

WISHH Activities: Research

Cade Fields-Gardner
Nutrition Consultant

NUTRITIONAL IMPACT OF THE TITLE II FEEDING PROGRAM TARGETING PEOPLE LIVING WITH AND AFFECTED BY HIV/AIDS IN UGANDA

**GW Maina¹, C Fields-Gardner², J Kulabako⁵, E Murphy³,
S Kugonsa-Isingoma⁴, J Ssemwanga⁶, R Basalirwa⁷, S Magezi⁸,
¹ Makerere University Institute of Public Health; ² World Initiative
for Soy in Human Health, ^{3,4,5} ACIDI/VOCA PL-480 Title II
Program, ^{6,7,8} Ssemwanga Consulting**

Objectives

- To improve objective growth and other nutritional measures, muscle function, and health impact
- To identify potential impact of VASPs in the improvement of the measures

Introduction

- ACIDI/VOCA piloting Title II HIV/AIDS Initiative
- Complements palliative care services through distribution of supplementary rations to improve food security of PLWHA.
- 60,000 target beneficiaries
- Food distributed through Implementing Partners:
 - Africare
 - Catholic Relief Services
 - The AIDS Support Organisation (TASO)
 - World Vision

Food Distribution: Ration Provided

- Monthly dry ration of:
 - Corn Soy Blend (CSB)
 - Vitamin A fortified Vegetable oil
- Daily ration of 300g CSB & 25g Vegetable oil
 - 1,333Kcal/person/day
 - 65% of a 2000Kcal diet/ day



Complementary Activities

- **Agriculture activities**
- **Nutrition & hygiene education**
 - Training materials developed
 - Final Distribution Points (FDPs) Training
 - Capacity Building
 - Nutrition education banners displayed at FDPs
 - Home visiting of most vulnerable families
 - Water source protection



Study Design and Sample Size

- One-year study
- Baseline recruitment targeted 250 beneficiaries newly registered between Sept 03 and Jan 04
 - 100 HIV positive beneficiaries aged 16 years and above (primary adult beneficiaries)
 - 100 family members of the primary beneficiary aged below 16 years (secondary beneficiaries)
 - 50 orphan beneficiaries (serostatus unknown)

Data Collection and Analysis

■ Data collection

- Quarterly assessment of weight, head and mid upper arm circumference

■ Data Analysis

- Percentage respondents who gained, maintained or reduced on selected anthropometric measures
- Mean change in anthropometric measures at quarter 4 from baseline
- Impact assessment of beneficiaries present at baseline, Q1, Q3 and Q4

Results:

Beneficiaries Interviewed

Beneficiary Category	Baseline	Quarter 4
Primary Adult	104	68
Primary Orphan	37	29
Secondary	88	57
TOTAL	229	154

Dietary Intake

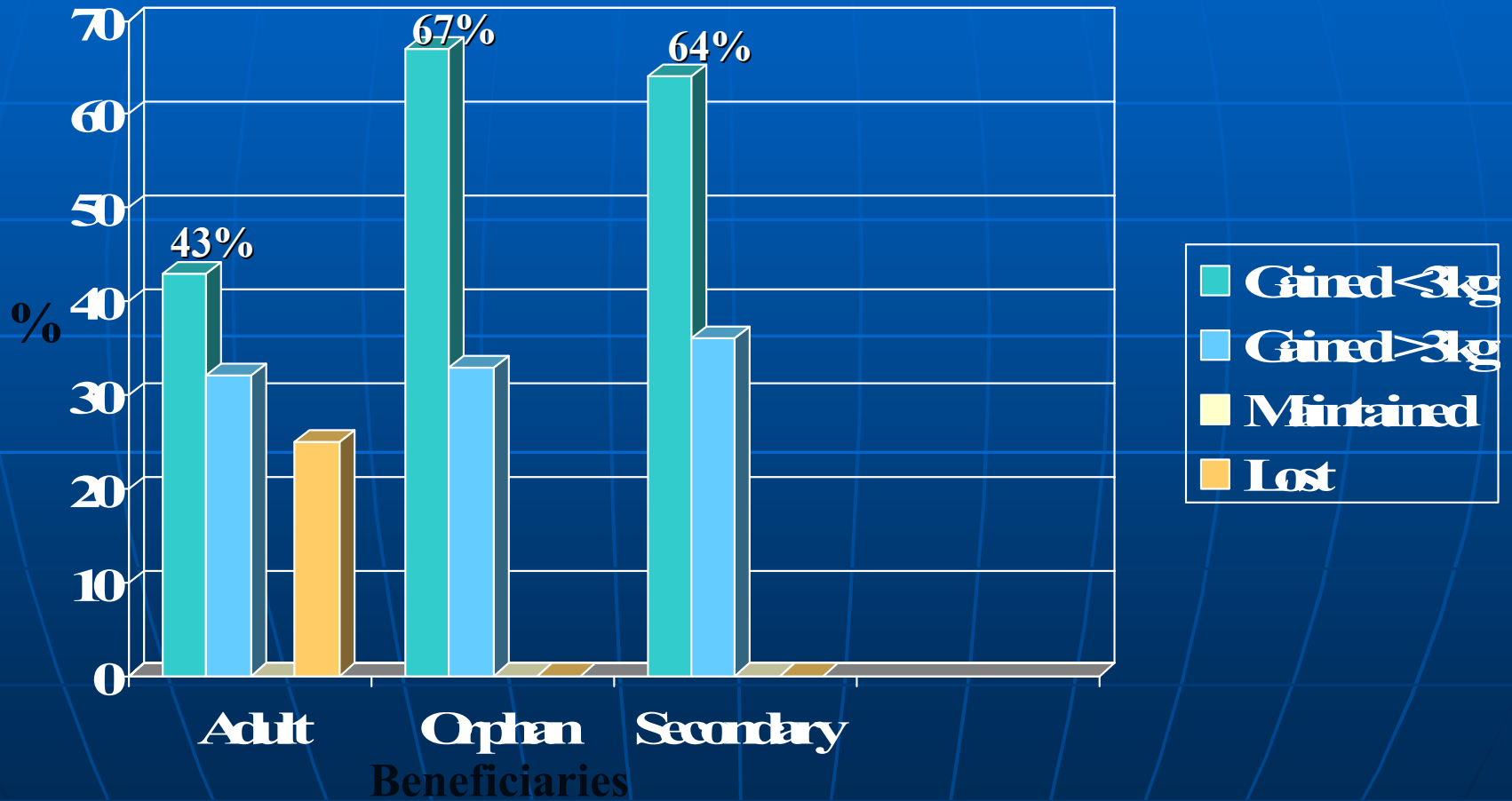
Dietary intake	Baseline	Quarter 4
% having adequate appetite in past 3 months*	61	74
Average number of meals consumed in 24 hours	3	4
Average number of food groups consumed in 24 hours	5	7

*Often and usually felt like eating

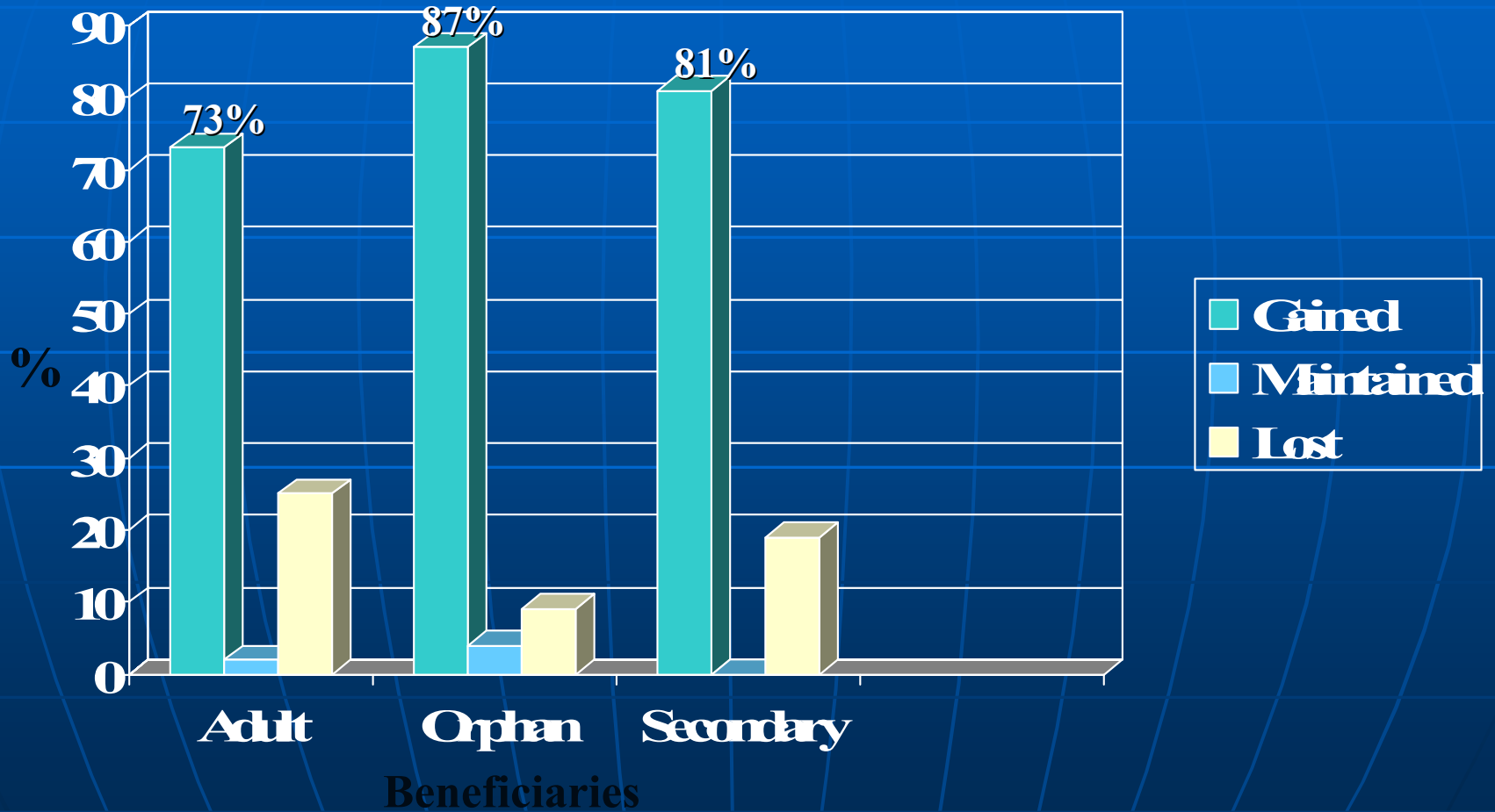
Medical Profile

Medical Profile		Baseline	Quarter 4
% Respondents ill in previous 3 months	Adult	90	82
	Orphans	58	45
	Total	83	71
Average number of days ill	Adult	27	14
	Orphans	13	5
	Total	25	5

Weight Changes



MUAC Changes

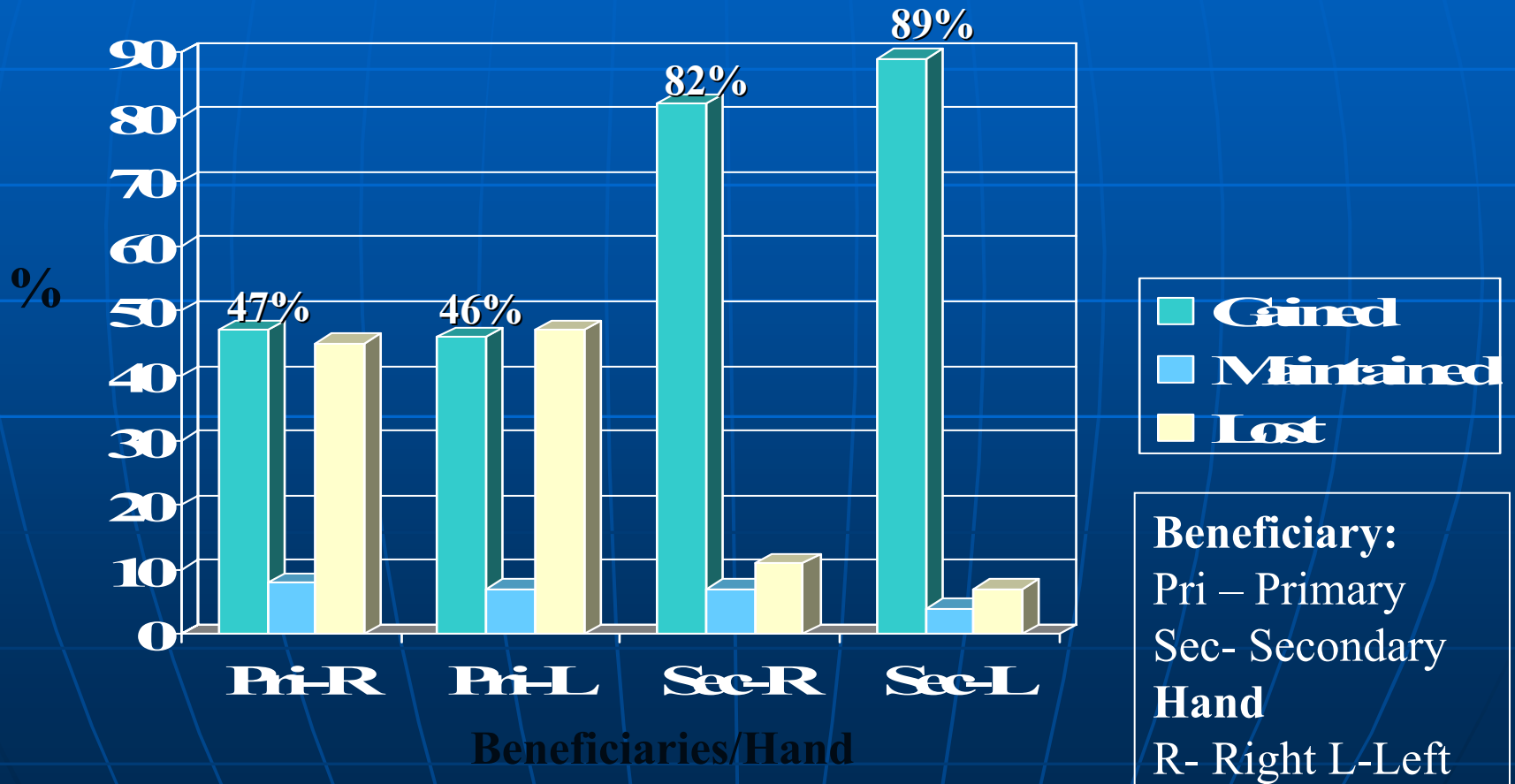


Overall Mean Change in Anthropometric Indicators

Beneficiary/ Indicator	Mean Change	<i>t</i> -value	<i>P</i> -value
Primary Adult			
Weight	2.18	4.14	0.000*
MUAC	1.14	5.05	0.000*
Head Circumference	0.23	1.53	0.131
Primary Orphan			
Weight	2.70	5.91	0.000*
MUAC	9.33	3.52	0.000*
Head Circumference	0.32	2.50	0.025*
Secondary			
Weight	2.95	10.2	0.000*
MUAC	0.75	6.39	0.000*
Head circumference	0.64	4.50	0.000*

*Statistically significant *P*-value ($P < 0.05$)

Hand Grip Strength Changes



Overall Mean Change in Handgrip Strength Measures

Beneficiary/Hand	Mean Change	<i>t</i> value	<i>P</i> -value
Primary Adult			
Right hand	0.86	1.47	0.148
Left hand	0.16	0.25	0.801
Primary Orphan			
Right hand	0.30	0.12	0.904
Left hand	1.55	0.93	0.377
Secondary			
Right hand	2.61	5.17	0.000*
Left hand	2.88	6.40	0.000*

*Statistically significant P-value (P<0.05)

Quality of Life

Quality of life*	% Primary Beneficiaries	
	Baseline	Quarter 4
Overall quality of life	66	77
Physical well being	65	79
Activity ability	59	75
Sleeping ability	73	88
Health related problems	59	77
Severity of pain	63	78

* Perceived as somewhat better and much better combined

Conclusion

Provision of food rations and complementary activities resulted in improved:

- Nutritional status
- Health status
- Quality of life
- Dietary intake and food security

Recommendations

1. Continue provision of supplemental foods, nutrition and hygiene education to people living with and affected by HIV/AIDS as it has a positive impact on nutritional and health status as well as quality of life
2. Continue M&E of food assistance program including
 - Advance techniques of measuring body composition
 - Effects of anti-retroviral therapy

Acknowledgements

1. Study Respondents
2. Implementing Partners
3. The Ssemwanga Centre



THANK YOU!

WISHH

World Initiative for Soy in Human Health
Enhancing human well-being through soy



GIVING HOPE TO A
WORLD OF NEED

*The official international relief and development
agency of the U.S. Catholic community*



WISHH Research Activities: CRS-WISHH Project

PROTEIN SUPPLEMENTATION WITH VALUE-
ADDED SOY PRODUCTS (VASPS) IN
COLLABORATION BETWEEN WISHH AND
CATHOLIC RELIEF SERVICES-KENYA FOR THEIR
ORPHANS AND VULNERABLE CHILDREN (OVC)
PROGRAM IN THE NYANZA PROVINCE IN KENYA

Cade Fields-Gardner, MS, RD, Nutritionist

Interventions

- Four groups
 - Soy + Beans + Maize
 - Soy only
 - Beans + Maize only
 - Control
- All received education on basic nutrition, food/water safety
- Soy groups received training on use of VASPs

Methods

- Four partner sites chosen
- Measures (baseline and 6-month follow-up)
 - Demographics
 - Height
 - Weight
 - Mid-Upper Arm Circumference (MUAC)
 - Strength (hand grip)
 - Symptoms: respiratory illness, diarrhea
 - Program use, acceptability, understanding for soy groups @follow-up

Methods (cont'd)

- 50 households per site invited
- Educators hired, trained, and equipped with educational materials, recordkeeping, and bicycles
- Measures evaluated for prevalence of nutritional problems in adults and children at baseline and follow-up
- Acceptability/use/understanding evaluated for soy groups

Results

- 191 families enrolled; 727 measures completed at baseline
- 283 measures completed at follow-up
- Project took place during months of widespread drought and famine
 - In some cases, the rations provided were the only foods available at times

Objective Measures: Overall

- 47% gained wt; 23% maintained wt
- 32% improved MUAC; 37% maintained
- Improved hand grip in 17% (right) and 24% (left)
- Maintained hand grip in 53% and 47%

Objective Measures: Children

■ Baseline

- 66% no failure
- 21% stunted
- 11%
underweight
- 2% wasted

■ Follow-up

- 62% no failure
- 21% stunted
- 15%
underweight
- 2% wasted

Comparison of Groups: Children

Group	Stunted	Wasted	Underwt
B/M/S (110)	3+/8- (3%/7%)	1+/2- (1%/2%)	8+/4- (7%/4%)
B/M (140)	2+/9- (1.5%/6.5%)	3+/1- (2%/1%)	5+/3- (3.6%/2%)
Soy (198)	3+/21- (1.5%/10.6%)	3+/2- (1.5%/1%)	10+/8- (5.1%/4%)
Control (180)	3+/12- (1.7%/6.7%)	1+/0- (0.6%/0%)	7+/7- (4%/4%)

Use/Understanding/Acceptability

- Between 3-11 people used household rations (mean 5.5)
- All knew how to prepare food
- Rations lasted 7-30 days (mean 23 days)
- Liked extremely/liked
 - Food appearance 96%
 - Food taste 95%
 - Mouthfeel 97%
 - Overall 97%

Use/Understanding/Acceptability

- Healthy 97%
- Why received 61%
- How long received 54%
- Believed soy had an impact 84%
 - 11% didn't know

Use/Understanding/Acceptability

- Both soy products well-liked
 - Most preferred the TSP over flour
- TSP rehydrated, used in stews and fried with vegetables
- Flour used in porridge and chapati

Use/Understanding/Acceptability

- Comments included:
 - Positive: like taste, feel energetic and stronger, don't feel hunger after eating TSP, kids like, would like to continue receiving, many thanks
 - Negative: 3 cases of stomach upset, product not properly hydrated used too much oil, problems getting water, took a while to get used to it

Summary

- Nutrient priorities are still important
 - Soy protein source works best with adequate calorie source
 - Addition of soy improved results for weight catch up and strength
 - The addition of calories and protein may blunt the impact of drought and famine
- VASPs in the form of TSP and DSF are highly acceptable by both adults and children



LA NGAU
MULTIPURPOSE
GROUP (RAGUBA)
BOX 94, KARUNGU



THIS OFFICE OFFICIALLY
OPENED BY DISTRICT
COMMISSIONER MIGOR
R. KARUNGU



