Community Managed Nutrition cum Day Care Centers

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Society for Elimination of Rural Poverty
Dept. of Rural Development
Andhra Pradesh
16.04.12
Outline of the presentation

• Background
• Innovation
• Processes
  ● Phase 1: Platform establishment to demand entitlements
  ● Phase 2: Focus to bring behaviour change at household level
  ● Phase 3: Community based monitoring and evaluation
• Impacts
• Challenges
• Scale up plan
• Conclusion
Society for Elimination of Rural Poverty (SERP)

- Autonomous Society established by Govt of Andhra Pradesh in 2000.
- Responsible for implementation of AP Poverty reduction project supported by WB & the state Govt.
- Works with network of Self Help Groups (SHGs) and their federations with women.
- Works in close coordination with mainstreaming departments
Holistic Development of rural poor

- Land Access
- Land development
- Dairy / Livestock
- Sus. Agri
- Collective Marketing

- Wage emp.
- Skilling and out migration
- Self Employment

- Microfinance
- ECE Centre
- Quality Primary Education
- Quality Secondary Education at +2 level
- Higher Education

- Govt. programmes
- H&N NDCC

- Additional Income of Rs.60000 / annum

- S.E.R.P
- Women’s organisations:
  plan, and
  implement

- Village level
  activists

- Community best
  practitioners –
  catalysts, trainers,
  mentors
Magnitude of the malnutrition

40.4% of children with under weight
37.3% of children are stunted
12.5% of children are wasted
82.7% of children are anemic
37.5% women with BMI<18.5Kg/m2
58.2% of women are anemic

Source: NFHS-3
# Status of children among poorer sections in India

<table>
<thead>
<tr>
<th></th>
<th>Stunted (height-for-age)</th>
<th>Wasted (weight-for-height)</th>
<th>Underweight (weight-for-age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled Caste</td>
<td>53.9%</td>
<td>21.0%</td>
<td>47.9%</td>
</tr>
<tr>
<td>Scheduled Tribe</td>
<td>53.9%</td>
<td>27.6%</td>
<td>54.5%</td>
</tr>
<tr>
<td>Backward Class</td>
<td>48.8%</td>
<td>20.0%</td>
<td>43.2%</td>
</tr>
<tr>
<td>Other</td>
<td>40.7%</td>
<td>16.3%</td>
<td>33.7%</td>
</tr>
</tbody>
</table>

Source: NFHS-3

Figures are presented as percent of children who are below 2 standard deviations from the median growth indicator value calculated from the WHO reference population.
How far is A.P from MDGs (4 & 5)?

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the state</th>
<th>IMR</th>
<th>MMR</th>
<th>CMR</th>
<th>TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>49</td>
<td>134</td>
<td>52</td>
<td>1.9</td>
</tr>
<tr>
<td>2</td>
<td>Karnataka</td>
<td>49</td>
<td>178</td>
<td>50</td>
<td>2.0</td>
</tr>
<tr>
<td>3</td>
<td>Kerala</td>
<td>12</td>
<td>81</td>
<td>14</td>
<td>1.7</td>
</tr>
<tr>
<td>4</td>
<td>Tamil Nadu</td>
<td>28</td>
<td>97</td>
<td>33</td>
<td>1.7</td>
</tr>
<tr>
<td>5</td>
<td>MDG target set by 2015</td>
<td>28</td>
<td>109</td>
<td>42</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Source: SRS 2007-09
Rationale

- 56% of the SHG members spent their income on health related issues.
- Huge net work with Poor health and nutrition indicators
- No special nutritional care for vulnerable groups
- Lack of awareness about Govt schemes & low Utilisation
- Mismatch between the design and implementation of Govt schemes
Community managed health and nutrition interventions to reach MDGs

Universal Interventions *(6336 VOs)* (Common platform to converge for outreach sessions; BCC, support for health emergencies, Anemia reduction)

- Fixed NHDs
- Regular capacity building of Stake holders
- Health savings-HRF-Sanjeevani
- Community Kitchen Gardens

Intensive Interventions *(4200 VOs)*

- Nutrition cum Day Care center (NDCC)
- Water and Sanitation

Health spearhead team strategy

1. Health agenda
2. Health savings-HRF
3. Trainings at NDCC/S HG members
4. NDCC
5. Convergence for community health
Key elements of NDCC

- Balanced diet (3 meals)
- Daily use of sprouts
- Daily use of millets
- Growth monitoring
- Fixed NH Days
- NHED
- Complementary food
- Common Interest Group (CIG) activities
- Capacity building
- Community Garden
- NDCC
- Growth monitoring
- Fixed NH Days
- NHED
- Complementary food
- Common Interest Group (CIG) activities
- Capacity building
- Community Garden
- NDCC
The design built in

1. **One-stop-shop**: Access to nutrition & RCH services
2. **Ownership**: Community assisted and supervised feeding centers
3. **Affordable**: Member contribution Rs. 10/- per day towards quality diet cost which is less than the home diet
4. **Sustainable**: CIGs an opportunity for Pregnant & Lactating mothers to earn an income of > Rs 40-50/day
## Wight gain – Birth weight

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</tr>
</tbody>
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- 90% had normal deliveries
- 10% had cesarean section.
- 52% of pregnant women gained 9-10Kgs weight

**Note:** study conducted in 8 districts inclusive of mandals in 3 ITDAs.
Revenue generation activities (CIG)

The innovation: Cluster approach

- **Primary CIG: Food basket**
- **Collective procurement for cluster of 5-6 VOs**
- **Profit: Rs. 5000 to 8000 per NDCC per month**

Branding exercise: NANYAM
Secondary CIG: Supplementary activities

- Nutritious snacks
- Agarbatti making
- Paper covers
- Adda leaves
- Curd making
- Garland making
- Cloth business
- Revenue: Rs. 2000-3000 per month per NDCC

Feasibility studies conducted by SPJMR & IRMA interns

Revenue from Primary & Secondary CIGs: Rs. 6000- Rs. 10,000 per NDCC per month

“It was always my dream.. I had never imagined it would happen so soon. Now my centre is fully sustainable.”
- Satya, CRP, Jogamperta
# Investment for one Village for 5 years: NDCC and AWC

<table>
<thead>
<tr>
<th>Nutrition cum Day Care Centre (one time grant)</th>
<th>Unit cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption loan corpus for 30 BPL beneficiaries</td>
<td>250,000</td>
</tr>
<tr>
<td>Health CRPs resource fee &amp; Health activist incentives</td>
<td>30,000</td>
</tr>
<tr>
<td>Non-recurring expenditure</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anganwadi Centre (Every year)</th>
<th>Unit cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNP cost for 80 APL+BPL beneficiaries</td>
<td>360,000</td>
</tr>
<tr>
<td>Salary component for AWW and AWH</td>
<td>204,800</td>
</tr>
<tr>
<td>House rent</td>
<td>12,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>576,000</strong></td>
</tr>
</tbody>
</table>

Note: Additional cost for monthly training at NDCC and induction/ refresher training at AWC
Services provided at NDCC are complementary to AWC and not parallel structures.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Particulars</th>
<th>NDCC</th>
<th>AWC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Provision of diet</td>
<td>Nutritionally balanced diet</td>
<td>Supplementary nutrition</td>
</tr>
<tr>
<td>2</td>
<td>Nutrient supply</td>
<td>2800 Kcals; 65 gms of protein</td>
<td>500 Kcals; 15 gms of protein</td>
</tr>
<tr>
<td></td>
<td>Diet cost</td>
<td>Rs 30/day/pregnant; Rs 16/day/child</td>
<td>Rs 6/day/pregnant; Rs 4/day/child</td>
</tr>
<tr>
<td>3</td>
<td>Budget requirement</td>
<td>One time grant (i.e., Rs 3,00,000/center)</td>
<td>Yearly release (i.e., Rs 1,69,692/year)</td>
</tr>
<tr>
<td>4</td>
<td>Investment</td>
<td>Capacity building</td>
<td>Project mgt</td>
</tr>
<tr>
<td>5</td>
<td>Management</td>
<td>Community owned</td>
<td>Functionary driven</td>
</tr>
<tr>
<td>6</td>
<td>Nutrition Education</td>
<td>2 members at every SHG to review, educate and encourage to practice at HHs</td>
<td>Weakest component s of ICDS</td>
</tr>
<tr>
<td>7</td>
<td>Capacity building</td>
<td>Hands on training on regular basis (Fortnightly)</td>
<td>No regular refresher trainings for the functionaries</td>
</tr>
<tr>
<td>8</td>
<td>Community based monitoring</td>
<td>Regular social audit to assess the outcomes by external community representatives</td>
<td>Weak accountability to community.</td>
</tr>
</tbody>
</table>
# POP pregnant woman diet at Home, AWC and NDCC

<table>
<thead>
<tr>
<th>S. No</th>
<th>Food group</th>
<th>At home</th>
<th>AWC</th>
<th>NDCC (RDA as per ICMR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rice &amp; Millets</td>
<td>250</td>
<td>80g</td>
<td>400g</td>
</tr>
<tr>
<td>2</td>
<td>Dhal</td>
<td>10g</td>
<td>40g</td>
<td>55g</td>
</tr>
<tr>
<td>3</td>
<td>Leafy Vegetables</td>
<td>-</td>
<td>-</td>
<td>150g</td>
</tr>
<tr>
<td>4</td>
<td>Other vegetables</td>
<td>50g</td>
<td>-</td>
<td>75g</td>
</tr>
<tr>
<td>5</td>
<td>Roots &amp; Tubers</td>
<td>-</td>
<td>-</td>
<td>75g</td>
</tr>
<tr>
<td>6</td>
<td>Fruit</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Egg</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Jaggary</td>
<td>-</td>
<td>-</td>
<td>20g</td>
</tr>
<tr>
<td>9</td>
<td>Oil</td>
<td>10g</td>
<td>10g</td>
<td>30 g</td>
</tr>
<tr>
<td>10</td>
<td>Milk</td>
<td>-</td>
<td>-</td>
<td>250ml</td>
</tr>
<tr>
<td>11</td>
<td>Curd</td>
<td>50ml of butter milk</td>
<td>-</td>
<td>50g</td>
</tr>
</tbody>
</table>
Repayment pattern

- **Diet cost**: Rs 30-35/day
  - Member contribution: Rs 10/day
  - Income through CIGs: Rs 10/day
  - Interest thru’ internal lending: Rs 5/day
  - Dovetailing from ICDS: Rs 5/day
  - VO profits: Rs 5/day
- **Total**: Rs 35/day
- **For children**: Rs 12-15/day
Time line for NDCC establishment

- **1-4 Months**
  - Implementation of Universal Interventions

- **5th Month**
  - External Spear head team strategy

- **6-12th Month**
  - Internal spear head team strategy (1 Health Activist, 2 Health subcommittees, 1Cook)

- **13-24th Month**
  - Sustainability of NDCCs
# Investment - 3 models

<table>
<thead>
<tr>
<th>Budget heads</th>
<th>Model 1 (20 beneficiaries) (In Rs)</th>
<th>Model 2 (12 beneficiaries) (In Rs)</th>
<th>Model 3 (5 beneficiaries) (In Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed capital</td>
<td>2,50,000</td>
<td>1,75,000</td>
<td>75,000</td>
</tr>
<tr>
<td>Equipment cost</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>CRPs support</td>
<td>30,000</td>
<td>30,000</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,00,000</strong></td>
<td><strong>2,25,000</strong></td>
<td><strong>125,000</strong></td>
</tr>
</tbody>
</table>
Internal Spearhead & CRPs

**Member:** Rs 10/-

**CIG:** Rs 10/-

**ICDS:** Rs 5/-

**Internal lending:** Rs 5/-

**V.O. Contri.:** Rs 5/-

**INCOME** (Rs. 10,920)

**NDCC Pregnant- 3**
**Lactating- 4**
**Children- 5**

**EXPENDITURE** (10,436)

**Building rent** (Rs. 400)

**Fuel** (Rs. 800)

**Cook’s salary** (Rs 500)

**Diet expenses** (Rs 8736)

**SUSTAINABLE NDCC**

**Behaviour change in community**

Complete repayment of diet cost @ Rs 35/- per member

Complete recovery of expenditure

Financial sustainability
Year wise establishment and Coverage of vulnerable groups

No. of NDCCs

2007 2008 2009 2010 2011

38,400 67,200 86,400 1,05,600 2,20,800 4200

2007 2008 2009 2010 2011

No. of NDCCs
ICT
Bringing technology to health

Mobile Technology

Health Passbook

V O Input sheet

User friendly feedback monitoring and decision support system
M-NDCC
DSS alerts
NDCC sustainability

Revenue Generation
- Beneficiary Contribution,
- CIGs (Land based, cluster approach, local resource based, nutritious snacks),
- Internal lending, land leasing

Reduction of Diet cost
- Millets usage, PDS supply, community garden (Land leasing - NPM practices)

Convergence
- ICDS (SNP supply), NRHM (NHDs, nutrition support), NREGS [ SSS(PLM) with special works] & RWS for ODF villages

Social capital
- Internal Spearhead team availability to provide counseling at HH level

Intra-sectors: Land, POP, NPM, Marketing, IB, Disability and Gender

Inter-sectors: Health, WD&CW, RWS and RD

Sustainability of NDCC
Convergence with ICDS, health and rural Development

ICDS
• G.O. Ms No. 55 has been issued for universalization of ICDS with quality by integration of Anganwadi centres, NDCCs and ECEs in backward habitations, Tribal villages, fishermen habitations and SC Localities

NREGS
• G.O.Ms. No. 4 has been issued for ensuring NDCC sustainability through revenue generation by Land- leasing and development of community kitchen gardens through tie-up with NREGS.

NRHM
• Convergence with NRHM for Fixed NHDs resulting in 100% coverages for immunization, ANC, PNC and Growth monitoring for children.
Comparison with NFHS 3 (17300 deliveries: 2007-11)

Source: Internal MIS &
Reaching the MDGs  
(17300 deliveries : 2007-11)

* MMR is measured against 1 lakh deliveries. As our sample is 17,300, MMR shown is as an extrapolation.

Source: Internal MIS &
External evaluation study results 2009 and 2011
Phase I: Platform establishment
Utilization of public health facilities

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Deliveries at PHF</th>
<th>Three ANC check-ups at PHF</th>
<th>Regn. Of pregnancy at PHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN + NDCC (N=234)</td>
<td>68 %</td>
<td>66 %</td>
<td>92 %</td>
</tr>
<tr>
<td>Control (N=242)</td>
<td>51 %</td>
<td>54 %</td>
<td>84 %</td>
</tr>
</tbody>
</table>
Utilization of ‘Provider-Dependent’ Services

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSY Incentive</td>
<td>56</td>
</tr>
<tr>
<td>Postnatal Check-up</td>
<td>83</td>
</tr>
<tr>
<td>Complete ANC</td>
<td>78</td>
</tr>
<tr>
<td>Full Immunization of Infants</td>
<td>90</td>
</tr>
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HN + NDCC (N=234)

Control (N=242)
**Wight gain – Birth weight**

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- 90% had normal deliveries
- 10% had cesarean section.
- 52% of pregnant women gained 9 -10Kgs weight

**Note:** study conducted in 8 districts inclusive of mandals in 3 ITDAs.
Phase II: Health Seeking Behavior Change

Health Literacy Levels in Mothers

- Knowledge of modes of transmission of HIV
- Heard of HIV/AIDS
- Use of bed nets at home
- Knowledge of bed nets to prevent malaria
- Knowledge of modes of transmission of malaria
- Knowledge of malaria symptoms
- Knowledge of methods to treat diarrhea
- Knowledge of methods to prevent diarrhea

Beneficiaries in non-intervention villages N=242
Beneficiaries in intervention villages 237
Mean Awareness Score (on Communicable Diseases) between Women in Two Groups (Maximum = 100)

- HN+ (N=234): 61.54%
- Control (N=243): 48.82%
Maternal Health Behaviour Outcomes

- Full Infant Immunization
- Breast Fed for 6 months
- No Pre-lacteal fluids
- Colostrum fed
- Cesarean delivery
- Delivered at home
- Delivered in private facility
- Delivered in Govt. Facility
- IFA Consumed for 90 Days
- IFA Received
- Three ANC visits

Legend:
- Rural India (NFHS-3)
- Rural AP (NFHS-3)
- NDCC Beneficiaries
Innovation for nutrition
Cost Estimate

- Outreach services
- Referral Services
- Balanced diet
- Complementary food
- Millets (micronutrients)
- HRF
- CIG
- CKG
- Health Passbook
- Mobile technology
- V O Input sheet

Rs. 8064 ($168) per beneficiary

178.18 Crore

2,20,800 Beneficiaries
Household investment v/s Project investment

Total Household expenditure incurred for quality nutrition care: Rs 15,860

- Member contribution: Rs 5980
- Project contribution (one time grant): Rs 8064
- Health Education
- Health services

Investment per member: Rs 14,000
- Complete Maternal and child care
Amortization of Investment over next 10 years

- **Number of beneficiaries (expressed as multiple of 1000)**
- **Investment per beneficiary**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of beneficiaries (expressed as multiple of 1000)</th>
<th>Investment per beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>214.2</td>
<td>8309.991</td>
</tr>
<tr>
<td>2012</td>
<td>428.4</td>
<td>4154.995</td>
</tr>
<tr>
<td>2013</td>
<td>642.6</td>
<td>2769.997</td>
</tr>
<tr>
<td>2014</td>
<td>856.8</td>
<td>2077.498</td>
</tr>
<tr>
<td>2015</td>
<td>1071</td>
<td>1661.998</td>
</tr>
<tr>
<td>2016</td>
<td>1285.2</td>
<td>1384.998</td>
</tr>
<tr>
<td>2017</td>
<td>1499.4</td>
<td>1187.142</td>
</tr>
<tr>
<td>2018</td>
<td>1713.6</td>
<td>1038.749</td>
</tr>
<tr>
<td>2019</td>
<td>1927.8</td>
<td>923.3323</td>
</tr>
<tr>
<td>2020</td>
<td>2142</td>
<td>831</td>
</tr>
</tbody>
</table>
Policy influence

C M Announcements
August 20\textsuperscript{th} 2011, Jogampeta, Vishakapatnam

- Rs 5 lakh grant to all NDCCs for building construction
- Rs. 1 lakh as HRF to all SHGs with regular Health Savings
- Expansion from 4200 to 36,000 villages across Andhra Pradesh.
The ecosystem established

- Institutional architecture to have regular discussions on nutrition and health at SHGs
- Door step delivery of nutrition and health services
- Entrepreneur model of delivery
- Technical inputs through community nutritionist
- Best practitioners as counselors to influence household behaviors.
- Community gardens to influence dietary diversification at HH level too.
- Community based monitoring on nutritional outcomes
Challenges

- More investment of time in capacitating institutions-
  Discussions at SHGs and development of sustainable
  CIGs at NDCCs
- Long time to appreciate the power of the demand
  side approaches by the line depts for replication.
- Lack of baseline data for comparison.
Way forward

- Reaching 15000 tribal, SC and ST habitations with intensive interventions by 2015
- Reaching 38000 with universal interventions by 2015
- External evaluation to measure the outcomes from time to time and make midcourse action
- Establishment of resource centers to train the social capital for replication
Conclusion

- Model needs a network/platform for replication
- For scale up: Constant nurturing of the network members to plan, implement and monitor the interventions.
- The whole model can not be done in one go. It has phases
  - Establishment of platform (1st & 2nd yrs)
  - Focus to bring change in household behaviours (3rd to 4th yrs)
  - Community based monitoring and audit (5th -6th yrs)
- Needs to establish partnership between the CBOs and line depts.
- Development of internal facilitators from the network for scale up and sustainability.
- External evaluations to make modifications/midcourse actions for replication/scale up.
Conclusion

- Sustainable
- Community managed
- Scalable where SHG network/platform is available
For more details of the innovation

1). http://go.worldbank.org/305MTTK2Q0
2). www.serp.ap.gov.in