



Cabinet of
Ministers of Ukraine



SECTORAL ACTION PLAN FOR HEALTH SECTOR IN THE CONTEXT OF THE COVID-19 PANDEMIC

UNDP PROJECT "CRISIS COORDINATION MANAGEMENT IN UKRAINE"



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HEALTH SECTOR: SECTORIAL ACTION PLAN

Public health preparedness is one of key issues in responding to COVID-19 challenges. The effectiveness of inter-sectorial efforts largely depends on its capabilities and ability to quickly adapt. The objective of the health sector action plan is to overcome most critical challenges and create conditions for further rapid response to changes in the epidemic situation.

Key components are:

1. Construction of a system of analysis and situation modeling.
2. Capacity building and stockpiling in the health care system.
3. Integration of levels of healthcare.
4. Ensuring stable implementation of the set of actions and availability of response plans.

Construction of a system of analysis and situation modeling

The main framework for building a response system and implementing its main components is the availability of resources and creating a system for collecting and processing information for decision making.

The information should be divided into the following sections:

- World trends – daily analysis of updates in the world situation. The analysis should be provided at two levels – globally and in countries similar to Ukraine’s model of the disease spread (Romania, Poland)
- Analysis of current situation with COVID-19 in Ukraine – daily updates of the incidence in different groups and the percentage of detected cases from the individuals who got tested, those who seek healthcare, detection, testing, cases of pneumonia, etc.
- trend analysis – analysis of trends by region, bed occupancy, availability of resources in health care facilities.

- long-term planning – integration of all information, construction of a spread model spanning for at least 14-day planning horizon.

To implement such an approach to the collection and analysis of information, the best solution would be to set up an analytical centres based on the Centre for Public Health that would receive primary data from hospitals, the Electronic Health System (hereinafter – EHS), the decisions of Regional Commissions for Technogenic and Environmental Safety and Emergencies, procurement data, data from volunteers, etc.

The reports of this analytical centre should inform management decisions.

The second step should be stockpiling and capacity building of the health care system, including testing capacity.

In accordance with the WHO recommendations, testing itself is a mechanism for timely detection of those infected with COVID-19 and a component that enables realistic assessment and response to the situation in the country. Investments in regional public health centres and health facilities, procurement of equipment, test systems and supplies, and the further expansion of testing teams should provide effective testing and timely response capabilities.

The availability of testing for the population at all stages of health care should ensure timely response to outbreaks in the regions, districts, cities and localized areas. Current problems with the availability and taking outpatient testing and delayed results lead to significant implications, as the outbreaks are detected with delay, and the national response is delayed, too.

It should be noted that availability of sufficient test systems and coverage of testing will significantly increase the number of persons diagnosed with the disease. It can be perceived as a critical threat in absolute terms, but at the same time, attention should be paid to relative indicators such as how many infected individuals are detected among all the tested individuals, as this indicator tells more about the situation in the community.

Also, the increase in the number of detected cases and getting the most realistic incidence rates in the country requires an immediate political and epidemiological response. The basic and the most effective response should be to focus on the narrow localization of outbreaks, as it ensures effective work with the patient's contact persons – tracing, detection and isolation (ECDC, *Contact tracing for COVID-19*, April 2020). Also, the most realistic incidence rates in the country will cause additional, increased burden for the health care system.

Working with contact persons is an important chain of response to COVID-19 challenges. Of all the existing approaches – both non-digital and digital, both mandatory and optional – each country should choose an approach that best suits current situation and

is the most cost-effective for covering the needs. Currently, Ukraine where the system of effective epidemiological surveillance and control is in the process of formation or reform, should opt out for the simplest solutions that have minimum requirements with regard to savviness of general public (such as downloading, installing and using default mobile application to track contacts via Bluetooth).

Given current situation and the condition of Ukraine's health care system, the best option for building an effective contact tracing system in Ukraine is to set up a centralized, standardized contact centre (clearinghouse) to collect basic information for an epidemic investigation, including for other infectious diseases. Centralizing the contact centre would enable easier capacity expansion, easier training and faster reconfiguration in case of changes of contact tracing approaches. Also, as soon as a contact centre is centralized, it needs less administrative support and follow-up than a branched one. Involving persons who are not professional epidemiologists – persons who perform surveillance and interviews according to standardized procedures/scripts – to the epidemic investigation contact tracing should be a new experience for Ukraine. The result of their work should be automatically generalized information on contact persons to simplify the work of highly qualified specialists – epidemiologists and infectious disease specialists.

To implement the approach to working with contact persons, an uninterrupted chain of information transfer should be established from a patient to an authorized person (laboratory centre, doctor, paramedic) and to the contact centre that should receive basic contact data of a patient, conduct a remote standardized survey and further process and collect information on contact persons, coordinate with the epidemiologist the actions related to self-isolation or treatment, summarize information for epidemiologists that will inform subsequent decisions. For this, legal regulation allowing the remote epidemiological investigations and the use of digital contact tracing tools is necessary – these measures if combined can be an effective tool to control the spread of COVID19.

Given that each infected person potentially infects others, and infection can be contracted before an infected person develops symptoms, and that an infected person usually remains socially active before the diagnosis – that is, potentially infects others – it should be borne in mind that tracing contact persons and contact points can determine the outbreak spots and take effective measures to curb the spread of COVID-19.

Important aspects in building an effective mechanism for working with contacts and contact persons are:

- Coordinated procedures of interaction and established algorithms for all involved persons,
- Maximally anonymized databases, system interoperability,
- Control over compliance with anti-epidemic measures,
- Effective testing strategy and automatic obtaining information about tests from all the laboratories,
- Sufficient staff to process the received data,
- Control and regular updating of the status of self-isolated persons: contact – got infected – recovered – completed self-isolation,
- Control over compliance with the conditions of self-isolation, and
- Wide coverage of the population, effective communication.

Steps to be taken in developing a set of contact tracing measures:

1. Setting up a target contact centre:

- Set up or use an existing one
- Scripts for standardized surveys
- CRM-system for managing cases of self-isolated persons (may be based on the web platform *Diy.Vdoma* (“Act at Home”))
- Training for staff on conducting surveys, data collection and input, work on and formation of consolidated data on the number of self-isolated persons, their current condition.

2. *Diy.Vdoma* (mobile application):

- Contact persons are inputted by the patients; contact persons who according to the results of the survey need self-isolation are automatically notified of this need
- Questionnaire to assess condition for persons in self-isolation
- Obtaining test results in the application and automatic removal from self-isolation (green card)
- Persons in isolation who have no people to take care of them can call for social assistance.

3. *Diy.Vdoma* (web platform):

- Creation of accounts for primary and secondary outpatient physicians, ambulance paramedics, social workers, employees of laboratories and local self-government bodies officials (if necessary)
- Differentiation of access rights for different users/roles of the web platform
- Self-registration page for primary and secondary care physicians, paramedics, social workers and employees of laboratories (if necessary).

4. Mobile applications for tracing contact persons:

- Launch and distribution of QR-codes in public spaces (shops, restaurants, cinema theatres, etc.) and applications for their processing
- Launch and distribution of a mobile tracing application via Bluetooth
- Form for evaluation of public facilities on how they comply with the lockdown requirements and rating of these facilities (possibility to file a complaint, upload photos or other evidence of violation of the lockdown requirements)
- Integration with *Diy.Vdoma* (mobile application).

5. Integrations for automatic information exchange:

- *Diy.Vdoma* (mobile application and web platform)
- CRM system of a contact centre (can be based on *Diy.Vdoma* web platform)
- Electronic integrated disease surveillance system (lab centres and Centre for Public Health)
- eHealth (healthcare facilities)
- Mobile contact tracing applications (citizens).

6. Analytical panels/dashboards:

- Identification of key indicators of situation with COVID-19 in Ukraine (morbidity, stocks, decisions of decisions of Regional Commissions for Technogenic and Environmental Safety and Emergencies and lockdown restrictions) and their analysis
- Establishment of an analytical department at the Secretariat of the Cabinet of Ministers of Ukraine or the Ministry of Health that would daily assess updates on key indicators, deviations and problems
- Tracking of disease sites, retrospective analysis
- Proposals for necessary measures.

Tracing contact persons and capacity building of the network of laboratory centres for COVID-19 testing will increase the load on the healthcare system. Therefore, the following simultaneous measures should be taken to form stocks of personal protective equipment (PPE), disinfectants, consumables, medicines and equipment.

To assess the needs, a centralized system of needs collection was created (based on the Meddata software of the state-owned enterprise Medical Procurement), and the Ministry of Health approved the standards for providing staff with personal protective equipment. This system is the one that informs procurement.

At the first stages, a list of hub hospitals for admission of patients with COVID-19 was determined. They were selected based on the National Health Service of Ukraine (NHSU) data on availability of equipment and personnel. However, further developments proved that this data was partially inaccurate (based on the data entered in Meddata software), and certain significant factors were sometimes missed in determining the list of hospitals.

Before making plans to provide PPE, disinfectants, consumables, medicines and equipment, the existing network of health facilities designated for the patients with COVID-19 should be reviewed reflective of current situation, identified problems and the epidemic forecast.

Key factors should include: availability of assistance, equipment and staff, accessibility for citizens and territorial coverage, availability of an appropriate number of beds of different profiles per 100 thousand population. The need to provide the population with other types of healthcare (elective care, especially for patients with chronic conditions) should also be considered, even during an epidemic caused by a specific disease.

After the adoption of the list that will take into account the existing criteria, considering the statistics on the needs of basic equipment such as ventilators, resuscitation, therapeutic beds, unified routes that will include not only the hospital admission route of a patient but also the route for outpatients, patients with suspected infection, and for patients with other diseases not suspected of COVID-19 should be developed and approved, taking into consideration local context. It is also necessary to create financial and organizational incentives at the national level to make sure that these routes are followed. In addition, a comprehensive algorithm – a step-by-step action plan for identifying a COVID-19 patient in a non-specialized hospital (what happens to a patient, what happens to a patient and staff who have been in close contact with an identified case, what happens to a hospital room or a hospital department) – should be approved along with specific rules and recommendations for their implementation for hospitals on the effective

construction and control of the epidemic situation in the facility during the epidemic, including effective tools to monitor how the health workers adhere to the requirements to put the PPE on.

At the laboratory centres level, opportunities for outbreak investigations should be assessed and appropriate decisions made.

After the analysis, hospitals should be distributed between the 1st, 2nd and 3rd response waves. For each wave, the transition criteria and rules for the preparation and reprofiling the facilities should be clearly defined. The bed stock should be formed taking into account available statistics of the severity of disease and patient age groups.

One of the most significant challenges of the first days of the fight against the COVID-19 epidemic in Ukraine was providing hospitals with medical equipment and consumables. Currently, there are three sources of supply of such resources: centralized procurement (performed by the Ministry of Health based on the needs calculation), direct procurement of hospitals (performed by the director based on the needs assessment), and volunteer assistance. Lack of clear coordination of the three sources and the labeling of supplies provided to the hospitals cause inconsistency in supplies – for example, a hospital with no patients can have many ventilators, and vice versa, a hospital with multiple patients lack them.

In the current context, the supply provision should be organized in a way that an entity that coordinates all supplies and allocates resources as needed is determined at least at the local level. It is also necessary to take into account the needs for the distribution of PPE so that they come in sufficient numbers to those who need them the most and are the most vulnerable categories. This includes the provision of appropriate PPE and hygiene products for health workers, taking into account the design parameters and size of outfit.

After building a network map, the stock of PPE, staff, equipment, taking into account the actual and regular demand should be calculated and planned in time according to the number of staff, beds, potential modeling of patients.

At the same time, actual and regular demand should be compared at once, and a more in-depth study of facilities where there are significant differences should be planned.

It is necessary to rebuild the logistics chain that will include availability of local stocks in hospitals, availability of regional warehouses (possibly at the expense of state reserve warehouses), and the formation of continuous supply.

In order to **integrate the levels of healthcare**, special attention should be paid to meeting the needs of particularly vulnerable groups, including people with HIV/AIDS and other socially significant diseases. It is advisable to establish reserves of medicines and other treatments for such patients and to develop ways of delivering and providing therapy and treatment to minimize the risks of exposing them to additional dangers of coronavirus.

According to the WHO Critical preparedness, readiness and response actions for COVID-19, the population should be divided into certain groups pursuant to the assessment of the infection risk and possible consequences. Accordingly, a medical strategy for isolation, detection, care, hospital admission, testing, and social support should be developed for each group. It will reduce the number of serious cases, unjustified hospital admission and overload on the healthcare system.

The analysis to determine the risk probability and particularities in terms of the groups should be conducted based on sex- and age-disaggregated data, taking into account the specific needs of women and men. In terms of risk groups, particularities of the groups such as the internally displaced persons (IDPs), women at increased risk of violence, the elderly, people living with HIV, tuberculosis, chronic diseases (diabetes, respiratory diseases, cardiovascular diseases), people with disabilities, the homeless, persons in places of non-freedom, single parents, persons who are marginalized or are in particularly difficult financial circumstances should be also subject to in-depth analysis. For this strategy, clear deadlines and review mechanisms should be established, taking into account global data on the spread of infection, and social policy experts should be involved in its development. This focus is currently absent

from the effective regulatory documents of the Cabinet of Ministers of Ukraine or the Ministry of Health.

Development of the adaptive lockdown strategy involves not only a list of restrictions and easements, but also criteria for their application. The application of restrictions should be based on a clear understanding of their impact on the epidemic process. To this end, when analyzing the statistics on virus spreading, the actions that have taken place should be considered along with their impact on the virus spreading.

Such constant work will enable to determine priority of application of restrictions. It will also help quickly adapt the lockdown (change the rules for different sectors of social life) to reduce its negative impact. The rules of conduct should also be developed in two directions: general and special. General rules apply to all areas of activity, while special ones must take into account the specifics of a particular area. It should be borne in mind that the revision and change of rules should be a dynamic process that is informed by findings of the analysis of the epidemiological impact.

Currently, the rules are approved by resolutions of the Chief State Sanitary Doctor of Ukraine. The compendiums of these rules for such thematic areas as the museums and cultural institutions, sports competitions, hotels, catering facilities, student examination, transportation, pre-schools, retail, psychiatric and social assistance facilities have already been developed and approved. However, this list does not cover all the areas of activity that need to be adapted to the lockdown restrictions. In addition, the lack of general framework rules – those that apply to all areas of activity – complicate the enforcement of special rules.

Yet important aspect is the construction of a system of control over compliance with the rules, both through the system of executive authorities and with the involvement of the public.

As soon as all these components are launched, it is critical to ensure stable operation of the set of measures taken and the availability of response plans.

Amendments to the treatment protocol (introduction of new medicines or exclusion of medicines, methods, etc.) should be taken into account in changes in funding, under the programme of medical guarantees. At the same time, care should be taken to create financial incentives, because paying for a patient who stays in a hospital – given the lack of control over the medical component – will inevitably lead to excessive hospital admission.

Considerable attention in the funding process should be paid to the mobility of medical resources. Financial policies to be developed should concern issues such as financing of hospitals, remuneration of staff, procurement, social support.

Funding for hospitals should be sufficient to ensure the provision of healthcare, laboratory testing, compliance with infection control.

The strategy of action and financing of infectious disease hospitals or departments in the periods between the outbreaks, the availability of reserves of medicines and protective equipment, the frequency of their review should be determined. Criteria for the launch of the second and third waves, the number of beds of the first wave for the periods between the outbreaks should also be determined.

The decision-making strategy should include a description of the procedure for registration and detection of cases, contact persons, notification actions, as well as actions of relevant authorities aimed at locating the disease site.

A State Response Reserve should be established to ensure efficient use of resources, ongoing renewal and allocation of resources. Proposals for such a strategy should include the structure of the system, the parameters of its distribution and centralization, the required list of funds, their volume (calculation formulas), the period of renewal and revision, the criteria for their use. Financial support of the health care system should be built on a two-phase modality, including ensuring preparedness for an outbreak, as well as the possibility of using additional financial resources in case of an immediate outbreak of the disease.

The model should take into account the need to keep a significant number of beds, staff, equipment in a permanent standby mode, including maintenance, inspections, retraining and advanced training of medical staff.

This system should also include the financing of preventive measures, epidemiological investigations into emerging outbreaks, a permanent system of case monitoring and reporting, and the collection of statistical information.

Funding for analytical centres that would constantly monitor the situation and propose response measures is also a challenge. Depending on the change in treatment protocols, the effective financial model should be constantly updated to ensure sufficient level of resources.

In the context of the COVID-19 pandemic, an important issue for the health sector is striking the balance between measures to respond to coronavirus challenges and to meet the needs of patients with other diseases. Ukraine currently has one of the worst situations in Europe in terms of HIV/AIDS and tuberculosis incidence. Attention should be paid to preventing its escalation and preventing the risks of cross-negative coronavirus factors and socially significant diseases. Maintaining the effectiveness of prevention and treatment of non-communicable diseases, HIV/AIDS, tuberculosis, psychosomatic disorders, sexual and reproductive health care, psychosocial support (especially for victims of violence), immunization and rehabilitation in the context of COVID-19 crisis is key. Existing systems and referral mechanisms for victims of domestic violence and of sexual or gender-based violence should be adapted to the lockdown restrictions. Individuals with non-communicable diseases, HIV and tuberculosis should be identified as high-risk groups with regard to COVID-19.

In the long run, the resumed implementation of the Sustainable Development Goals 3 –

Ensure healthy lives and promote wellbeing for all at all ages – should serve both as a strategic guideline and a conceptual framework for further action focused on COVID-19. Therefore, adequate funding and continued reform of the national health care system is a prerequisite for both Ukraine's path to sustainable development and immediate overcoming of the COVID-19 crisis.

The protection of health workers who are at the forefront of the pandemic is particularly important, both for social reasons and for sustainable functioning of the health care system in times of heavy workload and challenges. It is necessary to collect and disseminate data on health workers involved in combating COVID-19 disaggregated by sex and other parameters to better assess the needs for their support and protection, development and implementation of psychosocial support systems for all the health care workers engaged into the response to the epidemic, taking measures to prevent the spread of infection among family members of health workers. Also, health workers and other critical infrastructure workers need response plans to the worst-case epidemic scenario that would help them work comfortably in these conditions. It includes availability of transport, access to housing and food, schools for their children, and the opportunity to get necessary administrative services outside general restrictions.

In the face of epidemic and burden on the health care system caused by coronavirus, regulatory authorities need to pay double attention to preventing medicine counterfeiting and the spread of counterfeiting among the population in need of healthcare. In this context, it is necessary to strengthen state control over the production of medicines, support best practices in production and clinical activities, as well as establish information exchange with national institutions for quality control of medicines in other countries.





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