Early Childhood Development and Nutrition

Experiences promoting holistic nurturing care in nutrition services

29 July, 2021
Child Health Task Force Today

1800+ members
80+ countries
300+ organizations

Working together in 10 subgroups

Coordination
Support Countries
Knowledge Management
Advocacy
Learning

Focused on 5 themes of work
Featuring

Allison Daniel
PhD Candidate
Nutritional Sciences
The Hospital for Sick Children
Toronto, Canada / Blantyre, Malawi

Colleen Emary
Senior Technical Advisor
Health & Nutrition
Technical Service Organisation
World Vision International

Elena McEwan, MD
Senior Technical Advisor
Maternal and Child Health
Catholic Relief Services

Hosted & moderated by the Nutrition subgroup
A mixed methods cluster-randomized controlled trial of the Kusamala Program for caregivers and children with severe acute malnutrition in Malawi

Allison Daniel, PhD Candidate
Moyo Nutritional Rehabilitation & Research Unit
Management of severe acute malnutrition

Severe acute malnutrition (SAM)
- Severe wasting
- Oedematous malnutrition

Admission to nutritional rehabilitation units (NRUs) required for acute illness in addition to SAM

Stabilization phase
- Broad-spectrum antibiotics and the early initiation of therapeutic food

If the patient has resolving oedema and is regaining appetite

Transition phase
- Step up to F-100 or RUTF

Rehabilitation phase
- Step up to F-100 or RUTF

Bhutta et al. Nat Rev Dis Primers, 2017
Malnutrition and child development

Risks for **poor child development**³

- Infection and illness
- Malnutrition
- Inadequate **psychosocial stimulation (responsive care)**

**Few studies** of development in **children with SAM** including after discharge⁴-⁸

- Research at the Moyo NRU has shown poor developmental scores at discharge⁷
- Children with SAM at an earlier grade and have lower cognitive scores⁸

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8. Lelijveld et al. Pub Health Nut, 2018
The Kusamala Program

Psychosocial stimulation

Nutrition and feeding

Water, sanitation and hygiene (WASH)
Objectives and trial design

To evaluate the effects of the Kusamala Program on child development and nutritional status in children with SAM six months after discharge.

To understand perceptions and experiences of primary caregivers who have participated in the Kusamala Program.
Objectives and trial design

Cluster-randomized controlled trial
- Including children 6-59 months of age with SAM and primary caregivers
- Intervention or comparison randomly attributed by 1-week periods

Data collection at enrollment, discharge, and follow-up six months after discharge
- Enumerators blinded to allocation
### Malawi Developmental Assessment Tool

#### Table of Assessments:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Can use a neat pincer grasp to pick up object between thumb and</td>
<td><img src="image1" alt="Image of objects" /></td>
</tr>
<tr>
<td>14. Puts blocks or stones in and out of a plastic tea cup in imitation.</td>
<td><img src="image2" alt="Image of objects" /></td>
</tr>
<tr>
<td>15. Copies pushing a little wooden or wire car along</td>
<td><img src="image3" alt="Image of objects" /></td>
</tr>
<tr>
<td>19. Scribbles on paper with chalk or on the ground with a stick in a</td>
<td><img src="image4" alt="Image of objects" /></td>
</tr>
<tr>
<td>20. Can build a tower of two bricks</td>
<td><img src="image5" alt="Image of objects" /></td>
</tr>
<tr>
<td>21. Puts pegs in a board in a longer time. (≤ 2 min)</td>
<td><img src="image6" alt="Image of objects" /></td>
</tr>
<tr>
<td>22. Fill up two cups. One with very little water and one with a lot of</td>
<td><img src="image7" alt="Image of objects" /></td>
</tr>
<tr>
<td>23. Can do the peg board quicker – within 30 s (≤ 30s)</td>
<td><img src="image8" alt="Image of objects" /></td>
</tr>
<tr>
<td>24. Unscrews and screws the cap on and off a peanut butter plastic jar</td>
<td><img src="image9" alt="Image of objects" /></td>
</tr>
<tr>
<td>25. Picks the “longer” stick 3 out of 3 times</td>
<td><img src="image10" alt="Image of objects" /></td>
</tr>
<tr>
<td>26. Picks the heaviest of two objects</td>
<td><img src="image11" alt="Image of objects" /></td>
</tr>
<tr>
<td>27. Can make a bridge</td>
<td><img src="image12" alt="Image of objects" /></td>
</tr>
</tbody>
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Intervention attendance and fidelity

Day 1: 93%
Day 2: 89%
Day 3: 79%
Day 4: 64%

Intervention fidelity was assessed by an enumerator trained in child development and counselling

- 90% of counselling skills were met based on the Care for Child Development manual
- The mean quality rating was 4.25 out of five
MDAT z-scores

Comparison
-0.82 (95% CI: -1.6, -0.07)

Intervention
-0.93 (95% CI: -1.5, -0.4)

p=0.8
Seven in-depth interviews and four focus group discussions were done with 20 caregivers between January and April 2020

Each of the 20 participants had positive sentiments

“The lessons learned were an eye opener to problems arising due to poor nutrition and unhygienic conditions.”

“It was good in the sense that we learned a lot especially on how to take care of our children. We used to prioritize other issues at the expense of our children.”
Applying practices at home

“I try my best because I even made porridge flour from soya, beans and rice. When the flour is about to finish, I have to know how I can source money, or I can prepare porridge using maize flour and groundnut flour. The money one can spend when a child is admitted at the hospital is more than you can spend by just taking good care of the child.”
The Kusamala Program was **feasible to implement** at the Moyo NRU.

It was **insufficient in terms of having an impact on developmental outcomes** in children with SAM following discharge from inpatient treatment.
Growth and developmental trajectories following SAM
Potential and capacity to benefit from interventions
Additional focus on caregiver nutritional status
Opportunity for improved interventions at NRUs and OTPs
Acknowledgements

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Malawi Team
Agatha Gausi
Phyllis Kufakuwawa
Vetta Senyela
Alice Tsokonombwe
Alice Bwanali
Jonathan Kapichira
Abel Tembo
Frank Ziwoya
Nurturing Care in Management of Wasting: Experience from Sudan

Colleen Emary, WVI
Context

- South Darfur State, Mershing, Manawashi, Duma localities

- Protracted humanitarian context
  - Conflict, disease outbreaks, climate shocks/hazards, economic instability
  - 13.4 million people in need of humanitarian assistance in 2021
  - 3 million children with acute malnutrition, 570,000 SAM
Integrated Nutrition and ECD for Moderately Acute Malnourished Children in Sudan - operational research

Objective

Assess the feasibility and effectiveness of combined early childhood psycho-social stimulation and care on the treatment outcomes of malnourished children integrated within existing nutrition program

- 2-group comparative study
- 6-month implementation period
Design - Intervention

Community Nutrition Integrated Platform (CNIP) - implemented by WV in collaboration with WFP. The approach combines:

- **Targeted Supplementary Feeding (TSF)** - treatment regimen for MAM children 6-59 months with moderate wasting, PLW with MUAC 18.5 cm - <21 cm

- **Supplementary Food Based Prevention of Moderate Acute Malnutrition** - prevention regimen for children 6-23 months with MUAC 11.5 cm - <12.5 cm, PLW at risk – MUAC ≥21 cm and < 23 cm

AND

**ECD - Go Baby Go** - Parenting Program with an integrated approach to promote holistic growth and development for children 0-3 years
Go Baby Go - Parenting Program

How the broader system supports caregivers

Linkages to social services

Water, Sanitation and Hygiene

Safe & Secure Home Environment

Sound policies for children 0-3

How caregivers meet these needs

Health & Nutrition

Responsive Caregiving

Strengthening the Family Environment

Secure Baby-Caregiver Attachment

Strong community networks

Requirements for baby's developing brain

Supportive & Positive Parenting

Early Stimulation

Protection

Nutrition/Breastfeeding

Learning Through Play & Communication

Referrals to specialized services
Go Baby Go!

Alignment with Nurturing Care Framework

**Health Care:** immunization, safe water, improved sanitation and good hygiene.

**Early Learning:** access to quality early, age-appropriate learning opportunities, materials with nurturing, interactive engagement.

**Nutrition Care:** Optimal IYCF - exclusive breast feeding, minimum acceptable diet.

**Responsive Caregiving:** sensitive engagement such as, serve and return, secure attachment, responsive feeding, singing, talking.

**Security and Safety:** prevention from toxic stress, environmental hazards (indoor, outdoor safety).
Implementation

Go Baby Go - Parenting Program

Process and Curriculum

Pre-Program Planning
- Map existing parenting practices
- Map services and structures
- Identify integration points
- Contextualize GBG curriculum

Program Implementation
- GBG Support Network
- Home Visits
- Caregiver Learning Sessions

Expected Results
- Holistic Child Development for 0-3
  - Sensitive Caregiving
  - Health & Nutrition
  - Protection & Safety
  - Early Stimulation

Learning Sessions:
- GBG Journey: Who We Are As Caregivers
- Sensitive & Responsive Caregiving
- Holistic Child Development
- Nurturing Physical Development
- Nurturing Cognitive Development
- Nurturing Social & Emotional Development
- Play & Communication
- Home & Community Environment
- Wellbeing as a Family Affair
- Community Action Planning
- Who We Are As Fathers (Optional)
- Supporting Children in Crisis (Optional)
Study Design

**Target group** – randomly selected 427 children, aged 6 – 59 months with MUAC 11.5 cm - < 12.5 cm enrolled in CNIP Targeted Supplementary Feeding

**3 CNIP Sites:** 2 – CNIP + GBG, 1 - CNIP

**Delivery cadre for ECD** – Community Mobilizers, trained on GBG
Design - ECD

1. Caregiver Group Sessions - integrated within waiting period at Supplementary Feeding Centers

2. Toy making

3. Home Visits – monthly
Monitoring & Evaluation

• Nutrition outcomes
  • Standard MAM treatment outcomes (cured, death, default, non-recovered)
  • Weight gain, Length of Stay

• Parent-Child interaction & developmental outcomes
  • Nipissing District Developmental Screener (NDDS)
  • Brigance Parent-Child Interactions Scale (BPCIS)
Treatment Outcomes

- **Cured**: 72.43% (CNIP) vs. 42.72% (CNIP + GBG)
  - **P<0.001**
- **Default**: 18.31% (CNIP) vs. 10.28% (CNIP + GBG)
  - **P<0.001**
- **Non-response**: 33.33% (CNIP) vs. 11.21% (CNIP + GBG)
  - **P<0.001**
Caregiver & Volunteer Perceptions

"I have also come to learn that playing with my children not only amuses them but it also gives me a great feeling of release and relaxation," (caregiver)

“There’s a lot we teach the caregivers, some of these things they already know, it is just a matter of enhancing that knowledge further or reinforcing its importance,” (GBG volunteer)
Conclusion & next steps

• Implementing ECD was feasible within an outpatient program, using community volunteer structures

• Combined psychosocial stimulation & care with nutrition was found to improve treatment outcomes

• More evidence needed to prove the concept for scale-up, institutionalization of the approach

• Advocacy for inclusion of ECD interventions as part of wasting management in both humanitarian and stable contexts
Acknowledgements

WV Sudan

World Food Programme

Ministry of Health

Communities of Mershing, Manawashi, Duma localities
CRS Integrated Early Childhood Development, Health, and Nutrition programming

Elena McEwan
STA MCH
Catholic Relief Services
July 29, 2021
Where and Why integrate ECD?

• First 1000 days is the most rapid and crucial developmental processes in cognition, language, social-emotional development, and physical health occur during this period.

• Healthy food, clean water, health care, protection, and opportunities to learn are crucial elements for brain development.

• Combining ECD with existing interventions is efficient as programs can make use of same facilities, transportation, community networks and distribution systems.
Catholic Relief Services: A Model of Optimal Child Development

**Cultural & Government**
ECD policies and programs for supporting providers, promoting strong families, and valuing children.

**Community**
Screening and services for the most vulnerable children. Structures to strengthen and support families.

**Child**
ECD-trained providers in education, medicine, and social services.

Parents can access opportunities for their child.

**Home**
Families have basic needs met. Opportunities for education, work, and spiritual growth.

**Pathways to Optimal Development in Early Childhood**
WASH | Agriculture | Social Services | Microfinance | Nutrition | Shelter Health | Livelihoods | Education | Peace Building | Family Strengthening

**CrS' Focal Areas for ECD**
Spiritual development, disability and inclusion, child protection, and ages & stages from birth to age 8.

**Catholic Relief Services Goal for Early Childhood Development**
All young girls and boys are protected and valued by family and community in an enabling environment to thrive and grow.

Link: CRS Guiding Framework for Integrating Child Health, Nutrition and Early Childhood Development
Master Trainers train and supervise 2-4 Community Health Volunteers (CHV).

Each CHV implements iMBC/ECD with 6-8 care groups.

Each care group consists of 8-12 pregnant and lactating women. One member is the Lead Mother.

Every 2 weeks, each Lead Mother conducts home visits to the care group members to reinforce promoted behaviors.
CRS Conceptual Framework for Integrated ECD in the First 1000 Days

CRS hypothesizes that improved mothers’ skills to manage their mood and knowledge in IECD, coupled with better coping mechanisms, and social support, will lead to greater parenting self-efficacy. Increased self-efficacy will lead to uptake of positive care behaviors (e.g. early stimulation, IYCF, positive parenting and WASH behaviors), which will ultimately lead to stronger mother-baby relationships, and healthier women and improved child growth and development.
MEAL

- Baseline/endline
- Accompaniment to improve BC and technical skills
- Monthly monitoring
- Implementation Research/integration of maternal mental health/ECD
- Use of QIVCs and supervision checklists
Kenya

- Mothers’ engagement 2+ early stimulation behaviors increased from 37% to 44.5% (p<0.01)
- Approval of physical punishment decreased from 79.1% to 37.7% ( <0.001))
- Child minimum dietary diversity ( 6-23 m) from 32.3% to 41.5% ( <0.005)
- Mothers with symptom of depression decreased from 61.9% to 31.1% ( <0.001)

Malawi

- Mothers’ engagement 2+ early stimulation behaviors increased from 73.8% to 84.9% (p<0.01).
- Child minimum dietary diversity increased from 35.8% at baseline to 55.1% at end line (p<0.001)
- Mothers’ symptoms of depression (Hopkins Symptoms Check List) decreased from 55.7% to 39.4% (p <0.001)

Tanzania

- Mothers’ engagement 2+ early stimulation behaviors increased from 42.2% to 80.3% (p<0.01)
- Approval of physical punishment for children decreased from 63.8% to 30.6% (p<0.001).
- Child minimum dietary diversity increased from 18.8% at baseline to 33.1% at end line (p<0.001)
- Mothers’ symptoms of depression decreased from 45.1% to 22.7% (p <0.001)
Conclusion & Recommendations

• Integration is feasible and efficient as projects can make use of same facilities, human resources, transportation, community networks and distribution systems

• Targeting: First 1000 days, Caregivers in vulnerable sub-groups (depression, young mothers and fathers)

• Address implementation challenges to increase comprehension and attendance

• Integrate ECD with economic strengthening activities to reduce HH poverty and hunger

• Proactively address intimate partner violence

• Directly engage male caregivers (increase attendance, decrease IPV)
Implementation challenges

- Delays in translating materials to local languages/validation
- Staff and CHVs learning curve to implement quality SBC interventions
- Low literacy likely impacted uptake of SBC skills in CHVs
- Household hunger (attendance)
- Intra partner violence (depression, attendance, migration)
Engage with the **co-chairs**:

- Akriti: akriti_singh@jsi.com
- Bridget: baidam@actionagainsthunger.org

Subgroup information, recordings and presentations from previous meetings and webinars are available on the subgroup page of the Child Health Task Force website: [www.childhealthtaskforce.org/subgroups/nutrition](http://www.childhealthtaskforce.org/subgroups/nutrition)

*The recording from this webinar will be available on this page later today*

Suggestions for improvement or additional resources are welcome. Please email childhealthtaskforce@jsi.com.

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