TEMPLATE

Supporting Narrative for Theory of Change for Gavi Support Request

1. Situational analysis: key findings (maximum five pages)

1.1. The current state of our immunization system

To track national, regional, and global goals for immunization and control of infectious diseases prevented by vaccines, the National Program "Immunoprophylaxis" for 2020-2024 is synchronized with the national strategy of the health system of the Program of the Government of the Kyrgyz Republic for the protection of public health and the development of the health care system for 2019-2030 "Healthy people - a prosperous country,"; aligned with the European Immunization Program 2030; integrated with the Sustainable Development Goals (SDG 3) to ensure healthy lives and promote well-being for all at all ages by the 2030 year. To establish a coordinated, integrated approach to building coherent and effective immunization service delivery, the Program works closely with other public health programs, and primary health care - maternal and child health, tuberculosis and HIV/AIDS, and potentially related activities are presented as mutually beneficial, and cost-effective for managing human and financial resources.

Through this approach, the country has achieved and maintained high immunization coverage rates of over 95% over the years, and immunization efforts have met the SDG target.

However, despite high immunization coverage rates, measles outbreaks were reported in the country in 2014 and 2016/17. The immunization program recognizes that inequalities in routine vaccination coverage led to these outbreaks. Actual immunization coverage in a country may be lower than reported administrative coverage.

The Immunization Coverage Assessment (MICS) conducted in 2018 confirmed the gap between registered (official) and actual immunization coverage. The study showed that coverage of children aged 12-23 months with DTP-3 is 83.9%, and coverage with the measles vaccine (MCV1) is 62.3%. The study also showed that coverage with the complete vaccination package (i.e., vaccination with all major vaccines) was 51.3% among children in the 12–23-month age group and 76.4% among children in the 24–35-month age group.

To identify the causes of inequality, measures have been taken to develop, plan and implement targeted measures to impact vulnerable populations. In 2018, the Ministry of Health, with the technical support of WHO, conducted a study on the immunization coverage of children in families of internal migrants in Bishkek and Osh. The study found that only 45.2% and 70.9% of migrant children in the 12–35-month age group were fully vaccinated in Bishkek and Osh, respectively[1]. When three doses of pneumococcal vaccine (PCV) were added as a criterion for complete vaccination, the fully vaccinated proportion dropped to 41.3% and 68.0% in the two cities,

[1] A fully vaccinated child in the 12-to-35-month age group is one who has received one dose of BCG and MMR vaccines and three doses of Penta and Polio vaccines.

respectively. Thus, the assessed data revealed inconsistencies in reported data and inequalities in vaccination coverage, which required action to improve the quality of data on immunization.

In addition, the functioning of the immunization service was disrupted during the COVID-19 pandemic, resulting in a decline in DPT3 coverage to 87% in 2020, which only partially recovered to 89% in 2021 (WHO and UNICEF immunization coverage estimates, rev. 2020)[2][3]. Similarly, reported MCV2 coverage declined to 93% in 2020, recovering to 97% in 2021. The 2020 coverage estimates for Kyrgyzstan show the lowest reported coverage for most antigens in the last two decades.

The factors underlying the disparity in access to immunization in the country are complex and involve more than just health services, requiring a multisectoral approach to addressing this problem. The universal scheme for providing immunization services as part of routine immunization is currently insufficient to cover the needs of populations with difficulties in accessing vaccination and will need additional support and resources. An analysis of the available evidence has identified the following factors that influence inequities in access to immunization services:

(a) Lack of effective accounting and registration systems for vaccination of the migrating population at the PHC level;
(b) Problems with access to medical care due to the lack of registration at the place of residence and registration in a medical institution;
(c) Problems with access to the medical care of the population due to geographical and social inaccessibility;
(d) Weak mechanism/capacity of HS and health professionals to track and identify children with missed opportunities;
(e) Shortage/absence of medical personnel in health organizations providing immunization services;
(f) Problems with access to medical care due to the limited opportunities for vulnerable groups of the population (children with special needs, children from a family with one parent, children of labor migrants left in the care of relatives);
(g) Poor quality of services evident to mothers/caregivers, low access to immunization services due to the physical capacity of PHC;
(h) Hesitancy or hesitation about immunization due to low public awareness of immunization issues;
(i) Refusal of preventive vaccinations due to lack of motivation;
(j) Problems with access to medical care for the population located in the zone of border conflicts;

Ministry of Health jointly with WHO and UNICEF, with the support of the HSS-2 grant, based on the analysis of data from several studies on the quantitative and qualitative immunization coverage of internal urban migrants (WHO), revision of the legislative framework for the provision

[2] WHO and UNICEF Immunization Coverage Estimates: 2020 Revision, 8 July 2021
[3] World Health Organization. Immunization Kyrgyzstan 2021: Country profile. July 6, 2021. Available at https://www.who.int/publications/m/item/immunization-kgz-2022-country-profile.

of services to internal migrants (IPI), identification of vulnerable groups among Urban Migrants (JSI), Behavioral Research (KOP, UNICEF) strengthened the capacity of healthcare organizations at the PHC level to ensure equal and fair access to essential maternal and child health services, including immunization of urban migrants and hard-to-reach populations in all regions of the country.

With financial support from GAVI and partners, the Government of Kyrgyzstan has made significant investments to improve the effectiveness of the immunization program at all levels, including at the level of service delivery.

Provision of services

Key Factors - Strengths

49 FMCs (Family Medicine Centre) provide primary health care for the population of the republic, and 29 CGMP (Center for General Medical Practice), in which 701 FGPs (Family Group Practice), 17 independent legal FGPs, and 1049 FAPs (Feldsher-Obstetrical Ambulatory Points) operate (source MoH KR). The private sector is also involved in delivering public health services and is represented by seven private maternity clinics that report to the national immunization reporting system.

Based on the findings and recommendations of the studies, the NIP has identified a number of specific targeted interventions to ensure high-quality and equitable access to immunization services:

(a) A list of priority hard-to-reach settlements for 2019-2021 has been identified;
(b) Provided access to immunization through an innovative approach - mobile teams; 44 mobile teams were formed that provided immunization services in 99 settlements in 2018 and 198 in 2019 from the list approved by the Ministry of Health. The WB contribution to the nationwide DPT3 coverage in 2018-2019 grew steadily and amounted to 1.8% and 2.1%, respectively. The results achieved under the HSS-2 grant for sustainable development continue in the HSS-3 grant and will continue until the country can fund program components;
(c) Improving management practices and strengthening supportive oversight of immunization service delivery;
(d) Use integrated supportive surveillance of maternal and child health and immunization services in PHC facilities. This guide has been provided to all PHC facilities;
(e) Revision of the NLA regarding the provision of services for internal migrants. Bylaws relating to internal migrants require further development and cross-sectoral interagency cooperation;
(f) The home visiting system is a robust mechanism for identifying missed opportunities that should be included as an intervention to identify and register children with zero doses and defer/deny vaccination;
(g) An integrated approach to managing childhood illnesses, with a focus on immunization, is also a strategy for an integrated approach to identifying missed opportunities for immunization, which will generally focus on increasing vaccination coverage;
(h) The guidelines for medical contraindications to vaccination were developed;

(i) Training of health workers to ensure effective counseling of parents on the quality and safety of vaccines and the prevention of adverse events after immunization;
(j) Expanding the routine immunization schedule with new vaccines: rotavirus vaccine was introduced in December 2019, followed by the 2nd dose of inactivated polio vaccine in 2022, vaccination of 11-year-old adolescent girls against the human papillomavirus is planned for November 2022, as recommended by SAGE and NITAG. And also, in the first year of implementation, a cohort of teenage girls 12-14 years of age will be included.

Key Drivers - Challenges

Despite good overall immunization coverage across the country, some challenges remain that prevented the European Vaccine Action Plan (EVAP) targets of 95% national coverage and 90% regional coverage of all antigens in routine immunization. According to the MICS 2018, coverage of the DTP-3 vaccine at the national level was 86.4%.

With the global spread of the virus that causes the disease COVID-19 and the ongoing pandemic, there is a recurrent risk of disruption to routine immunization activities, both due to the burden on the healthcare system due to COVID-19 and the reduced demand for vaccination due to the requirement to physical distancing or unwillingness to participate in vaccination on the part of the population. Suspension of immunization, even for short periods, increases the number of vulnerable people and the likelihood of outbreaks of vaccine-preventable diseases (VPD), particularly measles.

Various surveys conducted in the country identified several reasons why the National Immunization Program (NIP) failed to achieve its coverage targets (in descending order of priority):

- COVID-19 Pandemic - Resource Mobilization for COVID-19 Response
- Personnel shortage.
- Weak mechanism/capacity of HCs and health professionals to track and identify children with missed opportunities;
- Lack of effective record-keeping and registration systems for vaccinations (especially among migrants) at the PHC level
- Problems with access to the medical care of the population due to geographical and social inaccessibility;
- Poor quality of services evident to mothers/caregivers, low access to immunization services due to physical availability of PHC.
- Hesitancy or hesitation about immunization (denials) when accessing immunization services
- Low public awareness of vaccination, its benefits, and the safety of vaccines.

Efforts made and impact

Mitigation of negative impacts on routine immunization.

(a) A national Action Plan for routine and catch-up immunization in the context of COVID-19 has been prepared per WHO recommendations. The potential of mobile teams, as a continuation of the initiated HSS-2 activities, Goal 3 continues to be used in the context of COVID-19 to ensure the continuity of routine immunization services. Personal protective equipment was purchased for medical workers of stationary vaccination stations and mobile teams.

(b) Provided access to immunization through an innovative approach - the use of mobile teams; the Ministry of Health formed 44 mobile teams that provided immunization services in 99 localities in 2018 and 198 in 2019 from the list approved by the Ministry of Health. WB's contribution to nationwide DPT3 coverage in 2018-2019 steadily grew and amounted to 1.8% and 2.1%, respectively. The results achieved under the HSS-2 grant for sustainability are continued in the HSS-3 grant and will continue until the country can finance the Program Components.

(c) Developed guidance on medical contraindications for vaccination and an integrated method for supportive supervision of maternal and child health and immunization services in PHC facilities. In order to increase the capacity of health professionals to provide effective parental counseling the guide has been provided to all PHCs.

(d) As part of Gavi's 25% additional funding, home visit activities in 2020-2021 have begun their implementation;

(e) The system of home visits and supported supervisory visits implemented through the revision and Adaptation of the NAP and the provision of training for health workers to provide effective counseling to parents on the quality and safety of vaccines and the prevention of adverse events after immunization

1.2. Root cause analysis for reaching zero-dose, under-immunized, and missed communities

The target group is born/surviving infants throughout the territory of the Kyrgyz Republic, who are subject to mandatory routine vaccination according to the preventive vaccination calendar.

Data from several sources are used to analyze births and surviving children:

(a) National Statistical Committee of the Kyrgyz Republic (NSC KR). A population census has been conducted every ten years since 1999. The last population census was supposed to end in 2019, but due to the COVID-19 pandemic, it was postponed for two years and began its implementation only on March 25, 2022. The National Statistical Committee annually recalculates statistical data, considering birth and death rates. Statistical forms of accounting and reporting (forms 5 and 6) for the registration of preventive vaccinations have been approved, which are filled out by all healthcare organizations involved in immunization, regardless of their departmental affiliation and form of ownership, which reflects Information on born and surviving children.

(b) eHealth Center of the Ministry of Health of the Kyrgyz Republic is a single information space of the healthcare system that provides for the collection, processing, compilation, and analysis of medical and statistical Information and its presentation to users;

(c) Medical census, data from primary health care organizations are aggregated in the form of Information on the age composition of the population and the Perspective Plan of preventive vaccinations at the level of the Republican Center for Immunoprophylaxis of the Ministry of Health;

The situational analysis covers all vaccination points on the territory of the Kyrgyz Republic, located in 7 regions and cities of the republican destination Bishkek and Osh, including data on remote settlements. Statistical data from the eHealth Center (eHC) of the Ministry of Health of the Kyrgyz Republic for 2021 were used. According to triangulation analysis, eHC data from the Ministry of Health of the Kyrgyz Republic are the most accurate.

The discrepancy between the administrative data and the study data is explained by the calendar dates of the study, as well as the imperfection of the mechanisms for determining the denominator. The primary source of the denominator used to calculate coverage is the health census, which is cross-checked with other sources during the calendar year (E-Health Center of the Ministry of Health of the Kyrgyz Republic, National Statistical Committee). There are missed opportunities for internally displaced persons who are not included in the denominator in the administrative territories throughout the year. The last two sources are also imperfect in providing a valid denominator (WHO mission report on Information flows, 2017).

A triangulation analysis of born and surviving infants over the past five years was conducted to identify discrepancies between different data sources. The country results showed a little discrepancy between the three data sources. Looking at the sub-national level statistics, one can see significant differences that are several times higher than the 10% threshold. Such discrepancies are explained by the fact that the National Statistical Committee relies on data from the registry offices under the State Registration Service. The registry offices consider the born child only after registration and receipt of a birth certificate. If the parents did not register the child with the registry office, then this child remains unaccounted for by the statistical authorities. Accordingly, the National Statistical Committee cannot be considered a reliable source of birth and death records. In the information portal of the Center for e-Health, the data comes through the local network "Medstat," respectively, and the data can be considered more accurate. According to the analysis of population growth rates, it can be seen that the population of Kyrgyzstan annually increases by 1.02 times, taking into account the birth and death rates of the population. The approximate average number of deaths of children annually is 15 deaths of children under the age of 1 year per 1,000 births.

According to the e-health center of the Ministry of Health of the Kyrgyz Republic, in 2021, the number of surviving infants was 151,927 children. This figure is calculated from official sources, considering the number of live births minus the number of deaths for 2021.

- Officially vaccinated with PENTA 1 – 132,114 children
- Officially vaccinated with PENTA 3 – 134,097 children

According to official data, the number of children with a zero dose is 19,813, 13% of the number of surviving infants. However, considering the number of zero-dose children who dropped out of routine immunization, the total number of zero-dose children was **35,595.**

The number of children who did not complete the Penta-3 vaccination course (under-immunized) is **4,468**.

The estimated number of children is less than the actual number at the locality/district/oblast level. At this stage, there is no system to track whether all children are registered with the local health facility.

(a) 39% of children with 0 doses are localized in Bishkek city, 8,941 children. 453 children did not complete the vaccination course;

(b) In the city of Osh, 2,222 children remained unvaccinated, which is 26%. Children with incomplete vaccination, 405 people;

(c) In the Chui region, according to statistics, 6,122 children were identified with 0 doses. The main proportion of children with 0 doses was detected in the Alamudun, Chui, and Zhaiyl districts and Tokmok. A high percentage of children with 0 doses was recorded in the Chui region, which accounted for 30% of the total number of children with 0 doses. There were 1,082 children with incomplete vaccination. The main share was found in the Issyk-Ata, Zhaiyl, Alamudunsky, Panfilovsky districts, and the city of Tokmok;

(d) 4,244 children were recorded as children at 0 dose, 27% of the survivors in the Batken region. A high proportion of children with a 0 dose was recorded in the city of Kyzyl-Kiya, which amounted to 61% of the total number of children with a 0 dose throughout the Batken region. 12% of children with 0 doses were detected in Batken and the Kadamdai and Leilek regions, including Sulukta and Razzakov (Isfana). Children with incomplete vaccination were identified in Kyzyl-Kiya and Razzakov (Isfana) cities and Batken and Leilek regions. Their total number is 245 children;

(e) 2,902 children were registered in the Jalal-Abad region. The main share of children with 0 doses of vaccination is localized in the city of Jalal-Abad and Kerben. Also, children not covered by vaccination are localized in the cities of Karakul, Tash-Kumyr, in Ala-Buka, Nooken, and Toguztorous regions. The total number of partially vaccinated children was 898. The main share is localized in Aksy, Ala-Buka, and Bazarkorgon regions;

(f) 6,595 children with 0 doses were identified in the Osh region. Among the vaccinated, 867 children with incomplete vaccination were identified;

(g) 1,305 children with 0 doses of vaccination were identified in the Talas region. The identified children live in the city of Talas. The total number of children with incomplete vaccination was 181, and the main share is localized in Karabuurinsky. Bakayata, Talas districts;

(h) In the Naryn region, 1,676 children were identified as not being vaccinated. These children are localized in the city of Naryn, and the total number of children with an incomplete dose was 86;

(i) In the Issyk-Kul region, the total number of children with 0 doses of vaccination was 1,928, 22%. The main share of unvaccinated children was found in Karakol and Balykchy. The total number of children with an incomplete dose was 251;

Figure 1. Percentage of children with zero doses by region

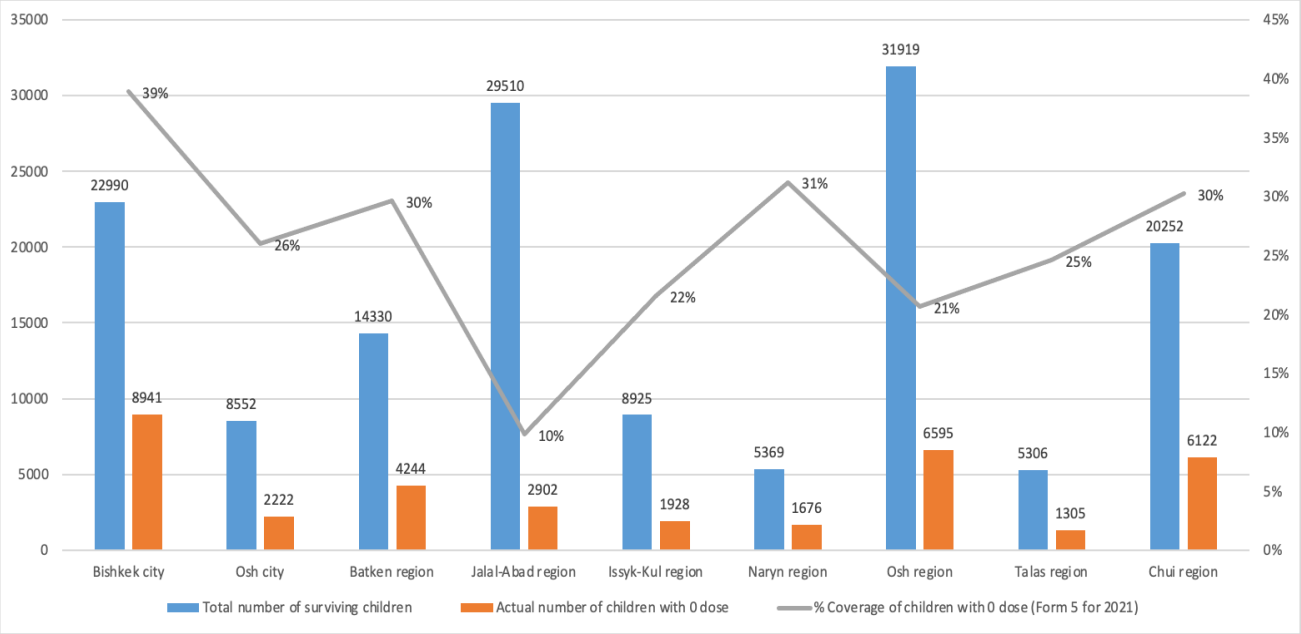
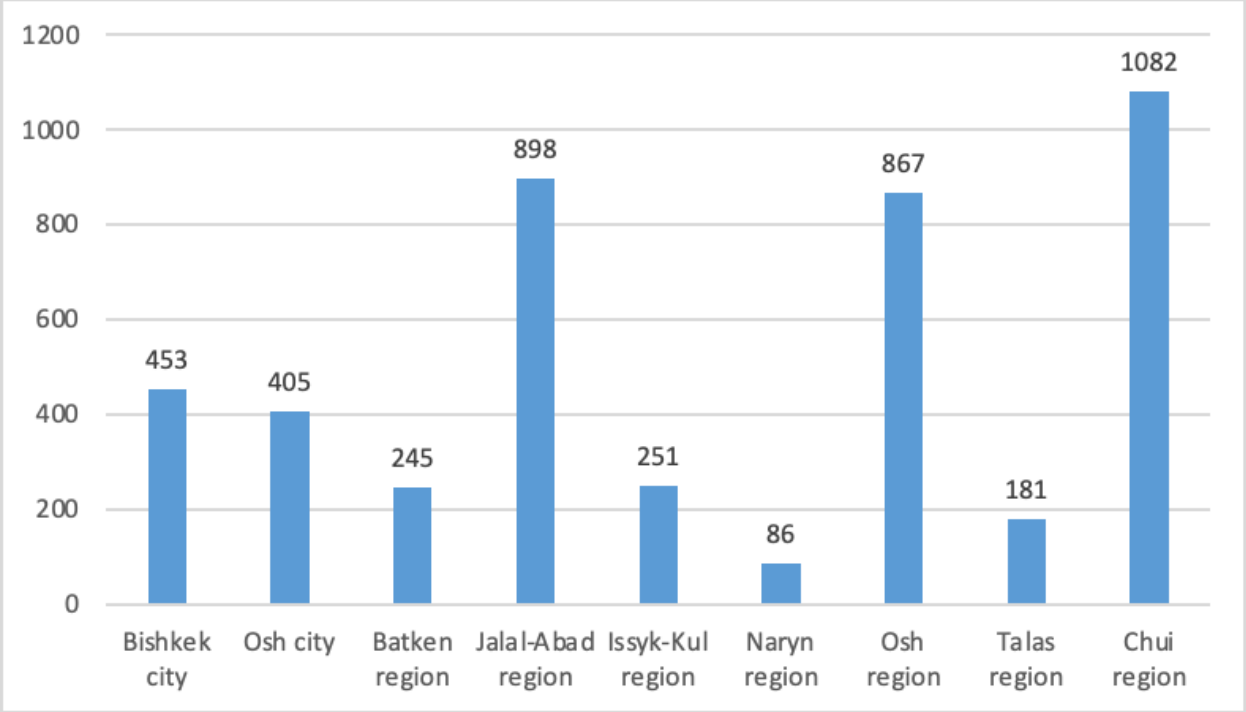


Figure 2. Number of under-immunized children



Why were zero-dose and under-immunized children not vaccinated?

(a) Lack of effective accounting and registration systems for vaccination of the migrating population at the PHC level;

(b) The accumulation of a susceptible group (non-immune layer) of children from among unrecorded internal migrants in the regions, especially in new buildings in Bishkek and the border areas of the Chui region, led to periodic outbreaks of measles in 2017-2020. An epidemiological analysis of the age distribution of measles cases in these areas over the past 2 years shows that 33% are from 1 to 5 years of age; these are children with a zero dose. According to the NSC KR statistics, the highest intensity of departure for interregional migration was noted from the Naryn region - 8.9 people, then from Talas (5.4 people per 1000 population) and Issyk-Kul regions (4.8 people per 1000 population). The distribution of the migration flow falls on Bishkek, Osh, and Chui regions);

(c) Problems with access to medical care due to lack of registration at the place of residence and registration in a medical institution A review of legislation related to the registration of urban migrants, and their access to health services, carried out as part of the Adaptation of the Immunization Program (API, WHO) project in 2018 showed that the percentage of refusals to provide free medical care, including immunization, based on the lack of registration/propiska is 41.7%, which is a reasonably high figure;

(d) The most significant number of unregistered children occurs among children under one year of age (96.9%) (East COMP, 2018); the lowest rate of unregistered children is in Chui

oblast (96.8%) and Osh city (97.5%). Also, data on the discrepancy between the number of people registered in new buildings and those assigned to medical institutions (from 8305 to 47130 residents of new buildings in Bishkek remain without registration/propiska) allow us to determine the possible scale of the problem - the likely number of people who may face various obstacles in access to basic social services in Bishkek;

(e) Imperfection of bylaws on population migration. Quantitative and qualitative studies show that one of the three risk groups not receiving vaccinations is families not included in the state registration. Although the state, to monitor and regulate internal migration processes, carries out the procedure for registering the population, the procedure and its complexity create grounds for the informal stay of citizens in the territory. With the existing registration institution, citizens prefer to find informal work, pay for medical services, and receive educational benefits;

(f) As a result, statistics differ significantly from reality, leading to misallocation of the budget and ineffective policies. The legal framework covers only registered citizens, while most internal migrants are unregistered and remain outside the scope of public services. Officially, healthcare systems cannot provide medical care to illegal migrants (unregistered at the place of stay);

(g) Problems with access to the medical care of the population due to geographical and social inaccessibility.
Based on the regional breakdown, Bishkek and Chui oblast (about 60-71%) have lower coverage than other regions where coverage exceeds 90%. Bishkek is the republic's capital, and the main influx of people from the southern and northern regions of the republic is concentrated. There are 49 new buildings around Bishkek where residents have not received official registration for home ownership.

(h) The weak mechanism/capacity of HCs and healthcare professionals to track and identify children with missed opportunities due to parental hesitancy and immunization-skeptical parental responses remain a problem across the country and lead to increased dropout rates, contributing to an increase in missed opportunities. According to COMP research, in 2018 - DTP-1 (90.6%) and DTP-3 (86.4%) dropout was 4.2%, and for PVP-1 (90.4%) and PVP-3 (79.7%) - 10.7%. Data from surveys of urban migrant coverage also showed that missed vaccination opportunities (OSV) were the highest between PCV1-PCV3, reaching 29.6% in Bishkek and 11.1% in Osh. It also points to the limited ability of the immunization service to identify and track children between 2 and 12 months of age according to the prescribed immunization schedule.

(i) Shortage/absence of medical personnel in health organizations providing immunization services. "The formation of resources for the health care system" is defined as a priority during the implementation of the national health system strategy of the Program of the Government of the Kyrgyz Republic on health protection and development of the health care system for 2019-2030 "Healthy people - a prosperous country" states that "lack of human resources for health in rural areas and remote areas of the Kyrgyz Republic

continues to worsen." This is a significant factor (physical ability) that is an obstacle for the population to receive immunization services due to the lack of a health worker;

(j) Reforming the health system at the primary health care level, emphasizing the autonomy of health organizations (reducing the number of trained health workers with vaccine knowledge and skills), and delegating these functions to untrained professionals;

(k) The COVID-19 pandemic - as a priority in the health system in 2020-2021, has had a negative impact and risk on the Immunization Program as a whole, as the capacity of health organizations and medical workers providing immunization services has been directed to respond to COVID-19;

(l) Problems with access to medical care due to the limited opportunities for vulnerable groups of the population (children with special needs, children from a family with one parent, and children of labor migrants left in the care of relatives); The problem lies in the access of children from a family of labor migrants. Children remain in the care of guardians. According to a survey of knowledge, attitudes, and immunization practices in Kyrgyzstan, the proportion of fully vaccinated children under the age of five living in families of labor migrants was 82 percent, while in Kyrgyzstan as a whole this figure was 90 percent;

(m) The category of migrant children (children of legitimate citizens of Kyrgyzstan) is separate and needs special treatment from the state with specialized social support programs - this is a particular risk group. The legislation does not provide benefits for the provision of medical services to children of internal migrants. Neglect and insufficient investment in the health of migrant children are contrary to international law and adversely affect the country's socio-economic development. Since the foundations of life are laid in childhood, it is vital to pay special attention to the rights of migrant children. Investing in the health of migrant children can also help reduce the spread of infectious diseases

Officially registered internal or external migrants are entitled to a basic range of social services, including public health care. However, many migrants do not have registration at their temporary residence; therefore, they cannot exercise these rights in practice. A study conducted by the Child Protection Center of Kyrgyzstan identified the main barriers to accessing health services. The most common problems faced by children of migrants when applying for medical services are the lack of registration at the residence and registration in a medical institution, lack of documents (passports, birth certificates), frequent changes of residence, low incomes, and legal illiteracy. These factors prevent migrant children from accessing health care. In addition, some population groups, including children, are at a disadvantage in terms of access to health care. This applies to populations living in remote areas and those not working in the formal labor market who do not have access to government benefits and basic services.

(n) Poor quality of services evident to mothers/carers, low access to immunization services due to the physical capacity of PHC;

Access to quality PHC services in rural and remote areas is limited. According to the results of a joint study of community needs in 11 pilot districts within the framework of the project "The Voice of the Rural Health Committee and the Social Responsibility of Local Governments on the Determinants of the Health of Rural Communities in the Kyrgyz Republic" (Swiss / DPI, 2017), the key issues were: Primary health care, due to reception mainly only in the morning, low qualification and lack of staff, remoteness and transport costs (64%);

(o) As confirmed by the results of research reports from WHO, JSI, and UNICEF (KAP, 2018) - the opinion of medical professionals and other target groups regarding the main problem in urban areas is the same. This problem is a long wait in the queue. Its presence was noted by 35 percent of specialists working in urban new buildings. The main problem for rural areas is the remoteness of vaccination rooms. A quarter of medical workers practicing in villages believe parents face this problem. It is especially acute in the southern region, where the existence of this problem was noted by 32 percent of medical workers. A fifth of medical workers believe parents experience difficulties due to the lack of public transport, which is also more typical for rural areas. However, only 1 percent of mothers living in rural areas face this problem. The proportion of fathers living in the northern region who are satisfied with the time spent in line is 64 percent, while in the southern region, the figure was 80 percent;

(p) Hesitancy or doubt about immunization due to low public awareness of immunization issues;

(q) Refusal of preventive vaccinations due to lack of motivation.
The number of children whose parents refuse to be immunized is rising. This poses a significant threat to public health and a high risk of outbreaks of vaccine-preventable infections. Refusal of preventive vaccinations due to religious beliefs represents a significant proportion of the total number of refusals, among other reasons. Religious leaders play an important role in fathers' decisions to vaccinate their children. Only 68 percent of religious leaders believe vaccines are safe for children's health. It should be noted that the most critical of vaccinations are religious leaders living in urban areas and those living in the northern region. Thus, 41 percent of respondents living in the northern region expressed disagreement that vaccines are safe for children's health.

(r) Problems with access to medical care for the population located in the zone of border conflicts.
Due to periodically erupting border conflicts between Kyrgyzstan and Tajikistan, a constant movement of internal migrants from one settlement to another has been recorded. In 2021, an influx of internal migrants was recorded in the Chui region;

Ministry of Health, in order to identify risk groups and adapt the Immunization Program with the technical support of WHO through the HSS-2 grant, Gavi initiated 3 (three) studies among urban migrants in the territory of Bishkek and Osh, as well as a study of knowledge, attitudes, and practice of immunization in Kyrgyzstan.

1. The Immunization Program Adaptation Focus Group Study (2017), drawing on proven community behavior analysis approaches and social science research (TIP) methods, identified problems with the registration of internal migrants, resulting in efficient and effective interventions to strengthen the physical empowerment of migrants through raising awareness of their rights.

2. A study on vaccination coverage among migrant populations in Bishkek and Osh cities (2018) DTP3 coverage in Bishkek among migrants living in settlements was 52.5% (compared to 69.7% of the local population) and 79. 3% in Osh for the same group (among locals - 98.2%). Administrative coverage based on available vaccination records for migrants in Bishkek was 51% and in Osh was 77%. It is clear that, despite all efforts, there are visible problems regarding the fair provision of services for migrants living in settlements in the cities of Bishkek and Osh.

3. Technical assistance to improve the delivery of vaccination services to the urban poor, JSI, 2018 – which also showed the problem with urban migrants and vulnerable groups.

Service accessibility and friendliness

(a) There is limited access to quality PHC services and laboratory and diagnostic services in rural and remote areas. Based on the results of a joint study of community needs in 11 pilot districts within the framework of the Project "Voice of the rural health committee and social accountability of local governments on the determinants of health of rural communities in the Kyrgyz Republic" (Swiss / DPI, 2017), the key problems were:
   (i) Primary health care, due to reception mainly only in the morning hours, low qualification and lack of staff, remoteness and transport costs (64%);
   (ii) the limited radius of service and unsatisfactory work of the ambulance service (hereinafter referred to as the EMS), problems with the transportation of patients (55%);
   (iii) difficulties in accessing laboratory and diagnostic services due to remoteness, the need for re-examination, and the associated transport costs (18%).

   Weak material and technical equipment, outdated infrastructure, and limited availability of healthcare technologies at the PHC level do not allow providing the population served with comprehensive, high-quality medical services (Program of the Government of the Kyrgyz Republic for the protection of public health and the development of the healthcare system for 2019-2030 "A healthy person is a prosperous country")

(b) What is also confirmed by the results of research reports from WHO, JSI, and UNICEF (KAP, 2018) - the opinion of medical workers and other target groups regarding the main problem in urban areas is the same. This problem is a long wait in the queue. Its presence was noted by 35 percent of specialists working in urban new buildings. The main problem for rural areas is the remoteness of vaccination rooms. A quarter of medical workers practicing in villages believe that parents face this problem. It is especially acute in the

southern region, where the presence of this problem was noted by 32 percent of medical workers. A fifth of medical workers believe that parents experience difficulties due to the lack of public transport, which is also more typical for rural areas. However, only 1 percent of mothers living in rural areas indicated that they faced this problem. The proportion of fathers living in the northern region who are satisfied with the time spent waiting in line is 64 percent, while in the southern region, the indicator was 80 percent.

Supply chain

(a) There has been no shortage of EPI vaccines in the past 12 months, with the exception of the rotavirus vaccine. This did not disrupt routine immunization services, as children who had missed vaccinations were vaccinated upon the arrival of the vaccine. The interruption of the vaccine was within three months due to a delay in the supply of vaccines.

(b) There are no problems with the provision of immunization services due to the lack of non-functionality of refrigeration equipment in the country.

Human Resources for Health

(a) A common problem in the healthcare system is the shortage of family doctors, especially in rural areas. There is one family doctor per 18 thousand people. The shortage of human resources for health care in rural areas and remote areas of the Kyrgyz Republic continues to worsen.

(b) 1730 vaccinators with secondary medical education provide immunization services; however, in the context of optimizing the healthcare system, the rates of vaccination nurses were reduced, and powers were transferred to family nurses.

Behavioral and social drivers

(a) A KAP survey conducted in Kyrgyzstan in 2018 did not reveal any significant differences in knowledge, attitudes, and vaccination practices between parents (“mothers” and “fathers”) of children under five years of age. However, the knowledge of "mothers" and "fathers" in the national immunization schedule differed significantly. Only 10% of fathers confirmed that they had heard of the national immunization schedule.

(b) Religious leaders play an important role in fathers' decision to vaccinate their children. Only 68 percent of religious leaders believe that vaccines are safe for children's health. It should be noted that the most critical in relation to vaccination are religious leaders living in urban areas, as well as those living in the northern region. Thus, 41 percent of

respondents living in the northern region expressed their disagreement that vaccines are safe for children's health.

(c) The number of mothers aware of the national immunization schedule was four times higher. The results of the survey confirmed that mothers are the main responsibilities for children, including responsibility for childcare and immunization, although fathers have a significant influence on mothers regarding children's vaccinations. 64% of mothers turn to other people for advice when making a decision about vaccination.

Gender-related barriers

(a) Maternal autonomy in decision making

36% of mothers make decisions regarding the vaccination of their children on their own, without consulting anyone. Moreover, in Naryn and Issyk-Kul regions, they make up the majority - 81 and 71 percent, respectively, while in other regions, there are less than half of such mothers. The proportion of mothers who do not consult with anyone when making decisions about vaccinating their children is relatively high among residents of new buildings in Bishkek - 51 percent, while in the city as a whole, this figure is only 25 percent. The process of making decisions about the vaccination of children in Kyrgyz and Uzbek families is somewhat different. Among the representatives of the Kyrgyz nationality, 39 percent of mothers independently make such decisions, while among the representatives of the Uzbek nationality - 19 percent.

There were no differences in this indicator for other socio-demographic characteristics. The results of a KAP survey in Kyrgyzstan in 2018 showed that the husband is the most influential person in making this decision. More than half of women in registered marriages (52%) and about a third of women in unregistered marriages or divorcees ask their husband's opinions when deciding whether to vaccinate their children.

(b) Geographical/physical accessibility challenges faced by mothers

An analysis of coverage data shows that equity issues still exist in the provision of immunization services in Kyrgyzstan. Based on MICS 2018 results, DPT3 coverage in urban areas is lower (79.2%) than in rural areas (89.9%).

Based on the regional breakdown, Bishkek and Chui oblast (about 60-71%) have lower coverage than other regions where coverage is above 90%. Around Bishkek, there are 49 new buildings in which internal migrants are concentrated. The territories of the Chui region bordering Bishkek is another place where internal migrants are concentrated. The study also showed little gender disparity in the provision of immunization services. DTP-3 coverage was 88.9% among girls and 84.1% among boys.

(c) Mother's education/literacy level

According to the KAP survey in Kyrgyzstan in 2018:

- There was no significant difference in the level of education of mothers whose children received DTP-3 (the difference was only 1.3%).

- However, the difference in wealth coverage is quite significant and reaches 5.6% (by wealth quintiles) in DPT3 coverage among the richest (76.4%) and middle poor (87.7%), while there was almost no difference among the wealthiest quintiles. poor (87.5%) and moderately poor. Perhaps this difference can be explained by greater access to the Internet and existing negative information.

2. Country vision & Gavi support request (maximum 10 pages)

2.1. Description of the overall country vision

With this Gavi support, the country expects to reduce 80% of zero-dose and partially vaccinated children by 2025. This goal is aligned with the National Immunization Program strategy for 2020-2024 - Chapter 3. Ensure immunization coverage of at least 95% of children in the target cohort by increasing the availability of immunization services through the provision of adapted, innovative strategies:

(a) Identification of the underserved population and the reasons for their disparity

(b) Develop and implement tailored, innovative strategies to address underserved populations and barriers to accessing immunization services;

(c) Establish a system and capacity to ensure equitable access to immunization (creating electronic systems for registration of vaccinations, which were an integral part of electronic systems for immunization).

The main principles of the Program include the following:

1) Fairness and accessibility - the benefits of vaccination are fairly distributed to all people, regardless of social status and gender differences;

2) Partnership and responsibility - all immunization tasks are agreed upon and carried out by the Ministry of Health of the Kyrgyz Republic and international partners on a joint basis, by the adopted agreements European Immunization Program 2030 - integration of immunization into general health systems. Immunization Collaboration in a Global Interdependence

Main types of interventions

1) improvement of the system of registration of the population living in the service area of primary health care organizations (hereinafter referred to as PHC);

2) identification of population groups living in hard-to-reach areas, "risk" groups, and identification of the reasons for their lack of vaccination;

3) optimization of the system for planning and distribution of vaccine preparations, as well as the schedule for the provision of immunization services at the level of primary health care organizations;

4) adaptation of the immunization program to the needs of this category of the population;

5) Implementation of mobile clinic visits in target areas for the provision of integrated health services, with a focus on zero doses, under-immunized children, and missed communities;

6) conducting supplementary immunization activities (SIAs) against poliomyelitis, measles, rubella, and diphtheria among unvaccinated and/or incompletely vaccinated children, adolescents, and adults

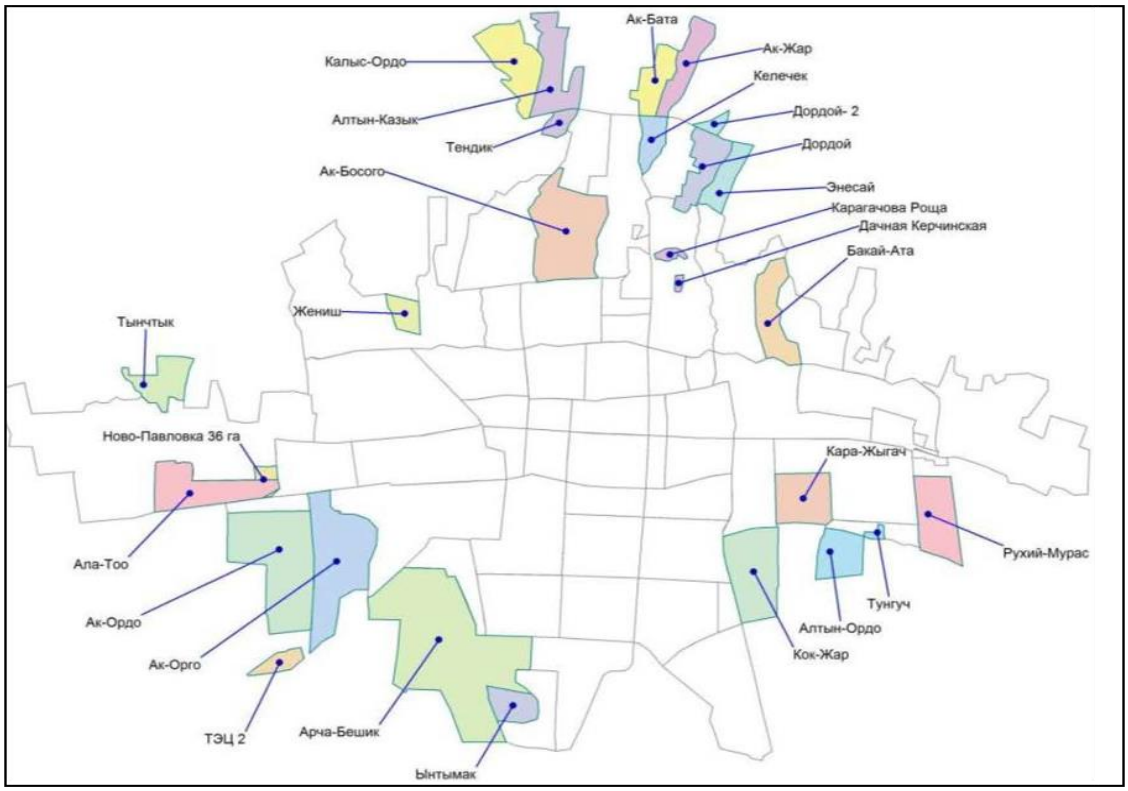
2.2. Targeting Gavi support to specific geographies and sub-populations

Based on a situational analysis, Gavi's support will target specific geographic regions and population subgroups.

1. Criteria for geographic targeting (geotargeting) - programmatic focus on areas with a high concentration of children with a zero dose and under-immunized children. Priority areas awaiting Gavi EAF support are:

(a) Bishkek, where n-8941 (39%) of the 0-dose children are localized out of the total number of surviving infants. Children who did not complete the course of vaccination were 453. In the city's vicinity, there is a growing population of illegal settlers, consisting of migrants who have arrived from rural areas. No information is available on the demographic composition of these illegal settlements, and some settlements cannot be registered with public health services. Many residents of such settlements cannot afford to pay rent for housing in more prosperous places. According to the Bishkek mayor's office, there are currently 49 settlements or "novostroikas" around the capital, with more than 250,000 people, more than 20 of which are informal settlements without legal registration. Some of these settlements have existed since 1995 and today are no longer considered "migrants" and have access to public health services. Twenty-five of these 49 residential areas have been recognized as legal settlements since 2005. Three settlements do not have legal status. The state cannot legalize them because the neighborhood they are located in is not intended for living. These areas do not meet environmental, sanitary, and hygienic standards. Such settlements include Altyn-Kazyk, located near the city's landfill (for waste disposal); CHPP-2, located on the alienated territory of CHPP-2; and Zher Yntymagy, adjacent to the territory of the cemetery. Focus group discussions were held with the residents of these three settlements. Obtaining more accurate demographic and qualitative Information about the internal migrant communities surrounding Bishkek will require much more extensive qualitative and quantitative research.

Figure 1. The city of Bishkek, map of documented rural-urban communities



Source: The American University of Central Asia, Department of Anthropology

(b) Chui region, where n-6122 (30%) children with 0 doses of the total number of surviving infants are localized. The main proportion of children with 0 doses was detected in the Alamudun, Chui, and Zhaiyl districts and the city of Tokmok. Under-immunized children amounted to 1082 people. The main share was found in the Issyk-Ata and Zhaiyl regions, Alamudunsky, Panfilovsky districts, and the city of Tokmok.

(c) Osh oblast, where n-6,595 (20.6%) 0-dose children are localized, 867 were under-immunized.

(d) Batken oblast, where n-4244 (30%) of the total number of surviving infants with 0 doses are also localized throughout the Batken region. 12% of children with 0 doses were detected in the city of Batken and the Kadamjai and Leilek regions, including the towns of Sulukta and Razzakov (Isfana).

(e) Jalal-Abad oblast, where n-2902 (30%) of 0-doses children are localized out of the total number of surviving infants. The main share of children with 0 doses of vaccination is localized in the city of Jalal-Abad and the city of Kerben. The total number of under-immunized children was 898. The main share is localized in Aksy, Ala-Buka, and Bazar-Korgon regions.

Geographic targeting in areas with low concentrations of zero doses children and high levels of routine coverage (Talas, Naryn, I-Kul oblasts) - will be less relevant, so coverage of children with 0 doses in these areas will be strengthened under existing routine immunization mechanisms.

2. Criteria for social targeting - programmatic targeting in areas with a high concentration of families with zero-dose children and under-immunized children.

Priority areas awaiting Gavi EAF support are:

- Families omitted during state registration (migrant families, migrants who arbitrarily settled in new buildings);
- Families living in hard-to-reach areas;
- Socially vulnerable children (children with special needs; single-parent families, children of labor migrants, and unemployed families); and
- Parents and guardians who doubt vaccination: those who did not bring their child for vaccination.

3. Efforts to coordinate the direction of investments with other partners and/or donors in specific areas/populations.

Many previous activities planned under HSS-2 have been carried over into the HSS-3 grant proposal. The Country Application for Strengthening the Health System (hereinafter HSS-3), which has begun its implementation, is aimed at the t**arget areas of Bishkek, Alamedin, and Sokuluk districts of Chui region, Suzak district of Jalal-Abad region.**

The rationale for the GAVI EAF investment lies in the sustainability and expansion of the initiated activities to fill the gaps described earlier, ensuring synergy and complementarity of Gavi's joint investments (HSS-3, CCEOP-2, and NVG); the result will be aimed at expanding and achieving in the target areas a high enrollment of zero dose and under-immunized children.

2.3. Tailoring of Gavi support request

Program strategies based on a high concentration of zero-dose children and high planned coverage: will be directed to the priority geographical areas of Bishkek (urban new buildings), Alamedin, Chui, Zhayil districts, and Tokmok city of the Chui region. Osh region (Uzgen and Kara-Suu districts), Batken region (with a focus on border conflict areas), Jalal-Abad, Kerben, Ak-Syi, Ala-Bukinsky, and Bazar-Korgon districts of Jalal-Abad region.

The WHO Tailoring Immunization Programmes (TIP) methodology and the Immunization Missed Opportunities (IMO) methodology will be used to tailor approaches to reach zero-dose children and missed communities for different geographic regions or populations appropriate to the country contexts to cover zero doses and under-immunized children.

Approaches will be gender-sensitive and/or gender-transformative.

Interventions:

(a) Integration of immunization with other essential health services/programs, including integration of COVID-19 vaccination at the primary health care level;

(b) The home visiting system, nutrition programs, and deworming programs may will also be involved in the identification of children with zero doses;

(a) Involvement of non-medical actors:

- Municipal and territorial departments in cooperation with internal affairs bodies on registration of citizens and families with children with a zero dose;
- Social protection authorities providing social services, village health committees, mosques, madrasas, and other public organizations in the target areas;

(b) Technical support from Gavi Alliance and extended Partners/CSOs is expected for activities beyond government agencies;

(c) To reach children with zero doses in humanitarian and conflict areas, the country's proposal intends to strengthen partnerships with humanitarian organizations, including:

- National Red Crescent Society (NRCS).
- International Organization for Migration (IOM),
- United Nations Development Program (UNDP).
- Office of the United Nations High Commissioner for Refugees (UNHCR),
- United Nations Children's Fund (UNICEF)
- World Health Organization (WHO)

2.4. Monitoring, Measurement, & Evaluation

As a result of the implementation of the grant and the Immunization Program, it is planned to achieve the following results:

1. DPT1 coverage in target areas;
2. DPT3 coverage in target areas;
3. The number of children who did not receive a single dose of vaccine;
4. Percentage of districts with updated micro plans that include activities to increase immunization coverage;
5. Percentage of mobile sessions for hard-to-reach areas and internal migrants in Bishkek and Osh;

2.5. Ensuring political will

(a) To track national, regional, and global targets for immunization and control of vaccine-preventable diseases to provide people-centered approaches and broad access to vaccination, the National Program "Immunoprophylaxis" for 2020-2024, and the Program of the Government of the Kyrgyz Republic for the protection Health and Health System Development 2019-2030 "Healthy People, Prosperous Country," were aligned with the European Vaccine Action Plan (EVAP) and integrated with the Sustainable Development Goals (SDG 3) – "Ensuring healthy lifestyles and promoting well-being for everyone at any age by 2030".

(b) All the Ministry of Health of the Kyrgyz Republic partners is working to support this commitment.

3. How did you prioritize interventions to be supported by Gavi, as reflected in the Theory of Change? (3-5 pages)

The Gavi tool - Zero Dose Analysis Map was used to conduct a quick situational analysis, national statistical data, and the results of studies conducted in the country were used.

Key indicators were assessed for children at zero doses, under-immunized, and missed cohorts of children.

Further, using the HCD approach, interactive workshops were held with key partners and stakeholders at both the national and subnational levels to provide systems thinking on the findings of the situation analysis and propose actionable solutions, taking into account potential problems and required resources and stakeholders. The result was a Theory of Change and a set of priority interventions to reach the missing communities with Gavi's requested support. The Country Application (EAF) will go in synergy with Gavi's two main streams of funding, namely Health System Strengthening (HSS-3), Partnering Framework (PEF), and Country-Focused Assistance (TCA 2022-2025).

To adapt the approaches to the coverage of zero doses and under-immunized children for various geographical regions or groups of the population, the country's context will be used to adapt the WHO Tailoring Immunization Programmes (TIP) and the methodology for Immunization Missed Opportunities (MOM).

Support for the implementation of other health interventions such as electronic vaccination registries, periodic routine immunization intensification (PIRI), and second year of life (2YL) vaccinations are taken into account.

The following types of Gavi investment areas have been selected:

Provision of services;

1. Service Delivery
2. Human resources services for healthcare;
3. Health information systems, monitoring, and education;
4. Demand generation and community engagement;
5. Governance, Policy, Strategic Planning, and Programme Management

Key activities:

(a) Adaptation of regulatory and legal documentation regarding the provision of immunization services for target populations and territories;

(b) To perform a study to determine the geolocation of 0 doses and under-immunized children for the whole country before and after the intervention of the EAF grant.

(c) Implement community-based approaches to increase the frequency and regularity of comprehensive outreach immunization activities

(d) Implementation of mobile clinic visits in target areas for the provision of integrated health services, with a focus on zero doses, under-immunized children, and missed communities;

(e) Provide time-limited funding to deploy and retain health workers to scale up services to reach zero-dose, under-immunized children and missed communities at the target area level.

(f) Strengthening the information system to identify and reach zero-dose and under-immunized children;

(g) Activate the participation of local health workers, LSGs, VHCs, NGOs/CSOs, and influencers in areas with a high number of missed communities, zero-dose children, and under-immunized children, through activities aimed at overcoming hesitancy and low confidence in vaccines, as well as removing negative gender norms in health systems.

(h) Activate advocacy for social and political commitment by collaborating with CSOs, CSOs, FBOs, and community activists and engaging with key ministries and parliamentarians to disseminate key advocacy messages and build political will for equitable immunization at all levels

(i) Use of non-financial incentives to increase motivation and behavior in the health workforce at the level of target areas

As part of the country's proposal, it is planned to strengthen partnerships with humanitarian organizations, including the National Red Crescent Society (INRCS), the International Organization for Migration (IOM), the United Nations Development Program (UNDP), the Office of the United Nations High Commissioner for Refugees (UNHCR), as well as the United Nations Children's Fund (UNICEF) and the World Health Organization - to reach children with zero doses in humanitarian and conflict areas.

The UN and its partners in Kyrgyzstan are working to achieve the Sustainable Development Goals to leave no one behind without immunization.

Through the Inter-Ministerial Coordinating Committee (ICC), synergies between government initiatives and donor support will be created, and this support will contribute to the achievement of the goals and activities outlined in the requested support.

The internal processes of human migration greatly complicate the quality of data in an immunization program. The migration of people, mainly from rural areas to cities, along with the lack of an electronic registration system for preventive vaccines, significantly complicates not only the quality of reporting data but also threatens the accuracy of vaccination of children, in particular when parents change their place of residence, there is no data on immunization of children. In such conditions, the child is considered unvaccinated and starts to receive the vaccine from scratch.

This situation can be corrected by introducing electronic systems for recording the vaccination coverage of children.