferred from the Defence Group to the FOCP, the Centre of Competence for Military and Disaster Medicine (MDM), with its training and research tasks, remains in the Defence Group, and its activities are focused solely on military staff. The budget transferred from the Defence Group to the FOCP for fulfilment of the CMS's tasks totalled CHF 1.6 million per year. Nationwide cost-cutting measures pushed this budget down to CHF 1.4 million as at 1 September 2024 (further cost-cutting measures have not been ruled out). Consequently, the resources transferred are barely enough to keep the existing tasks and activities going. For the reorientation, therefore, the CMS has to be positioned as a network and cooperation strengthened with its internal and external partners. The existing services of the CMS were continued after the switch to the FOCP and include:

- Training and certification on medical management in major incidents for incident command emergency physicians and incident medical commanders (SFG-P, CEFOCA Cours CSAM)
- Provision of the specialist training course on major incident management *(Führung Grossereignis)* in collaboration with Fire Service Coordination Switzerland (FKS) for joint training of managers from all civil protection organisations (police, fire service, medical service, civil protection service)
- Management and certification within the scope of the National Network for Psychological Emergency Aid (NNPN)

The Confederation's resource management service (ResMaB) within the NEOC has taken on operation of the IOS-CMS (Information and Operations System of the CMS) and the IOS-NG project (Information and Operations System – Next Generation). The financial resources for the IOS-CMS (CHF 1.3 million per year) and for the IOS-NG project (CHF 17.7 million) are ringfenced resources and are not available to any other CMS projects.

When the new MSCO dated 21 March 2025, was being drafted, a lack of capabilities in the FOCP led the FOCP and the Federal Food Safety and Veterinary Office (FSVO) to agree that the latter would consult directly with the Armed Forces (Veterinary Service and Military Animals Centre) and the Federation of Swiss Cantonal Veterinary Officers. Within the FOCP, however, tasks relating to the veterinary service continue to be performed in the Situation division and in ResMaB. It is also intended for the veterinary service to be represented in Medical Services Staff.

3.3 Crisis Organisation of the Federal Administration (COFA)

In various crisis situations (primarily the COVID-19 pandemic), it has been apparent that, although crisis management of the Federal Administration works satisfactorily, there is potential for improvement. Consequently, a new Ordinance on the Crisis Organisation of the Federal Administration (COFA) was devised and came into force on 1 February 2025. The cross-departmental COFA comprises a permanent Basic Organisation for Crisis Management (BCMO), a Policy and Strategic Crisis Management Unit (PSCMU) that is deployed as required, and an Operational Crisis Management Unit (OPMU). The two units can, but do not have to, be deployed in parallel.

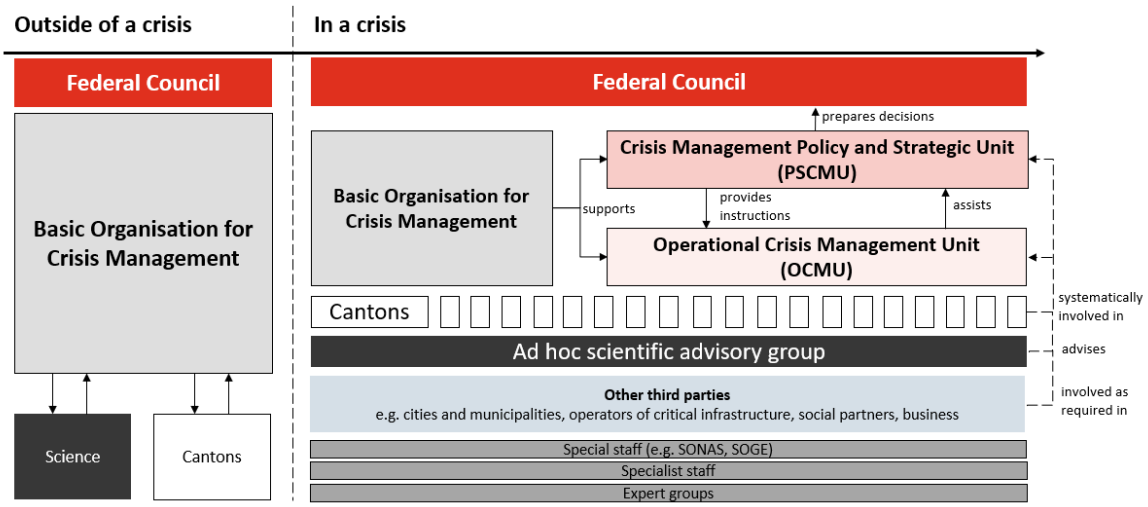


Figure 1 Crisis Organisation of the Federal Administration

Policy and Strategic Crisis Management Unit (PSCMU)
The Federal Council establishes a PSCMU by decree and designates the lead department. This department heads the PSCMU and handles policy-related and strategic coordination of crisis management.

The PSCMU devises action options, prepares the basis for decisions for the Federal Council and helps the lead department to prepare proposals to the Federal Council. In addition, it assesses the policy and strategy situation and coordinates the crisis management of the Federal Administration at this level. It draws up policy-related and strategic guidelines for the operational management of a crisis and ensures that the tasks of those involved are coordinated, the command and control procedures are harmonised, dependencies are taken into account, and there is sufficient time for operational implementation.

Through its work, the PSCMU guarantees structured, strategically oriented decision-making and ensures that the Federal Administration always has the capacity to act, even in complex and multifaceted crisis situations. The PSCMU acts as a bridge between the political leaders and those handling operational implementation and forms the basis for effective crisis management.

The Secretary General of the lead department chairs the PSCMU, in which the Secretaries General of the departments concerned, the Vice-Chancellors, the Director of the Federal Finance Administration (FFA), the Director of the Federal Office of Justice (FOJ), the State Secretary of the State Secretariat for Economic Affairs (SECO) and the State Secretary for Security Policy (SEPOS) are also represented. The lead department consults the Federal Chancellor and representatives of other federal agencies in an advisory capacity as needed and representatives of cantons and third parties when they are affected and/or as required.

Operational Crisis Management Unit (OCMU)
The OCMU is established by the lead department as required, receiving instructions from the PSCMU and fulfilling its mandates. It ensures that the operational measures are implemented in accordance with the strategic guidelines, coordinates between the crisis management units and the relevant administrative units of the departments and does the groundwork for the PSCMU in accordance with the strategic guidelines.

The OCMU gathers information relevant to decision-making, prepares it and makes it available to the PSCMU, which also includes assessing constitutional requirements for measures such as restrictions on fundamental rights or the enactment of emergency law. In addition, the OCMU coordinates the operational activities of the deployed special staff, specialist staff, expert groups, crisis management units of the administrative units and other bodies concerned in order to ensure that the measures are implemented consistently and efficiently.

The lead department designates the leadership of the OCMU. It comprises representatives of the administrative units concerned and their crisis management units as well as representatives of the Federal Office of Justice (FOJ).

The lead department consults representatives of other administrative units in an advisory capacity as needed and financial officers of the administrative units concerned and representatives of cantons and third parties when they are affected and/or as required.

The Basic Organisation for Crisis Management (BCMO)
The tasks of the BCMO include methodological and administrative support of the two crisis management units, involvement of relevant stakeholders and overall situation presentation as well as coordination of communication based on the joint systems of the Confederation, the cantons and other partners. This enables systematic, readily deployable and holistic crisis management at cross-departmental level. The FOCP runs the office within the NEOC and ensures that a point of contact is constantly available. Administrative units, cantons and operators of critical infrastructure can get in touch with this point of contact as required. In addition, the BCMO strengthens the Federal Administration’s capacity to pre-empt crises, ensures long-term knowledge retention and provides other services for the departments in non-crisis periods. The BCMO enables continuity and coherence in the Federal Administration’s crisis management and is run jointly by the Federal Office for Civil Protection and the Federal Chancellery. Further employees from other federal agencies can be called in to help when a crisis occurs.

Involvement of the cantons and scientists
The cantons, scientists and, depending on the situation, other relevant stakeholders are involved in the work of the PSCMU and/or the OCMU systematically and at an early stage, with the lead department bearing responsibility. This measure fosters a holistic approach to crisis management and ensures that all essential interest groups are represented appropriately.

3.4 Possible organisational structure of the FOPH in a pandemic

The Federal Act on Combating Communicable Human Diseases (Epidemics Act; EpidA) contains the following points:

- The division of labour between the Confederation and the cantons in crisis situations is clarified by the introduction of a three-stage model: the normal situation, a special situation and an extraordinary situation.
- The federal and cantonal authorities are to make joint preparations for impending special situations.
- In the context of crisis preparation and management, explicit provisions govern preparedness for new threats as well as the management of a public health emergency. Managing incidents during crises requires a high degree of coordination and organisation at federal and cantonal level.
- The Confederation is tasked with overall supervision of enforcement of the EpidA and coordinates the cantonal measures if necessary. At the same time, it ensures international coordination. The Federal Office of Public Health (FOPH) is the point of contact for the WHO for implementation of the International Health Regulations (IHR), including for incidents that constitute a 'public health emergency of international concern'.

The following diagram from the National Pandemic Plan of the FOPH depicts a possible organisational structure of the Operational Crisis Management Unit.

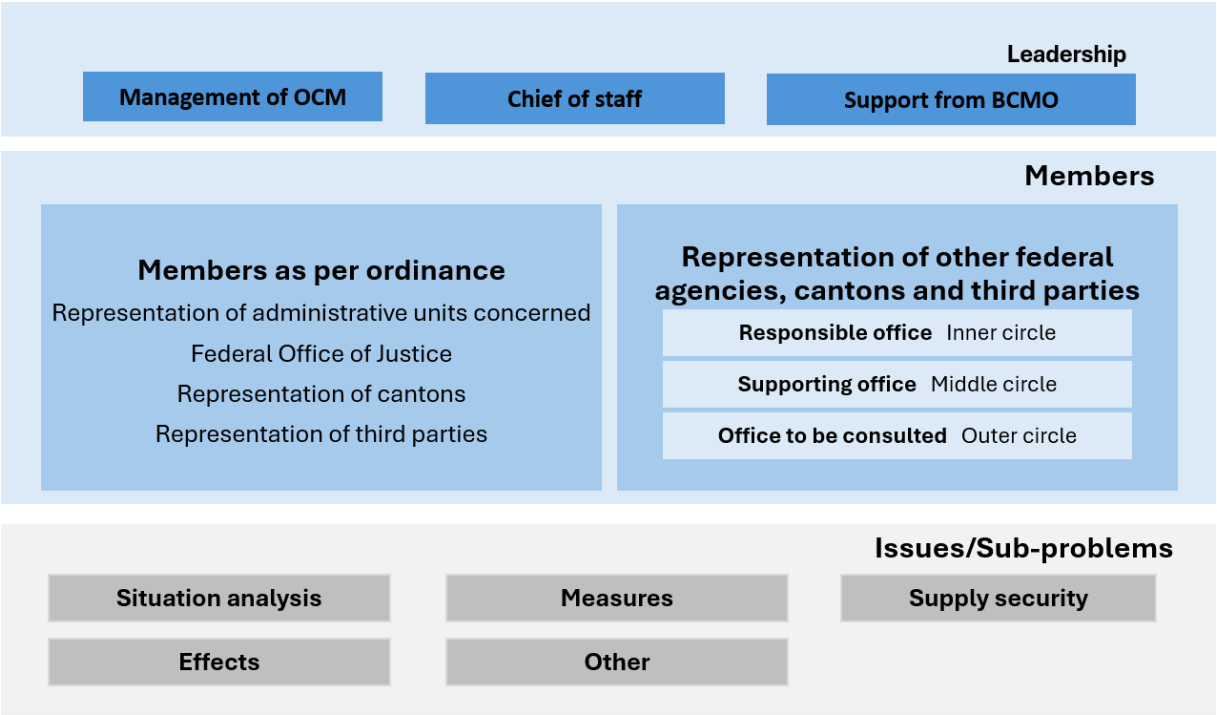


Figure 2 Organisational structure of the Operational Crisis Management Unit in a pandemic scenario (National Pandemic Plan Switzerland)

4 Challenges

The preliminary work and the work in the CMS reveal various main challenges.

4.1 Switzerland's federal structure

The cantons are responsible for healthcare in all situations as well as for planning, preparedness and incident management; the Confederation has no powers of direction in this field. Exceptions include protection against ionising radiation, transplant medicine, reproductive medicine, research on humans and responding to communicable diseases in humans and animals. For other areas, it relies on the principles of soft governance in the context of implementation, principles that are based on inclusive processes that allow flexibility of implementation and leave the details to the individual stakeholders. The policy process can be supported by informal networks, peer review and best practices. The reorientation of the CMS to the National Network for Disaster Medicine KATAMED is not intended to affect the cantons' responsibility for healthcare in any way.

The federal structure presents a major challenge to the coordination of the cantons among themselves, with the Confederation and internationally. Although incidents of national significance can only be managed jointly, as the available resources and specific features vary depending on the canton, readiness and preparedness for incidents are greater in cantons with urban conurbations than in those with more rural areas. Unclear responsibilities and incompatibilities as well as lengthy decision-making processes due to additional hierarchy levels can lead to a delayed response or a lack of response when an incident occurs.

One key aspect of the reorientation is the creation of functioning and coordinated structures, simple and compatible processes and a shared understanding in order to enable information-sharing, cooperation and decisiveness. It must be ensured here that both the Confederation and the cantons know their respective powers and responsibilities in a normal situation and can use and practise them so that they are able to apply proven structures and established procedures in times of crisis. The following concept applies: 'In a crisis, know who's who and what they can do.' The growing digitalisation of the healthcare system can be both a help and a further challenge here. It enables more efficient communication and coordination, but the federal structure also results in the existence of multiple systems, some of which are incompatible with one another.

4.2 Limited capacity of the healthcare system

The healthcare system provides basic healthcare on a day-to-day basis, including outpatient and inpatient primary healthcare, such as general practitioner care, treatment of patients with chronic illnesses, elective surgery, long-term care, pharmaceutical care, psychiatric and psychological support, biomedical analysis and much more. In addition, outpatient and inpatient acute care is provided, comprising emergency medicine as well as midwifery and constant care provision via the essential therapeutic products, crisis interventions, etc. Even in a normal situation, daily provision of basic healthcare is a major task for everyone involved in the healthcare system. In an exceptional situation, along with the added difficulty of delivering basic healthcare in these circumstances, there are also the tasks of incident-related outpatient and inpatient care. The diagram below shows how incident-related care also makes additional capacity an essential task for basic healthcare.

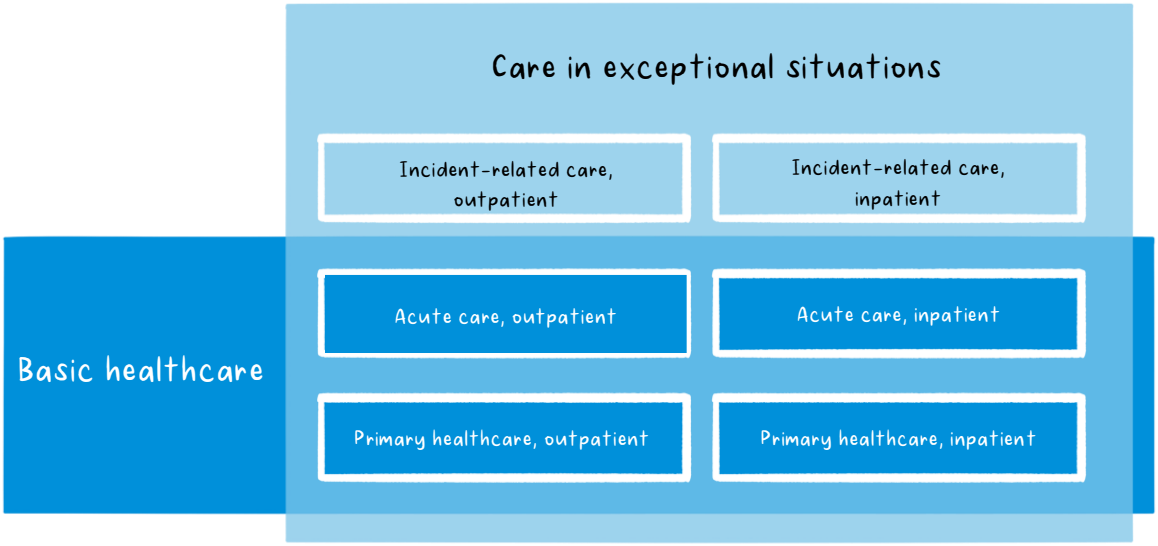


Figure 3 Healthcare provision

Institutions in the healthcare system are frequently under considerable financial pressure. This often results in little or no willingness to use resources for prevention, preparedness, management, recovery or follow-up for incidents that rarely occur. The increasingly acute staff shortage means that existing spare capacity and additional capacity for exceptional healthcare situations are having to be used in normal operations. The problems are compounded by the current demographic trend of an ageing total population and a decrease in the working population. There is also the misapprehension that the healthcare system can manage extraordinary situations easily, an assumption that stems from the high levels of efficiency and quality in basic healthcare and the lack of experience of exceptional healthcare situations of national significance. One exception is the COVID-19 pandemic.

In actual fact, there is a lack of training programmes, contingency plans, adequate capacity and nationally available additional and compatible resources for incident management, such as personnel, logistics, strategic patient distribution and infrastructure. Exercises are crucial to ensuring that emergency and contingency plans can be properly reviewed and practised, although this requires additional resources and the provision of personnel and working hours whenever normal operations are restricted. In general, there is room for improving the culture and expertise in crisis management, an area in which there is a lack of willingness and resources to invest.

4.3 Insufficient capabilities for managing exceptional situations in the healthcare system

There is much catching up to do in terms of education, leadership, training, management resources, and incident and emergency concepts, with logistics bottlenecks a factor even in a normal situation. There are no nationally coordinated concepts, processes or terms relating to terrorist attacks and no inter-cantonal leadership structures or concepts for training with all involved stakeholders and across all levels. The Swiss Humanitarian Aid Unit (SHA) cannot be deployed in Switzerland when disasters occur. The care of military and civilian casualties in wartime is handled by the civilian healthcare system, and as yet there are no guidelines on the maintenance of basic medical care for the population. With regard to medical protection facilities, which provide reserve infrastructure for the healthcare system for all situations, a renovation backlog has built up in recent years, meaning that many premises are no longer usable or require full renovation. The costs to be borne in future are the financial resources that were not invested during peacetime, known as the peace dividend.

In addition to the existing tasks, new essential capabilities that have hitherto been lacking are to be developed in the CMS-KATAMED partner network as part of the reorientation. As the occurrence of an exceptional situation in the healthcare system (terrorist attack, natural disasters of national significance, pandemic, war) was rated as unlikely in the past, essential measures were neglected or eliminated altogether, as they were in other areas. The COVID-19 pandemic prompted various measures to be taken.

4.4 Government and administrative health and security areas

The CMS-KATAMED network links the areas of healthcare and security (civil protection and military). The changed security situation, with the increased risk of terrorist attacks, the rise in organised crime and the threat of another war in Europe, entails major challenges. What is more, the two areas are not usually dealt with in the same departments and offices as far as cooperation at federal and cantonal level is concerned. Raising awareness of the matters relating to the CMS-KATAMED is a challenge in the healthcare system in particular. As there are a host of institutions and agencies involved, the amount of coordination and cooperation tends to significantly outstrip that in other areas.

In the healthcare system, there is less focus on risk prevention and mitigation for terrorism, natural disaster or war scenarios. Furthermore, unlike with internal security or defence, there are no national reserves for crisis management that would not already be largely in use when an incident occurs (healthcare professionals).

4.5 Limited resources of the CMS after the transfer

The financial resources for the existing work of the CMS are part of the budget of the FOCP. The CMS resources received by the Federal Office for Civil Protection under the transfer of the CMS's existing tasks are not sufficient for additional essential measures in the context of the reorientation. The strict budgetary requirements and the 'cost brake' in the Swiss healthcare system make it harder to increase the financial resources. Any regular increase in financial resources (raising the ceiling) by the Confederation is not possible until 2027 at the earliest, which severely restricts the implementation of essential measures at short notice. Overall, the development of essential capabilities relating to disaster medicine will require more resources. The measures must be prioritised jointly by the Confederation, the cantons and partners.
This is envisaged in the context of the joint preparation and finalisation of the National Action on Disaster Medicine, which will follow approval of this report. Long-term provision of essential resources is also to be clarified in the National Action on Disaster Medicine. The possibility of joint funding by the Confederation, the cantons and the private sector must be explored.

In the Defence Group, the CMS was able to draw on the resources of the Armed Forces Logistics Organisation (AFLO) – Medical, the Armed Forces Pharmacy, the Medical Corps and the Medical Staff with its military personnel with a civilian background in healthcare. In training and research, the Centre of Competence for Military and Disaster Medicine worked on the disaster medicine element. When the switch was made, the Centre of Competence for Military and Disaster Medicine was left entirely in the Defence Group, i.e. neither personnel nor resources were transferred to the FOCP. As a result, no more resources are available for the research and training tasks of the CMS, even though these tasks were also transferred to the FOCP in legal terms when the switch was made. However, increasing capabilities and raising awareness among the population and the healthcare professionals are crucial to successful preparedness and management.

4.6 Neglect of medical protection facilities (Med S facilities)

An infrastructure of 244 protected medical facilities (PMF) and 90 protected hospitals (PH) is available for protected medical care of the population in the event of a crisis, although only 71 of these are currently fit for purpose with no deficiencies. This is a description of the status of the infrastructure rather than that of the medical equipment, which in most cases is ageing and barely usable. Neither is there any back-up infrastructure (e.g. mobile hospitals) that can be established at a location other than that of the regular medical care facilities nor any clear guidelines regarding operation, personnel arrangements or the supply of materials. This suggests that the medical protection facilities are not fit for purpose. They were opened from the 1960s onwards and are based on the requirements of medical care as they were at the time, with no attention having been paid to maintaining them or rethinking their use in the wake of the peace dividend. The new concept for these facilities is intended to enable them to be used for healthcare provision over the next 50 years. Implementation, as well as issues relating to funding and future responsibilities, must be arranged between the Confederation, the cantons and operators amid budget constraints.

5 Reorientation

Overarching objectives can be derived from the preliminary reports as well as the challenges facing the CMS as stated above. Based on this, for the CMS-KATAMED network, the reorientation of the KATAMED network highlights the possibilities and needs in terms of managing medical tasks of the civil protection service in Switzerland. A focus on the actual tasks, greater integration of what already exists and joint development of the capabilities that are additionally required are intended to strengthen the network. The CMS is to be renamed the 'National Network for Disaster Medicine KATAMED' to reflect this new focus and new set of tasks.

5.1 KATAMED network

The reorientation to the KATAMED network aims to strengthen the capabilities for managing incidents on a national scale, building on existing structures, plans and procedures. As a pioneer, the FOCP is to coordinate the KATAMED partners in planning and preparedness and assist with management as part of its remit.

The reorientation also envisages a change of name from CMS to 'KATAMED' (from the German for 'disaster medicine'), which will be used in all languages. It is apparent that the old term, 'CMS', is not sufficiently well known, even among healthcare professionals. In addition, parties involved say they struggle to fully derive the remit from the name 'CMS'. In direct dialogue with specialists and partners, it was also established that the term 'CMS' is actually viewed negatively in some cases. In the context of the reorientation, therefore, the change of name to KATAMED will help to break with the above-mentioned uncertainties and preconceptions. To emphasise this, and to advance the reorientation, the term 'KATAMED' is primarily used in this report to denote the current CMS.

'KATAMED' is an inclusive term that covers all people and professions involved in prevention, preparedness, management, recovery and follow-up of exceptional situations in the healthcare system. As well as standing for explicit medical care in disaster situations, therefore, 'KATAMED' covers a much wider range of disciplines and responsibilities. In addition to emergency and disaster medicine per se, other medical disciplines (e.g. gynaecology and obstetrics, psychiatry, paediatrics and more), acute care, long-term care, pharmaceutical care, psychological first aid, strategic and operational management and other bodies also play a key role. Close cooperation between these areas is essential in order to ensure holistic and coordinated care in crisis situations. KATAMED takes this broader understanding into account and ensures that all relevant stakeholders can work together in an interdisciplinary way to handle exceptional healthcare situations as effectively as possible.

In the long term, KATAMED pursues the aim of empowering stakeholders in the healthcare system to manage an incident to the extent that the system can withstand current and future demands by itself. Through uniform, consolidated processes and an established network, the KATAMED network will enhance its capabilities in the long term, enabling stakeholders to be brought together within the KATAMED network and thus ensuring the highest-quality treatment possible, including when an incident occurs. This also encompasses international cooperation.

5.2 Vision ‘Together. Stronger. Support.’

Together.
In the KATAMED network, the available national potential is harnessed through improved cooperation in prevention, care and incident management, focusing on joint exercises, sharing knowledge and experiences, and inter-cantonal and international cooperation. A wide-ranging approach achieves the greatest benefit for the population. **Together**, the response is more efficient.

Stronger.
Resources, funds and expertise are bundled and handled under joint coordination for national incidents, with concepts and clear guidelines enabling national cooperation. Response capability is increased in the population and its communities and in a targeted manner among the professionals. The KATAMED network is more resilient and **stronger**.

Support.
Capabilities that exist in the KATAMED network are visible and can be shared easily and applied quickly. Training is coordinated. The capabilities are the subject of regular training, review and improvement. The *Information and Operations System* helps to create a shared understanding of management. **Support** can be given quickly and effectively when an incident occurs.

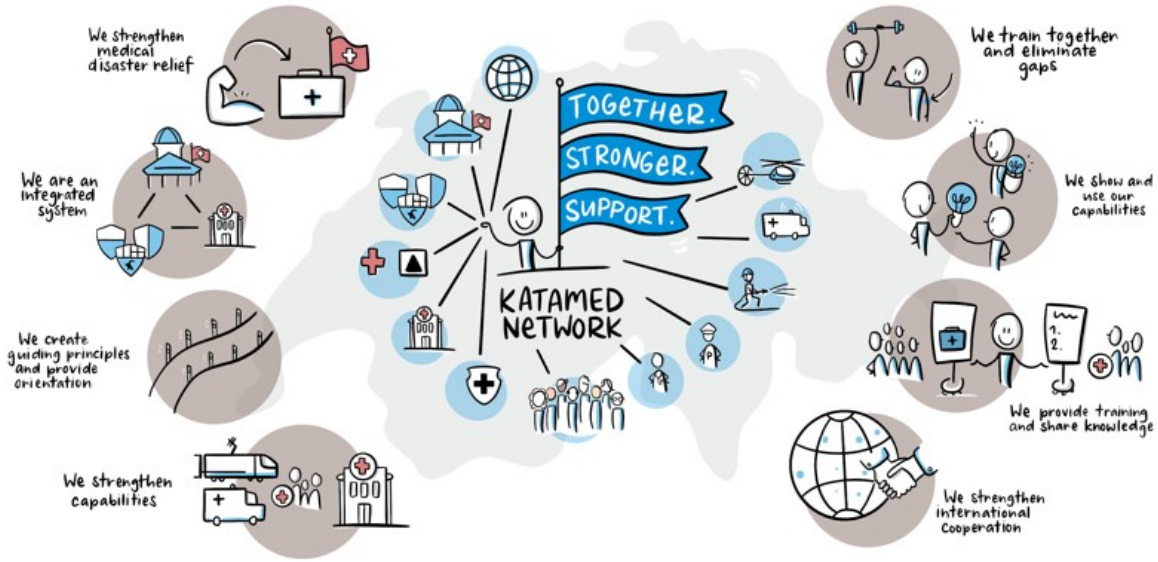


Figure 4 Vision of the KATAMED network

Across the strategic aims, the vision of the KATAMED network is focused on acting together and enhancing capabilities, one core principle being that all stakeholders of the healthcare system participate in the network. KATAMED ensures mutual dialogue as well as extensive exercising and strengthening of essential skills, and the network forms the basis for productive partnerships in Switzerland and abroad.

5.3 Mission statement

As per the vision, the KATAMED network is to be given a mission statement that fosters and enhances cooperation of the stakeholders involved via eight approaches structured as follows:

1. We strengthen Switzerland’s entire medical and healthcare provision in exceptional healthcare situations.

2. We are a network of the Confederation, the cantons and the institutions and organisations in the healthcare system.
3. We are committed to ensuring that the cantons, the healthcare system and the response forces have the best possible conditions for responding to an exceptional situation.
4. We work with our KATAMED partners to strengthen the capabilities in staffing, infrastructure, strategic patient distribution and logistics.
5. We become stronger through joint exercises, identify weaknesses and gaps, and work together to rectify them.
6. We coordinate existing capabilities and make them visible, and therefore useful, to the entire network.
7. We work together to inform and strengthen the KATAMED partners through training and the population by imparting knowledge.
8. We work together to strengthen international cooperation, we learn from the experiences of other countries, and we strengthen our capability to help in exceptional situations through partnerships.

5.4 Organisation and governance in planning and preparedness

On 21 March 2025, the 'Ordinance on the Coordination of Medical Services (MSCO)' was approved by the Federal Council. It integrates the tasks of the CMS into the FOCP more effectively as well as forming the necessary basis for successful reorientation of the CMS. To this end, the organisation and governance of the CMS-KATAMED in preparedness were devised more effectively in order to improve cooperation between the Confederation and the cantons in the KATAMED network, something that is crucial to successful reorientation. The MSCO defines the tasks and structures for responding to an incident.
In planning and preparation, the existing structures of the Swiss Security Network (SSN), with representation shared equally between the Confederation and cantons, are used for the KATAMED network, with the addition of healthcare with the FDHA and the FOPH as well as the Executive Council and the Secretariat General of the CMPH for governance.

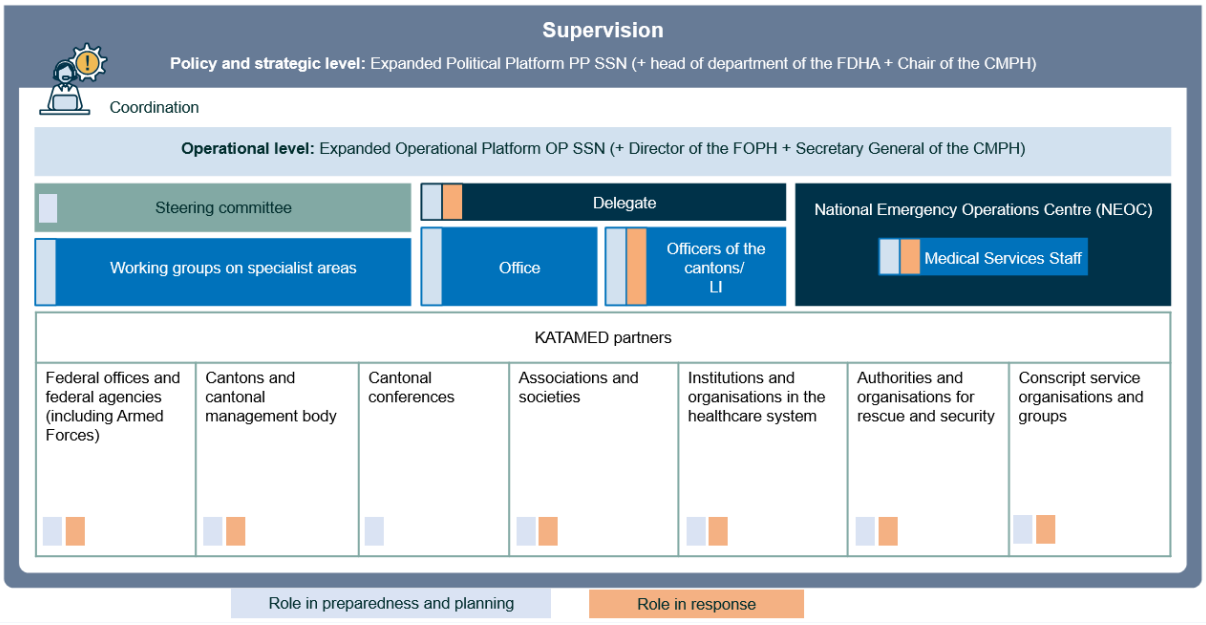


Figure 5 Agencies of the KATAMED network

Policy and strategic level

Expanded Political Platform SSN (PP+ SSN)
At policy level, KATAMED is governed by an equal number of representatives from the Confederation and the cantons. The basis for this is the Political Platform SSN as per the Administrative Arrangement on the Swiss Security Network (SSN) dated 4 December 2015. It is made up of the heads of department of the DDPS and the FDJP as well as the Presidents of the CCJPD and the RK MZF. This Political Platform will assume the policy and strategic management role for coordination relating to the medical service and, to this end, is expanded by adding in the head of department of the FDHA and the President of the CMPH, while maintaining equal representation. Further representatives of the Confederation and the cantons can be co-opted as required. The Political Platform SSN (PP SSN) meets four times a year in total and is expanded at least once a year through co-option of the head of department of the FDHA and the President of the CMPH (PP+ SSN). The Expanded Political Platform will establish and support the policy agenda for the KATAMED network with regard to the healthcare system and the associated specific aims for implementation.

Operational level

Expanded Operational Platform SSN (OP+ SSN)
At operational level, KATAMED will be managed within the framework of the Operational Platform SSN. This platform is likewise expanded with the addition of the Director of the FOPH as well as the Secretary General of the CMPH, again maintaining equal representation. However, the Operational Platform SSN can co-opt further representatives of the Confederation and the cantons, appoint specialist committees, lay the foundations and help the KATAMED delegate to fulfil their mandate. The Expanded Operational Platform SSN (OP+ SSN) prepares the items of business for the PP+ SSN.

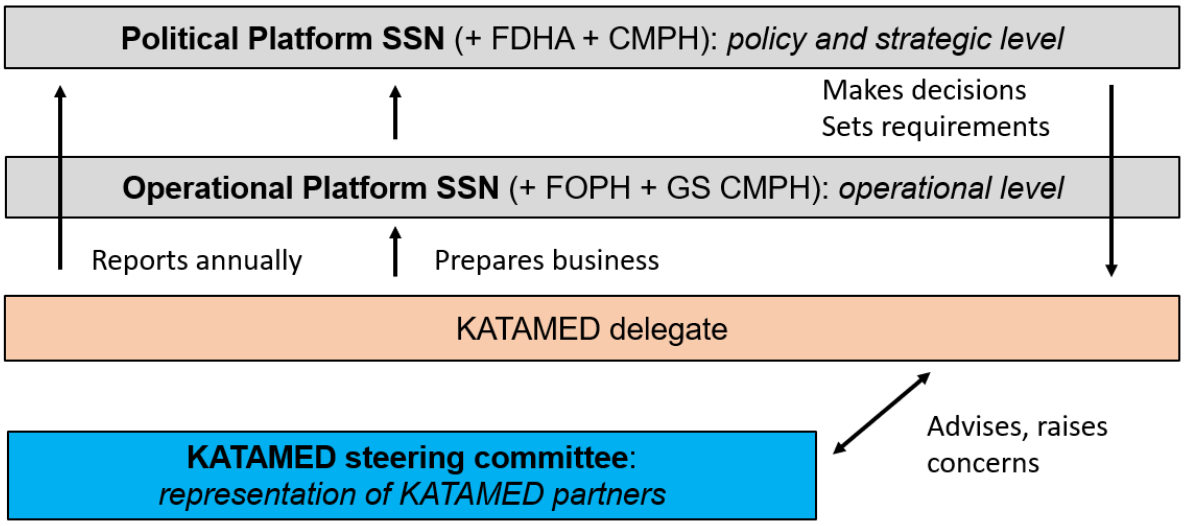


Figure 6: Governance in preparedness in the KATAMED network

KATAMED steering committee
The KATAMED steering committee is made up of representatives of the KATAMED partners. It assists with and validates the strategic developments and concepts from an expert perspective and thus advises the KATAMED delegate as well as the OP+ SSN. It also ensures balanced representation of the concerns of the operational KATAMED partners regarding the management of an exceptional situation in the healthcare system.

KATAMED delegate:
The KATAMED delegate raises the concerns of the KATAMED partners with the OP+ SSN, chairs the KATAMED steering committee and ensures balanced representation of the KATAMED partners. They maintain regular contact with the partners of the CMS-KATAMED and represent their interests. They prepare a report each year.

5.5 Organisation and leadership when managing an incident

The regular structures are applied in incident management. The Federal Council can convene a cross-departmental Crisis Organisation of the Federal Administration. When managing an epidemic/pandemic, there are structures and procedures of the FDHA, the FOPH and the cantons pursuant to the Epidemics Act.

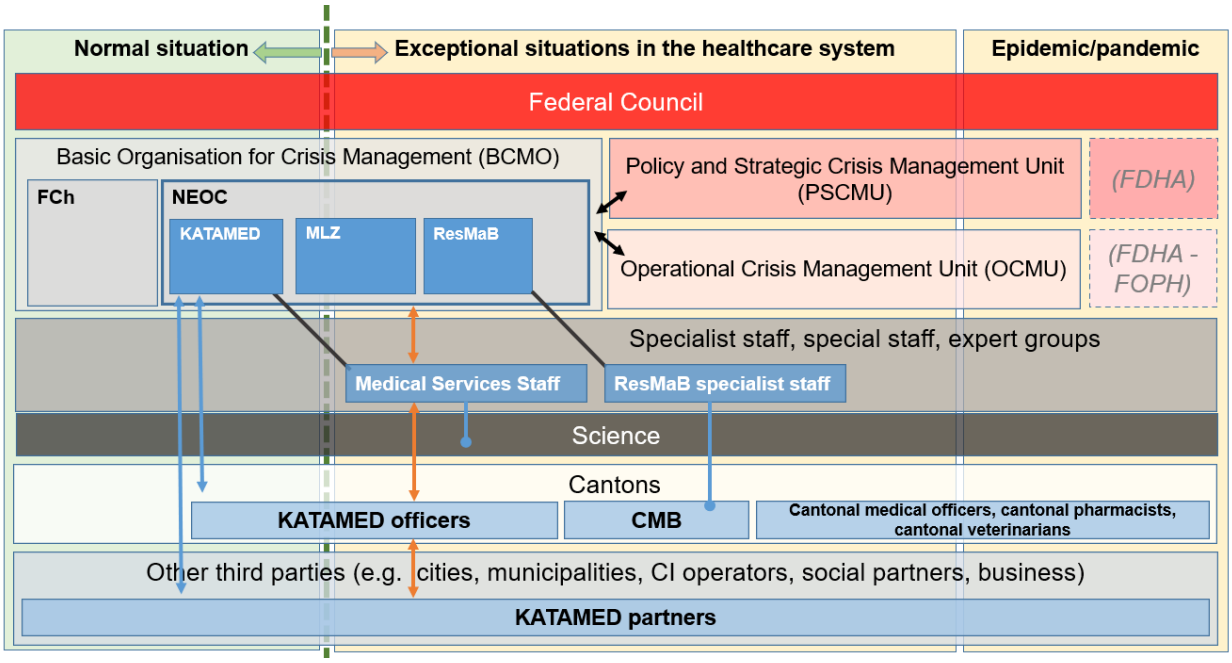


Figure 7 Interaction of leadership in the KATAMED network and embedding in the Crisis Organisation of the Federal Administration (COFA)

National Emergency Operations Centre (NEOC) with its Medical Services Staff
The Medical Services Staff is part of and managed by the National Emergency Operations Centre (NEOC). It ascertains the specific medical situation for the partners in the KATAMED network, the NEOC and the crisis management units in the Crisis Organisation of the Federal Administration (COFA), assesses resource requests from a professional perspective and makes proposals to the crisis management units regarding the prioritisation of resources as well as having the power to propose specific measures. The NEOC itself prepares an overview of the available personnel and material resources and the available facilities.

KATAMED officers of the cantons
In each canton, a responsible person is designated for the matters concerning KATAMED. The KATAMED officers meet regularly and network with each other, thus enabling the exchange of information and experiences. They are part of the cantonal management bodies and, as subject-matter specialists, are familiar with the structures, processes, resources and possibilities in the KATAMED network.

KATAMED partners
KATAMED partners are all stakeholders involved in preventing, planning, preparing for, managing, recovering from and following up on an exceptional situation in the healthcare system. They are agencies of the Confederation and the cantons (management bodies, inter-cantonal conferences and groups, coordination offices and KATAMED officers), institutions and organisations in the healthcare system (hospitals, homes, operations centres, rescue services, outpatient care), associations (professions, education and disciplines), education organisations and conscript service organisations. After the glossary, a (non-exhaustive) overview of the KATAMED partners is provided for information purposes.

KATAMED network
All partners combined make up the KATAMED network. Exceptional situations are responded to jointly in the network. This involves the following tasks:

- Representing the interests of the KATAMED network.
- Preparedness and planning by:
  - drawing up incident management plans and concepts;
  - devising and conducting regular exercises at all levels.
- Strengthening capabilities to manage an exceptional situation in the healthcare system and improving sustainability through:
  - leadership and coordination when an incident occurs;
  - developing resources (e.g. KATAMED teams);
  - strategic patient distribution;
  - providing logistical resources for management;
  - providing partially protected infrastructure.
- Training on disaster management.
- Raising public awareness of disaster medicine.
- International cooperation on preparedness, planning and incident management.

5.6 Contribution of the FOCP

Depending on the available resources, the FOCP can perform the following tasks:

- Commissioning and supervision by the Confederation and the cantons (governance).
- Close involvement of the KATAMED partners in order to align the work with their requirements.
- Representing the interests and needs of the KATAMED partners in the KATAMED network.
- Devising binding plans, concepts and requirements in disaster medicine in cooperation with the KATAMED partners.
- Promoting public awareness as well as the education and training of KATAMED partners in disaster medicine and the management of exceptional situations within the healthcare system.
- Promoting and holding exercises in the KATAMED network.
- Promoting the development of resources for managing incidents in the KATAMED network (personnel, logistics, strategic patient distribution and infrastructure).
- Promoting and developing the capability for nationally coordinated management of planned or unplanned incidents in the KATAMED network.
- Establishing international partnerships to manage exceptional situations in the healthcare system.

The related expectations are to be clarified in the context of the action plan.

5.7 Factors for successful implementation of the reorientation

With successful implementation of the reorientation dependent on various factors, the following underlying premises are defined for successful implementation:

1. *Focus of tasks*
   KATAMED's task is to coordinate the healthcare system in order to manage incidents of relevance to civil protection. Working together to prepare for and handle this strategically and tactically is the core task. KATAMED does not focus on different tasks or tasks that do not relate to the core task. The prepared concepts and resources can also be applied in a normal situation (e.g. mass-casualty incident concepts).
2. *Use of existing capabilities*
   The solutions envisaged should be realistically feasible and, where possible, build on existing

capabilities or infrastructure of organisations or institutions. The measures promote sustainability in a protracted exceptional situation affecting the healthcare system.

3. *Needs-based approach*
   The work must be aligned with the needs of the stakeholders in crisis management. The concepts must be as simple as possible but as complex as necessary. The aim is for the concepts to be used routinely in order to ensure successful crisis management when an incident occurs. To this end, it is essential to take the existing structures of the KATAMED partners into account.
4. *Involvement of all stakeholders*
   The tasks involved in incident management are performed by a wide range of stakeholders. In addition to medical and medical-related personnel (logistics, IT, administration, management), the other stakeholders of the emergency services (police, fire service, emergency call centres), the Armed Forces, the civil protection service and other parties concerned must also be involved.
5. *Creation of a shared understanding*
   Successful cooperation relies on a shared understanding of terms and processes among the partners of the various organisations. Along with a shared understanding at technical and tactical level, the aspects of leadership at all levels must be taken into account.
6. *Ensuring rapid implementation*
   The security policy environment is being made more intense by factors such as the heightened terrorist threat and the war in Ukraine, so it must be ensured that the key measures can be implemented rapidly. Thus work on preparedness, such as the mass-casualty incident concepts or educational provision, is already under way, with priority given to implementing the most effective measures.
7. *Increase in penetration levels*
   The stakeholders can only be reached through close networking and the use of existing organisations and associations. Efforts that are not known about or used are ineffective.
8. *Increase in resilience*
   When an incident occurs, there is already a certain time lag between the time it starts and when the first response forces arrive at the scene. Those affected must be able to help themselves and others during this period. Preparedness for care provision and available knowledge of the procedures, such as first-aid measures, can be life-saving in the interval until professional assistance arrives and therefore makes a huge contribution to increasing resilience. Education and training in emergency responder courses or similar courses play a major role here.

5.8 Goals of the reorientation

The KATAMED network will be better prepared to deal with exceptional situations following the reorientation:

1. **Clear structures and legal framework**
   The tasks, roles and cooperation between the federal authorities, cantons and organisations are clearly defined, and legislation has been adapted where necessary. Building on the structures used in normal conditions, cross-cantonal cooperation has been increased in the areas of preparedness and management. Regular exercises ensure that these structures and processes work effectively in an incident, while jointly developed national guidelines enable better and more efficient cooperation.
2. **Public awareness and professional skills development**
   Targeted measures in preparedness, awareness-raising, and education and training enable the population and healthcare professionals to cope more independently with exceptional situations. KATAMED partners share knowledge and experience and make use of synergies by coordinating their preparedness when developing plans and providing resources.
3. **Greater room for manoeuvre**
   Within the KATAMED network, a shared understanding of leadership and response has been established and is supported by the Information and Operations System – Next Generation (IOS-NG). There is increased cooperation across regions. Jointly coordinated resources in the areas of

personnel, operational logistics, infrastructure and strategic patient distribution give the network greater room for manoeuvre.

4. **Role of the FOCP**
   The FOCP coordinates the KATAMED network in preparedness and provides system-wide support. It monitors trends and developments, analyses risks and reviews existing plans in collaboration with partners as well as promoting education and training in disaster medicine. The FOCP also helps to organise exercises, runs the IOS-CMS (ISO-NG in future), issues guidelines and develops the overarching plan for renewing medical protection facilities. Finally, it coordinates nationwide preparedness in psychological first aid.

5. **Sustainable cooperation and funding**
   Close cooperation between the Confederation, the cantons and other partners is firmly established within the KATAMED network. Measures are jointly prioritised and mandated as part of the National Action Plan on Disaster Medicine, and the allocation of the necessary resources and funding for implementation is ensured in a sustainable way between the Confederation, the cantons and other partners. Inter-cantonal services for the KATAMED network are settled between the parties concerned.

6 The healthcare system in exceptional situations

The special features for the healthcare system in exceptional situations are addressed in the following chapter to gain a better understanding of the needs for successful prevention, preparedness, management, recovery and follow-up. In our broad understanding of disaster medicine, this applies to all people and sectors with a role in extraordinary situations in the healthcare system. We set out fundamental concepts in incident management. The challenges to the healthcare system are refined based on selected scenarios from the National Risk Analysis of Disasters and Emergencies by the FOCP, and findings in the areas of action are derived from this. The scenarios are ‘conventional attack’, ‘earthquake’, ‘armed conflict’ and ‘influenza pandemic’. A summary is used in the NBC section, as the range of specific incidents is too wide.

Combating communicable human diseases, including epidemics and pandemics, is the responsibility of the FOPH, which includes the definitions required for a special situation and an extraordinary situation pursuant to the Epidemics Act (EpidA).

6.1 Normal situation in the healthcare system

This is defined as a situation in which the ordinary structures and procedures are sufficient to manage the upcoming tasks. No crisis management mechanisms are applied at supra-regional or national level. The healthcare system is able to handle problems such as a shortage of qualified professionals, temporary peaks in patient volumes or reduced availability of therapeutic products within the ordinary structures and procedures.

Although management of these problems in the healthcare system is not the main thrust of this report, preparations and plans for exceptional situations can be both made and applied in a normal situation (e.g. concepts or educational programmes) and provide added value for the healthcare system.

6.2 Exceptional situations in the healthcare system

Exceptional situations in the healthcare system are major incidents, disasters, emergencies and armed conflicts that affect several cantons, the whole of Switzerland or neighbouring countries, result in a large number of patients or have a particularly serious impact on health.

Exceptional situations differ from the normal situation and encompass the special situation and the extraordinary situation.

In a **special situation**, certain tasks can no longer be managed using the ordinary procedures. It has only a sectoral impact on the authorities’ activities and requires the rapid concentration of resources, the streamlining of procedures and the use of emergency or contingency plans. Examples are major incidents such as accidents or attacks as well as natural disasters of supra-regional importance that necessitate the use of supra-regional, inter-cantonal or national assistance.

Numerous areas and sectors are affected in an **extraordinary situation**. Ordinary procedures are not enough to manage the upcoming tasks. Examples are disasters, epidemics/pandemics, emergencies or wars that severely affect the entire country. A response necessitates supra-regional, inter-cantonal, national or international assistance and may last for months or years.

An exceptional situation can be determined by the geographical extent as well as the imbalance between the quantity of patients and the available resources, or the quality of the healthcare consequences. This includes specific issues that the healthcare system cannot manage in a normal situation without prior planning and preparedness. This covers issues such as responding to a mass-casualty attack, caring for a large volume of severely burned patients, decontamination of large numbers of people in the healthcare system, procedures in violent situations (such as terrorism, shooting rampage or war) or the national handling of cases of patients with highly contagious diseases.

6.3 Emergencies in the healthcare system

An emergency can arise quickly or gradually from a social development or as a consequence of an incident. It is a situation that overstretches the personnel and material resources of the healthcare system and cannot be managed using the ordinary procedures and existing resources. Examples are an influx of refugees, supply shortage situations and epidemics.

6.4 Special features in the healthcare system in exceptional situations

Incidents with a major impact on the healthcare system are rare in Switzerland. A major medical mass-casualty incident (MCI) with few severely injured people =[3] (< 24 patients[4]) can usually be managed by the fully functioning healthcare system by distributing patients, making use of the ISO-CMS. In the hospital sector in particular, therefore, there is no need to trigger a contingency plan, and normal operations are not impaired. This leads to a false sense of security as regards the country's ability to manage exceptional situations in the healthcare system.

An incident with a larger number of severely injured people, specific requirements (contamination, severely burned patients, terrorism) or on a disaster scale (severe natural disaster, war) will overstretch the system, and procedures are often neither prepared nor practised. It can be assumed that the response will have to involve numerous immediate measures and a great deal of improvisation. Along with overstretching of personnel and material resources in the healthcare system, this would mean significant damage in terms of loss of human life and avoidable physical harm.

The aim of managing incidents in the healthcare system must be to maintain the best possible care for as many patients as possible for as long as possible in line with the criteria of individual patient care, something that is achieved through adapted use of resources.

Effective management comprises the phases of prevention, preparedness, management, recovery and follow-up of an incident and the recovery. During an event, the actions involved are emergency medical treatment, transport to inpatient treatment and subsequent aftercare. All stakeholders must be familiar with the tasks and procedures and lay the requisite foundations before the incident with plans and provisions for successful management in their organisations and institutions. Preparedness of the population, conscript service organisations and volunteers also plays a key role here, as deployment of the support staff is often delayed.

As there is little experience of exceptional situations in the healthcare system in Switzerland, and the efficiency of the healthcare system is perceived to be high in normal situations, the preparatory and planning measures are often neglected when human and financial resources are scarce. However, implementation of these measures requires only a low level of financial and personnel resources in relation to the possible disastrous impacts.

6.4.1 Direct impact

Direct impact on public health
Death and physical and mental harm are the worst direct consequences of a disaster for the population. In addition to the injuries caused by a direct impact (wreckage or violence), medical diseases affecting further organ systems (respiratory diseases, kidney failure) or poisoning and chronic consequences of toxins or ionising radiation can occur as a delayed direct consequence. A lack of clean drinking water and the effect of weather conditions can cause the spread of diseases. The effect of the incident on the mental health of the population is often substantial and necessitates psychological support and aftercare in the long term. It must be noted that deaths impose a direct strain on the authorities and the population rather than the healthcare system.

Direct impact on the healthcare system
The functioning of the healthcare system is restricted as a direct consequence of a disaster. The

[3] Patients with an acute life-threatening condition who need immediate treatment.

[4] 24 is an approximate figure calculated from 12 HSM trauma centres with an average of 2 resuscitation areas that are fit for purpose.

healthcare infrastructure and medical equipment may be damaged. Staff may suffer from health problems themselves or be affected by worry about their own living conditions and family and may therefore no longer be able to work. Supply chains are disrupted due to the failure of transport links, suppliers and technologies. Additional overstraining of the institutions that are still functioning results in a further decrease in treatment quality, capability and treatment capacity.

6.4.2 Indirect impact

Indirect impact on public health
Damage results in the long-term loss of critical capability to supply drinking water and food and to dispose of waste and wastewater, in both businesses and households. This leads to the loss of vital facilities and, indirectly, to strain on those affected as well as to delays in necessary acute and chronic treatments, as the population seeks to spare an already overstretched healthcare system or is compelled to postpone required medical care. These cause a deterioration in health that will eventually result in additional demand for treatments.

Dealing with what has happened, the loss of loved ones or a decline in living conditions triggers mental trauma and illnesses, which necessitate psychological aftercare and treatment. Long-term support must also be given to relatives in some circumstances, as the healthcare system does not have the corresponding capacity, which can lead to further strain.

Indirect impact on the healthcare system
The loss of critical resources such as water, energy, telecommunications, IT or transport links impairs the ability the healthcare system to function properly, as does destroyed infrastructure, a shortage of staff and equipment, and disrupted supply chains. This has an adverse effect on basic healthcare, leading to a backlog of essential treatments and, eventually, to increased volumes of patients.

6.4.3 A lack of resources due to the low probability of occurrence

The organisations in the healthcare system rely on sufficient resources for preparedness and the management of disastrous incidents, resources that are often neglected due to the low probability of such incidents occurring. Institutions and organisations must prepare emergency and contingency plans, provide related training and practise the plans regularly with partners. A disaster is not simply a very major mass-casualty incident, as the two involve some very different issues and requirements that must be taken into account. Along with incident-related care, maintaining basic healthcare is a key task in the KATAMED network.

As the incidents are so rare, exercises are very important. The processes must be practised on an interdisciplinary and interprofessional basis. In particular, this also enables vulnerabilities and errors to be detected early so that they can be rectified before an incident occurs.

6.4.4 Change of treatment standards

The best possible treatment for patients for as long as possible must always be aimed for in line with the criteria of individual patient care. This can be ensured by relocating patients to institutions that still have available treatment capacity up to a certain quantity; these institutions may be located abroad.

In major incidents where the requirements exceed the available resources, a change to the treatment standards with adjustment of the type, extent and level of treatment may save more lives, albeit at the expense of optimal care for individuals. Triage, i.e. medical assessment and decision-making on the priority of medical care of patients in terms of the type and extent of treatment as well as the time, type and destination of transport, is a crucial tool for optimum use of the limited resources. The table below shows the treatment standards with the special features in descending order.

Treatment standard	Brief description	Special feature
Individual patient care	Best possible care for the individual.	Everyone is given optimal treatment. Sufficient resources are available.
Damage control care	Limitation to the most essential measures for the care of the individual.	The aim is to provide optimal treatment. However, abbreviated procedures are carried out, as the physical strain would otherwise be too much for the patients. Further treatment steps are deferred until later. In the meantime, the patients are stabilised and treated in intensive care.
Tactical abbreviated care	Substantial limitation to the most essential measures with the aim of saving as many lives as possible.	Hard triage with a selection of patients who can be saved with minimal use of resources. The untreated patients must be cared for in line with the principles of palliative care.
Palliative care	Measures to alleviate the symptoms of the patients no longer treated in triage due to the lack of resources.	Dignified support of patients. The focus is on alleviation of pain and anxiety. In addition, as much attention as possible must be given to the needs of surviving relatives (farewells, rites). The duty of care of the healthcare professionals entrusted with this challenging task must be taken into account (care). *The palliative treatment of patients who can no longer be treated due to an overstretched the healthcare system and their injuries/illnesses is described here. In a normal situation, palliative treatment denotes the prevention of suffering and complications in terminally ill people.*

Table 1: Treatment standards and their special features

In exceptional situations of national significance in the healthcare system, it may be necessary to adapt treatment standards nationwide. These standards must define the treatments still to be carried out and the people who are still to have access to treatment. A decision of this magnitude must be made at political level on the basis of medical and ethical principles and cannot be delegated to working specialists. The requisite procedures must be decided on in advance with the appropriate partners (including the Swiss Academy of Medical Sciences) and authorities and this decision made applicable to the entire healthcare system.

6.4.5 Importance of preparedness

When an incident occurs unexpectedly, those affected must be able to help themselves until external assistance arrives, which may take hours or days depending on the incident. They must organise themselves and manage the incident as well as possible using the resources on hand. This applies equally to healthcare professionals, the population, institutions, organisations and authorities. Among other things, therefore, the measures focus on prevention, preparedness and planning in an effort to achieve increased resilience across the entire network.

6.4.6 Comprehensive approach to healthcare provision in exceptional situations

Healthcare provision in exceptional situations involves significant overlaps between disaster medicine on the one hand and emergency medicine and public health on the other. Complex systems are often affected or may even break down in exceptional situations. Since this is not just a medical problem, a holistic view and a comprehensive approach are crucial to successful management, with a need for interprofessional and cross-sector activity. Many planning, preparedness and response measures go beyond medical treatment, comprise measures relating to public health, crisis management and the maintenance of critical resources or capabilities (drinking water, protection against communicable diseases, safe housing, etc.) and involve political decision-makers. Strengthening the communities themselves and maintaining their basic healthcare play a major role in healthcare provision for the population when an incident occurs.

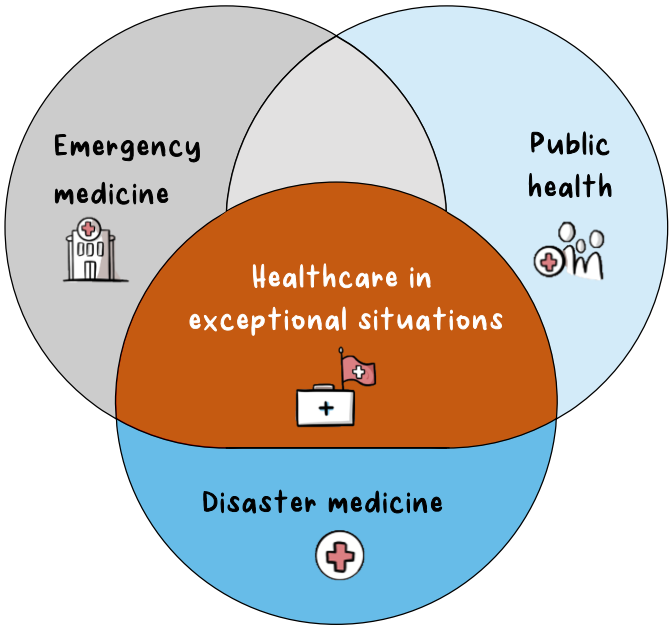


Figure 8 Healthcare provision in exceptional situations (adapted from Prof. Virginia Murray)

6.5 Foundations in the healthcare system for incident management

6.5.1 Preparation of a contingency plan

An incident greatly increases the strain on personnel. The ability to handle unfamiliar processes in these situations is reduced, meaning that efforts must be made to ensure that the plans and processes provided are as simple as possible and, ideally, are already applied routinely.

When managing incidents, the stakeholders must be familiar with each other and the available plans, processes and resources (‘In a crisis, know who’s who and what they can do’). Organisations and healthcare professionals in the healthcare system as well as other staff of importance to the response (management, administration, logistics, IT, etc.) must be involved in devising emergency and contingency plans, including the risk assessment adapted to the location. The plans cannot be made by individual departments without the involvement of the strategic and operational level authorised for decision-making during an incident.

6.5.2 Triggering of the contingency plan

Triggering of a contingency plan with a switch to disaster operations, involving restrictions on normal services, must be done promptly. This decision is made against a backdrop of uncertainty, urgency and incomplete information, requires particular effort and is taken under time pressure. The prior involvement of political and operational decision-makers is thus a crucial success factor. Triggering may be neglected or delayed without an understanding of the special features of a disaster situation and the support of decision-makers, with major negative consequences.

Training must be provided on the capabilities involved in switching to disaster medicine with prioritisation via triage and an increase in overall treatment capacity by adapting treatment standards. The processes and procedures in patient-oriented normal operation differ significantly from the resource-oriented approach in disaster response. It is all the more important for the decision on the switch to be made by the political decision-makers in order to relieve the working staff of legal and moral responsibility.

7 Major incident based on the example of a terrorist attack

To gain a better understanding of the process chain of the healthcare system when an incident occurs, the diagram below illustrates the procedures based on a potential incident. Overarching areas of action that combine partial elements of the processes and act as possible levers for the enhancement of existing capabilities can be derived from the process chain.

7.1 Procedures for management

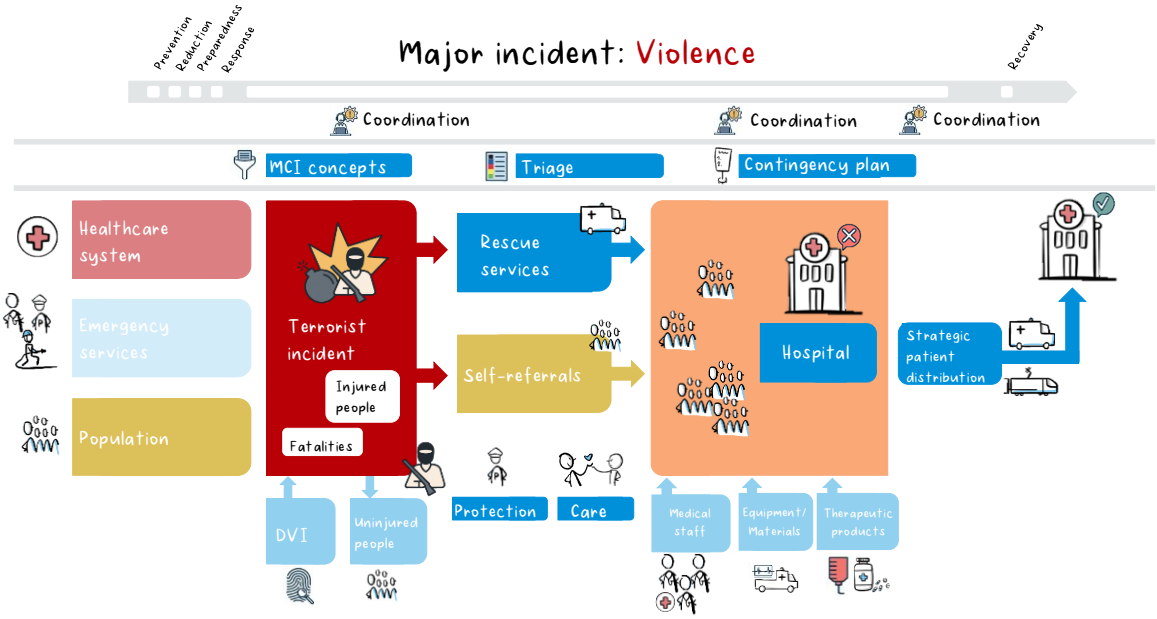


Figure 9 Patient pathway based on the example of a violent incident

An example of the patient pathway is described on the basis of a major medical incident involving a terrorist attack. In contrast with a normal situation, a major medical incident is defined by the need to apply extraordinary processes and bring in additional resources for incident management.

It involves a structured and coordinated care pathway that starts immediately after the incident and does not end until the patient can be sent home, fully cared for and stabilised after rehabilitation. The entire patient pathway comprises different stations and interfaces where various organisations and agencies must cooperate closely in order to ensure the best possible care and optimise the procedures.

Preparedness

Measures to help the population, emergency services and healthcare system to cope better are highly important before an incident occurs. The main questions to be addressed here are: ‘What should I do in the event of a terrorist attack?’, ‘Should I escape, barricade myself in or confront the perpetrator?’ and ‘How do I stop life-threatening bleeding of myself or others?’ – particularly if they relate to correct behaviour and first-aid measures. Correct preparedness of the population is a crucial factor in increasing resilience here. Institutions can devise contingency plans, derive measures from them and provide training, while continuous situation monitoring with regard to security also plays a major role.

During the incident

Self-help

When an incident occurs, it is important that those affected know how they can minimise an injury by acting properly – for instance, by using measures to staunch blood flow from wounds that can cause

bleeding within minutes. Knowing what to do in the event of a shooting rampage or terrorist attack, earthquake or other natural disasters can directly protect people, while institutions can trigger existing contingency plans.

Danger zones
The first emergency care step is initiated immediately after the incident occurs. The emergency services, comprising the police, fire service and rescue services, are alerted and undertake the first tasks. These also include protecting and securing the danger area. In this context, the organisations must be able to understand the procedures, terms and roles, which is not always the case at present. In an ongoing terrorist incident, the security forces act in line with the 'find – restrain – rescue' principle, meaning that the main priority is not treating injured people but neutralising the active perpetrator in order to prevent further casualties. The area of operations is divided into zones according to the threat. Rescue services are deployed in danger zones either rarely or not at all, requiring injured people to either wait or be evacuated by the security forces to the safe zones where the rescue services are.

There are still no nationally coordinated concepts for this procedure. Patients are generally taken to the nearest hospital as quickly as possible after a few stabilisation measures (initial staunching of blood flow, easing of tension in the chest, securing of the airways). Needs relating to self-protection (danger, possible perpetrators among the injured) and to the securing of evidence (forensics) must also be borne in mind here.

Pre-triage
At the scene of the incident, pre-triage is performed alongside securing the surroundings (insofar as possible amid heightened danger). Here, the response forces apply concepts for managing a mass-casualty incident (MCI), with structured prioritisation of the urgency of treatment and transport of the patients. Based on a quick assessment, the aim is to identify the most severely injured people, treat them first and transport them to a suitable hospital, a process that the Information and Operations System (IOS-CMS) and its successor can assist with. If there are a large number of fatalities, the Swiss Disaster Victim Identification (DVI) team is deployed on site and in the hospital to coordinate the identification and handling of the bodies.

In the hospital
The contingency plan (incident and crisis management) will ideally already be activated on arrival at the hospital. If the hospital is close enough to the scene of the incident, however, the first patients may arrive there without prior notice, which may delay identification of the situation. The large number of incoming patients compels the hospital to continue with triage, and treatment capacity for severely injured people must be created by switching from individual patient care to disaster medicine. In turn, the build-up of people at the hospital presents an opportunity for a second attack, which will ideally be countered by security measures on site. Specialised protocols and resources for a mass-casualty incident are applied at the hospital, and the internal organisation and the procedures are adapted. Additional staff are mobilised as per the contingency plan. A large number of patients are treated in order of priority. There must be the capacity to bring in additional therapeutic products such as medical devices (e.g. surgical equipment) and medicinal products, including blood products.

Creation of treatment capacity
It must be possible to create additional treatment capacity at the hospital concerned. This means that patients who are in a ward for reasons unconnected with the incident or do not need emergency treatment must be sent home or transferred, and planned operations must be cancelled or postponed. Capability for coordination and the requisite means of transport are needed for the transfer. Patients with moderate or minor injuries as a result of the incident who are sufficiently stable for transport are transferred to other inpatient or outpatient institutions via means of transport not involved in the incident, such as patient transport, public and private transport or logistics companies. The acute surgical response to a terrorist incident will be completed within a few days.

People trained in psychological first aid look after those affected by the incident. Injured people, uninjured people and deployed staff may suffer from psychological effects either immediately or not until

months later. Their details are taken for subsequent contact. The organisations and institutions themselves are responsible for the mental health of their employees.

After the incident
The patients continue to receive treatment and then go to aftercare with any rehabilitation they need. The backlog of postponed treatments from normal operations is made up over a period of several weeks to several months. After the incident, the institutions and organisations involved will critically assess the course of events in a follow-up process. The debriefings (such as in the form of structured after-action reviews) are useful here in terms of identifying needs for action, learning lessons and deriving essential adjustment measures.

7.2 Areas of action

In order to adequately assess KATAMED's capacities and capabilities in the event of an incident, an overarching framework is required to enable comparability across different events. These areas of action are derived, on the one hand, from the patient pathway in an incident scenario and, on the other hand, reflect operational domains that arise in the management of emergencies, disasters, pandemics, and armed conflicts for medical civil protection and the healthcare system.

Thematically related processes are combined in the overarching areas of action, thus enabling standardised information on existing capabilities. This key step serves to analyse the resilience of the healthcare system and the stakeholders involved across various incident scenarios.

Figure 10 graphically illustrates the areas of action, while Table 2 provides an overview of the defined areas of action that are used in the further analysis. The selection of the areas of action was evaluated in a workshop with the KATAMED steering committee and approves after adjustment of the assessments.

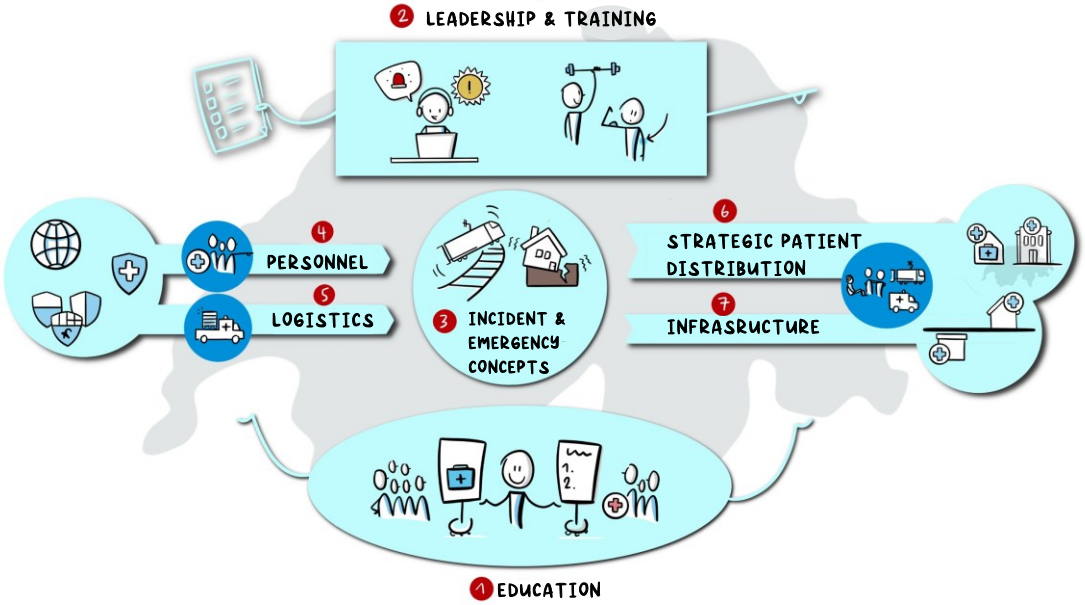


Figure 10 Areas of action

	Area of action	Description
1	**Education**	Education and training on disaster medicine for subject-matter specialists as well as raising awareness among the general public regarding preparedness for an incident.
2	**Leadership and training**	This covers the establishment and expansion of leadership structures and processes in the event of an incident, at international, national, regional and cantonal level and in conjunction with all partners and organisations. It also comprises the regular holding of exercises for leadership structures and assistance with exercises of the KATAMED partners.
3	**Incident and emergency concepts**	Concepts, contingency plans, recommendations and, where possible, guidelines that may play a key role when an incident occurs. A focus on those affected and measures that may be taken in order to assist all those affected.
4	**Resources for managing incidents – Personnel**	Preparedness and deployment of personnel in the event of a disaster (from KATAMED teams, additional personnel resources, volunteers and rescue teams to the civil protection service and the Armed Forces).
5	**Resources for managing incidents – Logistics**	Drafting of plans, preparedness and use of additional material resources and critical capabilities in the event of an incident.
6	**Resources for managing incidents – Strategic patient distribution**	This involves distributing and transporting a very large number of patients, if possible without using existing emergency transport resources. It also includes policy decisions on transport with all resulting implications of allocation and admission to an existing healthcare system, operational coordination by an operations centre and the essential resources.
7	**Resources for managing incidents – Infrastructure**	Implementation of the revised concept for the medical protection facilities to ensure appropriate medical management of exceptional healthcare situations. This covers operations, including personnel and equipment of protected hospitals and advanced medical posts.

Table 2: Areas of action with a detailed description

8 Incident scenarios

In the situation analysis, the resources and frameworks currently available are described on the basis of the established areas of action. The requirements for successful management will be reviewed in depth in these areas of action, based on the subsequent scenarios. This will enable gaps to be identified for which solutions must be developed and will improve the general understanding of the tasks of the KATAMED network.

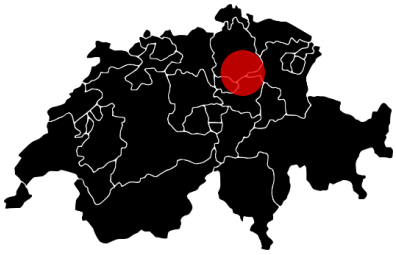
The scenarios ‘conventional terrorist attack’ (as distinct from NBC warfare agents), ‘earthquake’, ‘armed conflict’ and ‘influenza pandemic’ are used as a reference point based on the National Risk Analysis by the FOCP. The underlying data is taken from the reference scenarios, including estimated numbers of patients and fatalities. Specific medical features were also added, such as typical injury patterns and specific care requirements, and the impacts on the healthcare system were analysed, with particular regard to care bottlenecks, the allocation of resources and coordination between the stakeholders involved. This comprehensive approach enables a realistic assessment of the resilience of the healthcare system on the basis of these four scenarios. Furthermore, the NBC incidents and their specific problems are discussed in full. The scenarios were selected because they depict the biggest threats to the security and health of the Swiss population. They also provide a clear picture of the various challenges and requirements with regard to disaster medicine and incident response on account of their differing degrees of impact on the healthcare system (volume of patients, personnel, infrastructure, supply chains) and their timing. Each of these scenarios entails specific risks; some are announced, while others do not allow for any preparation time. When a terrorist attack occurs, the patient flow returns to normal after an initial phase, whereas the other scenarios can last for weeks or even years. Whether regional, national or international assistance can be expected depends on the situation. The state of the infrastructure can also vary, with the buildings for healthcare provision and the transport network (for transport and distribution of patients and key supplies such as therapeutic products and food) being particularly important, along with the status of the electricity and water supply and wastewater and refuse disposal. The challenges examined range from large-scale destruction and numerous injured people to highly specialised medical and logistical requirements.

Choosing these scenarios enables a comprehensive assessment of the capabilities of the healthcare system in exceptional situations. On account of their variety, they cover most of the other incidents that can be expected. The extent and complexity are deliberately high, as preparedness for the worst case automatically includes preparedness for less complex scenarios. Other important scenarios (cyberattack on the healthcare system, power shortage, etc.) are addressed in conjunction with the partners at a later date.

8.1 Scenario I 'Conventional attack'[5]

Scenario I
Conventional attack

Scenario characteristics

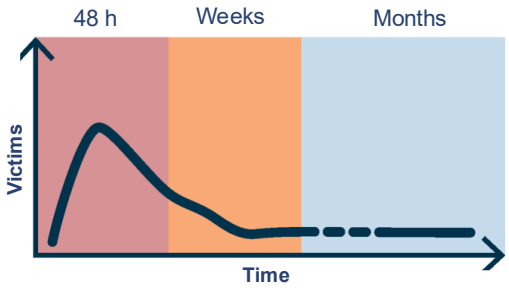


In a conventional attack, **various means such as bombs, explosive belts, vehicles, firearms or sidearms** can be used with the aim of harming **people, materials, equipment, infrastructure or institutions**.

The following **specific characteristics** apply to the medical **response** to the incident:

- **Danger** to the emergency personnel
- **Unfamiliar injury patterns**, less routine in diagnostics and treatment
- Mass-casualty incident with a switch to **disaster medicine**
- **Forensics** (preservation of possible evidence during patient treatment, effects, etc.)
- **Emergency psychological assistance**

Incident dynamics



Effects

Injured people	
Total	1,230
People with moderate and minor injuries	1,000
Severely injured people	100
Fatalities	130
Injury patterns	Penetrating injuries (shooting, stabbing), burns, compression injuries and injuries caused by explosion

Resources for managing incidents	
Leadership	Regional management involving additional regions
Pre-hospital	Danger, coordination with protection bodies, exceeding of capacity limitation for transport, no triage at the incident location
Hospital	Danger, triage at the hospital, triggering of the contingency plan on account of sudden overload, major staffing requirement, need to transfer large numbers of patients (coordination of emergency medical treatment), increased need for intensive care

Infrastructure	
Incident location	Substantial damage caused by explosion, local traffic congestion
Critical medical infrastructure	Disruption of regional healthcare with negative consequences for regular patients

Logistics
Temporary **significant need for medical goods** (therapeutic products), capacity for storage of bodies

Example scenario

Two explosive devices go off on a fully occupied train as it enters a large main railway station, followed by three more explosions on a stationary train. Many people are killed or injured. Desperate attempts to escape result in chaos and further injuries. Response forces cordon off the railway station and begin rescuing injured people and administering emergency medical treatment.
Advanced medical posts and care teams are set up. Due to the extent of the incident, the federal and cantonal authorities are asked for reinforcements. Information and recommended actions are disseminated.
In total, 130 fatalities and approx. 1,100 injured people (around 100 severely) are expected.

Figure 11 'Conventional attack scenario' factsheet

In a conventional attack, various means (bombs, explosive belts, vehicles, firearms or sidearms) can be used with the aim of harming people, materials and equipment, infrastructure or institutions. Depending on the motive and objective of the non-military perpetrators, the attack may be focused on deliberately selected targets or on an indeterminate number of bystanders. It is characterised by an immediate, rapid increase in victims and can be managed by the healthcare system after a matter of days to a few weeks.

The existing infrastructure of the healthcare system is not affected straight away during a conventional attack, meaning that there is no need for any back-up infrastructure. However, there is a risk of either a direct attack on a healthcare institution or a follow-up attack in the form of a second wave.

When the attack starts, there is a considerable need for additional personnel in pre-clinical and clinical management due to the sudden surge in injured people. This need subsequently reduces gradually as the large number of injured people are dealt with.

The logistical need for medical goods progresses in the same way as the volume of injured people and can quickly lead to bottlenecks and shortages in the pre-clinical and, in particular, the clinical field.

8.1.1 Current situation in the network for the 'conventional attack' scenario

Education
The basic medical training of doctors and nurses puts little focus on the management of specific injury patterns after a terrorist attack, psychological first aid, triage at the hospital or the procedure in the event of a capacity overload. Continuing training in these areas is often only provided at larger main hospitals, while exercises relating to the hospitals are neither regulated nor compulsory. The topic is given little weight in education and training in the rescue services.

In the first-aid course for driving licence applicants, non-specialists attend a first-aid course with a focus on cardiopulmonary resuscitation, covering topics such as self-protection and bleeding. Information materials, e.g. rules of behaviour of the Federal Office of Police (fedpol) in the event of an attack, are available to those interested and serve to enhance public awareness.

Leadership and training
The structures for leadership in a major incident are in place and functional in all cantons, provided that the number of injured people is limited. They range from operational control at the scene to the cantonal executive staff. There are considerable differences in inter-cantonal networking. In this scenario, leadership can remain with the canton affected, with executive staff of other cantons and the Confederation acting as contacts and intermediaries for required resources. When an incident involves several cantons, the police executive staff are deployed.

Incident and emergency concepts
Specific concepts and the Swiss patient routing system (PRS) in the pre-hospital area are also intended for mass-casualty incidents. There are fully functioning concepts for DVI. Outdated concepts are in place for psychological first aid in mass-casualty incidents. In the hospitals, there is no consensus and only a few contingency plans for terrorist incidents. There are internally developed concepts that are partly based on existing concepts in Germany (hospital alert and emergency response planning, KAEP), the United Kingdom (Hospital Major Incident Medical Management and Support, HMIMMS) and France (Plan Blanc).

Resources for managing incidents – Personnel
Off-duty personnel can be mobilised for pre-clinical tasks. Further personnel are brought in from neighbouring areas with rescue resources and advanced medical posts. Off-duty personnel can also be mobilised for clinical tasks, although there are no concepts for assistance from external personnel.

[5] Disasters and Emergencies in Switzerland in 2020, hazard file: Conventional attack

However, additional capacity for incident management can be created by not carrying out scheduled and deferrable treatments.

Resources for managing incidents – Logistics
A large-scale terrorist attack causes injuries to many people, creating a distinct need for medical goods and equipment. With arrival of additional out-of-canton resources, equipment is replenished at the incident location for pre-clinical tasks. For in-hospital tasks, there are no concepts for replenishment of medical goods from other regions. As consumption levels will be very high, a shortage may occur. Supply of blood products is organised throughout Switzerland by the Swiss Red Cross, as is transport to areas with increased demand.

Resources for managing incidents – Strategic patient distribution
The distribution and transport of patients is the biggest challenge in this scenario. The local rescue services can only take patients away slowly, and out-of-canton assistance must arrive first. In addition, severely injured patients must be distributed to the large trauma hospitals. > 24 severely injured people is above the total regular capacity of the Swiss hospitals with a highly specialised medicine (HSM) mandate for the care of severely injured people, which is why patients must also be transported to nearby countries. There are no national concepts for strategic patient distribution and allocation of patients.

Resources for managing incidents – Infrastructure
The state of the infrastructure very much depends on the type of attack. At healthcare facilities in particular, it depends on the distance to the incident location, and, in extreme cases, a hospital itself may even be the target of the attack. The contingency plans of the individual hospitals and their link with the cantonal contingency plan play a role here. Not every hospital has a contingency plan. For pre-clinical tasks, medical assistance points can be set up; as they are mobile, additional ones can be brought in from other regions. It is very hard to put medical protection facilities into use in such a short space of time. Subject to the availability of personnel for operations, however, protected and additional treatment capacity could also be used in the event of a terrorist attack to supplement the existing infrastructure in order to coordinate the large volume of patients more easily (and more safely).

8.1.2 Special requirements in the ‘conventional attack’ scenario

Area of action	‘Conventional attack’ special requirement
Education	• Recommendations and educational programmes regarding what to do in the event of an attack must be in place and regularly practised. • Training on the foundations of disaster medicine with adaptation of treatment standards must be provided for all partners and healthcare professionals. • The population must know exactly what to do in the event of an acute terrorist threat and possess knowledge of first aid.
Leadership and training	• The response to terrorism incidents must be practised with all partners on an inter-cantonal basis. • National coordination must be established for major incidents of national significance. The Medical Services Staff would be one possible solution.
Incident and emergency concepts	• There must be consistent foundations in terminology, processes and guidelines for managing a mass-casualty terrorist incident in the emergency services and the healthcare system that cover pre-hospital and hospital tasks while also fostering the agility required for a response in extreme situations.
Resources for managing incidents – Personnel	• Planning for the rapid mobilisation of personnel in the institution and organisation must be in place. • In the case of more protracted incidents, planning for dealing with volunteer helpers must be in place.
Resources for managing incidents – Logistics	• At local level, therapeutic products (medicinal products and medical devices) must be in stock and readily available. Rotation must be ensured so that usable resources are always available. Capabilities for rapid delivery are planned and in place.
Resources for managing incidents – Strategic patient distribution	• For evacuation of existing patients at the hospital affected, transport of a large number of patients must be planned. Rapid logistical transport must be possible.

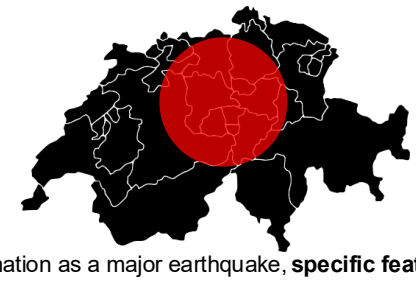
Resources for managing incidents – Infrastructure	*The scenario is not relevant for protected infrastructure.*

Table 3: Special requirements for scenario I by action area

8.2 Scenario II 'Earthquake'[6]

Scenario II Earthquake

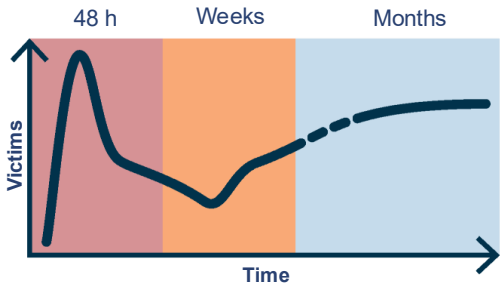
Scenario characteristics



Designation as a major earthquake, **specific features** of the medical **response**:

- The number of casualties depends on the **time of year and day** (cold, at night, etc.)
- **Destruction of infrastructure** and transport links, **impeded access** to the incident location
- **Supply problems** (electricity, water, wastewater, telecommunications, essential commodities)
- **Loss of shelter** for **a large number of** people, large **number of casualties**
- Specific **injury patterns** (trapping, crush injuries, secondary organ failure)
- Disruption of medical services leads to an **increased number of casualties** with **non-earthquake-related** illnesses
- **Disruption** of most of the **healthcare system** for a **lengthy period** due to destroyed infrastructure and loss of staff
- Special **requirements** for specific patient groups (e.g. pregnant women and women in labour)

Incident dynamics



Effects

Injured people	
Total	12,634
People with moderate and minor injuries	8,830
Severely injured people	2,200
Fatalities	1,604
Injury patterns	Trapping, long-life trauma, burns, poisoning, acute mental stress

Resources for managing incidents	
Leadership	Inter-cantonal response, including national and international bodies, need for coordination (host nation support, integration of foreign teams)
Pre-hospital	Danger, destroyed transport links, mountain coordination, need for upstream supply, exceeding of transport capacity limitation
Hospital	Damaged infrastructure, loss of affected staff, triggering of the contingency plan, major staffing requirement, need to transfer large numbers of patients, increased need for intensive medical care and dialysis

Infrastructure	
Incident location	Significant displacement of people from the incident location due to homelessness
Critical medical infrastructure	Infrastructure: disruption of regional healthcare provision with negative consequences for regular patients

Logistics
Several weeks of **supply disruption** and bottlenecks of medical goods (therapeutic products)

Example scenario

One morning in late spring, an earthquake with a magnitude of 6.7 hits Switzerland. It is a working day, and most people have already arrived at work. In the immediate aftermath of the earthquake, the situation is one of chaos, self-rescue and a lack of oversight.
Soon after the earthquake occurs, work gets under way to rescue trapped people, extinguish fires and prevent the release of hazardous substances. The technical services start organising the urgent repairs of failed electricity and telecommunications infrastructure, the water supply and the sanitation system.
Thirteen hours after the main earthquake, the region is hit again by an intense aftershock of magnitude 5.2. After four days, the situation is manageable for the authorities and emergency services, and emergency aid reaches those affected.

Figure 12 'Earthquake scenario' factsheet

An earthquake is an example of a natural disaster and presents the healthcare system with huge challenges due to the destruction of infrastructure, the shortage of personnel and the simultaneous need to care for a large number of injured people. When natural disasters occur, there is a period of overstretching that, despite being brief, also affects the system, and the efficiency of the system itself is reduced by the destruction of infrastructure, equipment and the absence of personnel and supply chains. The consequences of this destruction may restrict efficiency for a longer period, thus causing limited consequential damage. Depending on the geographical extent of the destruction, regional support is only possible to a limited extent. Assistance from abroad is possible. On the medical front, along with the first wave of trauma symptoms, a rise in medical illnesses and subsequently an increase in patient numbers can be expected due to the reduced living conditions, contaminated water, wastewater problems and communicable diseases. Consequently, the relative number of patients for the healthcare system will not necessarily fall directly over subsequent months.

A natural disaster increases the risk of substantial damage to the healthcare infrastructure. It is essential here to provide alternative infrastructure to compensate for both the loss of existing treatment capacity caused by the damage and the additional need for medical care as a result of the incident. Along with a sharp rise in the number of injured people, scenario II also exacerbates the need for personnel, as some healthcare professionals cannot access their workplace due to blocked transport links. The personnel may also be directly affected by the incident and therefore not be available to the healthcare institutions. The persistently high staffing requirement also results from the secondary rise in treatment needs among patients referred from primary care.

A natural disaster also causes an increased need for medical goods, which has to be met. Another complicating factor in this scenario is that transport links to the incident area may be significantly restricted or even cut off altogether, thus further compounding possible shortages.

8.2.1 Current situation in the network for the ‘earthquake’ scenario

Education
In the civil protection service, training is provided in the context of staff work, whilst there is little training on disaster response in the healthcare system. Exercises on the management of these incidents are rare, particularly in institutions such as hospitals and homes. Exercises that hone cooperation between pre-hospital and hospital units in these scenarios are also rare and are often only carried out voluntarily. The clinical staff are not trained to work in such challenging conditions if, for instance, there is a lack of key resources such as medical equipment. This means producing work of reduced quality.

The population is not prepared for the medical challenges, with relevant topics only touched on, even in first-aid courses. The resilience of the population with regard to the health-related and medical consequences is rated as fairly poor. Even stockpiling is merely recommended.

Leadership and training
Cantonal command organisations exist in every canton and are interlinked via the Conference of Cantonal Representatives for the Military, Civil Protection and Civil Defence. In terms of healthcare leadership, inter-cantonal cooperation varies significantly. Although there is a lack of national coordination bodies for management, information on the situation can be presented via the Reporting and Situation Centre of the NEOC. The form, content and extent of the situational overview in the healthcare system are currently being developed. The Crisis Organisation of the Federal Administration (COFA) would be convened depending on the extent of the incident. The Medical Services Staff of the NEOC, which is also being developed, would make the professional contribution in the healthcare system. National coordination of resources and personnel will be supported by the ResMaB within the NEOC: specific concepts for the procedures of ResMaB are in place and proven. Coordination of foreign assistance (host nation support) by ResMaB is viable.

Resources for managing incidents – Personnel
The arrival of national or international assistance will always be subject to a certain time lag. As there

[6] Disasters and Emergencies in Switzerland in 2020, hazard file: Earthquake

are no concepts for the national transfer of clinical healthcare personnel from unaffected regions, transferring patients from the affected area is of paramount importance. The civil protection service looks after the uninjured and homeless people: at present, it is no longer assigned a role in the care of injured people in most cantons. The Armed Forces can provide personnel in the form of a subsidiary deployment. In medical care provision, these personnel can be deployed in accordance with their level of training. It should be noted, however, that healthcare professionals performing military service or civil protection duties will be absent from the healthcare system. Basic medical care must be maintained over the longer term. Local and national personnel from various professions could be deployed here, although there are no concepts in place for this. Foreign emergency medical teams can also take on this role temporarily, with coordination via the NEOC and the WHO. Disaster medical assistance teams do not exist as structured back-up. Over a prolonged period, conscript service organisations and volunteers (Swiss Red Cross, Samaritans, etc.) play a very important role. Related disciplines (e.g. pharmacists) can assist with first aid for people with very minor injuries (e.g. abrasions).

Resources for managing incidents – Logistics
National and international assistance provides a limited amount of medical goods. ResMaB is a mechanism for distributing scarce resources in crisis situations (five-step allocation mechanism). Requirements are first determined, which involves the stakeholders affected, such as cantons or healthcare facilities, reporting their bottlenecks. It is then assessed whether the required resources can be covered from in-house supplies or through redistribution. If this is not sufficient, additional resources are procured at national or international level. The available resources are then ranked in order of priority on the basis of pre-defined criteria and allocated to the respective consumers. Finally, distribution is monitored in order to ensure efficient use and make any necessary adjustments. Although this mechanism ensures coordinated and needs-based allocation of resources during incidents, a shortage of essential medical goods lasting several weeks can still be expected in the event of an earthquake. Supply of blood products becomes a major challenge but can probably be covered via donations from unaffected regions.

Resources for managing incidents – Strategic patient distribution
The distribution and transport of a large number of patients from the affected area is a high priority, as local healthcare provision is severely restricted. The national and international distribution of patients and their transport to suitable facilities require policy decisions, coordination and transport capacity. The rescue services have limited capacity, and, although the Armed Forces have a larger number of medical vehicles at their disposal, these require considerable preparation time. At present, there are no national or international concepts for strategic patient distribution.

Resources for managing incidents – Infrastructure
In the affected area, some or all of the infrastructure of the healthcare system is destroyed. Local care of the patients is only possible with major restrictions. Further destruction of the critical infrastructure (e.g. electricity, water supply) also restricts the usability of healthcare facilities that have not been destroyed. Medical assistance points could be built and operated. Intact protected facilities are usually ready for operation within a few days, even after an earthquake, as they are also shock-tested (air blast and earth tremor) and designed for this purpose. In addition, they have emergency power and water for autonomous operation lasting 14 days. Personnel resources pose the biggest barrier to operation. Furthermore, the technical infrastructure has only been renewed to a limited extent, which makes it more difficult to put into operation. Improvised healthcare facilities can be put into operation in preserved infrastructure or auxiliary systems such as field hospitals. However, there are no field hospitals in Switzerland, although the Armed Forces do have 10 medical centres with a total of 621 beds for inpatient treatment (low-level care) and could potentially, if the infrastructure is intact, also take on patients from the civilian healthcare system on a subsidiary basis after a certain time lag.

8.2.2 Special requirements in the ‘earthquake’ scenario

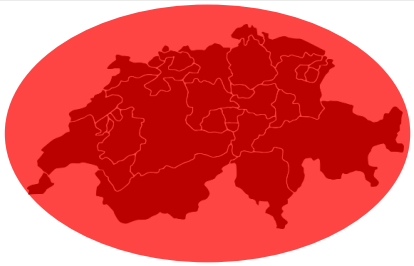
Area of action	‘Earthquake’ special requirement
Education	• Recommendations and educational programmes regarding what to do in the event of an earthquake must be in place and practised regularly. • Training on the foundations of disaster medicine with adaptation of treatment standards must be provided for all partners and healthcare professionals.
Leadership and training	• The role of the KATAMED officers in the cantons and the Cantonal Management Body (CMB) must be clarified and then be the subject of training. • Management of disaster incidents must be practised at inter-cantonal level with all partners: this also includes host nation support with the international component. • National coordination must be established for catastrophes of national significance. The Medical Services Staff would be one possible solution.
Incident and emergency concepts	• There must be consistent foundations in terminology, processes and guidelines for managing a disaster in the emergency services and the healthcare organisations that cover the entire healthcare system.
Resources for managing incidents – Personnel	• Planning for the rapid mobilisation of extra staff must be prepared. • Secure accommodation must be found for the personnel and their families. • In the case of more protracted incidents, planning for dealing with volunteer helpers must be in place. • Specially trained employees could strengthen the response on site (disaster medical assistance teams, emergency medical teams).
Resources for managing incidents – Logistics	• At local level, therapeutic products (medicinal products and medical devices) must be in stock and readily available. Rotation must be ensured so that usable resources are always available. Capabilities for rapid delivery are planned and in place.
Resources for managing incidents – Strategic patient distribution	• For evacuation of patients due to a lack of treatment capacity, the distribution and transport of a large number of patients must be planned. Rapid logistical transport must be possible.
Resources for managing incidents – Infrastructure	• Major importance of protected and secure treatment capacity in the incident area. Resilience on account of multiple sites. Possibility of operating institutions in back-up infrastructure. Possibility of back-up through newly trained personnel/volunteers in available back-up infrastructure.

Table 4: Special requirements for scenario II by area of action

8.3 Scenario III 'Armed conflict'[7]

Scenario III
Armed conflict

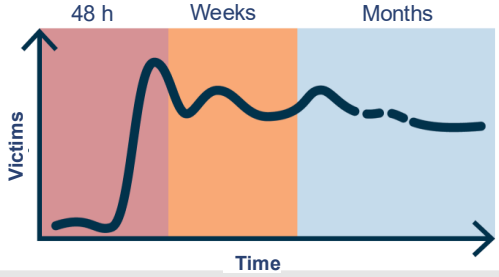
Scenario characteristics



Specific features of the **response**:

- **Changing levels of intensity** from low to high (no direct proximity to potential opponents)
- **Direct attack** (including hybrid) on **healthcare facilities**, with violations of international law
- Danger
- **Staff shortages** due to a lack of foreign personnel and service provision
- **Huge bottlenecks** in supply chains and transport
- **Extremely high** and constant **volumes of patients**
- Unfamiliar **injury patterns**
- Switch to **disaster medicine**
- Emergency psychological assistance
- **National coordination** civilian – inter-cantonal – military
- **International services affected** by reduced cooperation
- Significant need for **international cooperation**
- For **terminal care**, the medical service of the **Armed Forces** relies on the **civilian healthcare system**
- Special **requirements** for specific patient groups

Incident dynamics



Effects

Injured people over a one-year period	
Total	18,000
People with moderate and minor injuries	14,500
Severely injured people	2,500
Fatalities	1,000
Injury patterns	Injuries caused by gunshot and explosion, traumatic injuries caused by debris, acute mental stress

Resources for managing incidents	
Leadership	National response, requiring the use of international resources, need for international cooperation, need for coordination with the Armed Forces
Pre-hospital	Danger
Hospital	Damaged infrastructure, loss of affected staff, situation-dependent triggering of the contingency plan, national prioritisation of supply, recruitment of additional staff (surge capacity), transfer of large numbers of patients

Infrastructure	
Incident location	Significant displacement of people, detained prisoners of war, restricted services of the healthcare system
Critical medical infrastructure	Disruption of regional healthcare

Logistics
Several weeks of **supply disruption** and bottlenecks of medical goods (therapeutic products), missing persons **tracing agency**

Example scenario

After a state is overthrown by an authoritarian regime, Switzerland's relations with it deteriorate. Military equipment and irregular forces are smuggled into Switzerland, resulting in tension, violent demonstrations, skirmishes and attacks. There is an increase in cyber activity, espionage and fake news.
The violence causes major uncertainty throughout Switzerland, with growing fears of armed conflict. Finally, a military attack is launched against Switzerland. Over several days, military and civilian infrastructure comes under attack. Civilians must go to protected facilities.
After several weeks of fighting and international pressure, the authoritarian regime undertakes to cease the attacks.

Figure 13 'Armed conflict scenario' factsheet

[7] Disasters and Emergencies in Switzerland in 2020, hazard file: Armed conflict

An armed conflict or war entails additional complexities, such as large-scale evacuations, restriction of treatments, and medical care provision in challenging logistical conditions. It is necessary to adapt treatment standards and restrict elective treatments. Depending on the progression and duration of the conflict, more prolonged overstretching of the system is possible. The efficiency of the system is severely restricted by disruption to supply chains and a shortage of personnel (drafting of personnel subject to military service, absence of cross-border commuters and foreign personnel, up to 40–80 per cent), even without the additional volume of patients. Basic healthcare provision must be maintained. In addition to the population, Swiss and foreign combatants must be cared for. The injury patterns differ on account of increased penetrating trauma and psychological effects. If there are breaches of the law of armed conflict, the infrastructure of the healthcare system and personnel could conceivably be direct targets of an attack.

Armed conflict makes it imperative to develop a back-up infrastructure, as capacity limits within the healthcare system are repeatedly and greatly exceeded. Furthermore, in breach of the Geneva Convention, healthcare facilities are often strategic targets of hybrid and ballistic attacks, meaning that there is also an increased need for protection.

Armed conflict is characterised by repeated peaks in the numbers of injured and affected people, meaning that extra response personnel are required at regular intervals. The number of sick and wounded people fluctuates as the conflict progresses, and the influx persists for its duration.

The need for medical goods is comparable to that in a natural disaster. What makes the ‘armed conflict’ scenario unique in terms of logistics requirements is that replenishment via international assistance is difficult or even impossible, as it can be assumed that surrounding countries are at least partially war zones too. A distinct shortage of various essential materials and equipment can therefore be expected throughout the duration of the conflict.

The reference scenario for an armed conflict in Switzerland assumes around 1,000 fatalities and 17,000 injured people in a year-long war. These estimates are based on the Confederation’s National Risk Analysis. However, experience from the war in Ukraine shows that the actual number of casualties in an armed conflict could be far higher. In particular, the intensity of fighting, the destruction of critical infrastructure and the impacts on medical care provision could mean that the number of fatalities and injured people in Switzerland far exceeds the current model assumptions in a worst-case scenario.

This is reflected by the casualty figures from Ukraine recorded so far. According to UN human rights experts, who only record independently verified cases, a total of 19,659 injured civilians and 10,382 civilian fatalities were documented from the start of the war on 24 February 2022 to January 2024, i.e. in just under two years. However, these figures are likely to be underestimates, as both the UN and the Ukrainian government struggle to verify casualty numbers in Russian-occupied regions, particularly where fighting is intense and in the case of patients with minor to moderate injuries. If these figures are transposed to Switzerland and adjusted for its smaller population, this would mean around 2,150 injured people and 1,150 civilian fatalities per year of a comparable conflict. Only civilian casualties are taken into account here. If military losses are also included, the total number of casualties could increase to twice as many or even more, depending on the progression and intensity of the fighting. These figures emphasise the possible impacts of an armed conflict on Switzerland’s healthcare system in the event of an armed conflict.

8.3.1 situation in the network for the ‘armed conflict’ scenario

Education

Training on the special requirements for the treatment of war wounds is rarely provided. In the Armed Forces, military personnel are trained in treatment and processes in the pre-hospital and hospital field (primary care). There are no military hospitals for terminal care in Switzerland. Therefore, the civilian healthcare system also forms the basis of care provision for the Armed Forces. The civilian education system, be it at primary, secondary or tertiary level, is not designed to prepare the population, medical professionals or managers for an escalated national incident such as a war. The existing education

and training programmes cannot prepare for the persistently high patient volume with unfamiliar injury patterns, complex rescues, capacity overload or weeks-long interruptions to the supply of medical goods. There are major deficits at all levels, particularly with regard to the acute mental stress of a large number of people and the knowledge of psychological first aid.

Leadership and training
There are still no clear arrangements for national responsibility in the event of a war. Cantonal command organisations exist in every canton but are interlinked in varying ways. In terms of leadership of healthcare provision, there are varying arrangements for inter-cantonal cooperation. Although there is a lack of national medical management bodies, information on the situation can be presented via the Reporting and Situation Centre of the NEOC. The Crisis Organisation of the Federal Administration (COFA) has been newly established, and its capabilities are to be tested for the first time in the 2025 Integrated Exercise. National coordination of resources and personnel can be supported by ResMaB within the NEOC: specific concepts for the procedures of ResMaB are in place and proven. It is unclear what resources are available to meet medical requirements, however, and the accuracy and scope of the overview of the medical situation are still unclear.

Resources for managing incidents – Personnel
In the event of an armed conflict, it must be assumed that the foreign personnel and cross-border commuters will return to their home country. In addition, mass displacement of acutely affected people – including medical personnel – is expected. Personnel eligible for military service and civilian service are also drafted.

As the whole of Switzerland is affected, national, inter-cantonal assistance is unlikely. Any international assistance that is available is subject to delays and heavily dependent on the security situation and domestic requirements. At best, available healthcare personnel whose infrastructure is destroyed can assist personnel at intact facilities. The severe and persistent strain on healthcare personnel makes support from volunteer groups (such as the rescue organisations of the Swiss Red Cross) and individuals likely. The civil protection service looks after uninjured people and people seeking protection: at present, it is not assigned any role in the care of injured people. The Armed Forces are tasked with defence and can provide limited assistance to the civilian healthcare system. The Armed Forces have the capacity for primary care of patients at the regional medical centres and improvised sites. Extra personnel resources will need to be built up through shortened training by way of back-up or capacity-building.

Resources for managing incidents – Logistics
The large volume of patients requires substantial resources, and medical goods soon become scarce. Due to the security situation and partial disruption of supply networks in Switzerland, available reserves, international aid supplies and even regular waves of replenishment from abroad may be poorly distributed. Substitutes must be found for therapeutic products in short supply (medicinal products and medical devices). In the event of an armed conflict, it must be assumed that the market partially or entirely collapses or that essential medical goods can no longer be sourced via existing market channels. The Armed Forces Pharmacy assumed the role of a national procuring entity during the COVID-19 pandemic, and its deployment in other scenarios would also have to be explored.

National coordination of resources and personnel is assisted by ResMaB within the NEOC. Here too, however, there are question marks over the extent to which international aid or assistance can be expected due to the international incident.

Resources for managing incidents – Strategic patient distribution
The capacity of the rescue services is reduced due to loss of personnel and vehicles. If modes of transport are damaged, vehicles must have a certain degree of off-road capability. There is an increased need for transfers, in order to evacuate patients from areas at particular risk. The risk of drones is another complicating factor in evacuating patients. The destruction of infrastructure will also prevent care from being provided in certain areas, and injured people will have to be transported

across long distances. The Swiss healthcare system will not be able to care for all injured people and, if possible, strategic patient distribution to foreign countries may be necessary. This does not yet exist.

Resources for managing incidents – Infrastructure
The infrastructure of the healthcare system is partially destroyed right across Switzerland. Care of the war-wounded and maintenance of basic healthcare for other patients are severely restricted. The duration of the incident means that existing medical protection facilities are put into operation despite not being ready. The current state of these facilities varies significantly, and it will take between several days and several years to make them fit for purpose. It must be assumed that some of these facilities cannot be put into operation at all, as they no longer meet the needs of current medicine. The destruction of critical infrastructure may significantly impair the supply of electricity, water, heat, etc. to healthcare facilities and their ability to dispose of wastewater.

8.3.2 Special requirements in the 'armed conflict' scenario

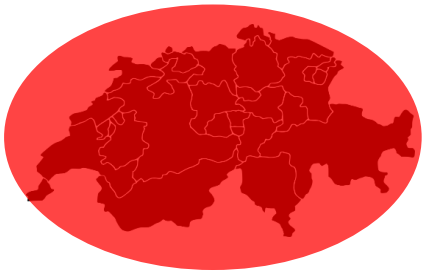
Area of action	'Armed conflict' special requirement
Education	• Aspects of military medicine among civilian healthcare professionals in combination with aspects of disaster medicine. • Training required for deployments in the conflict area for emergency services on what to do when in danger as well as skills relating to self-protection, threat, weapons systems, etc.
Leadership and training	• Clarification of national leadership coordinated with the deployment of the Armed Forces, Joint Operations Command. What stays with the cantons? Such a large volume can only be handled via national coordination. • Clarification of the interfaces in the specific cooperation between the civilian and military sectors. Where will treatment be focused on? How will the transfer be carried out? How will logistics be handled? • Decision on allocation of patients and ranking treatments in order of priority (reduction in elective surgery). The Medical Services Staff of the NEOC could devise proposals that would require a policy decision in the context of the Crisis Organisation of the Federal Administration.
Incident and emergency concepts	• Agreement on Swiss-wide treatment concepts. • The Armed Forces focus on pre-hospital tasks in non-permissive zones.
Resources for managing incidents – Personnel	• Back-up of qualified professionals through accelerated training courses with reduced content. Integration of volunteers. • Assistance with patient navigation from the civil protection service.
Resources for managing incidents – Logistics	• Increase in resilience through stockpiling, own production and cooperation with the FONES, industry and the Armed Forces Pharmacy. Adjustment of use to the current situation.
Resources for managing incidents – Strategic patient distribution	• Strategic patient distribution for transfer of a large number of patients. Political authority to assign, admit, distribute and guide patients.
Resources for managing incidents – Infrastructure	• Major importance of protected treatment capacity in the vicinity of front lines. Protected treatment capacity throughout the country if at all possible. Resilience ensured by multiple sites. Possibility of operating institutions in back-up infrastructure. Possibility of back-up through newly trained personnel/volunteers in available back-up infrastructure.

Table 5: Special requirements for scenario III by area of action

8.4 Scenario IV 'Influenza pandemic'[8]

Scenario IV
Influenza pandemic

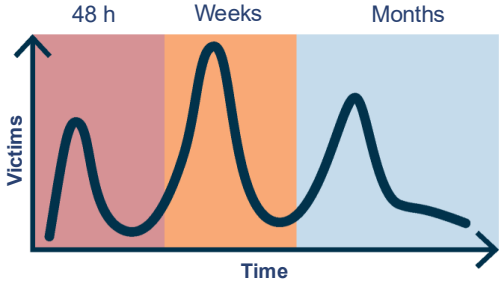
Scenario characteristics



Specific features of the **response**:

- Strategic **planning principles**
- **Monitoring** (early warning, tracking, monitoring of measures, effectiveness of laboratory diagnostics)
- Reduction of **transmission** (contact management, testing)
- **Need to adapt** healthcare provision (diagnostics, specific therapy, vaccine, medication, equipment)
- Unknown **secondary diseases** after exposure
- **Availability** and administration of **vaccines**
- Regular **updates** for **specialists** and the **population** regarding the current **extent of the pandemic**
- **Procurement** and **logistics** of essential medical goods
- **Triage** (determination of treatment priorities) of incoming patients
- **Ensuring** medical treatment in the context of **primary healthcare**
- **Effects** of **illnesses** detected late or not at all under primary healthcare

Incident dynamics



Effects

People affected over a one-year period

Total infected people	2 million
Hospitalisation	40,000
Hospitalisation > 1 week	5,000
Fatalities	8,000
Disease patterns	Coughing, runny nose, fever, headache, muscle pain, shortness of breath, organ failure

Resources for managing incidents(in civil protection)

Leadership	National coordination, decision-making and execution in line with the pandemic plan, cantonal implementation, need for national and international cooperation for vaccines and other goods
Pre-hospital	Danger, loss of affected staff, increased need for protective clothing, exceeding of transport capacity limitation
Hospital	Loss of affected staff, increased need for protection of infected patients and treating staff, increased need for intensive care (ventilation), inter-cantonal/national triage and transport of patients

Infrastructure

Pre-hospital	Construction of testing and vaccination centres
Critical medical infrastructure	Immediate building of testing and quarantine infrastructure Increase in ICU bed capacity

Logistics

Supply disruption and bottlenecks of medical goods (therapeutic products) due to collapsing supply chains

Example scenario

In winter/spring, cases of viral diseases rise in Europe, and subsequently in Switzerland too. As the healthcare system is acutely overburdened, the Federal Council takes charge of the special situation and introduces nationwide restrictions (e.g. lockdown) shortly afterwards. These restrictions have an effect for the following three months. Based on the pandemic plan, the Federal Civil Protection Crisis Management Board assumes coordination of decision-making preparations and of execution of the measures passed by the Federal Council. After the situation eases over the summer, a second wave follows in the autumn, with renewed restrictions. Around 12 months after the start of the pandemic, manufacturers deliver the first batches of effective vaccines, which helps to keep new waves under control in the following months. Subsequently, watered-down restrictions remain in place for a further 12 months. Finally, 36 months after the start of the pandemic, the situation returns to normal and all social restrictions are lifted.

Figure 14 'Influenza pandemic scenario' factsheet

An infectious disease is a disease caused by pathogens such as bacteria, viruses, fungi, parasites or prions. An influenza pandemic is a temporary, global, mass cluster of an infectious disease caused by the influenza virus. Although the corresponding scenario is based on the reference scenario, it forms a sound basis for evaluating other pandemics, particularly viral ones. In principle, every pathogen can trigger an epidemic or a pandemic.

An epidemic is the mass, locally restricted and temporary occurrence of an infectious disease within a specific population or region, whereas a pandemic is a nationwide or global wave of infection that is not limited to a specific area.

Viruses change over time through mutations and new genetic combinations. These changes can be either minor, meaning that the immune system can partially respond to them, or so drastic that a completely new subtype emerges. A new viral strain of the latter type can cause severe illness and spread from one person to another particularly efficiently. If there is no suitable vaccine or natural immunity within a population, this kind of infection can quickly progress from an initial epidemic to a global pandemic, with potentially serious impacts on healthcare systems, the economy and society.

In a pandemic, the infrastructure remains largely intact and functional. Due to complications with treatment procedures and to protect against further spread, however, there may be a need for a back-up infrastructure that can be used for the treatment of patients in isolation and quarantine.

The ‘influenza pandemic’ scenario entails a significant need for additional personnel as, in many places, healthcare professionals are affected themselves due to constant pathogen exposure, thus reducing their availability. This need is compounded by accumulating waves of patients. Availability of medical goods is significantly reduced due to immediate growth in demand for them at global level. There are international shortages and a collapse of supply chains, partly because of political protectionism.

A pandemic is an extreme case of a ‘public health emergency of international concern’ as defined by the WHO. However, there are already health threats of a lesser extent from infectious diseases that also require early and coordinated action. The existence of a pandemic is thus not a prerequisite for implementing measures.

8.4.1 Current situation in the network for the ‘influenza pandemic’ scenario

Education
Educational measures during the COVID-19 pandemic (e.g. on basic knowledge of infections or rules of conduct) raised public awareness of infections and pandemics. The FOPH has various factsheets and information materials about different infectious diseases. The Swiss Pandemic Plan, for which the FOPH is responsible, is designed to help the Confederation, the cantons and affected institutions to prepare for a pandemic. The current revision is to incorporate the lessons from the COVID-19 pandemic. For medical professionals, dealing with communicable diseases, protective measures and conduct is part of their basic training and day-to-day work.

Leadership and training
Cantonal command organisations exist in every canton but are interlinked in varying ways. Although there is a lack of national medical management bodies, information on the situation can be displayed via the National Emergency Operations Centre. The national coordination of medical goods (including protective masks and protective clothing) and equipment (e.g. ventilators) and the processing of requests for support are carried out by ResMaB. In epidemics and pandemics (Epidemics Ordinance, Art. 61), the FOPH can allocate therapeutic products on the basis of a priority list. At present, Crisis Management of the Federal Administration is being re-established (section 3.3.). In August 2024, the Federal Council commissioned the FOCP to take the measures required to add medical goods in an

[8] Disasters and Emergencies in Switzerland in 2020, hazard file: Influenza pandemic

epidemic to the existing operational picture (overall situation) for the preparatory work associated with care.

The Federal Act on Combating Communicable Human Diseases (Epidemics Act, EpidA) governs protection of people against communicable diseases and sets out the measures required for this (Art. 1 EpidA). The EpidA makes a distinction between a normal situation, a special situation (Art. 6) and an extraordinary situation (Art. 7) as well as governing the preparatory measures (Art. 8 EpidA): the Confederation and the cantons are obliged to take preparatory measures to limit the risks to and negative effects on public health at an early stage. These preparations can relate to the devising of operation and emergency plans, medical care provision, use of resources and monitoring thereof, communication and information or other measures. As a general rule, the cantons are responsible for arranging sanitary measures as per Art. 33–38 (medical monitoring, isolation, quarantine, etc.), but the Confederation can also do so if there is a special or extraordinary situation as per the EpidA.

Resources for managing incidents – Personnel
Management of a pandemic can quickly generate great demand for additional personnel in various fields. These include: additional personnel in inpatient and outpatient medical care and in socio-medical institutions, particularly for testing, diagnostics, therapy and treatment; personnel for the construction and operation of testing and vaccination sites; extra personnel in laboratories for laboratory analyses; and personnel in national, cantonal and communal crisis organisations. Furthermore, more personnel may be needed in all fields of work in a pandemic, e.g. because employees are absent or ill due to quarantine or isolation. At present, there are no nationwide plans for additional recruitment to help manage a pandemic, although the Swiss Pandemic Plan does describe the resources of the civil protection service, civilian service and Armed Forces. It also contains recommendations for recruitment in the ‘Pandemic Response Checklist: Personnel’, and solutions and experiences relating to the COVID-19 pandemic can be drawn on.

Resources for managing incidents – Logistics
After the SARS-CoV-2 pandemic, various institutions in the healthcare system throughout Switzerland increased their stocks of personal protective equipment, with variations in the scope of availability. Federal stocks were also replenished. Medical devices such as ventilators may become scarce depending on how the disease manifests itself, so there are procedures in place for national allocation (five-step allocation mechanism) by ResMaB. According to Art. 60 of the Epidemics Ordinance (EpidO, SR 818.101.1), the FOPH allocates therapeutic products on the basis of a priority list (Art. 61 and 62 EpidO). The Armed Forces can provide subsidiary support to the healthcare system in the form of materials and equipment and their distribution. There are currently no concepts for cooperation with civilian transport companies.

Resources for managing incidents – Strategic patient distribution
As the incident progression is fairly slow in a pandemic, the number of patients to be transferred simultaneously is fairly low and can be managed with the available rescue and transport resources. The Armed Forces can provide subsidiary support with its medical vehicles to ease the burden on the civilian institutions. Strategic patient distribution is required in order to reduce regional bottlenecks in bed capacity, which chiefly involves policy decisions for inter-cantonal or international distribution of patients. An overview of bed capacity should be prepared by the Reporting and Situation Centre of the NEOC, for which there is no set procedure at the moment; neither are there any specific concepts for strategic patient distribution.

Resources for managing incidents – Infrastructure
The infrastructure is intact and functional. An increase in bed capacity, such as intensive care spaces, or specific action options may be required. The healthcare institutions and the cantons are responsible for the relevant concepts. If demand for beds is very high, the medical protection facilities can be put into operation. Due to their poor state, the lead time for most of them ranges from weeks to years, and many are no longer fit for purpose. There are no suitable concepts in place, and the current protection facilities are only partially suitable for the care of patients with infectious diseases due to various circumstances (ventilation, density of people, etc.).

8.4.2 Special requirements in the ‘influenza pandemic’ scenario

The Federal Office of Public Health (FOPH) is responsible for preparedness and planning of a pandemic response as well as for monitoring potential pandemic pathogens, strategic preparedness and the healthcare measures when an incident occurs. Reference is made in this context to the new pandemic plan, published in summer 2025. The aim of the Swiss Pandemic Plan is to provide a basis for planning, along with an overview of the pandemic preparation and response measures. It is intended as guidance for the involved stakeholders in the organisation of their work and is based on experiences from previous pandemics (particularly the COVID-19 pandemic) and is being devised by the FOPH and the FCP (Federal Commission for Pandemic Preparedness) in close collaboration with the CMPH and other stakeholders (including the FOCP). After revision, the content of the pandemic plan is structured as follows: implementation (monitoring, infection control, healthcare provision, vaccination) and cross-cutting topics (communication, supply security, resources, impacts). It also clearly sets out which stakeholders take on which role in pandemic preparedness and response. The FOCP is actively involved in revising this plan and will continue to assist the FOPH in various areas, such as by taking part in exercises and helping to enhance management strategies. Regarding the responsibilities in the event of a pandemic, therefore, explicit reference must be made to the new pandemic plan.

8.5 NBC (nuclear, biological, chemical)[9] incidents

The assessment of incidents in the ABC domain is conducted at a higher, overarching level due to the number and unique nature of the possible events. The analysis was carried out in close coordination with the ABC Office of the NEOC, which was able to highlight the specific challenges related to response management based on its existing expertise and experience. There is also proven expertise in NBC/CBRNE at the FOCP with the Spiez Laboratory.

Incidents posing a nuclear/radiological, biological or chemical risk to the population present additional challenges to the healthcare system and all emergency organisations. Actually identifying an NBC incident is key here, as they occur only rarely, and many of the substances involved are imperceptible to the senses. In the initial phase, therefore, an NBC incident may be mistaken for a normal deployment. Further contamination may occur, including of response forces, and unknowingly contaminated people may leave the place of deployment. These people may carry the substances around society with them, causing further spread. In addition, contaminated people may enter a hospital with the rescue services or alone, resulting in secondary contamination there.

If the NBC incident is identified as such, the corresponding measures are initiated and further partners are mobilised. Decontamination of the people affected is partially or predominantly carried out where the damage occurred, e.g. by deploying mobile mass decontamination resources, as well as in hospitals. A decontamination concept in place in Switzerland states that every acute care hospital in Switzerland must be able to decontaminate a small number of patients. In addition, the canton designates specific hospitals as decontamination hospitals that must be in a position to decontaminate a larger number of patients.[10]

In some cases, medical treatment of these patients is highly complex and requires specific specialist knowledge. Given the infrequency of these injury patterns, this is rare and hard to build up. In conjunction with University Hospital Zurich (UHZ), the FOPH has developed a treatment concept for radiation accidents, a draft of which has already been produced. The existing concept, 'Decontamination of People in Damage, Transport and Hospitalisation Zones in NBC Incidents' *(Dekontamination von Personen im Schaden-, Transport- und Hospitalisationsraum bei ABC-Ereignissen)*, is currently being revised in collaboration with various partners, coordinated by the NBC Protection office within the FOCP. Furthermore, the Antidotes working group draws up a list and application recommendations as well as storage proposals for the key antidotes. However, implementation largely depends on the political backing these tools receive. Better care provision can only be achieved if the healthcare institutions, the cantons and the Confederation take joint responsibility for introducing and applying the same concepts and recommendations throughout Switzerland. In addition, constant active dialogue between the corresponding agencies and networks must be encouraged.

NBC incidents are rare in daily life and may be wrongly identified at first. The level of preparedness of the institutions involved is low, and there is also little experience of working with the protection and decontamination measures. Unidentified contaminated people may further the spread of the harmful substances, and it may last until the extent is identified. In incidents of this kind, therefore, a rapid, comprehensive and rigorous response is essential in order to contain the extent of harm to the population. Furthermore, it must be noted that NBC incidents may also occur in all the scenarios set out above and must therefore always be taken into account there as well.

8.5.1 Scenarios

In the NBC area, an incident may be caused by an accident or by humans, i.e. with malicious intent. The FOCP has drawn up several NBC risk files that provide examples of the possible scenarios.

For **'nuclear'**, i.e. **'atomic'** or **'radiological'**, there are the following scenarios: accident at a nuclear power plant, attack on a nuclear transporter and an attack with a dirty bomb (conventional bomb mixed

[9] In this report, the term 'NBC' is used instead of the international abbreviation 'CBRNE' (chemical, biological, radiological, nuclear and explosives). This is to aid comprehension, as the relevant organisations do not yet use 'CBRNE' throughout Switzerland.
[10] Hazard files and scenarios of the Federal Office for Civil Protection

with radioactive material). All scenarios involve the release of radioactive material into the environment and therefore contamination of people and the landscape. The extent varies according to the quantity and type of leaked material and weather-related spread.

For '**biological**', the following scenarios apply: accident in a biological laboratory with leakage of dangerous pathogens as well as attacks with bacteria, viruses or toxins (biogenic substances that harm the organism). In all four cases, a biological substance is emitted into the environment accidentally or intentionally, causing harm to those exposed to it. The duration and the harm to health depend significantly on the application method and the biological substance. Pathogens sometimes have a long incubation period, which is why it may be days or weeks before the incident is detected.

For '**chemical**', the following scenarios apply: accident at a factory with chemical substances, accidents involving dangerous goods both on road and on rail, and an attack with chemical weapons. In all four cases, a chemical substance is emitted into the environment accidentally or intentionally, causing harm to those exposed to it. The harmful effect on health depends on the type of substance, possible reactions between multiple substances and the spread in the environment.

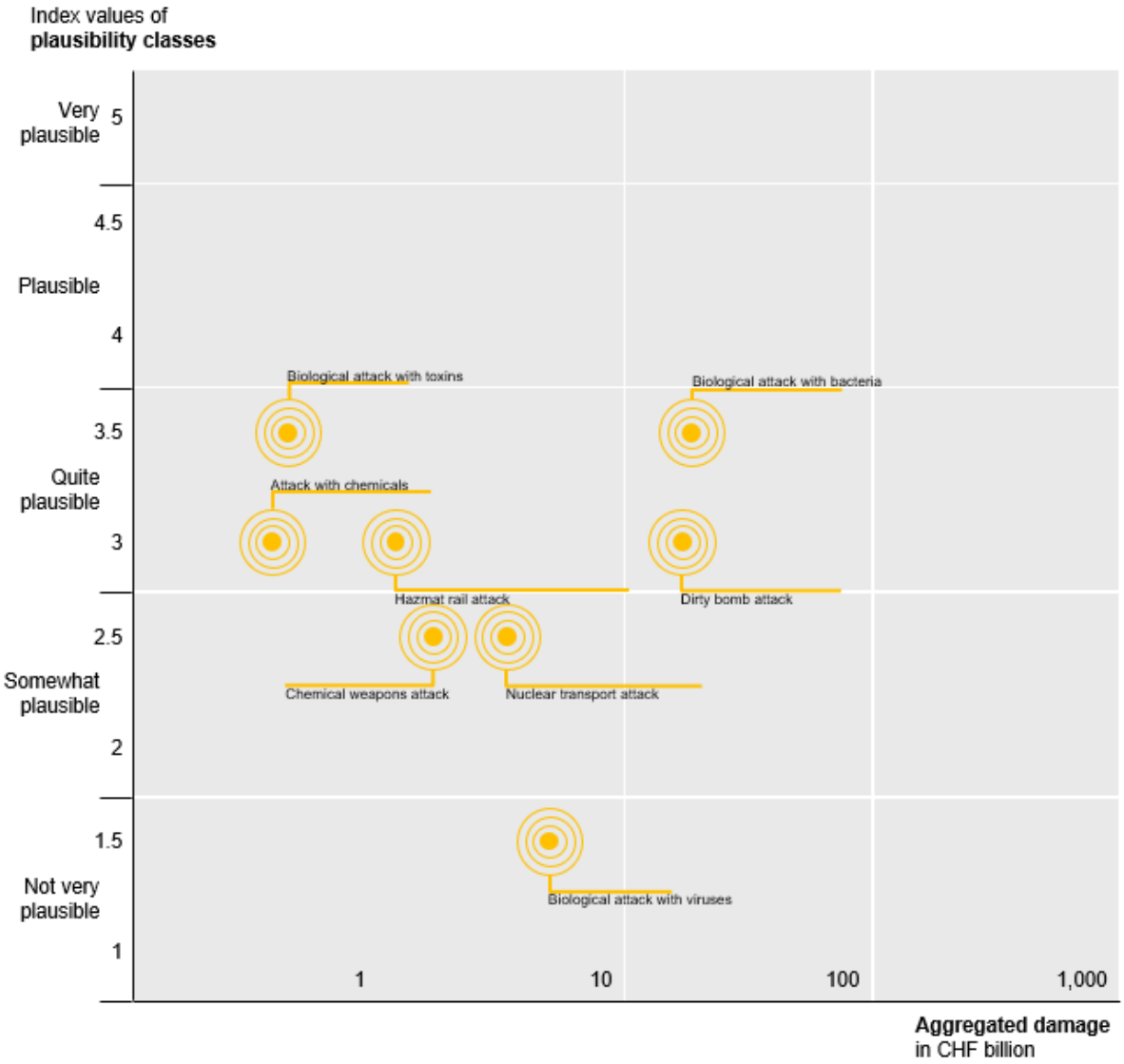


Figure 15 Risk diagram of harm and plausibility, FOCP risk files as part of the national risk analysis 'Disasters and Emergencies in Switzerland' 2020

9 Analysis and results

Based on the situation analysis, the intended target situation as well as the need for action and specific measures derived from this are set out below. The areas of action and the measures were discussed and validated with the steering committee in workshops. A detailed analysis of the individual areas of action is documented separately. The measures listed here correspond to the measures prioritised by the steering committee.

The proposed measures constitute the first basis for closing identified gaps and attaining the set targets. However, they are still in the coordination phase and need to be discussed further with the responsible bodies, particularly with regard to their funding and specific implementation. Many details remain unresolved, so further work is required. The measures are being enhanced in the context of a National Action Plan (NAP) that provides a detailed implementation strategy. While some measures are already in operation, others require extra financial and personnel resources before they can come into effect.

9.1 Education

9.1.1 Current situation

Education and training on disaster medicine for response forces, all professionals working in the healthcare system and the entire population are only coordinated to a limited extent, making nationwide quality assurance more difficult.

The Federal Office for Civil Protection (FOCP) provides various courses for cantonal staff, although these are focused on crisis management and not specifically on communicating topics relating to disaster medicine. Exercises are already held at various levels, but often sparsely. The CMS has a structured system for psychological first aid, coordinated by the National Network for Psychological Emergency Aid (NNPN), which issues deployment guidelines and certifications. Furthermore, the healthcare system does not have a national strategy for promoting resilience, as a variety of different structures and emergency processes are in place within the cantons.

The resilience of response forces such as the police and the fire service is mostly promoted via local measures, although there is a lack of national standards and systematic promotion. Debriefings and peer support are mostly organised informally. Simulation training and exercises relating to disaster response are not standardised to any great extent and are often limited to individual initiatives. Disaster medicine is not well established in academic education, and there is a lack of specialist professorships. The Swiss Centre for Rescue, Emergency and Disaster Medicine (SCRED) provides specific courses in fields such as hospital-related and pre-hospital medical management of major incidents (SFG-H and SFG-P), with the French equivalent course *'conduite sanitaire en cas d'accident majeur'* provided by Centre de formation en médecine de catastrophe (CEFOCA). Although emergency medicine courses such as Advanced Trauma Life Support (ATLS) and Advanced Cardiac Life Support (ACLS) are established in most specialist clinical training programmes, they do not have a specific focus on disaster medicine. The health education centre Berner Bildungszentrum Pflege (BZ Pflege) provides a Disaster Nursing certificate course and is a leader in disaster nursing in Switzerland.

9.1.2 Target situation

- The FOCP coordinates training of the KATAMED officers of the cantons in the context of staff work and provides foundations for specific topics relating to disaster medicine for the training of staff members.
- A KATAMED digital platform is available to all KATAMED partners that promotes networking and helps to increase the resilience of all partners with educational content.
- The KATAMED network supports a network of educational institutions (at upper secondary level and tertiary level) that provides coordinated training on disaster medicine, builds on existing opportunities and operates in all language regions.

- Opportunities for increasing resilience and public awareness are promoted or developed. The existing opportunities (e.g. first-aid courses, emergency supply calculators, information materials, psychological first aid) are taken into account here and enhanced if necessary.
- Interprofessional and interdisciplinary educational activities enable dialogue and learning from one another.

9.1.3 Measures

- Developing options for raising public awareness (e.g. programmes for compulsory education, courses for non-specialists, information materials).
- Providing time and resources for education and training of KATAMED partners.
- Promoting the sharing of documents and experiences between the partners within the KATAMED network via a KATAMED digital platform, as well as holding of regular activities within the KATAMED network.
- Devising content and training curricula for healthcare professionals on disaster medicine and related fields.
- Expanding and enhancing psychological first aid in Switzerland (NNPN).

9.2 Leadership and training

9.2.1 Current situation

On a day-to-day basis, crisis management is not well developed everywhere. However, repeated application of proven processes and structures in common pressure situations such as winter viruses or overstretching presents an opportunity to bring about a cultural change in the handling of exceptional situations.

There is as yet no legal basis in civil protection for expanded national coordination of the healthcare system in the context of an incident. The Confederation' has only piecemeal powers in the area of healthcare, such as during epidemics/pandemics with the Federal Act on Combating Communicable Human Diseases (Epidemics Act). In general, the cantons remain responsible for healthcare provision in all situations. There is no holistic view with underlying clear responsibilities for situations with a national impact.

Work on developing possible host nation support is under way at the FOCP in collaboration with the SDC, although there are no established international partnerships regarding incidents at national level.

The new Ordinance on the Coordination of Medical Services (MSCO) came into force on 1 May 2025. The NEOC, with its Medical Services Staff unit, will be used for exceptional situations in the healthcare system and will assume the responsibilities of the former Medical Services Coordination Committee.

Various cantons form regional partnerships, and there are well-developed concepts for responding to major incidents, such as the Groupe Romand d'Intervention Médicale en cas de Catastrophe (GRIMCA) in French-speaking Switzerland and the cooperation of the cantons of central Switzerland.

9.2.2 Target situation

- The KATAMED partners and the cantons are encouraged to organise themselves in regions on an inter-cantonal basis. They coordinate prevention, preparation, management, recovery and follow-up of exceptional healthcare situations and can also provide mutual assistance in normal situations.
    - The idea of KATAMED regions is aimed at strengthening inter-cantonal cooperation on prevention, preparation, management, recovery and follow-up of exceptional situations in the healthcare system. Existing structures and partnerships are to be taken into account and enhanced here, rather than creating new parallel structures.

- Established models of cooperation already exist, such as in central Switzerland or through GRIMCA in French-speaking Switzerland. As in the case of police agreements, KATAMED regions could help to facilitate dialogue between cantons and service providers, such as on patient transfer, the preparation and use of personnel and material resources or the joint preparation of foundations for planning.
- A first step would be to identify existing structures and their possible enhancement in dialogue with the cantons. KATAMED could act as a catalyst here.

- An exercise landscape is in place that is capable of conducting exercises throughout the KATAMED network and that covers all levels and relevant subject areas.
- For exceptional healthcare situations, responsibility for planning, preparation and deployment when an incident occurs is clarified between the Confederation and the cantons. The role and tasks of the KATAMED officers of the cantons are clearly defined.
- National coordination can also help in normal situations, such as for preparation of predictable major incidents and response to unplanned major incidents of national significance. It could be carried out by the NEOC with its Medical Services Staff unit.
- Along with its existing tasks, the FOCP performs additional national and international tasks in coordination with the KATAMED partners as required.
- ResMaB within the FOCP coordinates international medical assistance at national level (host nation support).
- The legal requirements for cooperation with neighbouring countries as well as relevant international organisations (partnerships) on planning, preparation and incident response are revised and established to facilitate mutual assistance.
- Switzerland is part of international networks for civil protection, takes part in international exercises and engages in knowledge-sharing.

9.2.3 Measures

- Potentially forming regions on inter-cantonal cooperation, based on existing structures, including from the Conference of Cantonal Representatives for the Military, Civil Protection and Civil Defence (KVMBZ) and the CMPH.
- Developing the capability to plan and conduct exercises in the KATAMED network with all levels involved (Confederation, canton, tactical level) and creating improved exercise landscapes in the pre-hospital and hospital field.
- Integrating the KATAMED officers in the cantonal command organisations, clarifying their role with the KVMBZ (chief of staff group), preparing a specifications document for the KATAMED officers of the cantons on a joint basis and conducting joint exercises.
- Actively participating in international networks and working groups in order to benefit from global healthcare strategies and best practices and make in-house expertise available in crisis situations; having KATAMED partners participate in exercises (e.g. MODEX in the EU).
- Reviewing and, if necessary, adapting the legal basis for determining responsibilities within the KATAMED network in prevention, preparation, management, recovery and follow-up of exceptional situations in the healthcare system.

9.3 Incident and emergency concepts

9.3.1 Current situation

The Information and Operations System of the CMS (IOS-CMS) is a web-based IT platform that supports the processes of the command and emergency organisations in preparedness and implementation, as well as in situations with a national impact. The functions it provides include an overview of emergency reception capacity of hospitals, rescue services, means of transport, alerting and an electronic situational overview.

With regard to the incident, topics such as missing persons and disaster victim identification also play a role and are already being dealt with in these areas by KATAMED partners, the cantons or other federal agencies. For example, fedpol coordinates measures relating to missing persons.

9.3.2 Target situation

- As an information and operations system, the IOS-NG can be used for incident response (from the damage site and transport to hospitalisation and any transfer). The IOS-NG can be used as a minimum viable hospital information system for exceptional situations and mobile response teams in planning and implementation with interfaces to existing hospital information systems. It can also assist in normal situations.
- The NEOC assumes tasks with the Medical Services Staff as per the new MSCO, conducts practices and is ready for action at any time.
- There are various concepts that can be applied throughout Switzerland (e.g. mass-casualty incident, disaster medicine, specific NBC issues, decontamination, terrorism, violence, adaptation of treatment standards).

9.3.3 Measures

- Establishing use of the IOS-NG as a management support system for incident response across the entire patient pathway.
- Having the NEOC assume responsibility with the Medical Services Staff as per the new MSCO, conduct practices and be ready for action at any time.
- Within the KATAMED network, devising concepts on a joint basis that can also be applied in normal situations:
  - Mass-casualty incident with pre-hospital (in the rescue domain) and in-hospital response
  - Mass-casualty incident with contaminated patients
  - Mass-casualty incident with severely burned people
  - Mass-casualty incident with injuries caused by terrorism
  - Guidelines and recommendations regarding adaptation of treatment standards in an exceptional situation that has an impact on the healthcare system

9.4 Resources for managing incidents – Personnel

9.4.1 Current situation

Staff are the healthcare system's most valuable resource. They comprise specialists in somatic medicine, psychiatry and psychology, pharmacy, biomedical analysis, midwifery, physiotherapy and long-term care as well as countless other people who all play their part. The healthcare system is heavily dependent on foreign staff: the emerging shortage of staff weakens staffing resilience when major incidents occur. Depending on the incident, foreign healthcare personnel are unwilling or unable to cross the border for work, resulting in a shortage of these professionals. Whereas individual organisations, hospitals and cantons have specific pools of staff, there is currently no nationally coordinated pool of additional trained healthcare personnel. Only a limited number of staff with highly specialist knowledge are available, and they require lengthy training.
Maintaining basic healthcare is fundamental. Primary care keeps chronically ill people at a stable level, provides huge benefits in long-term care (inpatient and outpatient through Spitex) and catches non-acute diseases before they become acute. Sustainability is important here, and there is a lack of back-up capability for the personnel.
There is no operational reserve in the healthcare system. The Armed Forces can provide secondary support in incidents that do not involve armed conflict. In the civil protection service, there are only functions for assisting people who are homeless and seeking protection and no regulations for support of the healthcare system or the medical service.

9.4.2 Target situation

- The staff for incident response as well as for long-term maintenance of basic outpatient and inpatient healthcare are supported by back-up (medical reserve) comprising medical staff (e.g. staff who are retired or no longer working in their usual profession), the civil protection service or newly trained auxiliary staff.
- Staff resilience is increased in all areas of the healthcare system.
- There are concepts for the deployment of conscript service organisations and volunteers.
- The extent and type of cooperation between the Armed Forces and the civilian healthcare service is regulated for secondary deployment.
- In the civil protection service, there is the capability to assume tasks in healthcare provision/medical service.
- There are concepts for international cooperation with regard to DMAT and EMT.
- Switzerland and Swiss KATAMED teams are in regular dialogue with international organisations as well as foreign DMATs and EMTs.
- There is a concept for short-term training of medical auxiliary staff for longer incidents.

9.4.3 Measures

- Creating regional pools of staff that include qualified professionals who are retired and no longer in active employment as well as other suitable people who can be mobilised when an incident occurs in order to assist with medical care; they should be based regionally and live in the community that they want to support.
- Devising concepts for deploying conscript service organisations and volunteers in collaboration with the corresponding organisations.
- Determining uniform guidelines and processes that govern the coordination and deployment of KATAMED teams at national level with clear consultation between the various stakeholders.
- Preparing joint concepts by the Armed Forces and the KATAMED network to define the extent and type of secondary support by the Armed Forces in the civilian healthcare system when an incident occurs (excluding armed conflict).
- Developing the civil protection service’s capability to assume tasks in healthcare provision/medical service.
- Joining international organisations in order to ensure regular contact between Swiss organisations and foreign DMATs and EMTs, particularly those of neighbouring countries.

9.5 Resources for managing incidents – Logistics

9.5.1 Current situation

The respective organisations themselves are responsible for replenishing their goods when an incident occurs. Although a national coordination body exists in ResMaB irrespective of the scenario, it is not geared specifically towards medical matters. Neither are there any central or local resources in terms of therapeutic products for rapid deployment in exceptional situations in the healthcare system.

9.5.2 Target situation

- At local level, there are standardised resources (disaster kits) associated with healthcare institutions available for use on a graded-readiness basis when an incident occurs. Circulation is ensured in regular operation, and transport resources are on hand.
- Plans are in place for local stockpiling by the KATAMED partners and rapid supply of critical medical goods, therapeutic products (medicinal products and medical devices, such as blood products) that are required for incident response.

- The KATAMED partners have procedures in place for the rapid provision of essential goods as well as concepts for the production of therapeutic products and medical devices. These materials and equipment are aligned with the pandemic plan and the FOPH. The required raw materials and capabilities are available.
- There are reliable overviews of the available resources.

9.5.3 Measures

- Determining the resources critical to the incident response and transporting them within the disaster response by the KATAMED partners. In the event of an epidemic/pandemic, the FOPH is responsible for critical goods, and a corresponding project is already under way.
- Preparing the procurement of material and equipment within a few days from spare industrial capacity; drawing up lists and plans for immediate delivery as required in collaboration with the partners concerned and planning the essential medium-term storage measures.
- Drawing up recommendations for procuring and storing critical goods for the healthcare system and medical care of the population.

9.6 Resources for managing incidents – Strategic patient distribution

9.6.1 Current situation

Primary transport is currently focused on safe and fast transport of patients from the incident site to suitable hospitals in order to ensure immediate medical care and is coordinated and carried out by the emergency call centres and rescue services involved in the incident. At the same time, these bodies perform pre-triage and, if applicable, triage of injured people and ensure the flow of patients in consultation with the respective acute hospitals. Further rescue services can be requested via cantonal incident coordination in the event of capacity bottlenecks. There is a considerable structural risk here, particularly in the case of the mobile infrastructure (e.g. emergency ambulances). Rescue services have very little spare capacity in terms of the mobile infrastructure, meaning that a capacity bottleneck can quickly arise if there is an increased number of people with moderate to severe injuries.

Strategic patient distribution relates to the planned and coordinated transfer of patients between various medical facilities or to specialist treatment centres during the incident response in an effort to ensure continuous and specialist medical care by strategically transporting patients in line with their treatment needs. This involves the use of specialist means of transport and close cooperation between the medical teams in order to ensure that patients receive the best possible treatment. Transport-focused strategic patient distribution is also a responsibility of the rescue services and the medical transport services. These services have different capacity levels that are managed by the individual cantons, with little reserve capacity of staff or equipment (on-call transport vehicles, etc.).

Combined with the need for essential primary transport, this could lead to a structural capacity bottleneck, as the capacity of the rescue services must be deployed in different places and for different purposes. In addition, alongside the incident, there is continuous basic healthcare, which ideally can be ensured with no major compromises in terms of quality.

9.6.2 Target situation

- There are concepts and a legal basis for a coordination office that makes binding decisions on allocation to a region. Prioritisation of treatments must be carried out there.
- The coordination office operates at national level, plans and manages strategic patient distribution, delegates transport to the partners and engages in dialogue with emergency service transport coordination (ESTC).
- The means of transport available for strategic patient distribution, such as patient transport, public transport or logistics companies, are known, and the way in which they can be deployed is planned.

- The capability to transport a large number of patients over long distances while using staff not yet deployed for incident response is developed. To this end, sufficient alternative means of transport are available and can be mobilised as required.
- Transport of specific patients, such as highly infectious patients, can also be carried out. The required protective equipment is available and in storage.

9.6.3 Measures

- Designating a new national coordination office that is responsible for managing strategic patient distribution in the event of a crisis and has powers of direction.
- Preparing central spare capacity of specific protective equipment for highly contaminated or infectious transport, such as in the respective KATAMED regions.
- Providing resources for non-rescue-related transport in acute care.
- Clarifying the legal basis or devising of a procedure for allocating and distributing a large number of patients with the cantons.

9.7 Resources for managing incidents – Infrastructure

An in-depth report entitled ‘Medical Protection Facilities’ has been written for this action area, which focuses on medical protection facilities. This is why this action area is described in more detail than the other six.

9.7.1 Current situation

In the 1950s and 1960s, it was agreed in Switzerland that protected treatment was to be put in place for a certain proportion of the Swiss resident population in the event of a major incident or a disaster, and protected hospitals and protected medical facilities have been built and maintained ever since. In total, there are currently 90 protected hospitals and 244 protected medical facilities, although only 28 per cent of these are fully ready for use. This estimate relates to the structural and technical infrastructure.

Dedicated protection places for persons requiring a low level of care and for care staff in hospitals, residential and nursing homes as well as in former medical aid posts are maintained separately in accordance with the applicable legal provisions.

As at 2024, it can be stated that most of the facilities for protected treatment facilities built over the past decades do not have up-to-date equipment and are not ready for use. Many of the facilities need total replacement, reconstruction or extensive renovation. Yet even if the infrastructure and equipment were to be replaced, there is still no rigorous concept for the operation of the facilities that provides for appropriate treatment quality as well as patient beds.

The changed security situation has drawn attention further away from these facilities. The transfer of responsibility for the CMS from the Defence Group to the Federal Office for Civil Protection is intended to achieve a holistic redesign of the medical protection facilities, geared towards managing exceptional situations in the healthcare system.

9.7.2 Target situation

- In future, rather than simply providing protected infrastructure, the medical protection facilities will also be able to be operated with suitable treatment quality, deliver added value even in normal circumstances and, ideally, be capable of integration into existing hospital operations. In the concept for the new medical protection facilities, the term ‘medical protection facilities’ is used instead of ‘protection facilities’ in order to emphasise the focus on medical care.
- The treatment capacity that must be reserved in protected facilities is reduced from 0.6 to 0.2 per cent of the resident population.
- Various aspects must be taken into account in the redesign of the future protection facilities. These include:

- limited financial and personnel resources in the Confederation, in some cantons, in the healthcare service and at the hospitals;
- the capabilities and resources for executing the concept with the essential services when an incident occurs;
- the personnel required for operations (medical as well as medical-related, administrative, technical, logistics and IT staff);
- equipment, such as devices, beds, instruments, operating materials and therapeutic products (such as medicinal products, consumables or blood products);
- operation and maintenance;
- planning and leadership;
- skills development and knowledge management.

- The following two variants have been devised; which one is ultimately chosen must be decided at political level.
  1. Variant 1 – 'Maintenance of active and inactive facilities'
     The existing medical protection facilities (protected medical facilities and protected hospitals) are fully maintained and adapted to treatment, care and aftercare requirements. The seven protected hospitals with CMS special status will continue to form the core of protected hospital-based treatment.
     All of the existing infrastructure is retained and will continue to be managed by the civil protection service and the Armed Forces, with medical protection facilities linked to hospitals operated by hospital personnel.
  2. Variant 2 – 'Trauma centre network'
     There are four types of infrastructure that take basic healthcare into account: (1) protected infrastructure, (2) secure infrastructure, (3) mobile infrastructure and (4) primary care infrastructure.
     These infrastructure types are broken down into existing protected medical facilities (such as through use of the protected medical facilities for primary care) or capacity expansion of a hospital in existing facilities. New capacity is also created, associated with the ongoing operations of hospitals. Basic healthcare is provided on a graded-readiness basis.
     There is a network of hospitals that ensure care in exceptional situations. These are to be based on the 12 hospitals with a highly specialised medicine mandate for the care of severely injured people (trauma level 1 hospitals). These hospitals are called 'KATAMED main hospitals'. At least four hospitals are assigned to each of these twelve hospitals, ensuring outflow of patients while covering basic healthcare needs. These hospitals will be renamed 'KATAMED satellite hospitals'. Their capacity for treatment and aftercare will be adapted to the current risk and threat situation, and the future threat situation will be anticipated as effectively as possible.

Both variants assume a reduction in bed and treatment capacity in line with the reduction in capacity from 0.6 to 0.2 per cent. The reduction in capacity only entails an increase in the treatment standard in variant 2. Based on the criteria and the assessment, variant 2 has the better cost-benefit ratio. Consequently, this variant is described in more detail in section A.5 of the report 'Medical Protection Facilities' *(Medizinische Schutzanlagen)* and also recommended.

9.7.3 Measures

- Bringing about a political decision in favour of one of the two proposed variants as a basis for further work on the reorganisation of medical protection facilities.
- Resolving the outstanding issues in the concept on the basis of the variant decision, such as responsibilities for the main hospitals, issues relating to leadership of the network when an incident occurs, funding, technical specifications, and requirements regarding the hospitals and stockpiling.
- Commencing work, incorporating pilot projects with the cantons in order to gain specific experience and learn lessons for subsequent use and devise future designs for protected hospitals and protected medical facilities.

10 Conclusion

The ongoing deterioration in the security situation, with the threat of another war in Europe and the current hybrid attacks in cyberspace, as well as sabotage, the increased likelihood of terrorist attacks (partly due to individuals radicalised online), the increased risk of technical and natural disasters and the ever-present threat of a new pandemic, all indicate possible challenges that can impact the healthcare system directly or affect it as a key sector. As highlighted in the report, the ability to manage exceptional situations in the healthcare system requires different capabilities and stronger inter-regional and national coordination than in normal conditions. The financial constraints in the healthcare system make it harder to prepare and plan for the management of rare incidents.

Reorienting the Coordinated Medical Services in the FOCP presents the opportunity to help Switzerland's healthcare system prepare for exceptional situations more effectively. A KATAMED network is to be formed for this purpose, guided by the vision '**Together. Stronger. Support.**'.

The aims are to:

- strengthen cooperation and networking among KATAMED partners;
- ensure the necessary capabilities for coordinated leadership at all levels;
- build up the required resources for response (personnel, logistics, strategic patient distribution and infrastructure) across regions;
- make the population, its communities and healthcare professionals better able to manage such situations and build resilience through knowledge transfer.

The following challenges to the network were identified here:

- Switzerland's federal structure
- Limited capacity of the healthcare system
- Insufficient capabilities for responding to an incident
- Affected government and administrative health and security areas
- Limited resources of the CMS after the transfer
- Neglect of medical protection facilities

The reorientation is about identifying workable solutions that the KATAMED partners can put into practice together, solutions that must take account of the specific features of Switzerland's federal system, with its strong involvement of the cantons and KATAMED partners, while also recognising the limited financial and personnel resources available in healthcare. Along with the scenarios used for development – 'conventional attack', 'earthquake', 'armed conflict' and 'influenza pandemic' from the FOCP's national risk analysis – the jointly prioritised and adopted measures are also intended to provide greater room for manoeuvre in the KATAMED network in future scenarios that remain unknown.

10.1 Resources for the reorientation

The reorientation aims to strengthen the KATAMED network's capacity to cope with exceptional situations in a forward-looking way. Additional resources will be needed to build capabilities and address any gaps identified within the network.

Stronger inter-cantonal and national cooperation and coordination will allow for more targeted and efficient action. Synergies can be exploited and redundancies avoided.

When implementing the reorientation towards a national KATAMED network, the KATAMED division within the FOCP can facilitate and drive change. However, successful implementation will require the active involvement (including financial contributions) of all network partners.

Once the report has been adopted, the Confederation and the cantons, together with the other partners, must approve the National Action Plan (NAP) on Disaster Medicine. The steering committee has already prioritised measures, elaborated on them in detail and provided cost estimates. On this basis, the Confederation and the cantons will decide on the measures to be implemented in the National Action Plan on Disaster Medicine, including prioritising and clarifying the provision of resources.

10.2 Political and legal implementation

The reorientation of KATAMED will be carried out step by step:

1. New ordinance on medical services coordination
Particularly through the use of the structures of the SSN, the new Ordinance on the Coordination of Medical Services (MSCO) strengthens cooperation between the Confederation and the cantons and forms the basis for subsequent work; it entered into force on 1 May 2025. Alterations have been made to reflect the influence of the new ordinance on the report. The same applies to the Ordinance on the Crisis Organisation of the Federal Administration (OCOFA), which came into force on 1 February 2025 and largely complements the MSCO.

2. KATAMED report
This report on the reorientation of the CMS into the National Network for Disaster Medicine KATAMED underwent extensive consultation. No fewer than 90 stakeholders were written to as part of this consultation, 27 of which were cantons and the Principality of Liechtenstein and the remaining 63 KATAMED partners. A total of 61 responses were received, equating to a rate of 68 per cent. All cantons and the Principality of Liechtenstein replied. The report was revised accordingly. It provides a reference framework and is to be submitted to the Federal Council as well. A mandate will be requested to continue the work in line with the directions set out in the report.

3. National Action Plan on Disaster Medicine
The Confederation and the cantons will work with other partners to devise the National Action Plan on Disaster Medicine, making use of the SSN's structures for governance. Proposed measures have already been devised and prioritised with the KATAMED steering committee as part of the reorientation. These measures define responsibilities, implementation, estimated costs and resources. This report serves as a basis for the political decisions on prioritisation of the measures to be implemented in the KATAMED network. Broad support from the cantons, the Confederation and third parties is essential. The National Action Plan on Disaster Medicine will cover five years, with implementation of the measures reviewed annually. The KATAMED delegate will report regularly to the committees of the SSN in the context of governance.

10.3 Consultation by the cantons and KATAMED partners

This report was submitted to the cantons (plus the Principality of Liechtenstein) and a total of 63 KATAMED partners for consultation. The consultation phase ran from 30 January 2025 to 28 March 2025. In total, all 26 cantons, as well as the Principality of Liechtenstein and 34 partners, submitted their opinions, equating to a response rate of 67.8 per cent. Most of the feedback from the consultation was positive and emphasised the detailed nature of the report. The numerous, sometimes detailed, responses and direct discussions with the CMPH, the FOPH, the FONES, the SEPOS and the Defence Group enabled the report to be enhanced.

In particular, terminology was clarified and the glossary was revised to improve comprehensibility. The KATAMED partners were supplemented in order to fully reflect the diversity of the network partners. In addition, the report made it clearer that, rather than being confined to disaster medicine, KATAMED also covers other disciplines such as nursing, emergency psychology, pharmacy, leadership and other domains of the healthcare system. Furthermore, there was more emphasis on the fact that measures relating to KATAMED are also meant to provide benefits in normal conditions.

Some partners expressed uncertainty regarding the proposal to create KATAMED regions, saying that they did not want parallel structures to be set up. In response, it was explained that this is about promoting inter-cantonal cooperation. There are already inter-cantonal approaches in central Switzerland and French-speaking Switzerland (GRIMCA). The statement that existing structures should be applied in exceptional situations if at all possible is entirely supported.

As regards the point that other scenarios, such as cyberattacks or electricity shortages, are of crucial importance, reference is made to other ongoing work on critical infrastructure protection (CIP) being

carried out by the FOCP and the NCSC. Nevertheless, there are plans to examine this topic in more depth in due course in the context of KATAMED.

Ultimately, there were many reservations regarding funding of the new tasks and responsibilities associated with the reorientation of KATAMED. It was also pointed out that the KATAMED division in the FOCP should be strengthened as a central coordination office with regard to the reorientation. Overall, these are new measures for which the funding still needs to be jointly clarified. As the cantons are responsible for the healthcare systems in all situations under the constitution, it is necessary to come up with a joint solution regarding the measures and the resources required.

The following must be noted regarding the 'medical protection facilities' concept: most of the responses clearly favoured network variant 2, particularly the CMPH and the majority of the cantons, and so a mandate to devise a detailed concept in line with this variant has been assigned to the Federal Council. The business case set out in the concept is not exhaustive. This costing is intended solely to aid comparison of the two variants. Both calculations are based on the same assumptions, with the benchmark figures of the variants used as a basis. This allows for an approximate statement as to whether and to what extent the variants differ.

Application of the factor 0.2 must be devised in a detailed concept. The proposal is to calculate the capacity of the KATAMED main hospitals across the cantons, and that of the KATAMED satellite hospitals on a cantonal basis. This is because authority for healthcare provision lies with the cantons and can therefore be linked with these structures. As the KATAMED main hospitals need supra-cantonal regulation anyway, the factor should also be applied across the cantons. In addition, the detailed concept should include statements on personnel and funding.

Various cantons have agreed to conduct a pilot project. Based on three pilot projects, the aim is to obtain findings for implementation in the overall system quickly: adjustments to the TWO77 protected hospitals for an extension of use, creation of a protected hospital with a new design, and use of the protected medical facilities for basic healthcare.

10.4 Next steps

The FOCP will apply to the Federal Council for continued work on the reorientation of the CMS towards the National Network for Disaster Medicine KATAMED in line with this report. There will be close cooperation with the Confederation and the cantons in the context of the committees of the SSN and in tandem with partners. A detailed description of the measures, including responsibilities, cost estimates and required resources, will provide a basis for decision-making. At political level, the measures to be implemented for the KATAMED network will be ranked in order of priority in the context of a National Action Plan on Disaster Medicine (NAP KATAMED). The Confederation, the cantons and third parties must work together to lay the foundations for long-term provision of the required resources and funding to the benefit of the network. Work on the NAP KATAMED will also include examination of the need to adapt the legal framework. The first NAP KATAMED, covering a five-year period, is to be approved in 2026. It will be rewritten at regular intervals (every five years) or as required, with the KATAMED delegate to report on the status of implementation every year.

Acknowledgements

We would like to thank everyone involved for the conversations held, their contributions and their willingness to take part. We appreciate the constructive suggestions and will be in touch with the partners again in future so that they can be actively involved in the next steps.

ANNEX

KATAMED partners

The KATAMED partners are all the agencies, organisations, institutions and people involved in the preparation, planning, management and follow-up of exceptional situations in the healthcare system. The following is a non-exhaustive list.

KATAMED partner	Full name or description	Comments
Federal offices and federal agencies		
AFLO Med	Armed Forces Logistics Organisation – Medical	Medical service of the Armed Forces with all subsidiary organisations; represented on the standing committee
AFP	Armed Forces Pharmacy	
CC MDM	Centre of Competence for Military and Disaster Medicine of the AFLO Med	
CIVI	Federal Office for Civilian Service	Represented on the standing committee
CP	Civil protection	
Defence Group	Defence Group of the Swiss Armed Forces	The Defence Group is the planning, leadership and administrative backbone of the Swiss Armed Forces. The Swiss Armed Forces help to prevent war, thus contributing to peace in Switzerland.
FCMDM	Federal Commission for Military and Disaster Medicine	
FDFA	Federal Department of Foreign Affairs	
FDHA	Federal Department of Home Affairs	
fedpol	Federal Office of Police	Represented on the standing committee
FIS	Federal Intelligence Service	
FOCP	Federal Office for Civil Protection	
FONES	Federal Office for National Economic Supply	Represented on the standing committee
FOPH	Federal Office of Public Health	Represented on the standing committee
FSVO	Federal Food Safety and Veterinary Office	Represented on the standing committee
JOC	Joint Operations Command of the Swiss Armed Forces	
NBC EOD CC	NBC EOD Centre of Competence (nuclear, biological, chemical, explosive ordnance disposal and mine clearance)	The Centre of Competence for Military and Disaster Medicine (CC MDM) ensures and coordinates education and training of army doctors as well as military medical staff and promotes research into military and disaster medicine. Its work is focused on aspects of military medicine, and its programmes are geared towards military staff.
SDC	Swiss Agency for Development and Cooperation	Represented on the standing committee
SHA	Swiss Humanitarian Aid Unit	
Spiez Laboratory	Spiez Laboratory	
SSN	Swiss Security Network	Represented on the standing committee
Cantons and cantonal conferences		
APC	Association of Cantonal Pharmacists	Represented on the standing committee
CCJPD	Conference of Cantonal Justice and Police Directors	
CCO	Cantonal crisis organisations	
CCPCS	Conference of Cantonal Police Commanders of Switzerland	Represented on the standing committee
CMB	Cantonal Management Body	
CMPH	Conference of the Cantonal Ministers of Public Health	Represented on the standing committee
FKS	Fire Service Coordination Switzerland	Coordination and handling of issues of joint interest to the fire service as a public duty of the cantons

KATAMED partner	Full name or description	Comments
		and the Principality of Liechtenstein; represented on the standing committee
KATAMED officers	-	KATAMED officers of the cantons and the Principality of Liechtenstein
KVMBZ	Conference of Cantonal Representatives for the Military, Civil Protection and Civil Defence	Represented on the standing committee
RK MZF	Intergovernmental Conference on Issues relating to Military, Civil Protection and Fire Services	Represented on the standing committee
VKS	Swiss Association of Cantonal Officers of Health	Represented on the standing committee
VSKT	Federation of Swiss Cantonal Veterinary Officers	
Associations, groups, professional bodies, organisations and institutions		
AORS	Authorities and organisations for rescue and security	
Carelink	-	Care and response organisation for emergency psychosocial support following extraordinary events at companies and institutions
CEFOCA	Centre de formation en médecine de catastrophe	Training centre for disaster medicine that provides a series of training modules on disaster medicine aimed at healthcare and rescue services professionals
FMH	Swiss Medical Association	Represented on the standing committee
GSASA	Swiss Society of Public Health Administration and Hospital Pharmacists	
H+	The Hospitals of Switzerland	National umbrella association of public and private Swiss hospitals, clinics and care institutions; represented on the standing committee
IVR	Swiss Rescue Association	Umbrella organisation of Swiss medical services, commissioned by the cantons; represented on the standing committee
MFE	Swiss Young Family Doctors	Represented on the standing committee
NNPN	National Network for Psychological Emergency Aid	
Notfallpflege Schweiz	Swiss emergency care association	
PharmaSuisse	Swiss Pharmacists' Association	
RCS	Red Cross Service of the Swiss Red Cross	
REDOG	Swiss search and rescue dog association	
Samaritans	Aid association	
SBB Care	Swiss Federal Railways, Care	
SBK	Swiss Nurses' Association	Represented on the standing committee
SCRED	Swiss Centre for Rescue, Emergency and Disaster Medicine	
SCS	Swiss College of Surgeons	Represented on the standing committee
SGTV	Swiss Society for Traumatology and Insurance Medicine	
SHV	Swiss Federation of Midwives	Represented on the standing committee
SLRG	Swiss Lifesaving Society	
SMSV	Swiss Army Medical Association	
SPA	Swiss Paramedic Association	Represented on the standing committee
SPI	Swiss Police Institute	
Spitex Switzerland	National umbrella association of cantonal assistance and care at home associations and other organisations	Represented on the standing committee
SRC	Swiss Red Cross	Represented on the standing committee
SSAPM	Swiss Society for Anaesthesiology and Perioperative Medicine	Represented on the standing committee
SSB	Swiss Samaritan Federation	

KATAMED partner	Full name or description	Comments
SSC	Swiss Surgical Society	
SSERM	Swiss Society of Emergency and Rescue Medicine	Represented on the standing committee
SSGIM	Swiss Society of General Internal Medicine	Represented on the standing committee
SSICM	Swiss Society of Intensive Care Medicine	Represented on the standing committee
STB	Swiss Trauma Board	
SUREK	Search, rescue and disaster relief arm of the SRC	
SVTM	Swiss Association for Tactical Medicine	
Swiss DVI	Disaster Victim Identification Switzerland	

Glossary (excluding KATAMED partners)

Abbreviation	Meaning	Description
	Care in exceptional situations	This denotes basic healthcare and additional incident-related care.
	Healthcare system	The healthcare system comprises all people, organisations, facilities, regulations and processes tasked with healthcare, i.e. improvement and preservation of health and protection of health through prevention and treatment of diseases and injuries.
	Incident-related care	This denotes all outpatient and inpatient services of the healthcare system, and of all institutions and people involved, that must be performed in connection with or as a result of the incident. It is supplementary to basic healthcare.
	Protection facilities	Protection facilities ensure command capability and medical care. They consist of: - Command posts to ensure command capability - Supply facilities for the personnel and equipment of the civil protection groups. - Protected hospitals and protected medical facilities for medical care.
	Protective structures	In the case of protective structures, civil protection distinguishes between shelters and protection facilities.
	Public health	Public health is the science and art of preventing disease, prolonging life, and promoting health through the organised efforts of society (WHO).
	Shelters	Shelters serve to protect the population and cultural heritage. The best-known type of shelter is the private shelter in the cellar of single-family and multi-family houses. Larger private or public shelters have up to 200 protection places. The shelters are designed in such a way that people can stay in them for extended periods.
-	Acute care	This denotes all outpatient and inpatient services of the healthcare system, and of all institutions and people involved, for the treatment of acute diseases or injuries. In conjunction with primary healthcare, it constitutes basic healthcare.
-	Basic healthcare	This comprises care in normal conditions, divided into outpatient and inpatient primary healthcare as well as outpatient and inpatient acute care.
-	Contingency plan	Incident and crisis management
-	Coordination platform	Digital platform for educational provision in disaster medicine education and training and for promotion of regular dialogue and cooperation of KATAMED officers of the cantons as well as other interested parties.
-	Disaster	A damaging event that poses a threat to nature or civilisation and causes such a large amount of damage and failures that the human and material resources of the community affected are overwhelmed.
-	Duty of care	Obligation to provide care or assistance.

Abbreviation	Meaning	Description
-	Emergency	Situations that cannot be managed with the existing resources, such as a failure of critical systems (energy, special logistics, IT) or a need for additional capabilities such as transport of a large number of patients (hospital evacuation) or materials and equipment (medical equipment, blood products).
-	Exceptional healthcare situations	An exceptional situation can arise from the geographical extent as well as the quantity of patients or the quality of the health implications.
-	Graded readiness	Phased mobilisation and back-up of reserved capacity.
-	HSM trauma centres *[in the text]* Hospitals with an HSM mandate for the 'treatment of severely injured people' *[official definition]*	Acute hospitals that can care for severely injured patients. In Switzerland, there are twelve such hospitals (the University Hospitals of Geneva, Basel, Zurich, Lausanne and Bern, the Cantonal Hospitals of St. Gallen, Lucerne, Aarau, Graubünden and Winterthur, Lugano Hospital and Valais Hospital, Sion).
-	Incident	Event (e.g. armed conflict, terrorist attack, major accident, accident with unusual injury patterns) that impacts the disaster medicine sector across the cantons or nationwide.
-	Individual patient care	Full utilisation of all medical options for patients, particularly no rationing of treatments.
-	KATAMED main hospital	Hospitals that cover acute care, particularly of polytrauma patients when an incident occurs. They must maintain treatment capacity in protected infrastructure and on a graded-readiness basis.
-	KATAMED partners	All partners that interact with the National Network for Disaster Medicine KATAMED.
-	KATAMED satellite hospital	Hospitals that ensure outflow of patients from the KATAMED main hospitals as well as basic healthcare. As a minimum, they must provide treatment and aftercare capacity in a secure infrastructure and on a graded-readiness basis.
-	KATAMED teams	Teams in Switzerland based on the WHO Emergency Medical Teams to assist and relieve the healthcare system in national crises.
-	Major incident	A locally confined damaging event that can only be handled with the involvement of multiple partners or-ganisations but remains manageable.
-	Medical protection facilities	Protected hospital (PH), protected surgical facility (PSF), protected medical facility (PMF), advanced medical posts (AMP).
-	Medical task force	Tactical unit with special capabilities or reinforcement potential to assist regular disaster management units.
-	NATO Role Support	Four-stage NATO classification of medical treatment in the military sphere. From unit level (1) to definitive treatment in a hospital (4).
-	Network	All KATAMED partners combined.
-	Normal situation	Everyday situations in which ordinary processes are sufficient for managing the upcoming tasks.
-	Palliative care	Palliative care comprises care and treatment of people with incurable, life-threatening and/or chronic progressive diseases. It prevents suffering and complications and includes medical treatments, nursing interventions, and psychological, social and spiritual support at the end of life.
-	Plan Blanc	Emergency plan in France for rapid organisation of medical assistance in exceptional situations such as disasters or attacks.
-	Primary healthcare	This denotes all outpatient and inpatient services of the healthcare system, and of all institutions and people involved, that are not of an acute nature. In conjunction with acute care, it constitutes basic healthcare.
-	Protected	Infrastructure that is equipped to deal with kinetic threats and has full NBC protection.
-	Secure infrastructure	Infrastructure that provides a certain degree of protection against natural incidents (earthquakes, floods, storms, avalanches) but has no NBC protection.

Abbreviation	Meaning	Description
-	Soft governance	A form of management and coordination based on informal mechanisms such as recommendations, guidelines, voluntary agreements and social norms rather than binding laws or regulations.
-	Surge capacity need	Medical surge capacity involves the capability to examine and care for a large number of patients.
-	Swissmedic	Swiss Agency for Therapeutic Products
-	Swisstransplant	Swiss National Foundation for Organ Donation and Transplantation
-	Trauma level 1	Acute hospitals that can care for severely injured patients. In Switzerland, there are twelve such hospitals (the University Hospitals of Geneva, Basel, Zurich, Lausanne and Bern, the Cantonal Hospitals of St. Gallen, Lucerne, Aarau, Graubünden and Winterthur, Lugano Hospital and Valais Hospital, Sion).
-	Triage	Clearly defined procedure for prioritising medical assistance. It is applied in particular when there are insufficient resources, e.g. when mass-casualty incidents occur.
-	Unaffiliated volunteers	Unaffected people who offer to help on a voluntary basis in the event of a disaster.
ABCDE	Airway, breathing, circulation, disability, exposure	Emergency checklist for examining critically injured or ill patients, setting out a prioritised approach.
AFLO	Armed Forces Logistics Organisation	-
ALS/ACLS	Advanced (cardiovascular) life support	Guidelines on the extended measures set out by the European Resuscitation Council (ERC) and the American Heart Association (AHA) relating to resuscitation in order to end a cardiac arrest and treat the underlying disease.
AMP	Advanced medical post	-
AORS	Authorities and organisations for rescue and security	-
Art.	Article	-
ATLS	Advanced trauma life support	Training programme for the management of severely injured people. It sets standards for the diagnosis and treatment of polytrauma patients in the resuscitation area.
BCM	Business continuity management	Planning for the continuity of business operations.
CBRNE	Chemical, biological, radioactive, nuclear or explosive substances	We use the term ‘NBC’ in this report.
CCMB	Federal Civil Protection Crisis Management Board	-
CDPA	Federal Act on Civil Protection and Civil Defence	-
CEFOCA-H	-	Training programme at CEFOCA: medical management of major incidents (similar to SFG-H) for the hospital sector (cf. SFG-H).
CivPO	Civil Protection Ordinance	-
CMS	Coordinated Medical Services	The Coordinated Medical Services provide national coordination of disaster medicine and cover the tasks of the medical services in the National Network for Disaster Medicine.
CMS partners	-	All partners involved in planning, preparedness and the management of an incident.
CP	Command posts	-
CRM	Crew resource management	Training on human factors
CSAM	Conduite sanitaire en cas d’accident majeur	Training programme at CEFOCA: medical management of major incidents (similar to SFG-P).
Cst.	Constitution	-
DCC	Damage control care	Treatment to limit the extent of damage. Reduced medical care with a focus on staunching blood flow and stabilising the patients.
DDPS	Federal Department of Defence, Civil Protection and Sport	-
Deco	Decontamination	Decontamination after (possible) contact with NBC hazards.

Abbreviation	Meaning	Description
DMAT	Disaster medical assistance teams	A group of specially trained, rapid-response medical and non-medical staff who are available in the event of a crisis or a disaster.
EBM	Evidence-based medicine	-
EMT	Emergency medical teams	WHO-classified teams for ensuring treatment quality and logistics readiness that provide rapid medical assistance to relieve the local healthcare system in national and international health crises, such as natural disasters or disease outbreaks. They are divided into different categories, ranging from type 1 (an inpatient treatment facility) to type 3 (a fully equipped hospital including an intensive care unit).
EO NEOC	NEOC Emergency Organisation	Operational section of the NEOC.
EpidA	Epidemics Act	Federal Act on Combating Communicable Human Diseases; EpidA. SR 818.101
EpidO	Epidemics Ordinance	Ordinance on Combating Communicable Human Diseases; EpidO, SR 818.101.1
ESTC	Emergency service transport coordination	-
EU	European Union	-
FCR	Federal Council report	-
FTCS	Federal Training Centre	-
GRIMCA	Groupe Romand d'Intervention Médicale en cas de Catastrophe	
GS CMPH	General Secretariat of the Swiss Conference of the Cantonal Ministers of Public Health	-
HMIMMS	Hospital major incident medical management and support	-
HNS	Host nation support	This comprises civilian and military support services that the host nation provides for foreign armed forces of a sending state.
HSM	Highly specialised medicine	-
ICRC	International Committee of the Red Cross	-
ICU	Intensive care unit	-
ICU	Intensive care unit	Ward providing intensive care
IMC	Intermediate care	A link between the normal acute care ward and the intensive care unit.
IOS-CMS	Information and Operations System CMS	Web-based IT platform that supports the processes of the command and emergency organisations for preparedness and implementation as well as in exceptional situations.
IOS-NG	Information and Operations System – Next Generation	Project to deliver a new IT platform to replace the existing Information and Operations System of the Coordinated Medical Services.
IT	Information technology	-
KAEP	Hospital alert and emergency response planning	In Germany
KATAMED	National Network for Disaster Medicine	National Network for Disaster Medicine, new name for the Coordinated Medical Services (CMS). In this context, 'medicine' includes all medical and healthcare professions as well as emergency psychologists and psychiatrists.
MARCH	Massive haemorrhage, airway, respiration, circulation, head injury/hypothermia	Algorithm for assessing and treating injured people in high-risk situations. It takes massive bleeding into account in particular. Cf. XABCDE.
MCI	Mass-casualty incident	-
MCIC	Mass-casualty incident concept project	-
MDM	Military and disaster medicine	-
Med S	Medical services	Designation for emergency medical care services for sick, injured or wounded people and the public functions in medical incident and disaster management, including the related preparations. In the new ordinance, the medical services comprise the processes and services for medical care in major incidents, disasters, emergencies and armed conflicts.

Abbreviation	Meaning	Description
MLZ	Reporting and Situation Centre	Unit of the NEOC
MODEX	Module Exercises	European platform for exercises in civil protection
MSCO	CMS Ordinance	Ordinance on the Coordination of Medical Services
NAP	National Action Plan	-
NATO	North Atlantic Treaty Organization	-
NBC	Nuclear, biological and chemical substances	See also CBRNE
NEF	NEOC Fundamentals	NEOC Fundamentals unit
NEOC	National Emergency Operations Centre	National emergency operations centre and incident management unit.
NPP	Nuclear power plant	-
OCOFA	Ordinance on the Crisis Organisation of the Federal Administration	-
Op	Operation	-
OP+ SSN	-	Extended operations platform of the SSN involving the Director of the FOPH and the Secretary General of the CMPH.
PH	Protected hospital	Part of the medical protection facilities. It enables protected treatment capacity in a hospital environment. Former term: PSF.
PMF	Protected medical facility	Part of the medical protection facilities. It enables protected treatment capacity in a pre-hospital environment. Former term: protected advanced medical post.
PP+ SSN	Expanded Political Platform SSN (PP+ SSN)	Expanded political platform of the SSN involving the head of department of the FDHA and the Chair of the CMPH.
PPP	Public-private partnership	Cooperation between the public sector and private companies.
PRS	Patient routing system	Standardised procedure for triage and treatment in a mass-casualty incident.
PSF	Protected surgical facility	Former term for a protected hospital (PH).
ResMaB	Resource management service	ResMaB is a coordinating body and a tool of the Confederation for sourcing additionally required resources in dangerous or hazardous situations, particularly during complex incidents, and specifically during inter-cantonal, national and international incidents. Coordination of resources and sourcing of services are carried out by the ResMaB staff unit in conjunction with the stakeholders involved in incident management and on the basis of defined criteria and priorities in a consultative process. Coordination and allocation of resources help to ensure targeted use of resources in order to protect the population and preserve their vital facilities.
RRT	Rapid response teams	
RTAO	Road Traffic Authorisation Ordinance	-
SANKO	Medical Services Coordination Committee	-
SBB	Swiss Federal Railways	-
Sec.	Section	-
SF	Supply facility	-
SFAO	Swiss Federal Audit Office	-
SFG-H	Medical management of major incidents (hospital)	-
SFG-P	Medical management of major incidents (pre-hospital)	-
SOR	State of readiness	-
SSN	Swiss Security Network	-
TCCC	Tactical combat casualty care	Care for people injured in combat in line with principles of advanced first aid.
TCS	Touring Club Switzerland	-

Abbreviation	Meaning	Description
TECC	Tactical emergency casualty care	A course on tactical emergency medicine and tactical approaches: civilian variant of TCCC.
Therapeutic products		These comprise medicinal products and medical devices.
UN	United Nations	-
USAR	Urban search and rescue	Looking for and rescuing people in towns and cities.
WHO	World Health Organization	
WUR	Wake-up room	-
XABCDE	Exsanguination, airway, breathing, circulation, disability, exposure	Emergency algorithm stipulating that critical bleeding should be treated first when examining a patient. Cf. MARCH.