Mama SASHA Baseline survey:

Preliminary results

Dietary Diversity Indices (DDI)

By Christine Kiria

SASHA

Sweetpotato Action for Security and Health in Africa

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Introduction

- Micronutrient deficiency, in particular of VAD, is a major problem globally
  - A leading cause of early childhood death and a major risk factor for pregnant and lactating women.
  - About 250 million children in developing countries are vitamin A-deficient
  - In Kenya, 3.8 million children under the age of five years (84.4%) suffer from VAD.
  - VAD is common among Kenyan mothers (50.7%)

MAMA SASHA: Main goal

- The overall goal is to *assess the cost effectiveness of integrating OFSP into an existing health service delivery program to improve the health status of pregnant women and the nutritional status of children up to two years* in selected districts of Western Kenya

Presentation objective

- To present dietary diversity of households and children of age 6-23 months based on project baseline study
  - Individual dietary diversity (IDD)
  - Household dietary diversity (HDD)

Baseline survey 2011

- **Study sites**
  - Catchment areas of the health facilities
  - 8 APHIA-supported health facilities, purposively selected, then randomly allocated into intervention or control group
- **Population**
  - Pregnant women, children 6-23 months & their mothers
- **Sampling method**
  - Size of 1386 mother-child pairs and 1022 pregnant women
  - Cluster sampling design: 52 clusters per group, using “probability proportionate-to-size” cluster sampling,

Data collection

- HH identification, demographics, housing and assets
- Knowledge & attitudes regarding health & nutrition & SP
- SP production
- Food consumption and dietary diversity
  - Children aged 6-23 months
  - Households
  - 2 recall periods; 24 hrs & 7 days

Methods: Dietary diversity indices

- We use dietary diversity indices to compute levels of diet diversity

Types of dietary diversity indices

- Household dietary diversity index (HDDI), a proxy for:
  - household's access to diversified foods
  - social-economic status of household
  - and household food security

- Individual dietary diversity index (IDDI), a proxy for:
  - nutrient adequacy for individual diet (quality of complementary food)

Individual dietary diversity indices

(Used a cluster of 7 food categories -WHO)

- Minimum dietary diversity (A dietary diversity =4-7)
- Required minimum number of meals
  - breastfed infants: 2 times for 6-8 months old, and 3 times for 9-23 months old
  - Non-breastfed children: 4 times for 6-23 months old
- Minimum acceptable diet
  - Breastfed children: received minimum dietary diversity and min meal frequency during the previous day
  - Non-breastfed: received minimum dietary diversity and min meal frequency and at least 2 milk feedings during the previous day

Household dietary diversity index

- Used a cluster of 10 food categories –FAO
  - 0-4 (low) and unacceptable; 5-10 (medium to high)

Results and discussion

Characteristics of participants

- **Women**

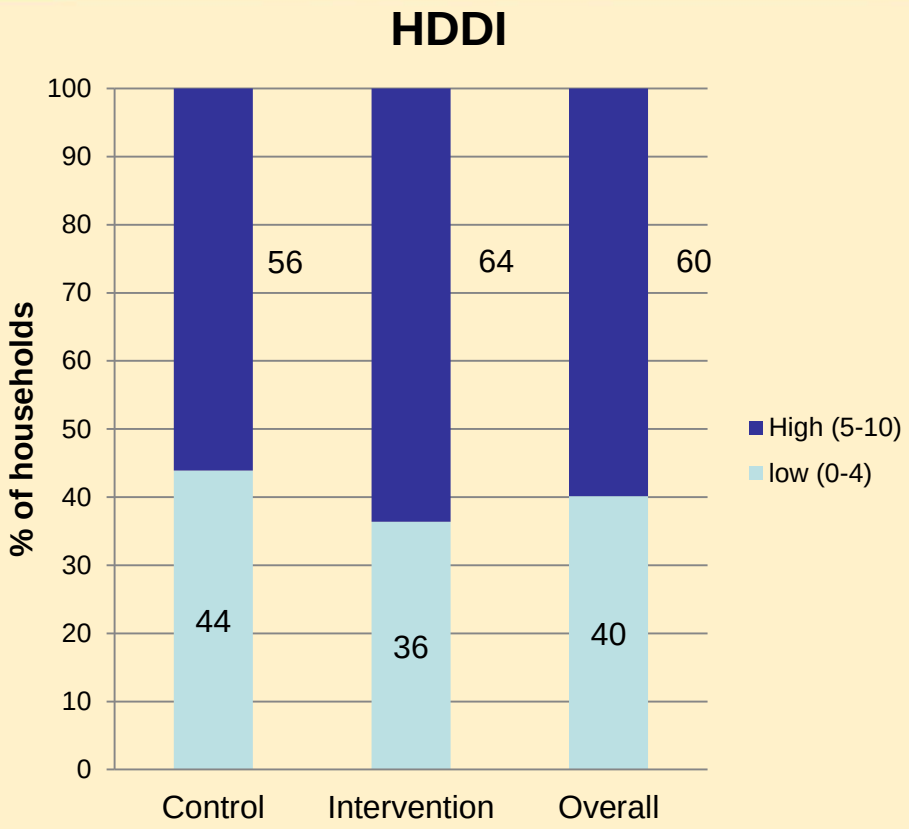
	Pregnant women		Mothers	
	Intervention (n=489)	Control (n=491)	Intervention (n=897)	Control (n=884)
Households size (mean, SD)	3.7 (2.0)	3.8 (1.9)	4.2 (2.1)	4.2 (2.0)
Head of household is a man (%)	93.8	92.0	92.0	91.9
Age (mean, SD)	25.9 (6.5)	26.7 (6.9)	28.9 (8.4)	29.9 (8.8)
Is spouse of the household head	83.0	82.1	81.8	85.0
Primary school is highest education level	77.0	70.3	72.7	71.5
Months of pregnancy (mean, SD)	5.9 (2.1)	5.8 (2.1)	N/A	N/A
Had income-generating activity past year	83.0	88.9	89.2	91.1

Characteristics of participants (cont')

- **Children**

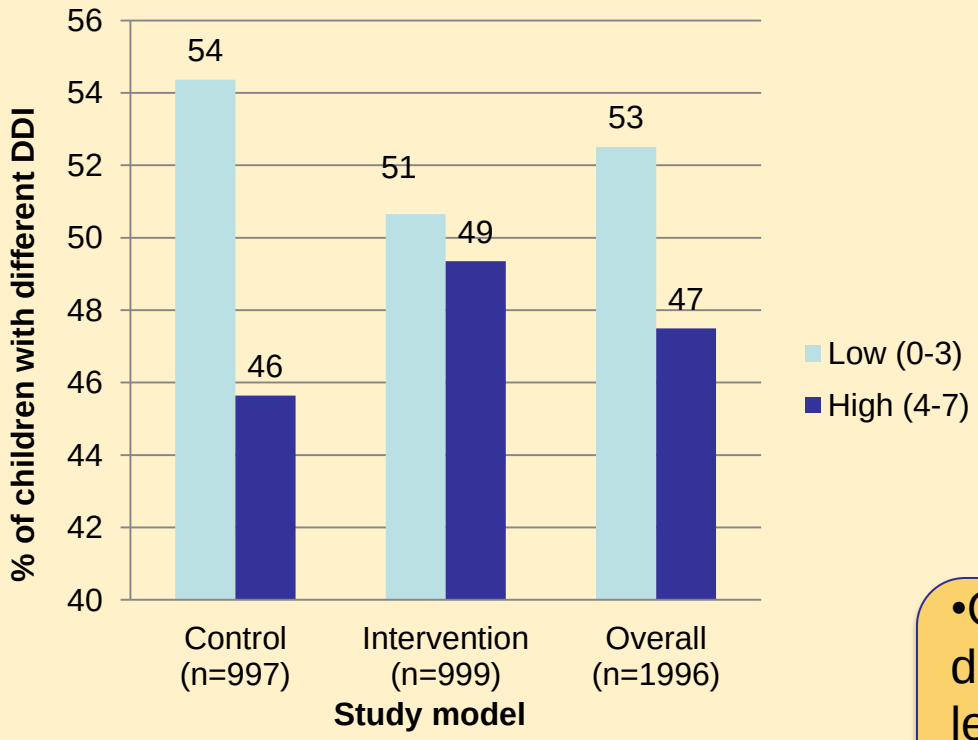
	Intervention (n=994)	Control (n=990)
Age in months (mean, SD) 6-11 months (%)	14.1 (5.0) 36.1	14.1 (5.1) 36.4
Sex (% male)	50.5	49.4

Household dietary diversity



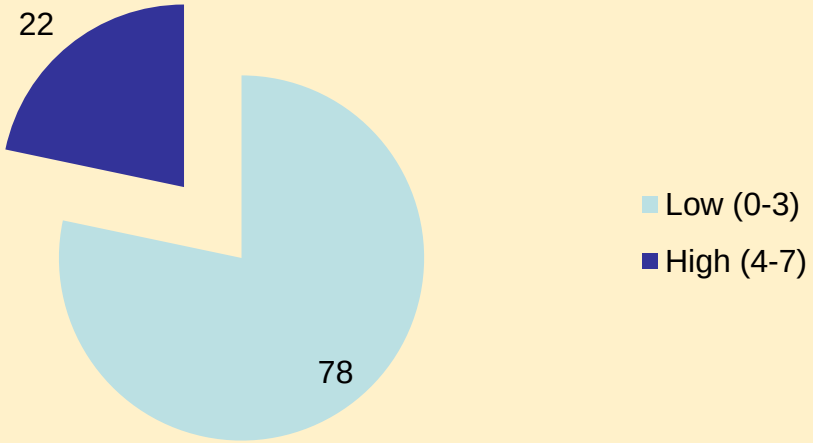
- About 40% households with dietary diversity below acceptable level
- Similar trend across HHs in control and intervention area

Overall DDI for children



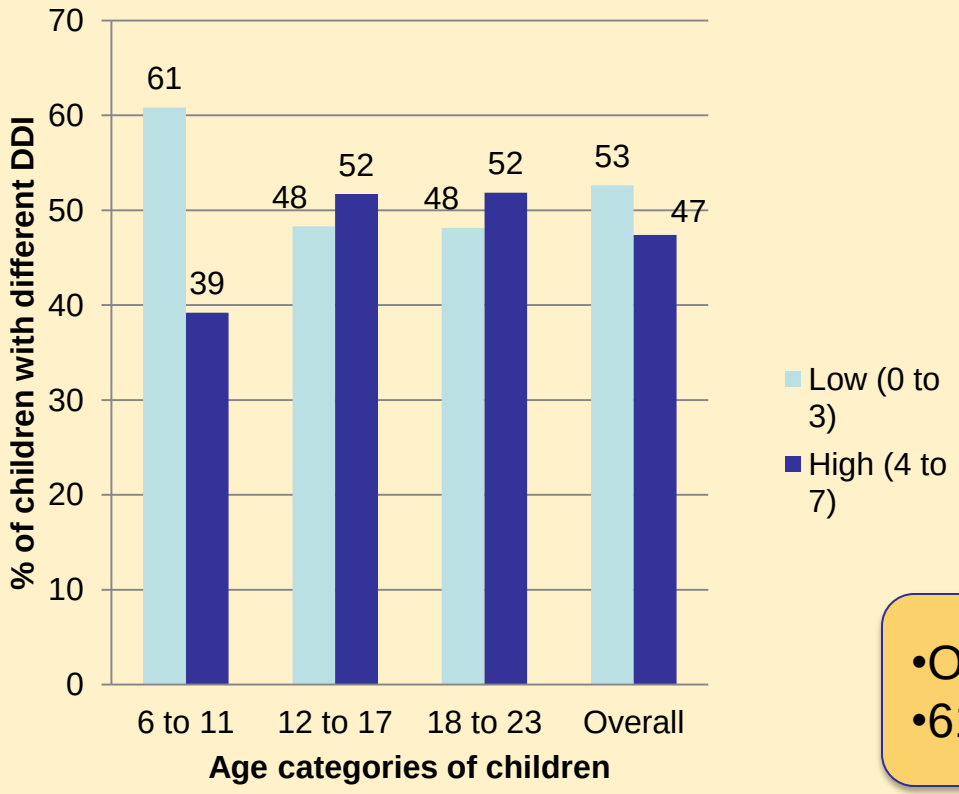
- Overall, 53% of the children have dietary diversity of below acceptable level
- Risk of malnutrition

DDI for non-breast feeding children



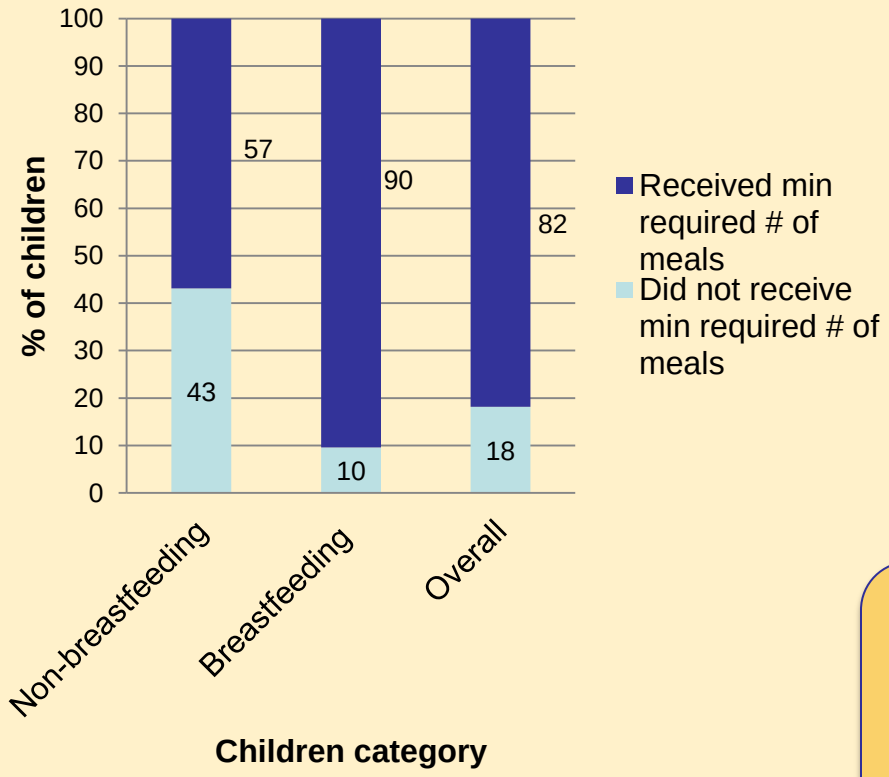
•78% of non-breast feeding children have DDI<4

DDI for children by age categories



- Overall, 53% of children have DDI<4
- 61% of children aged 6-11 have DDI<4

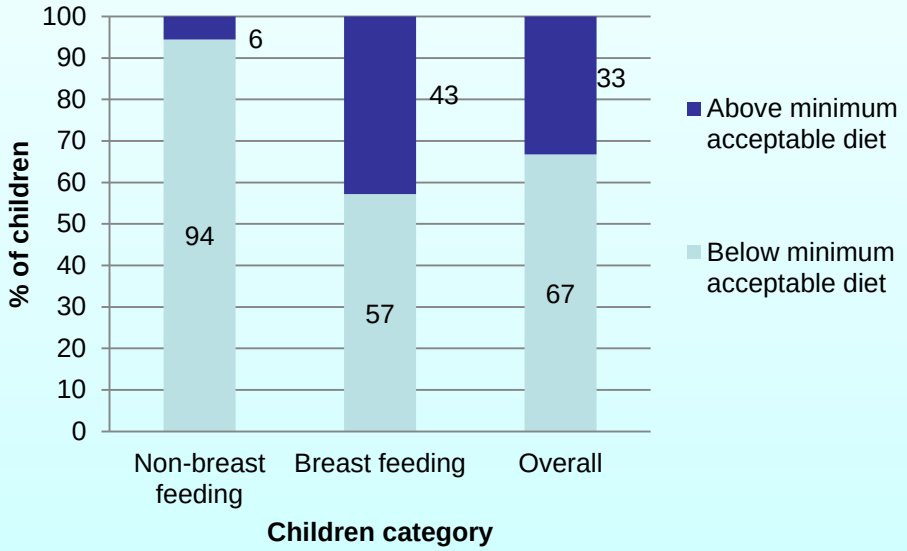
Minimum required number of meals



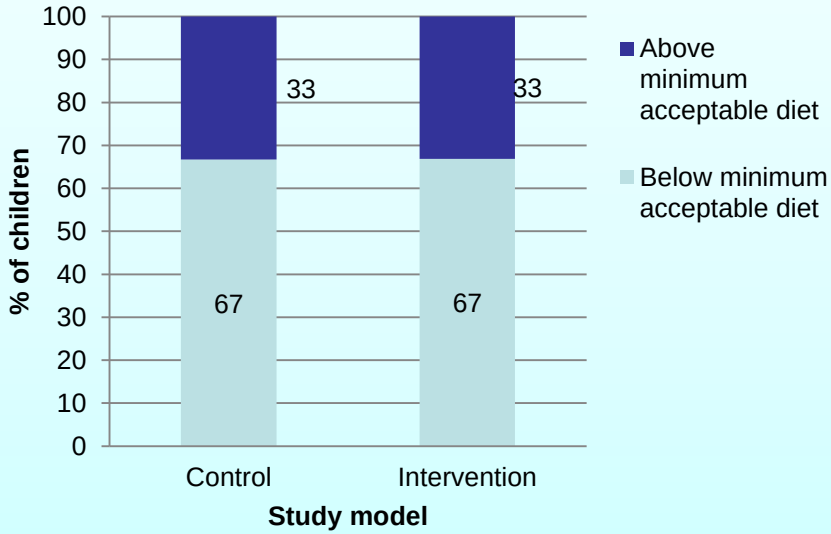
- Almost half (43%) of non-breast feeding children do not receive min required number of meals
- Overall, 18% of children fall in this category

Minimum acceptable diet

By children category



By study model



- More than 2/3rds of children received below min acceptable diet
- Only 6% of non-breastfeeding children received the min acceptable diet

Conclusion

- 40% of households have dietary diversity below acceptable levels
  - Similar for treatment and control

- Number of meals is not the big problem
  - Only 18% do not receive minimum required no. of meals
  - However, the problem is bigger for non-breastfeeding children (43%)

Conclusion cont…

- Dietary diversity is a bigger problem than no. of meals
  - 53% children have dietary diversity of below acceptable level
    - Risk of malnutrition
  - Worse for younger children – 6 to11 months (61%)
  - Non-breastfeeding children are worst affected
    - 78% have dietary diversity of below acceptable levels
    - 92% do not do not receive min acceptable diet

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THANK YOU