SECURITY

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PUBLIC HEALTH SECURITY IN CRISIS SITUATIONS. BASIC PREMISES AND STRATEGIC OBJECTIVES

Interest in public health has been changing in recent decades. It results from the peculiarity of emerging issues and from difficulties in creating a uniform definition of public health. Uptill the second half of the 20th century all actions were aimed at the prevention of infectious diseases by improving sanitary and hygienic conditions, against a background of remedial medicine. Together with the growing number of long-term cardiovascular diseases and cancer in developed countries, which cause early morbidity and deaths, making them statistically more important than infectious diseases, it was decided that they should be limited by eliminating such factors as: high-fat diet, lack of physical activity, hypertension, smoking, alcohol abuse, bad working and living conditions, and not only by the development of treating methods.[1] The resolution of the World Health Assembly "Health for All by the Year 2000" influenced the creation of a new aspect of public health. Attention was paid to factors connected with the life-style and the physical, social and economic environment people lived and worked in. Professor Julian Aleksandrowicz called for a holistic approach to health and disease.

In 1986 the World Health Organization, on a motion of the Canadian government, introduced the "new public health" policy with purpose to promote healthy life sty and preventing early morbidity, death, and disablement caused by long-term social diseases. The complex formulation of health issues in the "Ottawa Charter" defined new tasks for governments and public health promoters. In 1988 WHO, adopted after the Committee of Inquiry into the Future Development of the Public Health Function in the UK, the definitions: "public health is the science and art of preventing diseases, prolonging life and promoting health through the organized efforts and informed choices of society".[2]

The contemporary definition has been modified by experts from Western Europe, Japan, the USA, Poland and many more. Without embarking on detailed speculations, it is worth concentrating on the essential tasks to counter environmental threats: epidemic prevention and disease spread; environmental threats prevention; injury prevention; promoting and encouraging healthy behaviour; reacting to natural disasters and re-

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[1] J. Konieczny, *Bezpieczeństwo zdrowia publicznego w sytuacjach kryzysowych. Podstawowe założenia i cele strategiczne*, in: *Zdrowie publiczne. Aktualne uwarunkowania i zmiany*, (ed.) M. D. Głowacka, Poznań 2011, p. 87.

[2] Cit. after: C. W. Włodarczyk, *Zdrowie publiczne w perspektywie międzynarodowej. Wybrane problemy*, Kraków 2007, pp. 21–27.

sponding to their efects; providing access to sanitary benefits.[3] Conduct of these tasks requires the participation of the public administration, health services, inspection agencies and security services, non-governmental organisations, social groups and individuals, led by appropriately trained public health leaders.

PUBLIC HEALTH IN PROSPECTIVE THINKING AND ACTING

We cannot live in the world "after 9/11",
thinking at the same time "pre-9/11".

– Adapted from Angela Thirkell, 1933

Using the appropriate research instruments makes it possible for the World Health Organization to check not only information about long-term diseases but also to estimate what kind of difficulties the diseases cause for society. The assembled figures for so-called life quality factors are the base for elaborating epidemiological prognoses. The DALY (disability adjusted life-years) factor is one of the most important. This factor shows the number of years lost through premature death or damage to health following injury or disease. It can be analyzed according to different criteria: disease, region, age, sex, and the like. It also allows the results of diseases to be traced and recorded and facilitates preventive actions. The changing tendencies in morbidity as a result of predicted causes of breakdown in 2020 are shown in the table below. Morbidity of infectious diseases such as diarrhoea, pneumonia, or tuberculosis will decrease relative to long-term civilisational diseases. Mental illnesses, especially depression, show an upturn and are in second place in the world scale. Cardiovascular diseases are still in first place and transport accidents have moved to third place.

Table 1

Main Causes of Breakdown (DALY)

Place	1990	Prognosis for 2020
1	Pneumonia and other respiratory diseases	Ischaemic heart disease
2	Diarrhoea	Depression
3	Perinatal disorders	Transport accidents
4	Depression	Ictus
5	Ischaemic heart disease	Emphysema and long term bronchitis
6	Ictus	Bronchitis and other infectious respiratory diseases
7	Tuberculosis	Tuberculosis
8	Measles	Wars
9	Transport accidents	Diarrhoea
10	Inherent defects	HIV

Source: B. R. Bloom, *Zmiany potrzebne od zaraz*, "Świat Nauki" 2005, No. 10, p. 75.

[3] P. Jendroszczyk, E. Wysocka, M. Kozman, *Rolnicy stracą miliardy*, "Rzeczpospolita", 4–5.06.2011, pp. B2, B3.

The emerging new infectious diseases (Table 1.) to which people have not yet developed immunity, is an unknown of epidemiology. Epidemiologists are afraid of avian influenza, as well as the use of dangerous biological factors in terrorist attacks.

New infectious diseases that emerge from time to time cause panic, which often destabilises health policy, disunites countries and political parties, at the same time causing crisis situations. An example here is the incidents in April and May of 2012, when fatal infections of the EHEC bacteria, causing complications similar to HUS syndrome (haemolytic-uremic syndrome) which can lead to acute renal failure, resulted in intervention at the European Union level. International trade in vegetables has collapsed. According to estimates, the first days of the panic caused the loss of 1 billion euro among the EU producers.[4]

Table 2

New infectious diseases

1973	Rotavirus Diarrhoea
1977	Viral hemorrhagic fever caused by Ebola virus
1977	Legionellosis (Legionnaires'disease)
1981	Toxic shock syndrome (TSS)
1982	Lyme borreliosis
1983	AIDS
1991	Tuberculosis resistant to medicines
1993	Cholera caused by 0139 serotype
1994	Cryptosporidium parvum infection (epidemic in Wisconsin)
1998	Avian influenza
1999	West Nile Virus
2003	SARS (severe acute respiratory syndrome)

Source: B. R. Bloom, *Zmiany potrzebne od zaraz*, "Świat Nauki" 2005, No. 10, p.77.

The tragic incidents on 11th September 2001 in the United States, 11th March 2004 in Madrid and 7th July 2005 in London, numerous natural disasters, transport and industrial disasters, and morbidity of non-specific infectious diseases have defined new challenges for public health in its pragmatic dimension. The assumptions have changed radically. A lot of traditional public health programs and resulting action have been placed behind. The emerging, new professionalism points to process thinking, which includes constant monitoring, preparation for rapid response and ability to standardise a situation, and evaluate actions in order to update legal and organisational solutions. It also involves logistics consistency in managing crisis situations through forward planning and actions, created during games and complex exercises: "think about the unthinkable". The increasing financial and logistical shortcomings which are directly connected to medical, social, psychological and general humanitarian help, are defining new challenges for all sectors of public life that respond to individuals in crisis situ-

[4] L. Rowitz, *Public Health for the 21st Century*, Sudbury 2006, pp. 4–8.

ations, above all, for the leaders of the broadly understood public health authorities. The most important things are: preventive action realised by sanitary services, veterinary services, environmental protection and labour protection; organising vaccination programs; introducing environmental protection projects; undertaking initiatives connected with mother and child care, realising educational programs preventing unsolicited pregnancy and other actions resulting from the current situation in public health in order to secure a better quality of life for a society.

Public health leaders have to deal both with everyday problems and also with sudden biological, chemical and radiation threats, fires, explosions and other incidents causing multiple, multi-organ injuries, and also preparing for crisis situations. The solutions to these problems must be preceded by well-judged action. Access to information sources and expert knowledge and opinions are necessary in order to persuade the decision-makers and public opinion not to disregard the need to implement appropriate measures in crisis situations and to take into consideration all those things that could help the public health administration function effectively in everyday life. Comprehension and awareness of this should be created by formulating questions and obtaining answers concerning health security. Some example questions, as suggested by L. Rowitz are:

– How many terrorist acts have occurred in our communities in the past year?
– How many infectious diseases, such as: SARS, monkeypox, West Nile fever, pertussis, or others have emerged recently?
– How many people have died as a result of influenza complications in the past year? (most probably because of the lack of appropriate vaccines)
– How many teenage girls have become pregnant in the past year?[5]

A lot of factors have an impact on public health, e.g. socio-economic determinants, stress, health behaviour, physical environment, transport conditions, working conditions, stimulants, nutrition, social support, health promotion or health care. The most important is the quality of life of the community at a local and regional level. Establishing this helps public health leaders decide which of the factors are more important and which questions concerning the public health sector should be answered. The appropriate preparation and respons to situation in which public health is in danger has become the main priority in recent years, activating the relevant financial measures to address the resulting tasks. Of course, all the speculation on financial measures is fundamental to developing public health infrastructure. That is why leaders have to become the architects and navigators of the system. An appropriately prepared leader in the public health sector has to deal with crises appropriately, in both normal and unforeseen situations. The leaders must have the knowledge and practical skills in making decisions suitable for the factual circumstances.

Being prepared means being ready to act. To cope with their tasks, public health professionals should be trained not only on the basis of traditional knowledge of public health, but also in the area of risk management, health sacurity management and crisis management. Experiences from last few years have shown that knowledge and skills in

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[5] M. Lichtweld, L. Rowitz, J. Cioffy, *The leadership pyramid. Leadership In Public Health*, 2004, No. 6(4), pp. 3–8.

this area are insufficient. The approach to public health represented by remedial medicine is still observed: focusing on individual diseases and their treatment. In Poland, none of the Medical Universities conducts classes on crisis management, and courses on disaster medicine are conducted in the form of 15–20 hours of lectures in which there is no connection made with public health and crisis management. With the closure of the Military Medical University and elimination of military lecturers in civil universities, medicical, nursing, public health and paramedic students receive practically no training in crisis situations or mass disasters. Also the majority of doctors and nurses have almost no knowledge or very little knowledge in this regard. The importance of this is only recognised in health care management departments.

Public health leaders know that their efficacy depends mainly on the organisation of the public health system, its infrastructure, staffing and financing. Leadership is essential for reacting in a crisis situation, but the authorities also require ongoing building of teams and collaboration in order to prepare overviews and strategies, action plans, public health security plans, and then supervising their realisation, cooperating with the organs of public administration, health services, incpection agencies and security services, educational institutions, the mass media and non-governmental organisations.

NEW LEADERSHIP PYRAMID IN PUBLIC HEALTH

Effective leaders learn throughout their whole lives. Therefore, it is worth looking at education and learning as a sequence. In the last twenty years, interest in educating public health professionals and health care management has risen significantly. It results from the belief that an effective management means building effective public health system. The differences between motivating profit in business and social justice, which determines the structures of the majority of public health institutions, remain controversial. If we observe the public health system and take into consideration the challenges resulting from social and constitutional transformations, we can notice the importance of management from a new perspective.

Leadership in the public health sector can be defined as "creativity in acting".[6] It is the ability to see future conditions in the present, while at the same time learning from the past. Therefore, we return to Hippocrates trinity: "it is necessary to talk about what already happened, recognise what is happening and foresee what will happen".[7] It requires flexibility to put this vision into practice, through sharing this vision with others. Leadership in the public health sector is connected to clearly establishing actions tailored to social needs and an awareness that public health must be a common duty of society. The mission, vision, tasks and functions must be generally known. The managers must protect crucial social values and always declare the high ethical standards in their practice. Moreover, they should be prepared for decision making in crisis situations, should educate themselves and practice the skills necessary in public health security.

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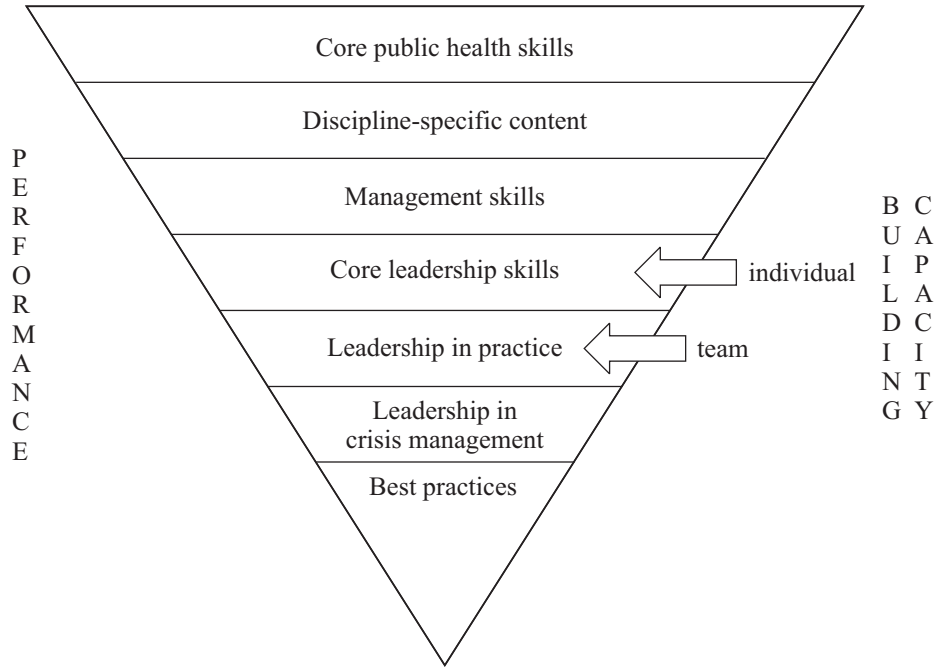
[6] L. Rowitz, *Public health leadership: Putting principles into practice*, Sudbury 2001, p. 7.
[7] Hippocrates, *Wybór pism*, Vol. I, Warszawa 2008, p. 50.

Figure 1. New leadership pyramid in public health management



Source: L. Rowitz, *Public Health for the 21st Century: The Prepared Leader*, Sudbury 2006, p. 8.

Figure 1 shows the leadership pyramid as an inverted triangle. Each level of the pyramid describes the range of essential interdependent requirements and competences. The triangle is inverted to show the range of fundamental skills needed in the public health sector and which the professionals on each level of management must show. They need be equipped with clear legal solutions and financial measures. The system's management quality and action standards should be constantly monitored and the obtained evaluations used for improving actual circumstances.

Training is key to the gaining knowledge and skills necessary for creating this infrastructure. The centre of the pyramid highlights the importance of these practices. Business communities are not afraid to discuss the strong and weak points of their company or organisation. The public health sector should follow their example. Quality assurances may therefore be defined by the following formula:

Quality improvement = leadership competences as evidenced by best practices +
+ high performance expectations + strategic capacity building

We can use different formulae to understand this new approach within the pyramid better. The first level defines the key skills useful in the public health sector. People employed in this sector should know the rules, functions and management techniques confirmed by certificates issued by universities and institutions which obtained accreditation from the civil services responsible for health security. The range of competences for this level of the pyramid has been developed by many different organisations. This

means that the skills will be required from every worker in the public health sector: doctors, nurses, lawyers, economists, political scientists, sociologists, psychologists, computer scientists, engineers, employees of health services, inspection agencies and security services. The main message on the second level is the rule of convergence, that means using knowledge and skills of different disciplines to improve the results of practical measures. It is worth adopting business practices here.

The skills which are necessary to attain the appropriate competences on the first two levels of the pyramid are technical. When a worker from the public health sector moves to the third level of the pyramid, the tasks which he is supposed to perform apply to strengthening the efficiency and efficacy of the system. He takes the role of leader, from whom management competences such as human resource, knowledge, time and financial management, are required.

Moving from management to leadership is not easy. Firstly, there are significant changes when switching systems. A genuine manager "looks inwards into" the organisation to make sure that it is functioning effectively and efficiently. The leader looks around and is aware of the rules of functioning of the public sector in society on a regional and national level. Additionally, the technical skills required on the first and second levels and the skills directed at the administrative operations of the third level have become subordinated to people and evaluation of their competence. The basic criterion for leader evaluation is the efficiency of the systems they create, not necessarily with the use of traditional medical methods.

The incidents of 11th September 2001 changed the tasks and functions of public health. Specialist in the field of bioterrorism, disaster medicine and crisis management began to play a crucial role in the public health sector. In the changing priorities, appropriate preparation and response have become new challenges for public health. Public health leaders have noticed that new skills are essential to be able to deal with crisis situations, not only in the area of crisis management skills but also in terms of health communications skills during crisis, forensic epidemiology, hospital management in crisis situations and crisis negotiations. New strategies of cooperation with families and critical incident victims, health security stations and officials and health inspectors are needed. The competences of people managing these conditions differ from traditional managing skills and allow operating in a constantly changing environment.

The presented leadership pyramid shows the key directions of development of this complex, new approach to preparing public health leaders. The leaders will have to move between the levels on their own in developing their individual, collective, social and professional skills. The development of leadership becomes nothing more than a long-term learning process, and being aware of the challenges brought by new structures of public health.

THE ASSUMPTIONS OF HEALTH SECURITY STRATEGY

There is an urgent need for political, social and cultural integration in the face of the new concept of health sacurity based on indicators of efficiency and standards for measuring the preparation levels for health risks which have been experienced in the past and

which may be faced in the future. Therefore, it is necessary to formulate the health safety strategies in order to protect people's health in emergencies and direct the national efforts to minimization the risk which is associated with the wide range of potential large scale accidents, which endanger citizens' health and conditions at home or at work. In this context: "health security is attained when the country and the citizens are prepared for life and health security in normal conditions and in crisis situations through constant monitoring of threats, conducting appropriate prophylactics, undertaking essential action in order to rescuing people, property and the environment and providing injured parties with access to proper treating centres (trauma, burns, poisoning treating, rehabilitation, psychological centres) and restoring the environment to a safe condition".

The formulated health security strategy requires the commitment of the public administration (governmental and non-governmental) and health security, officials and health inspectors, the academic and scientific community, the education sector, non-governmental organisations, individuals, families and society as a whole. Even though the active and lasting participation of citizens in essential to achieve national health security, it is unreal to expect that individuals and families can complete all the required tasks to prevent, protect and react to unusual incidents.

Taking advantage of the experience of the United States, it is worth presenting the frameworks of the National Health Security Strategy, which can be used in conceptual work on Polish Health Security Strategy.

The tasks stated in the Strategy come down to realising two main aims: building the ability to regenerate of the society in the aftermath of unusual threats, and strengthening and maintaining the health security system in crisis situations. Here, the traditional solutions of health care and public health are exceeded, developing collision-free access to health security and integrated interdepartmental human resources, information and logistics (figure 2).

A. Strategic objectives

The main aims are detailed in the operational abilities which describe what must be done when filling the gap in national health security through the next four years, and the ongoing improvement of the health security system in the longer term.[8]

The operational abilities may be understood as health securiy 'active modules', individuals, family, society (together with private sector and non-governmental organisations) and government administration which undertakes prophylactic, security, rescue and treatment actions suitable to the threats.

When elaborating the aims to be realised, the solution to the following problems must be taken into consideration:

– *Health monitoring*: constant data gathering about the state of human health, processing the data and information into knowledge and sharing the diagnosis with the public administration and society;

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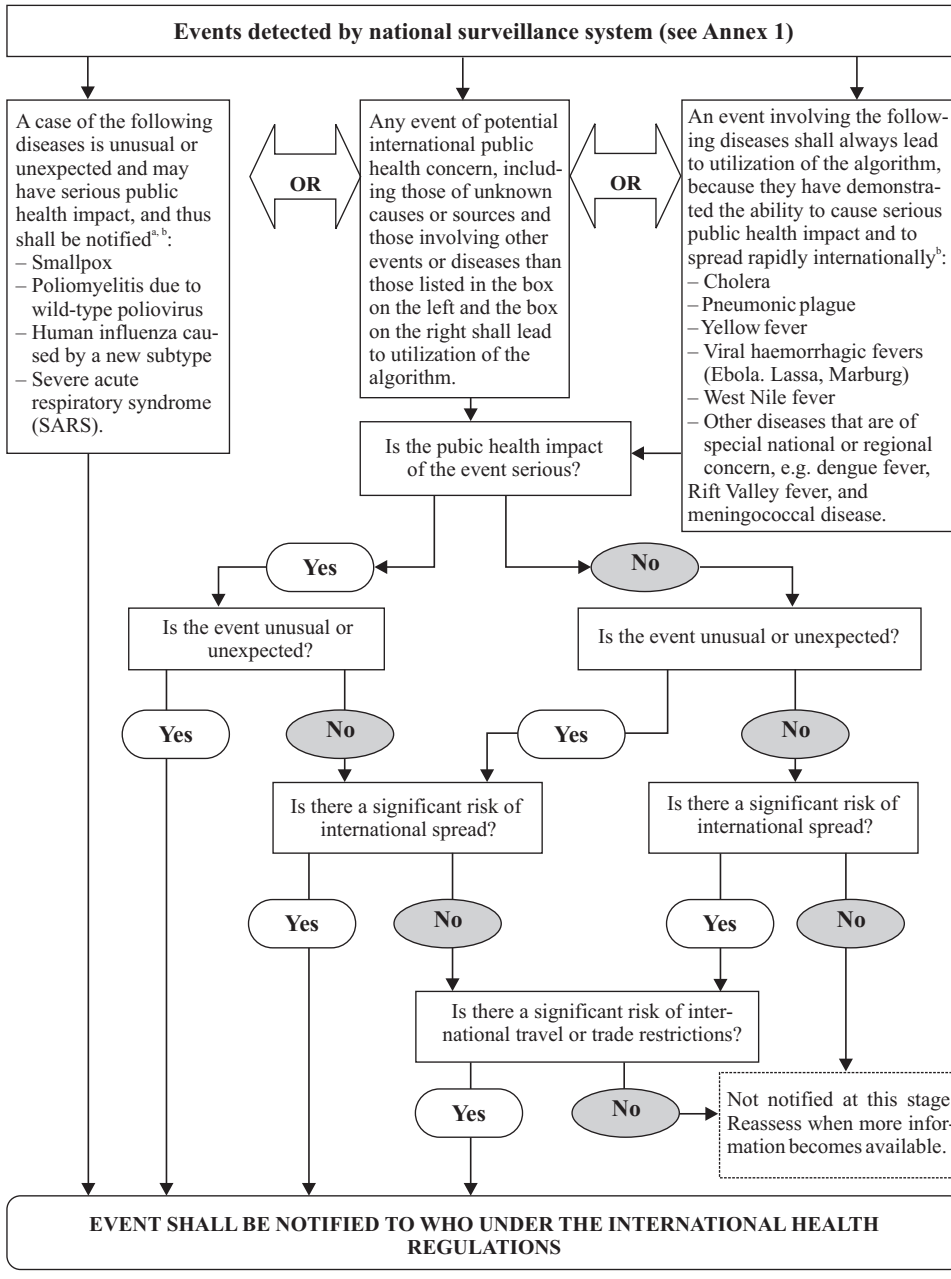
[8] *National Health Security Strategy the United States of America*, U.S. Department of Health and Human Services, Washington, December 2009; and J. Konieczny, *Zarządzanie w sytuacjach kryzysowych, wypadkach i katastrofach*, Poznań 2001, pp. 116–121.

Figure 2. National System of Monitoring Infectious Diseases

DECISION INSTRUMENT FOR THE ASSESSMENT AND NOTIFICATION OF EVENTS THAT MAY CONSTITUTE A PUBLIC HEALTH EMERGENCY OF INTERNATIONAL CONCERN



[a] As per WHO case definitions.
[b] The disease list shall be used only for the purposes of these Regulations.

Source: http://www.pzh.gov.pl/ihr/przepisy_zdrowotne.html# (18.09.2012).

- *Creating situational awareness*: situational awareness includes an active, constant and current decision-making 'loop'. In the context of emergencies, operational situational awareness uses the information directly connected with the threat and with the resource mobility of the health security system in terms of prophylactics, preparation, response and loss regeneration. The ability to use different sources of information becomes necessary; efficient use of suitable IT systems (diagnostics laboratories, epidemiological investigation) and means of exchanging and coordinating data. Situational awareness requires not only adequate information but also the ability of interpreting and using it. The decisive people must be able to identify, and recognise threats and examine their outcomes;
- *Integrated actions in crisis situations, mass accidents and catastrophes*: health security units form the basis for the critical response in a national health security system (HSS). This system should provide fair access to health care at basic and specialist levels, capable of taking action in sudden emergencies according to actual state of medical knowledge. The measures taken result from the specificity of the incident, be that fire, chemical accident, dangerous infectious disease, and which determines the tactics and defines the essential human resources and logistics needed. The participation of many organisational units from different administrative entities, including officials and health inspectors or non-governmental structures, requires efficient coordination and integrated management to be in place, as well as fully engaged health care and other rescue units. The following scope of operation is required: coordination, lifesaving, medical rescue, victim identification, hospital assistance, psychological, social and legal help;
- *Organising effective communication*: experiences gathered in different unusual incidents show the need to organise effective communications during the response and liquidation phases. Indeed, effective communication between rescuers themselves and between rescuers and society in the preventive, preparatory, response and restorative phases defines the health security system's efficiency. Effective communication is a multi-directional term which includes psychological, sociological, legal and technological elements. From the point of view of social communication in a crisis situation, information is given before potential crisis incidents, and then during and after completing outreach activities;
- *Promoting effective preventive operations*: the reaction and restoration process will be more effective if we take preventive actions earlier – planning, organizing medical equipment, preparing procedures for health security units and rescue teams. Preparation in the case of unusual threats includes disposing suitable human resources, information and logistics (transport, connections, medicines, vaccines, medical equipment, provisions) at your disposal. A common vision of all entities connected with medical prevention in mass accidents and catastrophes must be prepared (SWOT, PEST method);
- *Preventing unusual environmental threats*: growing international mobility and incrising population increase the risk of new infectious diseases, bioterrorist threats and ultimately epidemics emerging. There is an urgent need for developing and implementing integrated monitoring of biological threats against people, animals and plants. Also efforts to modernise food, plant and animal security systems are necessary, which will help to define critical points in the production chain;

– *Planning response and health regeneration procedures in the aftermath of accidents and catastrophes*: national and international experiences gathered in different natural disasters show the weak preparation of public administration for outreach activities in the fourth phase (restoration) of crisis management. The long-term effects on the health of the rescue teams and victims can be seen in a range of psychologal research and, directly, on professionals in the field of emergency medicine. Regeneration after incidents should be included in planning and should begin with the rescue operation. The main aim should be to return society to the state it was in before the incident;
– *Developing and international cooperation in terms of continuous development of the HSS*: in a globalised world where people and objects travel by air, many production processes are spreading across many countries. Food is imported from one country to another and health security depends on the health security of other members of international community. As many experiences show, infectious diseases know no borders. Therefore, international cooperation in terms of health security becomes a huge challenge in the face of emerging threats: biological, chemical, nu clear and other dual-use substances. Learning from the experiences of other countries highly reasonable, in both practical and diplomatic terms. A state should also estimate what kind of international support is available and on what conditions;
– *Integrating systems supporting national health security*: nowadays, national health security resources are thinly spread and limited. There are no legal regulations in force concerning crisis infrastructure in terms of health security and rescue operations. There are no suitable organisational solutions in terms of mobility of human resources and logistics. No scientific researche has been conducted, education in this area is only partial and the available knowledge is mostly not current.

B. Health security strategy supportive technologies[9]

Advanced IT systems have an important impact on the ongoing improvement of the HSS and crisis management. They include the systems for conveying information via voice and text, IT systems (data storage and information searching) and systems for presenting data. Those include specialised techniques supporting operational activities associated with incidents requiring exceptional technological capabilities.

The continuous development of science and technology is an integral element of improving the HSS. Research into strategic development has confirmed that improvements are taking place. Systems are based on scientific and technological standards which have an impact on a state's ability to deal with local crisis situations, preventing them, responding to them and removing their results. Introducing all the new scientific and technological solutions which relate to handling crisis situations will require long term cooperative efforts from all HSS partners.

The HSS demands new solutions from the fields of science and technology as well as reduced costs, which are outlined in the following key principles:

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[9] J. Konieczny, *Zarządzanie w sytuacjach kryzysowych, wypadkach i katastrofach*, Poznań 2001, pp. 116–121; and L. Drenan, A. McConnell, *Risk and Crisis Management in the Public Sector*, London–New York 2007, p. 6.

– *Operativity and compatibility*: systems must cooperate with each other, or at least not clash, if different administrative organs and HSS integrated organisations are to be successful in local crisis situation management. Operativity and compatibility can be achieved thanks to such tools as common communications standards in conveying data, standard formats of digital data, standardised equipment desing;
– *Technological support*: allows organisations using the HSS increase the quality of all aspects of crisis situation management and rapid reaction. Technological support also significantly influences the quality of crisis operations and in this way promotes research and development programs, which account for the long-term national investment in future crisis management ability;
– *Technical standards*: compatible systems and technologies that are based on the requirements prepared by different emergency services. Key national systems must be operative and compatible across services, irrespective of administrative, geographical and practical limitations;
– *Broadly understood requirements*: the need for new technologies, procedures, protocols and standards in order to improve crisis situation management has been recognized on the level of the accident as well as on the level of local, regional and national structures. Because the needs most probably exceed the available measures, the health security system provides a mechanism for indicating them, designing their importance and setting out priorities from regional to national level. The needs are indicated by the analysis of life cycles, coordinating research, training and evaluating actions;
– *Strategic planning for research and development)*: strategic planning refers to the development of future technologies which will beneficially influence abilities to prepare for, prevent or respond to events and later to deal with the damage or which will decrease the costs of current solutions. In order to provide efficiency, Integrated HSS Centre operating in tandem with a governmental security centre will cover the needs of all the agencies, private sector subjects and non-governmental organisations, working within HSS on the national, regional and local levels.

C. Science and technology in crisis management

Support technologies enrich the possibilities for crisis situation management or decrease costs, due to the three priorities in their use: scientific support of operations, technological standards and research and development.

Scientific support of operations means using, and if need be, activating the scientific and technical resources used in order to conduct the action associated with crisis situation management. The scientific support of operations is based on the scientific and technological expertise of universities, scientific centres and other organizations. Planning for this category of support is carried out each area of governmental actions through the HSS alarm procedures.

Efforts directed towards technological standardisation enable the development and coordination of the technological standards functioning within the health security system in the way that the personnel, organisation, communications systems, IT systems and other equipment cooperate efficiently and can supplement each other, not acting, at

the same time, against each other. The task of an SBN Integrative Centre is to coordinate and set technical standards for all users. The following rules define the standards:

– *Action implementation measure as the basis for setting standards*: this includes collecting information on particular elements functioning in the real world. It is the most reliable basis for setting the standards which provide the safety and success of a mission conducted by rescue teams and chief operations officers. In the process of outlining the technological standards the infrastructure for overseeing the curse of operations defines the instructions, action standards, tests, qualification requirements of the personnel and training procedures. This to ensure all the organisations managing dangerous situations use the available equipment as effectively as possible;
– *Common action implementation standards*: stating the common standards is based on the current approach which aims at the standarisation of operational equipment and systems according to binding standards of security and rescue team units;
– *Testing and evaluation conducted by independent experts*: technological criteria are formed as a result of comparison of the results of equipment tests, obtained in private and public research laboratories with the technical standards currently in force;
– *Technical instruction for training rescue teams concerning the use of equipment:* data from analysts, equipment designers, users and experts on standards state the technical instructions, based on scientific data, for training rescue teams on how the use the available equipment properly. The training instructions, which are based on accident management protocols, instruments and systems, reflect the threats, susceptibility of information to deformation, the equipment and system capabilities, as well as the whole scale of possibly foreseeable conditions accompanying an operation. Moreover, the conduct of a rescue operation is measured and the results gained by applying the training instructions will provide a possible method for measuring the efficiency of the system and equipment.

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The insights and remarks presented here concerning public health in the face of a changing socio-economic situation and emerging threats do not exhaust the subject but states the directions for building the potential related to modern leadership which will have to deal with new difficulties and new crisis situations. The considerations herein enable the following conclusions to be reached. It is important to connect the aspect of the lifelong education of public health leaders with the constant need of strengthening the public health infrastructure in order to improve health. The main aim is the development of leadership skills and educating leaders who will be ready to react appropriately in the face of social threats. Leaders abilities and operational readiness are of more importance than simply drawing up more plans or conducting further training.

One of the conditions of surviving any crisis is strong leadership. In time of insecurity, it is necessary to convey reliable information and have a reasonable action plan in place. Apart from information, 'emotional leadership' is also essential. Rational arguments are often not persuasive, whereas emotional appeals can be. Leadership after a crisis should be a caring leadership which gives people time to regather themselves. It

should be discrete maybe even withdrawn, so that people could take responsibility for their actions.

In a changing reality, national security, emerging threats to health and life and social dissatisfaction with access to medical services, it is necessary to have a health security strategy, which states the chances and challenges, risk and threats, and which treats health as a social capital of national security.

ABSTRACT

In recent years the approach to public health has changed, making the adoption of a uniform definition difficult. This is forced by the growing number of extraordinary dangers: terrorist attacks, natural disasters, dangerous invading microbial and virus diseases, bioterrorist, chemical and radiation threats, transport accidents and disasters. These threats create crisis situations which are very complicated and define new challenges for the authorities and public health leaders as well as for officials and health inspectors. In the speculation below, an attempt has been made to present a new pyramid of leadership in the public health sector in crisis situations, the assumptions and strategic objectives of a health security strategy are stated.

BEZPIECZEŃSTWO ZDROWIA PUBLICZNEGO W SYTUACJACH KRYZYSOWYCH. PODSTAWOWE ZAŁOŻENIA I CELE STRATEGICZNE

STRESZCZENIE

W ostatnich latach zmienia się podejście do zdrowia publicznego, co utrudnia przyjęcie jednolitej definicji. Jest to podyktowane wzrastającą liczbą zagrożeń nadzwyczajnych: ataki terrorystyczne, klęski żywiołowe, niebezpieczne inwazyjne choroby bakteryjne i wirusowe, zagrożenia bioterroryzmem, terroryzmem chemicznym i radiacyjnym, wypadki i katastrofy komunikacyjne. Zagrożenia te wywołują sytuacje kryzysowe, bardzo skomplikowane, określające nowe wyzwania dla przywódców i liderów zdrowia publicznego jak i służb, inspekcji i straży. W przedstawionych rozważaniach podjęto próbę zaprezentowania nowej piramidy przywództwa w sektorze zdrowia publicznego w sytuacjach kryzysowych, określono założenia i cele strategii bezpieczeństwa zdrowotnego.