



MANAGEMENT OF RISK SITUATIONS

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ABSTRACT

Risk is the probability of an event occurrence at a certain moment with a negative impact on the population, territory, environment, cultural values and material valuables. The management of risk situations is necessary for any organization in which unforeseen circumstances may arise. The management of risk situations includes quantitatively expressing risk and its manifestation; risk assessment and risk analysis. Effectiveness in dealing with risky situation coordination is needed to be established between the management vertical and horizontal structures in the State. Preventing, controlling and overcoming the consequences impose an integral process of management and planning events. The requirements for growing professionalism in the management of all levels are obvious.

Keywords: management, disaster, risk, planning, management decisions,

INTRODUCTION

The management of risk situations is necessary for any organization in which unforeseen circumstances may arise. Risk is the probability of an event occurrence at a certain moment with a negative impact on the population, territory, environment, cultural values and material valuables. Any disaster, regardless of its nature and scope of manifestation is characterized by three main elements: surprise, time and threat.

Surprise is expressed not so much time for the start of the crisis (the suddenness, according to some authors, [1] as with the nature of its manifestation and running by others [2]. The development usually differs from expectations and the crisis caused events that are not expected.

Threat is any condition or trend in the external environment, which affects or will affect the activities of the organization and its results. They can be assessed and classified according to their seriousness of harming the organization and likelihood to happen with the help of

“The Matrix of threats”.

In the course of the daily activities of any organization some unforeseen circumstances can appear that may largely influence in making managerial decisions which include the following components:

- Management of the risk situation with its main points: determining the structure and content of the risk situation - risk analysis; determining the magnitude of risk - the risk quantification; making regulatory decisions concerning the discrepancy between goals and results obtained as a manifestation of risk;
- Assessing and overcoming risk.

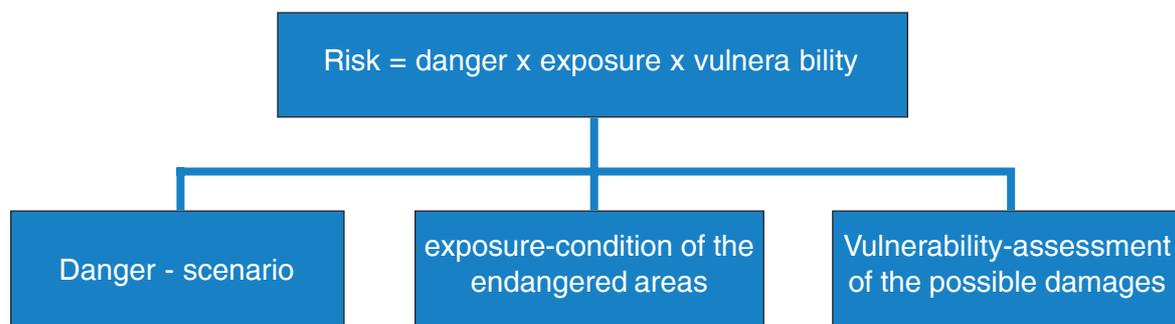
RESULTS AND DISCUSSION:

Risk Assessment is a process of collection, analysis and assessment of the available information to determine the acceptable levels of risks for the individual, group contingent, society and the environment. It includes the identification and characterization of the danger likely frequency, duration, volume and time of impact [2].

Risk analysis is a detailed study carried out in order to understand the nature of adverse consequences of an event, including human life, property and the environment. It can be defined as an analytical process that provides information about the likelihood of disaster and the consequences of an adverse event. [3]

The damages that can occur in an emergency situation depend both on the parameters of the hazard and the vulnerability of exposed people, infrastructure, ecosystems and others. People, flora and fauna, buildings, material and cultural sites are exposed to risk.. In its simplest form, the vulnerability is comprised of exposure (Who / what will be affected?) And sensitivity (how the affected items will be damaged?). The combination of danger and vulnerability leads to risk, defined as the probability of occurrence of some damage within a certain period of time. [4] (Fig. 1)

Fig. 1. Risk of emergency situation such as flood (Barredo, [5])



In the recent decades, disasters in Europe have become a growing topic of concern for citizens, public authorities, insurance companies, businesses and politicians.

The management of disasters is determined by a complex business of governing bodies of the appropriate management level [6]. Management is an integral process and consists of information process and organizational process. Information includes prevention process; forecasting and planning; development and utilization plans; publicity and information; assessment of the situation and decision / choice of options. Organizational process integrates maintaining operational readiness; study; storage and use of information; organization of insurance; monitoring the implementation of the activities.

Leadership and management in case of emergencies are carried out according to the conventional country management system [7]. In Bulgaria the management in emergency situations is carried out in two directions:

- Management system of state and local administration. Under the state (executive) power the control is vertical Council of Ministers - Ministry (whose portfolio is disaster) - Governor - Mayor of the Municipality - Economic site.

- Management system of specialized bodies and agencies.

In healthcare the medical insurance of the popula-

tion in emergency situations is carried out by: top management (management at the political level) - represented by the Ministry of Health and participates in decision making of national importance; coordinating management (medium level of management) - Regional health inspections and operational management - carried out by the heads of medical institutions. For an effective management coordination is essential. [8]

Management of events in risky situations:

Management is a focused activity, a process of impact on the sites of government (structures, forces, units) for the preparation of actions targeting efforts to achieve certain goals and completing assigned tasks.

Management is a combination of different types of principles, decisions and activities resulting in:

- Monitoring of risk factors;
- forecast and early warning of the occurrence;
- determining management objectives in a particular situation;
- action planning and use of forces and means;
- making decisions in the situation, guide the actions and control over the results of management;
- preparation and implementation of measures to overcome the consequences and achieve stability.

Management of events in risky situations goes through several phases. (Table. 1)

Tab. 1. Phases of management process

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Indication	Assessment of the crisis situation	Development of options for response	Planning	Stability restoration
Warnings			Execution	

Preventing, controlling and overcoming the consequences of imposing a single process of management and planning events.

In emergency situations, planning is a key step in the management of rescue operations. Success largely depends on well-developed, effective and comprehensive work plan. Planning is a complex set of events. Its drawing requires thorough analysis and preparation for an informed debate based on the huge amount of data. The planning includes resource planning, business planning and planning outcome [9]. There are different types of plans for risk situations: Plan ready for action; response plan; recovery plan; plan for miti-

gation. The plans identify priority projects and activities, outline responsibilities, provide time, include monitoring and risk assessment. [10] Planning is an indispensable stage in the work of the manager and is a key point, as it can save unnecessary delays and save lives, which is particularly important in emergency situations. [11]

Besides planning the management of life-events also covers *organizing, managing, leadership, coordination and control of the institution*, organization, institution, etc. to achieve a goal. The process of managing management (scheme "PMM") applies to all levels of healthcare organization and to all activities. Scheme "PMM" includes (Fig. 2):

Planning: to determine what will be done, when and how.

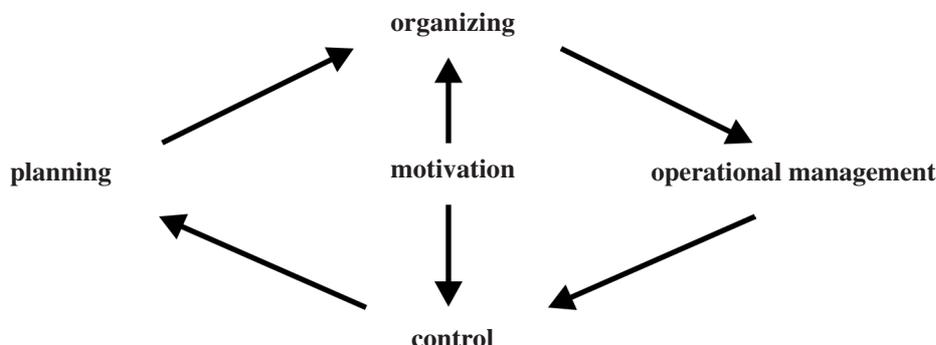
Organization: to provide the necessary resources.

Operational management: to define in detail the time and cost; to take measures and be guided.

Control: to compare achievements against the plan; to take appropriate action.

Motivation: inciting subordinates for quality and efficient work to achieve the objectives.

Fig. 2. Management process (scheme „PMM” in healthcare, 12)



The management of the activities carried out in emergency situations includes both traditional and specific elements:

- Action Plan before, during and after a disaster;
- Assessment of the effectiveness and testing of the plan;
- Change in the plan during a disaster;
- Good management organization;
- Effective communication;
- Data management;
- Response to the needs of the healthcare system. [13]

For the effective implementation of the plan and readiness to act in any situation the human resources of the organization are very important [14]. The selection of staff is essential to the management of the organization. According to Lee Iacocca, a very important quality of a manager is to possess the feeling of the time factor, because the correct decision becomes wrong, if taken too late. This is absolutely true in disaster situations where events are moving too fast. According to Akio Morita among the pillars of a manager, which gives an idea of the conceptual model of the head, is his highly appreciated ability to organize people to maximum dedication, and without the knowledge it is not possible to generate “the sixth” sense of the manager. Effective leadership is a function of the correct diagnosis of the situation that precedes the selection of one or another style by the Head, managers can adapt to any situation. Managerial styles are deeply personal, human skills. Openness and willingness to adapt are perhaps the most important prerequisites for success in any new venture.

Organizing workflow is important for the efficiency and quality of work. The manager and his subordinates should be a team, because only when there is this feeling subordinates will take effect by the Head. [15] The head must be confident that it has a sufficient number of people in his team. Each of them must be qualified enough to undertake the task, which is inserted and be able to find a solution to the problems that will almost certainly arise dur-

ing the workflow. One problem for management is mutual influence between managers and subordinates (theories of “transformation” guide). Only after achieving activity on behalf of both nations and others organization protection can be achieved in emergency situations. This is a factor for dynamic leadership, which is important in disaster situations. Tanenbaum, Schmidt, Hersey-Blanchard, Vrum-Jensen account the influence of the environment (situation) on relations manager-subordinate and general ideas of leadership. Quality situational theories of leadership (Fiedler, Yedar) display situation (situation, environment) as the main factor determining the leadership style that is influenced and depends on many of the qualities of the head. [16, 17]

CONCLUSIONS

- The model of management indicates that any organization (health and each other) exists not in isolation but in particular for her external environment is changing in emergency situations.
- Questions on the management of disasters appear an advantage of central, together with regional and local governments.
- Preventing, tackling and overcoming the consequences of disasters impose a single management process.
- The sooner problems are identified, the faster solution would be found for them.

CONCLUSION:

The effective response in a crisis situation requires taking the right decisions in terms of chaotic and emotionally charged environment. Management of disasters can be successfully implemented on the basis of prior information, events planning and preparation of the teams, as well as training and assistance to citizens. Health policy, planning and management are interrelated and interdependent. The requirements are obvious for growing professionalism in the management and use of non-standard approaches in the management of every area of social life at risk situations.

REFERENCES:

1. Chakurova R, Mihailova II. General characteristics of disasters, Disaster medicine. *Sofia: Arso*. 2011, p 17. [in Bulgarian]
2. Sapundzhiev P, Kostadinov R. Manual management of medical support in emergency situations, *Plovdiv: Ik-VAP*. 2010. p 20, 21. [in Bulgarian]
3. Levees and National Research Council. The National Flood Insurance Program: Improving Policies and Practices. *Washington, D.C.: The National Academies Press*. 2013. p 230-250 [Internet]
4. Merz B, Thieken A, Kreibich H. Quantification of Socio-Economic Flood Risks. In *Flood Risk Assessment and Management: How to Specify Hydrological Loads, Their Consequences and Uncertainties*. Editor Schumann AH. *Springer Netherlands*. 2011; Capter 11:229-247. [CrossRef]
5. Barredo JJ. Major flood disasters in Europe: 1950-2005. *Nat Hazards*. 2007 Jul; 42(1):125-148 [CrossRef]
6. Mihailova I. Management of medical insurance, Disaster medicine. *Sofia: Arso*. 2011. p 457. [in Bulgarian]
7. Todorova D. National bodies and structures for civil protection of the Member States of the European Union, Socio-economic aspects of disasters and protection of the population. *Sofia: CP Center*. 2012. p 44-50. [in Bulgarian]
8. Zlatanova T. Management Activities of General Practitioners in Bulgaria. Editors: Jeliuzko Hristov, John Kyriopoulos, T.C. Constantinidis. In *Public Health and Health care in Greece and Bulgaria: The challenge of the Cross-border collaboration*. *Athens: Papazissis Publishers*. 2010. p 657-663.
9. Shipkovenska E, Popova S, Petrova G, Gladilov St, Benisheva T, Popova Cr, et al. Scientific research methodology. *Sofia: EkoPrint*. 2013. p 63-77. [in Bulgarian]
10. Rasid H, Haider W. Floodplain Residents' Preferences for Water Level Management Options in Flood Control Projects in Bangladesh. In *Flood Problem and Management in South Asia*. Editors: Qader Mirza MM, Dixit A, Nishat A. *Springer Netherlands*. 2003; Capter 5:101-129. [CrossRef]
11. Vodenitcharov C, Popova S, Mutafova M, Shipkovenska E. Social Medicine. *Sofia: Gorex Press*; 2013. p. 482-487. [in Bulgarian]
12. Yanachkov Iv, Pencheva M, Alvasov B. Management in Health. *Sofia: Loren Publishing*. 1999. p 39-40. [in Bulgarian]
13. Wiedrich TW, Sickler JL, Vossler BL, Pickard SP. Critical Systems for Public Health Management of Floods, North Dakota. *J Public Health Manag Pract*. 2013 May-Jun;19(3):259-265. [PubMed]
14. Prodanova J, Zlatanova T, Cheshmedzhieva A, Zlatanova R. «Health» workplace, wasted resources or investments. First National Conference of the Bulgarian Society for the Study and combat stress, with international participation, *Plovdiv*. 2003. p 331-335. [in Bulgarian]
15. Ivanov I. Key points of success in management, *Fundamentals of Management*. *Plovdiv: Macros*. 2003. p 324. [in Bulgarian]
16. Petkov A. Management and Health Management. *Kazanluk, Irita*. 2009. p 8, 17. [in Bulgarian]
17. Ivanov I. Situational approach, *Fundamentals of Management*. *Plovdiv: Macros*. 2003. p 68. [in Bulgarian]

Please cite this article as: Todorova D, Mihailova T, Etova R, Garov S. Management of risk situations. *J of IMAB*. 2016 Jul-Sep;22(3):1198-1201. DOI: <http://dx.doi.org/10.5272/jimab.2016223.1198>

Received: 04/05/2016; Published online: 01/07/2016



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