

# Integrating nutrition programmes in primary and community care in Kyrgyzstan

## Overview

Responding to high levels of anaemia reported among infants in Kyrgyzstan,<sup>1</sup> the Ministry of Health launched an initiative in collaboration with international partners to provide micronutrient sprinkles, known locally as “Gulazyk”, to infants aged 6–24 months. With support from international organizations, a regional pilot project on the use of Gulazyk to prevent iron deficiency in children was conducted in Talas between 2008 and 2010. Every two months, as

part of routine health visits, primary care providers dispensed Gulazyk to caregivers and counselled them on using the supplement. Messages were reinforced by Village Health Committees (locally appointed volunteers who deliver health messages within their communities), which facilitated the successful implementation of the pilot and widespread use of Gulazyk among the target population. A strong focus on monitoring and evaluation throughout the initiative provided

evidence of the positive impact of Gulazyk on reducing anaemia, leading to the decision to scale up the programme nationally. Presently, the Gulazyk programme remains actively implemented across Kyrgyzstan and continues to prove effective in reducing the levels of anaemia among infants. As funding is provided primarily through humanitarian donations, initiative leaders are currently exploring ways to transition to a more sustainable delivery model.

## Problem definition

High levels of iron deficiency contributed to an elevated prevalence of anaemia among the Kyrgyz population (Box 1). Children under 24 months of age were particularly affected, with anaemia rates reaching 50% among this group in 2005.<sup>1</sup> Furthermore, widespread micronutrient deficiencies were attributed to growth stunting in children under five which had a national prevalence of 18% in 2006.<sup>2</sup>

### Box 1

What problems did the initiative seek to address?

- Widespread evidence of micronutrient deficiencies among young children, particularly iron-deficiency anaemia.

- Elevated levels of growth stunting among children under five linked to micronutrient deficiencies..

## Health services delivery transformations

### Timeline of transformations

Following repeated surveys in the late 1990s exposing widespread anaemia in infants, a new programme to distribute micronutrient sprinkles, locally known as Gulazyk, was proposed in Kyrgyzstan in 2006 (Table 1). Supported by a national maternal and child nutrition campaign, piloting of the proposed micronutrient home-fortification programme began in Talas oblast in 2009. Following a positive evaluation of the pilot programme, activities were scaled up nationally in 2011. Within one year, all regions had

incorporated delivery of Gulazyk within primary care. Presently, the initiative continues to be actively implemented with donor support and efforts are underway to transition the programme to a more sustainable delivery model.

### Description of transformations

**Selecting services.** According to internationally recommended practices, Gulazyk (micronutrient sprinkles) is a suggested intervention to reduce iron deficiency. Gulazyk is now distributed free-of-charge as part of standard primary care check-ups offered bimonthly to infants aged 6–24 months. Health promotion messages to encourage breastfeeding and improve complementary feeding have also been incorporated into health check-ups and growth charts have been introduced to monitor children’s physical development. Regular health check-ups allow

**Table 1**

What were the chronological milestones for the initiative?

1997	First Demographic and Health Survey conducted in Kyrgyzstan; prevalence of anaemia in infants shown to be high.
Late 1990s–early 2000s	Evidence from multiple smaller surveys suggests the prevalence of anaemia among infants remains high.
2006	Based on the results of cluster research conducted by UNICEF, the Ministry of Health and international actors begin development of an initiative to systematically introduce a micronutrient home-fortification programme to tackle infant anaemia.
May 2008	Nationwide maternal and child nutrition education campaign launched.
June 2008	Talas selected as the pilot region for the proposed micronutrient home-fortification programme; baseline nutrition survey conducted in Talas.
June 2009	Implementation of the pilot study in Talas begins; micronutrient home-fortification programme integrated into the existing local primary care system.
2009	National baseline nutrition survey conducted.
July 2010	Impact evaluation on the Talas pilot carried out; decision made to expand the micronutrient home-fortification programme based on positive results observed.
2011	Phased national scaling up of the micronutrient home-fortification programme.
2013	National impact evaluation conducted for the micronutrient home-fortification programme.
Present	Continued implementation of the micronutrient home-fortification programme.

monitoring of physical development and early detection of micronutrient deficiencies in infants.

**Designing care.** Protocols for the initiative have been established to guide primary care providers through necessary screenings, directing consideration across all dimensions of health, nutrition and early childhood development. The selected dosing regimen requires delivery of 30 Gulazyk sachets every two months (approximately one sachet every other day). Primary care protocols for the detection and treatment of childhood anaemia have been mirrored in secondary care to ensure consistency in clinical practices. Previously established protocols remain in place for the treatment of severe anaemia.

**Organizing providers.** The initiative has been organized for delivery in primary care. Family physicians and nurses are responsible for conducting health check-ups and distributing Gulazyk sachets. Primary care providers are supported by community health volunteers who deliver health promotion messages, reinforce advice issued by health providers and encourage people in their local communities to access available services.

**Managing services.** The initiative is managed by oblast administrations according to standard practices. As locally-elected advocates for public health services in their communities, Village Health Committees have supported tailoring of practices to local contexts.

**Improving performance.** Basic trainings on dispensing Gulazyk are in place for providers and Village Health Committees. Trainings also provide guidance on communicating effectively with patients. Trainings for providers take place over a three-day period and are repeated in areas where coverage with Gulazyk is reported as low.

**Engaging and empowering people, families and communities**  
The initiative relies on caregivers to add Gulazyk sachets to food prepared in the home. Consequently, a key component of activities has included educating and empowering caregivers to provide Gulazyk to their infants. Caregivers receive instructions from health providers on using Gulazyk. Educational pamphlets and children's books have

**Table 2**

How was the delivery of health services transformed through the initiative?

Before	After
<b>Selecting services</b>	
Frequent health check-ups for infants; no provision of micronutrient supplements.	Micronutrient supplements universally available for infants aged 6–24 months as part of health check-ups; health education on infant feeding increased; infant growth regularly charted.
<b>Designing care</b>	
Absence of guidelines for the distribution of micronutrient supplements to infants; treatment protocol for infants with severe anaemia in place.	Micronutrient supplements delivered during health check-ups every other month according to newly-established protocols; protocol for treatment of severe anaemia remains in place.
<b>Organizing providers</b>	
All regional and district centres have primary care clinics and almost all rural villages have a primary care post; access to primary care services is considered high; community health volunteers support health promotion in rural communities.	Micronutrient supplements are delivered through primary care providers across settings; community health volunteers reinforce health messages issued by primary care providers.
<b>Managing services</b>	
Necessary systems not in place to provide national micronutrient supplementation to infants.	Oblast administrations manage the initiative; Village Health Committees provide support to the initiative at the local level.
<b>Improving performance</b>	
Providers not trained to provide micronutrient supplements.	Primary care providers receive three-day trainings on micronutrient home-fortification, as well as general information on infant nutrition; community health volunteers receive training on the appropriate use of micronutrient supplements.

been developed as tools to reinforce health education messages delivered by providers and inform caregivers on how to administer Gulazyk. Additionally, peer mentorship from community volunteers has been described as particularly important for supporting health education messages and encouraging use of Gulazyk. The initiative has also run an extensive communication strategy to raise national awareness of iron deficiency. Leaflets, booklets and other information sources were developed and disseminated to inform communities about the benefits of Gulazyk.

### Health system enabling factors

The Normative Standard on Management of Children with Anaemia was reviewed and updated by the government in 2009, mandating the list of child services to be offered by primary care providers and requiring delivery of counselling on health, nutrition and early childhood development (Table 3). A working group – with representation from the Ministry of Health, as well as specialists within haematology, nutrition, pharmacology and paediatrics – supported development of the Standard. Initiative resources are centrally procured using donor

funding and supplies are delivered to village-level primary care clinics according to standard distribution procedures for humanitarian aid. The drug department within the Ministry of Health, responsible for monitoring all humanitarian aid, oversees distribution of Gulazyk and effective resource use. External monitoring is conducted by the National Statistics Committee. The Ministry of Health also has an internal monitoring process – channelled through the Integrated Management of Childhood Illness (IMCI) data monitoring system – which provides the Ministry with quarterly statistics. Health providers are required to submit the

**Table 3**

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	<ul style="list-style-type: none"><li>• Normative Standard on Management of Children with Anaemia sets care standards and requires delivery of nutrition and early childhood development counselling in primary care.</li></ul>
Information	<ul style="list-style-type: none"><li>• Improvement of existing IMCI data monitoring system provides regular statistics on the micronutrient supplementation programme.</li></ul>

information to local health authorities who report data to the Ministry. Existing monitoring systems have reportedly been improved in order to accommodate specific reporting needs of the initiative.

### Outcomes

Baseline surveys conducted prior to the initiative, combined with a strong focus on monitoring and evaluation throughout, have allowed concrete outcomes to be determined (Box 2). Uptake of the programme among the target population is high and data indicates the initiative has had a positive impact on reducing the prevalence of anaemia and iron deficiency in infants.

### Change management

#### Key actors

The initiative has been led through collaborations between the Ministry of Health and international actors (Box 3). The Ministry of Health has served as the main actor, establishing the necessary national framework to support and oversee activities. International actors have played critical roles in conducting research, funding necessary resources and supporting monitoring and evaluation. While the initiative was developed in a top-down approach, extensive community outreach and engagement with community health volunteers and caregivers supported the widespread uptake of Gulazyk within local populations.

Health providers incorporated new mandated practices into daily routines and meetings held with Village Health Committees encouraged community health volunteers to promote use of Gulazyk.

### Box 3

Who were the leading actors and what were their defining roles?

- **Ministry of Health.** Main actor leading implementation of the initiative; adjusted policies to support programme implementation; assisted with monitoring and evaluation of the programme.
- **International organizations.** Provided the Ministry of Health with technical support and resources for purchasing Gulazyk; assisted with monitoring and evaluation of the programme.
- **Primary care providers.** Provide Gulazyk to caregivers; monitor development of infants.
- **Community health volunteers.** Organized within peer-elected Village Health Committees; deliver health promotion messages and encourage Gulazyk use.
- **Caregivers.** Prepare and provide Gulazyk to their infants.

### Box 2

What were the main outcomes of the initiative?

#### Outcomes observed within the Talas pilot study between 2008 and 2010:

- Prevalence of anaemia among infants significantly decreased from 51% to 44%.<sup>3,4</sup>
- Prevalence of iron deficiency among infants decreased from 46% to 33%.<sup>4</sup>
- Almost all caretakers (99%) had received Gulazyk at least once, indicating successful outreach.<sup>3</sup>
- Self-reported consumption averaged at 23 doses out of a possible 30; 45% of infants were reported as receiving the full 30 doses in the last two months.<sup>5</sup>
- Participant acceptance of Gulazyk was high; caregivers reported that Gulazyk was easy to use (88%), important for the child (96%) and they would continue its use (89%).<sup>3</sup>

#### Other outcomes observed:

- Between 2009 and 2012, approximately 45 000 children in Talas received Gulazyk.
- National coverage of Gulazyk is estimated to be at least 80% of the target population based on 95% vaccination coverage rates.
- Exclusive breastfeeding increased nationally from 31% in 2006 to 56% in 2012;<sup>2</sup> other indicators of feeding practices also improved.

## Initiating change

The driving factor behind change was “the understanding of the problem and why we need to deal with it”. Leaders used data from situational analyses, as well as international nutrition recommendations, to provide “strong data to support the need for change”. Increasing awareness about the importance of investing in child nutrition was another key area of activity. An analytical report examining investments in nutrition (put together by UNICEF in partnership with the World Bank) was influential in convincing politicians and other stakeholders to support the initiative by showing the possible financial returns on the investment.<sup>1</sup>

## Implementation

Piloting the programme enabled a number of issues to be identified and addressed before national implementation. For example, it was learned that launching the programme outside of summer months was important as caregivers blamed the naturally higher incidence of gastrointestinal infections during summer on Gulazyk, leading them to abandon its use. Similarly, hospital providers also attributed Gulazyk as a causal factor for infants presenting with acute gastrointestinal infections and advised caregivers

to discontinue the treatment. Consequently, training for specialists was later incorporated to ensure all health providers were aware of Gulazyk and delivered a consistent message about its benefits across care levels.

When the programme officially launched, an extensive media campaign was used to promote activities and raise awareness about Gulazyk. Village Health Committees helped to disseminate information about the programme within local communities and pre-established high levels of trust between the population and community health volunteers proved important for gaining public acceptance of the programme. Supervisory visits to

local clinics, regular discussion of issues with providers and clear data reporting requirements helped maintain providers’ adherence to the programme by increasing accountability.

## Moving Forward

At present, the initiative continues to be actively implemented with donor support. Preparations to transition the initiative away from reliance on external funds are ongoing. UNICEF is currently in discussions with the Global Alliance for Improved Nutrition in an effort to secure funding to establish local production of Gulazyk and begin to build a market for selling Gulazyk through local pharmacies.

## Highlights

- Alignment with existing infrastructure and services provided support and stability to new reforms.
- Building trust between primary care providers and patients was an essential step in ensuring uptake of micronutrient supplementation; community health volunteers supported this process.
- Developing a consistent message across all providers, even those not directly involved with the initiative, was essential for safeguarding changes from being undermined at other care levels.
- Participation of mothers and community members proved valuable for overcoming challenges of potential non-compliance.

1 Institute of Strategic Analysis and Evaluation under the President of the Kyrgyz Republic., & United Nations Children’s Fund, (2009). *National report Kyrgyzstan: National study on child poverty and disparities*. Retrieved from [http://www.unicef.org/kyrgyzstan/Child\\_Poverty\\_Report\\_Eng.pdf](http://www.unicef.org/kyrgyzstan/Child_Poverty_Report_Eng.pdf)

2 World Health Organization, (2015). *European health for all database*. Retrieved from <http://data.euro.who.int/hfad>

3 The United Nations Children’s Fund, (2012). *Follow-up survey of nutritional status in children 6-24 months of age*. Bishkek: UNICEF.

4 World Bank. (2011). *Situational analysis: improving economic outcomes by expanding nutrition programming in the Kyrgyz Republic*. Washington, DC: World Bank. Retrieved from <http://documents.worldbank.org/curated/en/2011/01/14830811/situational-analysis-improving-economic-outcomes-expanding-nutrition-programming-kyrgyz-republic>

5 United States Agency for International Development, (2012). *Kyrgyz Republic demographic and health survey*. Bishkek: USAID. Retrieved from <http://www.usaid.gov/kyrgyz-republic/fact-sheets/kyrgyz-republic-demographic-and-health-survey>