



# Introducing Sprinkles in Kyrgyzstan: From People's Mandate to National Policy

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## Kyrgyz-Swiss-Swedish Health Project

Funded by SDC and Sida  
Implemented by the Swiss Red Cross



## Community Action for Health Project

- 1,319 Village Health Committees in all 7 provinces of Kyrgyzstan
- VHC volunteers implement interventions (*health actions*) to address health issues prioritized by the communities themselves
- Communities ranked anemia in top 3 disease priorities (in all 7 provinces)
- Served as a mandate for developing a health action to address anemia



## People's Mandate Supported by Epidemiology

- Anemia prevalence (DHS, 1997):
  - 50% in children under 3 years
  - 38% in women of reproductive age
  - 65% in pregnant women
  
- Several non-nationally representative surveys in the last decade suggest that the prevalence of anemia in children under 3 years has not declined
  
- Dietary iron deficiency is most likely cause



## VHC Health Actions: Improving Nutrition and Addressing Anemia

- Improving iron consumption within the family
  - Vegetable gardening (beans and iron-rich vegetables)
    - Provision of seeds and recipes for cooking beans
  
- Community-based maternal and child nutrition education campaign
  - Door-to-door informational campaign to improve:
    - Diet during pregnancy
    - Exclusive breastfeeding
    - Complementary feeding practices





## Addressing Iron Deficiency Anemia in Children

- Needed an intervention to prevent anemia among young children
- International literature showed that ‘Sprinkles’ micronutrient powder for home fortification was a promising intervention
- SRC decided to generate evidence that the ‘Sprinkles’ intervention could be effective in Kyrgyzstan

# What is Sprinkles Micronutrient Powder?

- Micronutrients in power form
  - Nutritional anemia formulation: microencapsulated iron (ferrous fumarate), zinc, vitamins A and C, and folic acid
  - Multi-micronutrient formulation: 14 micronutrients
  - Packaged in single-dose 1-gram sachets
- Home fortification of semi-solid complementary foods
- Lipid encapsulation of the iron prevents it from interacting with food, and thus there are no changes to the color, taste, and texture of the food





## Effectiveness Study of Weekly Sprinkles Use

- Effectiveness of weekly Sprinkles use for six months in reducing anemia among children 6-36 months in a program setting
- Intervention: 30 Sprinkles sachets (nutritional anemia formulation with 30 mg iron per sachet)
- Results
  - Small reduction in anemia, but little difference between the control and intervention groups



# Effectiveness Study of Daily Sprinkles Use

- March – May 2007
- Study design:
  - Longitudinal pre-post cohort study
  - Cluster-randomized trial (intervention randomized to communities)
  - Control group
- Effectiveness of daily Sprinkles use for two months in reducing anemia among children 6-36 months
- Intervention: 60 Sprinkles sachets (nutritional anemia formulation with 12.5 mg iron per sachet)
- Results\*:
  - Intervention group: 28% relative reduction in anemia prevalence (72% to 52%)
  - Control group: 4% relative increase in anemia prevalence (72% to 75%)
  - Compliance to the intervention was high (75% on average)





## Pilot Home Fortification Program

- Positive results from second trial provided evidence to justify the implementation of a pilot program
- Pilot programs in Talas province (launched July 2009) and Naryn province (launched June 2010)
- Objective: reduce prevalence of iron deficiency anemia among children 6-24 months by 30%
- Partners:
  - UNICEF – Talas
  - Swiss Red Cross – Naryn
  - Ministry of Health
  - U.S. Centers for Disease Control and Prevention (monitoring & evaluation)

# Local Branding of Micronutrient Powder Product

- Sprinkles nutritional anemia formulation (12.5 mg iron, 5 mg zinc, 160 µg folic acid, 300 µg vitamin A, 30 mg vitamin C)
- Changed product name to **Gulazyk**
- Adapted package design and usage instructions

Рекомендовано  
Министерством здравоохранения  
Кыргызской Республики

**ГУЛАЗЫК**



**ДЛЯ ЗДОРОВЬЯ И УМА  
ВАШЕГО МАЛЫША**

Витаминно-минеральная  
пищевая добавка  
для детей 6-24 мес.  
**1.0 г.**

Не использовать, если пакетик поврежден. Хранить в сухом недоступном для детей месте при комнатной температуре

**Состав:**

Железо	12,5 мг
Цинк	5,0 мг
Фолиевая кислота	160,0 мкг
Витамин А (Ретинол)	300,0 мкг
Витамин С	30,0 мг
Вспомогательные вещества:	
Мальтодекстрин	q.s

**Применение:** Дети в возрасте 6-24 месяцев, должны принимать 30 пакетиков за 60 дней.

Добавьте содержимое 1 пакетика в небольшое количество еды перед употреблением.



Произведено в

Употребить до:  
Партия №:

# Model for Pilot Gulazyk Home Fortification Program – Distribution

- Primary health care providers at the province-, district- and village-levels
- Distribute Gulazyk for free at governmental primary care clinics
- Children 6-24 months old
- 30 sachets given every 2 months (270 sachets total)



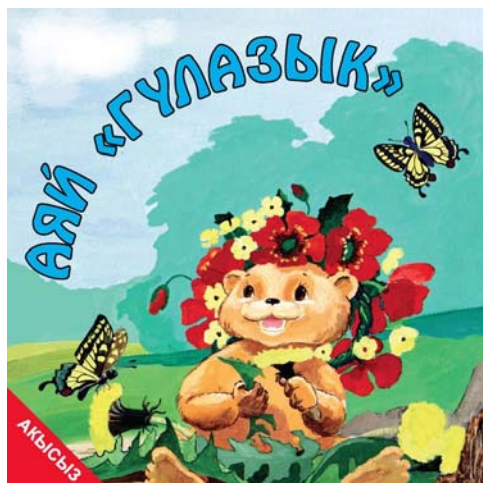
# Model for Pilot Gulazyk Home Fortification Program – Communications

- Primary health care providers at clinics
  - Counseling on Gulazyk use and proper nutrition
  - Materials: counseling cards, Gulazyk usage instructions, brochures, posters
- Village Health Committee volunteers
  - Door-to-door awareness-raising campaign
  - Mother activists
  - Materials: informational flip charts
- Mass media
  - Radio: jingles, public service announcements, nutrition programs
  - Newspaper articles



# Holistic Approach to Nutrition and Child Development

- Village Health Committees' community-based nutrition education campaign
- Early Childhood Development component
  - Responsive feeding
  - Gulazyk-branded children's book
  - ECD messages in communications materials (reading, singing, playing with child)





## Pilot Program Monitoring Results at 6- and 12-Months

- Two household surveys representative of children 6-24 months in Talas:  
6-month survey (December 2009) and 12-month survey (July 2010)
- High program “coverage” (received at least one package of Gulazyk):
  - 6-month survey: 99%
  - 12-month survey: 99%
- High compliance
  - Child is currently taking Gulazyk:
    - 6-month survey: 82%
    - 12-month survey: 66%
  - Consumed all 30 sachets in last two months:
    - 6-month survey: 58%
    - 12-month survey: 45%
- Adequate KAP (knowledge, attitudes, and practices) among caregivers
- High acceptance of Gulazyk among caretakers



## Scaling-Up

- Sprinkles is currently being distributed in Osh and Jalalabad provinces as part of the emergency response
- 2011 – scaling up Gulazyk program to 3 new provinces
- Pending positive results of Gulazyk program impact study, the program may be included in the national anemia prevention and control strategy for children



**THANK YOU!**

