Reducing Malnutrition and Child Deaths Using Care Groups

Thomas P. Davis Jr., MPH
Chief Program Officer
Feed the Children

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Reducing child global undernutrition at scale in Sofala Province, Mozambique, using Care Group Volunteers to communicate health messages to mothers

Thomas P Davis Jr, Carolyn Wetzel, Emma Hernandez Avilan, Cecilia De Mendoza Lopes, Rachel P Chase, Peter J Winch, Henry B Perry

Correspondence to Henry Perry (heperry@jhsph.edu)

Care Group peer-to-peer behavior change communication improved child undernutrition at scale in rural Mozambique and has the potential to substantially reduce under-5 mortality in priority countries at very low cost.
2005-2010 FH Care Group Project

- Interventions: Nutrition, Diarrhea/WASH, integration w/IMCI
- **No** food supplementation
- Funding: $2.5 million from USAID CSHGP, $0.5 million match from FH.
- Scale: Total population reached = 1.1 million people. 148K children 0-59 months of age, 71K WRA = 220K total beneficiaries in seven districts.
- Equity: >90% of mothers had contact with the CGV every two weeks.
Results and Impact
Area B Results

Dondo

Gorongosa

Nhamatanda
Area B Project Indicators

FH/Moz CS Final Evaluation: Area B Project Indicators (Pt. 1)

- Underweight (p<0.001)
- Exc. BF (p < 0.01)
- Ate 3+ meals (p<0.001)
- Oil added to meal (p<0.001)
- Vit. A supp. (p<0.001)
FH/Moz CS Final Evaluation: Area B Project Indicators (Pt. 2)

- Vit. A foods: p<0.001
- Dewormed: p<0.001
- Weighed last 4m: p<0.001
- ORS/RHF: p<0.002
- Same/more food during diarrhea: p<0.001
- Correctly prepare ORS: p<0.001
- Knows 3+ danger signs: p<0.0001
Differences in Health Service Utilization: Care Group vs. Non-Care Group Districts (Sofala, Mozambique)
Overall reduction: 34% (p<0.0001)
<table>
<thead>
<tr>
<th>Location</th>
<th>Age group of children</th>
<th>% of children &lt; 2 SD below the standard median/mean of weight-for-age</th>
<th>No. of years (endline – baseline)</th>
<th>Avg. annual rate of decline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Baseline (dates)</td>
<td>Endline (dates)</td>
<td>% Difference</td>
</tr>
<tr>
<td>Project Areas</td>
<td>0–23 m</td>
<td>26.5% (Feb 2006)</td>
<td>16.7% (Jun 2010)</td>
<td>9.8%</td>
</tr>
<tr>
<td>Nationwide</td>
<td>0–59 m</td>
<td>20.0% (2003)</td>
<td>18.0% (2008)</td>
<td>2.0%</td>
</tr>
<tr>
<td>(DHS and UNICEF/MICS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nationwide</td>
<td>0–59 m</td>
<td>20.0% (2003)</td>
<td>14.9% (2011)</td>
<td>5.1%</td>
</tr>
<tr>
<td>(DHS)</td>
<td></td>
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Abbreviations: SD, standard deviation; DHS, Demographic and Health Surveys; MICS, Multiple Indicator Cluster Survey.

a Comparable national data for children 0–23 months old from the DHS and MICS surveys are not available.
b Nationwide data are from the 2003 and 2011 DHS and the 2008 UNICEF/MICS. The 2003 DHS reported an undernutrition level of 24.6% using earlier WHO nutritional standards. The 2008 UNICEF/MICS survey recalculated the 2003 DHS numbers, shown here, using the WHO 2006 nutritional standards.
Brief Description of the Care Group Model
Theoretical/Conceptual Frameworks that Guide the Design/Analysis

- **Social Network Science** (Christakis & Fowler) and **Persuasion Literature** (Cialdini)

- **Positive Deviance**

- **Health Belief Model and Theory of Reasoned Action**

  *The PD Principle is seeing the glass half-full.*
What are Care Groups?

- Community-based strategy for improving coverage and behavior change
- Developed by Dr. Pieter Ernst
- Used subsequently in 27 organizations in 23 countries.
- Focuses on building teams of volunteer women who serve 10-15 households each
- “Pure” volunteers – no monetary incentives, just job aids
Major Programmatic Inputs

- One paid Promoter (7th grade education or higher) per 1,680 beneficiary households, and one Supervisor (nurse) per 7-10 Promoters.

- Some projects use MOH staff as Promoters, others work with the MOH in other ways.

- 4-5 day training on each of eight behavior promotion modules, 3-4 trainings/year for first two years.

- Educational materials (e.g. flipcharts) for Promoters and Care Group Volunteers, bicycles for Promoters, vitamin A, deworming meds, other supplies.

- One Child Survival or Nutrition Program Manager, 0.33 FTE M&E staff, 0.65 FTE HQ backstop.

**FH/Mozambique Care Group Model**

Promoters (Paid CHWs)

Promoter #1

Promoter #2

Promoter #3

Promoter #4

Promoter #5

Promoter #6

Promoter #7

Each Health Promoter educates and motivates 5 Care Groups. Each Care Group has 12 Care Group Volunteers (a.k.a., Leader Mothers)

Care Groups

12 Leader Mothers

12 Leader Mothers

12 Leader Mothers

12 Leader Mothers

12 Leader Mothers

12 Leader Mothers

Each Care Group Volunteer educates and motivates pregnant women and mothers with children 0-23m of age in 12 households every two weeks. Children in households with children 24-59m are visited every six months.

With this model, one Health Promoter can cover 720 beneficiary households.
What happens during Care Group meetings?

- Short walk to the meeting site: 15 mins
- Reporting of vital events and illnesses and progress in health promotion
- Demonstration with flipchart of this week’s 2-3 health messages
- Group reflection on the messages then practice in pairs
- Other social/teaching activities
- Meetings are 1.5 – 2 hours every two weeks
What happens after Care Group Meetings?

- Each Care Group Volunteer visits “her” 12 HHs.
- Promoter directly supervises one CGVs every 2 wks
- Deworming/vitamin A distributed to all preschoolers; EPI coordination with MOH
- Mostly HH/community-level health/nutrition promotion; some focus on health facility.
- “Cycle” of modules repeated after 18-24 months.
General intervention area/topic and Behavior Change Objectives

- **Intervention Area:** Community Mobilization and interpersonal communication (based on formative research) to improve child nutritional status and decrease child deaths
The main objectives of the program were to decrease malnutrition (underweight) in children 0-23m through:

- Increased uptake of nutrition behaviors; and
- Increasing uptake of WASH and illness-related behaviors.
Formative Research Design, Methods, Insights, and Design Decisions

- **Audience**: Mothers of children 0-23m and pregnant women (principally) and their influencers

- **Formative research methods**:
  - Local Determinants of Malnutrition Study
  - Barrier Analysis Studies
  - FGDs on feeding practices
Formative Research Results

- Local Determinants of Malnutrition (LDM) Study identified several key behaviors, including:
  - encouraging non-hungry child to eat;
  - emptying one breast before switching to another;
  - iron supplements during breastfeeding;
  - POU water treatment
Formative Research Results

**Barrier Analysis** focused on several key behaviors:

- Treatment of drinking water [with Certeza]
- Hand washing with soap
- Use of ORS/Zinc
- Exclusive breastfeeding

See also [http://barrieranalysis.fhi.net](http://barrieranalysis.fhi.net)
BARRIER ANALYSIS RESULTS

What are the advantages to exclusive breastfeeding?

<table>
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<tr>
<th>% of Respondents</th>
<th>Doers</th>
<th>NonDoers</th>
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<tbody>
<tr>
<td>Less expensive</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>No advantage at all</td>
<td>0%</td>
<td>42%</td>
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(OR = 0.22; p<0.05)

Also, “child grows well” (p=0.06; OR=0.44)

Emphasized during discussion about advantages of EBF
Communication Channels

- Principally biweekly *interpersonal communication during the first 1,000 days* and quarterly with mothers of children 2-5yo.

- Half of mothers: *daughters* usually attended the home visit.

- Men reached primarily through quarterly Community Leaders meetings.

- No mass media.
Systems Analysis or Engagement

- Health Facility Assessments
- Verbal Autopsies with feedback to MOH
- Vitals Events Registry
Monitoring Quality: Quality Improvement and Verification Checklists

FH Staff or ML Average Score on QIVC Checklist

- Education Provided to Care Group
- Education Provided to an Individual
- C-IMCI Care Checklist
- Promoter Supervision QIVC
Care Groups Outperform in Behavior Change: Indicator Gap Closure: Care Group vs. non-CG Projects

- Behavior change was **double** in Care Group projects
- 50-100% more reduction in the U5MR rate
Integration with MOH

Shifting the management of a community volunteer system (Care Groups) from NGO staff to Ministry of Health staff in Burundi

Care Groups supervised by community health workers produced similar improvements in child health and nutrition outcomes as those supervised by NGOs.
Applicability to SBCC for Nutrition During the First 1,000 Days

Very applicable for First 1,000 Days:

- Low cost, effective across (27+) organizations and (23) countries.
- Leverages thousands of “pure” community volunteers.
- ~24 contacts a year with mother/influencers.
- Can integrate with national programs by putting volunteer structure under CHWs.
- CG “integrated” model assures data flow Ministry HIS. National scale up through integration with iCCM and other means.
Support Mechanisms for Further Scale-up

- Hundreds trained on Care Group model.
- Website has many resources: www.CareGroupInfo.org
- Materials and discussions also posted on www.FSNNetwork.org
- Has been used for more narrowly-focused programs (e.g., TB)

- Promote use of volunteer peer educators and formative research at 2nd International Conference on Nutrition??