MULTIDISCIPLINARY TEAMS AND THE UNIVERSAL NURSE MODEL: STRENGTHENING THE KYRGYZ REPUBLIC'S HEALTH SYSTEM

SUCCESS STORY

September 2022

The COVID-19 pandemic placed extraordinary stress on the Kyrgyz Republic's health system and health care providers, revealing the need for new approaches that would address the immediate needs brought on by the pandemic and contribute to the country's health system resilience.

In August 2020, the USAID Local Health System Sustainability Project (LHSS) introduced two approaches – multidisciplinary teams (MDTs) and the Universal Nurse model – to respond to shocks in the Kyrgyz health system caused by the COVID-19 pandemic. The deficit of qualified human resources in the Kyrgyz Republic at the time had contributed to one of the highest per capita death rates in the world. Most hospitals, especially those in designated red zones, lacked the capacity to manage the increasing number of cases due to poor infrastructure, shortages of medical supplies and essential equipment, and an increased workload that health care providers, including nurses, struggled to manage.

Multidisciplinary teams (MDTs) are comprised of health care providers with distinct professional roles, such as nurses and primary, secondary, and tertiary-level physicians, who work as a unit to provide comprehensive, quality care to patients. The foundation of this approach rests on team members

working together in a coordinated way to improve patient outcomes. The MDT approach enabled local specialists to make evidence-based decisions on how to treat complex COVID-19 cases. Similarly, the Universal Nurse model empowers nurses to practice more autonomously, which contributes to more efficient, patient-centered care.

Multidisciplinary teams

At the initial stages of the pandemic in 2020, hospitals received many COVID-19 patients in addition to their regular caseload. Infectious disease specialists struggled to manage the increased number of patients, and doctors and nurses without specialized knowledge were attempting to treat COVID-19 patients.

The Ministry of Health (MoH) identified the need to create MDTs to respond to increased caseloads and manage demands placed on health care providers. In early 2021, with leadership from LHSS, the MoH coordinated with the Kyrgyz State Medical Institute
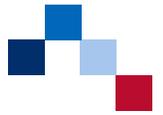
on Retraining and Continuous Education and national consultants to develop an MDT training manual. Training for MDT members followed.

The initial training of trainers was conducted with 20 doctors and 14 nurses from Bishkek city in February 2021. These trainees, in turn, served as cascade trainers in their respective regions and have since trained 211 doctors and 79 nurses from seven oblasts and Bishkek city. This was the first time the MDT approach had been used in the Kyrgyz Republic.

The training included information on COVID-19 epidemiology, infection prevention and control, diagnosis, and treatment, including respiratory therapy. The training manual also included recommendations for incentivizing and retaining MDT members.

Training materials were based on current clinical guidelines and practices. MDT trainees also learned about how to work in a multidisciplinary environment and leverage their respective knowledge and experience to improve service delivery and quality of care.

An MDT trainer discusses the course curriculum. (Photo: USAID LHSS Project)

Outcomes

The adoption of MDTs is having a positive impact on both health care providers and patients. Previously, national-level infectious disease specialists would need to travel to district hospitals to consult with health care providers, straining their ability to fully respond to requests for support. Now, oblast and district-level

MDTs can manage COVID-19 cases but can still consult with national-level specialists as needed. There have been 7,915 consultations through MDTs. In July 2020, 29,081 cases of COVID-19 were recorded, of these, there were 854 deaths, in July 2021, 37,451 cases were recorded and there were 325 deaths, meaning the COVID-19 mortality rate in July 2021 was 38% lower than in July 2020.

Regular MDT trainings are now institutionalized by national-level trainers. The MoH treatment and human resource chiefs have acknowledged the effectiveness of the MDT approach and committed additional technical support going forward. The MoH is also exploring using the MDT approach at the primary health care level for the management of non-communicable diseases.

> "All medical specialists were connected. Every doctor was involved in MDTs. Despite the large number of patients with coronavirus, other diseases and traumas also happened. Therefore, every employee and doctor was important in the MDT consultation."
>
> Gulzhan Sartarovna, Head of Anesthesiology and Resuscitation, Department of Neurosurgery

The Universal Nurse model

In the Kyrgyz Republic, nursing duties are typically divided into three categories related to specific tasks: ward, dressing, and procedure. Nurses in each category have separate responsibilities in the care of a single patient. The reporting structure tends to be hierarchical and strict, resulting in many nurses lacking the ability to independently make decisions such as nursing diagnoses, even if they possess the clinical knowledge to do so.

During the early months of the COVID-19 pandemic, this division of labor often exacerbated human resources constraints. The patient load for some nurses reached 40 patients per ward, resulting in decreased quality of care. Nurses did not have sufficient time to respond to patient needs, explain
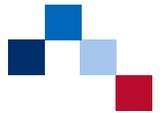
procedures, conduct regular monitoring, or follow COVID-19 case management guidance.

To build the health system's surge capacity and optimize efficiencies in human resources for health, in January 2021, the MoH and LHSS piloted the Universal Nurse model with an initial training for 75 nurses in four hospitals in Bishkek. The pilot focused on COVID-19 patient care in COVID-19 red zones and intensive care units. Under the Universal Nurse model, the functions of the three types of nurses were merged into one patient-centered role. This model encouraged nurses to act more autonomously by enabling them to assess their patient's condition, make diagnoses, develop a treatment plan, and evaluate outcomes, thereby shifting the treatment process to be more focused on the individual patient.

LHSS supported the training of seven nurse-trainers and developed job descriptions, duty checklists for nurses, and revised procedures. Between March 18 to May 27, 2022, LHSS and the MoH trained an additional 379 nurses in four hospitals.

A nurse checks a patient's heart rate. (Photo: USAID LHSS Project)

Outcomes

LHSS assessed nurse performance by reviewing staffing levels, nurse functions, workload, equipment, infrastructure, record keeping, and infection prevention and control compliance prior to and after the model's implementation. The Activity found that following the introduction of the Universal Nurse model, the nurses' caseloads became significantly

more manageable with 8-12 patients per nurse in general wards, instead of 30-40 patients. In intensive care units, the caseload decreased from eight to three patients per nurse after the model's introduction. Additionally, the rate of completion of assigned nursing tasks increased from 40 percent to 90 percent.

Both nurses and patients reported increased satisfaction with the quality of care as a result of the model's introduction. Nurses felt they were able to provide more holistic care, including nutrition and lifestyle recommendations to prevent complications and speed recovery.

Adoption of the Universal Nurse model demonstrates how consolidating roles and increasing nurses' autonomy can help a health system better manage health emergencies in resource constrained environments.

Based on the success of the pilot, the MoH plans to include the Universal Nurse in its registry of positions. It also plans to discuss additional pay for nurses serving in this role. In 2022, the MoH expanded the Universal Nurse model to three children's hospitals.

> "The Universal Nurse model contributes to pandemic preparedness as well as overall health system strengthening."
>
> Cholpon Asambaeva, LHSS Kyrgyz Republic Country Director

Impact

- **Optimized use of existing resources:** Both of the new approaches optimized use of existing resources, the MDT approach by pooling and opening lines of communication between health care providers, and the Universal Nurse model by combining nursing functions and reducing the nursing workload in hospitals where it was
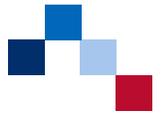
deployed, which optimized use of existing resources.

- **Reduced costs:** at the beginning of the pandemic, national-level infectious disease specialists traveled frequently to district hospitals to provide treatment guidance for severe COVID-19 cases. Once MDTs were established, non-specialists were empowered to treat patients, and in severe cases could still consult with infectious disease specialists. The Universal Nurse model reduced the need to recruit additional staff, thereby averting costs for health worker surge support.

- **Improved quality of care:** Both the MDT model and the Universal Nurse model help health care providers refocus on the patient by providing integrated, safe, and effective care.