

# Healthcare during crisis situations

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## Summary:

Medical protection of population in case of natural disasters or other mass threats needs coordination of the medical rescue system and many other subjects which can support its effort. Decentralized rescue system determined by the Polish law significantly depends on engagement and adjustment to local public administration structures on the province level.

The following text describes basic functions of provincial authorities and attempt to systematize them on the example of Łódź.

**Key words:** medical rescue, mass threats, crisis situations.

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## Introduction

In the most recent version of the Crisis Management Act, the point defining a crisis situation was revoked. However, when reading this Act, it can be assumed that a crisis situation is directly related to the national safety, and in particular to:

- threat to public administration functioning;
- threat to functioning and ability to restore critical infrastructure;
- continuous monitoring of threats;
- perturbations in rational management of forces and measures connected with normal functioning of the community;
- aid given to population at risk, ensuring conditions necessary to survive.

The last two points may be especially related to the constituents of healthcare safety.

Pursuant to the Ministry of Health guidelines on the plan for crisis preparations, a crisis situation 'is defined as any situation in which a hospital admits new patients for such a large scale that its resources are depleted. A crisis situation can be well described by the rule of balance between demand and supply

(i.e. providing medical services). Such a situation takes place, when a hospital admits a large number of new patients in a relatively short period of time; a deluge of patients results in hospital inability to provide adequate services if special actions have not been taken.'

## Planning

The basis of health safety in this meaning are actions intended to prepare the public administration, combined administration and other units to work in emergency circumstances, i.e. increased threat to human life and health, or increased percentage of population at risk. The most important element of this phase of crisis management is planning. The fundamental rule that should be observed when planning, is to maintain the basic organizational healthcare structure characteristic for the time of peace, also during a crisis situation, state of emergency or during war. Such a structure should be completed with elements that enable to increase its therapeutic capabilities and take quick actions by healthcare organizational units, aimed at providing first aid to increased number of injured and ill people, and public administration units, first of

all local government administration, to perform coordinative and organizational activities supporting the actions taken by healthcare units. The plans should allow the local authorities to implement tasks ensuing from general regulations and imposed by authorized organs of public administration. The rule of compliance should not mean any limitations for organs drawing up such documents to include in the plans their own needs and solutions. Special attention should be paid to considering the issue of cooperation during the implementation of tasks included in the plans. The public administration organs supervising task accomplishment are obliged to agree the procedures of cooperation between organs participating in the process of implementation.

Planning population health safety (as part of the general civil planning) includes preparing:

- operating plans for healthcare units in case of catastrophes and natural disasters;
- operating plans for the state Emergency Medical Services (prepared at the regional level of public administration);
- operating plans in case of epidemics (prepared by the National Sanitary Inspector);
- plans of distribution of potassium iodide tablets in case of radiation events (prepared by district, regional and national administration);
- operating plans for the veterinary surgeon in case of crisis events (prepared by the Chief Veterinary Surgeon);
- plans concerning the adjustment of public and nonpublic healthcare to the defensive needs of the country (including plans for organization and functioning substitute hospital sites);
- abstracts of plans for material and personal services, in aid of functioning of substitute hospital sites.

## Tasks concerning public health safety

Daily functioning of public and nonpublic healthcare as well as public administration, regardless of permanent statute activity within the scope of public health safety, is based on the accomplishment of the following tasks:

preparation and updating plans of adjustment of public and non public healthcare institutions to the defensive needs of the country;

- flow of information between the organizational units in order to update plans concerning the adjustment of public and non-public healthcare institutions to the defensive needs of the country;
- frequent analysis of the plans by healthcare institutions obliged to implement defensive tasks;
- correction of the prepared plans, concerning the use of maintained medical sets intended for broadening the hospital base and creating

- substitute hospital sets;
- updating the operating plans for healthcare institutions in case of catastrophes and natural disasters;
- preparation of plans for providing medical help in case of catastrophes, natural disasters and other events;
- continuation of actions aimed at protecting the population against epidemic, contamination and infections;
- continuation of preparing healthcare organizational units for implementation of tasks for the needs of the Polish Armed Forces and allied military forces;
- functioning of emergency departments, based on personal and material benefits;
- updating information concerning possessing by healthcare organizational units sources of energy, water intake and heat source;
- efficiency of substitute sources of energy (power generators);
- frequent updating documentation concerning the national healthcare security stocks;
- providing and control of rational management of medicinal product and medical device reserves;
- supervision of subordinate healthcare units by the public administration, within the scope of defence preparations and readiness to act in crisis and emergency situations;
- preparation and updating plans of evacuation from healthcare institutions in case of threat;
- control (by the public administration) of the organizational statutes of healthcare institutions taking defensive actions, regarding documentation of task accomplishment.

In the plan concerning increased number of hospital beds (within the 'total number'), not only the number of 'surgical' and 'nonsurgical' beds should be defined but also the number of 'contagious' and 'observational-contagious' beds. With regard to informative needs, it is necessary to attach an appendix including a list of selected specialist medical equipment, containing the number of devices declared by general hospitals in their 'MZ-29' reports and additionally: respirators, cardiomonitors, infusion pumps and electric suckers.

The public administrative authorities should control (in the administered area) whether statutes and regulations of the healthcare organizational units implementing defensive tasks contain records on task accomplishment for the defensive needs of the country. In the case of lack of such recordings, actions should be taken to include such records into the above mentioned documents.

In the operating plans of healthcare units for catastrophes and natural disasters, special attention should be paid to:

- timeliness of plans of evacuation and functioning of evacuated healthcare units in substitute buildings - establish the principles of cooperation between rescue, emergency and civil defence services,
- ensuring adequate manning of the positions for defence in the healthcare organizational units,
- logistic protection of hospital needs at the level assuring proper functioning of the institution.

## Substitute hospital sites

For the plans drawn up by public and non-public healthcare organizational units obliged to provide hospital beds for uniformed services, a set of documents should be developed in cooperation with representatives of Departments for which these services are intended (Ministry of National Defence, Ministry of Internal Affairs and Administration, Internal Security Agency). This documentation should contain the binding procedures following a disposition of assigning beds for uniformed services and be based on 'Instruction for drawing up plans concerning assignment of beds for uniformed services', prepared by the Ministry of Health in cooperation with Inspectorate of the Military Health Service.

Taking into account other possible assignments of substitute hospital complexes, and abilities to provide medical services in buildings intended for ZMSz (Organisation of Substitute Hospital Sites), it should be considered that these complexes, depending on the situation, may work as:

- 1) evacuation sites for people who are:
  - a) injured or directly endangered after a dangerous event (e.g. fire, explosion or another local threat) in buildings or in the area (first degree evacuation),
  - b) preventively evacuated from the area and buildings, in case of imminent threat, e.g. connected with spreading of dangerous events (flood, chemical catastrophe, etc.) or threat of military actions in case of war perils (second degree evacuation),
- 2) quarantine and isolation sites, which are defined in the Act of 5 December 2008 on prevention and control of infections and contagious diseases in humans.

Increasing number of possible use of substitute hospital sites and fact that assigning medical staff with tasks related to, e.g. protection of ZMSz functioning, is based on the assignment to Civil Defence formations; in this process it is necessary to use guidelines presented in Section IV of the Act of 21 November 1967 on General Defence Obligation of the Republic of Poland, and, issued on this basis, ordinance of

the Council of Ministers of 25 June 2002 on detailed scope of responsibilities of the Chief of National Civil Defence, chiefs of regional, district and local civil defence.

## Economic Reserves

When planning implementation of tasks by healthcare organizational units, special attention should be paid to the possibility of independent actions related to administrative, economic and technical aspects (kitchens, laundries, steriles, etc.). In case of logistic protection of organizational healthcare units based on external services and companies, it would be reasonable to consider the possible continuation of services provided to the units during crisis situations, national risk and war, by entering into agreement with relevant service providers, also using the administrative procedures based on the Act of 23 August 2001 on organizing tasks related to national defence implemented by entrepreneurs.

When planning the use of national reserves, one should bear in mind that each medical set should have its own recipient and specific intended use, and ready plans concerning increased number of hospital beds and creating substitute hospital sites in the district should be consistent with the register of medical sets of the national reserves intended for districts.

On 29 October 2010 the Polish Sejm passed the law on strategic reserves. The Act entered into force on 5 February 2011, replacing the Act of 30 May 1996 on the national reserves. The new regulation introduced only one type of reserves, i.e. strategic reserves. Pursuant to the provisions of the new Act, the currently existing economic reserves created by the minister in charge of economic affairs, will become strategic reserves on the date the Act comes into force. As for mobilization reserves, within 12 months from the date the act becomes effective, the minister in charge of economic affairs will hold an inspection, whose results will decide what assortment and amount will be recommended to be included into strategic reserves. Within 24 months from the date the act comes into force, for the matters related to the management of mobilization reserves (within the meaning of the Act), the hitherto regulations are binding. Therefore, in 2011 all decisions concerning mobilization reserves (medical sets) will be made by the Minister of Health.

One should bear in mind that in case of making decision on a dislocation of reserves within the district area, the local authorities should always notify the regional authorities, who will make relevant arrangements with the Material Reserves Agency

and Department of Defence, Crisis Management and Medical Rescue of the Ministry of Health.

### Planning the distribution of stable iodine preparations (potassium iodide tablets) within interventional actions in case of radiation emergency event

The administrator of stable iodine preparations is the Minister of Health, who secures the demand at the regional level (governors). The number of stable iodine preparations, the place of their storage and distribution within districts and communities, is defined by district and village heads in cooperation with provincial governors in charge of the territory, and based on the number of inhabitants belonging to risk groups that should be first protected against radioactive iodine absorption.

Risk groups and iodine preparation dosage in individual groups (one tablet is equivalent to 25 mg of iodine) are presented below:

**Table 1:**

No.	Risk Group	Iodine dose (single)
1.	Neonates and infants younger than 3 months	12.5 mg (1/2 tablet)
2.	Infants older than 3 months and children younger than 2 years	25 mg
3.	Children from 2 to 6 years of age	50 mg
4.	Children older than 6 years and adolescents younger than 16 years	100 mg
5.	Pregnant women	100 mg
6.	Breastfeeding women, who by reason of the age group (mothers under 16 years of age) are qualified to thyroid protection (instructed to stop breastfeeding for 48 hours and use an infant formula).	100 mg
7.	Adolescents from 16 to 18 years and adults who, from medical recommendations, should be given prophylactic iodine preparations in case of radioactive contamination	100 mg

Pursuant to the Act of 29 November 2000 - Atomic Law, a detailed plan of preparing and distribution of stable iodine preparations in case of radiation events should be included in the plan of iodine preparation distribution for individual levels of governmental or local administration; the basic sites of iodine preparation distribution should be healthcare units, pharmacies, sanitary and epidemiological stations, schools and kindergartens. In special situations, a mobile distribution point should be considered.

Direct distribution of iodine preparations (interventional actions) should be supervised by a medical professional (e.g. physician, pharmacist, nurse, or medical rescuer). The number and location of points distributing iodine preparations will be determined by a local authority: no more than 5,000 inhabitants for one point of iodine preparation distribution. The methods transport of iodine tablets to distribution points within districts and communes are defined, in cooperation with the provincial governor, by district and village heads; the collected iodine tablets belong to national reserves of medicinal products.

In case of radiation hazard involving a district or commune, a decision to release the national economic reserves of stable iodine preparations is made by the provincial governor at the request of district or village head.

Other aspects of health safety management by government administration authorities in crisis situations

Regardless of tasks included in planning health safety, public administration authorities are obliged to ensure coordination of subordinate services (guard and inspection) as well as formation of armed forces, in at least three phases of crisis management (the other aspects of management during crisis situations).

#### **Prevention Phase: it also includes health prophylaxis.**

Preparation Phase: apart from the above aspects, it also includes tasks related to safety assurance

during (previously planned) actions, concerning other forms of community functioning, infrastructure and nature. It is assured by the crisis management plans and other, regarding civil planning, and actions related to equipment and training. It particularly concerns the needs connected with the process of evacuation of population at risk of other actions of humans or nature forces, not requiring immediate healthcare service. This population needs common, regular healthcare protection.

Reaction Phase includes task accomplishment, sometimes by means of a 'manual' control of individual elements, due to the specificity of a particular situation. Normal functioning of unthreatened population should be protected in the aspect of its social needs.

Reaching these targets is based on general tasks implemented mostly by public administration

authorities, or imposed by these authorities in the form of local regulations and agreements.

## Conclusion

Proper healthcare protection during mass events requires a cooperation between many specialist entities, as well as systematic and effective accomplishment of planned and scheduled tasks which often considerably exceed routine (or less frequent) procedures for governmental officials.

Thus, the process of continuous improvement is necessary with respect to both planning and accomplishment of tasks in specific circumstances. The most important aspect is, as usual, awareness of decision-makers and their ability to react quickly and firmly, also during improvised situations.

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