Community-based management of severe acute malnutrition

The challenges for programme and product and of keeping them together!

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Content

- Why we treat severe acute malnutrition
- What is the community-based approach to management of SAM
- Progress and Challenges
  - Policy
  - Programming
  - Supplies and logistics
  - Funding
- Some ways forward
Why do we treat SAM?

- “Nearly 20 million children under five suffer from severe acute malnutrition” (WHO/UNICEF/SCN/WFP Joint Statement 2007)
- This is an estimate at one point in time. Potentially 40 million every year.
- Depending on reporting mechanisms, classification of cause of death, and HIV status, estimates of deaths directly attributable to severe acute malnutrition have varied from 0.5 million to 2 million annually (Bhutta Z. Treating acute malnutrition where it matters. Lancet 2009).
History of Community-based management of SAM

- Response to challenges of centre-based care for the management of SAM.
- 1999 Ready-to use therapeutic food developed
- 2000 1st community-based pilot programme in Ethiopia
- 2001-2005. Community-based approach developed and evidence collected from 21 community-based programmes (Malawi, Ethiopia, Sudan & Niger)
- 2005 Evidence from 25,000 children treated reviewed and approach endorsed by UN agencies.
- 2006 onwards Expansion and scale-up in countries with involvement of various agencies, NGOs and government.
## Magnitude of ‘Severe Wasting’ Around the World – not only in emergencies

<table>
<thead>
<tr>
<th>Country</th>
<th>Total population of under-5s (10^5)</th>
<th>Moderate and severe wasting (Z score ≤−3)</th>
<th>Severe wasting (Z score ≤−3)*</th>
<th>Under-5 mortality rate†</th>
<th>Severely wasted children (10^5)</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>118568</td>
<td>16</td>
<td>3</td>
<td>87</td>
<td>3557.0</td>
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<td>Democratic Republic of the Congo</td>
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<td>13</td>
<td>3</td>
<td>205</td>
<td>306.6</td>
<td>3</td>
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<td>Bangladesh</td>
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<tr>
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<td>5</td>
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<tr>
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<td>4</td>
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<tr>
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<tr>
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<td>17</td>
<td>4</td>
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<td>9</td>
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<tr>
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<td>3</td>
<td>262</td>
<td>76.5</td>
<td>11</td>
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<tr>
<td>Mali</td>
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<td>11</td>
<td>2</td>
<td>220</td>
<td>51.6</td>
<td>12</td>
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<tr>
<td>Nepal</td>
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<td>2</td>
<td>200</td>
<td>32.9</td>
<td>14</td>
</tr>
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<td>Ghana</td>
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<td>95</td>
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<td>15</td>
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<tr>
<td>Laos</td>
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<td>3</td>
<td>91</td>
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<td>16</td>
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<tr>
<td>Sierra Leone</td>
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<td>10</td>
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<td>284</td>
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<td>17</td>
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<tr>
<td>Togo</td>
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<td>12</td>
<td>2</td>
<td>140</td>
<td>16.2</td>
<td>18</td>
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<tr>
<td>Mauritania</td>
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<td>13</td>
<td>3</td>
<td>183</td>
<td>15.0</td>
<td>19</td>
</tr>
<tr>
<td>Eritrea</td>
<td>717</td>
<td>13</td>
<td>2</td>
<td>85</td>
<td>14.3</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total (103)</strong></td>
<td><strong>5683.6</strong></td>
<td></td>
<td><strong>5683.6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All values from 2003 except columns 2 and 3 which refer to 1995–2003. †Probability of dying between birth and 5 years of age expressed per 1000 livebirths.

Community-based management of Severe Acute Malnutrition (SAM)

- A community-based approach to treating SAM
  - Most children with SAM without medical complications can be treated as outpatients at accessible, decentralised sites using RUTF and simple medical protocols.
  - Children with SAM and medical complications are treated as inpatients with F75 and medical care.
  - Community outreach for community involvement and early detection and referral of cases

- Also known as community-based therapeutic care (CTC), ambulatory care, home-based care (HBC) for the management of SAM
Core Components of CMAM

- Community Outreach
  - Community-based Management of Acute Malnutrition
    - Services and programs addressing MAM
    - Outpatient care for SAM without complications
    - Inpatient care for SAM with complications

Services and/or programs to prevent undernutrition
Principles of Community-based Management of SAM

1. Maximum access and coverage
2. Timeliness
3. Appropriate medical and nutrition care
4. Care for as long as needed
1. Maximise access and coverage
Bringing treatment to the local health facility and the home

Ready-to use Therapeutic Food

- Nutritionally equivalent to F100 milk (used for second phase of inpatient care).
- Very low water content (activity) so resists bacterial contamination – i.e. is safe for disease vulnerable children.
- Given as **complete** diet according to weight of child.
Simple outpatient protocols for the majority of children

Initial:

- Measurement, Medical check and appetite test (referral if required)
- Vitamin A, Routine Antibiotic, De-worming, Measles vaccination, Anti-malarial
- 200Kcal/kg/d RUTF
- Orientation for carer on giving RUTF, antibiotic, basic hygiene & provision of other clinic services

Weekly visits to clinic:

- Medical check & appetite test
- Weight monitoring
- 200Kcal/kg/day RUTF

Length of stay about 60 days
2. Timeliness: Catching malnutrition early
Using simple tools: MUAC

- Community level identification essential for early presentation
- Transparent & understandable measure
- Facilitates work of community-based case-finders
3. Appropriate medical and nutritional care

Based on anthropometric assessment, medical assessment and appetite test by health worker.
4. Care for as long as needed

- Making treatment accessible at low opportunity cost allows children to stay in programme until fully recovered (minimises defaulters)
- Imperative to integrate all aspects of the service into the health system so that care is not provided only in an emergency
- Link of community-based management of SAM with programmes to address moderate acute malnutrition and on prevention of malnutrition (e.g. infant feeding support)
Progress and Challenges

- Policy
- Programming
- Supplies and Logistics
- Funding
Policy level - Progress

- Consensus on need for the community-based approach (agencies, donors, NGOs) wherever inpatient care cannot reach the majority of children

- Increased acceptance of MUAC for admission and for measurement during surveys to allow estimation of need.

- 17 West Africa, 17 East Africa, 6 Asia and 2 middle east and north Africa countries (total 42 countries) finalized or drafted national guidelines including the community-based approach for management of SAM.
Policy level - Challenges

- SAM not always recognised as problem (not identified in surveillance systems) - requires identification of the problem and advocacy.
- Uncertainty on the global burden of SAM:
  - Calculation of incidence (not measured in surveys and fluctuating prevalence)
  - Lack of consensus on associated mortality especially in the Asia context.
- Gap in cost effectiveness data for advocacy
- Reluctance on use of imported foods
- Criticism that treatment takes focus from prevention
Global guidelines and training resources available including incorporation of infant feeding orientation into trainings.

Collaboration on joint trainings WHO, UNICEF, UNHCR, FANTA and on support for planning and scaling up.

WHO inpatient training materials modified to reflect the community-based approach.

Multi-country sharing of experience of trying to integrate and scale-up the approach (FANTA 2008) and good documentation of progress on reaching children with SAM in selected countries (e.g. Malawi, Ethiopia, Niger)
Example of increased capacity to treat SAM

Treatment capacity 3500 in 2003, 18480 in 2006.
In 2009 over a year 180,000 children were treated.
Procurement of RUTF and F100 (off shore)

<table>
<thead>
<tr>
<th>Year</th>
<th>Plumpy Nut</th>
<th>F100</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2002</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2003</td>
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<tr>
<td>2004</td>
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<td>2005</td>
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<td>2006</td>
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<td>2007</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>2008</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>2009</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

Number of countries
Programming challenges (1)

- Capacity of health systems to take on treatment of SAM in terms of staffing, logistics, monitoring and supervision requires that a more holistic systems strengthening approach be taken.
- Focus on product rather than programme leading to poor quality implementation due insufficient attention to training and the above.
- Difficulties in evolving from a new treatment approach to one which forges links and reinforces wider preventative interventions.
- Integration of training in the approach into national and international health worker training curricula.
Programming challenges (2)

- Monitoring of progress on reaching children with SAM (numbers admitted, effectiveness of treatment and coverage). Challenges of monitoring many sites compared to few hospitals and multiple implementors.
- New simpler coverage monitoring methods yet to be integrated into national programmes.
- Increase in numbers with the adoption of new WHO growth standards.
Implications of shifting to the new WHO growth standards and MUAC cut-off in identifying SAM

- Two to four times as many children identified for treatment – this needs to be planned for
- However decrease in length of stay as more children detected earlier so quicker to treat
- Captures more children previously classified as moderate acute malnutrition who in none emergency contexts were not being reached.

WHO Child Growth Standards \(<-3\) SD or MUAC \(<115\)mm

NCHS reference \(<-3\)SD
Supplies and Logistics Progress (1)

Procurement of RUTF and F100 (off shore)

<table>
<thead>
<tr>
<th>Year</th>
<th>RUTF (kg)</th>
<th>F100 (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>2,000,000</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>4,000,000</td>
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<td>2003</td>
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<td>2004</td>
<td>8,000,000</td>
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<td>2005</td>
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<td>2006</td>
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<td>2008</td>
<td>16,000,000</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>2,000,000</td>
</tr>
</tbody>
</table>
Supplies and Logistics Progress (2)

- RUTF Supply Chain review (Kenya, Ethiopia, Somalia):
  - More accurate forecasting, predictable funding, and buffer stocks would allow more timely distribution.
- Expansion of RUTF suppliers based on technical review of products and factory quality inspections
- Expansion of RUTF local production (Ethiopia, Malawi, Niger, Mozambique, DRC... and more)
- Forecasting exercise at country level with partners to better predict requirements yearly
  - Based on what can be reached programmatically
INPUT ASSUMPTIONS TO FORECAST NEEDS FOR THERAPEUTIC FEEDING

User guide for inputting data:
- Information should be entered only in the yellow boxes.
- Some of these yellow input boxes can remain zero or empty. Instructions are given if they must be filled.
- User instructions are given in green font. "Ok input" indicates that the input is valid.
- Red font appears if invalid input has been entered or input is missing; the model will not work properly with invalid or missing input.
- The white boxes show calculation results by the model. They should/can not be edited by the user.
- Input step 1 to 5 and then view your forecast results on sheet "Calculation" and "Forecast Output"

1- Profile of the population

<table>
<thead>
<tr>
<th>Country name</th>
<th>Select a country from the drop-down list in cell B14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Input cell C16</td>
</tr>
<tr>
<td>Percentage of children under 5 (%)</td>
<td>Input cell C17</td>
</tr>
<tr>
<td>Number of children under 5</td>
<td>-</td>
</tr>
<tr>
<td>Prevalence of S.A.M. (%)</td>
<td>Input cell C19</td>
</tr>
<tr>
<td>Incidence of S.A.M. over 1 year (multiplying factor)</td>
<td>Input cell C20</td>
</tr>
<tr>
<td>Estimated annual (new) caseload</td>
<td>-</td>
</tr>
</tbody>
</table>

2- Estimated number of admissions, per month

- Fill in the table for the coming year based on previous year admissions, a prediction of trends, seasonal malnutrition patterns, the scale up plan and the capacity of the CO partner.
- The Outpatient number should be for new admissions who will receive only Outpatient treatment, while the Inpatient number will receive initial treatment in Inpatient followed by...
Supplies and logistics – Challenges (1)

- Maintaining supply chain in a decentralised programme is more challenging than previously supplying hospitals for inpatient care (e.g. Niger 75 facilities in 2005 to 941 facilities in 2007)
- Poor communications, transport challenges and stock control systems leading to stock outs at clinic level
- Expansion of local production, maintaining quality
- Surges in requirements leading to lack of global supply
Supplies and logistics – Challenges (2)

- Difficulty of forecasting
  - Unlike planning for population based prevention programmes e.g. Vitamin A
  - Children constantly slipping into SAM
  - Previous years data on admissions often incomplete due to incomplete reporting
  - As programmes are expanding last year doesn’t represent next yr
  - Difficulties in estimating incidence
  - Difficulties in estimating coverage
  - Unpredictability of large emergencies e.g. Ethiopia 2008
Funding - progress

Total spending on therapeutic products (F100, F75, CMV, RUTF) – UNICEF ONLY

- Year
- Total spending on therapeutic products (F100, F75, CMV, RUTF)
But..........

Estimates indicate that to be effective programmes may require as much resource dedicated to programming as to product per child (i.e. $60 plus $60).

If 40 million children with SAM/yr requiring $120/child (including costing of government inputs)

- 2010 – 10% coverage globally - $240 million
- 2011 – 20% coverage globally - $480 million
Funding - challenges

- $$$$$$$$$!!!?? (USA pledged $900 million to the global fund to fight AIDS, TB and Malaria for 2009)
- No consolidated view of funds to programming (divided within UNICEF budget codes and with NGOs, government etc.). Difficult to analyse what spent for results.
- Unpredictable funding – large proportion still from emergency budgets doesn’t allow for multi year planning.
- Tension between prevention and treatment competing for resources.
The way forward (1)

- Innovative approaches to improving monitoring of admissions and supply, and for monitoring coverage and integrating it into national systems (e.g. SMS)
- Further development of forecasting methods with all national partners to better predict requirements (research underway on estimation of incidence by WHO)
- Reinforcement of systems to ensure quality of supplies given proliferation of suppliers
- Creation of buffer stocks of supplies
The way forward (2)

- Continued work and advocacy on integrating treatment within wider prevention programmes rather than stand alone.
- Continued exchange of country experience of scaling up the approach and documentation of lessons learnt.
- Advocacy with non-emergency donors to fund programme and with all donors on implications of moving to the new WHO GS
- Collection of quality cost data to allow realistic planning
Still a long way to go..................

[Image of people walking on a muddy path]