Dietary Diversity for Human Development and Health

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Introduction: What is the issue?

• Lack of diversity in dietary intake is a serious problem among young children and women of reproductive age in developing countries
Introduction: What is the issue?

Children fed 4+ of 7 food groups, by age group, %

Multi-Sectoral Nutrition Global Learning and Evidence Exchange
Washington, DC
Breastfed children 6–23 mos provided foods from following food groups, %
Introduction: Why does it matter?

- Dietary diversity is significantly associated with height for age z-score and growth among young children (Arimond & Ruel, 2004; Steyn et al 2006; Busert et al 2016; Marriott et al 2012; Onyango et al 2013)

- Dietary Diversity is a good predictor of dietary micronutrient density and micronutrient intake among young children 6-23 (Moursi et al., 2008; Steyn et al 2006, Kennedy et al 2007; Wondafrash et al 2016)

- Dietary diversity has been shown to be predictive of child motor and language skills (Iannotti et al 2016)
Introduction: Why does it matter?

- Women’s dietary diversity have been shown to be significantly associated with reduced anemia (Weigel et al, 2016, Zerfu et al 2016)

- Women’s dietary diversity has been shown to be significantly associated with reduced low birth weight and preterm birth (Zerfu et al 2016)
## Contribution of DD to WHA Targets

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<tr>
<th>World Health Assembly Targets</th>
<th>Contribution of dietary diversity to target</th>
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<tr>
<td>40% reduction in the number of children under 5 who are stunted</td>
<td>Improved dietary diversity among young children contributes to decreases in stunting</td>
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<td>50% reduction of anemia in women of reproductive age</td>
<td>Improved dietary diversity in pregnancy may contribute to reductions in anemia</td>
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<tr>
<td>30% reduction in low birth weight</td>
<td>Improved dietary diversity in pregnancy may contribute to reductions in low birth weight</td>
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Gaps related to dietary diversity

• Major gap - lack of national and sub-national data on what people eat, especially women

• Need for more information on relationships between women’s dietary diversity and health/nutrition outcome measures

• Diet-related indicators related to obesity and overweight are also needed

• Still need solid information on determinants of dietary diversity and what works to improve it
Initiatives to fill gaps

• International Dietary Data Expansion (INDDEX) Project: http://inddex.nutrition.tufts.edu/project-overview

Initiatives to fill gaps


• Indicators of Affordability of Nutritious Diets in Africa Project (IANDA): [http://immana.lcirah.ac.uk/node/367](http://immana.lcirah.ac.uk/node/367)

• Innovative Methods and Metrics for Agriculture and Nutrition Actions (IMMANA): [http://immana.lcirah.ac.uk/](http://immana.lcirah.ac.uk/)
Improving DD in Guatemala
<table>
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<th>Optifood FBRs after Validation (TIPS)</th>
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<tr>
<td>FBRs for Children 6–11 Months</td>
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<tr>
<td>1. Fortified porridge (papilla)</td>
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<td>1 dry Tbsp. 5 times a week</td>
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<td>2. Black beans</td>
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<td>2 Tbsp. 3 times a week</td>
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<td>½ egg 3 times a week</td>
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Families’ Challenges with FBRs

• Financial access principal challenge for some FBRs due to cost
• Beliefs and practices – providing children the broth (bean or vegetable broth), not the food; portion sizes felt to be too large; perception of child rejection of food
• Lack of adequate home production of foods
• Influence of mothers-in-law/husbands
Considerations: National Level

• Strengthen family agricultural programs to improve access to FBR foods
• Strengthen government programs for fortified cereals and micronutrient supplements
• Review formulation of fortified cereals (e.g., Incaparina, Vitacereal) to optimize levels of problem nutrients like iron, zinc, B12
• Explore safety nets to expand access to FBR foods that fill nutrient gaps in the diet
Considerations: Community/HH Level

• Promote optimal child feeding: highlight child developmental phases and persistence to introduce textures and appropriate quantities

• Include whole family in FBR promotion, including the mother-in-law and the husband

• Support optimal use of fortified cereals with recipe demonstrations of porridge

• Promote food hygiene practices related to FBRs (e.g., well-cooked egg)
Considerations: Community/HH Level

- Support household production of FBR foods (drought resistant varieties of beans, raising chickens, growing DGLV)
- Support market access e.g., transportation, distribution, mobile butchers, etc., for regular access to fresh foods and storage
- Promote prioritization of household spending on diverse nutritious foods
Key Takeaways

- We must improve dietary diversity among children and women to prevent stunting and improve health and development outcomes.
- Although there are important gaps in available data on dietary diversity and its use, there are also important initiatives to fill these gaps.
- The Optifood tool identified nutrient gaps in the diets of children and PLW in Guatemala and FBRs to fill gaps, but constraints must still be overcome through national and local initiatives.
References


References


References


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