



EUROPE

Assessment of health systems' crisis preparedness

Poland

Supported by



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Abstract



In 2008, with the support of the European Commission Directorate-General for Health and Consumers, WHO launched the project, “Support to health security, preparedness planning and crises management in EU, EU accession and neighbouring (ENP) countries”, with the aim of improving preparedness for public health emergencies in EU Member States and selected EU accession and ENP countries in the WHO European Region. One of the objectives of this project was to refine the assessment tool, which had been revised on the basis of the experience gained through the planning and crises management assessments carried out in Armenia, Azerbaijan and the Republic of Moldova under the joint European Commission–WHO project, “Support to health security and preparedness planning in EU neighbouring countries” (2007–2008). The intention was to apply the updated tool during a second round of assessments before finalizing it in 2010. The countries involved in the second round were Kyrgyzstan, Poland and Ukraine. The WHO health systems’ framework was used as the conceptual basis for describing and analysing the health systems in the countries.

This report describes the level of preparedness of the health system in Poland and evaluates the arrangements in place to deal with crises, regardless of cause. It also examines the risk prevention and mitigation initiatives in the country. While the main focus is on the national level, some attention has been paid to crisis management capacity at the regional level and to the links between the various levels of government. In addition, the report considers the topic of mass gatherings and public health.

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Keywords

Process assessment (health care)
Disaster planning
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Health systems plans
Delivery of health care - organization and administration
Poland

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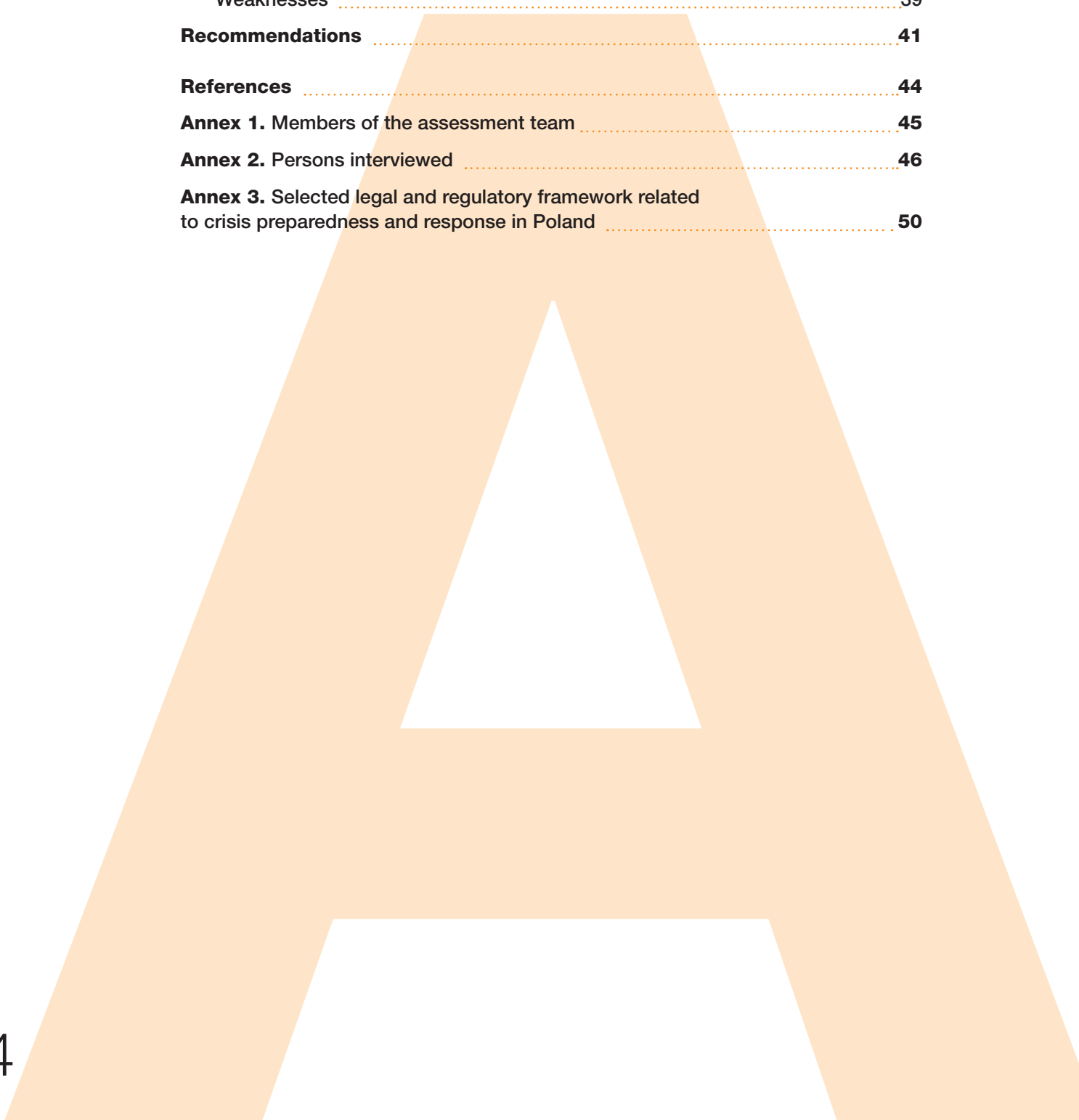

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Foreword

The number of emergencies and disasters and the severity of their impact have increased in recent decades, particularly in low- and middle-income countries, those of the European Region of the World Health Organization (WHO) being no exception. This development emphasizes the importance of the role of health systems in the overall cycle of disaster preparedness, risk mitigation, response and recovery.

Strengthening health systems' preparedness for crises is not a trivial task. Strengthening stewardship, implementing preparedness planning as a continuous process with a multi-hazard approach, establishing sustainable crisis management and health risk-reduction programmes, to name a few tasks, requires a clear understanding of the country's situation. Unfortunately, until now, there has been no formally agreed standard methodology for assessing the preparedness of a system for crises. This is not surprising given the diversity of countries in the WHO European Region.

The assessment in Poland was carried out under the WHO project, "Support to health security, preparedness planning and crisis management in EU, EU accession and neighbouring (ENP) countries", which is supported by the European Commission Directorate-General for Health and Consumers. Part of the process was to refine the health systems' crisis preparedness assessment tool developed within the project.

In Poland, the focus of the assessment was expanded to cover the issue of public health in mass gatherings with a view to the upcoming European Football Championship (UEFA EURO 2012™). Preparation for this important event was the entry-point for looking at the overall preparedness of the health system for any crisis (a multi-hazard approach).

By anticipating the health needs of the population in a crisis and taking the necessary steps to be prepared, a health system would be able to respond effectively should the situation arise and thus save lives and alleviate suffering. This report is an important contribution to the evidence being collected on the preparedness of health systems for crises and to the refinement of the standardized tool for assessing capacity for response at the national level.

International policy context

Health security – current issues and trends

Global health security

The United Nations Commission on Human Security established that good health and human security are inextricably linked and that illness, disability and avoidable death are critical pervasive threats to human security (1). It identified the three main health challenges as: conflict and humanitarian emergencies; infectious diseases; and poverty and inequity.

The statistics show a steady rise in the number of disasters¹ worldwide, many of which are attributed to climate change. In the past 20 years, disasters have killed over three million people and adversely affected over 800 million.

Not only are the established infectious diseases spreading more quickly (for example, multi-drug-resistant tuberculosis (TB) and HIV/AIDS are becoming an increasing threat to health security) but new diseases are also emerging at a faster rate than ever before (one or more per year since the 1970s). Nearly 40 diseases now exist that were unknown a generation ago.

Natural and man-made disasters, depending on their magnitude and the vulnerability of the populations they affect, can have a devastating effect on the health status in both the short and long terms. This is often aggravated by economic loss, which also has a negative impact on the health status and, therefore, on the economic burden in the health sector as a whole.

Increasingly, disaster management is becoming a priority in countries. The reasons for this are the following.

- The economic and political implications of disasters, particularly outbreaks of communicable diseases, and their effect on trade and tourism can be enormous. Low-income countries are clearly the most vulnerable to these negative effects.
- The effects of climate change have serious implications for global health security. In addition to the consequences for the health of individuals, environmental changes may well result in mass population movement and competition for scarce resources, leading in turn to conflict and political instability.
- States Parties to the revised International Health Regulations (IHR 2005), which came into force on 15 June 2007, are legally bound to meet their requirements.

Governments, particularly in low-income countries, are often loath to invest in strategies aimed at disaster prevention and/or risk reduction and there is an overall tendency to underinvest in the health sector. Statistics show (2) that, on average, the lower the Gross Domestic Product (GDP) of any particular country, the smaller the percentage invested in health.

Health security in the World Health Organization European Region

In 2008, three countries of the World Health Organization (WHO) European Region were among

¹ For inclusion in the Centre for Research on the Epidemiology of Disasters (CRED) database, a disaster must have resulted in at least one of the following criteria: 10 or more deaths; 100 or more people affected; a declaration of a state of emergency; a call for international assistance.

the top ten countries in the world most affected by crises (according to number of deaths), ranking fourth (heat wave in the Netherlands in July) , fifth (health wave in Belgium in July) and eighth (cold wave in Ukraine in January) (3). Between 1990 and 2008, 47 million people in the Region were directly affected by natural disasters. Of these, 695 were accidents, 414 floods, 141 events of extreme temperature, 302 windstorms, 110 earthquakes, 36 droughts, 72 wildfires and 59 landslides and avalanches, resulting in over 129 000 deaths. This does not include the wars and violent conflicts that have killed over 300 000 people in the Region over the last 20 years. Other severe events of the recent past include the Chernobyl nuclear power plant accident in 1986, which the United Nations estimates affected several million people, and the Spitak earthquake that killed over 25 000 people in Armenia in 1988.

Since 1990, a series of violent wars and conflicts in the Region have had vast political, social and human consequences. Armed conflict in the Balkans resulted in an estimated 125 000 fatalities and the displacement of up to three million people. The break-up of the former Soviet Union brought about a number of violent episodes in Azerbaijan (Nagorno-Karabakh), Georgia (Abkhazia and South Ossetia), the Republic of Moldova (Transnistria), the Russian Federation (Chechnya, Ingushetia, North Ossetia and Dagestan) and Tajikistan, causing the loss of an estimated 200 000 lives.

A number of serious terrorist attacks have taken place in the Region in the last fifteen years, including those that occurred in France (Paris, 1995), Spain (various ETA bombings; Madrid train attack, 2004), Turkey (various) and the United Kingdom (London, 2005). Reportedly, more than five times as many attacks have been thwarted in Belgium, France, Germany, Italy, the Netherlands, Spain and the United Kingdom, and the list of failed or aborted attempts is probably longer than we may ever know (4).

International Health Regulations

The need to strengthen capacity for emergency preparedness and response, particularly in low-income countries, is firmly based on current trends and statistics and supported by a wide variety of literature on global warming, environmental hazards, bioterrorism and re-emerging and emerging diseases, particularly severe acute respiratory syndrome and avian influenza. The level of international concern about this need is reflected in an increasing amount of media coverage and the establishment of various commissions, committees and international coordinating bodies (for example, the United Nations International Strategy for Disaster Reduction, the Commission on Human Security and the WHO Health Action in Crises Programme) to address issues related to emergency preparedness and response.

Growing concern about national, regional and international public health security led to the adoption of the revised International Health Regulations (IHR) by the 58th World Health Assembly in May 2005. These provide a new legal framework for strengthening surveillance and response capacity and protecting the public against acute health threats with the potential to spread internationally, affect human health negatively and interfere with international trade and travel.

The revised IHR have a much broader scope than the first edition (1969), which focused on the international notification of specific communicable diseases. States Parties to the IHR are now obliged to assess and notify WHO of any event of potential international public health concern, irrespective of its cause (whether biological, chemical or radionuclear) and origin (whether accidental or deliberate). The criteria for assessing the international public health implications of any given event are outlined in the algorithm presented in Annex 2 of the IHR. These include health-related events that are unusual or severe, may have a significant impact on public health, may spread across borders, and may affect freedom of movement (of goods or people).

For effective implementation, States Parties (with WHO support) were also required to develop a national IHR implementation plan by June 2009 and to meet national core capacity requirements by June 2012. How this can be achieved, particularly in low-income countries, is not yet fully envisaged.

EU support to crisis preparedness and response

In 2006, the WHO Regional Office for Europe utilized the health systems' framework to develop the document, *A practical tool for the preparation of a hospital crisis preparedness plan, with special focus on pandemic influenza (5)*. It aims to provide a simple tool for planning appropriate measures to be adopted by a hospital and/or, more generally, a health facility in preparation for a critical situation. As this concept was welcomed by the Member States, the Regional Office decided to extend it to developing a similar tool for crises preparedness planning in the health sector as a whole, again based on the WHO health systems' framework. In this connection and in the light of the ENP and the IHR, in March 2007, the Health and Consumer Protection Directorate-General of the European Commission (DG SANCO) (under priority 2.2 of its workplan) provided funding to the WHO Regional Office for Europe for the project entitled: "Support to health security and preparedness planning in EU neighbouring countries". The overall objective of the project was to assess available capacity to respond to public health crises in selected ENP countries, including the core capacity required to implement the IHR, and to promote a multisectoral approach to ensuring the interoperability of existing public health emergency plans and their coherence with EU policies and strategies. The specific objectives of the project were:

- to coordinate the development of a feasible and standardized assessment tool for evaluating: (a) the priority health risks; (b) the status of generic emergency preparedness plans; and (c) the interoperability of public health emergency plans in selected countries;
- to conduct assessments in three ENP countries of the WHO European Region, the candidate countries being Armenia, Azerbaijan, Belarus, Georgia, Israel, the Republic of Moldova and Ukraine, and to disseminate the results;
- to produce and submit a final consolidated report, including strategic and operational recommendations on further developing a joint European Commission (EC)–WHO plan of action to improve the level of preparedness in the assessed ENP countries and other EU neighbouring countries.

After negotiation with the relevant Ministries of Health, assessments were conducted in Armenia, Azerbaijan and the Republic of Moldova using the newly developed tool for assessing the health systems' preparedness in countries. All three countries showed a keen interest in and a high level of political commitment to strengthening the capacity of the health sector for crisis preparedness and response at the national level, as well as to following up on the findings and recommendations of the assessment.

In 2008, the EC and WHO launched the joint project, "Support to health security, preparedness planning and crises management in EU, EU accession and neighbouring (ENP) countries", the aim of which was to improve preparedness for public health emergencies in EU Member States and selected EU accession and ENP countries in the WHO European Region. One of the objectives of the project was to refine the assessment tool, which had been revised during the Expert Consultation on Health Systems' Crisis Preparedness, Dubrovnik, Croatia, 21–23 April 2009, on the basis of the experience gained through the assessments carried out in Armenia, Azerbaijan and the Republic of Moldova. The intention was to apply the updated tool during a second round of planning and crises management assessments before finalizing it in 2010. The countries involved in the second round were Kyrgyzstan, Poland and Ukraine.

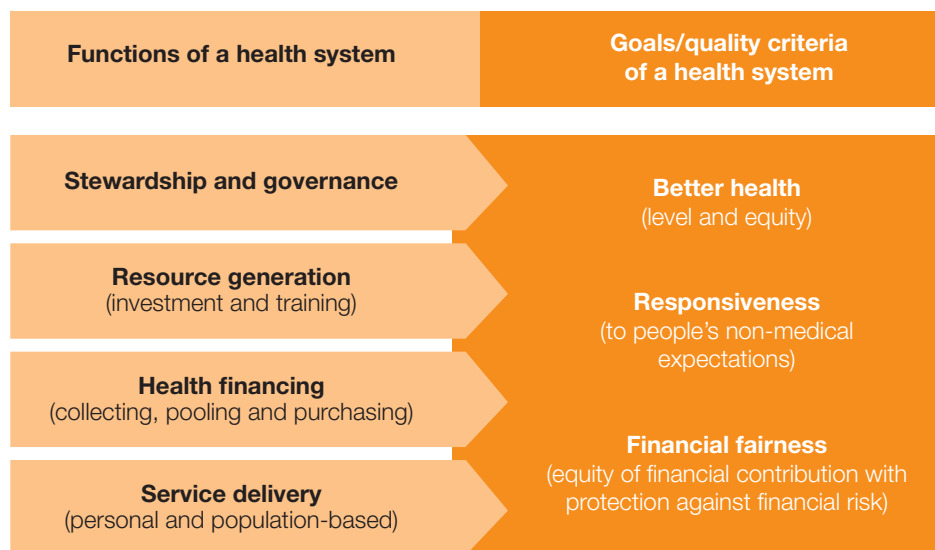
The Ministry of Health of Poland kindly agreed to host the assessment of the preparedness of its health system in September–October 2009. The Ministry specifically requested that the topic of public health in mass gatherings be included in the assessment in the light of the upcoming UEFA EURO 2012™ event in Poland. This report presents the findings of the assessment.

The WHO health systems' framework

Health systems are defined by WHO as comprising all the resources, organizations and institutions that are devoted to taking interdependent action aimed principally at improving, maintaining or restoring health. It is generally recognized that health systems vary widely in performance and that the achievement of crucial health goals can differ among countries with similar levels of income, education and health expenditure. This is mainly attributable to differences in the design, content and management strategies of the health systems that are often complex and difficult to assess when viewed as a whole.

By transforming crucial health goals into a number of measurable objectives and assessing these on the basis of four key functions needed by all health systems to fulfil their purpose, the WHO Regional Office for Europe is focusing on improving the performance of the health systems of all countries in the Region. Working within this health systems' framework, WHO can help decision-makers at all levels to analyse variations in health-care performance, identify factors that influence it and establish policies aimed at achieving better results. The following four key functions make up the WHO health systems' framework: (1) stewardship and governance; (2) creating resources; (3) health financing; and (4) service delivery (Fig. 1).

Fig. 1. The WHO health systems' framework



Stewardship and governance of the health system are achieved through careful and responsible management that results in influencing all sectors with regards to policy on and action for population health. In connection with preparedness planning, this means ensuring the existence of national policy that makes provision for the preparedness of the health system for crises. It also means having effective coordination structures and partnerships in place and involves advocacy, risk assessment, information management and monitoring and evaluation.

Resource generation includes engaging all health workers primarily involved in protecting and improving population health. It also encompasses health technologies, infrastructure and

pharmaceuticals. In terms of crisis management, preparedness planning ensures that, given the available resources and circumstances, there would be a sufficient number of qualified staff to respond to a crisis. Education and training, the collection, analysis and reporting of data, and management of the supplies and equipment needed to respond to a crisis, also fall under this heading.

The **health financing** function ensures the collection of revenues, their subsequent pooling and, finally, the purchase of health services from providers. In terms of crisis management, a good health financing system ensures that there are adequate funds for health system activities related to risk prevention and mitigation, preparedness and response. It also provides financial protection in case of a crisis and ensures that crisis victims have access to essential services and that health facilities and equipment are adequately insured for damage or loss.

Service delivery relates to a service production process that, when needed, combines the input of various providers into health interventions that are effective, safe and of high quality, and ensures their delivery to relevant individuals or communities in an equitable manner and with a minimum waste of resources. The organization and management of services are reviewed through a health system crisis management process to ensure access to, and the quality, safety and continuity of care across health conditions and health facilities during a crisis.

Health system performance is measured not only by how well each function in the framework is carried out but also by the relationship between the functions. Good interaction is crucial to attaining better health outcomes.

Further information on health systems can be found in: *The world health report 2000* (6), *Strengthened health systems save more lives. An insight into WHO's European Health Strategy* (7) and *Everybody's business: strengthening health systems to improve health outcomes* (8), as well as in the report on the WHO European Ministerial Conference on Health Systems "Health Systems, Health and Wealth", Tallinn, Estonia, 25–27 June 2008 (9).

Cross-cutting issues related to disaster preparedness and response

Effective crisis preparedness and response is governed by a number of cross-cutting (strategic) principles that WHO encourages Member States to adopt. These relate to the all-hazard approach, the multidisciplinary (intrasectoral) approach, the multisectoral approach and the comprehensive approach.

The all-hazard approach

Different crises invariably result in similar problems and responses requiring similar systems and types of capacity. During a crisis, the need to manage information and resources (including human resources), as well as to maintain effective communication strategies, is in essence the same whether the crisis is the result of an earthquake, a flood or a terrorist attack. Hence, WHO promotes a generic, all-hazard approach, actively discouraging the establishment of vertical planning mechanisms while recognizing that each type of crisis requires a specific area of technical expertise.

The multidisciplinary (intrasectoral) approach

Health systems are defined as comprising all the organizations, institutions and resources that are devoted to improving, maintaining or restoring health. This includes public and private initiatives (for example, by nongovernmental organizations (NGOs) and international agencies) and action at the central, local, population and military levels – from tertiary care to local community health care – all of which may have a role to play during a crisis. WHO, therefore, encourages transparency and interoperability in the planning process and promotes the involvement of all disciplines and all levels

of the health system to ensure a coordinated and effective response, making the best use of often scant resources and ensuring that plans are appropriate and feasible.

The multisectoral approach

Health sector plans also need to be linked to and interfaced with national disaster preparedness and response plans to avoid confusion, prevent duplication of effort and make the best use of resources. This is important not only during a crisis but also as part of prevention, reduction and mitigation strategies. Other governmental departments, private enterprises and commercial organizations can play an important role in reducing the negative health effects of, for example, inappropriate urban development and use of land, poor agricultural practices and inadequate legislative procedures. Although not directly responsible, the Ministry of Health needs to ensure that health is not overlooked in the push for greater profits and economic growth and to advocate a multisectoral approach in dealing with health issues. However, multisectoral planning continues to be a challenge in many countries as governmental departments often prefer to develop their own individual plans, in parallel with other key partners.

The comprehensive approach

The economic consequences of a crisis can be enormous and the reduction, prevention and mitigation of the related risks are priority areas that increasingly need to be taken into consideration in preparedness planning. Therefore, WHO encourages Member States to develop and implement strategies for the different aspects of crisis preparedness planning, bearing in mind that they are not separate entities but overlap with each other in scope and timeframe. They can be summarized as follows.

- *Prevention, reduction and mitigation.* Activities that address these aspects aim to reduce the likelihood or impact of a disaster and, in the health sector, are devoted mainly to ensuring the functionality of the health facilities and key installations in the aftermath of a disaster.
- *Preparedness.* This requires a multidisciplinary, multisectoral planning process to strengthen the capacity and capability of systems, organizations and communities so that they can better cope with emergencies.
- *Response and recovery.* Action related to this aspect covers a wide range of activities implemented during and after an emergency, which have specific humanitarian and social objectives linked to long-term strategic goals and sustainable development.

Mission objectives and methodology



The Ministry of Health of Poland kindly agreed to host the assessment in September–October 2009 and to cooperate with WHO in piloting the revised assessment tool. In connection with the upcoming UEFA European Football Championship (UEFA EURO 2012™), which will be hosted partly by Poland, the Ministry specifically requested that the assessment include the issue of public health in mass gatherings.

Objectives

The objectives of the assessment were: to support the Ministry of Health in identifying the strengths, weaknesses and gaps in the current preparedness of the health system for crises; to support the Ministry of Health in evaluating the preparedness of the health sector for a large-scale international mass gathering; and to further refine the standardized health systems' crisis preparedness assessment tool.

Methodology

A multidisciplinary team of five international experts carried out the assessment in Poland from 21 September to 2 October 2009 in cooperation with local counterparts from the WHO Country Office (Annex 1). One of the experts was nominated to write the report with contributions from the other experts on, in particular, the sections related to mass gathering and disease surveillance.

The areas of expertise of the team members included generic disaster preparedness planning and response, mass gathering and public health, and communicable diseases surveillance and response.

The team adopted an all-hazard, multisectoral approach to the assessment, using the standardized tool for assessing the preparedness of the health system for crisis.

Structured and/or informal interviews were held with key stakeholders, including:

- representatives of the Ministry of Health;
- representatives of the Chief Sanitary Inspectorate and regional State Sanitary Epidemiological Services (SES);
- representatives of the Ministry of National Defence and the Ministry of the Interior and Administration;
- representatives of the National Institute of Public Health;
- representatives of the National Health Fund
- managers of selected health facilities;
- national public health focal points for UEFA EURO 2012™.

On-site assessments of selected facilities were conducted at:

- tertiary medical-care referral centres;
- national and regional SES;
- emergency medical services:
 - pre-hospital
 - hospital;
- airports;
- stadia (under construction).

Two round-table meetings were held with all stakeholders at the beginning of the mission to develop a common understanding of its objectives and expected outputs, and at the end of the mission to present the results and gain consensus on the conclusions and recommendations.

Deliverables

To the Ministry of Health

- A report highlighting the strengths and weaknesses of and the gaps in the preparedness of the health system in Poland for crises with a focus on public health in relation to large-scale international mass gatherings (UEFA EURO 2012™ football championship).

To the WHO Regional Office for Europe

- A revised tool for assessing the preparedness of health systems for crises.

Standardized tool for the assessment of health systems' crisis preparedness

The assessment was carried out using the assessment tool that was piloted in Armenia, Azerbaijan and the Republic of Moldova and revised during the Expert consultation on health systems' crisis preparedness, Dubrovnik, Croatia, 21–23 April 2009, on the basis of the experience gained in these countries.

The tool is sectioned according to the four functions of the WHO health systems' framework. Each function has main components, which are divided into the key elements required to develop a preparedness plan (Table 1). In the tool, each key element is presented in a separate table with a general description of the element and a list of the attributes considered essential for its success.

Table 1. Health systems' crisis preparedness assessment tool

Functions							
Stewardship and governance		Resource generation		Health financing		Service delivery	
Main components	Key elements	Main components	Key elements	Main components	Key elements	Main components	Key elements
Policy and legislation	National crisis management and legislation Health sector crisis management policy and legislation	Human resources	Human resources strategy and planning for health crisis Capacity-building for health crisis management	Preparedness financing	Budget for health crisis management Budget for vulnerability analysis and risk reduction of critical health facilities	Mass casualty management	Capacity and ability to respond to health consequences of mass casualty incidents Surge capacity for health system response Emergency medical services (pre-hospital and hospital) Medical evacuation (role of the health sector)
Institutional framework	Multisectoral high-level crisis management committee Multisectoral operational crisis management body Health sector multidisciplinary crisis management committee Health sector crisis management entity	Pharmaceuticals, medical supplies, equipment, infrastructure	Essential pharmaceuticals, medical supplies and equipment strategies Disaster-resilient health facilities Service-delivery support functions, logistics and infrastructure	Contingency funding	National contingency fund International contingency fund	Management of health-care facilities	Preparedness of health-care facilities Hospital crisis management
Health sector risk reduction and crisis management programme	Risk-reduction initiatives Crisis-preparedness planning Coordination and partnerships Health education, public information and communication Evidence-based guidance and monitoring and evaluation	Health information management	Continuous health risk assessment, surveillance and early warning Rapid health needs assessment			Continuity of essential medical services	Essential health programmes, including primary care Assurance of health services for displaced populations

Review of documents and reports

The following national documentation, among others, was reviewed for background information and with the aim of triangulating and supplementing information collected during interviews.

- National health programme 2007–2015
- The sanitary state of Poland in 2007
- The health situation of the population in Poland
- The final report of UEFA EURO 2012™
- The structure of the Ministry of Health and the Ministry of the Interior and Administration

- The disaster plan of Wrocław Hospital
- Short summary on international cooperation on health care and medical rescue
- National system for contamination detection and response
- Act on emergency management establishing the Government Security Centre, 26 April 2007 (Dz.U.2007.89.590)
- Act on the preparations for the UEFA EURO 2012™ tournament in Poland, 7 September 2007 (Dz.U.2007.173.1219)
- Act on mass event safety, 20 March 2009 (Dz.U.2009.62.504)
- Ordinance of the Council of Ministers determining which government authorities shall establish emergency management centres and defining their methods of operation, 15 December 2009 (Dz.U.2009.226.1810).

Recording and analysis of results

Accuracy of the facts

Transcripts were prepared as soon as possible after the interviews and on-site assessments and shared with the other interviewers present to allow for additions and corrections and ensure a common understanding of the facts. The WHO Country Office in Poland was asked to clarify, where possible, any contradictory information and to provide additional information where necessary.

Feedback

The team met when possible at the end of each day to share information, discuss the findings of the day and plan future interviews.

Triangulation and report writing

A further analysis of the information was carried out following the mission, when all the transcripts had been received by the report writer. Using a triangulation system, the responses were compared for differences in the viewpoints of those interviewed on the key issues of the WHO health systems' framework, as well as in the interviewers' interpretation of the information received. It should be noted that qualitative research techniques, such as textual analysis of the transcripts or transactional analysis of the interviews themselves, were not used.

Country context

Country profile



Source: Map No. 3784 Rev. 4, United Nations Cartographic Section, January 2004.

Poland is situated in Central Europe with an area of 312 685 km² bordering Belarus, the Czech Republic, Germany, Lithuania, Russia (Kaliningrad Oblast), Slovakia, Ukraine and the Baltic Sea. The climate is predominantly temperate: winters are cold, cloudy and moderately severe with frequent precipitation; summers are mild with frequent showers and thundershowers (10).

The cities have their own administrations headed by the President of the city authorities. Each of the sixteen provinces (voivodships) also has its own administration, which is part of the governmental administration directly subordinate to the Ministry of the Interior and Administration (10).

The Polish economy is based on industry and agriculture. The country has natural resources, such as coal, sulphur, copper, natural gas, silver, lead, salt and amber, and about 40% of the land is arable. Poland has pursued a policy of economic liberalization since 1990 and while the GDP per capita is still much below the European Union (EU) average, it is similar to that of the three Baltic States. Since 2004, EU membership and access to EU structural funds have provided a major boost to the economy. Unemployment is falling rapidly, though, at roughly 9.7% in 2008, it is above the EU average. Thanks to a strong economic position at the start of the recent global crisis, Poland

is likely to be relatively less affected than other countries by a recession in Europe. Nevertheless, the external economic deterioration has had an impact on the country. Economic growth has slowed dramatically, forcing the Government to focus on structural improvements and maintenance of critical programmes in the social sectors (10). In 2006, 19.2% of the GDP was spent on social protection (11).

The population has remained stable at about 39 million over the last 20 years due to much improved life expectancy over the past three decades. In 2007, life expectancy at birth in Poland was 75.4 years. Noncommunicable diseases (NCD) account for about 81% of all deaths in Poland, external causes (accidents, traumas, etc.) for about 7% and communicable diseases for less than 1%. In total, 46% of all deaths are caused by diseases of the circulatory system and 24% by neoplasms (10).

In 2008, the proportions of the population in the 15–24, 25–49 and 50–64 years age groups were 15.9%, 36% and 19.6% respectively (11).

The health system is managed and coordinated by the Ministry of Health at the national level and by the health-care departments at the provincial level. The system is based on the Bismarckian system², with a relatively robust health insurance scheme under the National Health Fund, which operates in each of the 16 provinces. The ongoing health-care reform aims to improve resource mobilization and allocation and enhance service delivery. The rationalization and corporatization of public hospitals and the introduction of competition among public and private insurers are also among the objectives of the reform (10).

At the national level, the Ministry of Health is responsible for the implementation of state national health policies and for administering a few specialized state-owned health facilities. At the regional level, the health administrations are responsible for the implementation of state national health policies in the relevant jurisdictions and health facilities under state and provincial ownership. At the subprovincial level, primary care facilities and hospitals are owned by the councils of the various tiers of local government (provincial, municipal, city district, village, rural and private) (10).

Past crises and potential threats

In the past two decades, Poland has experienced more than thirty natural and man-made disasters, such as floods, extreme weather conditions and industrial and transport accidents, affecting nearly 250 000 people and killing 1500 with an estimated economic loss of at least US\$ 4.5 million (3).

Environmental vulnerabilities include air and water pollution, environmental degradation with deforestation, and wind and water erosion.

According to their Information Bulletin, the State Fire Services responded to about 450 000 events countrywide in 2008; 35% of these were forest and crop fires. In the same year, there was a dramatic reduction in their need to respond to events caused by adverse weather conditions, compared to previous years.

Analyses of hazards, vulnerabilities and risks in the country indicate the following threats for 2010 and 2011.

² A system of national social security and health insurance introduced into the 19th century German empire under the then Chancellor Bismarck. This system is a legally mandatory system for the majority or the whole population to obtain health insurance with a designated (statutory) third-party payer through non-risk-related contributions, which are kept separate from taxes or other legally mandated payments.

1. Weather anomalies, predominantly torrential rain and thunder storms in June and July, causing local pluvial and fluvial floods and other disturbances (for example, destruction of electricity supplies' networks, small local bridges and other road and rail traffic infrastructures).
2. Importation of contagious diseases.
3. Local forests fires (natural or intentional).

Other far more serious threats, such as epidemic outbreaks of disease, terroristic attacks and natural and industrial disasters, are also taken into consideration by all relevant services and institutions in planning preparedness and response activities. The likelihood that these serious threats will emerge is the same as in other countries of central and western Europe.

Findings of the assessment

The findings of the assessment are presented according to the four core functions of the WHO health systems' framework essential to a comprehensive and effective crises planning process. The complexity and interdependency of the components have been taken into account. Overlapping and repetition have been accepted for reasons of clarification.

Stewardship and governance

In planning crisis preparedness, the stewardship and management pillar of the health systems' framework seeks to ensure the incorporation in national policy of health systems' crisis preparedness and effective coordination structures. It includes three building blocks: (1) policy and legislation; (2) institutional framework; and (3) health sector risk reduction and crisis management.

Policy and legislation

The Constitution of the Republic of Poland and statutes, acts, regulations and ordinances of the Council of Ministers define the authorities dealing with crisis management and describe and regulate the roles and responsibilities of those involved. There are laws defining a state of emergency, civil defence, rescue services, the classification of extraordinary situations, contingency planning, protection of the population, etc.

A legal framework based on the Act of 26 April 2007 on emergency management establishing the Government Security Centre defines the roles, responsibilities and authority at the national level, which are replicated at the lower administrative levels. It refers in detail to transport and logistics, contingency, information flow, interactions within governmental structures, etc. Any crisis situation is managed according to the subsidiarity principle, that is, at the lowest administrative level, the next level up being involved only when additional resources are required or when several levels are involved.

The Ministry of the Interior and Administration is overall responsible for crisis management. The Ministry of Health drafts and reviews legislation in this area pertaining to health, such as the Act on the Emergency Medical System of 8 September 2006, the Act on emergency management establishing the Government Security Centre of 26 April 2007 (mentioned above) and the Ordinance of the Council of Ministers of 15 December 2009 determining which government authorities shall establish emergency management centres and defining their methods of operation. The Ministry of Health operates on the basis of this legislation. Response to health-related emergencies is organized through the Ministry of Health and – depending on the administrative level – the health administrations at the local level.

The legislation specifies, for example, sources of the funding and lines of communication and describes trauma centres for response units. However, whereas the Act on mass event safety (2009) relates more to the security aspects than to the health aspects of mass gatherings, it does not provide guidance on minimum service levels nor does it provide for more than basic emergency medical services' (EMS) coverage.

Legislation governing the stockpiling of emergency reserves is strong and access to the national stock is possible within several hours of request. Provision has been made for procuring unlicensed

pharmaceuticals from abroad under a temporary authorization but only pharmaceuticals licensed in the country may be included in the national reserve.

The State Fire Service developed a policy on chemical, biological, radiological or nuclear (CBRN) mass decontamination (the national contamination detection and alert system) and, at the time of the assessment, they were in the process of translating it into operational activities. Decontamination is shared between the fire services and the military, the latter being responsible mainly for the biological, radiological and nuclear part. The system is activated only if there is a threat of large-scale contamination, which would necessitate the use of all the resources available in the country.

Institutional framework

The emergency management system comprises an emergency management authority, a consultative and advisory body and an emergency management centre and it is represented at every administrative level (Table 2). Response to emergencies is carried out according to the subsidiarity principle, that is, at the lowest possible administrative level. Since the introduction of emergency management centres is a recent development, this concept has not yet been institutionalized at all levels.

Table 2. Emergency management system in Poland

Administrative level	Emergency management authority	Consultative and advisory body	Emergency management centre
National	Council of Ministers (Prime Minister)	Government Team for Emergency Management	Government Security Centre
Provincial (Vojevodztwo)	Governor	Provincial emergency management team	Provincial emergency management centre
District (Powiat)	District Head (District staroste)	District emergency management team	District emergency management centre
Communal (Gmina)	Head of commune Mayor President of a city	Communal emergency management team	Communal emergency management centres may be established but there is no obligation to do so.

In a national emergency, the Council of Ministers activates the Government Team for Emergency Management, a multisectoral high-level crisis management committee, which is the consultative and advisory body for the Council of Ministers and responsible for the initiation and coordination of emergency-related activities. Permanent members of the team are the Prime Minister (Chair), the Minister of the Interior and Administration, the Minister of National Defence, the Minister of Foreign Affairs and the Head of the Government Security Centre. Other ministers are invited by the Chair to attend meetings depending on the type of emergency. The Government Team for Emergency Management meets quarterly or as needed during crisis situations.

Only recently established, the Government Security Centre has been functional since August 2008. As the national body for multisectoral crisis management operations, it reports to the Prime Minister and coordinates with representatives of each ministry and heads of entities within the Ministry of the Interior and Administration, such as the Chief of the State Fire Service, the Chief of National Civil Defence, the Chief of Police, etc. The Government Security Centre is located in the Ministry of the

Interior and Administration as a separate department with specific terms of reference and about 50 staff. Its responsibilities range from gathering, analysing and distributing information on a 24/7 basis to coordinating and monitoring crisis situations.

Other activities carried out by the Government Security Centre include:

- planning emergency management through assessments on risk, vulnerability and available resources;
- supporting the development and biannual update of the national emergency plan;
- organizing simulation exercises and training;
- monitoring threats and establishing expert groups if necessary (as was done recently in relation to pandemic H1N1 (2009));
- cooperating with the Anti-terrorist Centre, which is responsible for surveillance (the Government Security Centre being responsible for operational planning);
- coordinating international processes, such as the repatriation of Polish citizens from abroad;
- ensuring the critical infrastructure.

The Government Security Centre establishes working groups of technical experts from various fields to advise the Governmental Team for Emergency Management. For example, a working group on pandemic (H1N1) 2009 meets regularly to this end. Guidelines exist on writing press releases and, in addition, the Press Office provides training in this discipline to spokespersons in the districts.

Procedures for collaboration between the Government Security Centre and the emergency management centres in other ministries and at the lower administrative levels are still being established as some of these entities are not yet functional.

There is close collaboration between the Government Security Centre and the National Centre for Coordination and Civil Protection.

Through a government order issued in 2009, provision is made for support to civilian services during emergencies, if requested. This has developed into response plans for different scenarios. While other services report to the local administrations, the Armed Forces' response team remains under the authority of the military commander. Health units respond in cooperation with the military police, engineers, transport and logistics units, etc., facilitated by a crisis management committee in the Ministry of National Defence. The Armed Forces have two mobile hospitals for evacuation purposes, specialized equipment for mass decontamination, facilities for first aid and transport to hospitals, all of which they can mobilize within six hours. One of the mobile hospitals is in Afghanistan. During an emergency, and by order of the Chief of Military Health Care, the eight well-equipped hospitals of the Ministry of National Defence can provide a substantial number of beds. All hospitals are now routinely open to the public. The Ministry of National Defence also has blood transfusion stations and laboratories connected to the main hospitals.

Crisis management committees comprising representatives of stakeholders at the national, provincial and municipal levels are being developed and/or reinforced. In particular, the newly established committee of the city of Wrocław is integrating the various emergency response actors by basing emergency management services' (EMS) teams, police, municipal guards and fire-fighters in the same premises. At this level, there is a master plan for crisis management that includes drills in different scenarios, threat assessments, procedural guidelines and information on resources. Since there is no emergency management centre in the City of Warsaw, the Government Security Centre coordinates the efforts of the different agencies at this level.

At the provincial level, the security and crisis management office of the Mazovia Province (the largest), for example, is responsible for the coordination and management of crises, civil defence and medical rescue activities. It covers Warsaw with up to five million people (including commuters) and deals frequently with mass gatherings. Upcoming large-scale events are the Chopin Year 2010, the inauguration of the six-month Polish EU Presidency in 2011 and the UEFA Football Championship in 2012.

According to the Act on the Emergency Medical System of 8 September 2006 (Dz.U.2006.191.1410) the health crisis coordinators at the provincial level are responsible for monitoring the number of beds available in the intensive care units of the various hospitals (which are required to inform the coordinators about availability of beds twice daily), and for coordinating the distribution of patients. They report the current health situation to the governors of the provinces and coordinate with other provinces if required.

The national contamination detection and alert system is a subsystem of the emergency management system and falls under the Ministry of National Defence. The purpose of the system is to counteract and eliminate chemical, biological, radioactive and nuclear (CBRN) contamination and it is activated only if there is a threat of large-scale contamination, such as in the case of a CBRN terrorist attack. Smaller-scale threats are dealt with by the State Fire Services.

A health sector multidisciplinary crisis management committee meets on an ad hoc basis during emergencies. All heads of department in the Ministry of Health participate and the Department of Defence, Crisis Management and Medical Rescue acts as the secretariat.

According to the Act on the Emergency Medical System (2006), the Ministry of Health is responsible for supervising the EMS. The Minister of Health approves the emergency response plan (and any updates) for each province. The plan includes details regarding the number and type of ambulances and their locations, the emergency departments and structure of the EMS in the province.

The Ordinance of the Council of Ministers determining government administration (2009) decreed the establishment of emergency management centres in 14 ministries (including the Ministry of Health) and in ten other services, such as the Chief Sanitary and Veterinary Inspectorates, the Police, the Border Guards, the State Fire Service, etc. While the Department of Defence, Crisis Management and Medical Rescue of the Ministry of Health functions as a health sector crisis management entity, it does not seem to do so as an emergency management centre, as defined in the legislation. However, as the Department seems to have sufficient staff and funding, it could also function as the Ministry of Health emergency management centre.

The tasks of the Ministry of Health emergency management centre include:

1. ensuring the continuous flow of information required for emergency management;
2. cooperating with the emergency management centres of public administration bodies;
3. monitoring the functioning of the detection and alert system and the early warning system for the public;
4. cooperating with environmental monitoring entities;
5. cooperating with rescue, search and relief aid services;
6. documenting the activities of the other emergency management centres;
7. taking continuous action to increase the readiness of the national defence.

The State Sanitary Inspectorate is a national public health institution under the authority of the Ministry of Health and the focal point for the Early Warning and Response System and the Rapid Alert System for Food and Feed. Its role is to ensure a rapid and effective exchange of information on emerging risks with other EU Member States, the European Commission (EC), the European Centre for Disease Prevention and Control (ECDC), WHO and the IHR National Focal Point in Poland.

The State Sanitary Inspectorate was established under the Act on State Sanitary Inspection, 14 March 1985 (Dz.U.2006.122.851) and the provincial and local sanitary and epidemiological stations (SES) came under its authority. As the result of structural changes (effective on 1 January 2010), the local units operate under the respective local authorities. In case of an emergency, the crisis management system is initiated and the crisis management group under the Chief Sanitary Inspector at central level is called in ad hoc, as well as crisis management groups at the provincial and local levels where they form part of crisis management centres under the local authorities. The tasks of the crisis management groups include monitoring the epidemiological situation, carrying out rapid assessments, activating early warning systems, coordinating responses and managing resources. Representatives of other scientific and research institutions may be consulted on specific issues (for example, environmental contamination).

The IHR National Focal Point is the National Institute of Public Health, which is responsible for monitoring infectious diseases and biological, chemical and physical risk factors in food, water and the air. Epidemiological surveillance reports are publicized on its website. The Institute also provides expertise for the Government, NGOs and civil society in the field of risk assessment and mitigation. It also houses some of the national reference laboratories, for example, those for polio and measles, as well as the National Influenza Centre and the National Toxicology Centre. The Institute acts as a think tank for policy and planning and makes recommendations to the Ministry of Health and the State Sanitary Inspectorate but it has no administrative power itself.

Health sector risk reduction and crisis management

The Government Security Centre is responsible for national crisis preparedness planning and risk reduction initiatives. Quarterly, it collects and analyses data from relevant ministries and reports on projections, risk assessments and scenarios. In a crisis, the Government Security Centre relies on the support of experts from the emergency management centres in the different ministries in connection with the collection, analysis and distribution of data.

At the provincial level, as stipulated in the Act on the Emergency Medical System (2006), the governor is responsible for establishing a three-year operational plan and for updating it annually. The plan should include threat and risk analyses, a description of the process of coordinating the response systems and specifications of the rescue and health services. It should also be costed. The plan is cleared by the State Fire Service, the Police, the Border Guard, the Military Medical Department and the Armed Forces at provincial level before being submitted to the Ministry of Health for approval.

The Ministry of Health provides the provinces with a framework to ensure uniformity of planning, including guidance on the level of detail to be included and on calculating cost (for example, for the maintenance of the emergency management teams). The framework aims to provide a means for effective planning and transparency. The plans are included in the Public Information Bulletin and submitted to the Department of Defence, Crisis Management and Medical Rescue in the Ministry of Health.

In general, vulnerability and risk assessments are carried out by each sector or even by individual entities, each with its own strategy. This is rarely a multidisciplinary process. For example, the

Military Medical Services of the Ministry of National Defence regularly prepare response plans for different crises scenarios and they participate frequently in national and international exercises. The Government Protection Agency carries out its own threat analyses. However, as reports on these activities are confidential, no details were provided. The State Fire Service also develops its own threat analyses and indicated that agreements on crisis management support have been entered into with all EU and neighbouring countries apart from Belarus and Ukraine.

Once the provincial and lower-level emergency management centres are institutionalized, they will be responsible for the crisis response plans at those levels.

Mechanisms for coordination and partnership building in crisis management are partially formalized through ordinances and acts but informal channels are frequently utilized, especially when convening meetings of different actors, exchanging information, assigning tasks or planning joint action. The Ministry of Health has entered into agreements with ECDC and WHO on international cooperation and has various bilateral agreements, such as that under which the EU afforded financial support for the purchase of ambulances, telemedicine facilities and hospital equipment.

There is a formalized mechanism of communicating and disseminating information to all relevant sectors of the population during an emergency. The Government Security Centre prepares a brief for the Office of the Prime Minister, which communicates the information to the public. The governor's office is in charge at the provincial level and the head of the administration at municipal level. The local emergency committees usually decide the content of the message and nominate an appropriate person to deliver it to the public.

Resource generation

Resource generation for emergency preparedness comprises three building blocks: (1) human resources; (2) pharmaceuticals, medical supplies, equipment and infrastructure; and (3) health information management. These ensure sufficient qualified staff, supplies and equipment, a knowledge base resulting from the collection, analyses and reporting of data (including those from hazard and vulnerability assessments), early warning systems, and the overall management of information.

Human resources

The strategy for managing, coordinating, training and building the human resources capacity necessary for emergency preparedness and response is addressed in a number of legislative documents issued by the Government and supplemented by the Ministry of Health. The Ministry of Health is largely responsible for policy relating to the scope, roles, responsibilities and training curricula of personnel involved in coordinating and providing emergency medical services. The following ordinances of the Ministry of Health should be mentioned in this respect:

- Ordinance 408 on the qualifying first aid course, 19 March 2007 (Dz.U.2007.60.408);
- Ordinance 525 on in-service training for medical dispatchers, 16 April 2007 (Dz.U.77.525);
- Ordinance 605 on procedures for accepting emergency calls and EMS dispatch teams, 7 May 2007 (Dz.U.2007.90.605);
- Ordinance 775 on in-service training for medical rescuers, 14 June 2007 (Dz.U.2007.112.775);
- Ordinance 893 on the operation of the State Emergency Medical Services in the provinces and on the criteria for calculating the operational costs of the medical rescue teams, 20 June 2008 (Dz.U.2008.142.893);
- Ordinance 322 on rights and responsibilities of EMSD coordinators at the provincial level, 24 February 2009 (Dz.U.2009.39.322).

The Ministry of Health decides on the number of medical students and the allocation of places among the different specialties in the universities. Of 62 000 students in undergraduate medical training in 2008, 42 000 were financed by the Ministry of Health. Foreign students account for most of the remaining 20 000 students. Generally, post-graduate training is under the responsibility of the Ministry of Science and Higher Education and the Centre for Postgraduate Medical Training but medical specialists are funded and supervised by the Ministry of Health. Although about 8300 students undertook specialist post-graduate studies in 2008, there is a shortage of certain cadres of staff, such as anaesthesiologists, neonatologists and surgeons. This is due partly to Poland's accession to the EU, partly to Polish medical staff working in other EU countries and partly to the introduction of private medicine, which has resulted in a loss of surgeons from the public sector.

Salaries remain relatively low at approximately Zł.3500 (€875) a month for junior doctors rising to Zł.5200 (€1300) a month for specialists. This amount does not include payment for overtime. Doctors working on ambulance shifts (24 hours on and 48 hours off) were said often to have other jobs to supplement their incomes.

As well as being involved in emergency medicine training, medical universities, further education centres and medical associations are also tasked with quality assessment, research and development and with making recommendations for improvements to the system.

Capacity-building for health crisis management lies within the realm of the Ministry of Health. For example, the Ministry has defined a comprehensive curriculum for paramedics, which covers training not only in medical skills but also in communications and psychological support for both medical rescuers and the injured. Ordinance 33 of the Ministry of Health on in-service training for medical dispatchers (2007) details the medical procedures that paramedics may perform either independently or when supervised by a medical doctor and provides a list of the drugs that they are authorized to administer. Ordinance 775 on in-service training for medical rescuers (2007) also provides for a comprehensive continuing professional development scheme based on a point system. In January 2008, it became a requirement that paramedics participate in refresher courses, seminars and self-education activities.

Ordinance 408 on the qualifying first-aid course (2007) stipulates the criteria for educational establishments offering training, including the qualifications of teaching staff, the framework of the courses, and procedures for final examinations and certification. Courses are required to be of at least 66 hours' duration. At the provincial level, the governors must approve all first-aid courses, based on the regulations specified by the Minister of Health.

Legislation also stipulates that non-medical services and organizations are allowed to participate in first-aid activities. These include the State Fire Service and units subordinate to or supervised by the Ministry of Internal Affairs and the Ministry of National Defence. These Ministries (in cooperation with the Ministry of Health) are responsible for ensuring the availability of adequate numbers of competent staff, including police, fire-fighters and soldiers, to take part in first-aid activities.

Nongovernmental rescue organizations may participate in the emergency management system if they are registered as 'cooperating entities'. The Mountain Rescue Services and the Polish Red Cross are examples of these entities.

According to Article 25 of the Act on the Emergency Medical System (2006), each province is required to have a rescue coordinator (medical doctor) and a rescue information centre with staff qualified to deal with emergency calls (medical dispatchers). Other articles of this Act, supplemented by Ministry of Health ordinances, define the required qualifications and experience of these staff, as well as their roles and responsibilities. Medical dispatchers are also required to take

one continuous medical education course every three years. This training includes participation in at least one refresher course and one seminar aimed at upgrading knowledge and skills.

Governors of provinces, district heads, mayors and presidents of cities are responsible for the management, organization and provision of training sessions and exercises in their respective domains. Basic life support (BLS) courses appear to be carried out mainly by the organizations and units involved in actually providing medical services, for example, the ambulance services, the fire services, the police and the airport authorities. The Emergency Medical Services training centre in Mazovia Province, for example, recently received a grant of €1 million from the EU to train 800 people, including members of the State Fire Service.

The Ministry of Defence has its own training programmes for a variety of health disciplines, including doctors, sanitary specialists and epidemiologists, and provides ongoing training for specialized units. The trainers are often trained in the United States of America (USA). At the time of the assessment mission, workshops on pandemic influenza were taking place and there were plans to carry out a large exercise with the USA on mass decontamination.

Hospitals are allocated a small annual budget for training from the national budget and receive extra support from the medical and nursing associations. One hospital reported that they carried out BLS and hygiene training for all staff and supported the training of approximately 50 doctors in a variety of standard postgraduate disciplines.

Postgraduate training in disaster management is available in a number of private universities but there is currently no strategy on or funding for the participation of key health staff.

It was clear from the interviews that almost all entities had been involved in either the planning or the implementation of simulation training exercises. Exercises at provincial level are organized on a regular basis (at least once a year). The scenarios are usually based on issues related to public order and security and thus involve fire-fighters, the police, the EMS and the Armed Forces.

A competition was recently organized for all ambulance teams in Poland and Ukraine, which involved the airport authorities carrying out a large-scale exercise simulating a terrorist attack. Both the airport services and the emergency services from across the city of Warsaw took part. One hospital reported having carried out fire evacuation drills but no routine exercises related to other internal or external emergencies. The hospital was not involved in any exercises run by the crisis management committee of the province, which would have offered the possibility of testing the interface between the services.

Poland is currently participating in the European Programme for Intervention Epidemiology Training (EPIET), an EU initiative and exchange programme to strengthen country capacity for communicable diseases surveillance and response.

Pharmaceuticals, medical supplies, equipment, infrastructure

Medical supplies (including blood) and equipment for health crises are available in the appropriate quantities at national and local levels and can thus be distributed swiftly nationwide. Stockpiles located at the manufacturers and in the provinces are either controlled by the Ministry of Health (pharmaceuticals) or the Ministry of Economy (non-rotating stock). Procedures are adequate in terms of requesting stocks, speed of accessibility and the cold-chain system. Special equipment is in place, including mobile field structures with CBRN capabilities, isolators, etc. Funding for the above is available.

The Department of Defence, Crisis Management and Medical Rescue of the Ministry of Health has its own stock of pharmaceuticals and medical supplies, as well as one mobile unit that can provide basic medical care for 50 patients. The provinces are being encouraged to invest in similar units. The Ministry of Health has established a highly commendable programme for emergency purchasing. This places increased responsibility on selected vendors who are required to have their own contingency plans and to maintain surge capacity. The Ministry of Health organizes training for the vendors.

The Ministry of Defence maintains stocks of pharmaceuticals and medical supplies both centrally and at district level for use mainly by its own military health facilities. It also has two mobile units. At the time of the assessment, one of these units was deployed in Afghanistan and the other was in the process of being equipped. The Ministry of Defence can also deploy specialized equipment, including mobile field structures with CBRN capabilities, isolators, laboratories, etc.

The provinces are required by law to create their own stockpiles based on risk assessments in their environment. In an emergency, they can also request the Government Security Centre to release extra medical equipment, such as drugs, from the central stock. This fast-track procedure means that supplies can be released in four to six hours in very serious situations. The system was successfully put to the test during a recent mining accident.

Hospitals are required to have back-up generators, water resources and adequate pharmaceuticals for a two-week period. Extra drugs can be obtained through the provincial authorities. The 4th Military Clinical Hospital in Wrocław, for example, has two separate water intake systems that are monitored by the hospital's laboratory and it runs its own kitchen and laundry services. At the time of the assessment, the hospital was planning to install an independent power system.

Personal protective equipment was readily available in all units and health facilities.

Under normal circumstances the State Fire Service is responsible for decontamination procedures (BCRN) and has the necessary equipment and trained staff. It is planned to include medical emergency services in the implementation of these procedures but, at the time of the assessment, this was yet to be discussed with the Ministry of Health and the relevant personnel. The airport authorities in Warsaw and the Ministry of Defence also have decontamination capacity, which can be called upon if necessary. However, in the event of a large-scale threat of contamination, when it would be necessary to use all resources available in the country, for example, in the event of a CBRN terrorist attack, the national contamination detection and alert system would be initiated.

Blood supplies are the responsibility of the National Blood Transfusion Service, a government agency established in 2006, in coordination with the Ministry of Defence (which has blood collection facilities at each of its health facilities) and the Ministry of the Interior and Administration. There are 21 regional blood transfusion centres in the country. The assessment team visited the regional centre in Warsaw, which receives approximately 110 000 donations a year and supplies nearly 100 hospitals, serving a population of five to six million on a 24/7 basis. There are a further 17 units in the province but blood processing and serology testing is being centralized to improve safety. Donors are not routinely paid.

During a crisis, the provinces can use up to 25% of their reserves but need the authorization of the National Blood Transfusion Service to use more. This allocation is based on a risk assessment and a review of blood usage in other countries during crisis situations. The National Blood Transfusion Service has recently increased blood stock levels significantly by introducing three mobile units. However, blood stock levels in Poland still remain 1.5 times lower than in most other EU countries.

As a member of the EU, Poland has harmonized its legislation to meet European standards. Many of the existing health facilities were originally built in the 1970s. Three types of hospitals (small, medium, large) were constructed and a large number of similarly constructed hospitals can be found across the country. In addition to national building standards, there are legal standards for hospitals defining requirements regarding, for example, number of square metres per bed, equipment, ventilation, water and power, etc. State laws on health security apply to microbiology laboratories and infectious diseases wards.

One of the large hospitals constructed in the 1970s (600–800 beds) was under renovation at the time of the assessment (funded at provincial level). Wards and main services, such as heating and water, were to be upgraded and new equipment purchased.

The Act on Emergency Management establishing the Government Security Centre (2007) states that organizational measures must be taken to safeguard or quickly restore critical infrastructures in the event of breakdowns, attacks and other circumstances that interfere with their proper functioning. Critical infrastructures in this context include energy and fuel supply systems, communication systems, data communication networks, water and food supply systems, health-care systems, transport systems, rescue systems, systems ensuring the uninterrupted work of public administrations, systems related to the production, storage and utilization of chemical and radioactive substances, and pipelines. Protection plans must be prepared at both the national and the provincial levels and updated every two years. This is a relatively recent requirement but the assessment team noted that work was in progress (or in some instances that plans were in place) at the provincial level. The team was informed by the Government Security Centre that they were responsible for critical infrastructures at the national level and that they were in the early stages of addressing this particular issue.

The local authorities are overall responsible for coordinating and providing service delivery support and logistics support in their areas. They develop the necessary contacts and agreements with other sectors and private companies with a view to sharing resources. Adequate resources for support functions seem to be available; they have not been interrupted during previous emergencies.

An emergency digital radio telecommunications system is in operation but only within the city of Warsaw.

Health information management

As mentioned above, the Government Security Centre is the responsible body at the national level for gathering and coordinating information on a round-the-clock basis using a variety of different sources, including ministries and organizations, the provincial authorities, the Anti-Terrorist Intelligence Centre (Ministry of the Interior and Administration), the meteorological services, the police, the fire services and the national and international media. The Government Security Centre reports to the Prime Minister and the Government Team for Emergency Management and communicates pertinent information to key personnel in other ministries, organizations, etc. Communication is mainly by telephone and over the Internet. The Centre is also responsible for monitoring crisis situations and issuing regular situation reports. Its press office prepares press releases and provides training to spokespersons in the districts and guidelines on what may or may not be publicized during a crisis.

A similar process of monitoring and risk assessment is carried out by the emergency management centres in each of the 16 provinces. The governors have a direct video-link to the Prime Minister. Innovative plans are underway in one province to develop a computerized mapping system to improve intelligence gathering (particularly with respect to terrorist attacks) and strengthen response

activities. This is being achieved through agreements with private companies on sharing information about their staff, buildings, activities, etc., and efforts are being made to enhance the relationship between the community and the police.

The Ministry of Health is responsible for collecting and processing information on the resources available for health emergency situations and for preparedness planning at the national, provincial, district and communal levels. The plan must include a threat profile, information about available resources, option appraisals, etc., and define standard operating procedures (SOP) and public information procedures. The plan, which is confidential, is updated at least every two years.

Health statistics for policy and planning come mainly from the National Institute of Public Health, the Centre for Information Systems in Health Care and the National Health Fund.

The health sector has a classic surveillance and early warning system. Surveillance of communicable diseases is based on active reporting on 78 diseases and doctors are obliged to complete standard notification forms for the SES. The main means of information exchange and notification are telephone and telefax while, increasingly, routine statistics are sent by e-mail where Internet connection is available.

Polish legislation on surveillance complies with EU Decision No. 2119/98/EC on the European surveillance system (12). It is the responsibility of the SES to take the appropriate action in a given situation, that is, to verify information received, carry out epidemiological investigations, implement preventive measures and/or submit reports to the higher levels (the Public Health Inspectorate, the National Institute of Hygiene and Public Health and the provincial authorities). Furthermore, Regulation No. 26 (2003) of the Chief Sanitary Inspector identifies the diseases, syndromes and events that should immediately trigger the Early Warning and Response System of the State Sanitary Inspectorate. These include botulism, cholera, plague, Q fever, smallpox, tularaemia, pulmonary or intestinal anthrax, viral hemorrhagic fevers, syndromes suggestive of a dangerous infectious disease, and intoxications or diseases presumably caused by a bioterrorist attack. Such cases must be reported immediately (using the emergency mobile phone number) to the duty officer at the provincial SES who informs the Chief Sanitary Inspector, the Institute of Hygiene and Public Health and the State Sanitary Inspectorate at provincial level.

Routine data are analysed at the local level and aggregated data sent weekly, mainly by e-mail, to the National Institute of Hygiene and Public Health. The routine surveillance system does not cater for reporting individual data sets, nor does it integrate accident and emergency or laboratory data. These shortcomings seem mainly to be related to poor computer and software facilities.

In order to prevent the spread of a communicable disease, directors of the SES at all levels are authorized to issue decisions that may limit citizens' personal rights.

The State Sanitary Inspectorate is responsible for maintaining international networks, such as the networks of the ECDC Early Warning and Response System (ECDCEWRS) and the Rapid Alert System for Food and Feedstuff (RASFF). Another alerting system, the Rapid Alert System – Biological and Chemical Agents Threats (RAS-BICHAT), developed and provided to EU Member States by the European Commission, is operated by the Department of Defence, Crisis Management and Medical Rescue of the Ministry of Health in cooperation with the National Centre for Coordination, Rescue Operations and Civil Protection, a service of the Ministry of the Interior and Administration.

The provinces have agreements on exchanging epidemiological information with neighbouring countries and this seems to work well; for example, there is good collaboration with Ukraine.

The Institute of Hygiene and Public Health is the national focal point for the IHR and provides round-the-clock coverage. Its remit includes issuing situation reports and providing the Chief Sanitary Inspector with daily updates, as was the case, for example, during the pandemic (H1N1) 2009. The Institute is also responsible for the routine analysis of surveillance data, including those on communicable diseases, and environmental monitoring. As a think tank, it provides the Ministry of Health and the State Sanitary Inspectorate with recommendations on policy and planning issues. Routine reports are issued on its web site every two weeks, three months and six months.

The National Public Health Reference laboratories are situated in a number of locations, including the Institute of Hygiene and Public Health, the Ministry of Defence, the Central Unit for Quality Research in Laboratory Diagnostics in Łódź and some public health laboratories in the provinces specializing in areas, such as pesticides and genetically modified food.

The Institute of Hygiene and Public Health also houses the National Influenza Centre. As a result of recent upgrades, polymerase chain reaction (real-time PCR) is also available at locations in Białystok, Bydgoszcz, Gdańsk, Katowice, Kraków, Łódź, Olsztyn, Poznań, Warsaw (Masovia Province) and Wrocław. The work of the public health laboratories is oriented towards food and water safety, hygiene and environmental health, which account for approximately 90% of their workload. However, most clinical microbiology samples, with the exception of virology samples, are processed by the hospital laboratories, which (in the case of those visited by the assessment team) are well equipped and function well. Virology samples collected in the Masovia Province are sent to the National Institute of Hygiene.

The National Accreditation Body is registered with the European Co-operation for Accreditation (EA) and the International Laboratory Accreditation Cooperation (ILAC). Three public health laboratories at provincial level were reported to have ISO 17025 accreditation. An external quality assurance system is run by the Central Unit for Quality Research in Laboratory Diagnostics in Łódź.

Biological safety level 3 (BSL-3) facilities are available at the Military Institute of Epidemiology, which is also the National Reference Laboratory for Anthrax. The laboratory with BSL-3 facilities in the Masovia Province still requires some funding before it can become functional. The Veterinary Service at the Ministry of Agriculture has BSL-4 facilities.

It was not envisaged that the planned decentralization of sanitary and public health services to the provinces in 2010 would result in any major changes to the surveillance system though it could affect rapid response, resource movement and laboratory services.

While the public health and clinical (hospital) laboratories appear to function relatively effectively on an individual basis, there is no central coordinating body.

Health financing

In emergency preparedness, the pillar of the WHO health systems' framework entitled "Health financing" aims to ensure adequate contingency funding for the essential services needed during a crisis.

The health-care system is funded mainly through national and local budgets and the National Health Fund in accordance with the Law on health benefits financed from public means (30 July 2004), which defines the responsibilities of individual and public bodies cooperating with the Government in the area of health care. In 2007, 70.8% of the health expenditure was funded from public sources and the total health expenditure accounted for 6.4% of the GDP (including non-public sources of payment), the third lowest proportion among the Organisation for Economic Co-operation and Development (OECD) countries and 2.5% lower than the OECD average of 8.9%.

The national budget covers the capital expenditures of hospitals and health protection programmes, such as those for public blood services, occupational health, AIDS prevention and control and the prevention of substance addiction. It also covers the costs of health services provided in life-threatening situations. The Minister of Health may consent to covering the cost of treatment or diagnostic procedures abroad, if they are not available in Poland.

The major part of the funds allocated from the national budget for the implementation of health programmes is transferred to the National Health Fund, which is represented in each of the 16 provinces and covers a wide range of health services, such as medical and diagnostic examinations, preventive care, out-patient health care, medical emergency services, medical rehabilitation, nursing, supply of drugs and medical devices, supply of orthopaedic devices, perinatal and palliative care and care of AIDS patients.

Supervision of the National Health Fund is carried out by the Minister of Health. The Minister of Finance is responsible for the financial transactions of the Fund. The draft budget is agreed between the Board of the National Health Fund, the Commission of Health and the Commission of Finance of the Parliament (Sejm) before submission for approval to the Minister of Health in consultation with the Minister of Finance.

The National Health Fund covers all employed persons and registered unemployed persons. Since 2003, it has also covered the Armed Forces. Emergency care is provided free to uninsured persons. The Fund buys services through contractual agreements. Payment to service providers, such as hospitals, is based on various payment schemes (per capita, per standardized costs for categorized medical procedures, etc.).

Forty per cent of the approximately Zł.53 billion annual budget is spent on hospital care. In 2007, 24.5% of the total health expenditure in Poland was on pharmaceuticals, which was well above the OECD average of 17.1%.

Medical rescue is financed from the national budget through the Ministry of Health. Hospital units and trauma centres are funded by the National Health Fund.

Contingency funding at all administrative levels, including city level, is available for and accessible by the Ministry of Health. For example, 1% of the budget for Wrocław is earmarked for emergencies, the city administration provides additional stocks and the provincial administration covers the cost of upgrading and maintaining the emergency management centre. Crisis management activities at the central level are financed from the national budget; at the provincial, local and municipal levels from the budget of the relevant province, county and municipality, respectively.

Service delivery

In emergency preparedness, the fourth key function of the WHO health systems' framework, "Service delivery" aims at ensuring the equitable delivery of safe and effective health interventions to individuals and communities during an emergency with a minimum waste of resources. The main components are mass casualty management, management of health-care facilities, and continuity of essential medical services.

Mass casualty management

In general, gathering the capacity and expertise necessary to respond to the health consequences of mass casualty does not seem to be a major problem. Procedures exist for securing the services of staff and resources from any hospital to deal with mass casualty, also at the provincial level, and for obtaining drugs and medical equipment from national stockpiles.

The Ministry of Health has a sophisticated, multitiered plan to increase hospital capacity, including the equipment required. The plan is reliant on several mechanisms: increasing numbers of beds (rooms), relocating patients to alternative health-care facilities and mobilizing additional staff and supplies. Considering the scale of such operations, it would be useful to test them through desk-top and, possibly, field exercises. The stockpiled equipment held by the Ministry of Emergencies can increase numbers of beds substantially (by 25% in the older hospitals and 50% in the newer).

Procedures seem to be well developed with clear lines of authority from the provincial level (through the medical emergency coordinator and the governor) to the national level, coordinated by the Government Security Centre. Furthermore, the governor of a province can, if necessary, request the Ministry of National Defence for the assistance of units of the Polish Armed Forces. In such cases, assisting units would function under the authority of their commanding officers.

The Polish Armed Forces are able to provide a variety of relevant services, including threat monitoring, post-emergency assessments, search and rescue assistance, evacuations, removal and disposal of hazardous materials (CBRN), medical aid and execution of sanitary, hygiene and anti-epidemic procedures. They hold monthly training exercises using different scenarios, such as a pandemic or a terrorist attack. They may also be involved in the evaluation of simulation exercises in the provinces.

The EMS are regulated by the Act on the Emergency Medical System (2006), which defines standards for ambulances, equipment, response time, etc., based on European standards. In 1999, Poland introduced an integrated medical response system, which includes hospital-based rescue units, ambulance medical rescue teams and helicopter rescue teams. EU funding supports the creation of 11 emergency departments in hospitals throughout Poland. The Ministry of Health reported the impending purchase of 600 new ambulances.

The EMS and the Helicopter EMS (HEMS) are generally well organized and have surge capacity built into their structures and plans. However, the availability of helicopter landing pads needs to be increased. Emergency procedures allow for multiple helicopter dispatches. At the time of the assessment, this was in conjunction with military helicopters, and the EMS was in the process of procuring 23 Eurocopters to serve nationwide.

The Ministry of Information and Administration has its own ambulance service linked to its hospitals, which forms part of the national fire rescue system. The EMS in Warsaw has 179 ambulance teams and coordinates with the local fire and police services. The hospitals also have ambulances but these are used solely for transferring patients to other hospitals. They are not involved in emergency interventions.

The EMS central station in Warsaw (Masovia Province) has ambulances stationed at 18 locations across Warsaw. These are on duty 24/7 and are called out approximately 200 000 times annually. Two ambulances are category C with full resuscitation and neonatal units.

The airports of Warsaw and Wrocław comply with international civil aviation standards. They each have dedicated medical and fire rescue services, a first aid/first response clinic and an on-site ambulance. In addition, the fire services at both airports have significant equipment to respond to crises, including a decontamination unit. The airport crisis management groups cooperate closely with the provincial and city administrations and carry out regular and frequent multidisciplinary simulation exercises. Both facilities provided the team with a detailed response plan.

Management of health-care facilities

Elements of hospital preparedness plans were found to a varied degree in the hospitals visited. While hospital directors usually have evacuation plans and plans to summon staff and equipment in a crisis, preparedness plans in line with the Ministry of Health guidelines were not provided at the facilities visited. Hospitals do not generally have a crisis centre, nor do they have a crisis management team. Therefore, in a crisis, they would request the help of the city crisis management centre. Collaboration between the hospitals and the city crisis management centres is considered good and is frequently based on informal and personal interaction between professionals at each level.

Because of its proximity to the stadium and its capacity to provide surgical services, the Bródnowski Province Hospital will act as the referral hospital during the UEFA EURO 2012™ event. At the time of the assessment, negotiations were underway to change the ownership of the hospital, which would allow the hospital to draw up private contracts and utilize all of its spare resources and capacity. The hospital is undergoing renovation, which will increase its theatre capacity and extend its casualty (emergency) department.

The Director of the hospital provided the team with the hospital evacuation plan, which was developed by a multidisciplinary committee. A pandemic influenza plan exists at the provincial level but hospital staff were not involved in its development. Patients diagnosed with a contagious disease are transferred to the Infectious Diseases Hospital, which arranges special transport and provides advice on the protection of the staff and the other patients. A room for provisional quarantine is made available.

Essential medical services

Essential health programmes, including primary health care and health services for displaced populations, have been proven to function effectively over the last 20 years, although the numbers of displaced persons were not high and periods of displacement were short.

The management of lifelines for internally displaced persons (shelter, provision of food and water) is under the responsibility of the local authorities.

Sufficient human resources, supplies and equipment are available to cover needs. Activities to prevent and control communicable and noncommunicable diseases continue, as do the immunization services. An active surveillance system is in place and environmental factors are being monitored.

The SES has the capacity to provide laboratory support during a crisis, enabling the hospitals to continue their normal services.

Mass gatherings

Poland will co-host the UEFA EURO 2012™ event. In preparation, and taking advantage of the WHO mission, the Ministry of Health requested further elaboration on the topic of mass gathering.

Table 3 lists the functional areas involved in the management of public health risks during mass gatherings.

Table 3. Management of public health risks during mass gatherings

Functional areas	
Communicable diseases	Noncommunicable diseases
Cross-cutting event-related issues	Food and water safety
Risk management	Risk communication
Diseases surveillance	Security (the Military)
Laboratory involvement	Consultation with international experts
Outbreak alert and response	Operations and logistics
Medical services and EMS	Environmental health
Deliberate event response	Communications system
Infection control and quarantine	Psychosocial dimension
Pandemic (H1N1) 2009 risks	Mass dispensing
	Fatality management

In a mass casualty incident, both the organizational and the medical resources and management systems are severely challenged and may be rendered insufficient to adequately deal with the situation. The inability to provide appropriate support could result in increased morbidity and mortality.

The cities hosting the UEFA EURO 2012™ event (Warsaw, Poznań, Gdańsk and Wrocław) need to ensure basic health care and EMS for an increased population (local population, visiting fans, football teams, officials, etc.). Crisis management must be coordinated *outside the stadium* by the municipal and national authorities and *inside the stadium and in fan zones* by the services providing health care and emergency response and those dealing with public amenities (transport services, airport and port authorities, tourist offices, industry, education, commerce, the media).

Preparedness and mitigation are thus of paramount importance to the Ministry of Health. The Medical Committee on UEFA EURO 2012™ in Poland (coordinated by PL-2012, a government-owned company responsible for coordinating the preparation process) presented the assessment team with a comprehensive plan for the delivery of medical services during the event, based on previous experience and best practices.

As mentioned under “Findings of the assessment”, mass-casualty plans are generally present, including plans to manage infectious diseases. Health-care facilities seem to have the appropriate surge capacity. The EMS and HEMS are generally well organized and have surge capacity built into their structures and plans. However, the number of helicopter landing pads needs to be increased, particularly at the referral hospitals and in the stadia.

Current jurisdiction provides a legal framework for coordinating the efforts of the EMS, the hospitals and the ambulance services in major emergencies.

Exercises are organized every year using scenarios related to public order and public security. Twelve were carried out in 2008 alone, with over 1300 participants.

During mass gatherings, surveillance activities focus mostly on detecting communicable diseases’ outbreaks and bioterrorism. However, for the UEFA EURO 2012™ event, noncommunicable conditions, such as injuries or heat-related illnesses, will also be included. The various departments in charge of the surveillance system at the national and sub-national levels will cover this aspect during the event.

At the time of the assessment, the National Institute of Public Health – in consultation with the Robert Koch Institute, Berlin, Federal Republic of Germany – was reviewing relevant literature with a view to deciding the most appropriate surveillance model for UEFA EURO 2012™ in Poland. Enhancing the current surveillance system, for example, by introducing active and sentinel surveillance rather than implementing a new system (for example, syndromic surveillance) was seen to be the most effective and realistic way forward, taking into account the financial aspect, the effort involved and the need to train staff in the new system. Implementation has been delayed due to the pandemic (H1N1) 2009 and pending the results of a survey by the National Institute of Public Health to establish what is in place (including Knowledge, Attitude and Practice (KKAP) surveys) with a view to developing recommendations for the State Security Inspectorate and the provinces, which have the necessary administrative authority to implement the programme. However, no additional specific epidemiological surveillance activities have been initiated or are planned in the context of UEFA EURO 2012™.

With respect to exercises, most respondents considered that Poland has rather extensive experience in dealing with mass gatherings, including the visit of Pope Benedict XVI in May 2006. Further opportunities for testing the surveillance system will be possible during the Chopin Year in 2010 and when Poland takes over the EU presidency in 2011.

No national minimum standards exist for the provision of health services during a mass gathering.

The Warsaw and Wrocław airports have special committees on disaster preparedness, membership of which includes representatives of the health units at the airports. There is an alert system between all rescue services (fire, security, medical), each of which has its own response plan, as well as an overall integrated plan, which is tested regularly with the participation of the municipal and provincial services. The delay for medical response at the airports is 2–3 minutes; additional support from the provincial level can reach the airport within 20 minutes. Both airports report sufficient security staff.

The State Fire Service has a national coordination centre and carries out simulation exercises to assess its ability to respond simultaneously to multiple attacks in the cities while maintaining core activities. During the UEFA EURO 2012™ event, the Service will be on full alert in each of the host cities and will provide first aid. It will need additional equipment, including a helicopter and decontamination facilities for up to 1000 persons.

The EMS in Warsaw and Wrocław seem to be well organized and equipped. Both cities will be covered 24/7 by the HEMS. Crew training will commence in 2010. The HEMS reports sufficient capacity but there is a plan to bolster services with volunteers during the event.

The two referral hospitals visited and hospitals of the Ministry of Information and Administration seem to be fully staffed and equipped with blood centres and ambulances and a sports and telemedicine facility will be in place during the event.

The Coordinator of the Wrocław stadium informed the team that flyers with health promoting messages and information about substances that are prohibited in the stadium will be distributed during the event.

Evaluation

The capacity for crisis management in the health sector in Poland was evaluated against the benchmarks and indicators of the WHO tool for assessing the preparedness of health systems for crisis, which is based on formal research and consultations.

The report is not intended to be judgemental of the comprehensiveness and effectiveness of the current system but rather to revisit it with the WHO health systems' framework in mind and to propose modifications as far as financial and other constraints will permit. Thus – solely in relation to the tool – the authors listed strengths and weaknesses perceived and provided recommendations for consideration.

Strengths

Poland has a high level of *political commitment* to health crisis preparedness and the proven capacity to respond to national and international disasters. There is an established framework for the management of all kinds of emergencies at both the national and the provincial levels.

A *legal framework* for crisis preparedness and response and good coordination mechanisms exist at the national and provincial levels. The multisectoral crisis management bodies present at the national, provincial and city levels are being developed and reinforced, which must be commended as a practical and pragmatic way of harmonizing and coordinating the efforts of the different services.

A *health sector crisis management* entity exists in the form of the Department of Defence, Crisis Management and Medical Rescue of the Ministry of Health. This well-staffed operational unit is responsible for health crisis management and is linked to the Government Security Centre and the emergency management centres at the provincial level.

The Ministry of Health and other institutions, such as the National Influenza Institute, are appropriately linked to *international networks* (for example, EWRS, RAS-BICHAT, IHR) and institutions.

Capacity-building for health crisis management exists at many levels and is offered by several institutions. Training and exercises addressing various disciplines of health crisis management are organized at international, national, provincial and local levels. An exercise involving fire-fighters, the police, EMS, etc., is organized annually at the provincial level.

Dedicated *emergency and contingency funding* is available for and accessible by each administrative level and procedures for accessing international funding are also in place. Action taken to organize a national reserve of pharmaceuticals, emergency procurement, and the stockpiling and distribution of medical emergency supplies is commendable.

Hospital capacity seems to be fully adequate in terms of numbers of beds, availability of trained staff (including specialists), access to equipment, contingencies and supplies in sufficient quantities and varieties, and access to modern medical technology.

Essential *health programmes*, including primary care programmes, are well distributed to cover affected populations in a crisis situation.

The SES has a well-developed *health and environmental surveillance system* with relevant reference laboratories in place.

The capacity and expertise required to respond to the health consequences of *mass casualty* incidents are present, as are resources for *surge capacity*. Also in place are a well-functioning EMS system (including pre-hospital and hospital facilities), a triage system, a surveillance system, and facilities for on-scene medical operations.

The health services' preparedness *planning for the UEFA EURO 2012™* event is well under way and no major problems were observed at the time of the assessment.

Weaknesses

The system for mobilizing, coordinating and integrating all available resources into an overall response is not fully coherent at all levels (horizontal and vertical). National crisis management policy seems not to be widely known outside the Ministry of Health and there is no common operational framework (EMS, police, fire-fighters, etc.). Although this does not cause problems under normal circumstances, it could do so in the face of a large-scale event.

The establishment of the Department of Defence, Crisis Management and Medical Rescue in the Ministry of Health is commendable. It could be strengthened to function as a crisis management centre, as required by Ordinance 1810 of the Council of Ministers determining which government authorities shall establish emergency management centres and defining their methods of operation (2009).

Currently, there is no legal basis for stockpiling unlicensed drugs despite the fact that governments of EU Member States, in accordance with EU Directive 2004/27/EC, Article 5 (12) can issue temporary authorizations for the distribution of unauthorized medicinal products in response to a confirmed spread of pathogenic agents, toxins, chemical agents or nuclear radiation, any of which could cause harm.

Procedures are in place for the urgent distribution of pharmaceuticals in the event of biological and radionuclear threats. Chemical threats, however, seem not to be sufficiently addressed. Chemical antidotes present special challenges: in the case of a threat, they would be needed very quickly; although they may be needed in large quantities, it could be difficult to rotate them as they are not used frequently under normal circumstances; some chemical antidotes are not licensed in the country.

The stockpile of rotating pharmaceuticals is only a vendor-managed inventory, which may render rapid distribution difficult. While budgetary prudence requests the rotation of pharmaceuticals, there are stocks of specialties, which – although they are not in everyday use – should still be available in sufficient quantities and, therefore, cannot be rotated entirely.

Currently there is no legislation describing the requirements of medical services during mass gatherings, the actors involved or the procedures to be followed

While the public health and clinical (hospital) laboratories are functional, they are not part of a coherent laboratories' network coordinated at central level. This situation may be further aggravated by the planned decentralization of sanitary and public health services to the provinces during 2010. Being part of a network would help the public health and clinical (hospital) laboratories cope with an unexpected surge in demand, enhance external quality assurance, facilitate intersectoral collaboration (for example with animal and food laboratories) and improve the collection of national surveillance data.

Disaster planning does not seem to fully incorporate hospitals. While the fire and ambulance services regularly test their response plans, there are no plans or procedures for ensuring an effective interface between the hospitals' crisis management services and other services.

Hospitals and other health institutions lack formal, generic plans for mass casualty emergency response and human resources development, based on an emergency needs assessment.

Interdisciplinary drills led by the health sector do not test hospital capacity for treatment, which may be overestimated. For example, hospital emergency departments are frequently crowded with non-emergency patients who would rather be treated in hospital than by the primary care services. Triage of such patients could be included as part of the interdisciplinary drills.

In spite of multiple offers, little training seems to take place – especially at the hospital level – in public health issues, such as disaster management, rapid health needs assessment, hospital crisis preparedness planning, and the aspects of mental health and nutrition in emergencies.

Vulnerability assessments of structural, non-structural and functional safety and controls of the resilience of critical health facilities, including required retro-fitting, are not regularly conducted.

At the time of the assessment, the fire-fighters responsible for mass decontamination were in the process of translating their mass decontamination concept into operational arrangements, without having discussed the proposed structures and procedures with the various actors involved (the Military, pre-hospital and hospital emergency medical services, etc.).

There was much uncertainty regarding procedures relating to the detection of CBRN agents (identification, confirmation, alert). This aspect could be further integrated into the CBRN and mass decontamination response plans.

Recommendations

With a view to further strengthening the crisis preparedness and response of the health system in Poland and to promoting multisectoral preparedness at all administrative levels, the Ministry of Health may wish to consider the following proposals.

1. To strengthen the hospital emergency preparedness programme.

Hospital emergency plans are an important component of a health sector's preparedness for emergencies. Therefore, as part of quality control and assurance, the Ministry of Health might consider developing a mechanism for accrediting health-care facilities with relevant and regularly drilled emergency response plans, and establishing a national programme on reducing the vulnerability of health facilities to the effects of natural disasters.

In addition, the hospital emergency preparedness programme should include: regular assessments of the level of preparedness for major epidemic or pandemic situations; the development of a health sector contingency plan for providing health services to internally displaced persons; information about the role of the health sector in the management of the dead and missing in a mass casualty event; and guidance about psychosocial support for both staff and victims.

2. To create a public health preparedness and response forum with a view to keeping the relevant national actors informed and connected.
3. To establish a national public health laboratory network, coordinated by a national body or authority, with an organizational framework that ensures the inclusion of all the identified core functions and expertise deemed necessary for an effective public health laboratory system.³
4. To provide legislation (or regulations) on medical support during mass gatherings, and the immediate availability of life-saving drugs in the event of chemical accidents, etc.
5. To implement the planned emergency management centre in the Department of Defence, Crisis Management and Medical Rescue. The Department would thus take the lead role in:
 - a. creating a network of health coordinators at all levels through training, information exchange, secondments, rotation, etc., establishing its position as the national reference centre for health sector crisis management;
 - b. drafting and implementing health policy on, for example, the introduction of post-graduate disaster management studies for selected hospital staff, community-based risk communication and health education on emergency preparedness, and the widespread sharing of concepts relevant to the health sector (such as the mass decontamination scheme developed by the State Fire Service);

³ Further reading: *Core functions and capabilities of state public health laboratories* (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5114a1.htm>, accessed on 2 March 2010); and *WHO EURO Laboratory Assessment Tool* (available from the WHO Country Office, Poland).

- c. designing exercises to test intersectoral collaboration on hospital crisis management (fire services, police, EMS), ensuring that the most likely rather than the least likely emergency events are addressed;
 - d. recommending the placement of helipads at hospitals and stadia to enhance the leverage of the HEMS;
 - e. supporting the hospital emergency preparedness programme by ensuring that the programmes specific to each hospital include:
 - regulations and legislation on the management and organization of the hospital;
 - procedures for receiving patients and providing essential services during a health crisis;
 - an assessment of the hospital's vulnerabilities, health risks and hazards;
 - a risk-reduction plan;
 - a mass casualty response plan, including details about hospital incident command, on-call procedures, hospital evacuation procedures, reception of victims, etc.;
 - contingency plans (for pandemics, chemical incidents, etc.);
 - f. ensuring that hospital emergency response plans and contingency plans are validated, tested and updated, and that they are shared with the other stakeholders (especially the first responders) and integrated in the disaster response plans at the municipal and provincial levels.
6. To apply the WHO vulnerability risk analysis and mapping (VRAM) programme. The primary objective of VRAM is to strengthen country capacity to assess health risks through mortality, morbidity and disability analyses, and to use the results of these analyses in developing emergency preparedness and response plans, in line with the WHO's six-year strategy for risk reduction and emergency preparedness.
 7. To introduce legal provisions that would allow for the prompt ad hoc authorization of drug products by the Ministry of Health in case of large-scale emergencies.
 8. With a view to testing hospital capacity for treatment, include triaging of non-emergency patients in the interdisciplinary drills led by the health sector.
 9. To avoid any uncertainty regarding procedures relating to the detection of CBRN agents, integrate these in the CBRN and mass decontamination response plans.
 10. To organize, jointly with WHO, a national workshop covering the main topics of the emergency preparedness programme (including training for hospital emergency managers in developing vulnerability reduction plans and emergency response plans).
 11. To take the following action in connection with the UEFA EURO 2012™ event.
 - Reinforce links between the Ministry of Health and the PL-2012 coordinator.
 - Advise each service involved about the anticipated extent of their involvement and provide them with details important for planning, such as anticipated crowd numbers, travel patterns, locations and dates.

- Request each service involved to review their resources, including staff numbers, in order to ensure that they are prepared for the impact of the event on their core activities. This pertains to all public health and laboratory services, which should be made aware of all visitors' locations during the event. Depending on the results of the review, it may be necessary to boost staff numbers temporarily by, for example, postponing staff leave or participation in training courses.
- Undertake a review of communication devices to ensure that seamless communication lines exist between all agencies and that the telephone service has the capacity to support the additional activity.
- Develop a monitoring and tracking programme for all care episodes at the UEFA EURO 2012™ venues in order to enhance routine communicable diseases surveillance (by changing mode of data collection, frequency of reporting, etc.) and the surveillance of emergency department discharge diagnoses. The data should be shared with all public health agencies.
- Test the medical delivery plans at the venues at least 10 months prior to the event. All venue-based services, as well municipal and national services should take part and the test should use uniform communication systems and reporting patterns.
- Request all public health agencies and the SES to undertake a full inspection of all venues, including hotels, immediately prior to the event. Security services could be included in the inspection to develop a procedure that would ensure food is not compromised prior to delivery to the various food vendors.
- Develop and test CBRN scenarios in or near the stadia (including the use of antidotes).
- Conduct a follow-up of UEFA EURO 2012™ (jointly with Ukraine) using the event as an opportunity to strategize intercountry collaboration on disaster preparedness. This could be in the form of a WHO-supported workshop in 2010 involving Polish and Ukrainian stakeholders.
- Test the health services' preparedness system for UEFA EURO 2012™ once it is in place in 2011. Staff needs to be recruited for the event without compromising the functionality of the health systems of the two cities involved. The services planned for the stadia and fan zones need to link closely with the city services and each entity needs to be clear about its areas of operation and its line of communication with the other.
- Encourage those concerned to review the WHO document, *Communicable disease alert and response for mass gatherings (13)*.

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Annex 1

Members of the assessment team



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Annex 2

Persons interviewed



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Ministry of Health

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Wojciech Kutyla, General Director

Department of Budget and Finance

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Department of Health Care Management

Piotr Warczyński, Head

Department of Health Policy

Piotr Dąbrowski, Head
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Barbara Bańczak-Mysiak, Deputy Head
Paweł Abramczyk, Chief of Division
Dariusz Cybula, Chief of Division
Miroslaw Saliszewski, Chief of Division
Krzysztof Wojtyś, Chief of Division

Department of International Cooperation

Katarzyna Rutkowska, Chief of Division for Bilateral Collaboration

Ministry of National Defence

Tadeusz Nierebiński, Chief Sanitary Inspector for the Polish Army
Sławomir Marat, Deputy Surgeon General

Warsaw (continued)

Ministry of Internal Affairs and Administration

Irena Walecka-Herniczek, Head, Department of Health
Jadwiga Karczewska, Chief of Division for Health Policy
Andrzej Szyrwiński, Coordinator for Medical Rescue
Helena Zacharska, Representative

Government Security Centre

Przemysław Guła, Acting Head
Dariusz Góralski, Deputy Head
Edyta Szafran, Representative

Government Protection Bureau

Dariusz Zajecki, Chief Medical Officer

National centre for coordination, rescue operations and civil protection, Warsaw

Dariusz Marczyński, Head

Chief Sanitary Inspectorate and SES

Marek Tomasz Szkoda, Deputy Director, Anti-Epidemics Department
Michał Targowski, Deputy Director, Department of Public Health and Health Promotion
Małgorzata Czerniawska-Ankiersztejn, State Voivodeship Sanitary Inspector

Bródnowski Hospital

Maria Teresa Bogiel, Director
Małgorzata Styczyńska, Deputy Medical Director
Jacek Kacperski, Deputy Administrative Director
Stefan Mękus, Deputy Technical Director
Jacek Gorzkowski, Head of Emergency Room
Agnieszka Jeziorska, Public Relations Specialist
Marek Marecki, Deputy Head of Emergency Room
Elżbieta Madajczyk, Chief Nurse
Artur Zaczyński, Medical Coordinator for the National Stadium

Mazovia Province Emergency Medical Services System

Michał Borkowski, Head
Artur Kamecki, Director, Emergency Medical Services, Warsaw

National Blood Centre and Warsaw Blood Centre

Agnieszka Beniuk-Patola, Director
Mateusz Kuczabski, Deputy Director
Dariusz Piotrowski, Regional Head for Warsaw

National Health Fund

Jacek Paszkiewicz, President of the National Health Fund
Arkadiusz Kosowski, Director, Department of Branch Special Medical Services

Warsaw (continued)

National Institute of Public Health

Andrzej Zieliński, Deputy Director

Małgorzata Sadkowska-Todys, Head, Zoonotic Diseases Unit

Polish Airport State Enterprise

Ireneusz Dzik, Chief of Medical Services

Justyna Grzegorska, Assistant

Andrzej Ilków, Airport Operations Manager

Jan Jagnyziak, Airport Fire Service

Michał Koziński, Representative of the Sanitary Inspection

Paweł Krawczyński, Head, Emergency Medical Services

Tomasz Krystek, Medical Staff

Agnieszka Lewandowska, Airport Sanitary Service

Anastazja Lipińska, Border Sanitary Inspection

Dorota Marczevska, Border Sanitary Inspection

Halina Ślosarska, Environmental Protection Unit

Halina Sobienak-Wdowińska, Border Sanitary Inspection

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Polish Medical Air Rescue

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National Sports Centre

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Crisis Management Centre

Stanisław Kosiarkiewicz, Director

4th Military Clinical Hospital

Grzegorz Stoiński, Commander

International Airport in Wrocław

Aleksander Rodziewicz, Head of Medical Dispensary

Mountain Voluntary Emergency and Rescue Service Training Centre, Wałbrzych-Kłodzko Group

Mariusz Rzepecki, Deputy Director of Mountain Services
Instructor of Voluntary Emergency and Rescue, Medical Rescuer
Tomasz Lipiński, Rescuer

Medical Care and Emergency Medical Services of Wrocław City


Jarosław Maroszek, Head, Department of Health Policy
Office of the Marshal of the Province of Lower Silesia

Wrocław Stadium

Bartosz Szafran, Medical Coordinator

Annex 3

Selected legal and regulatory framework related to crisis preparedness and response in Poland



Act on State Sanitary Inspection, 14 March 1985 (Dz.U.2006.122.851).

Act on the Emergency Medical System, 8 September 2006 (Dz.U.2006.191.1410).

Act on emergency management establishing the Government Security Centre, 26 April 2007 (Dz.U.2007.89.590).

Act on mass event safety, 20 March 2009 (Dz.U.2009.62.504).

Ordinance 33 of the Minister of Health on the detailed scope of medical rescue procedures a medical rescuer may perform, 29 December 2006 (Dz.U.2007.4.32–33).

Ordinance 408 of the Ministry of Health on qualifying first aid course, 19 March 2007 (Dz.U.2007.60.408).

Ordinance 525 of the Ministry of Health on in-service training for medical dispatchers, 16 April 2007 (Dz.U.2007.77.525).

Ordinance 605 on procedures for accepting emergency calls and EMS dispatch teams, 7 May 2007 (Dz.U.2007.90.605);

Ordinance 775 of the Ministry of Health on in-service training for medical rescuers, 14 June 2007 (Dz.U.2007.112.775).

Ordinance 893 of the Ministry of Health on the operation of the State Emergency Medical Services in the provinces and on the criteria for calculating the operational costs of the medical rescue teams, 20 June 2008 (Dz.U.2008.142.893).

Ordinance 332 of the Ministry of Health on the rights and responsibilities of EMS coordinators at the province level, 24 February 2009 (Dz.U.2009.39.322).

Ordinance 1810 of the Council of Ministers determining which government authorities shall establish emergency management centres and defining their methods of operation, 15 December 2009 (Dz.U.2009.226.1810).

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“New diseases are global threats to health that also cause shocks to economies and societies. Defence against these threats enhances our collective security. Communities also need health security. This means provision of the fundamental prerequisites for health: enough food, safe water, shelter, and access to essential health care and medicines. These essential needs must also be met when emergencies or disasters occur.”

Dr Margaret Chan
Director-General, WHO

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