



GUIDELINES FOR ESTABLISHING MULTIDISCIPLINARY TEAMS FOR THE TREATMENT OF COVID-19

LHSS KYRGYZ REPUBLIC

Local Health System Sustainability Project

Task Order I, USAID Integrated Health Systems IDIQ

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Local Health System Sustainability Project

The Local Health System Sustainability Project (LHSS) under the USAID Integrated Health Systems IDIQ helps low- and middle-income countries transition to sustainable, self-financed health systems as a means to support access to universal health coverage. The project works with partner countries and local stakeholders to reduce financial barriers to care and treatment, ensure equitable access to essential health services for all people, and improve the quality of health services. Led by Abt Associates, the five-year, \$209 million project will build local capacity to sustain strong health system performance, supporting countries on their journey to self-reliance and prosperity.

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ACRONYMS

FMC	Family medicine center
FPG	Family physicians group
ICU	Intensive care unit
KSMIRCE	Kyrgyz State Medical Institute for Retraining and Continuing Education
LHSS	Local Health System Sustainability Project
M&E	Monitoring and evaluation
MDT	Multidisciplinary team
MoH	Ministry of Health
PLHIV	People living with HIV
RPA	Research and Production Association
TPO	Treatment and prevention organizations
USAID	U.S. Agency for International Development
WHO	World Health Organization

INTRODUCTION

The COVID-19 pandemic has caused numerous problems in the world's health care systems. Nearly every country experienced disruptions in the provision of health services, with low- and middle-income countries experiencing the greatest challenges (World Health Organization [WHO], 2020). The Kyrgyz Republic's already struggling state-run health care system struggled to cope with the onslaught of infections during summer of 2020. The country's deficit of qualified human resources for health has been visible in terms of high per capita death rates.

At the end of 2019, in Wuhan, China, a new coronavirus was identified as the cause of an epidemic of respiratory infection. This outbreak was followed by an increase in the number of cases worldwide. In February 2020, WHO designated coronavirus disease 2019 as COVID-19, and the virus that causes this infection as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

Clinically, COVID-19 is characterized by a high degree of adverse complications and mortality associated with impaired gas exchange in the pulmonary alveoli, progressive respiratory failure, hypoxia, structural damage to many organs and systems that ensure the vital activity of the patient's body, and the development of multiple organ failure. Timely prevention of severe COVID-19 complications is of primary importance for health care professionals and requires rapid diagnosis and provision of medical care to patients.

Ideally, highly specialized clinicians such as infectious disease specialists, pulmonologists, and respiratory therapists would provide this care. However, the COVID-19 caseload in the Kyrgyz Republic has vastly exceeded the capacity of available specialists; accordingly, clinicians of various profiles are caring for COVID-19 patients. These physicians and nurses require intensive capacity building to provide quality medical care to their COVID-19 patients and to effectively work in specialized units. A well-trained and well-prepared mobile multidisciplinary team (MDT)—including specialists with different profiles who are united by solving one problem on jointly agreed principles—can effectively facilitate this capacity building.

This guidance document provides a framework and tools to support the creation of MDTs and the use of an MDT approach at the regional level of the Kyrgyz Republic's health care system during the COVID-19 pandemic. The document recognizes the need for a structured approach in which regional MDTs include specialists with different profiles and sufficient expertise in their discipline who can provide training and advisory assistance to doctors in district hospitals.

This approach enables high-quality medical expertise to reach remote areas by enabling local specialists to make evidence-based decisions on COVID-19 cases with complications. For the MDT approach to work successfully, oblast (regional) levels of health care and managers in the health care facilities must recognize the participation of health workers in the MDT as part of their job responsibilities.

GUIDELINES

OVERVIEW OF MDTs

MDT benefits are broad and include increased learning and development of medical staff and institutions, better use of resources, minimization of unnecessary costs, improved productivity and quality of work, and better results for patients and their families. There is no single, established structure for an MDT. The level of integration can range from one specialist who is responsible for treatment with the involvement of other personnel or services, to several specialists who have overall responsibility for the quality and effectiveness of patient treatment, potentially involving a much broader range of services and specialists.¹ A review of existing evidence identified seven best-practice factors associated with effective MDT performance:

- 1) Patient-centered treatment
- 2) Integration of physicians
- 3) General goals and tasks
- 4) General information technology and access to patient data
- 5) Culture, cooperation, and general decision-making processes
- 6) Co-location/geographic integration
- 7) Targeting high-risk groups

Well-coordinated cooperation within and between different medical professions is increasingly important to enable a range of health care providers to effectively treat COVID-19 patients. Developing management strategies that foster an interdependent collaborative approach among health care professionals will maximize the benefits of MDTs.

MDTs are a key factor in the design and implementation of the health care delivery processes. The authors of this document believe that this model provides a useful theoretical framework for guiding the implementation of interdisciplinary teams for three reasons: 1) it recognizes the need for a system-wide approach to organization, 2) it identifies the various needs that require potential adjustment and restructuring, and 3) it outlines the direction and interaction paths among MDTs.²

TYPES OF MDTs

There are many types of multidisciplinary approaches to treatment, care, and support of patients. In the Kyrgyz Republic, MDTs were initially used for HIV care.

- *Inpatient MDT* implies that team members (including specialists) work in a specific setting, such as a family medicine center (FMC), family physicians group (FPG), AIDS Prevention and Control Center, or research and production association (RPA). For example, in the Kyrgyz Republic, an Inpatient

¹ NHS England: Multi-disciplinary Team Handbook, 2014 <https://www.england.nhs.uk/wp-content/uploads/2015/01/mdt-dev-guid-flat-fin.pdf>

² Marsilio M., Torbica A., Villa S. Health care multidisciplinary teams: The sociotechnical approach for an integrated system-wide perspective //Health Care Manage Rev, 2017, 42 (4), 303-314.

MDT assumes that people living with HIV (PLHIV) and/or people affected by HIV know where affiliated services are provided and can choose a convenient time to visit the MDT.

- *Mobile MDTs* consist of specialists from one or more organizations who, on a certain day of the week (by agreement with the FMC or FPG infectious disease doctor), travel together to remote areas or to areas with a small number of patients. A mobile MDT can also be part of an Inpatient MDT, if specialists from neighboring districts invite the inpatient MDT to travel and provide MDT services outside the facility. Mobile MDTs can also be used to provide care, treatment, and support services for immobile, bed-ridden, or hospitalized patients.
- *Single-window MDTs* provide comprehensive medical services related to the prevention and treatment of HIV, drug addiction, and tuberculosis. This is an inpatient type of MDT and cannot be used as a mobile MDT. A single-window MDT is created on the basis of treatment and prevention organizations (TPO) in areas with a large number of registered clients.

MDT models can vary depending on the type of organization the MDT works with (e.g., TPO, RPA), the MDT's spheres of activity (e.g., HIV, HIV/tuberculosis, palliative care, drug addiction, psychiatric care), and on the principles of social or clinical orientation. In this regard, the composition of doctors in teams may be different. Despite the different models, the MDT unit must have a leader who can organize the team's work and set priorities. Currently, the functions of the MDT leader are often assigned to the infectious disease physician. The presence of several specialists in the MDT providing the same services is not effective, since there may be no division of responsibilities.³

FORMING TEAMS AND ESTABLISHING MDTs IN THE CONTEXT OF COVID-19

Multidisciplinary work involves the appropriate use of knowledge, skills, and best practices from different disciplines to deliver quality health care to patients with COVID-19. MDTs are made up of specialists from different disciplines who work together to plan the care of patients to prevent severe complications. They provide qualified advice on the management of critical COVID-19 patients to health providers from remote areas where such medical expertise is not readily available. To prepare the teams, a training program and distance learning module with online and offline trainings on practical skills for COVID-19 management based on the "Training of Trainers" model was prepared. The main objective of the teams is to increase the capacity, sustainability, and networking of national and regional MDTs on COVID-19.

MAIN OBJECTIVES

- 1) Development of adapted program and training module on COVID-19 based on a "Training of Trainers" model.
- 2) Education and training of mobile MDTs for the diagnosis and treatment of COVID-19 based on the "Training of Trainers" model.

³ Guidelines for the provision of services for PLHIV through national principles and standards for the operation of multidisciplinary teams in the Kyrgyz Republic, Bishkek, 2014, p. 82.

- 3) Creation of a sustainable network of MDTs based on the “Training of Trainers” model to strengthen the health care system’s capacity to continuously train specialists and to improve the quality of medical care for patients with COVID-19.

TARGET AUDIENCE

Because the MDT training manual will assist in forming teams to provide care to COVID-19 patients, the manual’s target audience includes:

- Physicians of various specialties: Infectious disease specialists, resuscitators, pulmonologists, cardiologists, rheumatologists, nephrologists, surgeons, family doctors, pediatricians, obstetrician-gynecologists, etc.
- Nurses and paramedics.

REQUIREMENTS FOR TRAINING PARTICIPANTS

The MDT training program is designed primarily for people with basic knowledge of COVID-19, teaching experience, and the ability to use a personal computer. It is important to conduct the training with the right mix of MDT members and with the on-site presence of a leader with decision-making authority for coordination.

METHODOLOGY AND TEACHING APPROACHES

METHODOLOGY

The conceptual basis of the MDT training program is the “Training of Trainers” model using a cascade approach:

- *The first level* will be focused on training a national-level multidisciplinary team of 14 physicians (trainers) and 14 nurses (trainers). In addition to organizing and treating patients with COVID-19, these trainers will also participate in the continuing medical education of other physicians and nurses in the regions according to the knowledge and skills required to provide effective medical care for patients with COVID-19. Experts with extensive knowledge of COVID-19 and teaching experience will be invited as trainers and lecturers.
- *The second level* will include training for other physicians and nurses and setting the MDTs at the regional (oblast) level. Oblast MDTs will provide medical care with a focus on critically ill patients with COVID-19, and will provide continuous training for physicians and nurses in the field. In doing so, they will use adapted WHO resources and prepared materials.
- *The third level* will include training by oblast MDTs of other physicians and nurses from district health facilities. If possible, regional health care facility representatives, who are part of regional MDTs, should carry out the training. It is critical to include physicians and nurses from district health care facilities in the regional MDTs to ensure active interaction and participation in consultations. During the pandemic, additional beds were made available in district hospitals to provide specialized care for patients with COVID-19, which indicates a need for training for district-level doctors and support staff.

This approach will lay the foundation for and contribute to the creation of a sustainable network of MDTs in all regions, MDT organization, and their coordinated interaction, which in turn will strengthen the health care system’s capacity to effectively manage COVID-19.

“Training of Trainers” uses a pyramidal training model which is designed so that the trained team can transfer their knowledge and skills to other professionals. This model also helps to maintain training consistency for specialists at all levels of the health care system (Figure 1).

TRAINING PROGRAM STRUCTURE AND CONTENT

The training program consists of two modules (see Annex II). The first module includes topics covering teaching principles, teaching styles and methods, skills, and preparation for the classes. The second module covers all questions on COVID-19 epidemiology, infection control, prevention, diagnosis, and treatment. The content and teaching methods take into account all factors that determine the clinical practice gaps and teaching principles. Training materials are based on up-to-date data on clinically effective practices that are also reflected in the interim Clinical Guidelines approved by the MoH of the Kyrgyz Republic and other orders.



Figure 1: Pyramid training model

The training program lasts approximately 28 hours (four hours daily for seven days). To institutionalize the training and education of multidisciplinary teams, the training course should be included in the training/learning plan of the Kyrgyz State Medical Institute of Retraining and Continuing Education (KSMIRCE), and training participants should be provided with a training certificate, and receive credit hours.

TEACHING METHODS AND RESOURCES

The MDT training employs in-person seminars, distance learning, practical exercises, case studies, role plays and discussions, and self-preparation. The distance learning component includes online lecture cycles with interactive discussions with space for participants to exchange insights from their experiences and opinions through chat or video communication. The following resources are required to conduct the MDT training:

- Standard equipment and premises for video broadcasts and practical training
- Flipcharts and markers
- Video projector and screen for presentations
- Laptop with speakers for presentations
- Workbook for participants

In addition to materials posted on the Internet, each trainee should be provided with a folder containing the printed copies of the main handouts.

EVALUATING THE EFFECTIVENESS OF TRAINING PROGRAMS

The aim of the trainings is to create MDTs comprised of competent physicians and nurses, who will in turn strengthen health systems and improve the quality of care for COVID-19 patients. Since there is no standardized way to evaluate the effectiveness of COVID-19 training programs, a proposed framework taking into account four levels of assessment is below:

- 1) Participants' feedback—an assessment of satisfaction with the training.
- 2) Pre- and post-tests on the level of knowledge and skills.
- 3) Applying new knowledge and skills in a clinical practice.
- 4) Evaluating the impact on treatment outcomes for patients with COVID-19.

By the end of the training course, participants will improve their knowledge of and skills in:

- Early detection, triage, and first aid for patients with COVID-19 and other respiratory diseases; collection of an epidemiological history of COVID-19; recognition of COVID-19 symptoms; application of algorithms of actions at all levels of health care; application of appropriate infection prevention and control measures; advising the community on the prevention of COVID-19 infection.
- Assessment of training needs and definition of training objectives adapted to different conditions; curriculum and educational materials development; a variety of teaching methods; evaluating the use of appropriate teaching methods; making proposals for an education module appropriate to the needs of local education (including assessment); improved communication skills; and preparing and conducting public speaking and trainings.

MDT PRINCIPLES

The main MDT principles are as follows:

- *Principle of membership.* Each member of an MDT is considered a professional in their area of competence and authority, regardless of whether teamwork is their main activity. The voice and opinions of each MDT member must have equal weight and significance and be taken into account in teamwork.
- *Principle of integration.* The knowledge and professional experience of each MDT member contribute to the achievement of common goals and tasks. MDT members should show readiness for mutual support and exchange of experience and knowledge with each other.
- *Principle of openness and trust.* All information concerning the patient should be equally accessible and open to all MDT members. It is important to respect the principle of wide awareness within the team.
- *Principle of collective decision-making process.* Each MDT member has the right to take part in decision-making processes, to offer their opinion and suggestions. In addition, each MDT member is professionally and legally responsible for their own and group decisions.

Formation of the MDT group as a single body is an important and rather difficult stage and requires considerable investment of time and practical experience. Teamwork requires changing the behavior of individual team members in accordance with goals and tasks.

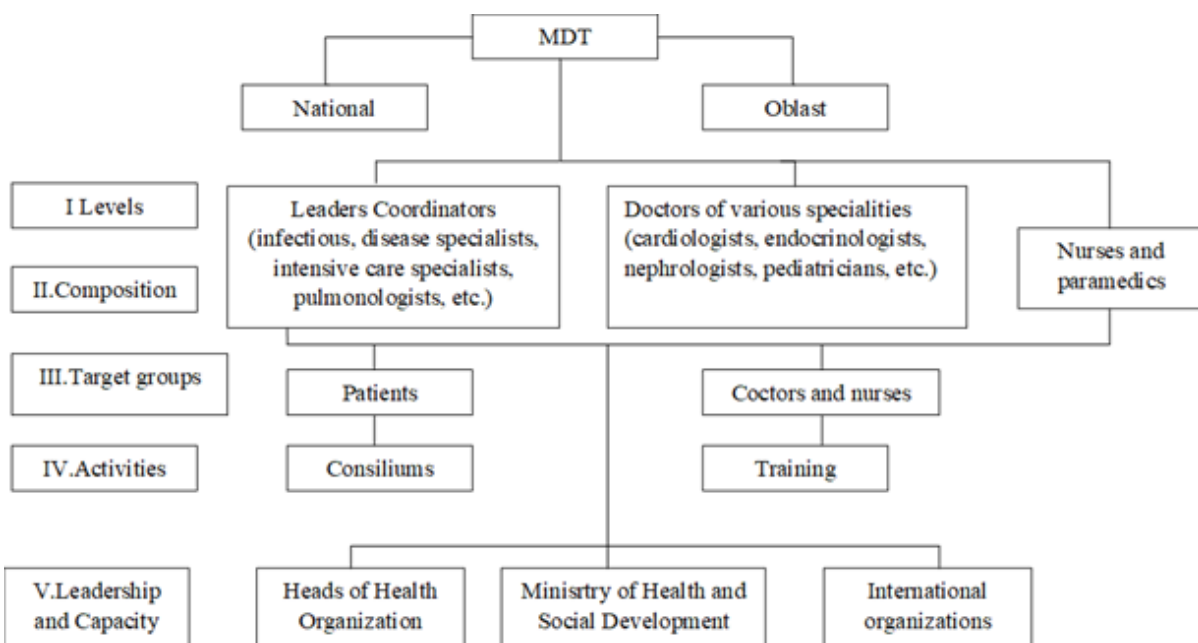
In accordance with the main goals, national and regional MDTs and trained physicians and nurses will provide quality treatment for patients, especially those with severe COVID-19 infection. Based on the accumulated experience of treating patients with COVID-19 in the Kyrgyz Republic and international recommendations, it is proposed that MDTs' main form of medical care provision will be **clinical consultations of the MDT** in online and offline modes. For a more efficient organization of the MDT's work and decision-making, preference is given to online platforms for MDT clinical consultations. In this context, WhatsApp groups have been created for national-level MDTs (city of Bishkek and city of Osh) and for regional MDTs in each region. These groups have already yielded good results. It is necessary for group participants to have access to platforms, to be able to ask and answer questions in the WhatsApp group, and to share regional teams' experiences through conferences and meetings. The use of a combined approach of online and offline consultations is certainly worth considering if necessary. It is also important that national consultants from various fields of medicine participate in the consultations of regional MDTs as needed, but they also must maintain one of the main guiding principles: strengthening the health care system's capacity in the regions and independently organizing quality medical care for patients with COVID-19, regardless of location.

MDT STRUCTURE

The MDT is made up of physicians of various specialties such as infectious disease specialists, resuscitators, pulmonologists, cardiologists, rheumatologists, nephrologists, surgeons, family doctors, pediatricians, obstetricians-gynecologists, nurses, and paramedics (Figure 2).

To better organize and coordinate work, it is advisable to identify coordinating leaders from among respected and experienced specialists, for example, an infectious disease specialist, an intensive care

Figure 2. Structure of the MDT



physician, and a pulmonologist/therapist. The list of the team members and the coordinator would need to be approved by a local order. The overall coordination of the MDT remains with the regional health coordinator.

The heads of health care facilities and responsible representatives of the MoH of the Kyrgyz Republic are responsible for enhancing the capacity and sustainability of the MDTs' work. By showing commitment to and support for the work of the MDT, reviewing members' reports and activities at planning meetings, and interacting with national consultants and members of the national team, heads of the health care facilities will contribute to a sustainable transition and further implementation of the MDT approach at the national level.

MDT FINANCING

Field trainings are costly activities to organize and conduct, but they must be carried out for MDT members at least twice each year to increase the team's potential to independently make decisions in critical situations, to improve team cohesion, and to increase the team's efficiency and productivity.

Adequate funding is important to support the regional hospitals on the basis of which MDTs are established and operate efficiently and to build the capacity of the MDT. The heads of health care facilities and the MoH of the Kyrgyz Republic should provide incentives for MDT members (e.g., bonuses, awards, coefficient of labor participation, or quotas for training).

MDT financial support can be mobilized from the MoH's epidemiological fund (e.g., travel expenses) for regular monitoring and regional refresher trainings, and from other sources (foundations, international organizations) to expand the MDT approach.

DEVELOPMENT AND IMPROVEMENT OF MDTs

Multidisciplinary approaches to quality care and continuing education using online and offline platforms have shown promise in strengthening the capacity of the health care system to address chronic diseases and respond to emerging health threats, such as pandemics. Monitoring, evaluation and analysis of the MDT approach should be carried out on a regular basis as experience in this approach is gained. An important role should be given to conferences and trainings, various platforms and forums for the exchange of experience, especially with international scientific and medical centers.

ROLES OF HEALTH CARE FACILITY MANAGERS, NATIONAL CONSULTANTS, AND NATIONAL AND REGIONAL MDTs

To increase the capacity and sustainability of the MDTs, MDTs must integrate into the health care system and the COVID-19 programs of the MoH, and actively interact with other entities involved in caring for patients with COVID-19—including working groups and MoH commissions.

Managers of health care facilities are assigned a key role in organizing MDT work and implementing a multidisciplinary approach for the provision of quality medical care for patients with COVID-19. These managers provide lists of physicians of various specialties who can form a regional MDT in accordance with basic requirements, identify coordinating leaders for the MDT unit, ensure the participation of specialists in training, and oversee the provision of medical equipment for MDT practical trainings. It is important that heads of health care facilities commit to and support MDT activities, consolidate the functional responsibilities of MDT members and those responsible for providing medical care (especially for patients with severe COVID-19). It is also important for them to track patients and obligatory consultations, to provide reports from the coordinating MDT leaders at planning meetings, and to interact with national consultants and members of the national-level MDT.

At the national level, national consultants and faculty and leading specialists collaborate to train the national-level MDT. This task includes the preparation of training materials, programs, and the formation of list of participants at the national and regional levels. National consultants are responsible for developing guidelines for a multidisciplinary approach to diagnosis and treatment of COVID-19 at the hospital and primary health care facilities level, assessing the level of knowledge of MDT members, organizing and conducting field trainings to develop practical skills at regional centers, creating WhatsApp groups for MDT members to connect and discuss issues related to COVID-19 diagnosis and treatment.

To better organize and coordinate the work of MDTs (at the national and regional levels), it is advisable to identify coordinators from among experienced specialists, such as infectious disease specialists, intensive care specialists, and MDT pulmonologists/therapists.

ADVANCED MDT TRAINING

To increase the sustainability of the MDTs, it is important to organize continuous training of MDT members with practical exercises, conduct refresher trainings that include new approaches and treatment technologies, using online and offline platforms available through KSMIRCE. MDT members' participation in in-country and international conferences, seminars, internships and trainings on COVID-19, should be encouraged.

MONITORING AND EVALUATION OF MDTs

Monitoring and evaluation (M&E) includes the collection, storage, analysis, and transformation of data into strategic information for decision-making. *Monitoring* helps implementers to better understand the progress and general direction of a project or activity, and informs adjustments to implementation and other project management decisions. *Evaluation* includes the identification and understanding of a project or activity's results and value.

M&E findings allow managers and other stakeholders to learn from each other's experiences and to improve the quality of future work.

The primary M&E activities for MDTs are to assess the team's achievement of set goals and tasks. When reporting on indicators, MDT members will be able to identify gaps in their work and where they have achieved their goals. Based on MDT reports, MDT leadership and donors will make decisions necessary to improve performance and remove barriers to achieving the set goals.

Collection, verification and preparation of information for MDT indicators should be carried out by each MDT member in his part, and the team leader aggregates all data and forms a general report. Verified data should be transmitted to the head of the organization on the basis of which the MDT operates and to donors. Below is a list of proposed indicators for MDTs:

1. # of workshops held in district hospitals
2. # of trained specialists in district hospitals
3. # of consultations held in health care facilities of the regional level (monthly)
4. # of consultations held in health care facilities of the district level (monthly)
5. % of seriously ill patients in the unit (red zone) of the regional hospital
6. % of seriously ill patients in the unit (red zone) of the district hospital
7. % of seriously ill patients transferred to the intensive care unit (ICU) of the regional hospital
8. % of seriously ill patients transferred to the ICU of the district hospital
9. % of deaths, after MDT consultations, in the regional hospital
10. % of deaths, after MDT consultations, in the district hospital

ANNEX I: DEFINITIONS AND BASIC CONCEPTS

- The concept (from the Latin conceptio, “system of understanding”) determines the strategy of action.
- Monitoring is a regular process of collecting and analyzing information to track the progress of implementation of the planned plans and check compliance with the established standards.
- Multidisciplinary team (MDT) is a group of specialists of different profiles who are united by solving one problem on jointly agreed principles.
- A pandemic is the spread of a disease on a global scale.
- Training program is a description of the details of the training process for obtaining knowledge, skills and abilities in a specific area.
- Target group is a group of people united by common characteristics, or for the sake of any goal or task.
- COVID-19 is an infectious disease established in 2019 caused by the recently discovered SARS-CoV-2 coronavirus.
- Training of Trainers (ToT) is a model intended to engage master trainers in coaching new trainers that are less experienced with a particular topic or skill, or with training overall. A ToT workshop can build a pool of competent instructors who can then teach the material to other people.

ANNEX II: MDT PHYSICIAN TRAINING PROGRAM FOR COVID-19, TRAINING OF TRAINERS MODEL

Day 1	Moderators: N. S. Ibraeva, V. S. Maitieva, T. M. Sooronbaev, A. Z. Kutmanova	Lecturer	Comments
14:00 – 14:20	Welcome and opening of the workshop Goals and tasks Participants introduction	N. S. Ibraeva, V. S. Maitieva	
14:20 – 14:30	Assessment of the initial level of knowledge of the participants (pretest)	G. M. Mirzalieva, K. M. Magdieva	
14:30 – 15:00	Assessment of training needs and determining the training objectives using a multidisciplinary approach. Development of a draft training program and lesson plan	S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion
15:00 – 15:20	Preparation and use of teaching materials. Teaching methods. Distance learning	S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion
15:20 – 15:40	Basics of evidence-based medicine. Assessment of the clinical content of scientific and medical publications	A. U. Jakupbekova, S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion
15:40 – 16:00	Evaluation of the effectiveness of the training program. Assessment of the work program and its impact	S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion
16:00 – 16:30	Preparation for classes. Practical work	S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion
16:30 – 17:00	Teaching methods: lectures, practical exercises, independent work, survey, small group discussion or work in pairs, role play and situational analysis	S. S. Abilova, J. N. Omurova, M. M. Usubaliev	Interactive discussion

Day 2	Topic	Lecturer	
14:00 – 14:40	Epidemiological situation on COVID-19 in the world, Kyrgyz Republic. Etiology, pathogenesis, clinic of COVID-19	A. Z. Kutmanova	
14:40 – 15:20	Clinical Guidelines for the diagnosis and treatment of coronavirus infection COVID-19 (5th edition)	T. M. Sooronbaev	
15:20 – 16:00	Clinical protocol “Diagnosis and treatment of COVID-19” in adults	M. M. Davletbaeva	
16:00 – 16:30	Clinical protocol “Diagnosis and treatment of COVID-19” in children	D. J. Kabaeva	

Day 2	Topic	Lecturer	
16:30 – 17:00	Practical lessons: analysis of situational tasks (case studies). Questions, answers		

Day 3	Topic	Lecturer	
14:00 – 14:40	Clinical protocol “Tactics of management and treatment of COVID-19 in concomitant diseases”. Endocrine diseases	R. B. Sultanalieva	
14:40 – 15:10	Clinical protocol “Tactics of management and treatment of COVID-19 in concomitant diseases”. Cardiovascular disease (CVD)	A. Sh. Sarybaev	
15:10 – 15:40	Clinical protocol “Tactics of management and treatment of COVID-19 in concomitant diseases”. Kidney damage	R. R. Kaliev, D. A. Aiyпова	
15:40 – 16:10	Clinical protocol “Mental health support in COVID-19”	L. Yu. Panteleeva	
16:10 – 16:30	Dermatological manifestations of COVID-19	M. M. Usubaliev	
16:30 – 17:00	Practical lessons: analysis of situational tasks (case studies). Questions, answers		
17:00 – 17:30	Open lecture of the training participants		

Day 4	Topic	Lecturer	
14:00 – 14:30	Clinical protocol “Rehabilitation of patients with coronavirus infection (COVID-19)”	A. I. Akylbekov, A. Rysbek kyzy	
14:30 – 15:00	Organization of medical care for pregnant women, women in labor, postpartum women with coronavirus infection COVID-19	E. A. Kibets	
15:00 – 15:30	Clinical protocol “Caring for newborns in conditions of coronavirus infection (COVID-19)”	S. T. Abduvalieva, N. F. Gagloeva	
15:30 – 16:00	Features of medical care for COVID-19 patients with immunosuppressive conditions	A. Z. Kutmanova	
16:00 – 16:30	Features of the management of patients with COVID-19 with rheumatological diseases	O. V. Lobanchenko, G. M. Koilubaeva	
16:30 – 17:00	Practical lessons for doctors: CT scan signs of COVID-19. Questions, answers	U. K. Kakishev, T. M. Sooronbaev	
17:00 – 17:30	Open lecture of the training participants		

Day 5	Topic	Lecturer	
14:00 – 14:30	Basic principles of emergency treatment. Indications for transfer to the intensive care unit (ICU). Practical guidelines for resuscitation and anesthesiology teams on COVID-19 patient care	A. K. Moldotashova, G. S. Juzumalieva	

Day 5	Topic	Lecturer	
14:30 – 15:00	Intensive care for acute respiratory failure. Indications for tracheal intubation. Precautions for intubation of COVID-19 patients. Patient monitoring in the ICU	A. K. Moldotashova, G. S. Juzumalieva	
15:00 – 15:40	Features of viral pneumonia and acute respiratory distress syndrome (ARDS) in children with COVID-19. Invasive artificial lung ventilation (ALV)	V. K. Shukurova, F. M. Faizova	
15:40 – 16:10	Features of diagnosis and treatment of children with sepsis and septic shock. Circulatory support and fluid therapy	V. K. Shukurova, F. M. Faizova	
16:10 – 17:0	Practical lessons on modes of ALV, CPAP, BIPAP, oxygen therapy	A. K. Moldotashova, G. S. Juzumalieva, M. J. Mademilov, U. U. Sheraliev	
17:00 – 17:30	Open lecture of the training participants		

Day 6	Topic	Lecturer	
14:00 – 15:00	Features of viral pneumonia and acute respiratory distress syndrome (ARDS) in adults with COVID-19. Invasive artificial lung ventilation (ALV)	G. S. Juzumalieva	
15:00 – 15:40	Diagnostics and treatment of patients with sepsis and septic shock. Circulatory support and fluid therapy	A. K. Moldotashova, L. E. Kiyizbaeva	
15:40 – 16:10	Standards of operating procedures (SOPs) for the organization of infection control measures for work in hospitals repurposed to provide COVID-19 services (Order of the Ministry of Health of the Kyrgyz Republic No. 526 dated 17 July 2020)	N. O. Sorombaeva	
16:10 – 17:00	Practical lessons on modes of ALV, CPAP, BIPAP, oxygen therapy	G. S. Juzumalieva, M. J. Mademilov, U. U. Sheraliev	
17:00 – 17:30	Open lecture of the training participants		

Day 7	Topic	Lecturer	
9:00 – 12:00	Practice on the use of personal protective equipment (PPE) in COVID-19 (Order of the Ministry of Health of the Kyrgyz Republic No. 526 dated 17 July 2020)	N. O. Sorombaeva	
13:00	Testing upon completion of the course for trainees (post-test)	All lecturers	

ANNEX III: COVID-19 MDT MONTHLY REPORTING FORM

Name of the organization: _____

Address (region, district): _____

No.	Action	Mark about fulfillment	Comments
1	Number of consultations on coronavirus infection were held		
2	Number of offline consultations or consultations were held together with other members of the MDT		
3	Number of online consultations or consultations were held together with other members of the MDT		
4	Number of consultations held in health care facilities of the regional level		
5	Number of consultations held in healthcare facilities of the district level		
6	% of deaths, after MDT consultations, in the regional hospital		
7	% of recovered after MDT consultations, in the regional hospital		
8	% of deaths, after MDT consultations, in the district hospitals		
9	% of recovered after MDT consultations, in the district hospitals		
10	Number of workshops held by MDT		
11	Number of trained specialists in regional and district health care facilities		
12	Have you experienced any difficulties in conducting and organizing consultations and trainings with other members of the MDT		
13	Do you know how to use BiPAP, CPAP devices?		
14	How often were BiPAP, CPAP devices used in your practice? Results of non-invasive lung ventilation (NILV)		