Effectiveness of an Infant and Young Child Feeding Toolkit: A Cluster Randomized Trial in Mchinji District, Malawi

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Project Goals

- To develop a proposal and study protocol for approval from the Malawi National Health Sciences Research Committee
- To train local enumerators to collect anthropometric and survey data
- To supervise sampling for baseline survey of a cluster randomized trial
- To train Concern Worldwide staff for implementation of intervention
- To analyze data collected at baseline

Based on previous, qualitative research, we hypothesize:

- Caregivers using the toolkit will increase volume of complementary feeding
- Caregivers using the toolkit will improve consistency of food provided
- Children of households receiving the toolkit will have improved anthropometric indicators

Findings from this study will inform future public health recommendations and interventions.

Progress to Date

- Baseline survey completed; data analysis in progress
- Concern Worldwide staff have been trained on the feeding toolkit and are in the process of training community health leaders. Community health leaders and disseminating feeding toolkits to households in the intervention arm.

Expected Outcomes

Based on previous, qualitative research, we hypothesize:

- Caregivers using the toolkit will increase volume of complementary feeding
- Caregivers using the toolkit will improve consistency of food provided
- Children of households receiving the toolkit will have improved anthropometric indicators

Findings from this study will inform future public health recommendations and interventions.

Next Steps

- In progress: Complete analysis of baseline data (descriptive statistics, prevalence of outcomes)
- In progress: Community health leaders are being trained on the feeding bowl and bowl will be distributed to approximately 800 households in Mchinji District
- Future: Analyze predictors of growth in population
- Future: Endline survey and data analysis

Project Partners

- Emory University
  - Dr. Amy Webb Girard, PhD
  - Ellah Kedera, MPH Student
  - Emory Global Health Institute
- Concern Worldwide
  - Jennifer Weiss, MPH
  - Mchinji District Office Staff

Background

- Stunting, a common indicator of chronic undernutrition, is associated with poor health outcomes and poor work capacity as an adult.
- Most linear growth failure accrues in the first 2 years, with limited potential for recovery beyond 2 years.
- Rates of under-two stunting in Malawi exceed 60 percent; there has been little improvement in national rates of stunting over the past 2 decades despite targeted interventions.
- The World Health Organization recognizes inadequate complementary feeding of 6 to 23 month old children as a cause of stunting.
- Qualitative research has found that feeding bowls intended to guide caregivers in complementary feeding are feasible and acceptable, and that caregivers perceive benefit with complementary feeding and child’s energy status.
- With funding from the World Bank and Government of Malawi, Concern Worldwide is conducting a cluster randomized trial to assess the effectiveness of a feeding toolkit (to include: feeding bowl, spoon, and counseling card) developed by a team from Emory and Georgia Tech.

Project Timeline

- Mar/Apr 2015: Develop study protocol and write proposal for Emory IRB and Malawi National Health Sciences Research Committee
- June 2015: Develop training material, hire enumerators, and define sampling population
- July/Aug 2015: Data collection
- Aug 2015: Train Concern Worldwide staff on implementation of intervention
- Sept/Oct 2015: Data cleaning and analysis; implementation of intervention in country
- Feb 2016: Endline survey

Preliminary Results (Descriptive)

<table>
<thead>
<tr>
<th>HOW WOULD YOU DESCRIBE THE THICKNESS / CONSISTENCY OF THE FOODS THAT [CHILD] TYPICALLY EATS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mashed 10%</td>
</tr>
<tr>
<td>Solid  16%</td>
</tr>
<tr>
<td>Watery 8%</td>
</tr>
<tr>
<td>Thin  25%</td>
</tr>
<tr>
<td>Less than 200 mL  72%</td>
</tr>
<tr>
<td>Greater than or equal to 15%</td>
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</tbody>
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PERCENT OF HOUSEHOLDS SURVEYED WHO ARE FEEDING LESS THAN THE RECOMMENDED 200 ML PER MEAL

Water 8%
Thin 26%
Soft and thick 15%
Solid 10%
Mashed 10%
Less than 200 ml 72%
Greater than or equal to 15%
Missing 15%

Preliminary Results (Descriptive)

<table>
<thead>
<tr>
<th>Stunting in sample population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column1</td>
</tr>
<tr>
<td>Total (N=1326)</td>
</tr>
<tr>
<td>6-11 months (n=781)</td>
</tr>
<tr>
<td>12-17 months (n=542)</td>
</tr>
</tbody>
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Population Served

- Women and children aged 6 to 23 months participating in a Concern Worldwide Care Group in Mchinji District, Malawi