

Trend and Inequity in Micronutrient Adequacy Among Adolescent Girls and Women of Reproductive Age in Bangladesh

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Rationale

- Micronutrient deficiency is widespread in Bangladesh
- Yet, limited information on micronutrient intakes among adolescent girls and women of reproductive age.
- Demographic Health Survey does not collect dietary information.
- Household Income Expenditure Survey collect data on food and non-food expenditure rather than household member food consumption.
- National Micronutrient Survey 2011-12 collected food intake information using 7 days FFQ, but data are not publicly available.-
- IFPRI's Bangladesh Integrated Household Survey (BIHS) collected dietary intakes in multiple rounds, using multi-pass 24-h recall, provide unique opportunity for study the nutrient intakes in Bangladesh

Objective

- Assess trend and adequacy for 10 micronutrients (Vitamin A, Thiamin, Riboflavin, Niacin, Vitamin B-6, Folate, Vitamin C, Calcium, Iron and Zinc) among adolescent girls (10-18 years) and WRA (19-49 years) in Bangladesh
- Examine changes in inequities of micronutrient adequacy by expenditure quintiles between 2011 and 2018.

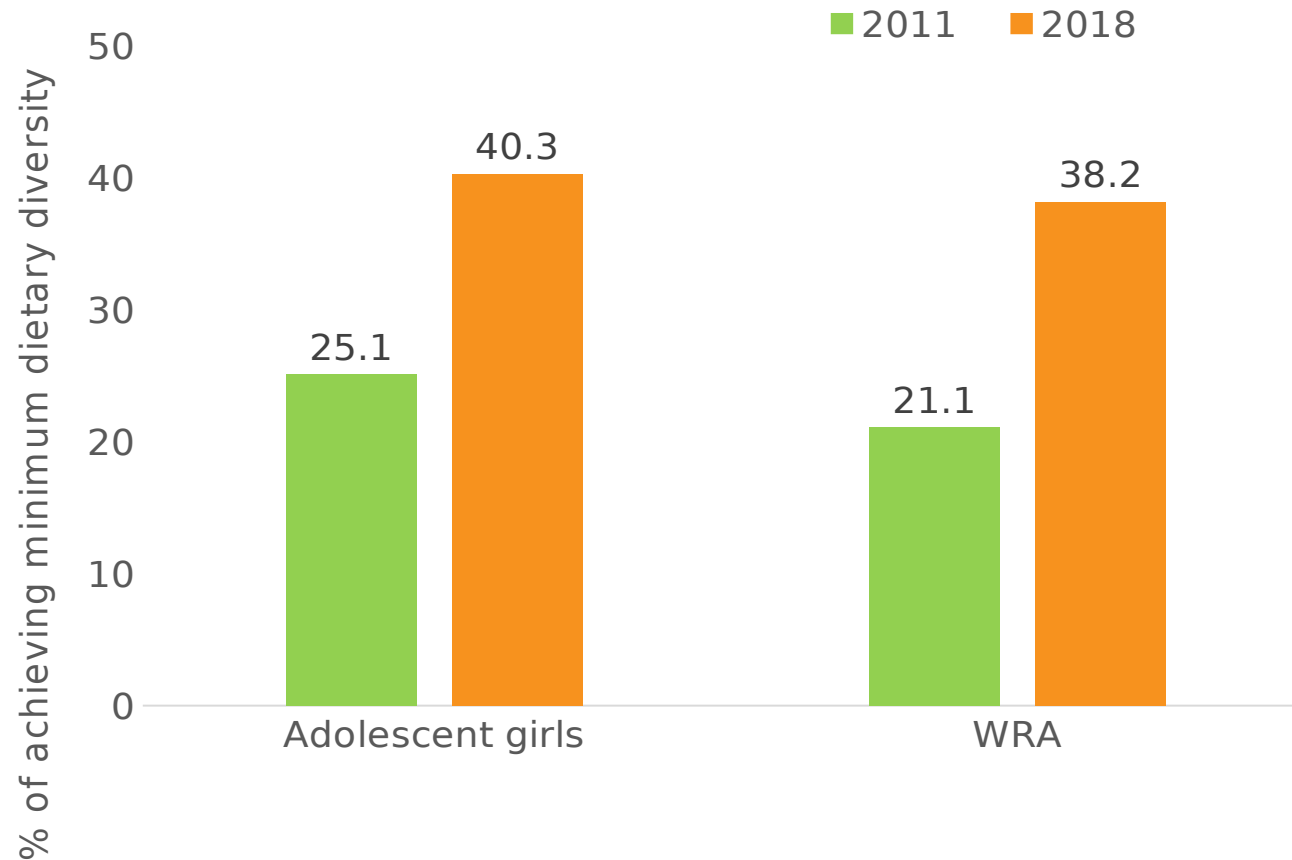
Methods/ Analysis

- Data were from the 2011 and 2018 Bangladesh Integrated Household Survey (BIHS)

	2011	2018
Adolescent girls	2,120	2,068
WRA	3,814	4,205

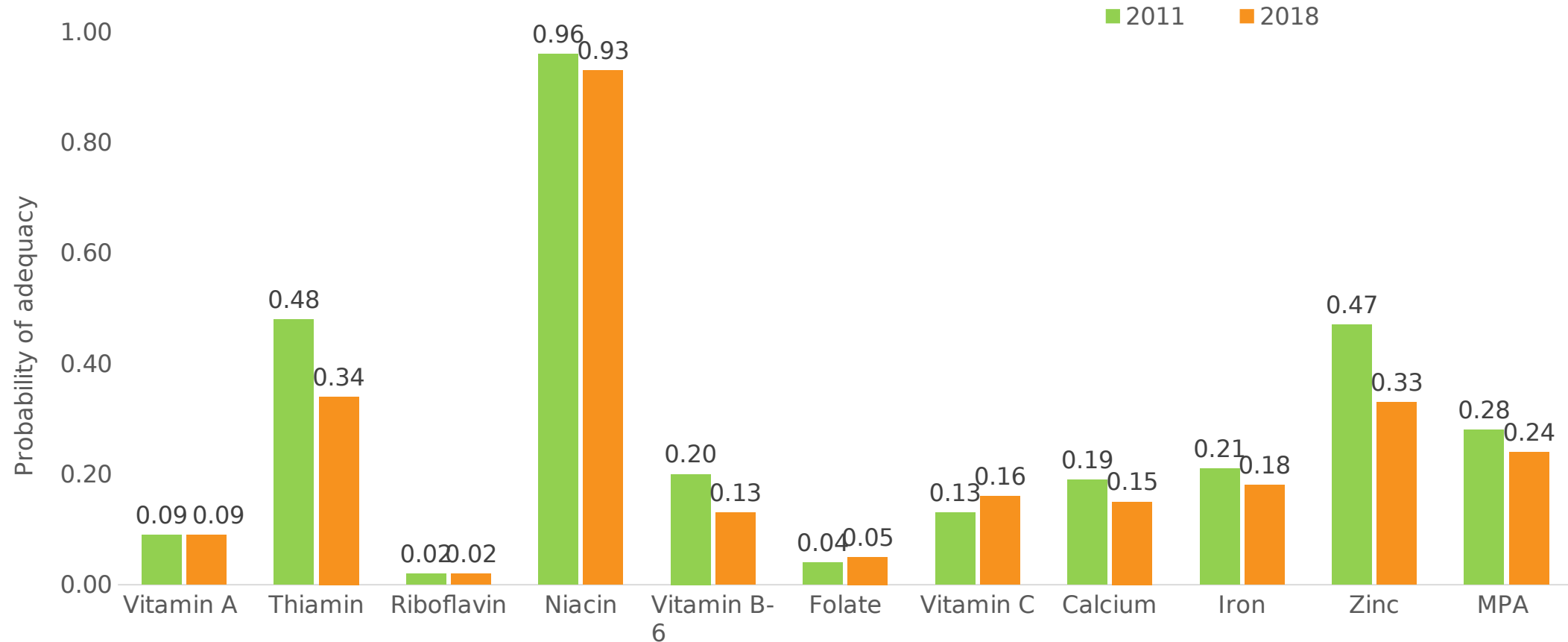
- Dietary intakes were collected using multi-pass 24-h recall.
- Estimated the probability of adequacy (PA) and mean probability of adequacy (MPA) of 10 micronutrients.
- Examined inequities across expenditure quintiles using the Slope Index of Inequality and Concentration Index.

Achievement of Minimum Dietary Diversity (MDD) increased significantly among adolescent girls and WRA

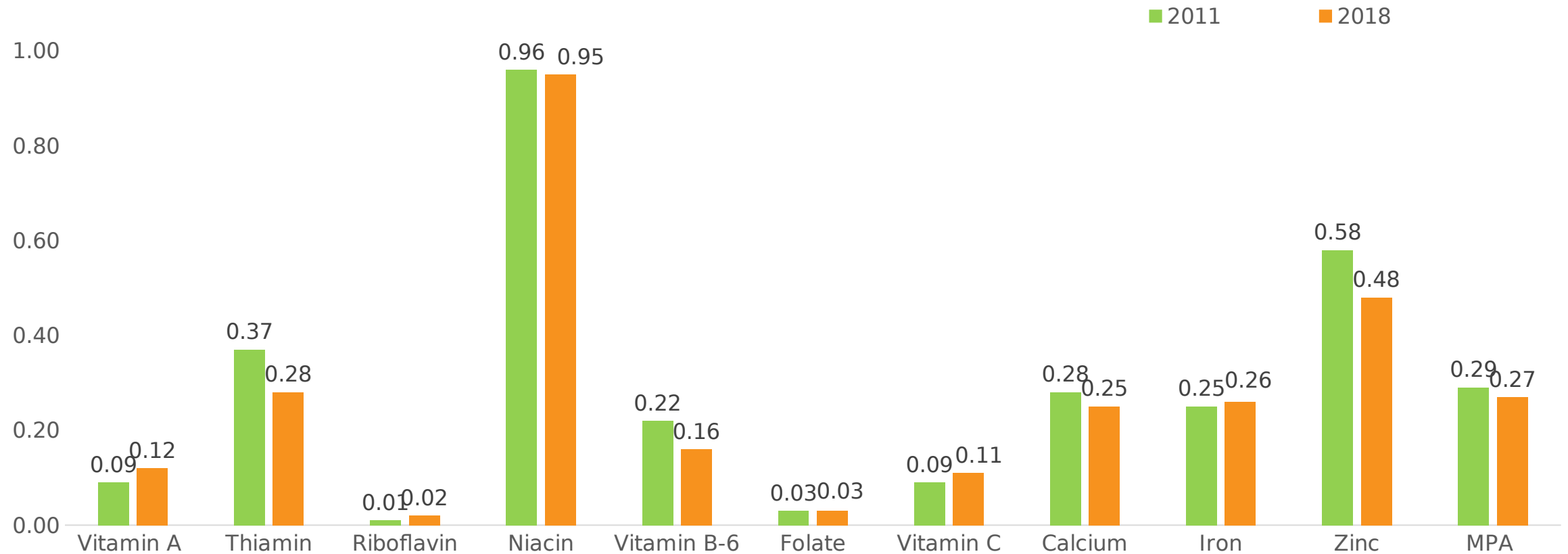


Note: MDD is a dichotomous indicator of whether or not participants have consumed at least five out of ten defined food groups on the previous day or night.

Among adolescents, MPA decreased by 14% between 2011 and 2018. Except for niacin, PAs were low for most micronutrients

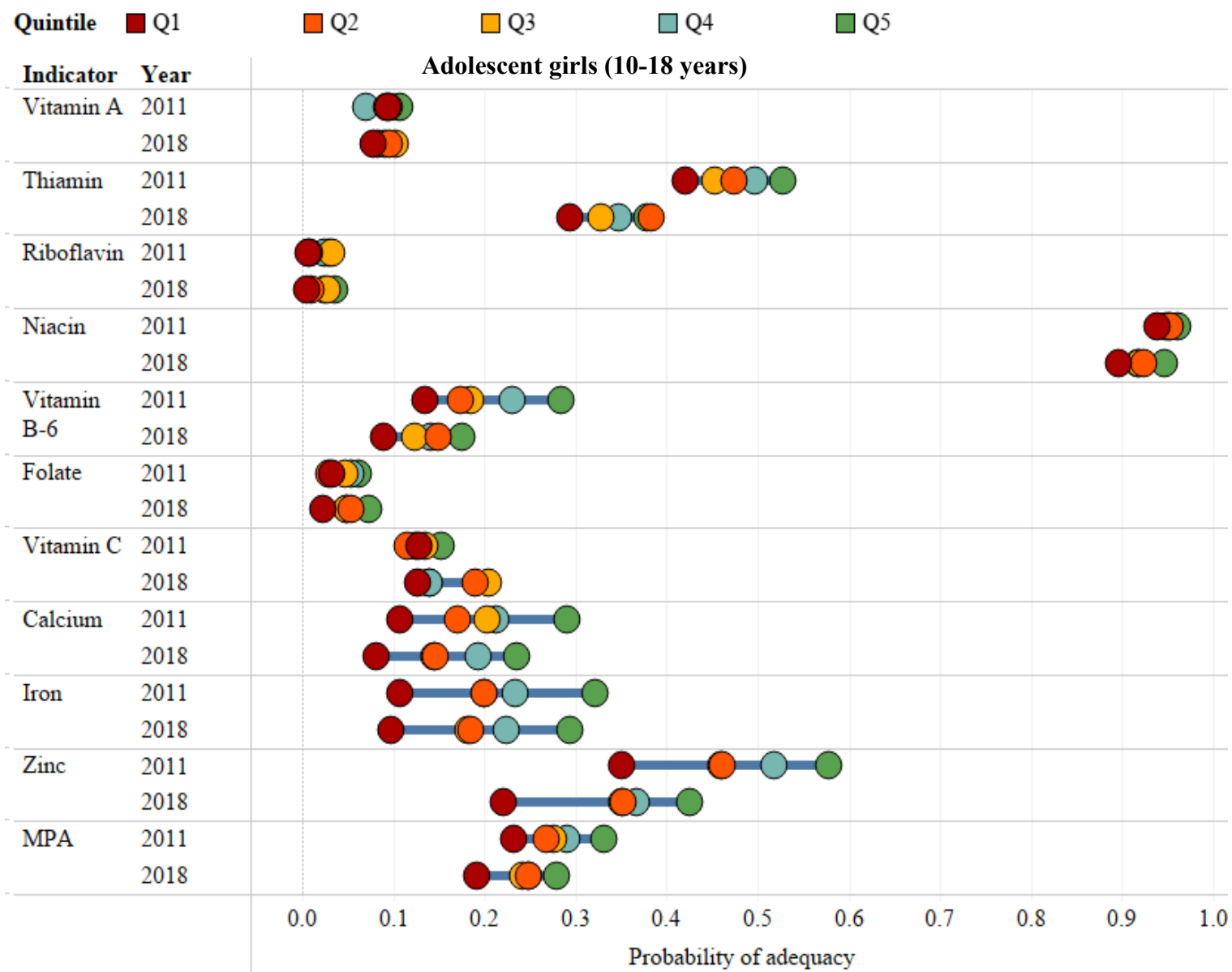


Among WRA, PA also decreased for thiamin, vitamin B6, calcium, and zinc

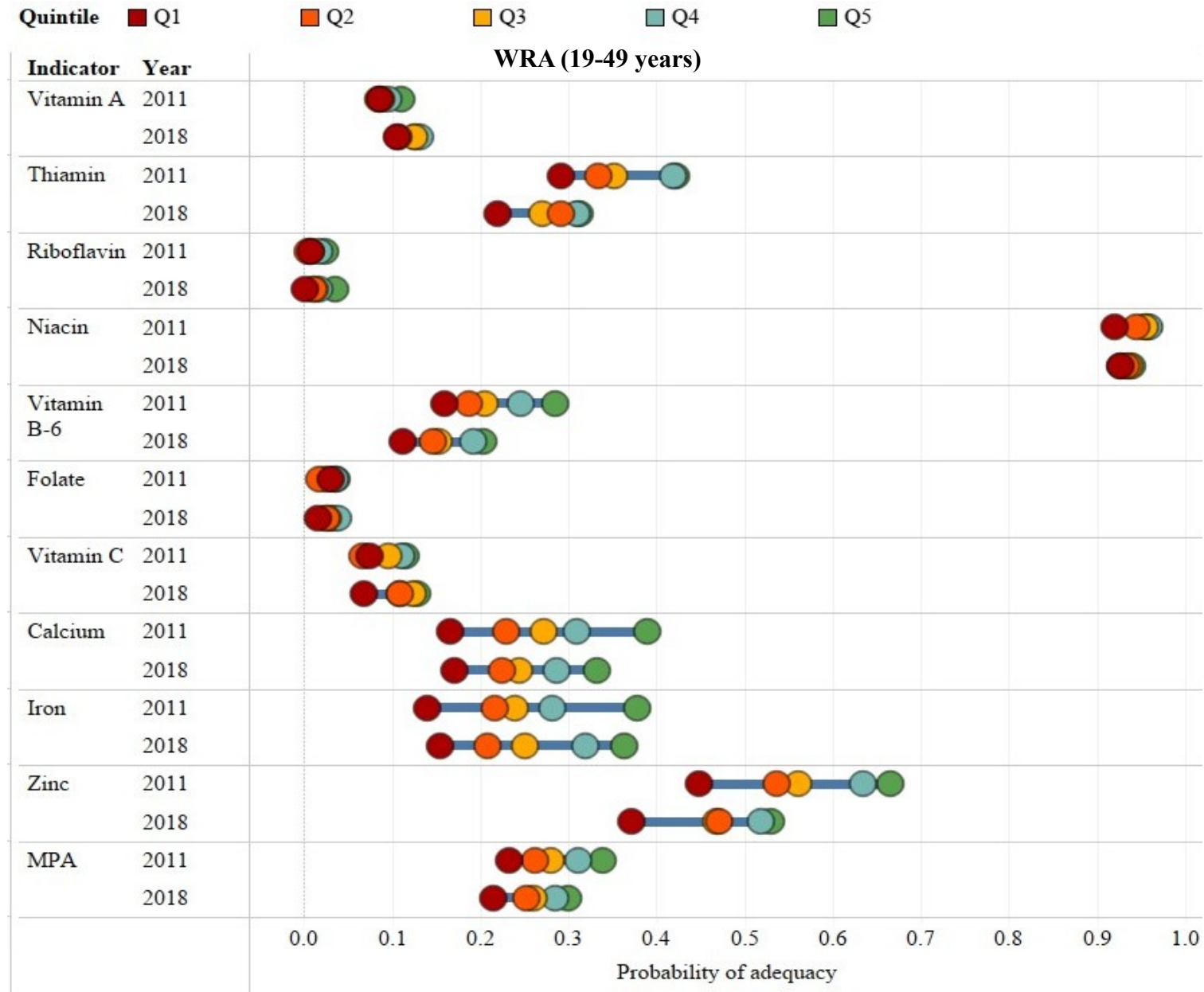


PA was the lowest for all micronutrients among poor households in both years.

Inequity gap decreased for most nutrients (except vitamin C)



Inequity gaps for WRA were narrowed for vitamin A, C, riboflavin, niacin, folate. Inequity gap decreased for calcium, iron, zinc and MPA



Why is PA low in Bangladesh ?

- Rice dominates Bangladeshi diet which is a major contributor of the macro and micronutrients.
- But rice consumption decreases in Bangladesh between 2011 and 2018 (around 100 gram per capita)
- Although dietary diversity increases in Bangladesh for adolescent and WRA, the amount of diverse food is not sufficient to meet the gap created by decreasing rice intake for the micronutrients.
- Also, not getting enough thiamin, riboflavin, and niacin from rice because of refined rice.

Implications

- Improve not only dietary diversity but also the quantity of the diverse food to ensure micronutrient adequacy.
- Trainings that combined nutrient-rich foods and nutrition behavior change communication are effective in improving diet quality in rural areas of Bangladesh
- Develop healthier food system and environment for these groups as well as diversify the food production system (production diversity is associated with individual dietary diversity in Bangladesh)
- Findings highlight the need for policies and programs that promote healthier, equitable diets to ensure adequate daily micronutrient intakes among these key populations

Thank You