

Ministry of Health

**PREPAREDNESS AND RESPONSE PLAN OF THE
HEALTH CARE SYSTEM WHEN COPING WITH
EMERGENCIES, CRISES AND DISASTERS**

2017

LIST OF ABBREVIATIONS

NBCD	Nuclear-Biological-Chemical Defence
ARM	Army of the Republic of Macedonia
FVA	Food and Veterinary Agency
GS ARM	General Staff of the Army of the Republic of Macedonia
SSHI	State Sanitary and Health Inspectorate
SEI	State Environmental Inspectorate
PRD	Protection and Rescue Directorate
ULSG	Unit of Local Self-Government
HC	Health Centre
PHIRM	Public Health Institute of the Republic of Macedonia
EMS	Emergency medical services
MoI	Ministry of Interior
MoE	Ministry of Economy
MEPP	Ministry of Environment and Physical Planning
MoF	Ministry of Finance
MoH	Ministry of Health
MTC	Ministry of Transport and Communications
MES	Ministry of Education and Science
MLSP	Ministry of Labour and Social Policy
NFP IHR	National Focal Point for the International Health Regulations
FFU	Fire Fighting Unit
SOP	Standard Operating Procedure
SRH	Sexual and Reproductive Health
UCIDFC	University Clinic for Infectious Diseases and Febrile Conditions
HMA	Hydrometeorological Administration
PHC	Public Health Centre
CMC	Crisis Management Centre

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GLOSSARY

State of emergency, pursuant to Article 125 of the Constitution of the Republic of Macedonia, is defined as follows: "A state of emergency exists when major natural disasters or epidemics take place."

Disaster means any natural, technological or man-made catastrophe which, due to its volume, intensity and unexpected nature, endangers lives and health of a large number of people, property of high value as well as the environment, the occurrence of which cannot be prevented nor can the consequences thereof be removed with solely the relief work by save and rescue players from the area under the local / regional self-government where the event happened, including the consequences of terrorism and warfare.

Risk of a disaster is a potential loss from catastrophes in terms of lost lives, health status, wellbeing, assets and services, which could happen to a community or society in some future period.

Risk assessment implies a methodology for determining the nature and the volume of the risk, including an analysis of the potential dangers and an appraisal of the existing conditions conducive to vulnerability which could, as a whole, potentially damage exposed people, material properties, services, wellbeing and the environment.

Vulnerability means characteristics and circumstances of a community, system or assets which contribute to the latter being susceptible to the harmful effects of dangers.

Exposure when researching natural disasters – this refers to entities exposed to events of dangerous nature. These entities include people, resources, infrastructure, manufacture, material and natural wealth, services, ecosystems or socio-ecological systems. Time and space components of exposure can be distinguished. Unless a society or a state is exposed to natural hazards, the development of strategies for coping therewith could be neglected.

Managing risks from disasters is a systematic process of using administrative directives, organizations and operational skills and capacities for the purposes of (i) implementing strategies/policies and (ii) improving the coping capacities with a view to mitigating negative effects of hazards and the likelihood of a disaster to happen.

Mitigation/reduction of risks from disasters – concept and practice for mitigating risks from disasters through systematic efforts to analyse and manage the causality factors for disasters, including through measures such as reduction of the exposure to hazards, mitigation of the vulnerability of both people and property, wise management of land and environment, as well as improved preparedness for adverse events.

Accident is an individual event caused by sudden activity of natural forces or by human actions bringing consequences that jeopardize human life and health or cause damage on property, environment and nature at the place where the event occurred.

Prevention means activity undertaken to prevent, control and cope with emergencies, crises and disasters with a view to fully avoiding the negative impacts of hazards and related catastrophes.

Preparedness refers to the ability of governments, professional response organisations, communities and individuals to anticipate and respond effectively to the impact of likely, imminent or current hazards, events or conditions.

Mobilization refers to a procedure whereby the participants in the save and rescue system join the save and rescue activities in an organized manner.

Hazardous substance/matter means any substance, mixture or preparation determined by a regulation, which appears as raw material, product or by-product including a substance the occurrence of which in case of accident can jeopardize human health and life or the environment.

Biological hazard is a process or a phenomenon of organic origin, or conveyed by biological vectors, including exposure to pathogenic microorganisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, damage to property or livelihoods, social and economic disruption, or environmental damage.

Response means delivery of emergency services and public assistance during disaster or immediately after it, in order to save lives, reduce health affections, ensure public safety, and meet basic human needs of those stricken or threatened by the disaster.

Emergency means a condition that requires undertaking urgent and unpostponable measures in order to protect the health of the population, whereas, it can be of sizeable or minor proportions, with or without victims, and present in circumstances lacking official proclamation of a state of emergency.

Public awareness - the extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken, individually and collectively, to reduce exposure and vulnerability to hazards.

Recovery, restoration and improvement of facilities, livelihoods and living conditions of disaster-affected communities from crisis situations and disasters, including efforts to reduce crisis and disaster risk factors.

Public health - a system of knowledge and skills of preventing disease, prolonging life and promoting health through the organized efforts of society. The public health system monitors and analyses population health for its improvement in view of such health risk factors as environmental factors, causes of disease, lifestyle and socio-economic factors.

Sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. It implies that people are able to have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when, and how often to do so (<http://www.unfpa.org/sexual-reproductive-health>).

Public health emergency is an occurrence of real threat from a state that may cause increased mortality or illness ensuing from natural disasters, contagious diseases, or biological, chemical, physical or radiological threats.

Public health emergency of international concern is an extraordinary event which

may constitute a public health risk to other countries through the international spread of disease, requiring a coordinated international response.

Crisis is an occurrence that poses a threat to the country's basic values, and permanent and vital interests and goals, i.e., a threat to the country's constitutional order and security.

Crisis situation is a situation caused by risks and hazards posing a threat to the resources, health and life of people and animals and to the security of the country, the prevention and/or management of which requires utilization of a wider range of resources.

International Health Regulations is a document adopted by the World Health Assembly binding on WHO Member States to undertake measures to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade, with utter regard to human dignity, human rights and fundamental freedoms.

Biocidal products are substances and preparations containing one or more active substances, put up in the form in which they are supplied to the user, intended to destroy, deter, render harmless, prevent the action of, or otherwise exert a controlling effect on any harmful organism by chemical or biological means.

Circulation is the import, export, transport, transit, storage, sale and/or handling of chemicals, as well as trade mediation in the domestic and foreign markets.

Production is the production or extraction of substances in the natural state.

Reference laboratory is a laboratory that performs quality control of services provided by other laboratories.

Substance is a chemical element and its compounds in the natural state or the result of a production process, including additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Mixture is a blend or a solution composed of two or more substances.

Putting into circulation refers to the supply or provision of chemicals for third parties on the territory of the Republic of Macedonia, including or excluding compensation, with import considered in the same sense in this context.

Security risks, hard security risks, as potential manifestations of nationalism, religious intolerance and hatred, forms and activities related to international terrorism, organized crime, illicit drug, arms and human trafficking, unlawful possession of large amounts of arms, corruption, urban terrorism, serious crimes, including blackmail, murder, and assault against people and their property, effects of weapons of mass destruction, activities of foreign special services and other activities aimed at aggravating the security situation, violation of Macedonian airspace, incidents at the Macedonian border, terrorist activities, diversions, sabotage, large-scale demonstrations, strikes and riots jeopardizing public peace and order, unauthorized revealing, publication and violation of the security of information and communications,

effects of the conflict of interest for using sources of and pathways to strategic energy-generating products, as well as obstructing their import to the Republic of Macedonia.

Natural disasters are earthquakes, floods, landslides, avalanches and drifts, black ice, hail, drought, which, by means of natural uncontrolled force pose a threat to the environment, the life and health of people, the material resources, the flora and fauna, and to the cultural heritage.

Other disasters are events that result from oversight and errors in performing daily business and other activities, and also from reckless handling of hazardous materials during their production, storage and transport (fires, major accidents in the road, railway and air traffic, mining accidents, industrial accidents caused by explosions and other technological causes, radioactive rainfalls, dust and deposits, spill of oil, its derivatives and other toxic chemicals, gas explosions, flammable liquids and gases, and other flammable materials producing air-borne explosive mixtures, and other large-scale explosive materials).

Technical and technological disasters, the group of technological disasters including explosive demolition, mining or production-facility disasters, dam cracks, collapsing and other damages jeopardizing the population and material resources, radiological, chemical and biological contamination and air pollution, meltdowns and major defects, accidents in road, railway and air traffic;

- group of hazards including mass poisoning with food, chemicals or toxic substances;
- group of risks and hazards including epidemics of quarantinable and other communicable diseases in people, animals and plants – outbreak of communicable diseases in people (epidemic), outbreak of communicable diseases in animals (epizooty), outbreak of communicable diseases in plants (epiphyty);
- group of risks and hazards including large-scale degradation and destruction of the environment;
- disturbance of regular state of affairs in public utility, traffic and in the provision of supplies and services (water and energy supply disruption, disruption in heat, gas and telecommunication networks, traffic rerouting, situation at border crossings, situation with blood and blood products and other developments in the health sector) that may affect the health of people and the population, causing crisis situation or emergency;
- increased inflow of migrants and refugees transiting the territory of the Republic of Macedonia or remaining for a longer period.

CLASSIFICATION OF EMERGENCIES AND DISASTERS

Emergencies and disasters fall into three categories:

I. NATURAL DISASTERS

II. TECHNOLOGICAL DISASTERS

III. MAN-MADE DISASTERS /COMPLEX DISASTERS

I. NATURAL DISASTERS

Hydrometeorological

- floods
- storms
- extreme temperatures
- droughts
- wildfires/fires in open space

Geophysical

- earthquakes
- tsunami
- volcanic eruptions

Biological

- epidemic
- insect infestation
- animal infestation

II. TECHNOLOGICAL DISASTERS

Industrial accidents

- chemical spills
- collapse of industrial infrastructure, explosions
- fires
- radiation

Traffic accidents in

- air traffic
- water traffic
- road traffic
- railway traffic

III. MAN-MADE DISASTERS / COMPLEX ACCIDENTS

Economic crisis

- deepening economic collapse
- hyperinflation
- financial crisis
- currency crisis

Violence

- terrorism
- civil unrest
- civil war
- war

FOREWORD

On the need for a Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters

Health emergencies, crises and disasters tend to be unpredictable, occurring at any place and any time. The health care system is among the most important links in managing emergencies, crises and disasters, and as such, it requires continuous capacity and resource enhancement when coordinating with the remaining entities within the disaster coping system.

The Plan should ensure speedy, timely and comprehensive action by the health care system and all remaining entities in regard to the present emergency, crisis or disaster.

The Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters, in the Republic of Macedonia is adopted to ensure intersectoral cooperation and participation of all line institutions related to the competences of the health care system regarding:

- timely planning and taking of operational measures by the health care system in responding to emergencies, crises and disasters;
- speedy and timely reporting;
- continuous communication and cooperation;
- upgrades to the health care system;
- connection of the protection and rescue system and the crisis management system.

The Republic of Macedonia has a history of coping with such situations.

The tables below provide an overview of the emergencies, crises and disasters that struck the country in the period 2001-2016¹.

Table 1. Overview of disasters that struck the Republic of Macedonia in the period 2001-2016 including human casualties.

Disaster no.	Type	Date	Total casualties
2001-0692	extreme temperatures	01-12-2001	15
2004-0333	extreme temperatures	01-07-2004	15
2015-0318	Flood	03-08-2015	5
2003-0033	Flood	08-01-2003	2
2005-0045	Storm	01-01-2005	1
2007-0368	wildfire	01-07-2007	1
2012-0019	extreme temperatures	01-01-2012	1
2013-0061	Flood	24-02-2013	1
2016	Flood	06-08-2016	22

¹2009/2010 influenza pandemic with 30 diseased.

1. Data obtained from the Protection and Rescue Directorate.

Table 2. Overview of disasters that struck the Republic of Macedonia in the period 2001-2016 including persons affected.

Disaster no.	Type	Date	Total persons affected
2007-0368	Wildfire	01-07-2007	1000,000
2015-0023	Flood	31-01-2015	100,000
2004-0252	Flood	04-06-2004	100,000
1993-9509	Drought	01-12-1993	10,000
2014-0496	extreme temperatures	28-12-2014	8,800
2012-0019	extreme temperatures	01-01-2012	5,100
2013-0061	Flood	24-02-2013	4,911
2003-0033	Flood	08-01-2003	4,000
2015-0318	Flood	03-08-2015	2,116
2005-0450	Flood	04-08-2005	2,000
2016	Flood	06-08-2016	30,000

The Preparedness and Response Plan when Coping with Emergencies, Crises and Disasters contains three chapters, as follows:

Chapter I: Description of the key elements of the health care system for preparedness and response when coping with emergencies, crises and disasters in the Republic of Macedonia;

Chapter II: Sexual and reproductive health in emergencies, crises and disasters;

Chapter III: Operating procedures for coordination and management of the health care sector in responding to emergencies, crises and disasters.

CHAPTER I: DESCRIPTION OF THE KEY ELEMENTS OF THE HEALTH CARE SYSTEM FOR PREPAREDNESS AND RESPONSE WHEN COPING WITH EMERGENCIES, CRISES AND DISASTERS IN THE REPUBLIC OF MACEDONIA

Introduction

The preparedness of the health care system to respond implies planning and organisation within all its sectors, particularly in public health care, hospitals, emergency medical services, laboratories, private health care institutions and other entities in the health care system. It also implies personnel recruitment and training for coping with modern threats and mass casualties in major disasters.

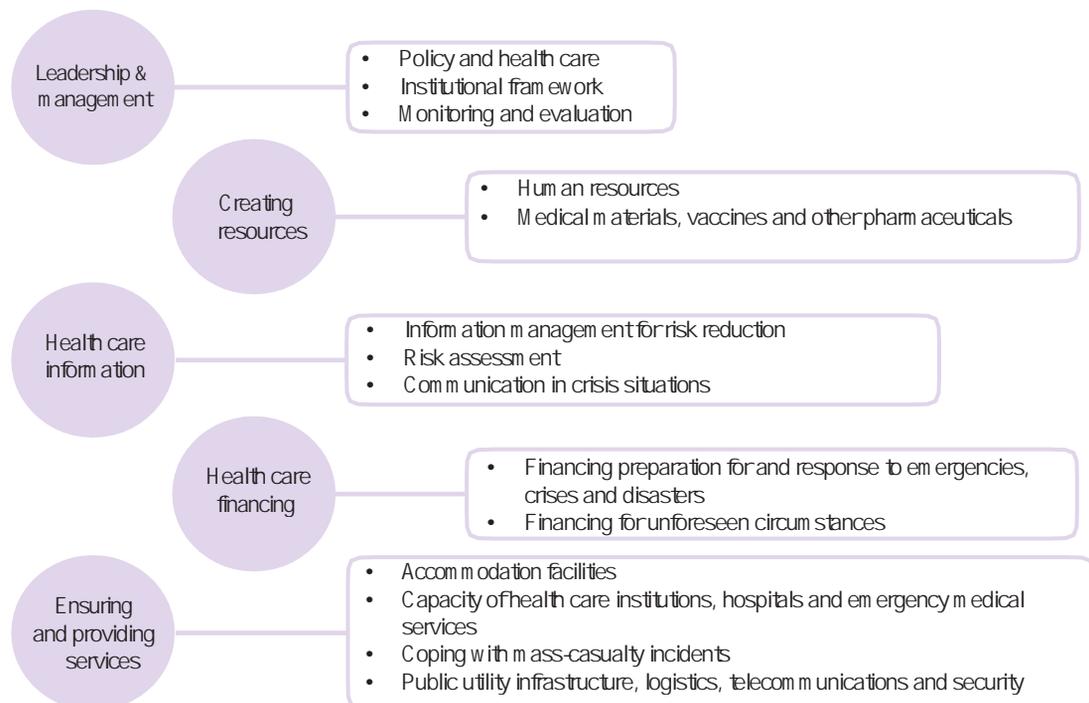
The preparedness also implies a set of integrated planning frameworks including prevention, protection, mitigation and recovery. These frameworks are built in a gradual and flexible manner, coordinated with all structures that have key role and responsibility.

The preparedness presupposes and includes an operational plan with detailed operation concept, description of critical tasks and responsibilities, resources, personnel, specific provisions for quick integration of resources and personnel.

The response refers to the necessary skills to save lives in regard to proper roles, coordination and communication, and utilisation of capacities, resources and assets.

Elements of the Preparedness and Response Plan when Coping with Emergencies, Crises and Disasters in the Republic of Macedonia

The Preparedness and Response Plan when Coping with Emergencies, Crises and Disasters in the Republic of Macedonia is structured according to the following diagram:²



2. According to the guidelines from: "World Health Organisation. Strengthening health-system emergency preparedness – Toolkit for assessing health-system capacity for crisis management, 2012".

1. Leadership and management

The leadership and management pertain to the careful and responsible health system management by exercising influence over policies and actions in all sectors affecting population health. As for planning crisis preparations, it implies the establishment of a national policy encompassing health system preparedness for emergencies, crises and disasters. It also includes effective structures for coordination, partnerships, representation (providing assistance), risk assessment, information management, and monitoring and evaluation.

1.1. Policy and legislation

The crisis management legislation of the Republic of Macedonia is realised through several levels.

- Pursuant to Article 125 of the Constitution of the Republic of Macedonia, the state of emergency is defined as follows: "A state of emergency exists when major natural disasters or epidemics take place."

- The Law on Crisis Management (Official Gazette of the Republic of Macedonia, no. 29/05, 36/11, 41/14, 104/15 and 39/16) defines crisis and crisis situation, risks, hazards, vulnerability and exposure. Pursuant to this Law, a decision for the proclamation of a crisis situation is adopted by the Government of the Republic of Macedonia, whereas it also establishes the area affected by the crisis and the activation of mechanisms to resolve the situation.

- The body responsible for health coordination and response in emergencies, crises or disasters is the Ministry of Health. The Ministry of Health and the health institutions cooperate in the field with all stakeholders having competences in such situation. Moreover, the Ministry of Health makes a decision whether the public-health emergency/crisis or disaster is of international concern, according to the decision-making and assessment instruments.³

- The Law on Protection and Rescue (Official Gazette of the Republic of Macedonia, no. 36/04, 86/08, 124/10, 18/11, 129/15, 71/16 and 106/16) regulates the system for the protection and rescue of people, the environment, material resources, natural treasures, the flora and fauna, and cultural heritage from natural disasters and other accidents during peace, state of emergency and state of war in the Republic of Macedonia.⁴

- The Law on Health Protection and the Law on Health Insurance ensure equality of all citizens in the Republic of Macedonia.

- The Law on Public Health (Official Gazette of the Republic of Macedonia, no. 22/10, 136/11, 149/15 and 37/16) in Article 6, paragraph 10, lays down the preparation for and management of a public-health emergency.

- Pursuant to the Law on Food Safety (Official Gazette of the Republic of Macedonia, no. 157/10, 164/13, 187/13, 43/15, 33/15, 129/15, 213/15 and 39/16), the Food and Veterinary Agency is a focal point for the EU Rapid Alert System for Food and Feed (RASFF) in the Republic of Macedonia. According to this Law, the Government of the Republic of Macedonia in the second half of 2013 approved the General Crisis Management Plan in the Field of Food and Feed Safety for the period 2013-2018 published in the Official Gazette of the Republic of Macedonia, no.

3. Law on Crisis Management (Official Gazette of the Republic of Macedonia, no. 29/05) and Law on Amendments to the Law on Crisis Management (Official Gazette of the Republic of Macedonia, no. 36 from 23 March 2011).

4. Law on Protection and Rescue in the Republic of Macedonia (Articles 1, 3, 4, 5 and 6).

130/2013 from 23 September 2013. The plan is in line with the relevant provisions of Regulation 178/2002.

- The Law on Ionizing Radiation Protection and Safety (Official Gazette of the Republic of Macedonia, no. 48/02, 135/07, 154/10, 53/11, 164/13, 43/14, 149/15 and 37/16) defines the competent state bodies for radiation protection and safety in the Republic of Macedonia.

- International Health Regulations is a document adopted by the World Health Assembly binding on WHO Member States to undertake measures to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid interference with international traffic and trade.

- The Sendai Framework (2015-2030) is a disaster-risk reduction action plan aimed at reducing impoverishment and promoting wellbeing.

1.2. Institutional framework for preparedness

1.2.1. Role of the Ministry of Health during emergencies, crises and disasters

The Ministry of Health is responsible for health care organisation and functioning, as well as management in emergencies, crises and disasters, including:

- coordination of matters pertaining to health care preparedness and response for operation in emergencies, crises and disasters; implementation of activities regarding the establishment and organisation of territorial (provisional) health institutions;
- monitoring and organisation of activities for the supply of medicines, medical devices and sanitary materials, and their provision in emergencies, crises and disasters; cooperation with the line ministries, and also with PHI Institute of Public Health of the Republic of Macedonia, the Crisis Management Centre, the Protection and Rescue Directorate, WHO, UNFPA and other relevant governmental and non-governmental organisations, UN organizations and other international organisations, also including NATO units;
- implementation of activities regarding the organisation and operation of the helicopter emergency medical and rescue service; preparation of exercise reports and participation in exercise activities, both in the country and abroad;
- efforts to obtain donations and humanitarian aid in the form of medical devices and medicines, and organisation and management of such donations and other means of assistance;

In order to ensure suitable and timely preparation of the health system and successfully manage the response, operation, as well as communication in health care during disasters, the **Ministry of Health appoints a National Coordinator for Health-Care Disaster Response, as a separate body preparing the health care for response and operation in emergencies, crises and disasters, with proper task description** (*Annex 1: Composition of the MoH National Coordination Body for Preparedness and Response in Emergencies, Crises and Disasters, Annex 2 and Annex 3: Task description for the National Coordinator for Preparedness and Response in Emergencies, Crises and Disasters*).

1.2.2. Role of health care institutions in preparedness and response during emergencies, crises and disasters

The health care system response to specific and sudden emergencies, and the effectiveness and capacity in terms of ensuring proper health services and medical assistance to the affected population, hinge on the level of preparedness. Health institutions of all levels of health protection (primary, secondary and tertiary), also including the Public Health Institute of Macedonia and the public health centres, should continue operating even in emergencies, crises or disasters; experience, however, shows that they tend to be quite vulnerable (to a natural disaster, such as earthquake, for example) regarding the infrastructure, and hence being hindered to provide even the basic health service package. *High level of preparedness is essential, primarily in hospitals, i.e. emergency centres, and also in all emergency medical services of health institutions in the country. Occurrence of an emergency, crisis or disaster activates the health institution preparedness plans for emergencies, crises or disasters.*

In the case of public-health necessity and emergency and the occurrence of a public-health extraordinary event, the *Public Health Institute of the Republic of Macedonia*, according to the Law on Public Health and the Public Health Programme, coordinates the activities between the public health centres and the Ministry of Health. Also, the Public Health Institute is the national focal point for the 2005 International Health Regulations. The Institute conducts health and environmental risk assessment in regard to water supply and sanitation, focusing on waterborne diseases, food safety and foodborne diseases, and communicable and non-communicable diseases, whereas it also ensures proper response in the case of public-health necessity and emergency, and the occurrence of a public-health extraordinary event

1.2.3. Other relevant institutions and bodies

The *State Sanitary and Health Inspectorate* is a separate legal entity and a body integral to the Ministry of Health with a basic task of organising, monitoring and inspecting law enforcement in such areas as population sanitary, epidemiological and health protection, health insurance, health care records, protection of patients' rights, blood safety, biomedically assisted fertilisation, toy and cosmetics safety, safety of everyday objects, oversight of the implementation of measures to prevent the spread of and eradicate communicable diseases for the purpose of protecting the population from such diseases.

The *Medicine and Medical Device Agency* monitors the situation concerning the supply of medicines and their quality, auxiliary medicinal products, medical aids, poisons and narcotic drugs, as well as the manufacturing and trade of poisons and narcotic drugs.

The *Food and Veterinary Agency* is the competent body controlling food and feed safety, as well as animal health. In accordance with the RASFF system, FVA receives regular information about unsafe food and feed, coordinates entities participating in Macedonia's rapid response system, undertakes corrective measures and activities, and also exchanges information with the respective systems in the country and abroad.

Radiation Safety Directorate, a regulatory body responsible for the control of ionising radiation sources, licensing of institutions and activities, inspection, establishment of intervention radiation levels, etc. This authority prepares the National Radiation Emergency Plan and undertakes intervention measures. It is the focal point of the International Atomic Energy Agency (IAEA) for radiation emergencies.

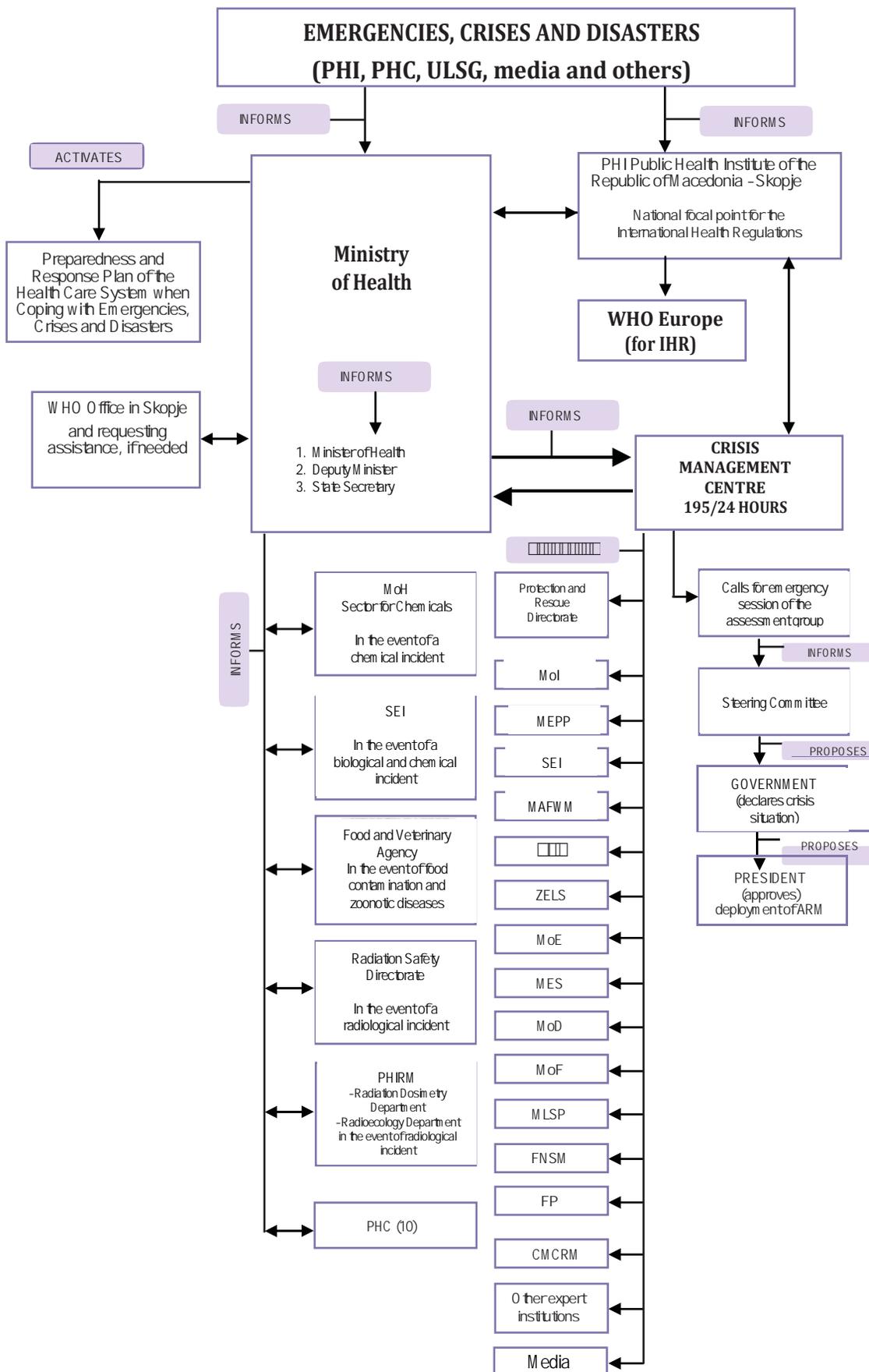
The *Protection and Rescue Directorate*, for the purpose of performing activities related to

the protection and rescue from natural disasters, epidemics, epizooties and epiphyties and other calamities, is responsible for matters pertaining to the preparation of the Protection and Rescue Plan and the Evaluation of Threats from Epidemics, Epizooties, Epiphyties and Other Calamities in cooperation with competent state authorities, whereas it organises and prepares the protection and rescue system, proposes measures to equip and develop the country's protection and rescue system, ensures the functioning of the system for prevention and detection of the occurrence and elimination of the consequences from natural disasters, provides timely involvement and efficient deployment of the national protection and rescue forces and rapid response teams.

The *Crisis Management Centre* performs such activities as: ensuring continuity in intersectoral and international cooperation, crisis management consultation and coordination, and preparation and update of the single evaluation of threats from all risks and hazards to the country. The Crisis Management Centre houses and provides support (expert, organisational, administration, etc.) to the Steering Committee and the Evaluation Group. With the declaration of a crisis situation, a General Headquarters is established within the Centre, as an operational expert body managing prevention and crisis-coping activities.

The *Ministry of Interior*, with the following tasks regarding prevention, early warning and initial response during an emergency: localisation and assistance in local accidents for rescuing people and property; traffic prohibition, diversion and establishment of traffic regime on local and national roads; evacuation, rescue and increased security for buildings of vital importance to the country; transport and security during quarantinable and non-quarantinable epidemic diseases in people and animals; police search; securing of state border; establishment of public peace and order in areas affected by an emergency, crisis or disaster, and arranging patrols and checkpoints; area search and assistance for all casualties; reception of teams and assistance in their transport to the emergency/crisis/disaster areas; helicopter surveillance and transport of the seriously injured, coordination with the remaining organisations involved in providing assistance; coordination with the CMC, Macedonian Army, MoH, MRC, and other governmental and non-governmental organisations.

Diagram 1: Overview of the communication among the Ministry of Health and the remaining key institutions and organisations during emergencies, crises and disasters



1.3. Health care system monitoring and evaluation when preparing for and responding to emergencies, crises and disasters

The Coordination Body for Preparedness and Response in Emergencies, Crises and Disasters in the Ministry of Health monitors and evaluates all aspects concerning the provision of basic health protection to the population and the unhindered functioning of the health institutions in such calamities. The monitoring and evaluation are aimed at ensuring records relevant to future planning, programming and policy preparation.

2. Resource creation

2.1. Human resources

With regard to the available resources and circumstances, the preparation planning for emergencies, crises and disasters ensures the sufficient number of qualified personnel responding to an occurring calamity. Such function also entails the following:

- education and training;
- data collection and analysis, and reporting;
- management of supplies and equipment essential during emergencies, crises and disasters.

The Ministry of Health has a database at its disposal regarding the labour force on a national level, also including data on the role of employees in the event of crisis. The database includes doctors, nurses, drivers, administrative personnel, laboratory technicians, dispatchers, communication specialists, and relevant personnel from public and private health institutions. The information should be available to the MoH Coordination Body at any given time in order to ensure organisation of resources for efficient deployment when needed.

There is clear delineation of roles, responsibilities and competences of all employees within the health care system in the event of an emergency, crisis and disaster. Procedures applied for the mobilisation of personnel, as well as the information about the roles, responsibilities and competences of actors involved, are all part of the health institutions' *Crisis Preparedness Plans* and they require regular update.

Another requirement is periodic evaluation of the training needs, and proper implementation thereof. The training should be incorporated within the national prevention programmes and should include the following: assessment training, risk management training, communicable-disease management training, preparation of hospitals to respond in emergencies, etc. Special attention should be given to the training of nurses and hospital non-nursing personnel to respond in the event of emergencies, crises and disasters.

2.2. Medical materials, vaccines and other pharmaceutical products

The Ministry of Health lays down procedures for external resource coordination (coordination, request, reception, and storage of medicines, record-keeping, dispersion, control and storage security). Moreover, experts are hired to work with donated sanitary materials, or a contract is signed with a given wholesale pharmaceutical distributor.

During emergencies, crises and disasters, there arises an urgent need for medical materials and equipment. Therefore, proper response in such calamity presupposes the following:

a) Continuous supply of the necessary medicines, medical materials and equipment in the health institutions.

b) Supplies to be stored at safe and easily available location. The Agency for Commodity Reserves represents a national storage for antibiotics, chemical antidotes, antitoxins, essential medicines, intravenous equipment, respiratory support materials and medical/surgical instruments, responsible for emergency re-supply of health institutions in a state of emergency.

c) Procedure for rapid supply and distribution of items mentioned. The procedure entails initialisation of the MoH Coordination Body for Preparedness and Response in Emergencies, Crises and Disasters by informing the Government of the Republic of Macedonia to release the commodity reserve supplies. Such an activity is coordinated by the Medicine and Medical Device Agency. The Ministry of Health is responsible for the distribution of the necessary medicines and medical devices to the final users.

In the event of emergencies, crises and disasters, and in the urgent and increased necessity for medicines and medical devices, the Medicine and Medical Device Agency may respond with all its capacities including:

- Import of medicines pursuant to the Law on Medicines and Medical Devices (Official Gazette of the Republic of Macedonia, no. 106/07, 88/10, 36/11, 53/11, 136/11, 11/12, 147/13, 164/13, 27/14, 43/14, 88/15, 154/15, 228/15, 7/16 and 53/16). The Medicine and Medical Device Agency is responsible for the import of raw materials for the production of medicines, the import of ready-made medicines manufactured by foreign companies, and the wholesale and retail distribution of medicines. Software solutions for medicine registration and import offer a prospect of concluding procedures in a relatively short time, that is, within a day.
- Import of medical devices pursuant to the Law on Medicines and Medical Devices, if designated by the EU Notified Body, is carried out by default, without any registration in the Republic of Macedonia. The import license is issued within a day.
- Emergency import pursuant to the Law on Medicines and Medical Devices.
- Quality check for all imported medicines and medical devices may be performed in short time by authorised laboratories in the Public Health Institute of the Republic of Macedonia and the Faculty of Pharmacy – Skopje.
- Vaccines are imported according to an approval obtained from the Medicine and Medical Device Agency in cooperation with the MoH and in line with the status assessment performed.

Same procedures apply in regard to narcotic drugs, psychoactive substances and poisons.

All of the above mentioned procedures are initiated upon request by the Ministry of Health, acting upon the proposal of the Coordination Body for Preparedness and Response in Emergencies, Crises and Disasters.

3. Health information

Updated and relevant data and information are pertinent in the risk assessment and proper emergency preparedness planning, and also in the decision-making process. Such data and information should be available through a distributed, interoperational and reliable information system connecting all relevant institutions, with mandate to collect and keep them, as in "My Term", and others. At the same time, data arriving from these different institutions should be compatible and documented in view of risk assessment and emergency preparedness planning.

With efforts to implement measures and activities for prevention and early warning, and also for the management of risks, hazards, emergencies, crises, accidents and disasters, all participants in the emergency management system, in line with the relevant legislation, undertake the obligation to ensure continuous and mutual communication, coordination and cooperation in collecting data and information, and their analysis, distribution and sharing in regard to the risk and hazards threatening country's security.⁵

3.1. Management of risk reduction information

Responsibilities and competences referring to the emergency, crisis and disaster information system are defined within the Law on Crisis Management Standard crisis management operational procedures, as adopted by the Government of the Republic of Macedonia, encompass protocols and procedures for data collection, management, analysis and dissemination pertaining to risk assessment and emergency preparedness planning. Moreover, the abovementioned documents also include a national health risk profile, with data and information on risks, hazards and vulnerability on a national level. Persons in charge of emergency response and preparation should prepare regular status reports, analysing in view of the health system, whereas such reports should be published and made available to other relevant institutions.

Institutions managing risk reduction information are the Crisis Management Centre and the Protection and Rescue Directorate. Local self-government units have the legal competence to prepare and propose to the Municipal Councils an evaluation of threats from all risks and hazards to the municipalities, which, of course, also includes the national health system.

"My Term" national health information system contributes in the emergency, crisis and disaster assessment, planning and response. This necessitates information update and mapping in regard to the following:

- health institutions (public and private);
- retail pharmacies and medical stores;
- coolers;
- laboratories;
- blood supply;
- human resources (health care);
- medical materials and equipment;
- accommodation and transport

5. (Source: Law on Crisis Management, Article 37).

Reliable and timely information are crucial for undertaking actions in public health care, here including the enhancement of the health systems for emergency, crisis and disaster response. Timely information is essential to preventing the outbreak of diseases and other acute health threats. A key element in securing information during crisis is health surveillance. This element has major relevance for timely information and response in the event of communicable diseases and influenza pandemic.

Owing to the financial and administrative limitations and the shared responsibility about the health information among different ministries and institutions, coordination sometimes tends to be complex. Nevertheless, the health information system should be made available for the needs and requirements of all parties concerned in emergency, crisis and disaster response (Annex 4: Description of key surveillance and early warning systems in the health care sector).

3.2. Procedures, instructions and protocols for rapid assessment of health needs in emergencies, crises and disasters

Rapid need assessment in regard to the response following a specific crisis/state of emergency is conducted by expert teams put at disposal on a short notice, which gather information on the resources needed for an effective response. Institution responsible for coordinating the rapid health need assessment in emergencies, crises and disasters and for appointing the teams is the Public Health Institute of the Republic of Macedonia and other relevant institutions from the health and other sectors. These teams should include: the National Coordinator for Preparedness and Response in Emergencies, Crises and Disasters from the Ministry of Health together with the Heads of the Primary and Preventive Health Care Sector and the Hospital Health Protection Sector, representatives of PHIRM (epidemiology specialist and hygiene specialist, and/or other specialities depending on the nature of the event), PHC representatives responsible for the affected region, health centre representative from the affected region, UCIDFC, regional CMC representative, and others by necessity. Defined were the key elements to be included in the rapid health need assessment, which need to be taken into consideration by the teams charged with the implementation of the rapid health need assessment in emergencies, crises and disasters (Annex 5: Elements of the rapid health need assessment in emergencies, crises and disasters).

3.3. Communication during emergencies, crises and disasters⁶

Communication during emergencies, crises and disasters includes a wide range of activities such as: timely and transparent information, coordination of communications, knowledge of the affected population, and involvement of all relevant stakeholders.

Of utmost importance is the distribution of coherent and consistent messages by authorities partnered in a health crisis. Timely information sharing is exceptionally important for the expected pressure by the media, especially in the event of an emergency, crisis or disaster. Such information should have a pacifying character and not instil panic and fear in the population.

6. The Standard Operating Procedures for Communication in Emergencies, Crises and Disasters are given in Chapter 3 of this document

Communication in health care during an emergency, crisis or disaster is realised on the following levels:

- Communication with the media and the population;
- Communication with key partners – intersectoral communication;
- Communication within the health sector.

Health-related communication with the media and the population during an emergency, crisis or disaster is conducted by the health sector in cooperation with the relevant institutions depending on the hazard. Communication entails strategies and messages informing the citizens about the current emergency, crisis and disaster, and risks thereof, also including measures taken in response to the calamity and public-health advice.

The occurrence of an emergency, crisis or disaster initiates the formation of an expert team in health care providing regular information to the population on the situation, and the prevention and health protection measures. Such team is established by the Ministry of Health, upon recommendation by the constituent Coordination Body for Preparedness and Response in Emergencies, Crises and Disasters, immediately after the calamity takes place. The expert team consists of the MoH National Coordinator for Preparedness and Response in Emergencies, Crises and Disasters, the appointed MoH representative – a member of the Coordination Body, and a PHIRM representative.

Communication goals during an emergency, crisis or disaster include sharing and dissemination of useful information which are vitally important to saving lives, protecting health and minimising the adverse effect to self and others, and also changing the conduct which potentially poses an impediment to managing the emergency, crisis or disaster. The strategies and messages should be adapted to the public perception: only then will the population accept the directions provided by health authorities aimed at reducing risky conduct. Gaining trust in the population is key to controlling the emergency, crisis or disaster. The more the public trusts the authorities, the more likely it is that people start behaving in line with the health information prepared and published.

Communication with the media is crucial for timely sharing of information to the citizens, whereas it is conducted through statements, announcements and press conferences, posting on Internet portals, radio and television broadcast, and sharing on the social networks. Communication with the population, except through messages and instructions released by the media, is also conducted through flyer distribution, free hotline, SMS, and involvement of people respected in society and in whom the public has confidence.

Communication with key partners – the intersectoral communication creates true balance among crisis management entities. Information sharing is indeed important for consistent strategy building, sending messages, and establishing and maintaining trust.

Communication within the health sector – key principle in crisis communication is the clear communication of messages that build, maintain and renew trust among the managers of crisis health institutions (Ministry of Health, health institutions, etc.). Timely communication in health care sector from the central to local level is essential for the timely, coordinated and successful situation management. The coordinated response of the health care system to specific and unforeseen emergency, crisis or disaster, and the capacity efficiency in regard to ensuring consistent messages and proper health care services to the affected population, hinge on the level of involvement of the health care workers responding to the emergency, crisis or disaster. Health care workers should be provided timely information and training, and they should also be part of the system for communicating consistent messages to the public, public-health advice and services referring to the goals to be obtained in the response to and control of the emergency, crisis or disaster. The population has greatest confidence in health care workers, and therefore they are the key channel for sending messages to the public.

Everyday communication with the health care sector during an emergency, crisis or disaster is crucial in controlling the occurring calamity. Such communication is established through the communication team in the Ministry of Health appointed depending on the nature of the emergency, crisis or disaster. Upon the declaration of a crisis situation and/or a disaster, the team maintains continuous communication and informs the Crisis Management Centre.

The public relations department in the Ministry of Health plays the key role in communicating with the media and information sharing with the public.

Figure 1: Components of a communication plan in emergency, crisis or disaster

Building successful communication during health emergency, crisis or disaster presents an ongoing and dynamic process including exercises, checks, modifications and updates, in order to ensure high level of efficiency in communication activities and achieve wanted results. The following steps are crucial and they should be considered in the process of developing the communication plan in emergency, crisis or disaster:

Assessment – The initial step to be taken is assessing the current communication plans and capacities on various levels and training of persons dealing with crisis communication. The effective communication during an emergency, crisis or disaster should also give due consideration to social, religious, political, cultural and economic aspects related to the health emergency, crisis or disaster. This will help the establishment of proper communication steps and their practical implementation.

Coordination – Coordination mechanisms for multisectoral communication on multiple levels should be identified to address issues pertaining to ownership, development and publishing of information; sharing the messages and identifying public relations persons representing the institution. National and international communication partners should be identified. Also, it is essential that continuous contact is established and maintained, so that there is coherence in the communication process during health crisis.

Transparency and timely publishing – There is the need to develop a system which will include proper tools and channels for publishing initial information in the event of a suspicion or confirmation about a health risk, and also further transparent publishing of information. Publishing of information on the very beginning of the health crisis, albeit even partial, prevents speculation, rumors and disinformation. Belated publishing of information will reduce the trust in the capacity of health care institutions to cope with the health crisis. There is the need to make an assessment as to which medium should be best utilised for the specific crisis situation and population.

Perception in the population – Mechanisms to attract public attention and public perception of the crisis situation should be foreseen as early as the preparatory stage. The perception in the population should be assessed, since it is key to effective communication during an emergency, crisis or disaster, but also to the comprehensive management of the health crisis.

4. Health financing

A good health financing system ensures proper finance in health care and financial protection in the event of an emergency, crisis or disaster. It also provides calamity victims the access to necessary devices, and insurance by health institutions and equipment against damage or loss.

The health protection system in the Republic of Macedonia is established on the basis of health insurance, whereas the Government and the Ministry of Health provide the legal framework and political leadership for such activity. The Health Insurance Fund is responsible for finance collection and management, and the health protection institutions are responsible for providing the services.

The mandatory health insurance (Law on Health Insurance, Official Gazette of the Republic of Macedonia, no. 25/00, 34/00, 96/00, 50/01, 11/02, 31/03, 84/05, 37/06, 18/07, 36/07, 82/08, 98/08, 6/09, 67/09, 50/10, 156/10, 53/11, 26/12, 16/13, 91/13, 187/13, 43/14, 44/14, 97/14, 112/14, 113/14, 188/14, 20/15, 61/15, 98/15, 129/15, 150/15, 154/15, 192/15, 217/15, 27/16, 37/16, 120/16 and 142/16) is the main source of finance. The Fund covers private and public sector employees, pensioners, students, disabled persons, and minors. The Health Insurance Fund provides financial assistance for emergency medical services to insurees (even when contributions for health insurance had not been paid). Costs to the citizens not covered by health insurance are covered by the state budget.

4.1. Financing preparations and response for emergencies, crises and disasters

Finance needed for preparation and respond for emergencies, crises and disasters are covered by the regular budget income in health institutions and the Ministry of Health. Depending on the situation, and in line with the established evaluation, there exist mechanisms for urgent financing from the Public Health Programme in the Ministry of Health, and also by the Government of the Republic of Macedonia.

When declaring a crisis, there is legal option to secure additional finance through a Decision by the Government of the Republic of Macedonia, in order to ensure rapid and adequate response for an emergency, crisis or disaster without the adverse effect on normal budgetary costs.

In given cases when declaring a crisis, the CMC Steering Committee submits a request to the Government to adopt a decision to send a support request to the United Nations in the Republic of Macedonia, for the purpose of a coordinated approach of the UN Offices in providing assistance and implementing the EU civil protection mechanism.

5. Service provision

Service provision represents a combination of contributions in the process of providing services resulting in the implementation of effective, safe and quality health interventions for individuals needing them, in a rightful manner, when needed, with minimal resources spent. Preparedness planning for emergencies, crises and disasters gives the opportunity to reconsider the manner of service organisation and management, in order to ensure accessibility, quality, security and continuity of health protection for different health conditions and health institutions during emergency, crisis or disaster.

Primary, secondary and tertiary health care services

The Primary and Preventive Health Care Sector in the Ministry of Health is responsible for providing outpatient services and first aid through the health institutions, and everywhere through municipal-level public health care – their 34 health centres and public health centres.

Primary health care in the Republic of Macedonia is provided through public and private institutions: clinics, health stations and health centres, within which the emergency medical services operate. The Republic of Macedonia has a total of 34 organised emergency medical services (EMS), with separate working units, personnel (a medical team of a doctor, a nurse and a driver), premises, and vehicles. As regards the initial communication infrastructure component (receiving calls), medical assistance in all cities the Republic of Macedonia is requested by dialling the sole number 194.

The Hospital Health Protection Sector is responsible for the preparation of hospitals and tertiary health institutions to respond to emergencies, crises and disasters, and also for timely and proper sheltering of persons affected.

The health institution network, providing stationary health protection to the population in the Republic of Macedonia, consists of 66 hospital institutions and 8 non-hospital dispensaries:

- 14 general hospitals (Gevgelija, Gostivar, Debar, Kavadarci, Kicevo, Kocani, Kum anovo, Ohrid, Prilep, Struga, Strum ica, Veles, "8 September" – Skopje, First Private General Hospital "Re-Medika" – Skopje);
- 4 clinical hospitals (Bitola, Tetovo, Stip, "Sistina" – Skopje);
- 14 specialised hospitals:
- 3 specialised hospitals for pulmonary diseases and tuberculosis;
- Institute for Pulmonary Diseases and Tuberculosis in Children – Skopje;
- 3 specialised hospitals for mental disorders;
- Specialised Hospital for Gynaecology and Obstetrics – Cair;
- Gerontology Institute "13 November";
- Specialised Hospital for Orthopaedic Surgery and Traumatology – Ohrid;
- 4 private specialised hospitals ("Philip II" – Skopje, "Sante Plus" – Skopje, "Plodnost" – Bitola, and European Eye Hospital – Skopje);

- 6 centres for treatment, rehabilitation and spa;
- 26 university clinics;
- University Clinic for Maxillofacial Surgery;
- University Clinic for Surgical Diseases “St Naum Ohridski”;
- 8 non-hospital dispensaries.

Out of 66 hospitals, 51 are hospitals for short-term (acute) treatment and 15 are for long-term treatment

Additional capacities can be provided by the Protection and Rescue Directorate, through a field hospital and rapid intervention teams, the Ministry of Defence, MRC through their field hospital and military capacities, the private sector, and by international assistance. Overview of the total number of hospital beds in the Republic of Macedonia in 2014 and 2015 is given in Table 3.

Table 3. Overview of the total number of hospital beds in the Republic of Macedonia in 2014 and 2015.

2014	Total beds	Per 1000 citizens	%	2015	Total beds	Per 1000 citizens	%
Total number of beds	9088	4.4		Total number of beds	9084	4.4	
Of which in private hospitals	287		3.2%	Of which in private hospitals	272		3.0%
Total number of general hospitals	4138	2.0		Total number of general hospitals	4173	2.0	
Internist group	2192		53.0%	Internist group	2249		53.9%
Surgical group	1964		47.0%	Surgical group	1924		46.1%
Day hospitals within hospital facilities	141			Day hospitals within hospital facilities	154		
Of the total beds, 2/3 are intended for short-term hospitalisation of acutely ill patients	6183			Of the total beds, 2/3 are intended for short-term hospitalisation of acutely ill patients	6199		
The remaining are for long-term hospitalisation, of which for mentally ill patients	1162			The remaining are for long-term hospitalisation, of which for mentally ill patients	1136		

5.2. Care/isolation/treatment of patients with infectious diseases

Infectious disease patients are hospitalised in the departments for infectious diseases (10 in total on the territory of the Republic of Macedonia) within the general and clinical hospitals and the University Clinic for Infectious Diseases and Febrile Conditions (UCIDFC).

The country has 6 units with an infectious disease specialist lacking a separate department (Gevgelija, Kavadarci, Kocani, Struga, Kicevo, Debar), whereas in terms of hospitalisation they are integrated within the competent region.

All departments and units have designated spaces for patient isolation.

The only tertiary health care institution treating patients with infectious diseases is the UCIDFC, which is also the sole institution with a specialised unit for treatment and care (equipped with mechanical ventilation/support apparatus and monitoring and life-support system) and high-level isolation units at negative pressure for patients with highly contagious diseases.

All unusual, complex, severe and enigmatic cases of infectious disease are subsequently referred to UCIDFC.

5.3. Laboratory capacities

Laboratories are an important segment of health care when coping with emergencies, crises and disasters, since they are responsible for timely and reliable detection and verification of a public-health event of national and international concern.

5.3.1. Microbiological laboratories

The Republic of Macedonia has a fine network of public-health microbiology laboratories, biosafety level 2. The sample for microbiological analysis can be of human origin or from the environment.

Microbiological laboratories in the Public Health Institute of the Republic of Macedonia (PHIRM) are being constantly prepared for response to emergency, crisis or disaster, that is, for rapid and accurate diagnosis of the cause of the infectious disease, such as viruses, bacteria, parasites and fungi. The laboratories, in their line work, utilise classical microbiological methods, as well as new detection methods (for example, molecular methods). The Laboratory of Virology and Molecular Diagnostics is the sole laboratory in its kind in the Republic of Macedonia. It was accredited by WHO to detect and type such viruses as influenza (human and avian), measles and rubella. The Laboratory of Bacteriology and Antimicrobial Resistance monitors all typical and atypical bacteriological carriers and their antimicrobial sensitivity, whereas it is one of a kind in the country concerning the detection of tularemia, syphilis, and others. The Laboratory of Parasitology monitors parasitic diseases and it is a reference laboratory for the detection of malaria and brucellosis.

Microbiological laboratories operate in all 10 public health centres (Skopje, Veles, Stip, Kocani, Strumica, Ohrid, Bitola, Prilep, Tetovo, Kumanovo), as well as the 5 regional units (Kavadarci, Gostivar, Kicevo, Struga, Debar), where by means of classical methods bacterial infectious-disease carriers are identified, and serological tests for common viral and parasitic diseases are performed.

Microbiological laboratories also operate in 55 hospitals, including: the University Clinic for Infectious Diseases and Febrile Conditions in Skopje, the Institute of Nephrology in Struga, and the clinical hospital in Bitola, where some bacteriological and serological tests are performed. The Institute for Pulmonary Diseases and Tuberculosis in Children – Kozle and the Institute for Pulmonary Diseases and Tuberculosis perform TB diagnosis.

The Institute of Microbiology and Parasitology at the Medical Faculty is separately distinguished, since it offers the opportunity to apply both classical and molecular methods to detect microorganisms.

Regarding infectious disease carriers for which the laboratories lack the capacity to ensure biosafety and security, such as the detection of Ebola, PHIRM has either concluded a cooperation agreement or will do so with WHO-recognised reference laboratories for their analysis. There is a person at PHIRM educated by WHO with IATA certificate for transport of infectious substances.

5.3.2. Chemical laboratories

Within the Centre for Reference Laboratories at PHIRM, there are laboratories with the capacity to detect heavy metals and chemical contaminants in samples taken from the environment, namely, water, air and soil, such as: organochlorine and organophosphorus pesticide residues in food products and drinking water; mycotoxin content (secondary products of mould metabolism which, under given circumstances, develop in cereals, hazelnuts, almonds, peanuts, etc.).

5.3.3. Radiological laboratories

Within the Centre for Reference Laboratories at PHIRM operate the only laboratories for radioecology and monitoring of ionising and non-ionising radiation. These laboratories have the capacity to establish radiation levels in the event of an incident; monitoring of radioactive content in the country's environment; monitoring of the dosage of ionising radiation in the air; personal dosimetry for individuals exposed to occupational ionising radiation; evaluation of the radioactive exposure levels of the population; radiation protection and safety training; and also dosimetry of border crossings as a prevention measure against proliferation of radioactive and nuclear materials on the territory of the Republic of Macedonia.

5.4. Mass casualty management

Mass casualty management is performed by the initial entity responding to the emergency, commonly the nearest operational forces. Depending on the location, the initial response is made by the emergency medical service present on the field.

Triage and first aid are conducted by the health care personnel from the local health institutions where the emergency, crisis or disaster took place, but also by the medical specialists of the MoD medical personnel, by representatives of the firefighting and rescue services, rapid intervention teams at the Protection and Rescue Directorate, Macedonian Red Cross teams, and qualified volunteers from the public sector.

Patient evacuation for secondary and tertiary health care treatment is the responsibility of the Ministry of Health, the health centres through the emergency medical service and local-level clinics. These capacities are further supported by the Ministry of Interior and its special units, the Ministry of Defence and its units responsible for air rescue, evacuation, emergency and special transports for air search and rescue, the rapid intervention teams at the Protection and Rescue Directorate, and the Macedonian Red Cross with its units.

Local public health institutions within the Ministry of Health and police structures and teams responsible for mass casualty identification and management exercise their competences during an emergency, crisis and/or disaster.

There are systems for mass trauma event management encompassing the necessary human resources, tools and procedures for efficient implementation on local and national level.

As for mass casualty management, the health care sector is responsible for the following:

- organising and preparing sanitary hygienic measures in the collection, transport and burial of the diseased;
- establishing the cause of death;
- identifying the persons diseased;
- organising sanitary hygienic measures in the collection and destruction of harmful waste and other hazardous materials that pose a threat to the livelihood and health of people;
- disinfection, disinsection deratisation of the field and buildings, and recovery of water supply facilities.

5.5. Critical systems (utility infrastructure, logistics, telecommunication and security)

Pursuant to the Law on Protection and Rescue and the Law on Occupational Safety and Health, for each building there exists an obligation to prepare an Evaluation of Threats from Natural Disasters and a Plan for Protection and Rescue from Natural Disasters and Other Calamities following the "Methodology for the content and manner of evaluating hazards (fires, rubbles, floods, tank explosions and their management, and personnel training, conducted without compensation by the Protection and Rescue Directorate) and protection and rescue planning," (Official Gazette of the Republic of Macedonia, no. 76/06). Such plans so far have been prepared by the University Clinic for Gynaecology and Obstetrics, the University Clinic for Children Diseases, and the University Clinic for Surgical Diseases "St Naum Ohridski" – Skopje.

The critical systems include electrical installation, telecommunications, water supply, fire protection, waste management, fuel storage, medical gas supply, and heating, ventilation and air conditioning (HVAC) systems. Any failure or interruption of the critical systems may hinder hospital operation. The collapse does not usually put the building's structural integrity at risk, but it may pose a threat to the people and everything else within the hospital.

It is crucial that the equipment of such systems operates both during and following the emergency, crisis and disaster (for example, water tanks, protection systems, etc.), especially regarding the systems in the hospital's critical areas, showing the highest demand for medical assistance in the event of a calamity.

Hospital rapid response plans for emergencies, crises and disasters should also encompass plans for operating and managing emergency systems, with personnel preparations included. The personnel responsible for the critical systems should be trained for emergency response and reaction, and it should be capable of efficient communication during an emergency. Maintenance costs must not be less than 5% of the hospital budget.⁷

Hospital management also entails regular measures for protection against damage or critical system failure for the purpose of hospital functionality during an emergency, crisis or disaster.

7. World Health Organisation. Hospital Safety Index – 2015 Guide for Evaluators.

5.5.1. Utility infrastructure

It is crucial that the utility infrastructure and vital connections (such as water, electricity, etc.) continue to function during an emergency, crisis or disaster, so that the medical personnel is capable of providing medical assistance when needed the most. Continuous functionality of hospitals hinges on many factors, including the safety of the building itself, the critical systems and equipment, material availability, and hospital capacity to cope with emergencies, crises and disasters, especially in response to and recovery from ensuing risks. Hospitals are equipped with backup power generators and fuel for the supply of electricity. Such generators ensure the functioning of the operating rooms, but not the x-ray department. *Alternative sources for the supply of drinkable water are needed (such as in the general hospitals in Kumanovo, Prilep and Strumica), whereas all health care institutions should be equipped with power generators that will meet the emergency needs in the event of an emergency, crisis or disaster. All of them should be regularly checked and maintained.*

5.5.2. Logistic support

Logistic support is the key element, which, in the event of an emergency, crisis or disaster, especially in hospitals, should ensure the continuous supply of food, medicine, medical material, safe water, waste distribution, etc. Essential supply of non-medical commodities like fuel and food should be provided for a given period. Services responsible for the logistics in health care institutions should be capable of continuing operations also during an emergency, crisis or disaster.

During a crisis situation, the Ministry of Defence, in line with its activities and pursuant the Law on Defence, prepares a Plan for Fuel and Other Energy Needs on a national level intended for the administrative bodies and public health care institutions of special interest.

5.5.3. Radio and telecommunication systems

Safe and effective telecommunications in the event of infrastructural overload or failure should be ensured. Health care institutions in the Republic of Macedonia have an established radio communication system. Emergency medical service, university clinics, clinical and general hospitals all have a radio system for unhindered communication, i.e. a TETRA system, functioning even during disturbance to the normal infrastructure. This system also connects to the M of I services. Moreover, CMC has established a radio network with radio users covering the entire country, whereas other users from all over Macedonia may also connect for informing and information sharing about events potentially causing an emergency or crisis.

5.5.4. Safety of health care institutions and personnel

Civil unrest may block the regular work of hospitals and health care institutions. A safety plan for the protection of critical health care institutions together with local police authorities (including simulation exercises) has not been prepared yet, but there exists cooperation, and so upon request, M of I may take part in physical security.

Hospital plans for preparation and response during emergency establish labelling of hospital personnel as follows:

- doctors carry red badges;
- nurses and other medical personnel carry blue badges;
- administrative personnel carries grey badges;
- janitors carry yellow badges.

CHAPTER II: Sexual and reproductive health in emergencies, crises and disasters

2.1. Significance of sexual and reproductive health in emergencies, crises and disasters

In the event of an emergency, crisis or disaster, women, adolescents and children are mostly exposed to reproductive health risks. Many adverse health effects, especially in women, adolescents and children, may be prevented if sexual and reproductive health services had been duly planned and made available during the calamity. For example, women, adolescents and children may be under the risk of sexual violence when searching for food, water and other products needed in times of crisis.

Care for mothers and newborns, gender-based violence and family planning also present an important segment that needs to be included in the national Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters.

2.2. Minimal Initial Service Package for Reproductive Health in Emergencies, Crises and Disasters

The integration Working Group for reproductive health⁸ defines a Minimal Initial Service Package (MISP) for Reproductive Health (RH) in Crisis Situations ensuring these services with the beginning of the humanitarian crisis, in order to prevent diseases and infections, but also save lives, especially regarding women and girls. Integrating the MISP for RH into the national Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters will ensure better coordination, protection and management of sexual violence outcomes, prevention of higher maternal and neonatal mortality, reduced transmission of HIV and other sexually transmitted infections, and also better planning for ensuring comprehensive approach to reproductive health services as early as the initial days and weeks of the occurring crisis. The minimal package should be defined and prepared before the occurrence of the crisis, thereby including trained personnel, education material, kits and standard procedures for rapid procurement (Annex 8 – Minimal Initial Service Package for Sexual and Reproductive Health in Crisis Situations).

2.3. Coordination and management

The MISP for RH is activated within the Intersectoral Committee for Preparedness and Response of the Health Care System when Coping with Emergencies, Crises and Disasters. The Ministry of Health is the competent institution for the implementation of the RH minimal service package. The role of the Ministry, through the National Coordinator for SRH (Annex 9 – Description of the tasks of the National Coordinator for Sexual and Reproductive Health in Emergencies, Crises and Disasters), encompasses the following:

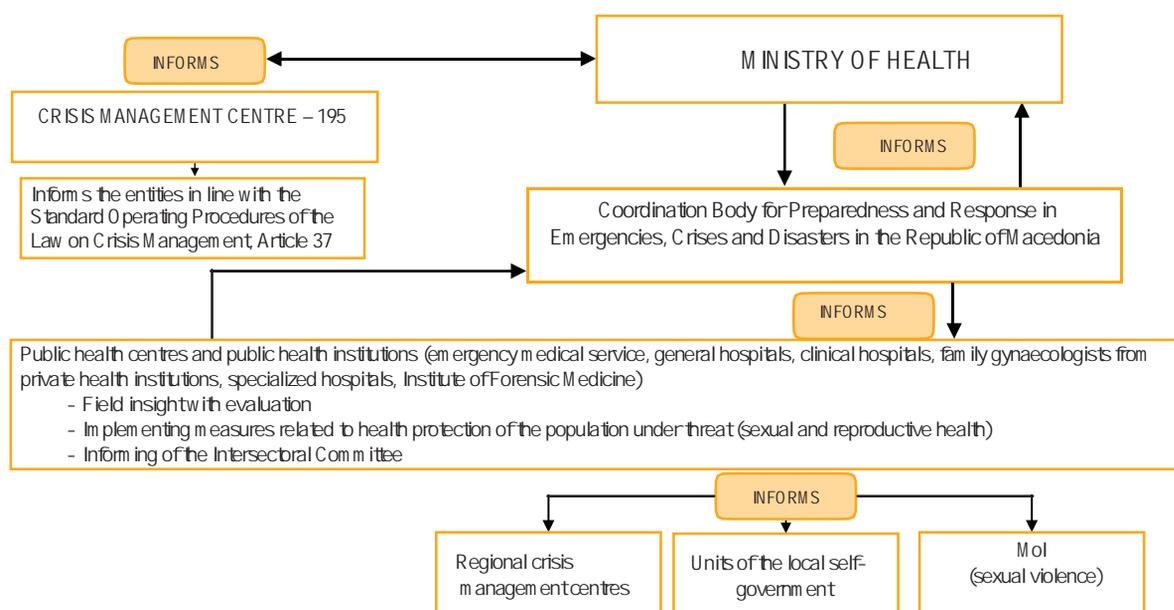
- Providing technical assistance and operational support to all institutions providing sexual and reproductive health (SRH) services;

8. Established in 1995 in order to address and promote reproductive health in women, men and children during humanitarian crisis. The management body has 12 members coming from UN agencies, international and national NGOs and academic institutions.

- Coordination and communication with all relevant state administrative bodies (CMC, PRD, MoI, MTSP, MoH-ARM, PHIRM and other public health institutions), as well as ULSG, public enterprises, NGOs and other institutions of use in implementing sexual and reproductive health services (Annex 10 – Description of the Working Group for Sexual and Reproductive Health in Emergencies, Crises and Disasters);
 - Keeping record about human resources, infrastructure, material and technical assets (MTAs) and equipment needed to implement the minimal service package for reproductive health in emergencies, crises and disasters on different levels in health care and social protection sectors (MTSP with the intermunicipal centres for social work) and information sharing in terms of resource availability;
 - Regular meetings with different stakeholders involved in the implementation of the minimal service package for reproductive health in emergencies, crises and disasters;
- Preparing plans, standard operational procedures, clinical guidelines, protocols, strategies, reports and finding solutions for problems related to sexual and reproductive health (Annex 11 – Action Plan for Sexual and Reproductive Health in Emergencies, Crises and Disasters, Annex 12 – Sexual and Reproductive Health Protocol for Mobile Clinic Services in Emergencies, Crises and Disasters, and Annex 13 – Multisectoral Standard Operating Procedures (SOPs) for gender-based violence (GBV) prevention and response in emergencies, crises and disasters);
 - Adopting priority activities in related to reproductive health according to the local needs in the areas affected by the emergency, crisis or disaster;
 - Timely informing of the Preparedness and Response Intersectoral Committee in regard to the plan for implementing the MISP for RH, also including challenges faced in the field;
 - Establishing contacts with the concerned parties, NGOs, MRC, international organisations and institutions that may provide support with their expert and financial assistance in the procurement of equipment and provision of resources needed to implement the MISP for RH.

Diagram 2 shows the Standard Operating Procedure for reproductive health coordination and management in emergencies, crises and disasters.

Diagram 2. Coordination and management SOP.



2.4. Establishment of an assessment, monitoring and evaluation system

The preparedness of the health care system in an emergency, crisis or disaster entails the establishment of an assessment, monitoring and evaluation system aimed at implementing the minimal service package for reproductive health. The assessment encompasses collection of demographic data about the affected area and indicators relevant for SRH in an emergency, crisis or disaster, also including a protocol to collect data on a local level in cooperation with the competent institutions. The implementation of the assessment, monitoring and evaluation are the responsibility of the National Coordinator for SRH at the Ministry of Health, the Public Health Institute, and the ten public health centres in cooperation with all line institutions participating in the coordination and management system. Within the line of work, the National Coordinator for SRH has the following tasks:

- Cooperation with the public health centres in collecting demographic data needed to monitor the scope of services provided and other SRH indicators related to the service provision system (materials, resources) intended for the needs of the crisis area;
- Result analysis and regular report preparation on the status of the crisis-struck areas;
- Constant communication and cooperation of the responsible person with the Preparedness and Response Intersectoral Committee for of the Health Care System when Coping with Emergencies, Crises and Disasters, whereby the SRH status is analysed and recommendations to overcome identified weaknesses are given in order to ensure support and timely planning of resources to implement the MISP for RH;
- Data collection and monitoring regarding the minimal service package entail the use of the MISP Record List (Annex 15 – Record List of the Minimal Initial Service Package for Reproductive Health in Emergencies, Crises and Disasters) as the base allowing further update/modification according to the needs. The responsible person reports data to the Preparedness and Response Intersectoral Committee on a daily/weekly/monthly basis, depending on the needs and dynamics relating to the calamity.

2.5. Medicines, equipment and expendable materials for implementation of the MISP for RH

Ensuring medicines, basic equipment and expendable materials is of great importance. The National Coordinator for reproductive health should take into account the opportunities offered by UN agencies regarding the procurement of reproductive health materials in line with the needs of the country and the population. Namely, the Interagency Working Group for Reproductive Health has designed a set of tools for reproductive health allowing the implementation of priority activities of the minimal service package for reproductive health during crisis situations. The UN Population Fund is the competent agency for distribution of reproductive health kits. Annex 14 – Reproductive health kits, provides basic information about the kits, procurement address and resource materials instrumental to better planning and implementation of the minimal service package for sexual and reproductive health in crisis situations.

CHAPTER III: OPERATING PROCEDURES FOR COORDINATION AND MANAGEMENT OF THE HEALTH CARE SECTOR IN RESPONDING TO EMERGENCIES, CRISES AND DISASTERS

This Plan segment provides information about the activities to be undertaken on an operating level. The health care system functions as part of the comprehensive response in emergencies, crises and disasters, with own capacities, resources and means, being part of the National Response Plan of the Local Self Government in Emergencies, Crises and Disasters.

The specific functions and tasks are grouped in time frames:

- activities within 24 hours;
- activities within 48 hours;
- activities within 72 hours;
- activities within 7 days;
- activities within 30 days and following the cessation of the emergency, crisis or disaster.

Key activities pertaining to the implementation of the Operating Procedures for coordination and management of the health care sector in emergencies, crises or disasters (listed below in a table) are as follows:

1. Initiating response through situation assessment

The initiation entails applying the following questions in order to implement given measures and activities:

- Is the health care sector going to be involved in the response, and if so, in what capacity?
 - Which functions of the health care system are under threat?
 - Which geographical region/area may be jeopardised? What is covered by its competences?
 - How many persons are jeopardised, affected, exposed, injured or dead?
 - What are the exposition pathways?
 - Is the critical infrastructure affected (for example, the supply of electricity and drinkable water, and water supply in general, sanitation, telecommunications, transport)? If so, in what manner?
- Are the health care and medical institutions going to be affected by the disaster? If so, in what manner?
 - Are exit roads open and accessible?
 - In what manner do current weather conditions affect the situation?
 - In what manner are the remaining agencies and organisations involved in the disaster response?
 - What activities have already been undertaken?
 - Has the information been exchanged with the persons arriving first on site for the purpose of protecting public health? If so, in what manner and with whom?
- Does the health care sector have agreed-upon or established procedures for acting together with other institutions and organisations involved?
 - Is there a command post established during the disaster? If so, where is it?
 - Who is in charge at the command post?
 - Has the local or national emergency/195 operating centre been activated?

2. Development of health sector initial response and establishment of an Action Plan

The *Action Plan* is proposed by the Coordination Body at MoH based on the assessed situation and forwarded to the Ministry of Health within 24-48 hours of the emergency, crisis or disaster.

3. Participation of health care sector representatives in Headquarters on national and local level during emergencies, crises and disasters

Health care sector representatives should be appointed, after which they should establish communications and maintain close coordination with the local and national headquarters and the remaining operational components.

4. Establishment of communications with key health care institutions

The establishment of communications with health care institutions with the role to respond to emergencies, crises and disasters, and responsibilities for and confirmation of their support procedures and capacities (for example, patient isolation, decontamination, etc.), includes:

- emergency medical services;
- hospitals and clinics;
- urgent care centres;
- transfusiology;
- laboratories;
- forensic science;
- psychiatric counselling;
- private health care institutions;
- others.

5. Establishment of resource and asset schedule in order to achieve the initial response goals

Many goals are not readily attainable during the response. Effective allocation and control of health care resources and assets is deemed if they can be maintained for 24 hours during response activities and operations. If needed, additional health care resources are included (medical students, retired health care professionals, etc.).

6. Referral of assistance and information requests

The response of the community entails linking assistance and information requests from other agencies/ministries/organisations and the public, or directly through the proper personnel within the Ministry of Health, or the competent agency and/or organisation (PRD or CMC).

7. Risk-related communication activities

Regular communication with the health care workers, media, population and all institutions involved in responding to the emergency, crisis or disaster.

8. Assistance preparations of the country

Preparations of the country on providing assistance and integration of the already involved personnel, resources and assets in the established response structure on a national level.

9. Activities following the event/disaster

Analysis and evaluation on the efficiency of implemented activities and preparation of a report with proposal measures to be submitted to all relevant stakeholders.

Given below is a detailed overview of the following:

- A. General operating procedures for taking actions by the health care sector in emergencies, crises and disasters,
- B. General operating procedures for communication of the health care sector in emergencies, crises and disasters,
- C. Standard operating procedure for public-health response to flood.

A. GENERAL OPERATING PROCEDURES FOR TAKING ACTIONS BY THE HEALTH CARE SECTOR IN EMERGENCIES, CRISES AND DISASTERS	
Action	Competent institution
Within 24 hours	
Emergency meeting of the MoH National Coordination Body responding to emergencies, crises and disasters.	MoH
The MoH Coordination Body establishes emergency communication with the remaining stakeholders of the response system for emergencies, crises and disasters.	MoH
The MoH Coordination Body appoints and involves rapid assessment teams.	MoH
The MoH Coordination Body appoints and engages rapid response teams.	MoH
Activation of the hospital crisis response plans in affected regions.	MoH, general hospitals, clinical hospitals, specialized hospitals, university clinics
Establishment of shelters where triage of the injured and diseased is conducted with the involvement of teams, units, experts, etc.	MoH in cooperation with PRD, MoI and MRC
Provision of first medical aid to the injured and diseased with the involvement of teams, units, experts, etc.	MoH in cooperation with PRD, MoI and MRC
Organising and conducting transport of the injured and diseased from the affected area by land and air, with the involvement of teams, units, MTAs, etc.	MTC in cooperation with MoH, PRD, MoD-ARM and MoI
Organising care for the heavily injured and diseased. Reporting to CM C.	MoH

Information to the public by MoH, in cooperation with the Coordination Body.	MoH
Within 48 hours	
Regional/local coordination bodies in coordination with PHC and in multisectoral cooperation with the relevant institutions and the units of local self-government, coordinated with MoH Coordination Body, gather field information about current developments.	PHC, health centres, general and clinical hospitals in multisectoral cooperation with PRD and CMC, MRC, the units of local self-government
The Coordination Body activates the rapid assessment and response teams.	PHC, health centres, general and clinical hospitals in cooperation with PRD and CMC, MRC, the units of local self-government
Establishment of field hospitals for the care of the injured and diseased, with the involvement of teams, units, experts, etc.	MoH in cooperation with MoD-ARM, MRC and PRD
MoH in cooperation with MRC, AYS, MLSP, MoES, MoD-ARM, PRD and ULSG with the public enterprises organise conversion of permanent buildings (halls, schools, kindergartens, etc.) into temporary hospitals. MoH puts at disposal medical buildings, MLSP, sports halls, resorts, retreats, etc., whereas ULSG provide support for building conversion and their maintenance.	MoH in cooperation with MRC, AYS, MLSP, MoES, MoD-ARM, ULSG and PRD
Provision of health care to evacuated persons.	MoH
Organising transport to the identification and accommodation premises, and identification of the deceased.	MoH/SSH/Institute of Forensic Medicine in cooperation with PRD, MoD-ARM, MoI and MTC
Within 72 hours	
Analysis and assessment of the situation in the field and obtaining additional information of interest on the health protection of the population in the affected areas.	MoH/rapid assessment teams
Upon analysis and assessment conducted, the MoH Coordination Body calls for an emergency meeting with the participation of relevant experts, depending on the character of the emergency, crisis or disaster (for example, the Committee on Infectious Diseases).	MoH
Provision of data on water safety through irregular controls. Reporting to CMC every 24-48 hours.	MoH in cooperation with PHIRM, PHC and FVA

Ensuring continuous supply of safe drinking water. For that aim, water trucks and bottled water are brought, and water production (through a portable water treatment facility) is activated. Locations for the distribution of drinking water are established.	MoH in cooperation with MAFWE, MRC, MoE, MoD-ARM, ULSG with PEs, TFUs and State Environmental Inspectorate
Implementation of health protection activities intended for the population against infectious diseases (there are also special protocols for the implementation of IHR).	MoH in cooperation with PHIRM, PHC and SSHI
Implementation of activities pertaining to food safety and quality.	MoH in cooperation with PHIRM and FVA
Within 7 days	
Definition of the need for help from non-governmental organisations, international entities and the private sector, submission of an emergency request by MoH.	MoH/PRD and Government of R. Macedonia
Preparation of an operating plan for implementing measures and activities in regard to the emergency, crisis or disaster, with designated persons, institutions and resources.	MoH
Within the following 7 – 30 days	
Regular meeting with the MoH coordination body.	MoH
Continuous information to the public by MoH in cooperation with the coordination body and continued implementation of stated activities, according to the needs.	MoH
Continuous monitoring of the measure implementation in the field.	MoH
Organising and conducting psychological support to the jeopardized people and the response teams. For that purpose, MoH involves teams, doctors, etc.	MoH in cooperation with MRC and other NGOs
Initiating activities for recovery and revitalisation of affected areas, in the context of health protection to the population.	MoH, PHIRM, PHC, ULSG
After the emergency, crisis or disaster	
Analysis and evaluation on the efficiency of implemented activities and preparation of a report with proposal measures to be submitted to all relevant stakeholders.	MoH
Continuous check and update of the Operating Plans for hospitals preparedness and response in emergencies, crises or disasters.	MoH, general and clinical hospitals, specialized hospitals, university clinics

B. GENERAL OPERATING PROCEDURES FOR COMMUNICATION OF THE HEALTH CARE SECTOR IN EMERGENCIES, CRISES AND DISASTERS	
Action	Competent institution
Within 24 hours	
A team for communication with the public is appointed.	MoH
The MoH coordination body for preparedness and response in emergencies, crises and disasters, upon initial situation assessment, prepares information for the public.	MoH, PHIRM, PHCs in cooperation with CMC
Scheduling initial press conference and other forms of providing information to the public	MoH
Within 48 hours up until the emergency, crisis or disaster is declared over	
Continuous monitoring of the situation, assessment of the population need for information	MoH, PHIRM, PHCs in cooperation with CMC
Data analysis, processing and evaluation, and providing continuous updated information on a daily basis, in line with the needs, depending on the situation in the field	MoH, National Coordination Body at MoH
After the emergency	
Evaluation of activities conducted and preparation of a report with proposal measures to be submitted to all relevant stakeholders.	National Coordination Body at MoH

C. STANDARD OPERATING PROCEDURE FOR PUBLIC-HEALTH RESPONSE TO FLOOD	
Action	Competent institution
Within 24 hours	
Emergency meeting of the MoH Coordination Body responding to emergencies, crises and disasters.	MoH
The MoH Coordination Body establishes emergency communication with the remaining stakeholders of the response system for emergencies, crises and disasters.	MoH
The MoH Coordination Body appoints and involves rapid assessment teams.	MoH
The MoH Coordination Body appoints and involves rapid response teams.	MoH

Activation of the hospital crisis response plans in affected regions.	MoH, general and clinical hospitals, specialized hospitals, university clinics
Establishment of shelters where triage of the injured and diseased is conducted with the involvement of teams, units, experts, etc.	MoH in cooperation with PRD, MoI and MRC
Provision of first medical aid to the injured and diseased with the involvement of EMS teams, units, experts, etc.	MoH in cooperation with PRD and MRC
Organizing and conducting transport of the injured and diseased from the affected area by land and air, with the involvement of teams, units, MTAs, etc.	MTC in cooperation with MoH, PRD, MoD-ARM and MoI
Organizing care for the heavily injured and diseased. Reporting to CMC.	MoH
Information to the public by MoH, in cooperation with the coordination body.	MoH
A public relations officer is appointed.	MoH
Initial press conference is scheduled.	MoH
The MoH coordination body for preparedness and response to emergencies, crises and disasters prepares the information for the press.	MoH in cooperation with CMC and PRD
The Ministry of Health, in coordination with the General Headquarters at CMC and PRD, and the Steering Committee and Assessment Group of the Government of the Republic of Macedonia, informs all public health centres in coordination with the Public Health Institute to take all preventive health care measures and to assess the sanitary, hygiene and epidemiological situation of the affected area after heavy rainfall, causing the river to overflow its banks.	MoH in cooperation with PHIRM and PHCs

Through the information media, social networks, local authorities and personal contact, the population of the affected areas using drinking water from local waterfalls, private or public wells, springs is recommended, as a preventive measure, to boil the water for ten minutes.	MoH in cooperation with PHIRM, PHCs and ULSG
Provision of safe drinking water.	ULSG/PUEs
Official PHC representatives inform the local population through the public media about the current situation and the measures taken by the local authorities and PHC, and take part in educational campaigns for disease prevention.	MoH, PHIRM and PHCs
Participation in the General Headquarters meetings at CMC and PRD.	MoH, CMC, PRD
Within 48 hours	
Prevention of food poisoning requires enhancing personal and collective hygiene with special focus on proper washing of food products (greenhouse fruit and vegetable) with safe drinking water.	MoH in cooperation with PHIRM and PHCs
Health centres undertake the obligation to ensure 4-hour attendance of a doctor and a nurse in the period from 10 a.m. to 2 p.m. at the locations which are the most affected by flood, in order to provide health care to all categories of the population, and especially to persons with chronic degenerative diseases, persons aged above 65, pregnant women, and children.	MoH
The health team will be provided with the necessary medical aids and medicines for rapid intervention in the field. Health centres provide means of transport	MoH
PHCs are obliged to regularly monitor the situation in the field, to establish contact with the family doctors and to provide routine information to PHIRM about the potential occurrence of a major number of diseased related to the flooded areas, and also to submit regular reports through the ALERT system.	PHIRM and PHCs
In regard to the drinking water quality, PHCs provide regular daily information to PHIRM and MoH.	PHIRM and PHCs
Preparation of proper flyers with recommendations to the population on prevention of infectious diseases in flood. Their distribution is conducted by the competent PHCs.	MoH in cooperation with PHIRM and PHCs

Request for the donation of drinking water purification tablets through WHO.	MoH
Within 72 hours	
The situation in the field (population's sanitary, hygiene and epidemiological condition) is constantly monitored up until complete normalisation of the situation.	MoH in cooperation with PHIRM and PHCs
For the prospect of warning during the monitored period, there is the need to dry out all stagnant waters owing to the pending danger from the development of anophelism (occurring larvae of mosquitoes – vectors of acute infectious diseases). Local authorities, in cooperation with PHCs, are recommended that, after the water retreats and yards are dried out, they perform a detailed mechanical (physical) cleaning by removing 2-3 centimetres off the soil surface (silt) due to the faecal contamination, and have disinfection, disinsection and deratisation (DDD) conducted by a competent public-health institution.	MoH, PHIRM, PHCs, ULSG, PRD, CMC and State Environmental Inspectorate
Conducting disinfection in the premises of kindergartens, primary and secondary schools on a regional level, and distributing prepared flyers on the prevention of infectious diseases.	PHCs
Distribution of personal hygiene packages.	MoH in cooperation with WHO, UNFPA, MRC
Within 5 days	
The situation in the field (population's sanitary, hygiene and epidemiological condition) is constantly monitored up until complete normalisation of the situation.	MoH in cooperation with PHIRM and PHCs
Implementing preventive measures to protect the health of workers involved in terrain sanitation – emergency vaccination and seroprophylaxis (health workers, PUE employees, all concerned stakeholders participating in terrain sanitation).	MoH in cooperation with PHIRM and PHCs
Preliminary report on the sanitary, hygiene and epidemiological condition of the affected population.	MoH in cooperation with PHIRM and PHCs
In the following 7 – 30 days	
The situation in the field (population's sanitary, hygiene and epidemiological condition) is constantly monitored up until complete normalisation of the situation.	MoH in cooperation with PHIRM and PHCs
Report on the sanitary, hygiene and epidemiological condition of the affected population.	MoH in cooperation with PHIRM and PHCs

Organising and conducting psychological support to the jeopardised people and the response teams. For that purpose, MoH involves teams, doctors, etc.	MoH in cooperation with MRC and other NGOs
Initiating activities for restoration and revitalisation of affected areas, in the context of health protection to the population.	MoH, PHIRM, PHCs, ULSG and the State Environmental Inspectorate
After the emergency	
Evaluation of activities conducted and preparation of a report with proposal measures to be submitted to all relevant stakeholders.	MoH
Implementation of proposal measures upon conducted evaluation.	MoH

LIST OF ANNEXES

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ANNEX 1: COMPOSITION OF THE MoH NATIONAL COORDINATION BODY FOR PREPAREDNESS AND RESPONSE IN EMERGENCIES, CRISES AND DISASTERS

Ministry of Health

- State Advisor for Health Protection in the Ministry of Health
- Head of the Primary and Preventive Health Care Sector
- Head of the Secondary and Tertiary Health Care Sector
- Appointed person responsible for sexual and reproductive health
- Appointed person of the Public Relations Department

Public Health Institute of the Republic of Macedonia

- Representative of the Environmental Health Sector
- Representative of the Epidemiology Sector
- Representative of the Virology and Microbiology Sector
- Appointed contact person for IHR implementation
- Appointed person responsible for chemicals at PHIRM
- Appointed person responsible for ionising radiation at PHIRM

Ministry of Environment and Physical Planning

- Representative

State Environmental Inspectorate

- Representative

Public health centres

- Representative

University Clinic for Infectious Diseases and Febrile Conditions

- Representative

Medicine and Medical Device Agency

- Representative

Food and Veterinary Agency

- Representative

Radiation Safety Directorate

- Representative

Crisis Management Centre

- Representative

Protection and Rescue Agency

- Representative

Emergency medical service

- Representative

Macedonian Red Cross

- Representative

If needed, representatives of other relevant national and international institutions are involved (WHO, UNFPA and others).

ANNEX 2: TASK DESCRIPTION FOR THE MEMBERS OF THE MoH NATIONAL COORDINATION BODY FOR PREPAREDNESS AND RESPONSE IN EMERGENCIES, CRISES AND DISASTERS

Introduction

Pursuant to Article 55 of the Law on the Organisation and Operation of the State Administration Bodies (Official Gazette of the Republic of Macedonia, no. 58/00, 44/02, 82/08, 167/10 and 51/11), the Minister of Health adopts a decision to establish a National Coordination Body for Preparedness and Response of the Health Care System in Emergencies, Crises and Disasters.

Working group tasks

The National Coordination Body for Preparedness and Response of the Health Care System in Emergencies, Crises and Disasters is a multisectoral group membered by relevant institutions (Annex 1), with the following tasks:

- Coordinating activities to prepare the health care system in coping with emergencies, crises and disasters, monitoring such activities, and proposing measures to promote the health care system preparedness to respond in crisis situations;
- When an area is struck by an emergency, crisis or disaster, proposing and taking of measures within the framework of existing and separate plans to ensure unhindered and continuous provision of health care services to the affected population;
- Coordinating, monitoring events and giving recommendations to promote preparedness and response in emergencies, crises and disasters, both during the preparation stage and in the course of the emergency.

PREPARATION STAGE

Coordination

During the health care system preparation stage for coping with emergencies, crises and disasters, the working group is coordinated by the Ministry of Health, that is, the National Coordinator responsible for emergencies, crises and disasters. In line with the needs, the Ministry of Health may establish a separate body – Secretariat for Preparation and Implementation of Activities for Health Care System Planning in Emergencies, Crises and Disasters.

Cooperation with other bodies

Depending on the needs, the working group may establish cooperation with the General Headquarters at the Crisis Management Centre, the Steering Committee at the Government of the Republic of Macedonia, and other relevant institutions.

Meetings

Members of the working group meet at least twice a year upon invitation by the National Coordinator responsible for emergencies, crises and disasters leading the preparation of the annual plan of activities and reporting on its implementation.

Financing and resources

Funds necessary to prepare for emergencies, crises and disasters are covered by the regular budget income of health institutions and the Ministry of Health. Depending on the situation, and according to the established assessment, there are mechanisms to ensure funds from the Public Health Programme of the Ministry of Health, and also by the Government of the Republic of Macedonia.

In some cases, UN Offices, within the framework of their programmes, also provide support for the process preparing the health care system for emergencies, crises and disasters.

Working group tasks

- Developing an annual action plan for preparedness of the health care system when coping with emergencies, crises and disasters;
- Monitoring the implementation of the annual action plan, performing corrections and giving recommendations to improve implementation mechanisms;
- Communicating with all relevant ministries, institutions and organisations, both national and international, depending on activities and needs;
- Providing advice on the amendments to state laws, policies and regulations in order to improve health care system preparedness in addressing sexual and reproductive health during emergencies, crises and disasters.

RESPONSE STAGE

Coordination

When an area is struck by an emergency, crisis or disaster, the MoH National Coordination Body responsible for response to such calamities coordinates the activities and acts in accordance with the Operating Procedures of the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters (Chapter 3).

Cooperation with other bodies

The Coordination Body cooperates with all relevant institutions and organisations on a local level (in the area affected by a hazard, disaster or crisis situation) when planning and implementing field activities, in line with the Operating Procedures of the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters.

Meetings

When an area is struck by an emergency, crisis or disaster, an emergency meeting of the competent MoH Coordination Body is scheduled, taking activities in line with the Operating Procedures of the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters. Meeting dynamics and Coordination Body communication are organised according to the level of crisis. Minutes are produced from every meeting which are then forwarded to the Ministry of Health, the General Headquarters at the Crisis Management Centre, and the Steering Committee at the Government of the Republic of Macedonia.

Financing and resources

Funds necessary to prepare for emergencies, crises and disasters are covered by the regular budget income of health institutions and the Ministry of Health. Depending on the situation, and according to the established assessment, there are mechanisms to ensure urgent funds from the Public Health Programme of the Ministry of Health, and also by the Government of the Republic of Macedonia.

Upon the declaration of a crisis situation, there is legal option to provide additional funds through a Decision by the Government of the Republic of Macedonia, in order to ensure rapid and adequate response to the emergency, crisis or disaster without any adverse impact on regular budget costs.

In given cases following the declaration of a crisis situation, the CMC Steering Committee submits a request to the Government to adopt a decision requesting support from the UN representative in the Republic of Macedonia, in order to ensure coordinated approach of UN Offices in the implementation of the EU humanitarian aid and civil protection mechanism.

Coordination Body tasks

The Coordination Body has the task of coordinating activities in line with the General Operating Procedures of the health care sector when coping with emergencies, crises and disasters (Annex 3 of the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters), and specifically:

- Preparing an emergency plan of activities to be implemented in the area affected by emergencies, crises and disasters;
- Appointing rapid assessment and response teams;
- Monitoring the implementation of the activities aimed at the population affected by an emergency, crisis or disaster; and proposing specific measures;
- Coordinating public communication activities during an emergency, crisis or disaster;
- Coordinating activities pertaining to the establishment and organisation of territorial (provisional) health care institutions;
- Giving recommendations to the key stakeholders and local authorities to improve population's access to health care services and health protection;
- Coordinating activities to obtain donations and humanitarian aid in the form of medical equipment and medicines, organising and managing such donations and types of aid;
- Monitoring and organising activities regarding the supply of medicines, medical devices and sanitary materials, and their provision in emergencies, crises and disasters;
- Cooperating with national and international organisations in order to obtain donations for an easier and more comprehensive implementation of priority activities;
- Analysing and evaluating the efficiency of implemented activities and preparing a report with proposal measures to be submitted to all relevant stakeholders.

ANNEX 3: TASK DESCRIPTION FOR THE NATIONAL COORDINATOR FOR PREPAREDNESS AND RESPONSE IN EMERGENCIES, CRISES AND DISASTERS

Introduction

Pursuant to Article 55 of the Law on the Organisation and Operation of the State Administration Bodies (Official Gazette of the Republic of Macedonia, no. 58/00, 44/02, 82/08, 167/10 and 51/11), the Minister of Health adopts a decision to elect a National Coordinator during emergencies, crises and disasters, in order to coordinate, implement and monitor activities regarding preparedness and response of the health care system.

Tasks

Coordination, communication and cooperation

- Managing the Coordination Body for Preparedness and Response of the Health Care System in Emergencies, Crises and Disasters;
- Scheduling the meetings of the Coordination Body for Preparedness and Response of the Health Care System in Emergencies, Crises and Disasters;
- Proposing an annual action plan for preparedness of the health care system when coping with emergencies, crises or disasters;
- Monitoring the implementation of the annual action plan for preparedness of the health care system when coping with emergencies, crises or disasters, providing corrections, and reporting to the MoH Coordination Body for Preparedness and Response of the Health Care System in Emergencies, Crises and Disasters;
- Monitoring the continuous check and update of the Preparedness and Response Operating Plans for hospitals and other health care institutions in emergencies, crises and disasters;
- Cooperating with national and local health-care and other institutions and organisations according to the needs;
- Communicating and coordinating also with other bodies of the emergency, crisis and disaster management system, that is, the General Headquarters at the Crisis Management Centre and at the Protection and Rescue Directorate, the Steering Committee of the Government of the Republic of Macedonia, and other relevant bodies;
- Communicating and establishing coordination with international organisations and donors involved in the management of emergencies, crises and disasters;
- Leading the preparation of plans, strategies and reports, and finding solutions to problems pertinent to the preparedness and response of the health care system when coping with emergencies, crises and disasters;
- Sharing reports and other materials with national and local authorities during emergencies, crises and disasters;
- Establishing cooperation with relevant institutions in the collection or assessment of basic demographic data on the crisis-affected area;
- Monitoring the implementation of activities in the crisis-affected area, in line with the General Operating Procedures for taking actions by the health care sector in emergencies, crises and disasters (Annex 3 of the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters);
- Performing data analysis and proposing effective measures and activities;
- Bearing the responsibility to initiate activities in line with the plan and propose measures to the

Minister of Health.

Knowledge of laws, policies and regulations

- Having knowledge and implementation of national laws, policies and regulations for emergency, crisis and disaster management;
- Having knowledge of instructions and protocols adopted by the Ministry of Health regarding emergencies, crises and disasters;
- Having knowledge of the private data protection legislation and principles, and signing Confidentiality Statement guaranteeing the right of personal data protection.

Profession and qualifications

- Bachelor's and master's degree in health care, public health care, social sciences or other related fields;
- Minimum 5 years of experience in health protection during emergencies;
- Minimum 5 years of experience working on preparedness and response of the health care system in emergencies, crises and disasters;
- Skills in organisation, report preparation and data analysis, as well as experience in working with national and local institutions and organisations;
- Experience in cooperating with international organisations;
- Obtained knowledge and training in the area of health care system preparedness and response in crisis;
- Good command of the English language.

ANNEX 4: DESCRIPTION OF KEY SURVEILLANCE AND EARLY WARNING SYSTEMS IN THE HEALTH CARE SECTOR

Surveillance and early warning systems during contagious diseases

Responsibility of every doctor (according to the Law on Protecting the Population from Contagious Diseases – Official Gazette, no. 66/04) is mandatory and immediate reporting (at the moment of examination and no later than 24 hours thereafter), either by personal reporting card or by phone, of the existence or suspicion of a contagious disease (CD) to the PHC (i.e. its regional unit). A suspicion of CD is established by all doctors of the Macedonian health care system network, also including the doctors of all clinical medicine specialities.

Microbiological CD verification is conducted in the following facilities: the laboratories of every clinic/hospital on the territory of the Republic of Macedonia located in the PHC, and the Institute of Microbiology and Parasitology in Skopje, PHIRM and UCIDFC – Skopje.

Pursuant to the Law on Protecting the Population from Contagious Diseases in the Republic of Macedonia, there is a dual CD reporting system established:

- Individual reporting of a contagious disease through an individual reporting card with a list of 48 diseases. Reporting by such cards is done immediately, and no later than 24 hours.
- ALERT system, i.e. reporting according to defined syndromic conditions, once a week by group cards.

With the incidence of two or more cases of disease (cluster), i.e. occurrence of diseased persons with identical or similar clinical presentation and an unusually acute form of the disease with unforeseeable progression, or with the incidence of a disease of special interest, besides

personal card reporting, the family doctor (also including the infectious disease specialist or any other doctor first to establish suspicion of the disease), has the obligation to make an immediate telephone report (24/7/365) to the competent PHC (i.e. its regional unit). The chain of reporting proceeds from PHC to PHIRM and SSHI, MoH.

In the event of zoonoses, PHC report to the veterinary services on the affected territory.

Operational Plan for Taking Actions in the Event of Influenza Pandemic – Represents an action plan in the event of influenza pandemic in the country, complementary to the 2013/2014 Action Plan with measures and recommendations to implement activities regarding influenza pandemic. This Plan foresees the timely assessment of the risk for influenza incidence and the planning of solutions, measures and activities, in line with the stages laid down in the Operational Plan.

Surveillance and early warning systems regarding events relevant to the International Health Regulations (IHR)

With the entry of the International Health Regulations into force on 15 June 2007, the Public Health Institute of the Republic of Macedonia became the country's focal reporting on the occurrence of a public health emergency of international concern (with potential to spread to the neighbouring countries and beyond), and maintains constant communication with WHO, on the one hand, and the public health centres in Macedonia (10 regional; in Skopje, Kumanovo, Stip, Kocani, Veles, Strumica, Prilep, Bitola, Ohrid and Tetovo), on the other hand.

In line with IHR, the Skopje "Alexander the Great" Airport was established as an entry point by air, whereas the Bogorodica border crossing, Gevgelija – an entry point by land.

The Ministry of Health has adopted the following protocols:

- a) Taking actions and reporting in a public health emergency of international concern with biological risk;
- b) Taking actions and reporting in a public health emergency of international concern including incidents with chemicals and hazardous material;
- c) Taking actions and reporting in a public health emergency of international concern including incidents with radioactive hazardous material.

Surveillance and early warning systems during cold waves

The Action Plan for the Prevention of Adverse Effects on the Population Health from Cold Waves was adopted. It provides a detailed outline of the early warning risks by phases and activities to be implemented.⁹

Surveillance and early warning systems during heat waves

The Action Plan for the Prevention of Adverse Effects on the Population Health from Heat Waves was adopted. It provides a detailed outline of the early warning risks by phases and activities to be implemented.¹⁰

9. <http://www.studenibranovi.mk/>

10. <http://www.toplotnibranovi.mk/>

ANNEX 5: ELEMENTS OF THE RAPID HEALTH NEED ASSESSMENT IN EMERGENCIES, CRISES AND DISASTERS

1. Introduction (brief information about the emergency, crisis or disaster)

- Establishment of affected areas
- Damage to the infrastructure
- Number of the affected population and demographic characteristics
- Vulnerable population

2. Environmental and public health issues

2.1 Accommodation capacity (current situation, measures taken on a local level, key recommendations)

2.2 Water (current situation, measures taken on a local level, key recommendations)

- Availability of safe drinking water
- Regular control of the drinking water in the affected region

2.3 Hygiene and sanitation (current situation, measures taken on a local level, key recommendations)

- Waste water removal system
- Solid waste disposal
- Disinfection, disinsection and deratisation (DDD)
- Personal and collective hygiene

2.4 Food (current situation, measures taken on a local level, key recommendations)

2.5 Chemical hazard (current situation, measures taken on a local level, key recommendations)

2.6 Other hazards (current situation, measures taken on a local level, key recommendations)

3. Basic health protection and epidemiological surveillance

- Mortality
- Morbidity
- Basic health protection (availability of personnel and conditions for the provision of health protection)
- Epidemiological surveillance (current situation, measures taken on a local level, key recommendations)

4. Measures to raise population awareness about the situation

5. Summary of recommendations and necessary actions

- Summary of recommendations for immediate/short-term activities (in the following 1-30 days)
- Summary of recommendations for middle-term/long-term activities

ANNEX 6: EXPERT RISK ASSESSMENT DURING EMERGENCIES, CRISES AND DISASTERS IN THE REPUBLIC OF MACEDONIA

1. Heat waves (wildfires)
 - Mb (h), Mt (l) (h=high risk, l=low risk)
 - Economic losses (reduction of growing stock, damage to infrastructure and goods)
2. Influenza pandemic
 - Mb (vh), Mt (vh) (vh=very high risk)
3. Floods
 - Mb (l), Mt (l) (l=low risk)
 - Economic losses (agriculture, damage to infrastructure and goods)
4. Earthquake
 - Mb (h), Mt (h) (h=high risk, h=high risk)
 - Economic damage to infrastructure (displacement of people, and other)
5. Chemical incidents
 - i. a) Industrial
 - Mb (h), Mt (l) (h=high risk, l=low risk)
 - i. b) Transport
 - Mb (l), Mt (l) (l=low risk, l=low risk)
6. Landslides
 - Mb (l), Mt (l) (l=low risk, l=low risk)
 - Economic losses (damage to infrastructure and goods)
7. State of war – (civil war and/or war)
 - Mb (vh), Mt (h) (vh=very high risk, h=high risk)
 - Economic losses (damage to infrastructure, displacement of people)

Legend: Mb = morbidity, Mt = mortality

ANNEX 7: PREVENTION MEASURES FOR WORKERS INVOLVED IN FLOOD DAMAGE RESTORATION

Workers involved in various working activities regarding flood damage restoration may be exposed to different hazards in their line of work. Workers and volunteers taking part in such activities should be properly informed about the potential risks and the occupational safety and protection measures.

Health effect	Recommendations and advice
Risk to life	All parties involved should be informed about the risks of drowning and death from injury or carbon monoxide poisoning. When using motor vehicles, they should avoid driving through waters of unknown depth. When working in or near water, they should have standard life jackets on them.

<p>Injuries</p>	<p>Injuries and accidents should be prevented by careful contact with the fast-flowing water of unknown depth or the water containing hidden hazards and sharp objects. Personal protective equipment is mandatory during the contact with the flood water. People working in flooded areas should use safety helmets and glasses, waterproof gloves and boots, as well as hearing protection (ear muffs), depending on the machines and tools used. During the cleaning, workers should wear rubber boots, rubber gloves, safety glasses, or even safety aprons and masks, in case of mud splattering. After contact with contaminated water, workers should wash up and take off their clothes and shoes.</p>
<p>Removal of fallen trees and rubble</p>	<p>In the event of flood, fallen trees and rubble may block roads and damage power lines. As with electrical hazards, the removal of trees and rubble has the following dangers: electric shock on contact with a fallen power line or with trees in contact with a power line; fall from height, blow or crushing under a tree or its part. Also, there is the risk of sustaining injury from the equipment used, such as chainsaws and other cutting machines.</p> <p>Personal protective equipment, such as, gloves, protective pants and shoes, safety glasses, fall protection equipment, ear muffs and helmets, must be worn when using chainsaws and tree-cutting machines.</p> <p>At the accident site, use only the electrical equipment intended for outdoor use and in wet conditions. All chainsaws, tree-cutting machines and other tools should be used appropriately and according to their purpose. The entire equipment should be properly maintained and kept operational. Moreover, the equipment should have shields, control switches and other safety mechanisms installed by its manufacturer, in order to prevent injuries during work.</p>
<p>Injuries</p>	<p>Workers with skin injuries should avoid contact with the flood water and keep their injuries clean and covered with waterproof bandages. Seek immediate medical assistance even at the slightest sign of infection, since antibiotics should then be administered in order to avoid septic shock.</p>

<p>Infections</p>	<p>The following specific measures should be taken on contact with contaminated water:</p> <ul style="list-style-type: none"> - Abandon the flooded area as soon as possible; - Drink only bottled water; - Wash hands adequately with soap after cleaning or other activity related to contact with contaminated water; - Wear proper personal protective equipment - Carefully disinfect all objects upon contact with the water; - Wash the contaminated clothes separately using boiling water and detergent - Workers must seek immediate medical assistance and call their family doctors if, within 10 days upon contact with the contaminated water or objects, they experience symptoms of diarrhoea, nausea, spasms, fever or abdominal pain.
<p>Electric shock hazards</p>	<p>Workers should expect an occurrence of standing water near the flooded zone. If such water is located near electrical equipment or circuitry, power must be immediately shut down through the main switch or the fuse box. In such cases, entry into the flooded area before turning off the electricity is forbidden. Also, electrical equipment must not be touched if the ground is wet. Workers must be aware that they should keep safe distance from fallen or damaged power lines. Moreover, they must report such incidents to the competent institutions. Repairs to the damaged power lines must be conducted by properly trained workers from an authorised company. Trained workers must first perform identification and assessment of the hazards and risks, in order to minimise any chances of aggravating the situation. The ideal solution lies in emptying the power lines, but that is not always an option. When performing their tasks, trained workers must wear proper personal protective equipment and follow safe work practices.</p>

<p>Hypothermia</p>	<p>Standing or working in water that measures below 24°C may reduce the body temperature faster than it can be compensated for, hence resulting in hypothermia (cooling). Hypothermia symptoms include: shivering, slurred speech, memory loss, staggering, drowsiness and exhaustion. Workers should wear proper clothing for cold, wet and windy weather conditions. This entails putting on dry clothes, underwear that prevents from getting the skin wet upon contact with water (polypropylene), layered clothing in order to adjust to changes in outdoor temperature, and also wearing a hat and gloves. Short and regular breaks are recommended in order to allow the body to heat up. Recommendations also include working during the warmest part of the day, as well as avoiding exhaustion or fatigue, since energy is needed to preserve muscle heat. In addition, teaming up (working in teams) is advised, and also drinking warm and sweet beverages (sugared water or sports energy drinks). Avoid drinking beverages that contain caffeine (coffee, tea, and hot chocolate) or alcohol, whereas for food, warm and high-calorie meals, such as warm pasta, are recommended.</p>
<p>Rodents, insects and other animals</p>	<p>For protection from insect bites and stings, proper clothing should be worn and insect repellents used, whereas skin surface bites and stings should be treated with products that relieve pain and prevent the occurrence of an allergy or infection.</p> <p>Animals, both dead and alive, can transmit any contagious diseases (rat-bite fever, rabies, etc.). Preventing such diseases means avoiding contact with wild or stray animals, with rats or rat-contaminated buildings, and, if possible, wearing protective gloves and washing hands regularly. Dead animals should be properly removed (using gloves and putting them in separate plastic bags), and the person bitten/scratched should be provided medical assistance as soon as possible. Health institutions should supply enough medicines and medical materials for these potential health issues during and following floods.</p>

<p>Contagious diseases</p>	<p>In the event of flood, it is recommended that workers on the field, especially those exposed to standing waters, are given a hepatitis A vaccine. Depending on the epidemiological status of hepatitis A in the community and the feasibility of vaccination (personnel, time, financial resources, etc.), the alternative is to conduct health educational activities, intended both for the general population and workers involved, and improve on-site sanitation. Hepatitis B vaccination is also recommended for workers assisting in flood management, while tetanus vaccination is recommended for all workers sustaining an injury in the field. Post-exposure prophylaxis is recommended for rabies.</p>
<p>Chemical and biological agents</p>	<p>Liquefied petroleum gas (LPG) and underground tanks, along with other containers, may become damaged, spilling their content upstream and causing a grave danger. Flood water may also contain biological harm due to the direct contamination with untreated waste water, dead animals, decomposing food, etc.</p> <p>Avoiding contact, good hygiene habits, health surveillance and disposal of food in contact with the flood water are important control measures.</p>
<p>Carbon monoxide</p>	<p>All gasoline or diesel generators, pumps and pressure washers release carbon monoxide, a lethal odourless gas. These devices must be used outside, and never indoors.</p>
<p>Moulds</p>	<p>Moulds are recognisable for their appearance and smell. They may seem as woolly covers and may release damp and musty smell. Mould exposure may cause sneezing, runny or stuffy nose, eye irritation, coughing, and exacerbations of pre-existing asthma or dermatitis (eczema). Individuals with allergies, asthma, sinusitis or other respiratory disease, as well as individuals with weakened immune system, have the biggest risk of health outcomes from mould exposure.</p> <p>In such cases, dampness issues should be readily addressed. Working premises should be well ventilated. Use of personal protective equipment for the hands, eyes and the respiratory system are recommended (N-95 respirator). Mould-contaminated materials need to be removed in plastic bags, wet objects and surfaces cleaned with water and detergent, and clean surfaces disinfected using ¼ to 1½ glass of bleach in 4 litres of water. Mixing the bleach with other cleaning products containing ammonia is strictly forbidden.</p>

Prepared by: Expert team of the WHO Collaborating Centre in Occupational Health, Institute of Occupational Health of Republic of Macedonia, Skopje.

ANNEX 8: MINIMAL INITIAL SERVICE PACKAGE FOR SEXUAL AND REPRODUCTIVE HEALTH IN CRISIS SITUATIONS

Reproductive health component	Priority reproductive health services	Comprehensive reproductive health services
GENDER-BASED VIOLENCE	<ul style="list-style-type: none"> -Coordinate activities among the health care, social protection and other relevant sectors in order to prevent sexual violence -Ensure medical care to victims of sexual violence and rape -Ensure trained personnel for mandatory reporting and provision of evidence on sexual violence 	<ul style="list-style-type: none"> -Extend services from medical, psychosocial and legal assistance to victims -Prevent (and include services to prevent) other forms of gender-based violence, including domestic, emotional, physical and economic violence -Provide education to the population -Involve men and boys in activities regarding gender-based violence
MATERNAL AND NEONATAL CARE	<ul style="list-style-type: none"> -Ensure availability of services for emergency obstetric and neonatal care -Establish a 24/7 system for the referral of obstetric emergencies -Provide clean delivery kits to women in late pregnancy 	<ul style="list-style-type: none"> -Provide services for antenatal protection -Provide services for postnatal protection -Train personnel (nurses, obstetricians, doctors) for the delivery of emergency obstetric and neonatal care -Increase access to basic and comprehensive emergency obstetric and neonatal care
SEXUALLY TRANSMITTED INFECTIONS (STIs) INCLUDING HIV PREVENTION AND TREATMENT	<ul style="list-style-type: none"> -Ensure measures for blood transfusion safety -Enforce the regard for standard precautions when working with blood and blood products -Provide free condoms -Provide syndromic approach to STI treatment 	<ul style="list-style-type: none"> -Provide comprehensive services for STI prevention and treatment, including a partner tracking system and STI surveillance -Cooperate with various organisations in establishing a comprehensive package for HIV-related services -Provide treatment, care and support to persons with HIV -Work on awareness raising on STI prevention, treatment and support, also including HIV -Provide education to the population
FAMILY PLANNING	<ul style="list-style-type: none"> -Provide contraceptive methods, including condoms, oral contraception, contraceptive coils and emergency contraception 	<ul style="list-style-type: none"> -Planning and procurement of contraceptive methods -Provide training to the health care personnel -Establish a plan for comprehensive family planning -Provide education to the population

M ISP diagram is available at <http://zdravstvo.gov.mk/akcioni-planovi/> and <http://ph.mkm/ultim-edija/broshuri-i-laceri/>

ANNEX 9: DESCRIPTION OF THE TASKS OF THE NATIONAL COORDINATOR FOR SEXUAL AND REPRODUCTIVE HEALTH IN EMERGENCIES, CRISES AND DISASTERS

Introduction

Pursuant to Article 55 of the Law on the Organisation and Operation of the State Administration Bodies (Official Gazette of the Republic of Macedonia, no. 58/00, 44/02, 82/08, 167/10 and 51/11), the Minister of Health adopts a decision to elect a National Coordinator for Sexual and Reproductive Health in Emergencies, Crises and Disasters, in order to coordinate, implement and monitor activities regarding preparedness and response of the health care system in regard to sexual and reproductive health.

Tasks

Coordination, communication and cooperation

- Management of the Working Group for preparedness and response of the health care system on sexual and reproductive health needs when coping with emergencies, crises and disasters;
- Cooperation with the Intersectoral Committee for Preparedness and Response of the Health Care System when Coping with Emergencies, Crises and Disasters, and other national and local health institutions and organisations depending on the need;
- Communication and coordination with other bodies of the system for the management of emergencies, crises and disasters, that is, the General Headquarters at the Crisis Management Centre, the Steering Committee at the Government of the Republic of Macedonia, and other relevant bodies;
- Communication and coordination with international organisations and donors working in the field of sexual and reproductive health when coping with emergencies, crises and disasters;
- Organisation of regular meetings of the Working Group for preparedness and response of the health care system in regard to SRH needs when coping with emergencies, crises and disasters;
- Preparation of plans, strategies, reports and finding solutions to issues relevant to the sexual and reproductive health;
- Provision of medicines, medical materials, equipment and other materials (such as hygiene packages) necessary for the implementation of sexual and reproductive health activities and services in areas affected by the emergency, crisis or disaster;
- Nomination of a local SRH coordinator in emergencies, crises and disasters in the affected areas and establishing close cooperation in planning, implementation and monitoring field activities;
- Sharing reports and other materials to the national and local authorities pertinent to the sexual and reproductive health in emergencies, crises and disasters.

Data collection

- Cooperation with the local coordinator or other relevant institutions in collecting or assessing basic demographic data in the affected area relevant to sexual and reproductive health, as follows:
 - Total population
 - Number of women of reproductive age (15 to 49 years old)
 - Sexually active men (estimated at 20% of the population)

- Girls aged 18
 - Number of pregnant women (estimated at 4% of the population)
 - Mortality in mothers and newborns
- Monitoring the implementation of activities and services in the crisis-affected area in line with the MISP Record List for SRH in emergencies, crises and disasters filled out by the local coordinator;
- Analysis of data from the MISP Record List for SRH in emergencies, crises and disasters and proposing effective measures and activities.

Knowledge of laws, policies and regulations

- Having knowledge and implementation of national laws, policies and regulations for emergency, crisis and disaster management
- Having knowledge of instructions and protocols adopted by the Ministry of Health regarding emergencies, crises and disasters, including SOPs for sexual and gender-based violence in such calamities;
- Proposing amendments to the laws, policies and regulations hindering access to services and rights to sexual and reproductive health in emergencies, crises and disasters;
- Having knowledge of the private data protection legislation and principles, and signing Confidentiality Statement guaranteeing the right of personal data protection;

Profession and qualifications

- Bachelor's and master's degree in health care, public health care, social sciences or other related fields;
- Minimum 5 years of experience in health protection during emergencies;
- Minimum 5 years of experience working on SRH;
- Gender-sensitive person and skills to work with vulnerable groups;
- Skills in organisation, report preparation and data analysis, as well as experience in working with national and local institutions and organisations;
- Experience in cooperating with international organisations;
- Obtained knowledge and training in the area of SRH, including crisis;
- Good command of the English language.

ANNEX 10: DESCRIPTION OF THE WORKING GROUP FOR SEXUAL AND REPRODUCTIVE HEALTH IN EMERGENCIES, CRISES AND DISASTERS

Introduction

Pursuant to Article 55 of the Law on the Organisation and Operation of the State Administration Bodies (Official Gazette of the Republic of Macedonia, no. 58/00, 44/02, 82/08, 167/10 and 51/11), the Minister of Health adopts a decision to establish a Working Group for Sexual and Reproductive Health in Emergencies, Crises and Disasters.

Working group tasks

The SRH Working Group, responsible for preparedness and response of the health care system in emergencies, crises and disasters, is a multisectoral group including members from the Ministry of Health, the Public Health Institute of the Republic of Macedonia and other relevant health care institutions and organisations, the Ministry of Interior, the Ministry of Labour and Social Policy, the Crisis Management Centre, the Protection and Rescue Directorate, Macedonian Red Cross, UN agencies and civil associations. The SRH Working Group has the following tasks:

- Preparation of the health care system to respond to sexual and reproductive health needs when coping with emergencies, crises and disasters;
- When an area is struck by an emergency, crisis or disaster, proposing and implementing activities within a separate or existing plan, whereby sexual and reproductive health services will be made available to the affected population;
- Coordination, monitoring the situation and giving recommendations for the promotion of sexual and reproductive health, both in the preparation stage and during the crisis.

PREPARATION STAGE

Coordination

During the preparation stage for the health care system when coping with emergencies, crises and disasters, the working group is coordinated by the Ministry of Health, that is, the National SRH Coordinator. In line with the needs, the Ministry of Health may establish a separate body – Secretariat for Preparation and Implementation of Activities for Health Care System Planning in Emergencies, Crises and Disasters.

Cooperation with other bodies

The SRH Working Group, in line with its duties, establishes cooperation with the Intersectoral Committee for Preparedness and Response of the Health Care System when Coping with Emergencies, Crises and Disasters. Depending on the needs, the SRH Working Group may establish cooperation with the General Headquarters at the Crisis Management Centre, the Steering Committee at the Government of the Republic of Macedonia, and other relevant bodies.

Meetings

Members of the working group meet at least twice a year upon invitation by the National Coordinator responsible for emergencies, crises and disasters. The National Coordinator heads the preparation of the annual plan of activities and reporting on its implementation.

Financing and resources

The work and activities of the group for preparedness and response of the health care system in regard to sexual and reproductive health needs when coping with emergencies, crises and disasters is financed by the budget of the Ministry of Health within the Crisis and Donations Department and by other means through external domestic and international donations.

Working group tasks

- Developing an annual action plan for preparedness of the health care system in regard to sexual and reproductive health when coping with emergencies, crises and disasters;
- Monitoring the implementation of the annual action plan, performing corrections and giving recommendations to improve implementation mechanisms;
- Communicating with all relevant ministries, institutions and organisations, both national and international, depending on activities and needs;
- Providing advice on the amendments to state laws, policies and regulations in order to improve health care system preparedness in addressing sexual and reproductive health during emergencies, crises and disasters.

RESPONSE STAGE

Coordination

When an area is struck by an emergency, crisis or disaster, the National Coordinator for reproductive health assumes the role of a Responsible Person for Sexual and Reproductive Health in Emergencies, Crises and Disasters. The SRH Responsible Person also nominates a local coordinator from the affected area with whom they cooperate in planning, implementation, monitoring and reporting on the situation to the working group.

Cooperation with other bodies

The Working Group cooperates with institutions and organisations on a local level (in the area affected by a hazard, risk, disaster or crisis) in planning and implementing field activities, that is, with local public health centres, municipal Red Cross offices, regional offices of the Crisis Management Centre and other local organisations involved in crisis management in the affected area.

Meetings

When an area is struck by an emergency, crisis or disaster, the Working Group, upon invitation by the SRH Responsible Person, meets within 24-48 hours from the declaration of the danger or crisis. Meeting dynamics and Working Group communication are organised according to the level of crisis. Meetings are also attended by the National Coordinator. Minutes are produced from every meeting, which are then forwarded to the General Headquarters at the Crisis Management Centre, and the Steering Committee at the Government of the Republic of Macedonia.

Financing and resources

The implementation of activities for sexual and reproductive health in the areas affected by emergencies, crises and disasters is financed by the budget of the Ministry of Health and by other means through external domestic and international donations.

Working group tasks

- Preparation of an emergency plan of activities for sexual and reproductive health to be implemented in the area affected by an emergency, crisis or disaster;
- Ensuring timely realisation of priority services for sexual and reproductive health in the area affected by an emergency, crisis or disaster, especially to girls and women;
- Monitoring the implementation of activities intended for the population of the area affected by an emergency, crisis or disaster in cooperation with the local coordinator;
- Giving recommendations to country's key stakeholders and local authorities on improving the access to sexual and reproductive health services;
- Cooperation with national and international organisations in ensuring donations for easier and more comprehensive implementation of priority activities.

ANNEX 11: ACTION PLAN FOR SEXUAL AND REPRODUCTIVE HEALTH IN EMERGENCIES, CRISES AND DISASTERS

The Action Plan is prepared according to the Minimal Initial Service Package (MISP)¹¹ for SRH in Crisis Situations. The Plan contains the following: goals, activities, responsible parties, partners and time framework.

Given below is the matrix upon which the annual plan is prepared.

Action Plan for Sexual and Reproductive Health in Emergencies, Crises and Disasters

The Action Plan is prepared according to the Minimal Initial Service Package (MISP)¹² for SRH in Crisis Situations

GOAL 1: Coordination and SRH management in crisis situations			
Activity	Responsible party	Partners	Time framework
GOAL 2: Prevention of sexual and gender-based violence and victim care			
Activity	Responsible party	Partners	Time framework
GOAL 3: Reduction of HIV and STI transmission			
Activity	Responsible party	Partners	Time framework
GOAL 4: Reduction of mother and infant mortality in crisis situations and provision of health care and support			
Activity	Responsible party	Partners	Time framework
GOAL 5: Provision of comprehensive SRH services integrated into the primary health care system			
Activity	Responsible party	Partners	Time framework

Note:

The Action Plan for Sexual and Reproductive Health in Emergencies, Crises and Disasters is integral to the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters.

The Plan is available as a separate document at: <http://zdravstvo.gov.mk/akcioni-planovi/> and <http://iph.mk/multimedija/broshuri-i-flaeri/>.

11. MISP (Minimal Initial Service Package for Sexual and Reproductive Health in Crisis Situations)

12. MISP (Minimal Initial Service Package for Sexual and Reproductive Health in Crisis Situations)

ANNEX 12: SEXUAL AND REPRODUCTIVE HEALTH PROTOCOL FOR MOBILE CLINIC SERVICES IN EMERGENCIES, CRISES AND DISASTERS

The Sexual and Reproductive Health Protocol for Mobile Clinic Services in Emergencies, Crises and Disasters contains the following chapters: target groups; technical expertise; gynaecological services; distribution of condoms and educational material; mobile clinic field shift preparation for SRH; preparation of technical field shift material; issuing of medical notes, treatment and referral; principles of voluntariness, confidentiality, privacy and age limit; record keeping; working hours; hygiene maintenance in the SRH mobile clinic; clientsatisfaction.

Note:

The current-year Sexual and Reproductive Health Protocol for Mobile Clinic Services in Emergencies, Crises and Disasters at transit centres is integral to the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters.

The Protocol is available as a separate document at: <http://zdravstvo.gov.mk/akcioni-planovi/> and <http://iph.mk/multimedija/broshuri-i-flaeri/>.

ANNEX 13: MULTISECTORAL STANDARD OPERATING PROCEDURES (SOPs) FOR GENDER-BASED VIOLENCE (GBV) PREVENTION AND RESPONSE IN EMERGENCIES, CRISES AND DISASTERS

The multisectoral Standard Operating Procedures (SOPs) for gender-based violence (GBV) prevention and response in emergencies, crises and disasters contains the following chapters: introduction; scope of work; accompanying guidelines and key resources; parties concerned; terms and definitions; guiding principles; GBV minimal initial service package of SOPs; vulnerability criteria and risk factors; field work; integrated first aid services; key activities on cases; sector response; prevention; documentation, data, monitoring; coordination.

Note:

The current-year multisectoral SOPs for GBV prevention and response in emergencies, crises and disasters is integral to the Preparedness and Response Plan of the Health Care System when Coping with Emergencies, Crises and Disasters.

They are available as a separate document at: <http://zdravstvo.gov.mk/akcioni-planovi/> u <http://iph.mk/multimedija/broshuri-i-flaeri/>.

ПРИЛОГ 14: REPRODUCTIVE HEALTH KITS

Block 1: Six primary care field kits for 10,000 persons/3 months		
Kit number	Kit title	Colour
0	Administration	Orange
1	Condom (Section A is a male condom, and section B, female condom)	Red
2	Clean delivery kit (individual)	Dark grey
3	Treatment after rape	Pink
4	Oral and injectable contraceptives	White
5	Sexually transmitted infections	Turquoise

Block 1 contains six kits. Kit materials are intended for use by health care professionals providing SRH services in the field or within primary health care institutions. Such kits are primarily medicines and expendable materials. Kits 1, 2 and 3 are divided into two sections, A and B, which can be obtained separately.

Block 2: Five primary care field kits for 30,000 persons/3 months		
Kit number	Kit title	Colour
6	Clinical delivery assistance kit	Brown
7	Contraceptive coil	Black
8	Abortion complication management	Yellow
9	Repair of tears (vaginal and cervical) and vaginal examination	Violet
10	Manual vacuum extraction	Grey

Block 2 contains five kits with expendable and reusable materials. These products are intended for use by trained health care professionals skilled in obstetric and neonatal care within primary health care institutions and hospitals.

Block 3: Two hospital kits for 150,000 persons/3 months		
Kit number	Kit title	Colour
11	Hospital care for reproductive health (Sections A + B)	Fluorescent green
12	Blood transfusion	Dark green

Block 3 contains two kits with expendable and reusable materials intended for providing comprehensive emergency obstetric and neonatal care in hospitals. It is estimated that hospital covers a population of about 150,000. Kit 11 has two sections, A and B, commonly used together, but they can also be obtained separately.

ANNEX 15: RECORD LIST OF THE MINIMAL INITIAL SERVICE PACKAGE FOR REPRODUCTIVE HEALTH IN EMERGENCIES, CRISES AND DISASTERS

Populated area / municipality: _____	Reporting date: _____	Date of crisis health response: _____	Reporting person / PHC: _____
1. Demographic data			
Total population ¹³ : _____			
Number of women of reproductive age (15 to 49 years old) ¹⁴ : _____			
Number of sexually active men ¹⁵ : _____			
Number of pregnant women in the reporting period ¹⁶ : _____			
Distance from the nearest clinic in km _____			
Distance from the nearest gynaecological clinic in km _____			
Distance from the nearest hospital in km _____			
Distance from the nearest pharmacy in km _____			
2. Protection from sexual violence and provision of victim care			
Yes No			
Establishment of a multisectoral coordination mechanism for protection from sexual violence			
Accessibility to reliable health care services for sexual violence victims in regard to the following:			
• Emergency contraception			
• Post-exposure prophylaxis			
• SPI protection and treatment antibiotics			
• Tetanus toxoid/Tetanus immunoglobulin			
• Hepatitis B vaccination			
• Referral to medical and psychosocial support services			
Number of sexual violence victims reported in health care institutions/MoU _____			
Shared information to the local population on providing care for sexual violence and provision of service			
3. Reduction of HIV transmission			
• Established blood transfusion safety protocols			
• % of safe blood ¹⁷ _____			

13. Estimated at 25% of population (Source: State Statistical Office).

14. State Statistical Office.

15. Estimated at 20% of population.

16. Estimated at 4% of population (Source: Maternal Health Card)

17. Units of checked blood/All units of donated blood X 100.

<ul style="list-style-type: none"> • Use of personal protective equipment 		
<ul style="list-style-type: none"> • Free condoms available at <ul style="list-style-type: none"> - Health care institutions - In the field in the community 		
Approximate number of condoms obtained for this period _____		
Number of condoms distributed in this period (specify locations) <ol style="list-style-type: none"> 1. _____ 2. _____ 3. _____ 		
4. Prevention of maternal and neonatal mortality		
<p><i>In order to provide basic emergency gynaecological and obstetric care, the primary health care has the following:</i></p> <ul style="list-style-type: none"> - One family gynaecologist on duty - Equipment, medicines, medical materials, and emergency gynaecological and obstetric care materials <p><i>In order to provide basic emergency gynaecological and obstetric care, the hospital has the following:</i></p> <ul style="list-style-type: none"> - One doctor on duty in the obstetric department - Team of a doctor, nurse, obstetrician and anaesthetist on duty - Proper equipment, medicines and medical materials for comprehensive emergency gynaecological and obstetric care, 24/7 		
The referral system for emergency obstetric and neonatal care operates 24 hours a day, 7 days a week and includes: <ul style="list-style-type: none"> - Communication system (radio, mobile phones); - Transport from the field to the health care institution, 24/7 - Transport from the health care institution to the field, 24/7 		
There is a functional blood cold chain (oxytocin, blood tests) in hospitals		
% of caesarean deliveries ¹⁸ _____		
% of distributed delivery kits ¹⁹ _____		
5. Plan for extending reproductive health services following crisis acute stage		
Identified locations for further provision of comprehensive reproductive health services – service extension (for example, family planning, SPI management, adolescent reproductive health): <ol style="list-style-type: none"> 1. _____ 2. _____ 3. _____ 		

18. Number of caesarean deliveries/number of births X 100.

19. Number of clean delivery kits distributed/estimated number of pregnant women X 100.

Health personnel needs assessed (family planning, SPI management, etc.) and training materials identified		
Timely monitoring of reproductive health product consumption (medicines and expendable medical materials)		
Sources for procurement of reproductive health materials identified 1. _____ 2. _____ 3. _____		
6. Other specific issues		
Basic contraceptives are available to meet demand		
SPI treatment is available at health care institutions		
Hygiene kits are distributed		
Antiretroviral therapy for persons with HIV is available, including therapy for preventing mother-to-child transmission of HIV		
7. Activities (where answered "NO" or given partly positive answers, explain the obstacles and suggest activities to overcome them)		
Obstacle description	Activity description	
1.		
2.		
3.		
4.		

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