The role of open data for addressing human nutrition challenges in Africa

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What don’t we know in a food security emergency?

- Estimates of the number of dead from the 1983-85 Ethiopian famine range from 200,000 to 1,000,000.
- Has anyone seen a map of the who was affected?
- Much of the real-time data came from journalists, surveys of victims in resettlement areas, limited meteorological and cropping data, etc.
- A corrupt government used aid a tool against insurgents, exacerbating the effects of the drought.
- As a result, FEWSNET and the PSNP were born.
What don’t we know in a food security emergency?

- Now we have FEWSNET to map projections of areas affected.
- We have (representative) household surveys to map trends.
- We have the Core Humanitarian Standard.
- What is missing?

Source: FEWSNet

Source: 2011 DHS Children’s Health and Nutritional Status report
Why nutrition?

the developed world’s view of nutrition

Which apps are best for your diet?
Why nutrition?

Developing countries have a different view
Why Nutrition?

- **Stakes are too high:**
  - Nearly half of all deaths of children under 5 are linked to malnutrition.
  - Malnutrition in first 1,000 days causes permanent cognitive and physical damage.
  - Children who aren’t exclusively breastfed are 14x more likely to die than those who are.

- **Funding levels abysmally low:**
  - Nutrition-specific funding stands at less than 1% of official development assistance (ODA)

- **Potential gains too good to miss:**
  - Nutrition = $1:16 return on investment
  - Malnutrition reduces GDP (by 10% in Malawi, e.g.)
## What is undernutrition?: 5 indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>What it means</th>
<th>What it does</th>
<th>How many?</th>
<th>Global Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stunting</strong></td>
<td>low height/age</td>
<td>↓ cognitive &amp; physical development, health, productive capacity ↑ risk of infection &amp; degenerative disease</td>
<td>162 million children</td>
<td>40% ↓</td>
</tr>
<tr>
<td><strong>Anemia</strong></td>
<td>↓ hemoglobin</td>
<td>↑ risk of low birth weight, miscarriage, stillbirth, prematurity</td>
<td>38% of pregnant women</td>
<td>50% ↓</td>
</tr>
<tr>
<td><strong>Low birth weight</strong></td>
<td>&lt; 5.5lb</td>
<td>↑ risk of non-communicable diseases Indicator of neonatal mortality</td>
<td>15-20% of births</td>
<td>30% ↓</td>
</tr>
<tr>
<td><strong>Exclusive breastfeeding</strong></td>
<td></td>
<td>lack of it contributes to 12% of child deaths</td>
<td>38% of infants</td>
<td>↑ to 50%</td>
</tr>
<tr>
<td><strong>Wasting</strong></td>
<td>low weight/height</td>
<td>↑ risk of disease &amp; death</td>
<td>52 million children</td>
<td>↓ to 5%</td>
</tr>
</tbody>
</table>
What is current state of accountability?

- Financial Outputs:
  - From multiple budget lines and multiple types of sources
  - To multiple funds and bilateral programs
  - Under multiple initiatives
  - Donors not always reporting nutrition-sensitive
  - Required nutrition-specific reporting incomplete

- Outcomes:
  - Data sources: World Bank, UNICEF, WHO, FAO, others
  - 61 countries don’t have enough data to make an assessment of more than 1 target
  - Only 74 have enough data to make an assessment across 5 targets
  - 12 interventions: 6 have no comparable data, 3 have proxy data, and 3 have comparable data
  - Particularly missing: diets of infants and young children

- Data funding = 0.16% of ODA (27% of which went to Africa in 2013)

messy and incomplete
Why does ONE care?

- 2006-2013: only 28 of 49 Sub-Saharan African countries had household survey data on income and consumption – so the 414 million people living on <$1.25/day? – a guestimate.

- On top of that: household survey data excludes the most marginalized (the homeless, the unregistered, the remote, the nomadic).

How do I push leaders to prioritize nutrition if I don’t know how much they’re investing now, who is affected, or even if the data can be trusted?
Why does ONE care?

$\&$ Policies

Interventions in households & communities

Outcomes

Image Credit: Bread for The World
We Need a(n) (Open) Data Revolution!

The World is facing a data crisis: missing, out of date and bad data is feeding corruption, bad management, and undermining the fight against ending hunger.

“Wrong data, wrong diagnosis, and wrong policy”
-- Statistician General of Nigeria
What is ONE doing about it?

- Spurring an effort to create a digital, accessible accountability framework for Sustainable Development Goal 2 (“End hunger, achieve food security and improved nutrition and promote sustainable growth”). Join us!

- Founding partner of the Global Partnership for Sustainable Development Data and member of the Global Open Data for Agriculture and Nutrition partnership (GODAN).

- Campaigning to fill data gaps as part of our 2016 Nutrition for Growth 2 campaign and for signatories to make SMARTer commitments (Specific, Measurable, Assignable, Realistic, and Time-bound).

- Ultimately, open data must serve those most vulnerable to malnutrition and leave no one behind, with the aim of reaching the global nutrition targets.
What are some promising solutions?

- GSMA mHealth’s mobile phone programs provide nutrition education, register pregnant women, real time feedback on interventions, etc.
- UNICEF’s “Wearable for Good” competition: mobile technology for, e.g., MUAC measurements.
- Premise uses a network of mobile data collectors for measurements such as food prices at local markets in Nigeria and Ghana.
- And many more examples
- But the outcomes for nutrition have yet to be demonstrated.