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| |  | | --- | | Global Fund COVID-19 Response Mechanism (C19RM)Supplementary Funding Request Form | |

**Date Created:** 20 September 2021

## Summary Information

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| **Country (or multicountry)** | Kazakhstan | |
| **Principal Recipient(s), grant name(s) and Implementation Period(s)** | Principal Recipient: RSE on REU “National Scientific Center of Phthisiopulmonology of the Republic of Kazakhstan” of the Ministry of Health of the Republic of Kazakhstan, KAZ-T-NCTP, January 01, 2020-December 31, 2022 | |
| **Planned start and end dates of the C19RM activities by grant** | December 01, 2021-December 31, 2022 | |
| **Currency** | 1USD=KZT423.453075 | |
| **C19RM Supplementary Funding Request amount** | **Amount (US$/EUR)** | **Submission date** |
| US$3,047,699.00 | October 08, 2021 |

*Note: Do not duplicate information included in the Full Funding Request. The Form must outline information relevant to the C19RM 2021 Supplementary Funding Request and will be reviewed taking into account previously approved C19RM 2021 funding (Full Funding Request and Fast-track, as relevant).*

## Context

* 1. Briefly describe the critical elements of the country context that informed the development of this supplementary funding request by summarizing any updates since the submission of the C19RM Full Funding Request. Specifically, highlight the current COVID-19 epidemiological context and its evolution, and updates to the impact of COVID-19 on the overall health system, and specifically on HIV, TB and malaria.

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| First COVID-19 cases were detected in Kazakhstan on 13 March 2020. As of September 22, the country has reported 870,059 confirmed infection with total of 10,913 deaths, and total recovery of 801,673 (92%). Infection fatality ratio forms 1.3%. More than one-third of all COVID-19 cases are registered in Nur-Sultan and Almaty cities. Oblasts with the high number of confirmed cumulative cases are Karaganda, Atyrau, Almaty, Pavlodar, East Kazakhstan, Akmola, and West Kazakhstan. Circulation of new coronavirus strains drove the increase in transmission, reaching the maximum number of 7,899 new cases on 07 August 2021[[1]](#footnote-2). Since then, the country is on downswing of the wave of cases with the rolling 7-day average of new infections dipped to the lowest level of 2,907.57 on 21 September 2021[[2]](#footnote-3). Bi-weekly reduction in new confirmed cases made up 37%. Currently, there are 67,404 SARS-CoV-2 PCR positive and PCR negative patients on treatment, including 12,105 patients admitted to the hospitals.  The country has invested heavily in the testing system and expanded molecular diagnostic capacity to reach a daily test volume of 107,000 PCR tests through 242 assigned laboratories. The positivity rate has been brought down from a reported 20% in June 2020 to about 5% in April 2021[[3]](#footnote-4), reaching the increase of the weekly testing average by nearly twice.[[4]](#footnote-5) As of June 8, the total number of PCR tests performed per 100,000 population made up 62,991. The national testing strategy was updated and entered into force in April 2021.[[5]](#footnote-6) Accordingly, the health system uses PCR testing to diagnose patients admitted to designated hospitals with suspected COVID-19, for people with acute respiratory illness and pneumonia. The next priorities are close contacts in the absence of documentary evidence of receiving a full course of COVID-19 vaccination and healthcare workers with the COVID-19-like signs and symptoms. Also, PCR testing is applied to prevent disease transmission as per the conditions and criteria specified by the Chief Sanitary Doctor. Furthermore, the rapid tests are used for mass testing in cluster outbreaks and trends monitoring, during emergency hospitalizations and in remote communities with no access to PCR testing. And, ELISA tool is applied for epidemiological surveillance.  To stabilize the epidemiological situation, reduce mortality and hospitalizations, Kazakhstan prepared the vaccination plan and launched its vaccination efforts on 01 February 2021. Presently, there are four vaccines approved for the use: Gamaleya Sputnik V and Light, QazVac and Sinovac-Coronavac. Based on the recent data of Interdepartmental Commission on COVID-19[[6]](#footnote-7), the country has successfully vaccinated 7,408,957 people with the first dose and 6,289,238 people with the second dose forming nearly 34% of fully vaccinated population.  As described in the COVID-19 Full Funding request narrative, the pandemic has presented severe economic and healthcare challenges for Kazakhstan. The government has sought to suppress the virus and slow the transmission through a series of “lockdowns” and restrictive measures. Adopted policies in response to the pandemic, including reassignments of health staff and equipment and rearrangement of patient’ pathways, as well as fear of catching the infection have resulted in healthcare services utilization reduction. The drop in planned spending for non-COVID services early in the pandemic might mean that people delayed or went without appropriate care they otherwise would have received. Though utilization of healthcare services picked up gradually toward the end of 2020, it might require increased investments and efforts to compensate for missed diagnostics and early treatment initiation.  The pandemic has also caused major disruption to tuberculosis diagnosis and treatment services by threatening to reverse recent progress reported towards national TB targets. The tuberculosis registration decreased significantly by about 23%[[7]](#footnote-8) for both indicators: TB notification and RR/MDR-TB cases, compared to the average annual decrease of 8-10% seen in the last five years. Comparing to the WHO-estimated number of TB patients in the country, which was 13,000 in 2019, there is a difference of 3,000 patients detected in 2020, and around half of them might be viewed as missed cases. In 2020, it was recorded merely 5% fewer deaths than in 2019, whereas the average annual decrease registered in the past five years was greater and exceeded 10%. The observed decline in uptake in diagnostic services in the first eight months of 2020 has been gradually restored linked with lifted restrictive measures and enhanced services provided to persons with suspected tuberculosis. As shown in Figures 1 and 2, TB detection has improved by the end of 2020. The average monthly number of new and relapse TB cases notified in the last quarter of 2020 was about 850 cases. This tendency has continued in the first half of 2021, with an average number of 807 patients notified per month, with a maximum of 1,001 TB cases reported in April 2021.   |  |  | | --- | --- | | **Figure 1. The number of TB cases (new and relapses) notified in Kazakhstan in 2016-2020, and by months in 2020**[[8]](#footnote-9) | **Figure 2. The number of TB cases (new and relapses) notified in Kazakhstan by months in 2021**[[9]](#footnote-10) |   A clear link was noted between the imposed quarantine measures and uptake in medical services, showing a decrease in numbers of TB suspects tested in mid of 2020 and a steady monthly increase in post-lockdown ‘phases (Q4.2020), continued in the first half of 2021 (Figures 3&4).   |  |  | | --- | --- | | **Figure 3. The number of suspects investigated by Xpert MTB/RIF technology, by months, abs, 2020- first half of 2021, Kazakhstan** | **Figure 4. The number of tests Xpert MTB/RIF performed by months, abs, 2020-first half of 2021, Kazakhstan** | |  |  |   Since the early pandemic, the TB Centers have been actively involved in service provision to the patients with coronavirus infection and repurposed the significant human and laboratory resources for COVID-19. Eight bacteriological laboratories obtained temporary permissions for doing COVID-19 testing on the Xpert equipment using SARS-CoV-2 cartridges supplied through the GFATM and USAID funding. While building infrastructure and healthcare workforce capacity for COVID-19 services, the NTP reflecting on the situation with disruption to TB Service has also adjusted its programs and adopted innovative ways to connect patients for effective treatment and care. The diagnostic algorithm for suspected TB cases was revisited and adopted, allowing those being evaluated for COVID-19 to be tested for TB if the symptoms, course of illness, and X-ray findings suggest so. Though most of the needs the NTP faces are being addressed through the approved programs financed from budgetary funds and external sources, critical elements have informed the development of the funding request supplementary to the C19RM 2021 award. These funds will be invested in the strategic interventions focused on mitigating disruption to TB services and COVID-19 testing and diagnostics. The proposed interventions and the rationale behind them are detailed in section 2.2 of this supplementary funding request. The infection prevention and control measures, including procurement of IPC commodities for medical personnel and NGO staff and their clients, waste management, and risk communication interventions approved under C19RM Full Funding Request, combined with interventions proposed in the Supplementary Funding Request, will allow achieving intended outcomes. |

* 1. Summarize which relevant stakeholders have been engaged in the development and decision-making for this Supplementary Funding Request (e.g. national COVID-19 response coordinating bodies, the national HIV, TB and malaria programs).

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| The Country Coordinating Committee on Work with International Organizations on HIV and Tuberculosis (CCM) coordinated the development and decision-making for the C19RM supplementary funding request through the process involving key stakeholders and beneficiary organizations, including national COVID-19 coordinating body, NTP, GF PIUs, National Scientific Center of Phthisiopulmonology (NSCP), TB Centers and penitentiary system representatives and international consultants.  On 16 August 2021, Kazakhstan received a C19RM Notification Letter from the Global Fund, informing that the country potentially has up to US$ 3,047,699 that may be requested as additional funding to be invested in interventions focused on mitigation of disruption to TB services and potential inclusion of such activities as bi-directional screening and testing, active case finding, contact tracing and COVID-19 testing and diagnostics. To clarify supplementary funding request requirements and issues related to operational procedures and procurement channels, the online consultative meeting was held with the GF Country Team on 06 September 2021. After preliminary discussions organized with key stakeholders, beneficiary institutions, and consultants, the funding request was drafted and agreed upon at the CCM meeting held on 01 October and endorsed by the COVID-19 coordinating body on 06 October 2021. The meeting protocols are attached and made available on the CCM website: www.ccmkz.kz. |

## Funding Request and Prioritization

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| The key principle laid out in the prioritization approach was that the proposed interventions and activities should maximize the country efforts in COVID-19 testing and diagnosis and restoring the services disruption to TB and enhancing the health system’s pandemic preparedness and response capabilities within the strategic priorities highlighted in Kazakhstan C19RM Full Funding Request. The investment options were specified in the GF’ Notification Letter. The factors that have shaped the decision in interventions include scope, and duration of existing TB grant and C19RM award, the role the TB Service plays in COVID-19 response, and the capped amount available for the supplementary funding. Adopted national strategies and monitoring systems, the WHO recommendations and experts’ opinion, planned health spending, need assessment studies were taken into consideration while defining the priority activities under each strategic intervention.  The activities planning and decision making was effectively guided by the GF Country Team’ efforts helping to better understand the requirements and the processes of the supplementary funding request. |

* 1. Describe the approach used for the **prioritization of interventions** and activities, considering previously approved C19RM 2021 funding (Fast-track and Full Funding Requests, as relevant) and the guidance provided by the Global Fund.
  2. Based on the COVID-19 Modular Framework (link forthcoming), provide a brief description/justification for the proposed interventions and key activities in the **Supplementary Funding Request**, including expected outcomes of these interventions and how these interventions will support grant targets. These should be in line with the C19RM Technical Information Notes and Guidelines[[10]](#footnote-11), applicable WHO guidance (including on COVID-19) and the NSPRP.

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| 1. **COVID-19 control and containment interventions** | |
| ***Intervention & Key activities*** | **Intervention: COVID-19 Diagnostics and testing**  **Activities:**   1. **Procurement of SARS-COV-2 Ag Rapid Tests** |
| ***Rationale*** | PanbioTM COVID-19 Ag Rapid Test Device (ABBOT) is authorized for the qualitative detection of SARS-CoV-2 antigen in Kazakhstan by the Resolution of the Chief State Sanitary Doctor[[11]](#footnote-12) in April 2021. According to Annex 4 of the Resolution, the use of rapid tests is recommended (i) in organized groups and closed institutions such as schools, kindergartens, children's camps, exhibitions, police, armed forces, places of detention, nursing homes, and dormitories, for mass testing in cluster outbreaks; (ii) for monitoring the disease dynamics during outbreaks, especially among the staff of continuously working organizations and health workers; (iii) during emergency hospitalization of patients with signs and symptoms of the coronavirus disease; and (iv) in remote communities with limited or no access to PCR testing.  It should also be stated that the rapid test kits were piloted at the NSCP, and the accuracy was assessed against testing by the GeneXpert method, resulted in a 95% matching rate.  In connection with the above, the CCM and NTP envisage the procurement of 131,200 rapid tests for detection of COVID-19 cases to be used (i) in the regional TB Centers, where there is no possibility of testing for SARS-CoV-2 using GeneXpert system; (ii) among staff and beneficiaries of TB and HIV NGOs; and (iii) by PHC facilities and at emergency ambulance calls. Online training for health workers in the use of rapid tests will be delivered through the NSCP’ training platform. The M&E of the use of the rapid tests will be carried out within the frame of the current GF grants based on the methodology approved by the Global Fund. |
| ***Expected Outcome*** | The implementation of the measures will contribute to efforts controlling the coronavirus disease through (i) timely testing of patients suspected with COVID-19; (ii) testing of patients admitted to emergency departments at the TB Centers for SARS-CoV-2; (iii) testing of hospitalized TB patients with COVID-19 signs and symptoms; (iv) testing of personnel of TB Centers; and (v) testing of staff and beneficiaries of the NGOs involved in TB and HIV control activities for coronavirus infection. A total of 131,200 tests are expected to be realized. |
| ***Expected Investment*** | Expected cost of the activity is US$761,958.43 |
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| ***Intervention & Key activities*** | **Intervention: COVID-19 Diagnostics and testing**  **Activities:**  **2. Procurement of GeneXpert cartridges for SARS-CoV-2 detection.** |
| ***Rationale*** | Depending on the COVID-19 outbreak evolution in Kazakhstan, the number of GeneXpert cartridges for SARS-CoV-2 detection ordered through C19RM Full Funding Request will cover the identified needs of authorized bacteriological laboratories of the TB Service only for the first six months of 2022.  For the second half of 2022, the NTP requests an additional 19,500 GeneXpert cartridges from C19RM Supplementary Funds for SARS-CoV-2 detection among the same categories of people and for the treatment monitoring:   1. patients with suspected or diagnosed tuberculosis who are admitted to TB Centers without PCR test results; 2. suspicion of COVID-19 infection in patients with tuberculosis already receiving in-hospital treatment in TB Centers; 3. monitoring the treatment of COVID-19 patients hospitalized in TB Centers, including those with TB/COVID-19 co-infection; and for 4. testing of medical personnel of TB Centers. |
| ***Expected Outcome*** | The implementation of these measures will contribute to efforts controlling the coronavirus disease through: (i) timely testing of patients, admitted to emergency department of TB Centers for coronavirus infection (ii) testing of hospitalized TB patients with COVID-19 signs and symptoms, and (iii) testing of personnel of TB Centers. A total of 19,500 investigations are planned to be conducted. |
| ***Expected Investment*** | Expected cost of the activity is US$375,984.67 |
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| ***Intervention & Key activities*** | **Intervention: Case management, clinical operations and therapeutics**  **Activities:**   1. **Procurement of Computed tomography (CT) scanning system for NSCP.** |
| ***Rationale*** | According to the WHO Interim guidance “Priority medical devices list for the COVID-19 response and associated technical specifications”[[12]](#footnote-13): “Computed tomography (CT) scanning allows the assessment of COVID-19 related lung damage and known comorbidities of COVID-19 such as pulmonary embolism/thromboembolism or extrathoracic disease manifestations. Pulmonary disease severity of COVID-19 can be evaluated by CT imaging. In the establishment or improvement of access to CT scanning systems during the pandemic, deployed CT systems are anticipated to be used primarily in imaging departments of district general hospitals and specialized hospitals. These units will serve multiple other general and specific purposes after the pandemic; for example, the imaging of trauma, infections, cancer staging, and more, including minimally invasive CT-guided procedures such as biopsies”.  The CT exam complements a reverse transcription-polymerase chain reaction (RT-PCR) diagnosis. Also, it was demonstrated to be effective in the current diagnosis, including follow-up assessment, and in the evaluation of the disease evolution[[13]](#footnote-14),[[14]](#footnote-15),[[15]](#footnote-16). Different clinical studies have shown that chest CT imaging can be helpful in supporting early detection of COVID-19[[16]](#footnote-17),[[17]](#footnote-18), and in assessing the severity of the disease[[18]](#footnote-19),[[19]](#footnote-20).  Since the beginning of the pandemic, all regional TB Centers in Kazakhstan have been actively involved in the identification, diagnosis and treatment of patients with coronavirus disease. The TB Centers have repurposed its hospital capacity and deployed COVID-19 isolated wards with 3,500 beds for acute and critical care. In fact, specifically, the most severe patients with COVID-19, and pneumonia cases with coronavirus-like symptoms are hospitalized in regional TB Centers.  The COVID-19 pneumonia numbers are discouraging in Kazakhstan. Since 01 August 2020, the MoH has maintained separate statistics and daily registers pneumonia cases where coronavirus symptoms existed, but the patients tested negative. Of the total of 74,674 pneumonia cases with coronavirus-like symptoms registered on 23 September 2021, 4,769 deaths were reported, with a case fatality rate of 6.4%. Perhaps, in many of these cases, the patients did not survive due to late diagnosis.  The MoH has planned to entrust the management of pneumonia cases including, COVID-19 pneumonia, to the TB Centers. And, the NSCP will be the lead institution that will coordinate activities, conduct operational research, analyze the situation, provide organizational, methodological, and clinical assistance for COVID-19 and post-COVID pulmonary changes to the regional TB Centers. Also, referring to the strategy of reforming the TB Service in the Republic of Kazakhstan, it is planned to strengthen and improve the quality of services for patients with pulmonary pathology of various etiologies, including post-COVID pulmonary complications. This will require the application of highly technological methods and tools for diagnosing respiratory diseases to meet the latest recommendations by international technical agencies.  The use of computed tomography (CT) for examining persons with COVID-19 is an integral part of the "Clinical Protocol for Diagnostics and Treatment of Coronavirus Infection COVID-19” approved by the Joint Commission on the Quality of Medical Services at the MoH back in 2020. Since then, the protocol has been revisited and lastly refined on 05 August 2021. The CT exam is included in the algorithm of the standard definition of the COVID-19 case, used to capture manifestations of the infection and define the spectrum of the disease severity. As per indications, it is also used at patient discharge from the hospital and transfer to outpatient care. Furthermore, according to the instructions and the national Standard of TB care organization, the CT is in a diagnostic package of services offered to persons with presumptive TB and hospitalized TB patients and included in the diagnostic algorithm of extrapulmonary TB to be provided at the regional and central levels. If the service is not available at the particular regional TB Center, the patients are referred to other health centers, including NSCP through adopted mechanisms. Out of 17 regional TB Centers, only five have CT systems purchased and installed using funds allocated from the local and republican budgets (earlier, there was no procurement available from other projects). Additionally, the local budgets' purchase and installation of CT devices are expected for eight regional TB Centers during 2021-2022. As per the regional health departments' plans, 14 TB Centers will be equipped with CT devices within a year.  The National Scientific Center of Phthisiopulmonology provides CT scans to patients with lung pathologies, to those who receive inpatient treatment at the Center, and to referrals, including patients referred for consultations from the regional TB Centers. It uses 16 Slice CT scanner, installed in 2013, which is becoming increasingly unreliable. The equipment has exhausted itself by technical parameters, having extremely low resolution, and does not meet today's standards for examining persons with lung pathologies, including those with suspected or diagnosed COVID-19. Along with this, the NSCP has all the technical capabilities needed to perform this kind of exam, including necessary infrastructure (availability of premises, provision of a source of electrical energy, including backup generators), trained personnel, capacities and policies for technical maintenance of equipment in the post-warranty period and corresponding budget lines. The maintenance strategy following the expiration of the warranty envisages a minimum of three-year contracts to be signed with engineering companies accredited by representatives of manufacturers companies.  It is worth mentioning that the country has sufficient number of certified radiologists, specialized in computed tomography and engineers for the maintenance of CT devices, who are present in all oblast’ cities and cities of republican significance, update their licenses and undergo training courses. Following the MoH order, the healthcare facilities allocate one percent of their annual budget for the personnel continuing education and specialization, including training sessions for radiologists and biomedical engineers in the field of computed tomography. The radiology departments of six medical universities offer specialization and continuous education courses in the CT field. As per the country regulation, all physicians offering CT scans must have a certificate of admission to work and renew it every five years. Similarly, it refers to biomedical engineers servicing CT devices.  In connection with the rationale above, the CCM and NTP request one 160-slice computed tomography scanner to be purchased from allocation of C19RM supplementary funds and be placed at the National Scientific Center of Phthisiopulmonology. |
| ***Expected Outcome*** | Implementation of the measures will contribute to: (i) enhanced material and technical base of the NSCP; and (ii) enhanced detection of lung changes among patients with pulmonary diseases, including TB, COVID-19, bacteriological pneumonia, and post COVID-19 and TB complications. |
| ***Expected Investment*** | Expected cost of the activity is US $1,305,298.40 |

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| 1. **COVID-19-related risk mitigation measures for programs to fight HIV/AIDS, tuberculosis, and malaria** | |
| ***Intervention & Key activities*** | ***Mitigation for HIV programs***   1. *[Enter key activity names in a prioritized order – starting with the highest priority activities]* |
| ***Rationale*** | *[Enter a brief rationale for prioritizing these activities]* |
| ***Expected Outcome*** | *[Describe the effect of this intervention/key activities on key affected populations and/or health systems]* |
| ***Expected Investment*** | *[Indicate the proposed Global Fund funding amount for this intervention]* |

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| ***Intervention & Key activities*** | ***Mitigation for TB programs***  **Activities:**   1. **Procurement of the GeneXpert equipment** |
| ***Rationale*** | As described in section 1.1, in 2020 there was a significant reduction in the number of new TB infections in Kazakhstan. The total number of registered new and relapsed cases in the civilian and penitentiary sectors made up 9,434 compared to 12,345 patients in 2019 or declined by 23.5%. TB notification decreased from 66.7 in 2019 to 50.3 in 2020 per 100,000 population. Along with this, the RR/MDR-TB notifications showed the largest shortfalls compared with 2019 data: 4,779 RR/MDR-TB cases, including 206 with XDR-TB were registered in 2020 versus to 6,210 RR/MDR-TB cases, including 348 with XDR-TB in 2019, representing 23% decrease. Despite of this reduction, the share of patients with RR/MDR-TB remains high in Kazakhstan, forming half of all registered TB cases in the country. A certain portion of the observed difference for both DS and DR-TB can be attributed to the missed cases.  Ensuring universal access to diagnosis and treatment of all forms of TB, including rifampicin-resistant and multidrug-resistant TB (RR/MDR-TB), for the entire population are the primary objectives of the NTP in Kazakhstan. Timely TB diagnosis, with rapid and full detection of the resistance profile, provides for early initiation of optimal treatment in people with TB, thus attaining the targets of the WHO’ End TB Strategy and the commitments for TB diagnosis and treatment taken by the Heads of States at the High-Level Meeting on Tuberculosis of the 73rd Session of the United Nations General Assembly held in September 2018.  The introduction of rapid molecular diagnostics (RMDs) (GeneXpert technology) in Kazakhstan started in 2012. By the end of 2017, there were 56 GeneXpert machines operated in the country, mainly at the NSCP, penitentiary sector, and at the level of regional TB Centers.  In 2018, the NTP and the Stop TB Partnership assessed the country's needs in GeneXpert MTB/RIF tool to ensure universal access of people with suspected TB to molecular diagnostic testing and make it a primary method for diagnosis of tuberculosis. Based on the assessment’ findings, the average distance from district centers and small towns to regional centers is 203.3 ± 140.4 km. Only 11.5% of TB basic management units (BMU) were located within 50 km distance to oblast centers, while for three-fourths of the BMU (135 out of 182, or 74.2%), the distance to the oblast center was over 100 km, and for 79 districts (43.4%) it exceeded 200 km. Almost half (49.4%) of the population of all districts and small towns resided in areas where TB units were at distances of over 200 km from the oblast center and 75.8%- more than 100 km. The study concluded that out of 209 TB units[[20]](#footnote-21) in the civilian sector in total, 60 units (28.7%) are considered not to be in need of GeneXpert instruments, and their needs would be covered by referral arrangements (transportation of specimens to either oblast laboratories or to nearby districts); other 33 units (15.8%) have sufficient number of GeneXpert machines, eight units (3.8%) have GeneXpert but require additional machines, and 108 TB units (51.7% of total) do not have GeneXpert instruments and are in need of them. The needs in the number of additional GeneXpert instruments that are to be supplied to provide for universal coverage with molecular testing, were calculated on the basis of the estimated number of tests needed for each BMU and took account of the distances to the regional laboratories and potential alternative referral points. As a result, the number of GeneXpert instruments needed in Kazakhstan was estimated at 166 in total (civilian sector only, excluding the National Reference Laboratory and AIDS Centers).  With the support of international partners (the GF and USAID), additional GeneXpert machines were procured and installed in civil sector' health facilities, improving access to the service and minimized the average distance for sputum samples transportation from the Rayons to Oblast/ inter-district GeneXpert laboratories that is made up 99 km, from a minimum of 29 km to a maximum of 183 km. From Table 1 below, there are twelve regions, where the maximum distance between the healthcare facility and GeneXpert laboratory exceeds 100 km.  **Table 1. Average distance between Rayons and GeneXpert laboratories, by Oblasts of Kazakhstan**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Oblasts** | **Average distance in km** | | | | **average** | **min** | **max** | | 1 | Akmola | 110 | 51 | 165 | | 2 | Aktobe | 123 | 44 | 341 | | 3 | Almaty | 71 | 15 | 150 | | 4 | Atyrau | 80 | 80 | 80 | | 5 | Eas Kazakhstan | 86 | 30 | 150 | | 6 | Karaganda | 121 | 20 | 260 | | 7 | Kostanai | 136 | 3 | 240 | | 8 | Mangistau | 97 | 13 | 158 | | 9 | Zhambyl | 68 | 28 | 110 | | 10 | North Kazakhstan | 166 | 14 | 338 | | 11 | Kyzylorda | 56 | 32 | 79 | | 12 | Pavlodar | 108 | 20 | 200 | | 13 | West Kazakhstan | 89 | 30 | 163 | | 14 | Turkestan | 72 | 23 | 130 | |  | **Average** | **99** | **29** | **183** |   Currently, the TB laboratory network includes 118 laboratories with 122 GeneXpert instruments (304 active modules) (except those at the NRL): 87 machines are placed at the PHC level, 27 - in the TB facilities, one in the AIDS Prevention Center, and three in the penitentiary system. This has resulted in a steady increase in GeneXpert MTB/RIF tests performed from 14,500 in 2013 to 78,723 in 2020. The molecular diagnostic testing coverage of estimated TB suspects was enhanced from 68% in 2018 to 89% in 2020 (Figure 5).  **Figure 5. Total number and proportion of TB suspects investigated by GeneXpert MTB/RIF technology (2018-6 months of 2021), and number of GeneXpert MTB/RIF tests performed in Kazakhstan, 2013 – 6 months of 2021**    Though the total number of GeneXpert MTB/RIF tests grew in 2020 despite the pandemic, at present certain testing limitations non-related to COVID-19 are caused by the necessity to transport sputum to regional and interregional laboratories, where GeneXpert systems are placed. The transportation of sputum samples is performed on average twice a week, and less frequently during the wintertime, as weather conditions create difficulties in regular delivery of specimens. With the remark, Kazakhstan is the ninth largest country globally by land area of 2,724,900 sq. km. It experiences an extreme continental climate in most of the territory, with cold winters with temperatures reaching minus 52°C. During long winter months, the transportation within many regions of the country is becoming sharply limited or even closed.  Based on all the above, to address the needs gap as the difference between the current 122 and estimated requirement of 166 machines to ensure universal access to GeneXpert MTB/RIF diagnostic testing, as well as to enhance the finding of missed TB cases caused by the COVID-19 pandemic, the NTP is requesting to purchase from the supplementary funding source:   * 20 units of 10-color module of GeneXpert machine in four-module configuration for bacteriological laboratories; and * three-year warranty for each GeneXpert system.   The planned procurement aligns with the WHO latest recommendations, assessment carried out by the WHO Green Light Committee's mission that highlighted the need to consider the countrywide introduction of Xpert XDR technology, and national protocols and algorithms for screening persons with suspected tuberculosis. Importantly, besides rapid detection of resistance to second-line drugs, rollout of RMDs will build up multiplexing diagnostic capacities and facilitate bidirectional screening and testing for TB and COVID, as well as integration of diagnostic services for HIV, hepatitis C and other infections, thus strengthening the health system’s pandemic preparedness and response capabilities. The GF’ list of SARS-CoV-2 Diagnostic test kits and equipment eligible for procurement according to the Board decision on additional support for country responses to COVID-19 was updated early in October 2021, allowing the use of Xpert® Xpress SARS-CoV-2 with GeneXpert Dx 6- and 10-color optical modules.[[21]](#footnote-22)  The NTP anticipates that expanding the GeneXpert network in the country will allow for reaching universal coverage of all presumptive TB cases by RMDs as the initial diagnostic test for TB and DR-TB. It will play a key role in optimizing the TB care delivery system by bringing services closer to patients, based on people's needs and a patient-centered approach, as well as improving referrals, decreasing diagnostic and treatment delays, and reducing the costs associated with specimens’ transportation to regional and inter-district laboratories. |
| ***Expected Outcome*** | Implementation of the measures will contribute to: (i) enhanced material and technical base of the laboratories in detecting and screening for TB; (ii) progress towards universal access of TB suspects to the GeneXpert diagnostic testing; and (iii) improved detection of RR and XDR-TB resistant forms. |
| ***Expected Investment*** | Expected cost of the activity is US$604,457.49. |

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| ***Intervention & Key activities*** | ***Mitigation for Malaria programs***   1. *[Enter key activity names in a prioritized order – starting with the highest priority activities]* |
| ***Rationale*** | *[Enter a brief rationale for prioritizing these activities]* |
| ***Expected Outcome*** | *[Describe the effect of this intervention/key activities on key affected populations and/or health systems]* |
| ***Expected Investment*** | *[Indicate the proposed Global Fund funding amount for this intervention]* |

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| 1. **Expanded reinforcement of key aspects of health systems and community-led response systems** | |
| ***Intervention & Key activities*** | *[Enter intervention name in line with the Modular Framework]*   1. *[Enter key activity names in a prioritized order – starting with the highest priority activities]* |
| ***Rationale*** | *[Enter a brief rationale for prioritizing these activities]* |
| ***Expected Outcome*** | *[Describe the effect of this intervention/key activities on key affected populations and/or health systems]* |
| ***Expected Investment*** | *[Indicate the proposed Global Fund funding amount for this intervention]* |

## Program Implementation Arrangements

3.1 Describe the following:

**Implementation Arrangement:** Entities (Principal Recipients, Sub-recipients, and other implementing entities) responsible for managing the components requested under the Supplementary Funding Request.

Measures put in place to ensure **efficient program delivery**.

1. **Health products management:** planned mechanisms for the procurement of COVID-19 health products. Describe entities responsible for forecasting/quantification, procurement, storage and distribution and monitoring of supply availability and delivery of COVID-19-specific health products to beneficiaries and service delivery sites (and clarify if these are different from current service delivery points for HIV, TB and malaria). Please include a summary of any foreseen in-country supply chain risks, including any regulatory barriers.

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| The Global Fund pooled procurement mechanism is expected to apply for the purchasing of SARS-CoV-2 Ag Rapid Tests and GeneXpert cartridges for detection of the SARS-CoV-2. The proposal for the direct purchasing of 10-colour module GeneXpert systems in four-module configuration from the Stop TB Partnership Global Drug Facility (GDF) is discussed and will be agreed with the Global Fund.  Given that computed tomography scanning system is not available on the wambo.org, it is suggested to go through the local procurement mechanism as the device is registered in the country and can be purchased through competitive bidding. The NCSP as Principal Recipient (PR) of supplementary funds will refer to International and the GF requirements related to Quality Assurance of health products. Beyond the product' technical specification that shall be in conformity with the WHO recommended technical specifications for procurement of CT scanning system, the following tasks will be outlined in terms of reference of the bidding documents:   * CT system complete installation, * startup and adjustment, * retraining of personnel, * two-year maintenance, and * three-year factory warranty.   The GF-funded Projects Implementation Unit (PIU/GF) will do local procurement per GF’s approved procedures and operation manual. The bidding documents will be agreed upon with the GF procurement specialists and the LFA. The competitive tender process will be carried out under the direct supervision of the LFA. To invite local companies to participate, the tendering documentation and the composition of the Tender Committee will be defined by the NSCP Director’ order. The anticipated custom clearance and in-country logistic spending are foreseen in the application budget. The PR will assure logistic for the equipment delivery and custom clearance.  The product distribution will be made based on the NSCP Director’s order and in accordance with the requests received from the beneficiary institutions. Twenty units of 10-colour module GeneXpert systems in four-module configuration will be distributed to beneficiary organizations:   * regional bacteriological reference laboratories (14 units); * bacteriological laboratory at the TB Center located in Semey city (one unit); * bacteriological laboratory at the TB Center located in Talgar city (one unit); * bacteriological laboratory at the TB Center located in Almaty (one unit); * bacteriological laboratory at the TB Center located in Nur-Sultan (one unit); * bacteriological laboratory at the NSCP (one unit), * bacteriological laboratory at Penitentiary Committee of Kazakhstan's Ministry of Interior (one unit).   The rapid tests will be distributed to regional TB Centers, TB and HIV NGOs, and PHC facilities as per the distribution plan agreed with the MoH and the NSCP. GeneXpert cartridges for SARS-CoV-2 detection will be delivered to the authorized bacteriological laboratories at the TB Centers and NSCP. And, 160-slice computed tomography scanner will be placed at the NSCP.  The health products can be stored at the NSCP warehouse for further distribution to the sites as per the distribution plan. The accounting department at the PIU/GF will prepare all the necessary documents, and the logistics company hired under the current grants will deliver products procured at the specified addresses.  The PR will conduct the monitoring of supply availability and delivery of COVID-19 specific health products to service delivery sites. Additionally, the regional health departments will do inspection on the medical equipment exploitation through their regular monitoring mechanism. The monitoring and evaluation of the use of SARS-CoV-2 Ag rapid tests will be carried out within the frame of the current GF grants based on the methodology approved by the GF. The oversight of C19RM full funding request together with supplementary grant will be done by the CCM Oversight Committee is as per the annual plans.  There might be some custom clearance delay in releasing the goods imported from abroad due to complicated procedures. According to the Rules[[22]](#footnote-23) for the import of medicines and medical devices into the territory of the Republic of Kazakhstan, it is necessary to obtain an import permit. This procedure takes from 45 to 60 working days. However, the supplier can provide documents for the goods (certificate of origin, certificate of analysis, information on weight, etc.) after the goods have been produced and ready for shipment. After receiving permission to import into the country, the PIU/GF will prepare letters to the MoH and the Ministry of Finance of the Republic of Kazakhstan to exempt the goods from taxes and customs duties. This procedure usually takes about 30-40 days. Accordingly, upon the arrival of the goods in Kazakhstan, it may take from two to four months to complete customs clearance, if the supplier does not provide documents for the goods on time. Meanwhile, the goods can be placed in the temporary storage of the customs control.  As to importation of health products into the territory of Kazakhstan, which are not registered in the country, it is required the PR to enter into the process of reconciliation with the Committee on Medical Goods and Services, and Pharmaceutical Control at the MoH. |

## Attachments Supporting the C19RM 2021 Supplementary Funding Request

Use the list below to verify the completeness of your application package

|  |  |
| --- | --- |
|  | C19RM Funding Request Form |
|  | C19RM Consolidated Budget |
|  | C19RM Health Product Management Template (HPMT) per grant |
|  | С19RM GX procurement forecast |
|  | CCM Endorsement of the C19RM Supplementary Funding Request[[23]](#footnote-24) |
|  | Endorsement by the national COVID-19 response coordinating body of the COVID-19 control and containment interventions of the C19RM Supplementary Funding Request (*where relevant*) |
|  | Assessment of needs in Xpert MTB/RIF instruments and tests in Kazakhstan |

1. <https://www.worldometers.info/coronavirus/country/kazakhstan/>. Accessed on 23 September 2021. [↑](#footnote-ref-2)
2. <https://ourworldindata.org/coronavirus/country/kazakhstan>. Accessed on 23 September 2021. [↑](#footnote-ref-3)
3. https://ourworldindata.org/grapher/tests-per-confirmed-case-daily-smoothed?tab=table [↑](#footnote-ref-4)
4. https://ourworldindata.org/coronavirus/country/kazakhstan [↑](#footnote-ref-5)
5. Resolution of the Chief State Sanitary Doctor “About changes and additions in the decree of the Chief State Sanitary Doctor of the Republic of Kazakhstan”. April 2021. Available from: https://online.zakon.kz/Document/?doc\_id=36903226#pos=177;-25 [↑](#footnote-ref-6)
6. https://www.coronavirus2020.kz/ru/skol-ko-kazahstancev-poluchili-vakcinu-ot-koronavirusa\_a3839933 . Accessed on 23 September 2021. [↑](#footnote-ref-7)
7. However, it is difficult to say what part of TB notification rate reduction in 2020 was caused by TB services disruptions due to lockdowns and preventive measures imposed, including improved IPC practices, as the last might have an impact also on TB transmission. [↑](#footnote-ref-8)
8. <https://worldhealthorg.shinyapps.io/tb_pronto/>. [↑](#footnote-ref-9)
9. Ibid. [↑](#footnote-ref-10)
10. <https://www.theglobalfund.org/en/covid-19/response-mechanism/how-to-apply/> [↑](#footnote-ref-11)
11. Resolution of the Chief State Sanitary Doctor “About changes and additions in the decree of the Chief State Sanitary Doctor of the Republic of Kazakhstan”. April 2021. Available from: https://online.zakon.kz/Document/?doc\_id=36903226#pos=177;-25. [↑](#footnote-ref-12)
12. WHO Interim guidance, “Priority medical devices list for the COVID-19 response and associated technical specifications. 19 November 2020. Available from: <https://apps.who.int/iris/handle/10665/336745>. [↑](#footnote-ref-13)
13. G. D. Rubin, C. J. Ryerson, L. B. Haramati et al., “The role of chest imaging in patient management during the COVID-19 pandemic,” Chest, vol. 158, no. 1, pp. 106–116, 2020. [↑](#footnote-ref-14)
14. F. Shi, J. Wang, J. Shi et al., “Review of artificial intelligence techniques in imaging data acquisition, segmentation, and diagnosis for COVID-19,” IEEE Reviews in Biomedical Engineering, vol. 14, pp. 4–15, 2021. [↑](#footnote-ref-15)
15. Samuel YS Wong, KO Kwok, “Role of computed tomography imaging in identifying COVID-19 cases,” Hong Kong Med J 2020;26:167–8. Available from: <https://doi.org/10.12809/hkmj205099> . [↑](#footnote-ref-16)
16. T. Ai, Z. Yang, H. Hou et al., “Correlation of chest CTand RT-PCR testing for coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases,” Radiology, vol. 296, no. 2, pp. E32–E40, 2020. [↑](#footnote-ref-17)
17. Y. Fang, H. Zhang, J. Xie et al., “Sensitivity of chest CT for COVID-19: comparison to RT-PCR,” Radiology, vol. 296, no. 2, pp. E115–E117, 2020. [↑](#footnote-ref-18)
18. Xie X, Zhong Z, Zhao W, Zheng C, Wang F, Liu J. Chest CT for typical 2019-nCoV pneumonia: relationship to negative RT-PCR testing. Radiology 2020 Feb 12. Epub ahead of print. [↑](#footnote-ref-19)
19. Ai T, Yang Z, Hou H, et al. Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases. Radiology 2020 Feb 26. Epub ahead of print. [↑](#footnote-ref-20)
20. This number includes oblast centers and urban districts in the cities of republican subordination. [↑](#footnote-ref-21)
21. Available from: https://www.theglobalfund.org/media/9629/covid19\_diagnosticproducts\_list\_en.pdf. [↑](#footnote-ref-22)
22. The MoH Order No. 668 “On approval of the Rules for the import into the territory of the Republic of Kazakhstan of medicines and medical devices and export from the territory of the Republic of Kazakhstan of medicines and medical devices, and the provision of the state service "Issuance of an agreement and (or) permit for the import (export) of registered and not registered medicines and medical devices”. June, 2020. [↑](#footnote-ref-23)
23. <https://www.theglobalfund.org/en/funding-model/applying/materials/> [↑](#footnote-ref-24)