Linkages between market access & child dietary diversity
Evidence from rural Malawi

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Quantitative Methods for Integrated Food and Nutrition Security Measurements
17 November 2017, Brussels
Programme Overview: Stunting Prevention

Malawi

Ntchisi district

42% stunting

53% stunting

LNS distributions

SBCC: IYCF & WASH

Home food production

Malawi

Ntchisi district

42% stunting

53% stunting

LNS distributions

SBCC: IYCF & WASH

Home food production
Available data:

- **Child data**
  - 24 hour recall: Minimum dietary diversity

- **Household data**
  - 7 day recall: Household food consumption, source of food

- **Spatial data**
  - Household locations, market locations, travel routes, travel time

Sample size: 3110 observations

**Household characteristics:** Household size and sanitation
Do households living closer to markets purchase more food from markets?

% of household food sourced from market

Walking time to nearest market

- <15 min: 54%
- 15-30 min: 33%
- 30-60 min: 31%
- 1-2 hours: 33%
- 2-3 hours: 33%
- 3+ hours: 33%

P < 0.05
Do households purchasing food from markets have children with better diet diversity?

The graph shows the probability density of % food bought from markets. The blue line represents households not reaching the minimum dietary diversity, while the orange line represents households reaching the minimum dietary diversity. The graph indicates that households purchasing a moderate amount of food from markets are more likely to have children with better diet diversity.
Do children living closer to markets have better dietary diversity?

P = 0.055

<table>
<thead>
<tr>
<th>Walking time to nearest market</th>
<th>Probability of reaching min dietary diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15 min</td>
<td>45%</td>
</tr>
<tr>
<td>15-30 min</td>
<td>41%</td>
</tr>
<tr>
<td>30-60 min</td>
<td>37%</td>
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<tr>
<td>1-2 hours</td>
<td>33%</td>
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<tr>
<td>2-3 hours</td>
<td></td>
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<tr>
<td>3+ hours</td>
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</tbody>
</table>
Spatial patterns of dietary diversity
Spatial patterns of dietary diversity
How does distance to markets affect household consumption of different foods?

Number of days consumed in last week

Walking time to nearest market

- <15 min
- 15-30 min
- 30-60 min
- 1-2 hours
- 2-3 hours
- 3+ hours

Dairy

P < 0.05

% of dairy purchased from markets

93%
So what does it mean?

1. Markets matter for nutrition

2. There is potential for cash programming to work for nutrition

3. Cash and nutrition programmes need to consider accessibility
Thank you!

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