# KYRGYZSTAN

## Improving Routine Immunization Service Delivery to Urban Poor in Kyrgyzstan: Results of Situational Analysis

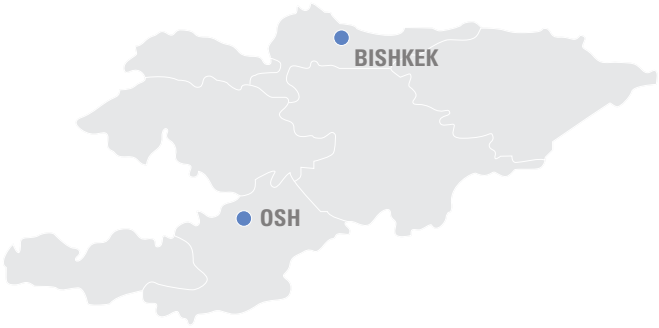
### INTRODUCTION

The population of Kyrgyzstan was estimated in 2017 at 6.1 million, approximately one-third of which reside in urban areas. Bishkek–the capital and largest city in Kyrgyzstan–has a population of approximately one million and is therefore home to approximately half of the country's urban population (National Statistical Committee of the Kyrgyz Republic).

Kyrgyzstan consistently registers immunization coverage of 90 percent or more for three doses of diphtheria, tetanus and pertussis (DTP). While national averages for DTP vaccination coverage are adequate, only 80.4 percent of two-year-old children were found to be fully immunized[1] (National Statistical Committee of the Kyrgyz Republic 2014). There are also concerns about "vaccine hesitancy," a growing mistrust of immunization and services among some parents, fueled by myths and lack of or misinformation.

Over the past ten years, there has been a large influx of migrants to Bishkek from the country's rural areas, creating a significant number of unofficial urban poor settlements surrounding the city that are home to as many as 250,000 people. The proportion of migrant and transient residents who may not be registered with the government health services is not known. At the same time, as many as 3 million Kyrgyz live outside the country working as migrant laborers, most of who live in Russia.

FIGURE 1: MAP OF KYRGYZ REPUBLIC METROPOLITAN CENTERS




A 2014 measles outbreak in Bishkek was linked to a strain circulating in Russian measles outbreaks. The external Kyrgyz population, which moves back and forth between countries, presents a significant challenge for improving urban immunization and increases potential for cross-border disease outbreak. Families and children may not be included in official government health service registration and therefore are overlooked in the provision of immunization services. The measles outbreak highlights the importance of ensuring that all children are protected against vaccine preventable diseases (VPD); and the high rates of migration make vaccination even more urgent.

Between January and July 2018, JSI Research & Training Institute, Inc. (JSI), in collaboration with local partners and the Republican Center for Immunoprophylaxis (RCI) conducted a situational analysis in Bishkek to identify potential factors contributing to low immunization rates in urban poor communities.

### DATA COLLECTION AND ANALYSIS

This urban immunization situational analysis used a mixed method approach for data collection. Existing tools and surveys were adapted and approved by the RCI. Quantitative information came from the 2013 Demographic Household Survey (DHS), the 2014 Multiple Indicator Cluster Survey (MICS), and 20 years of coverage and disease incidence reporting from the Ministry of Health's (MoH's) RCI, which oversees the country's immunization program. Further insight on the context of migrant communities was obtained through journalistic accounts on the types of struggles facing poor migrant communities and older caregivers (often grandmothers) acting as guardians while parents travel for work. These sources informed on potential barriers to access and utilization by migrant communities, given the limited official information available in these communities. The literature review and subsequent qualitative data collection were essential for providing insight into gaps in the available administrative data, which may not be giving a full picture of urban immunization coverage in Bishkek.

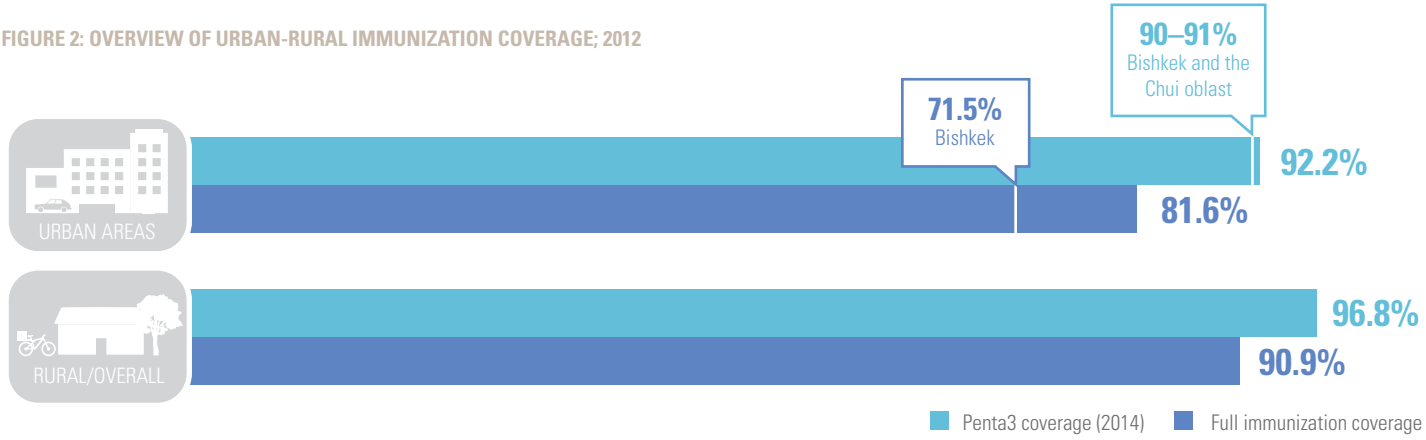
Focus group discussions were conducted by JSI with mothers from the general population, non-governmental organizations, health workers from family medical practices and family group practices, families with children of special needs, and families living in illegal settlements. The results of this situational analysis complemented the MoH and UNICEF immunization knowledge, attitudes, and practices (KAP) study conducted in Bishkek and Osh, 2017–2018.

### KEY FINDINGS: ACCESS AND UTILIZATION BARRIERS TO IMMUNIZATION SERVICES

Reported national immunization coverage for most antigens since 2010 for children under one year of age is consistently greater than 92% (National Statistical Committee, 2017). However, there was a recent decline in national immunization coverage; measles, mumps, and rubella (MMR) coverage declined from 99% in 2016 to 97% in 2017. In addition, coverage of essential vaccines in the second and third year of life is weaker. This trend is even more pronounced in urban areas, as compared to the National average. The 2014 MICS results show that Penta3 coverage is lower in

1 Refers to percentage of children age 24-35 months receiving all vaccinations recommended in the national immunization schedule by their first birthday and the second dose of measles by second birthday.

FIGURE 2: OVERVIEW OF URBAN-RURAL IMMUNIZATION COVERAGE; 2012




urban areas (92.2%) as compared to rural (96.8%), with major metropolitan areas like Bishkek and the Chui reporting Penta3 coverage around 90-91%, which is less than the regional average of above 95%.

Overall, vaccination coverage of most antigens was found to be higher in rural areas compared to that in urban areas (National Statistical Committee 2013). While Penta 1 coverage approaches 100% in most districts, the urban areas (Bishkek and Osh city especially) have the lowest coverage and a slighter higher drop-out between Penta 1 and Penta 3 doses, with Bishkek from 89% to 86% and Osh city from 94% to 90% (National Statistic Committee, 2014) (Figure 2). Similarly, vaccination coverage with MMR 1 for children under one appears to be declining in Bishkek Family Medical Centers. In 2012, immunization coverage dropped below 70% in Chui and Osh oblasts and in Bishkek city - areas with high internal migration from rural areas.

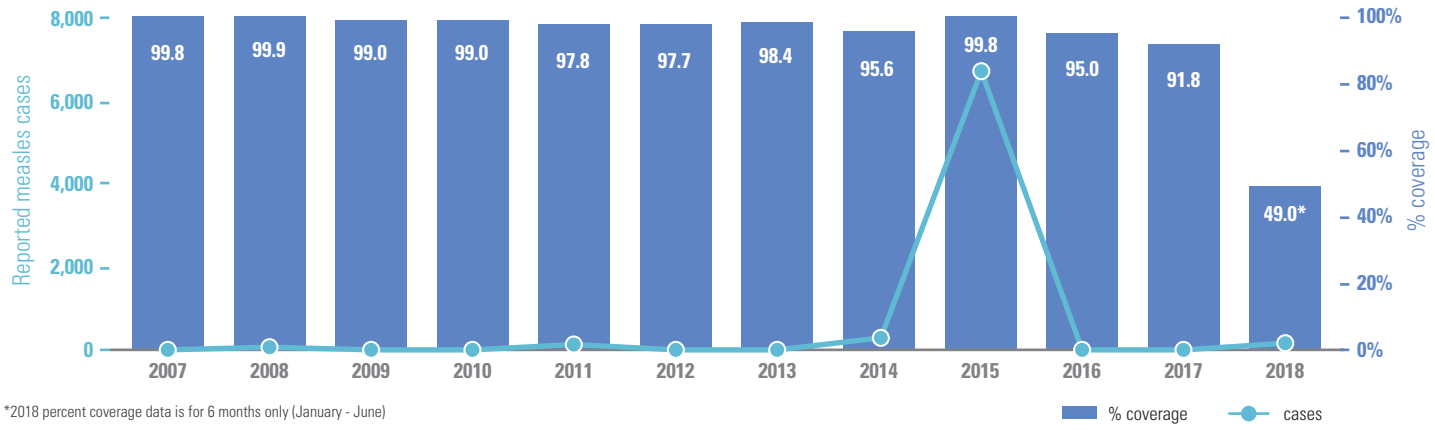
Despite the high reported coverage, an explosive measles outbreak occurred in Bishkek and Osh during 2014-15, during which more than 6,500 cases were reported in Bishkek alone, a large proportion of which were children under the age of 5 (Figure 3). Serologic studies on infected children suggested the virus may have come from Russia. The concurrent high reported annual coverage may indicate errors in calculation of coverage rates and the long term effect of low herd immunity for measles developing over the years. The recent measles outbreak is in contrast to the high reported measles immunization coverage for the previous eight years, highlighting the limitation of relying on aggregated coverage statistics for assessing the level of protection in communities against VPDs.

Bishkek City Health Services does not have the personnel to conduct thorough household registration, especially in newer migrant communities, and only registered children are included for planning and monitoring immunization services. Because the denominator used by the MoH to calculate immunization coverage rates may exclude children who are not registered with the government health system, reported immunization coverage for Bishkek may slightly overestimate the true proportion of children protected against VPDs in the urban setting.

**THE DENOMINATOR USED BY THE MOH TO CALCULATE IMMUNIZATION COVERAGE RATES MAY EXCLUDE CHILDREN WHO ARE NOT REGISTERED WITH THE GOVERNMENT HEALTH SYSTEM.**

The aggregated vaccination coverage rates reported in the MoH health information system do not allow for detecting pockets of under-immunized children and therefore may not reflect the actual vaccination status in a community. More localized, epidemiologic evidence is therefore needed to accurately define the high-risk urban pockets in Bishkek and other urban centers.

FIGURE 3: REPORTED MEASLES CASES AND MEASLES COVERAGE, BISHEK, 2007–2018




*2018 percent coverage data is for 6 months only (January - June)

**TABLE 1: BARRIERS AND CHALLENGES FOR URBAN IMMUNIZATION**

## ACCESS

## UTILIZATION

**BARRIERS AND CHALLENGES FOR URBAN IMMUNIZATION:**
planning and management of resources, availability of immunization services, community engagement and communication, quality of services, monitoring and data use, vaccine supply and cold chain, and leadership and governance

**Children not identified:**

- As many families are migrants, squatters, or transient, they may not be registered with the MoH.
- The lack of demographic data at the health facility level means that children may not appear in the catchment areas or in any denominator measure.
- Some migrants in peri-urban areas near Bishkek were unaware that they were eligible for government health services, including immunization.
- Some migrant children were missed for services because they did not reside in or return to an established health facility catchment area.

**Elderly caregivers:**

- Some caregivers, especially elderly relatives who may be caring for children while parents are working or traveling, may be reluctant to access services.
- Access to services is limited where facilities are inconveniently located, such as if travel is physically difficult or due to lack of transportation and/or traffic congestion.

**Security and "legality":**

- Lack of legal status in the country or other insecurity may threaten the ability or desire of vulnerable communities to access services.

**Vaccine Hesitancy:**

- Caregivers worry about the reliability of the cold chain and resulting potency and/or safety of vaccines, which may lead to refusals or high drop-out rates.
- Restrictive religious beliefs by some caregivers limit demand for vaccination services.
- Fear of negative side effects, often based on unfounded rumors or misinformation that are also spread via social media, acts as a deterrent to caregivers vaccinating children.
- Some mothers reported that health workers did not provide additional information or education to those who refused vaccination for their children.
- Some caregivers expressed distrust of free services, in terms of vaccines possibly being used for testing or not being of high quality.
- Some higher income groups also favored private facilities due to convenience (e.g. shorter waiting times) and better quality/reliability and notably, the private sector has a very minimal representation in terms of immunization service delivery.

**Transient populations:**
Squatter community participants indicated that they relied mostly on public health services, depending on what they could access, and some did not use any services due to lack of access.

**Stigma and discrimination:**
Vulnerable children with special needs / disabilities, single parent families, or unemployed families may face discrimination. Materials (especially printed) used for communication may not be understood by mothers.


Table 1 provides a snapshot of the main challenges and barriers to access and utilization of immunization services that were identified based on qualitative and quantitative data collected from the various sources noted previously.

## RECOMMENDATIONS AND PROPOSED ACTIONS

Based on observations emerging from JSI's situational analysis, some recommended next steps were developed through in-country discussions with partners and stakeholders, including the MoH and RCI. These strategies will need to be endorsed and implemented by the MoH and city health authorities using existing municipal funds to ensure they are sustainably country-driven.

The findings from this situational analysis, as well as the following recommendations and actions, must be further evaluated and prioritized for next steps by the RCI, together with the Bishkek City Health Services, health care providers, and selected community-based organization (CBOs) via a country-led round table forum. Such discussions should be conducted on a routine basis; the outcome of which will be a process of developing a comprehensive, long-term, urban immunization strategy.

This strategy should focus on reaching vulnerable communities and outline: a) how to provide routine immunization services for unregistered and transient communities, b) how to find and better monitor the immunization status for unregistered and temporary resident children, and c) communications and demand-creation activities. To ensure sustainability and ownership, the strategy should be incorporated into existing RCI plans and be coordinated with municipality administration - in collaboration with partners, nongovernmental organizations (NGOs), the private sector, and communities. It also should be linked with measles control efforts to ensure all children are reached and make use of surveillance data as a representation of gaps in urban immunization coverage. The plan should include broader health service and non-health advocacy efforts and also support the training of health workers to allow for better planning for outreach sessions.

PLANNING AND MANAGEMENT | HUMAN RESOURCES | ORGANIZATION/ SERVICE DELIVERY | LOGISTICS AND SUPPLIES | INVOLVEMENT OF THE COMMUNITY | HMIS AND MONITORING

## SHORT-TERM (<1 YEAR) ACTIONS TO OVERCOME IDENTIFIED BARRIERS

**Collaboration between in-country institutions:** The RCI and the Bishkek Health Promotion Center are the two main institutions which provide opportunities for collaboration in ongoing routine immunization health system strengthening within the urban context. In addition, the American University of Central Asia in Bishkek has initiated efforts on mapping the new settlements and squatter communities surrounding Bishkek. These initiatives provide an excellent opportunity for better defining the demographics and health service needs in these communities, and thereby developing an evidence-based immunization strategy.

**Engaging civil society:** A growing number of NGOs and civil society organizations (CSOs) that represent and address the needs of vulnerable urban communities (such as children with disabilities or those who may be discriminated against) should be engaged through roundtable discussions with the MoH and City Health Services to ensure that improvements in coverage also ensure equity in service delivery. This can be done through establishing and supporting active civil society groups to increase community representation at local levels, improve understanding of the needs of marginalized populations, and improve planning and budgeting. The MoH and City Health Services should act as the coordinating agency for these efforts, with dedicated, locally identified focal points in each community.

**Strengthen defaulter tracing:** In order to provide baseline data and trends as well as to evaluate the impact of the proposed strategies (such as new efforts aimed at strengthening communication about routine immunization), a mechanism to improve monitoring of vaccination "refusals" or drop-outs should be established at multiple levels. These data are intended to inform decision-making and prioritize certain communities or geographic areas.

**Increase capacity of health workers:** Additional skills enhancement, through on-the-job mentorship or supplementary training for outreach workers, is needed to build capacity on strategies and approaches for working with identified vulnerable communities.

## LONG-TERM (> 1 YEAR) ACTIONS TO OVERCOME BARRIERS

**Improve local communication to address vaccination hesitancy through ongoing social behavior change:** Communication with communities will greatly enhance broader scale communication initiatives, such as developing communication materials and using traditional and social media. In addition to media campaigns, interpersonal communication between and within groups such as health workers, mothers, caretakers and CBOs can effectively counter rumors and misinformation about associations between vaccines and disorders such as autism. An urban immunization communication strategy should outline how and when communities, NGOs, CSOs, the MoH, Bishkek Health Promotion Centers, Family Group Practice and Family Medicine Centre representatives, city government, social workers, the media, and the private sector can be included in crafting and delivering appropriate messages about the safety[2], benefits, and timing of vaccination[3].

**Improve denominator estimation:** More frequent (annual) house-to-house registration should be conducted on a regular basis by the MoH and involving city health officials and CBOs, to ensure that all urban communities are registered for immunization services.

**Improve immunization registration and tracking:** MoH and city authorities will need to develop, produce, and distribute an accurate and up-to-date immunization record for each child that caregivers can use and understand and that is valid and linked with immunization reporting at any health facility. Immunization certificates could also be made available for parents as a record of their child being fully immunized.

**Advocacy and political leadership from immunization team:** An increased profile and funding for integrated urban health in the context of Primary Health Care across departments (health and non-health) and immunization stakeholders is needed. To do so, evidence-based advocacy efforts (such as use of data for decision-making and situational analyses of urban immunization) must be targeted to budget-makers and planners within the MoH. This effort should promote integrated multi-program and multi-sector approaches to address inequities, as this has potential to attract more resources and be more acceptable and appropriate for the holistic needs of communities.

2 Drawing from safety messaging verified by WHO through the Vaccine Safety Network (http://www.vaccinesafetynet.org/#gsc.tab=0).
3 Making use of the WHO "Guide to tailoring immunization programmes (TIP)" resources to address vaccine hesitance and improve demand for services.

**REFERENCES**

National Statistical Committee of the Kyrgyz Republic and UNICEF. Kyrgyzstan Multiple Indicator Cluster Survey 2014, Final Report. Bishkek, Kyrgyzstan: National Statistical Committee of the Kyrgyz Republic and UNICEF.
National Statistical Committee of the Kyrgyz Republic, Ministry of Health [Kyrgyz Republic], and ICF International. 2013. Kyrgyz Republic Demographic and Health Survey 2012. Bishkek, Kyrgyz Republic, and Calverton, Maryland, USA: NSC, MOH, and ICF International.