Feed the Future Interim (2015) Poverty and Nutrition Indicators for Northern Ghana

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Context

- Level of analysis = Household
  - Except WEAI, women and children's anthropometry
- Sampling approach
  - Matched 2012 sample = 4,410 (success rate = 94%)
  - Added another 2,751 to cover all districts in the ZOI using the original 2-stage probability sampling approach
    - Stage 1: Probability proportional to size approach to select EAs
    - Stage 2: Systematic sampling approach to select 20 households per EA

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Outline

- A quick overview at the ZOI and district levels
- Create excitement and questions in your mind that would help you connect your project initiatives and results to the PBS
- Invite you to engage us in exploring how we connect your project's performance to larger program objectives and aspirations
  - To what extent has your project contributed to reduction in poverty or improvement in incomes?
- Conversations

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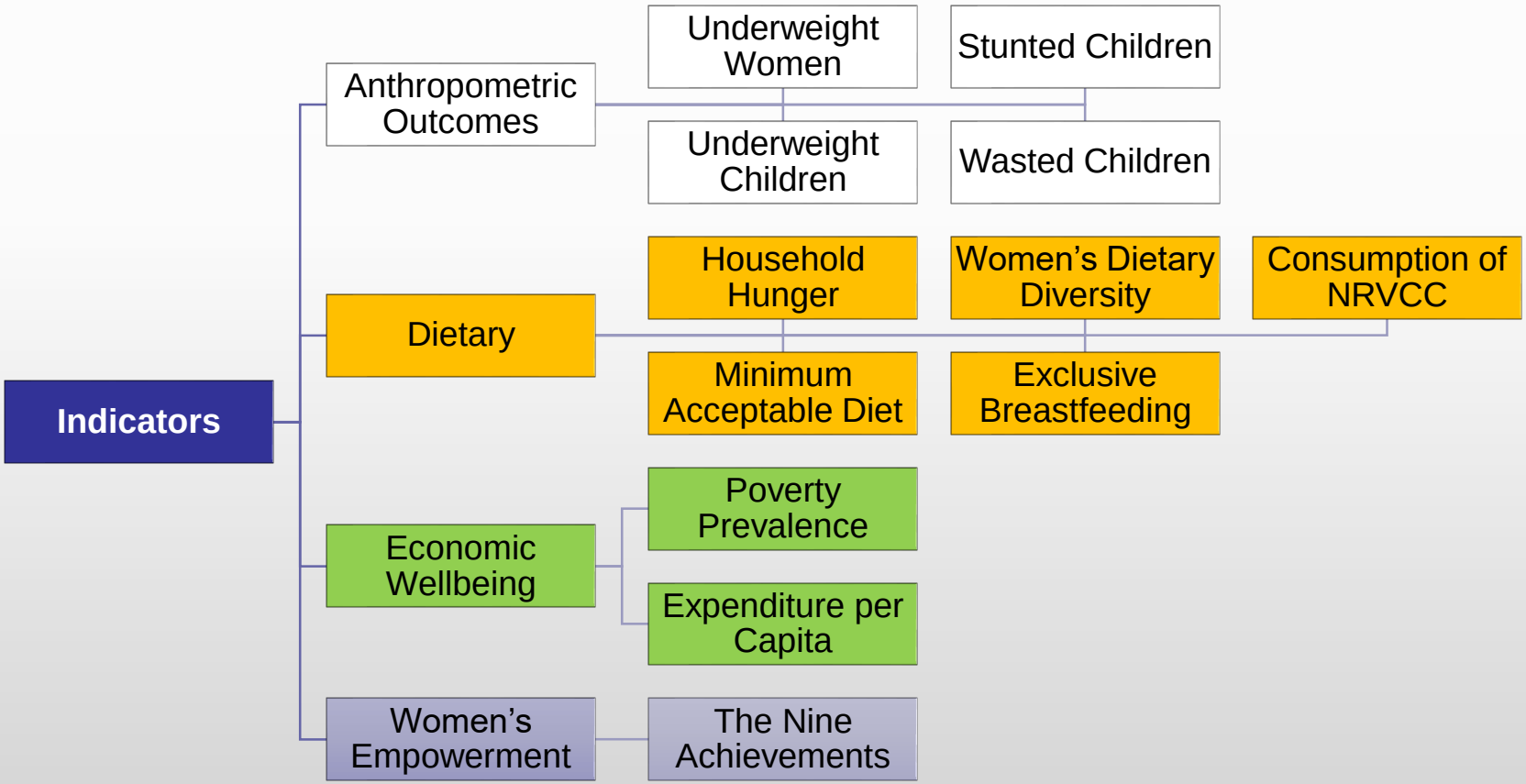
The Feed the Future Indicators



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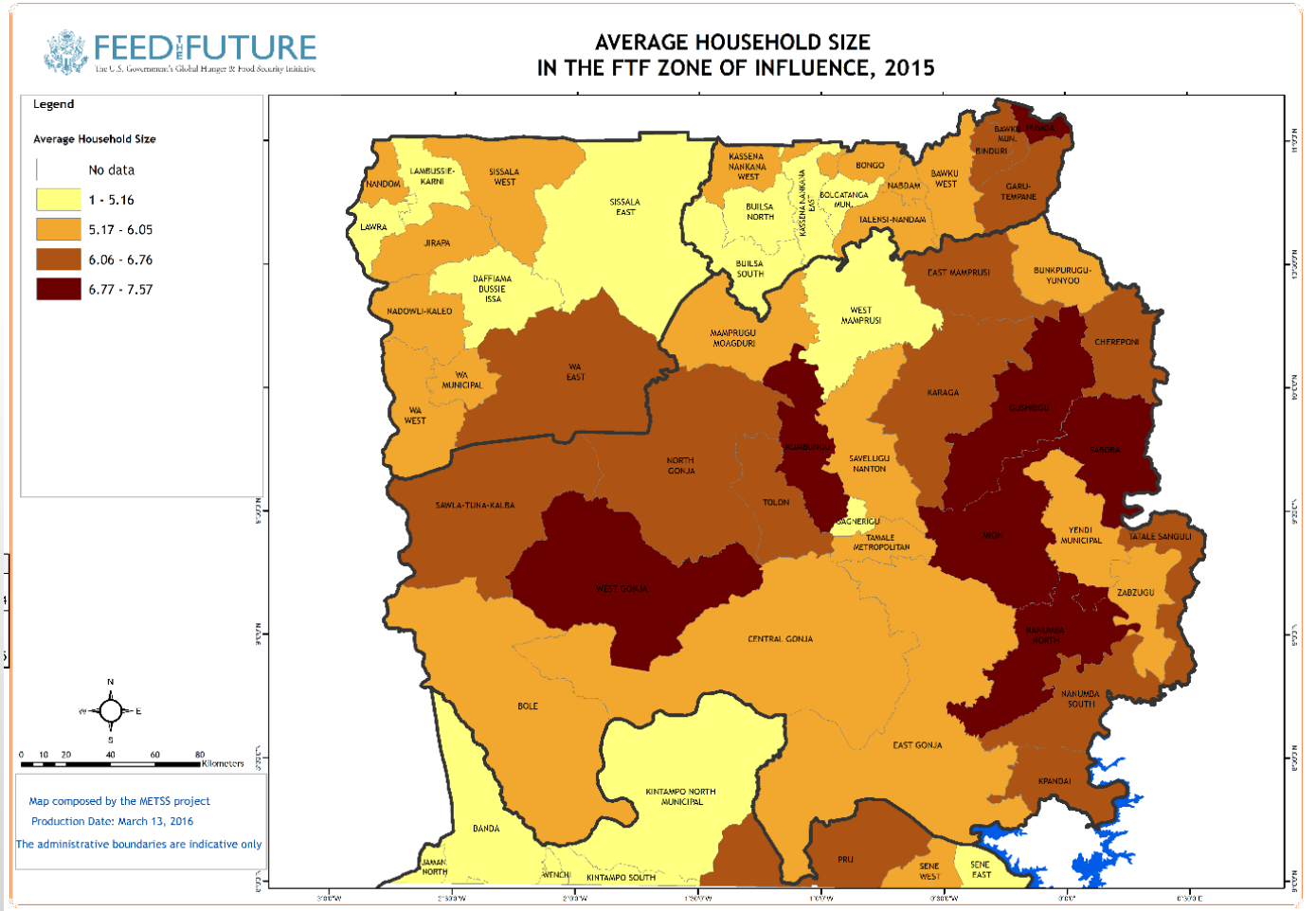
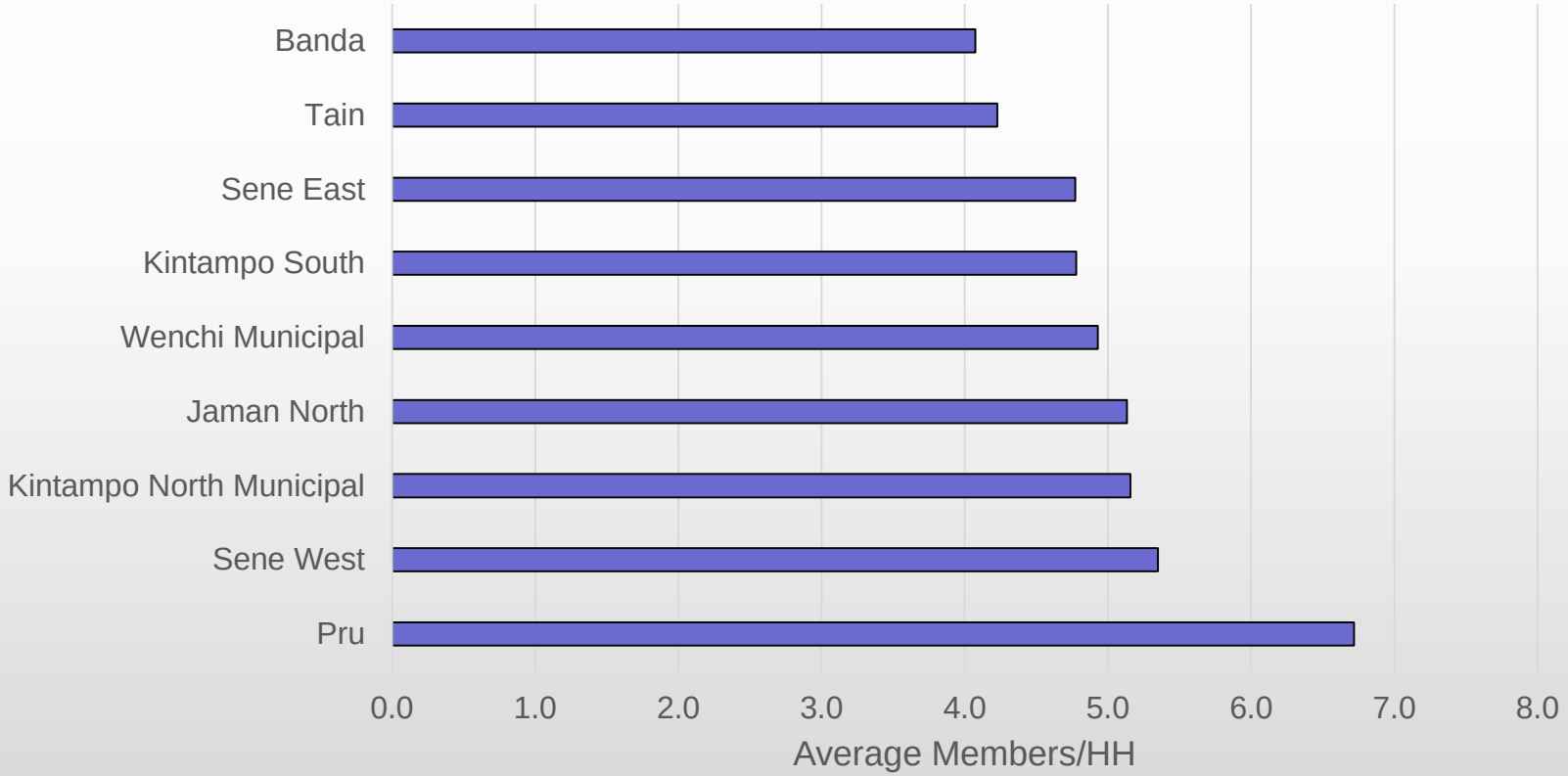
Summary Demographics

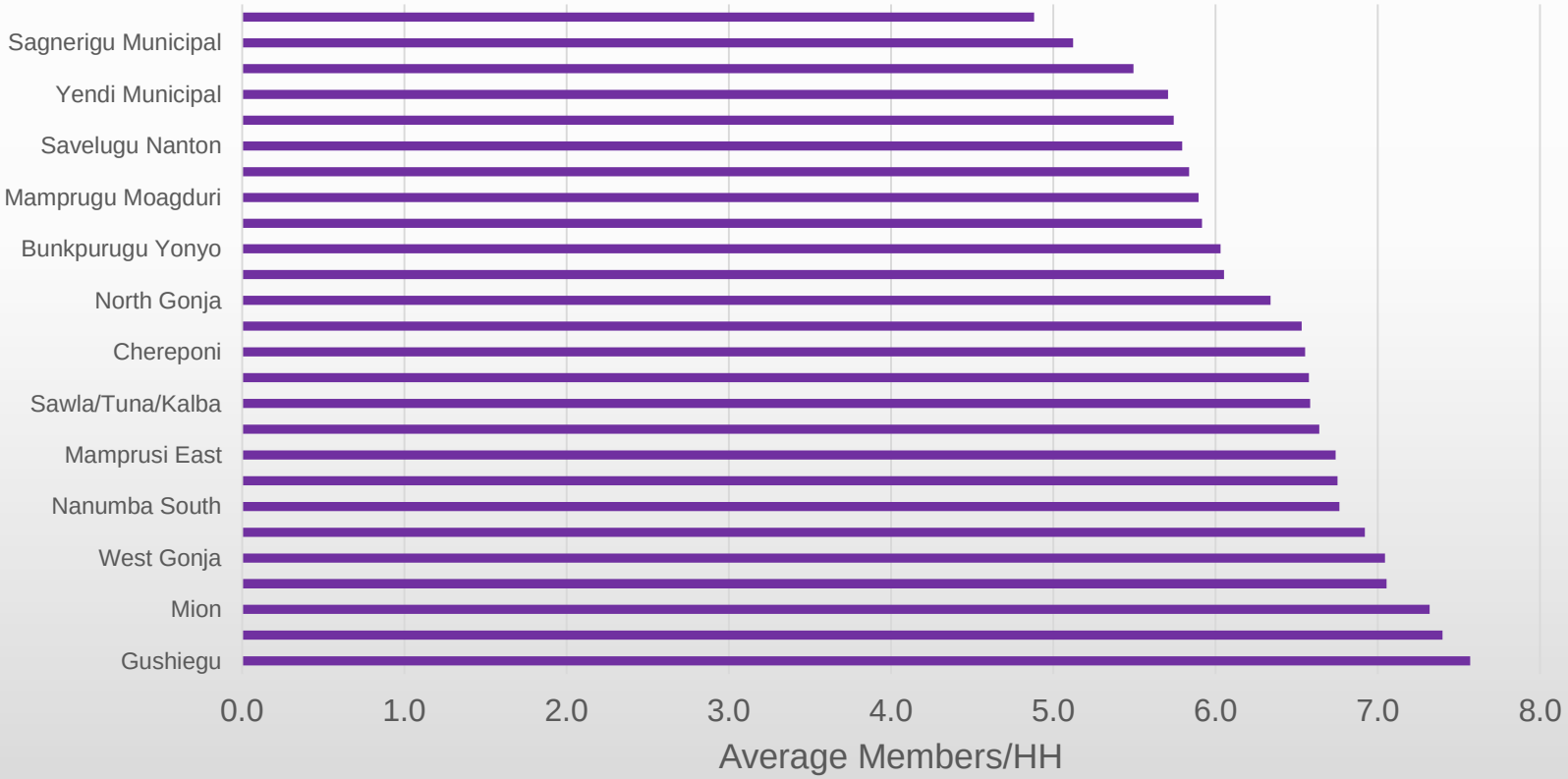
Average Household Size by District



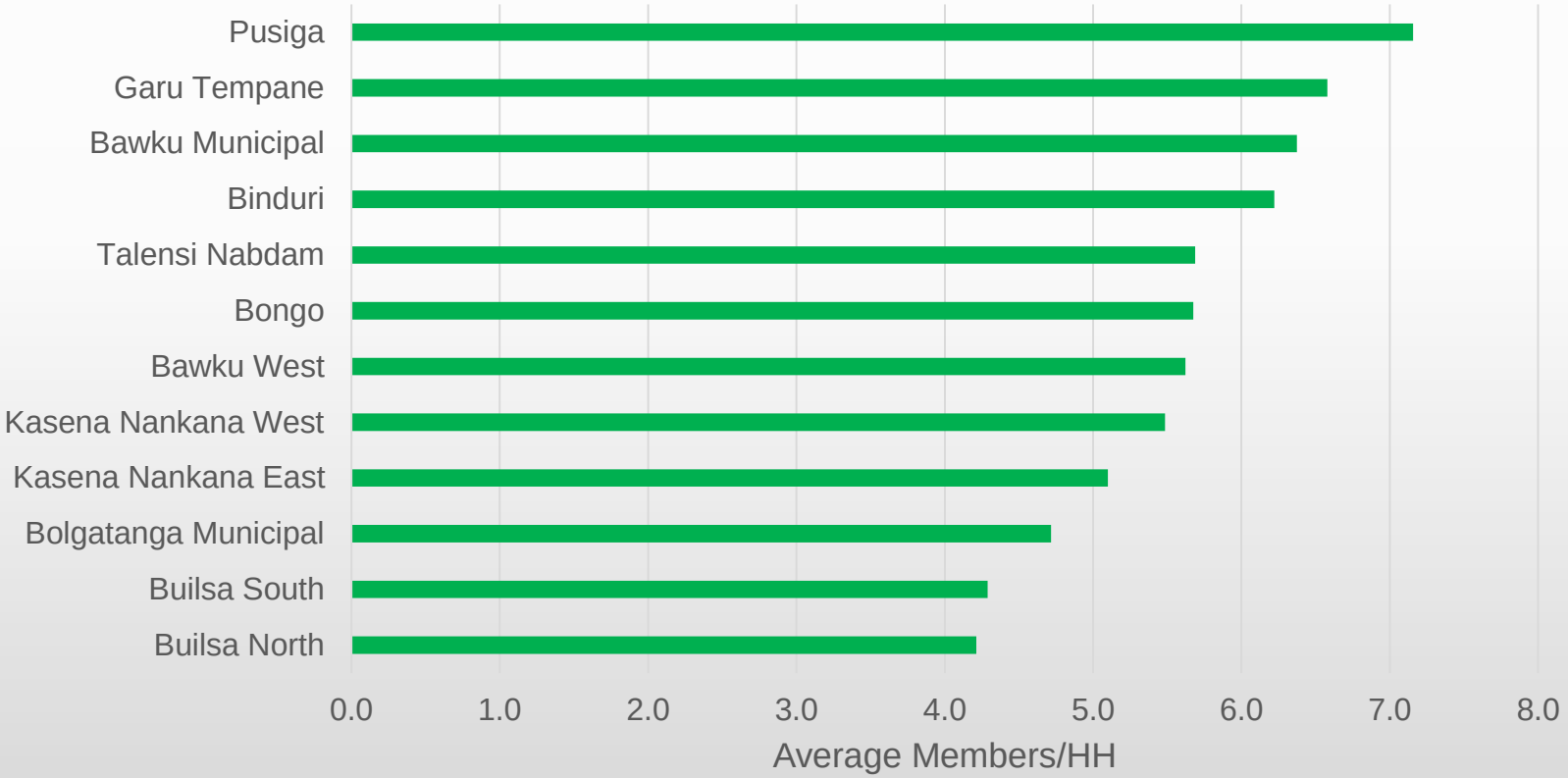
Average Household Size BA Districts



Average Household Size NR Districts



Average Household Size UE Districts



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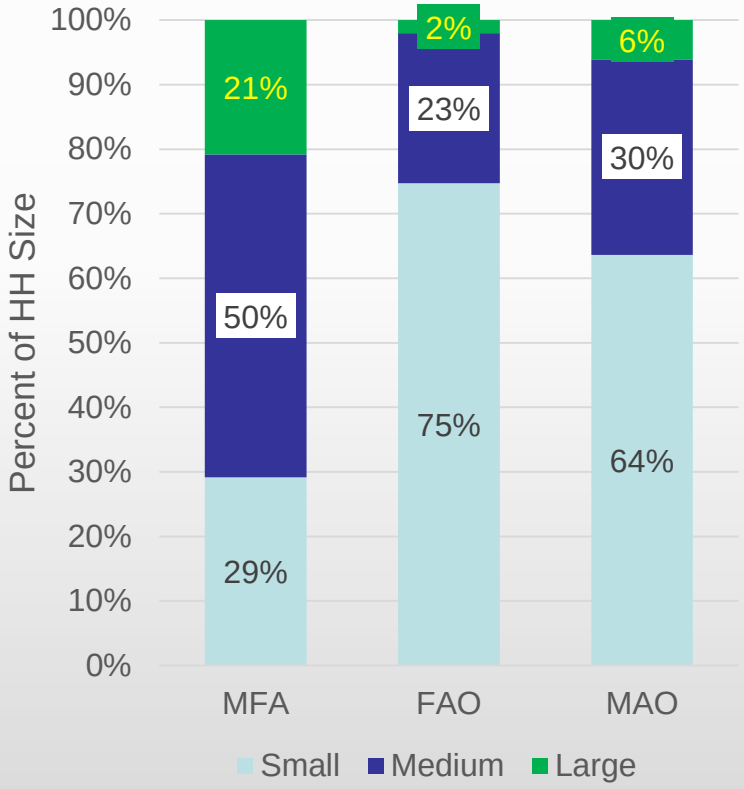
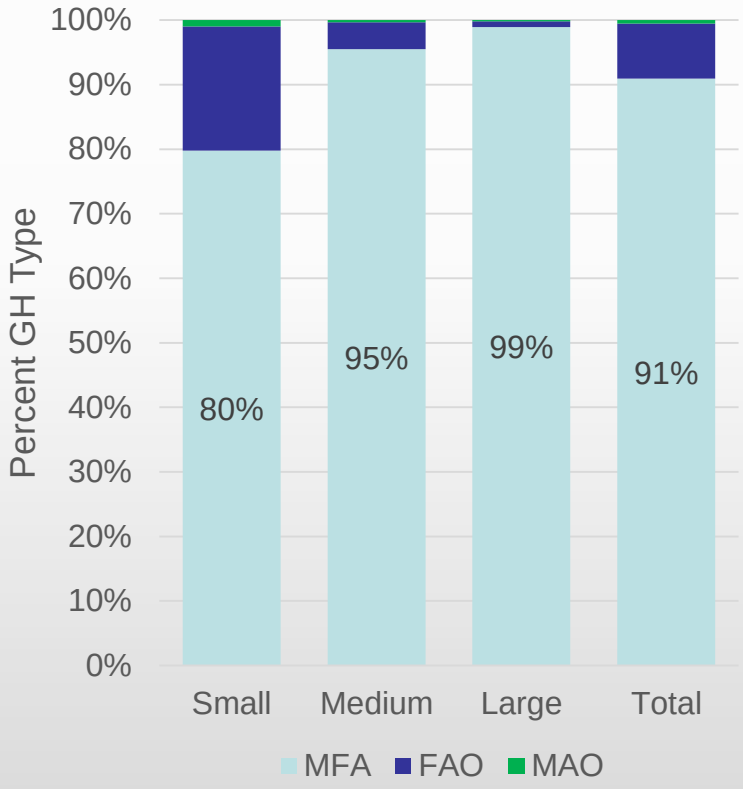
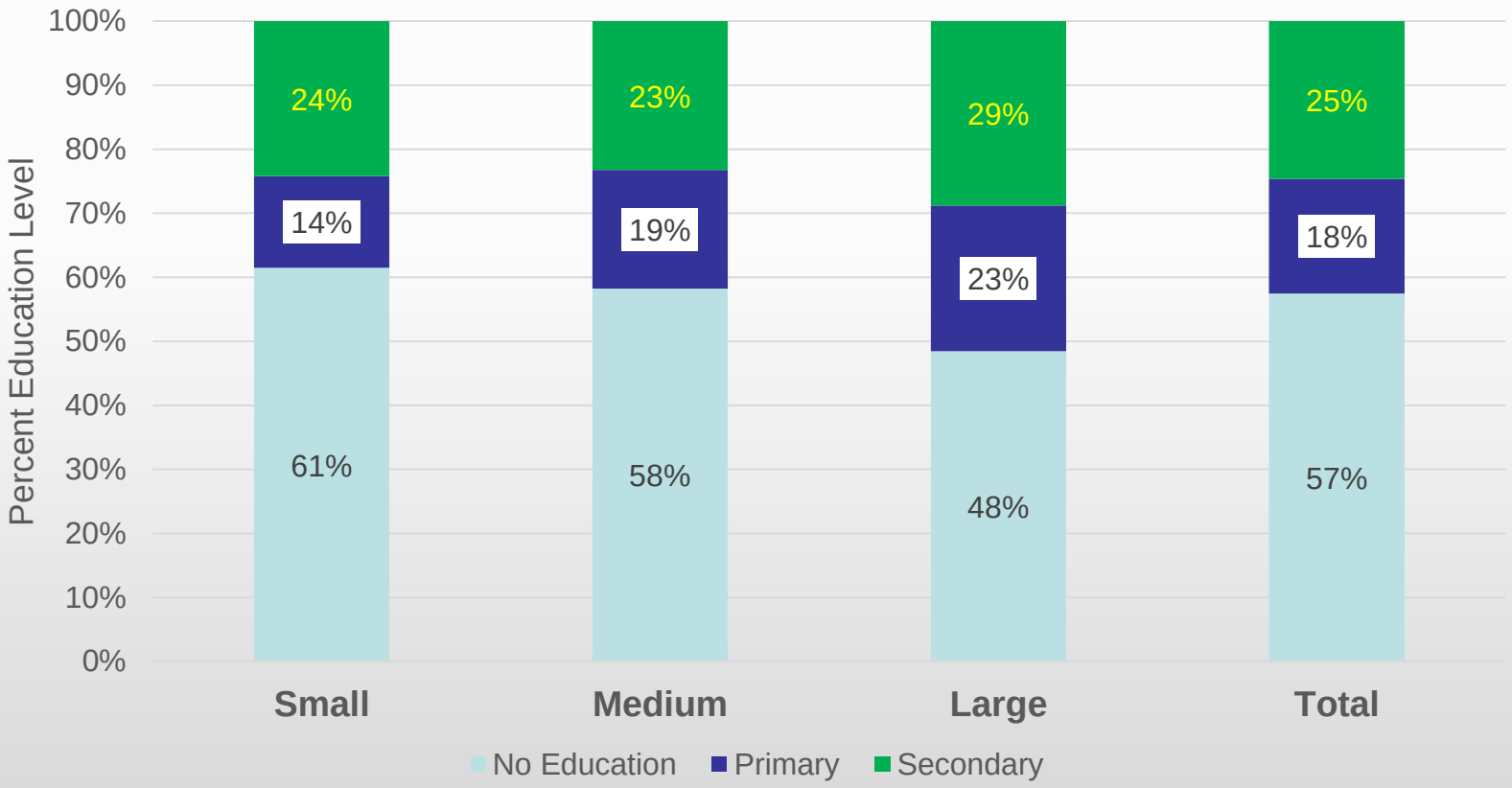
Average Household Size UW Districts

Household Size and Gendered Household Type

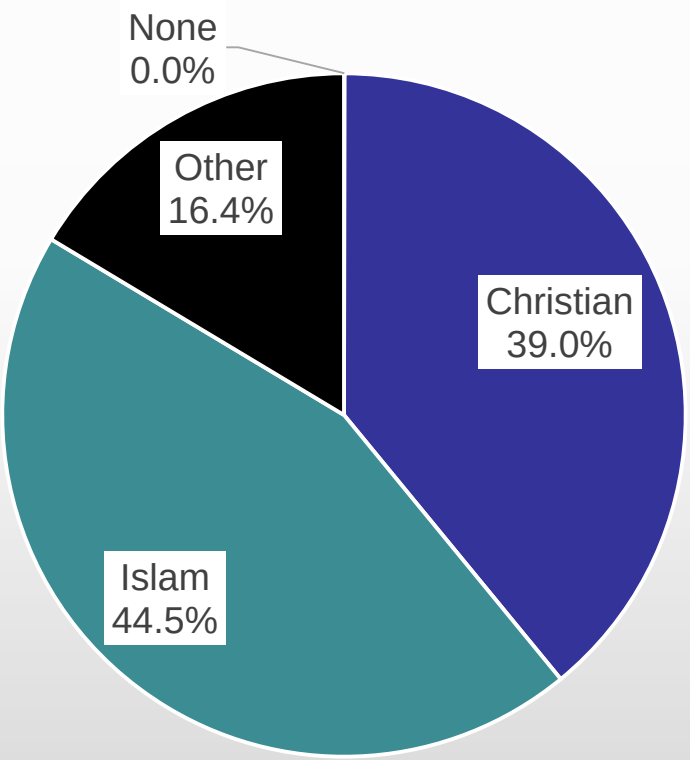




Household Size and Education

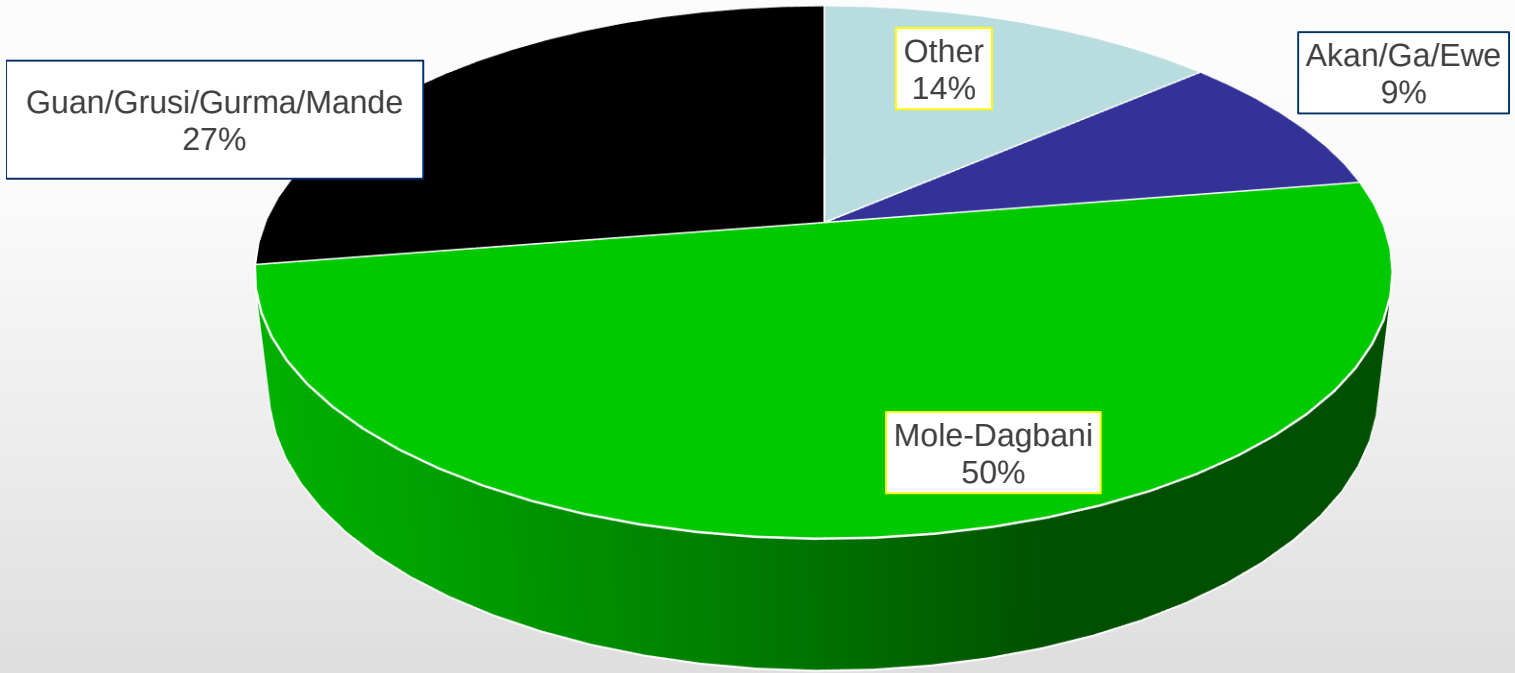


Religion



In about 48% of districts, the majority of households were Christian. In the remaining 52%, Islam was the religion of the majority of households

Main Ethnic Groups



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Economic Wellbeing and Poverty

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Expenditure and Poverty

- Poverty is determined from expenditures, which is used as a proxy for income and captured in four consumption categories:
  - Food
  - Housing – rent and imputed rent
  - Durables – last longer than a year (bicycles, radios, cellphones, etc.)
  - Non-durables – educations, health, beauty care, grooming, firewood and other household fuel, transportation, etc.
- Poverty threshold is $1.25 (in 2005 PPP) to make 2015 comparable to 2012
- How do we do that?

Expenditure and Poverty

- Respondents are asked to provide expense information on various items within each of these four categories – 256 items in total
  - Food consumption based on 7-day recall
    - Detailed in how much was consumed at home, away from home, communally, individually
    - Disaggregated into purchased, own production and gifts
  - Transportation and similar non-durables over one month
  - Clothing over three months
  - Health care and education, e.g., recalled over 12 months

Expenditure and Poverty

- Durable items age and purchase costs were asked and depreciated to use their remaining value in calculation
  - If respondent couldn't remember purchase price, they were asked to estimate how much they would sell their item for
  - For houses that were owned, values estimated from respondents' expected current sale price
    - How does one provide a good estimate of value when there is not market?

Expenditure and Poverty

- We then take all estimates presented in GHS and transform them into annual estimates
  - Weekly purchases x 52; monthly x 12; daily x 365 to get annual total aggregate household expenditure at an annual rate
  - We then bring the total back to a daily basis by dividing by 365
- Total aggregate daily expenditure divided by the number of people in the household equals average per capita daily household expenditure

Expenditure and Poverty

- But that estimate is in 2015 values and it has to be converted into international currency and made comparable across time and countries
- The conversion addresses inflation and exchange rates by presenting the estimate in terms of PPP

$$X_{2005}^{PPP} = \frac{X_{2015}^{GHS} I_{2005}}{I_{2015} \rho_{2005}}$$

Where I is the CPI, X is the expenditure, ρ is the PPP conversion factor & subs are ref years & sups are currencies

Expenditure and Poverty

- A line is drawn below $X^{PPP}_{2005} = \$1.25$
- And all households or individuals with per capita daily expenditure below that number are counted as poor
- Which one – individuals or households, and does it matter?
- Yes! It does!! – and here's why . . .

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Expenditure and Poverty

Take two households, same total expenditure but different sizes

- Household I = 10 people; Household II = five people; total daily household expenditure = $10 each
- Average per capita expenditures are respectively $1 and $2
- Prevalence of poverty at the household level (poverty line = $1.25) is 50%
- At the individual level, the prevalence of poverty is 67%
- If HH I has 12 members, then individual headcount poverty rate is now 70.6% but remains unchanged under household level estimates

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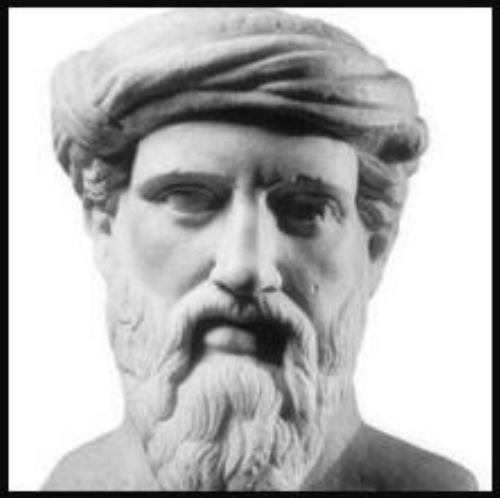
Expenditure and Poverty

- So, how many variables can affect the estimate?
  - The poverty threshold used
  - The calculation of expenditure and assumptions about prices, etc.
  - Time of year data are collected given vulnerability of poor to cyclical consumption patterns
  - The inflation rates used – determined by period of data collection and reference periods
  - The PPP conversion factor used
  - How the incidence is measured
  - The weights that are applied, which is determined by the sample size and the reference population being used
  - How outliers are treated



Numbers rule the universe.

~ Pythagoras

And humans rule numbers

~ Eric Temple Bell

Perception ≠ Reality

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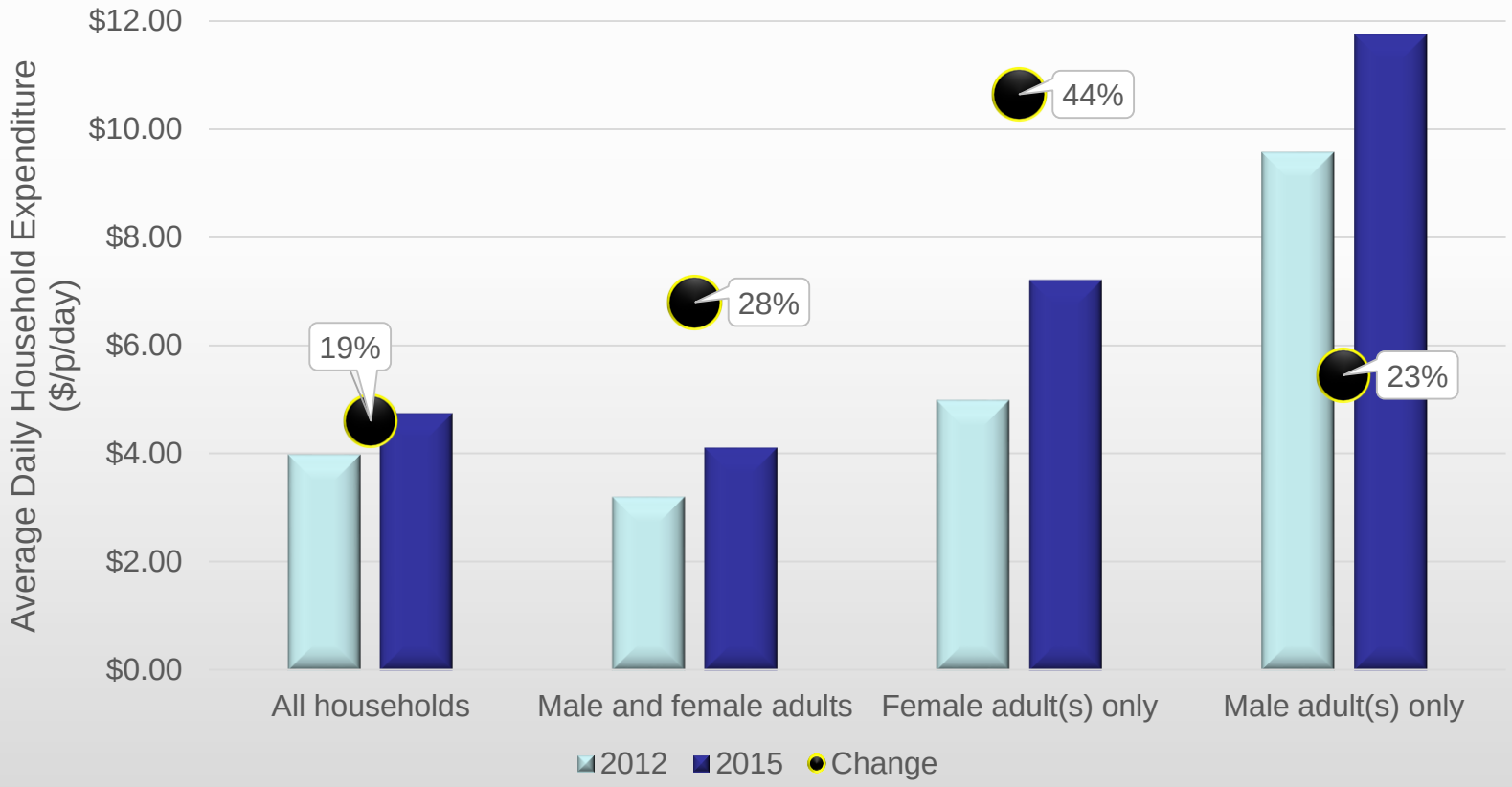
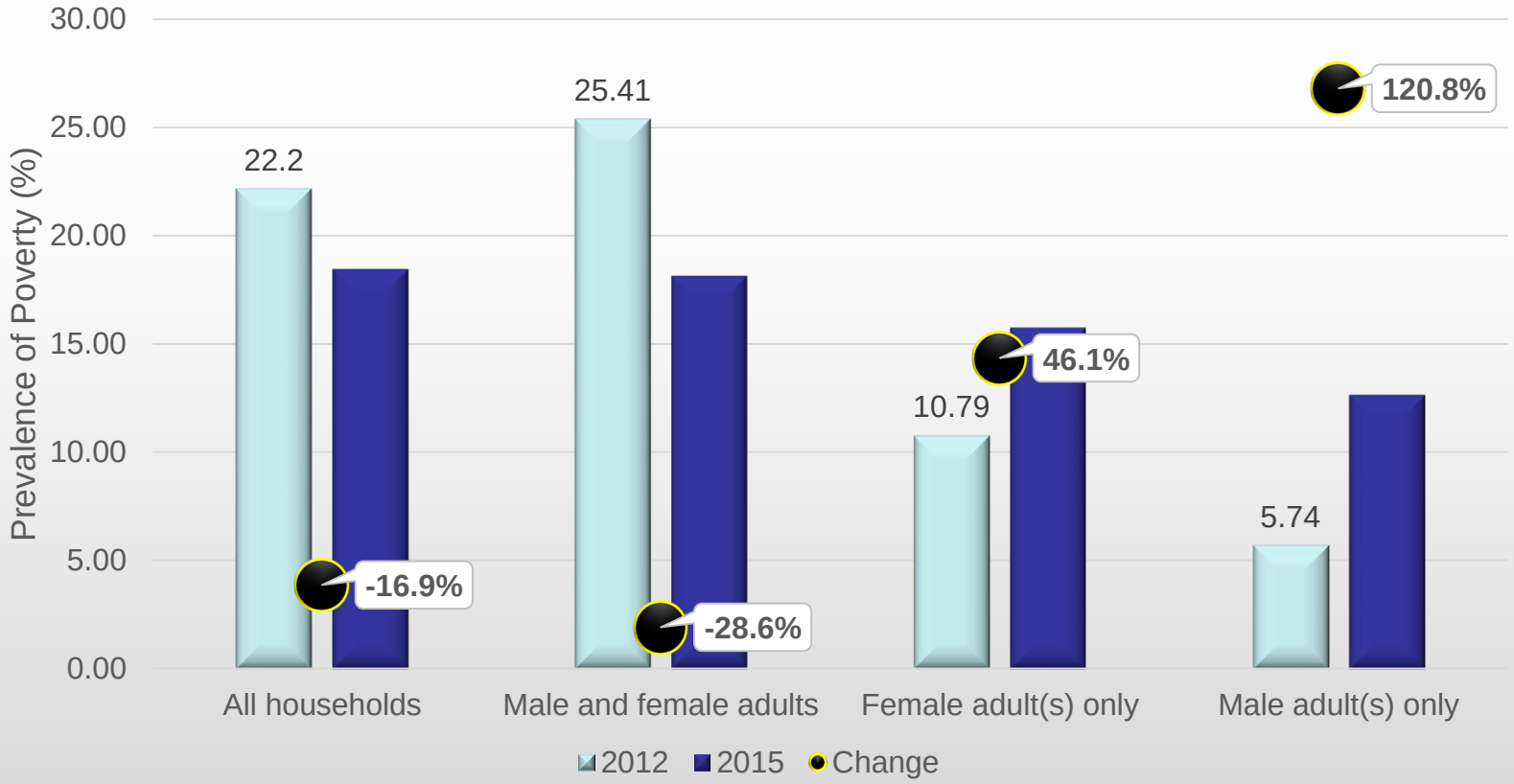
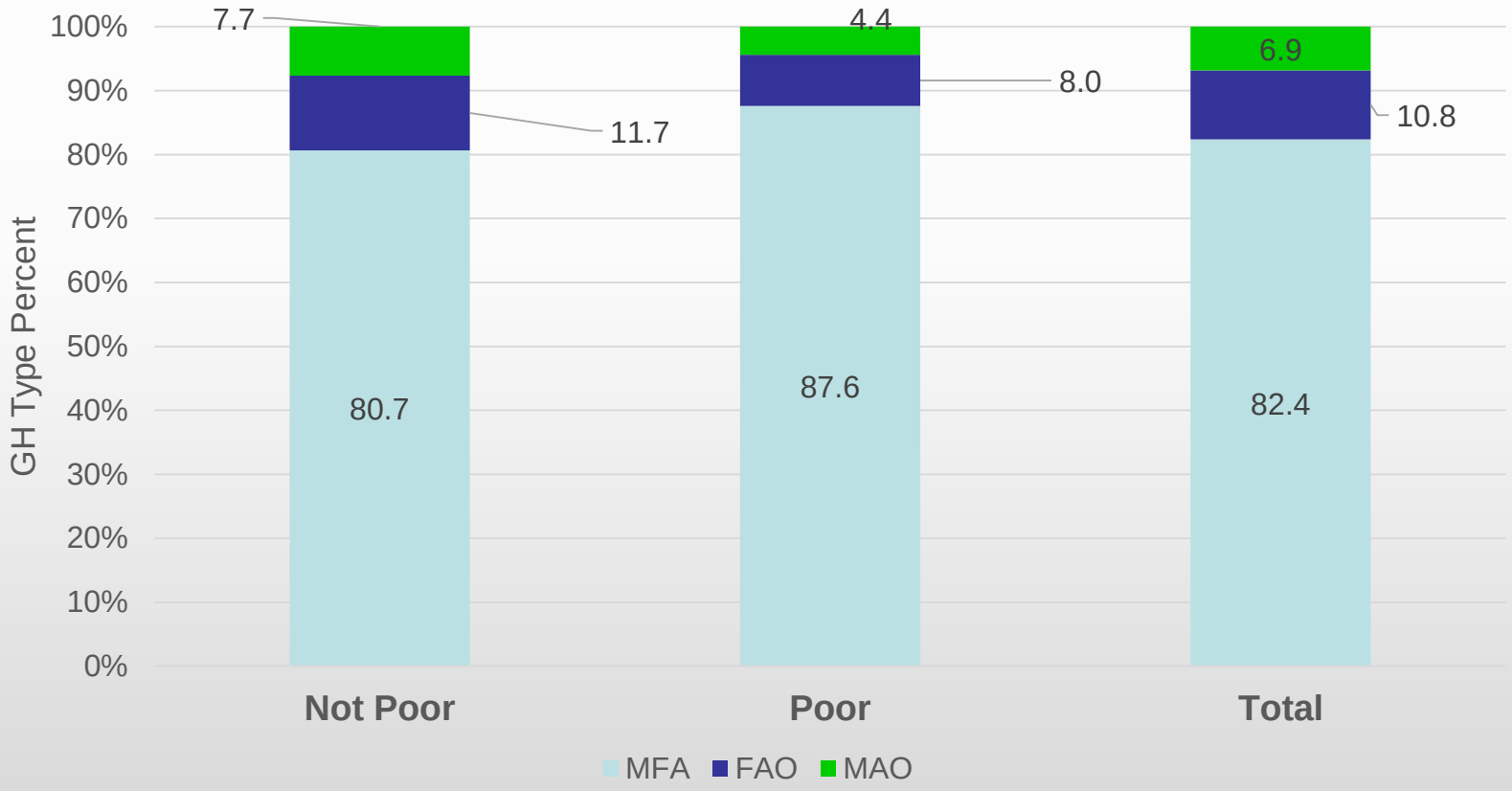
Change in Expenditure by Gendered Household Types



Change in Poverty by Gendered Household Types



Poverty & Gendered Households (2015)



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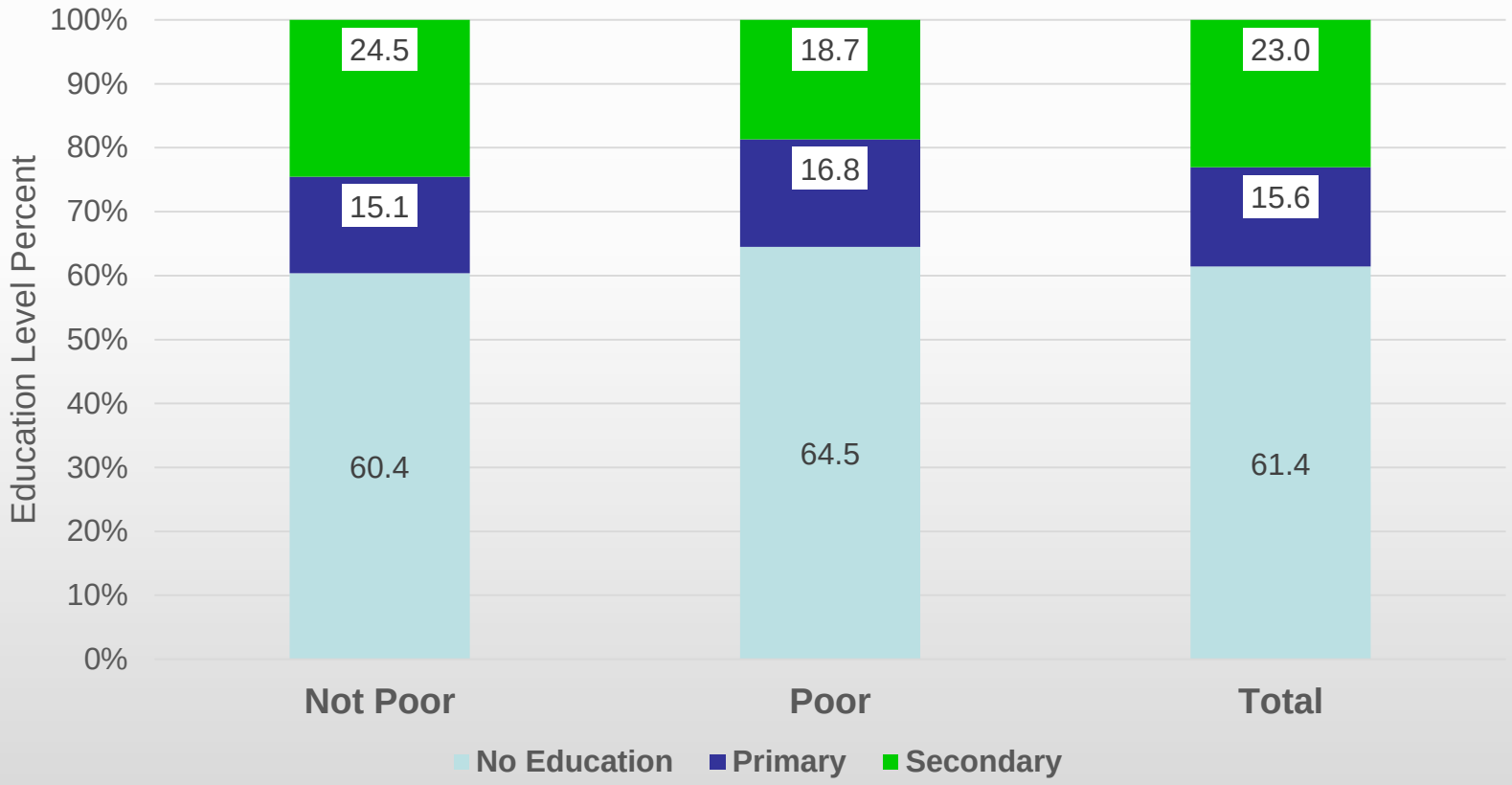
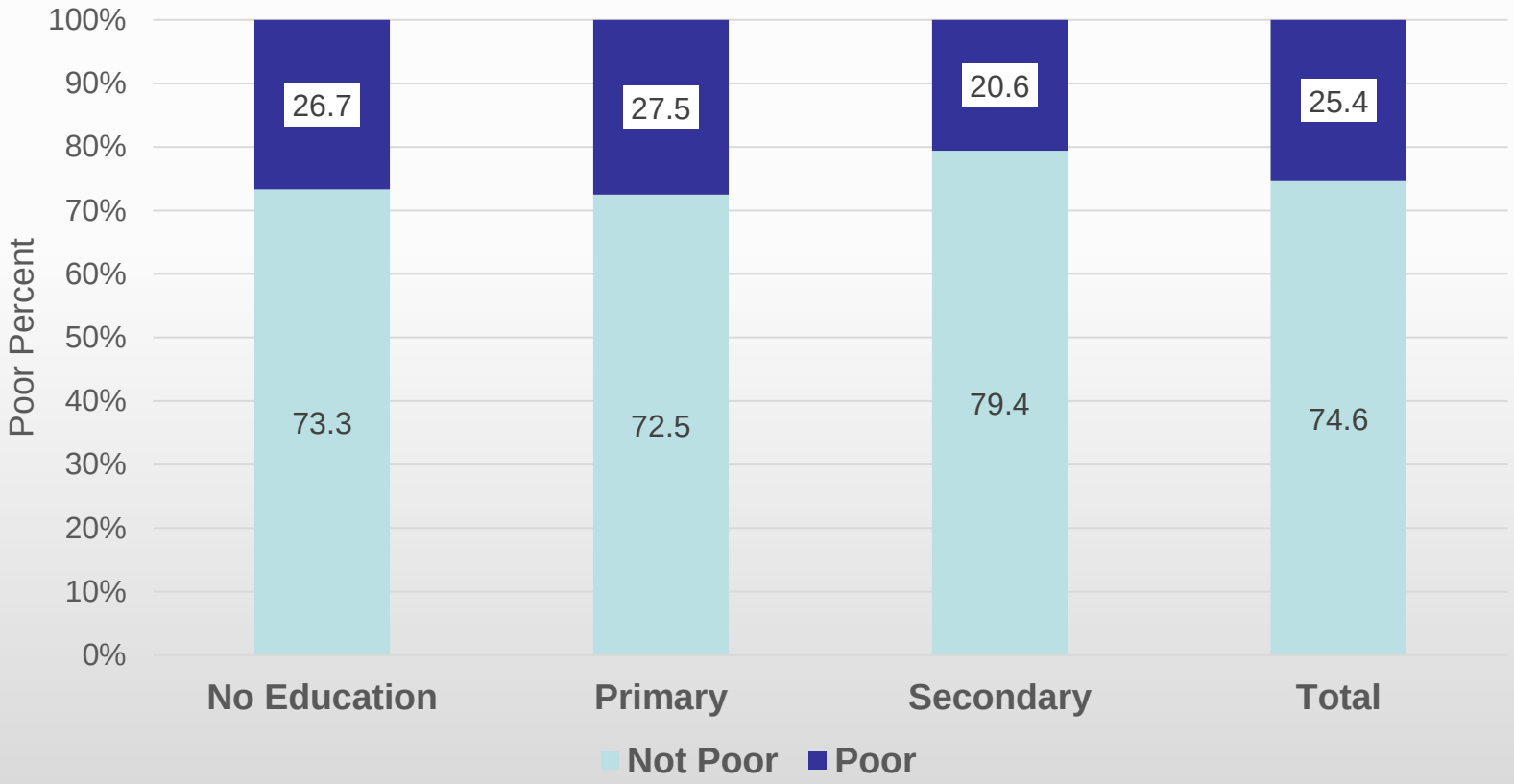
Poverty & Gendered Households (2015)

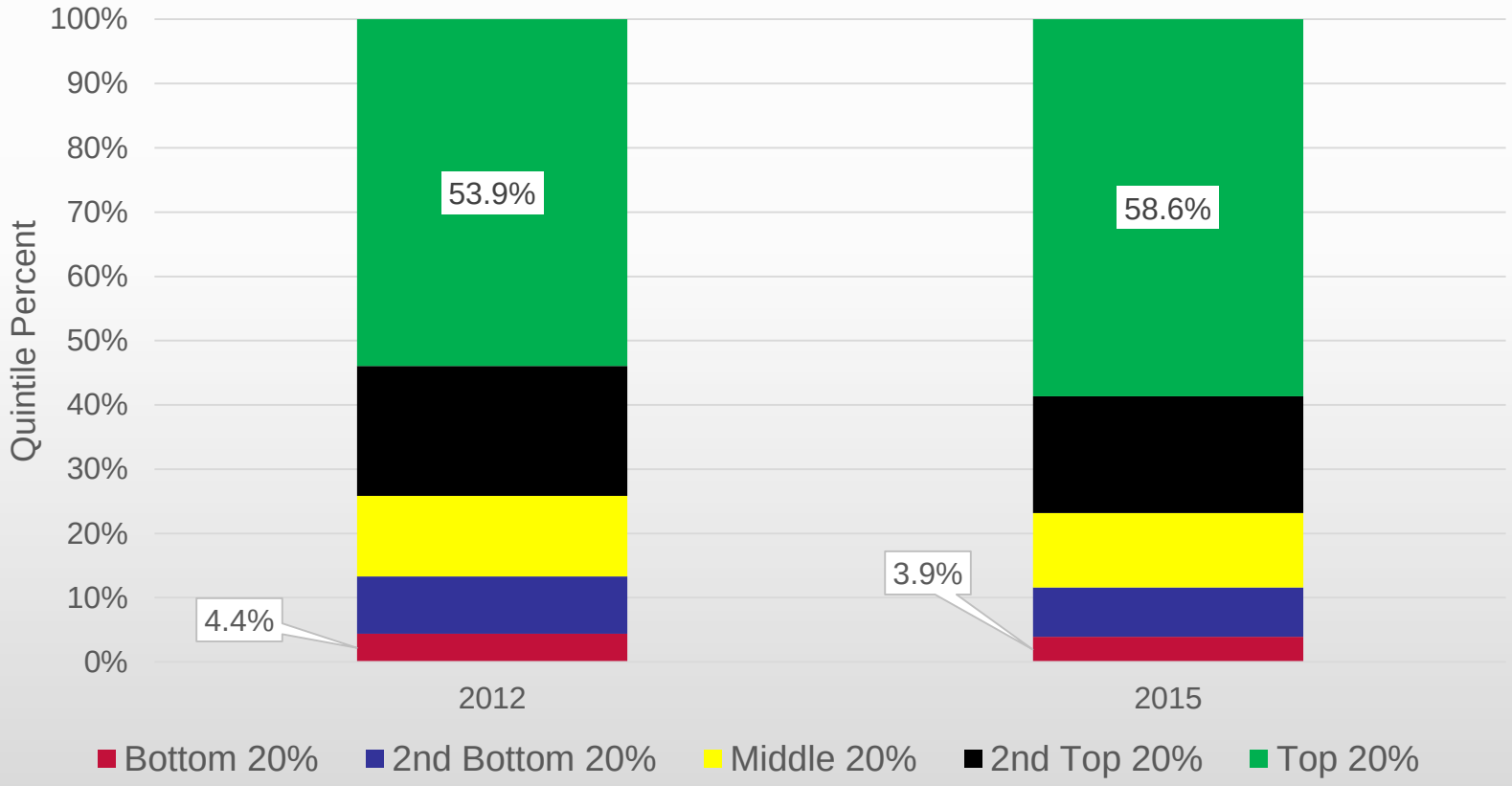
Poverty & Education Level



Poverty & Education Level



Inequality Indicator: Distribution of Consumption by Quintiles



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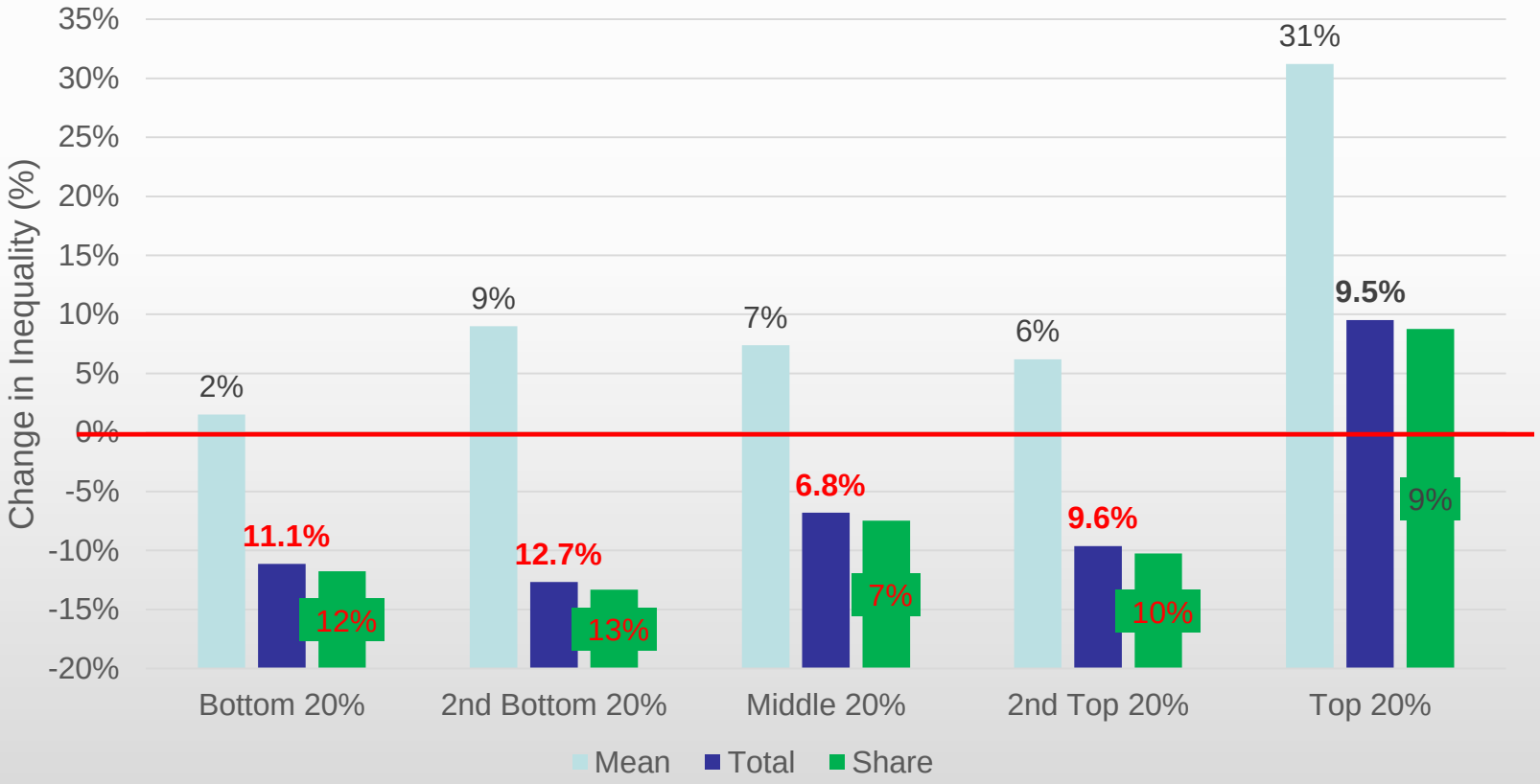
Change in Inequality 2012-2015



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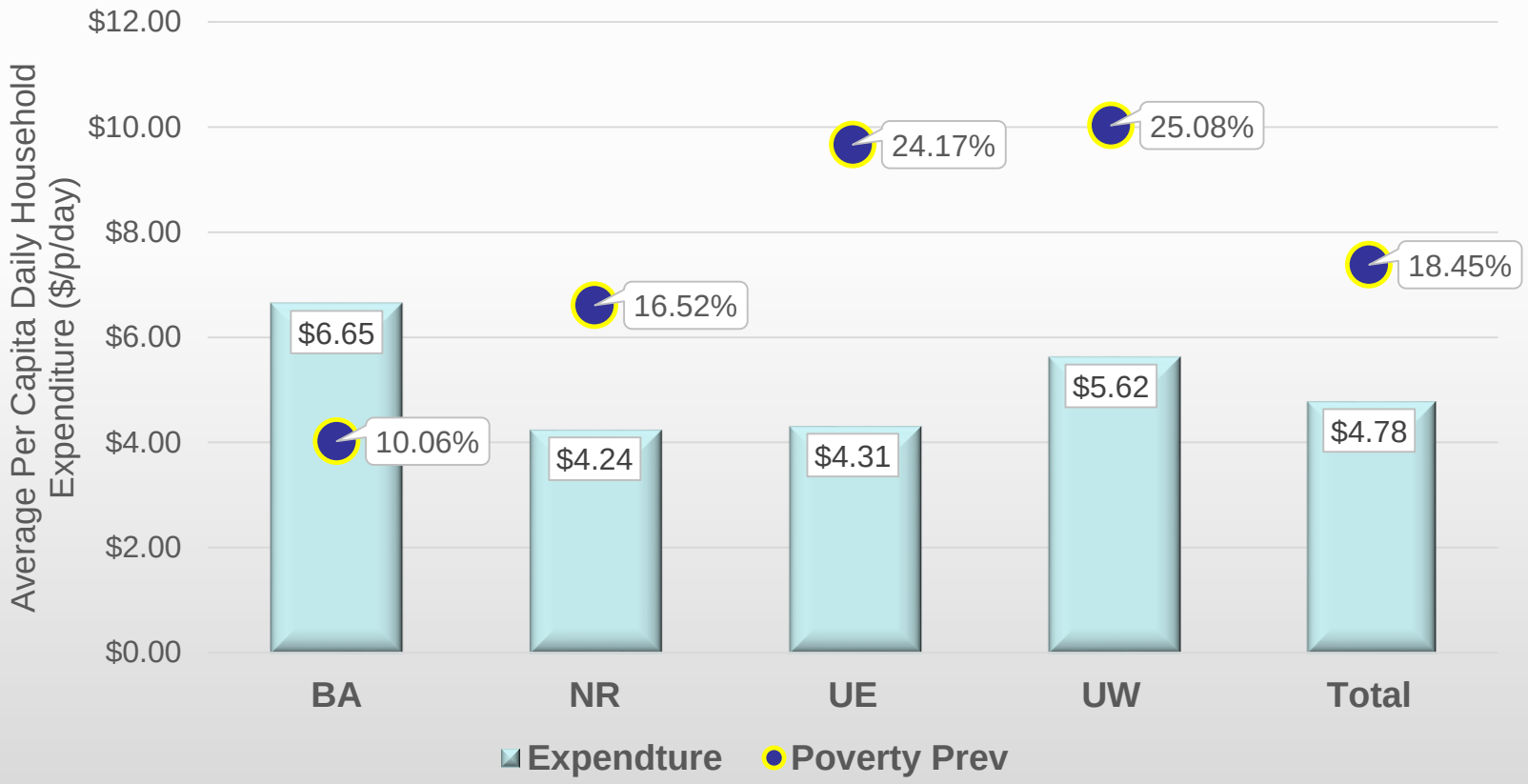
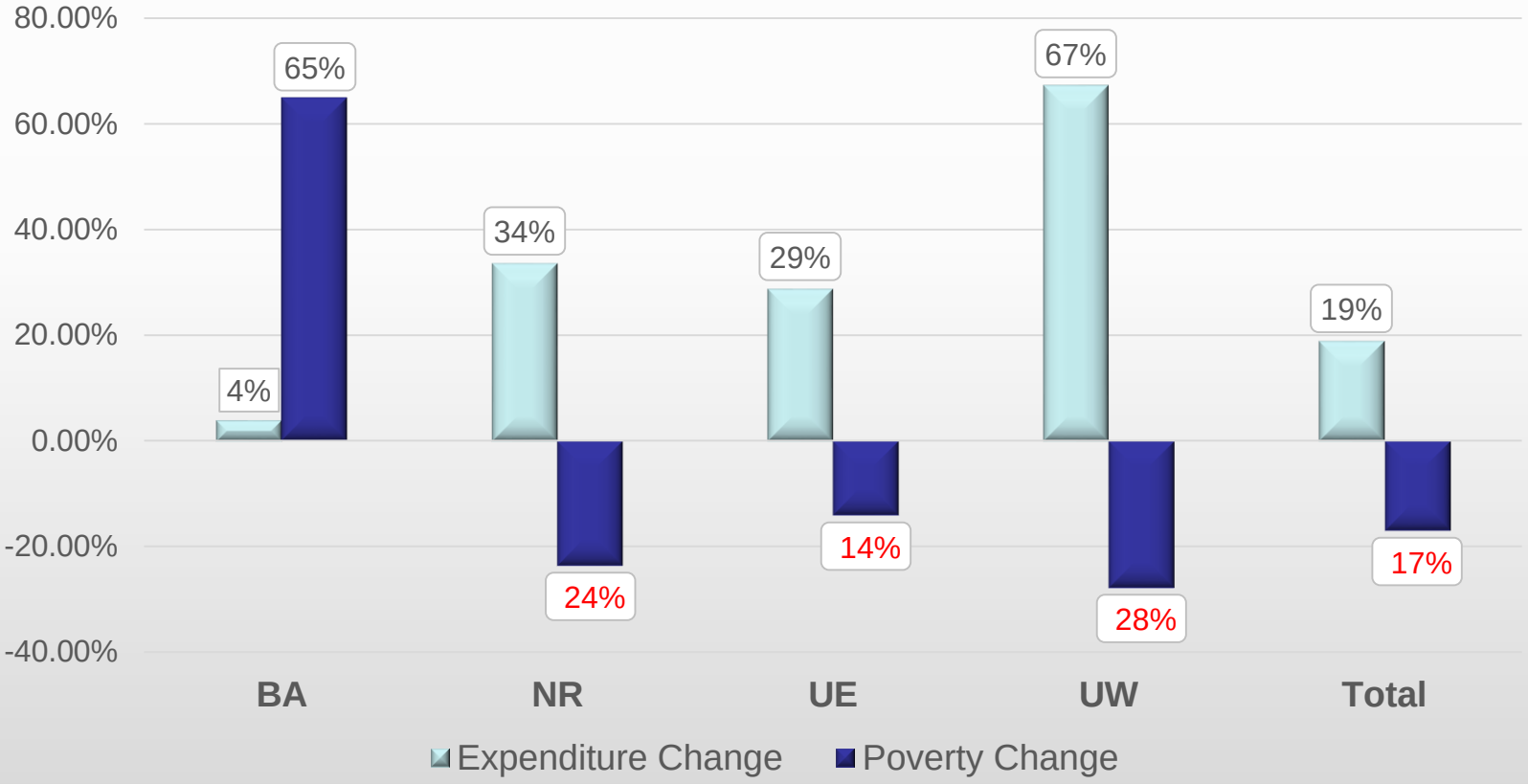
Expenditure and Poverty by Region (2015)



Expenditure and Poverty Change by Region (2015 v 2012)



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Food Security and Nutrition

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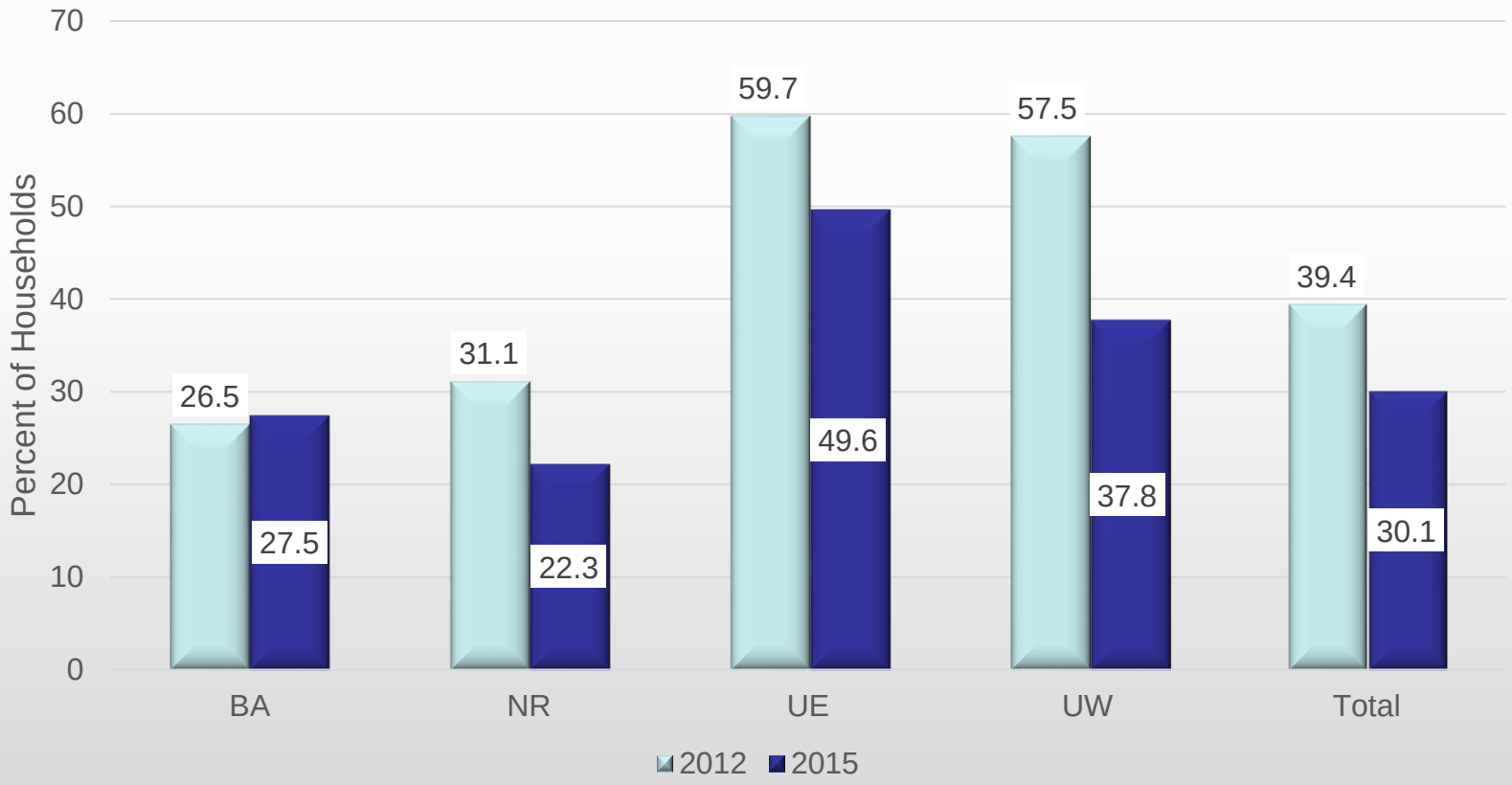
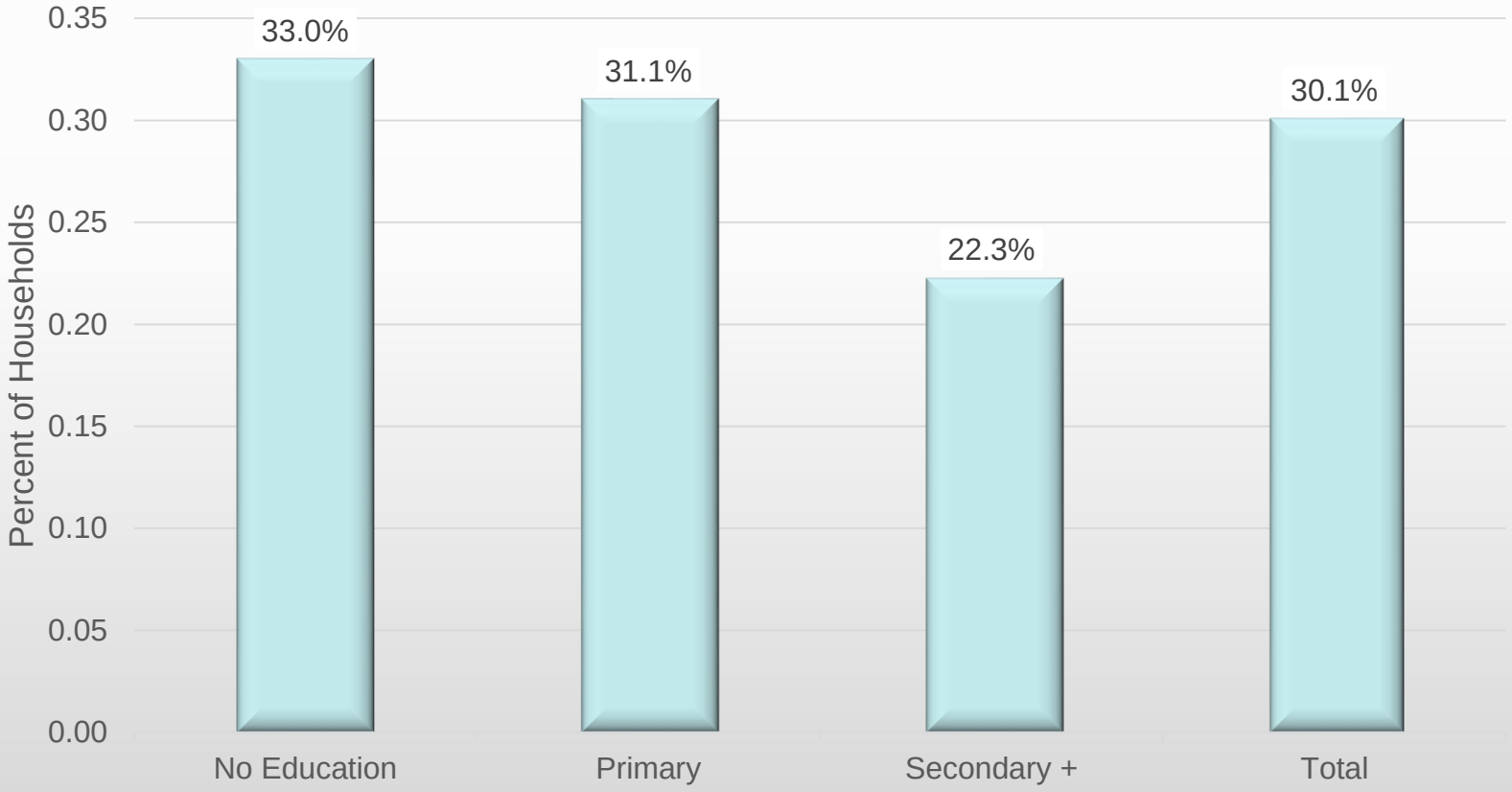
Households Experiencing Hunger

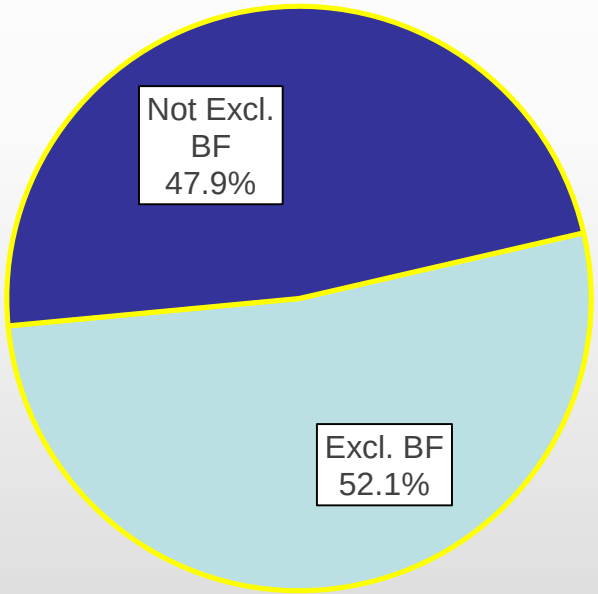


Households Experiencing Hunger by Education

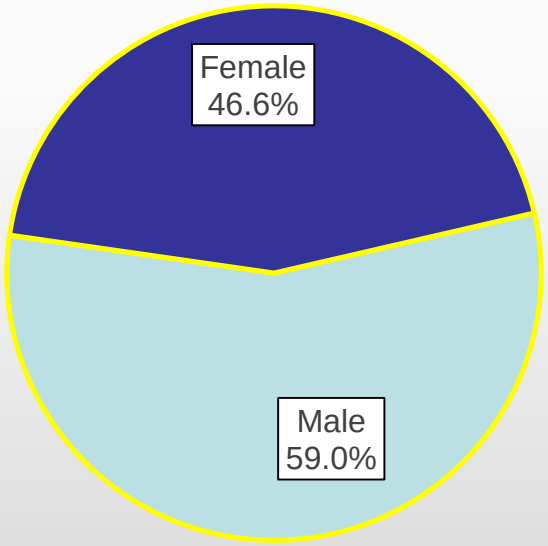


Percent of Children 0-5 months Exclusively Breastfed

ZOI



Exclusive Breastfeeding, by Child's Sex



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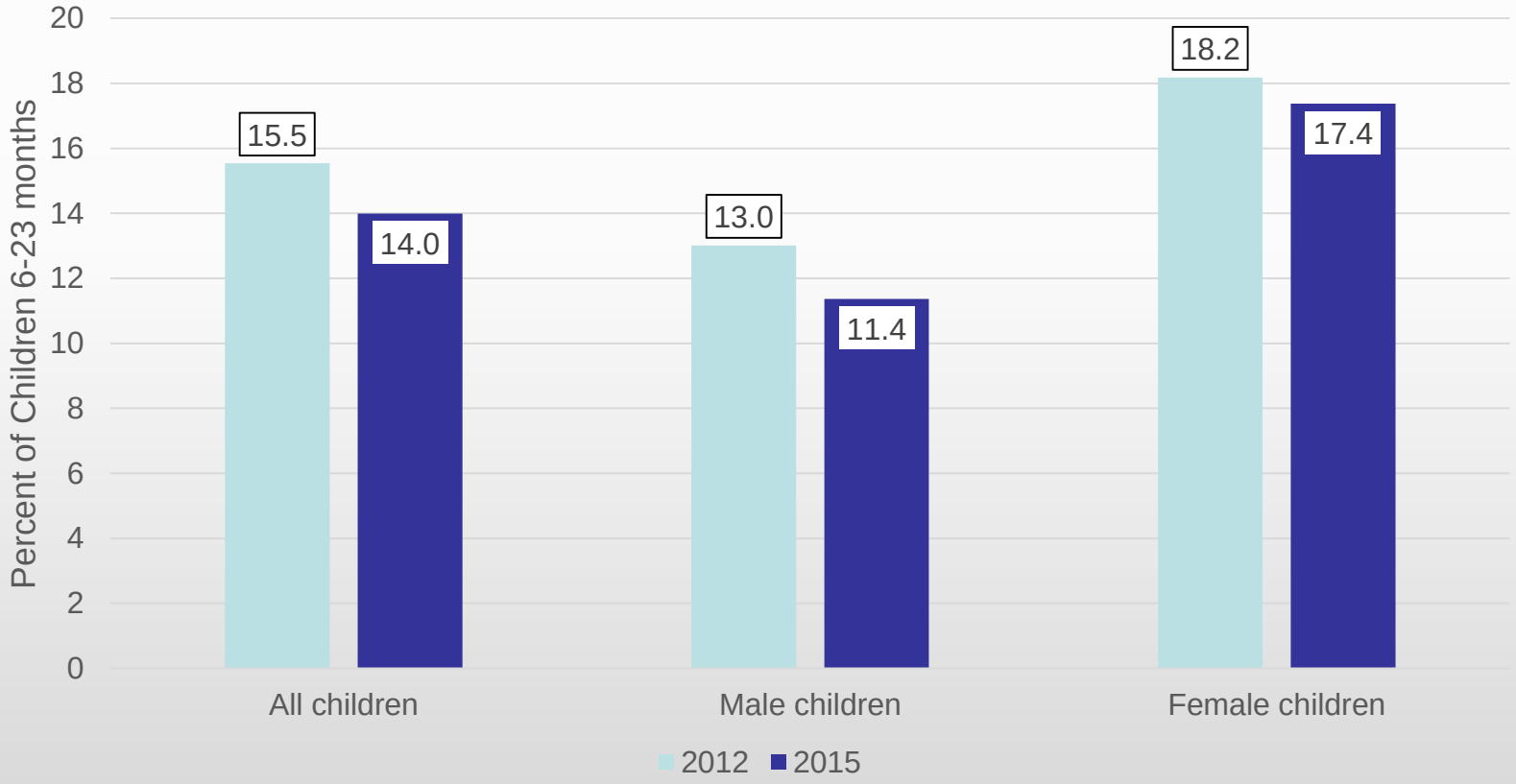
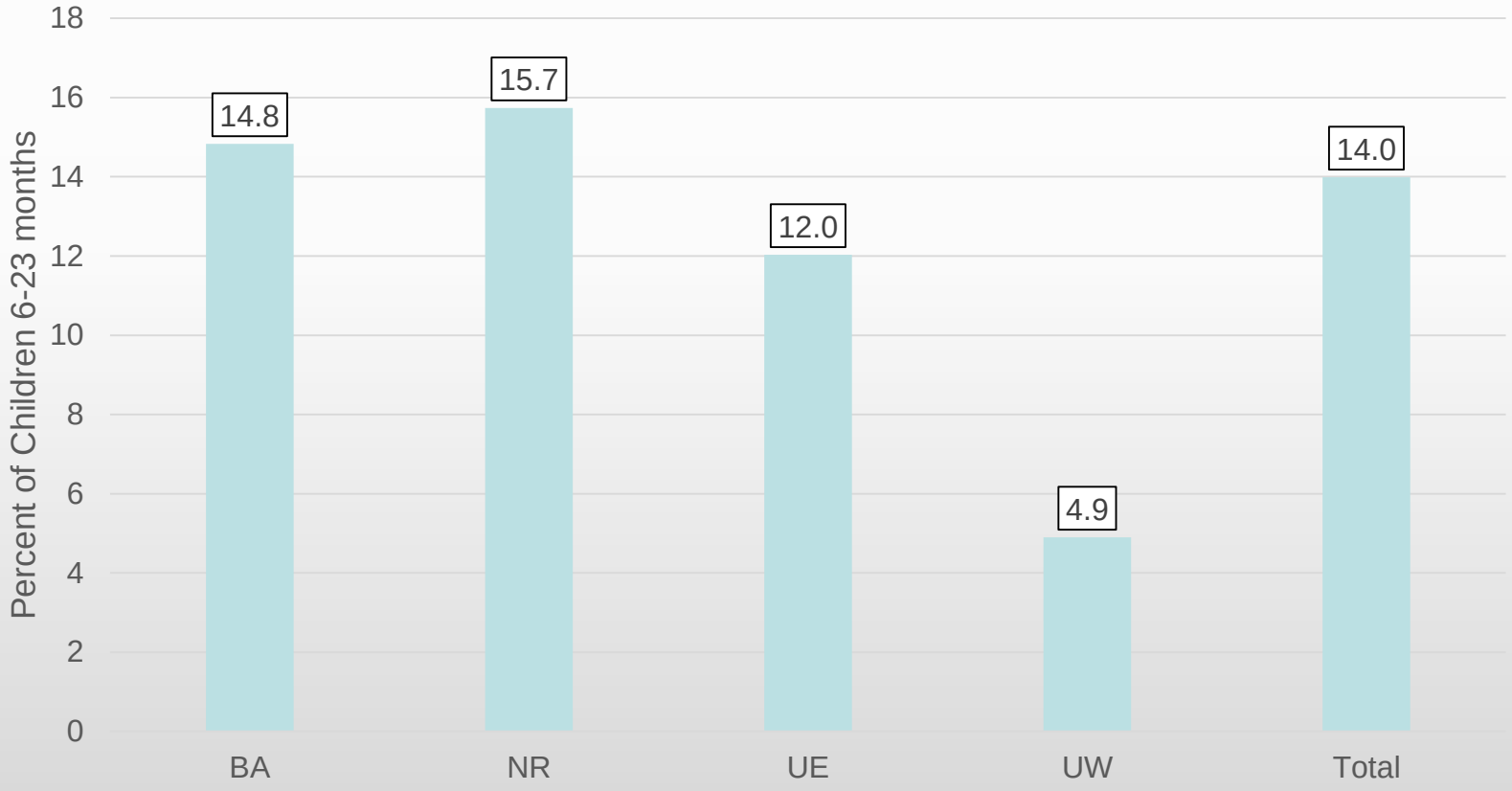
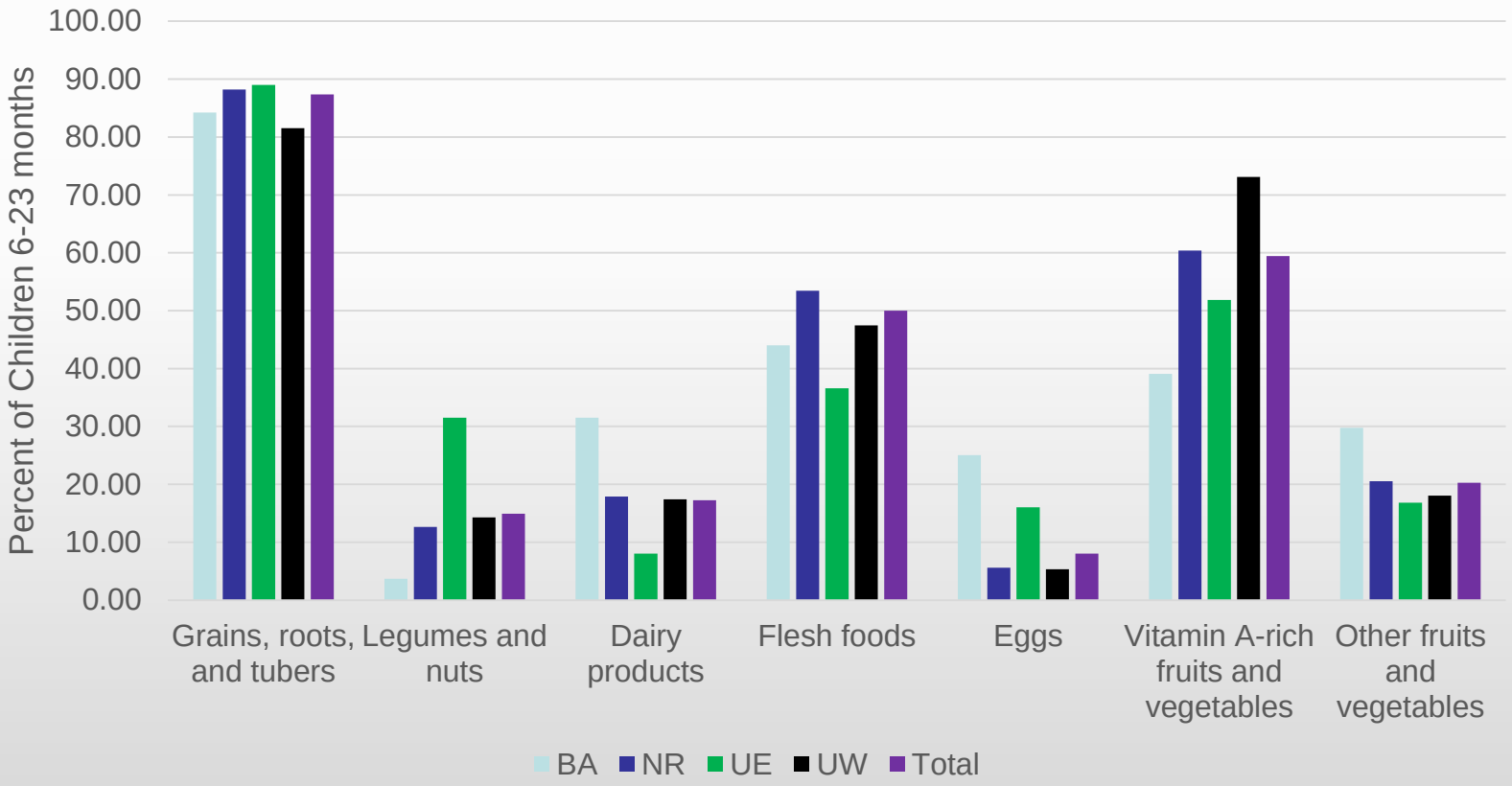
Percent of Children Achieving MAD



Percent of Children 6-23 months Achieving MAD by Region



Proportion of Children Consuming the Seven Food Groups



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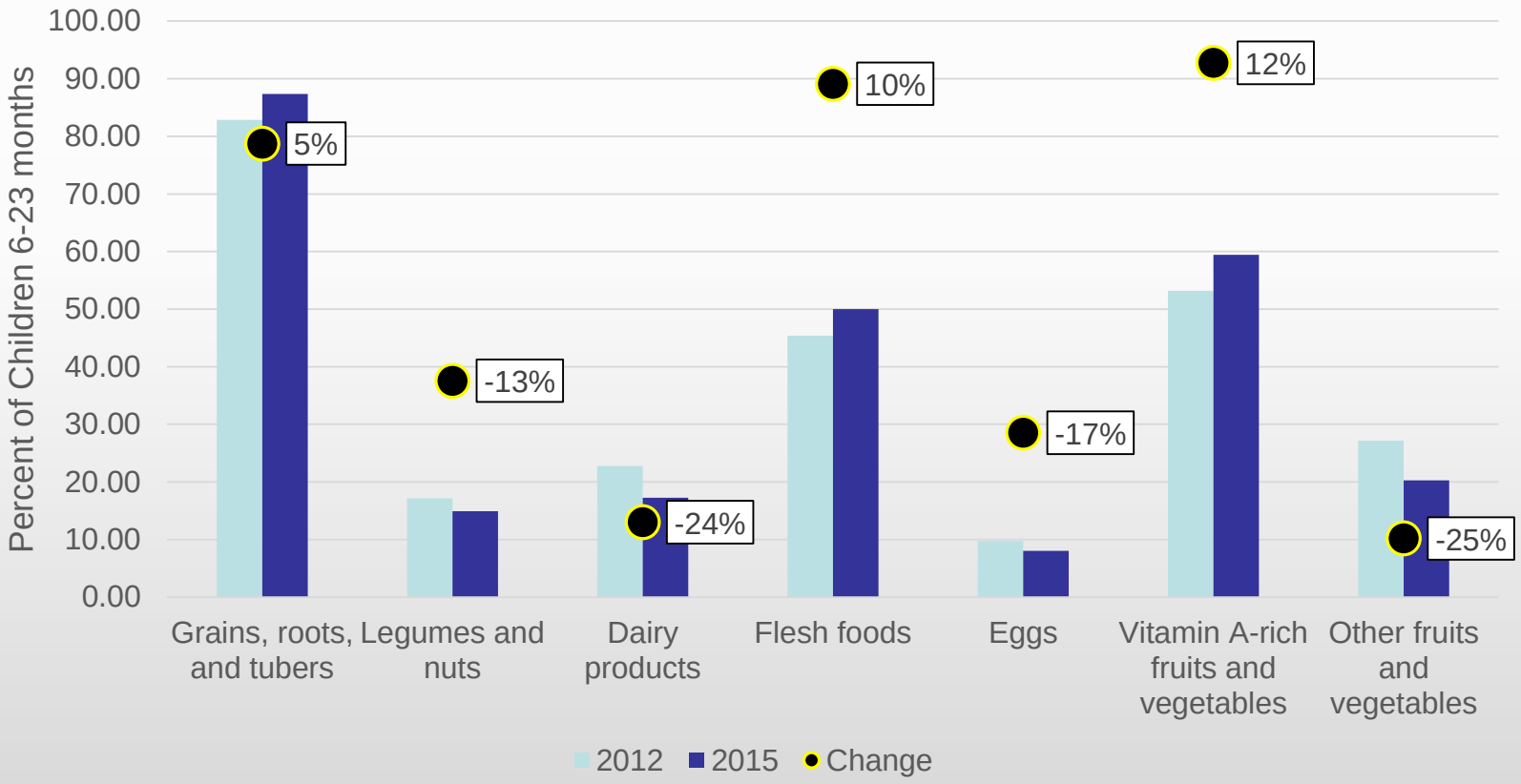
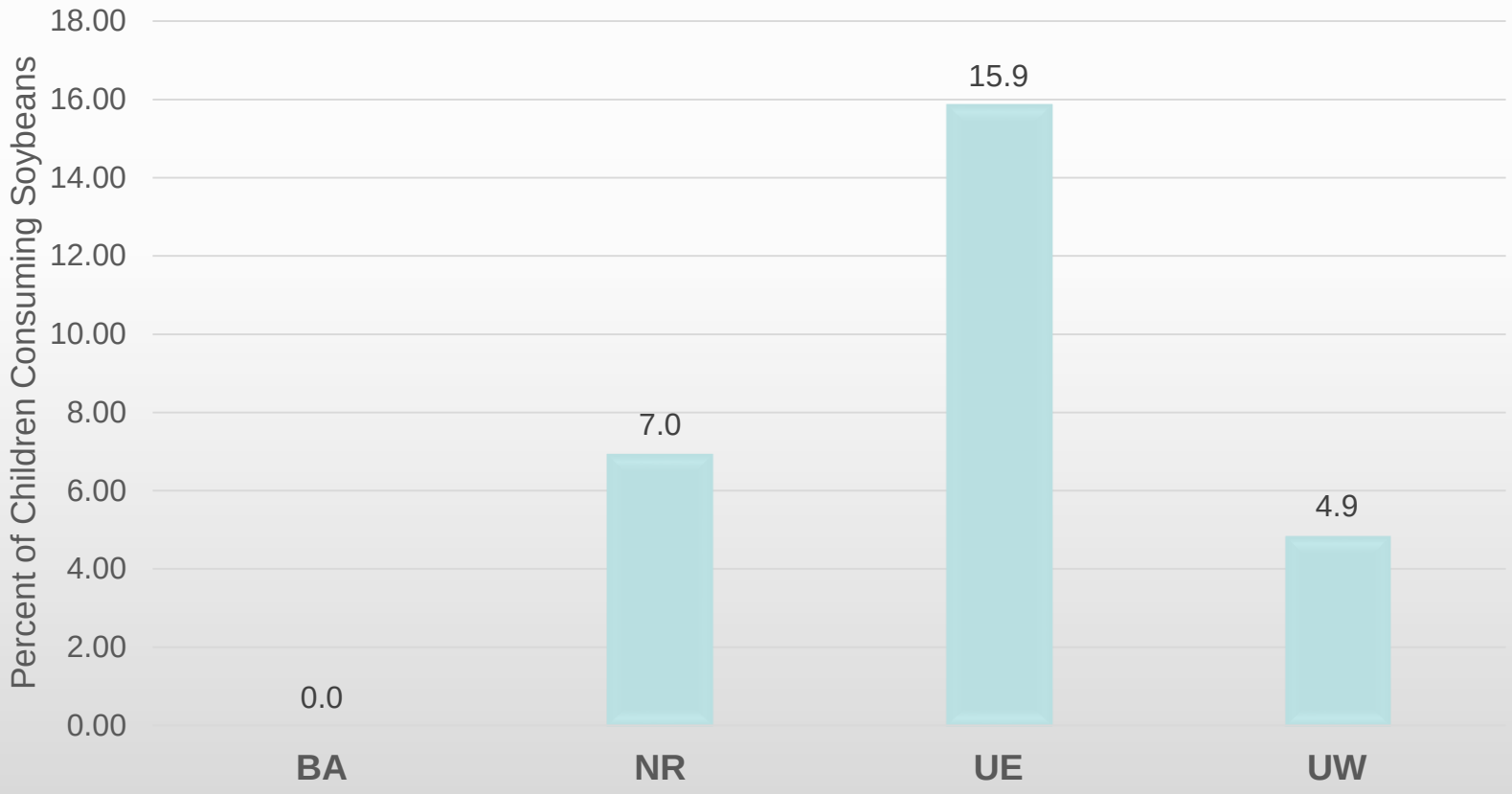
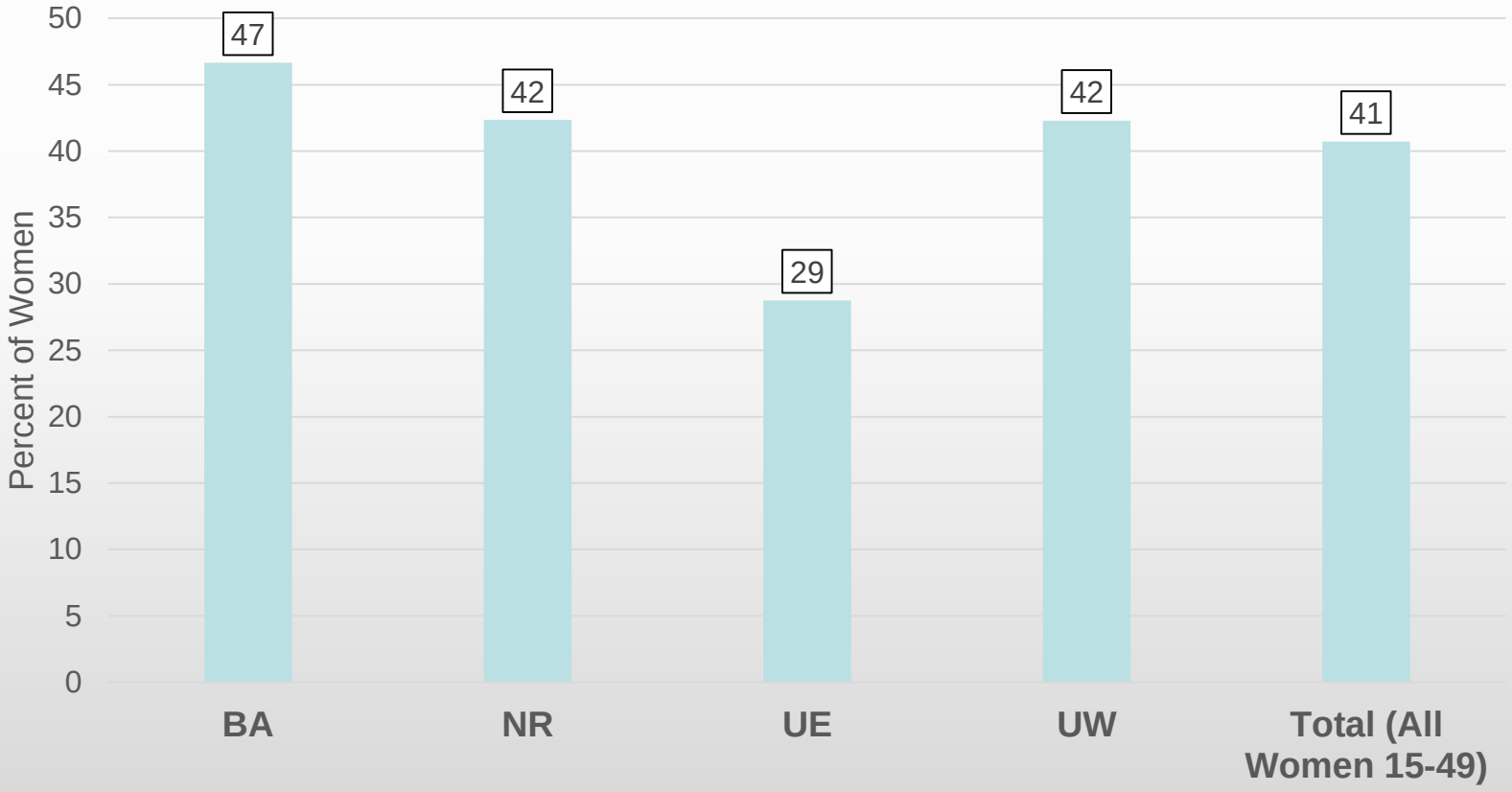
Proportion of Breastfed Children Consuming the Seven Food Groups



Proportion of Children Consuming Soybeans by Region



Women Achieving Minimum Dietary Diversity by Region



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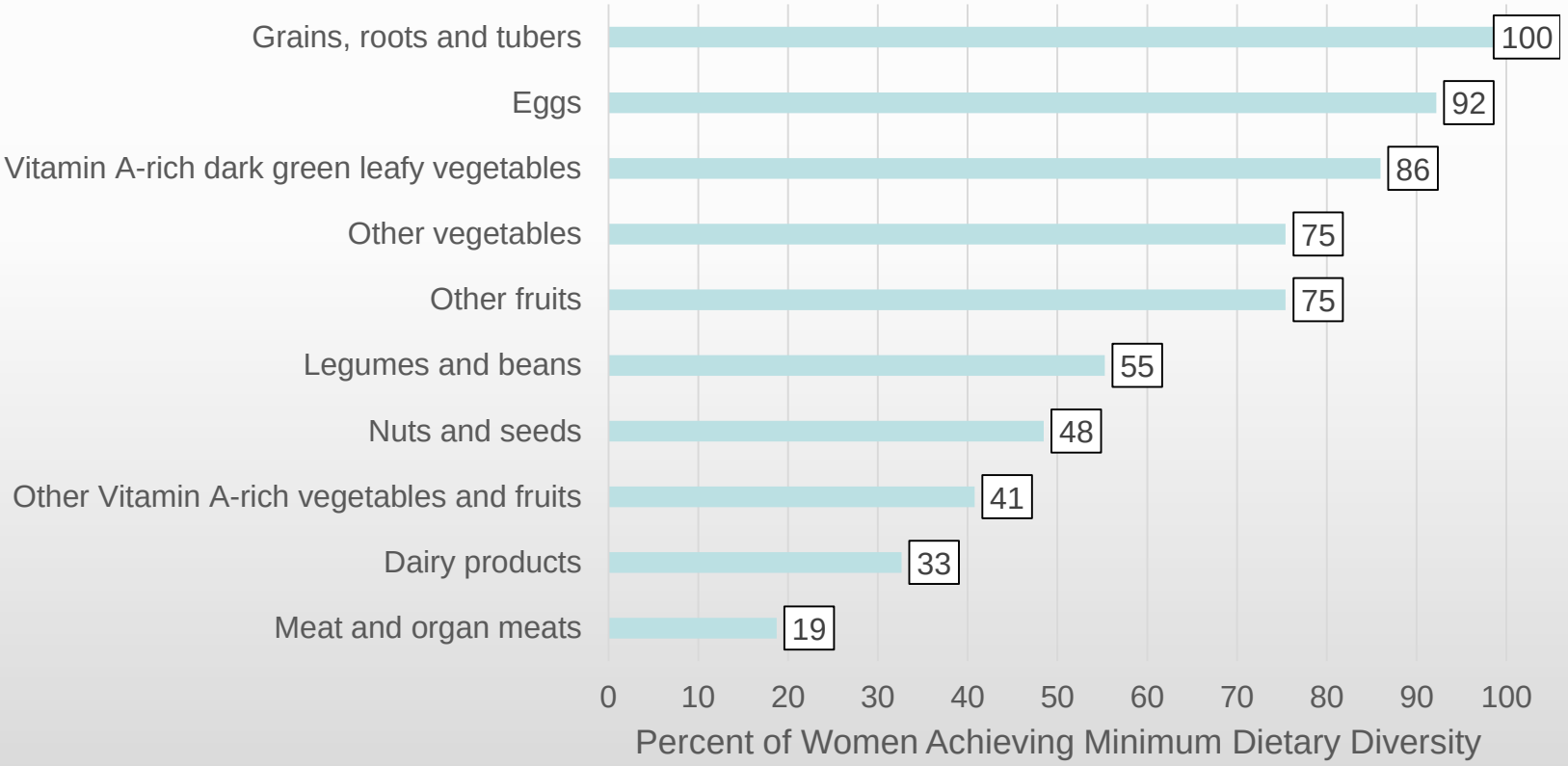
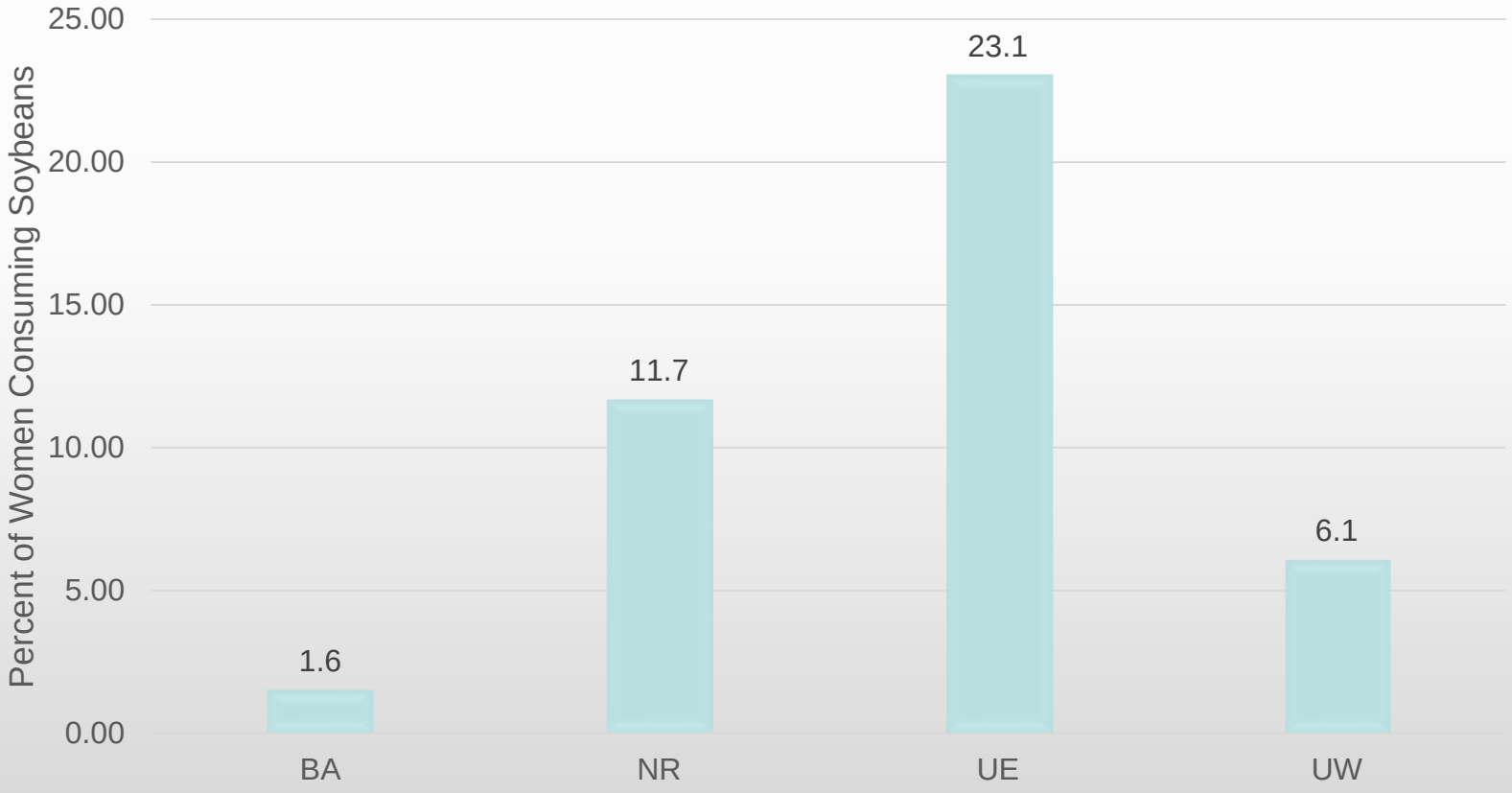
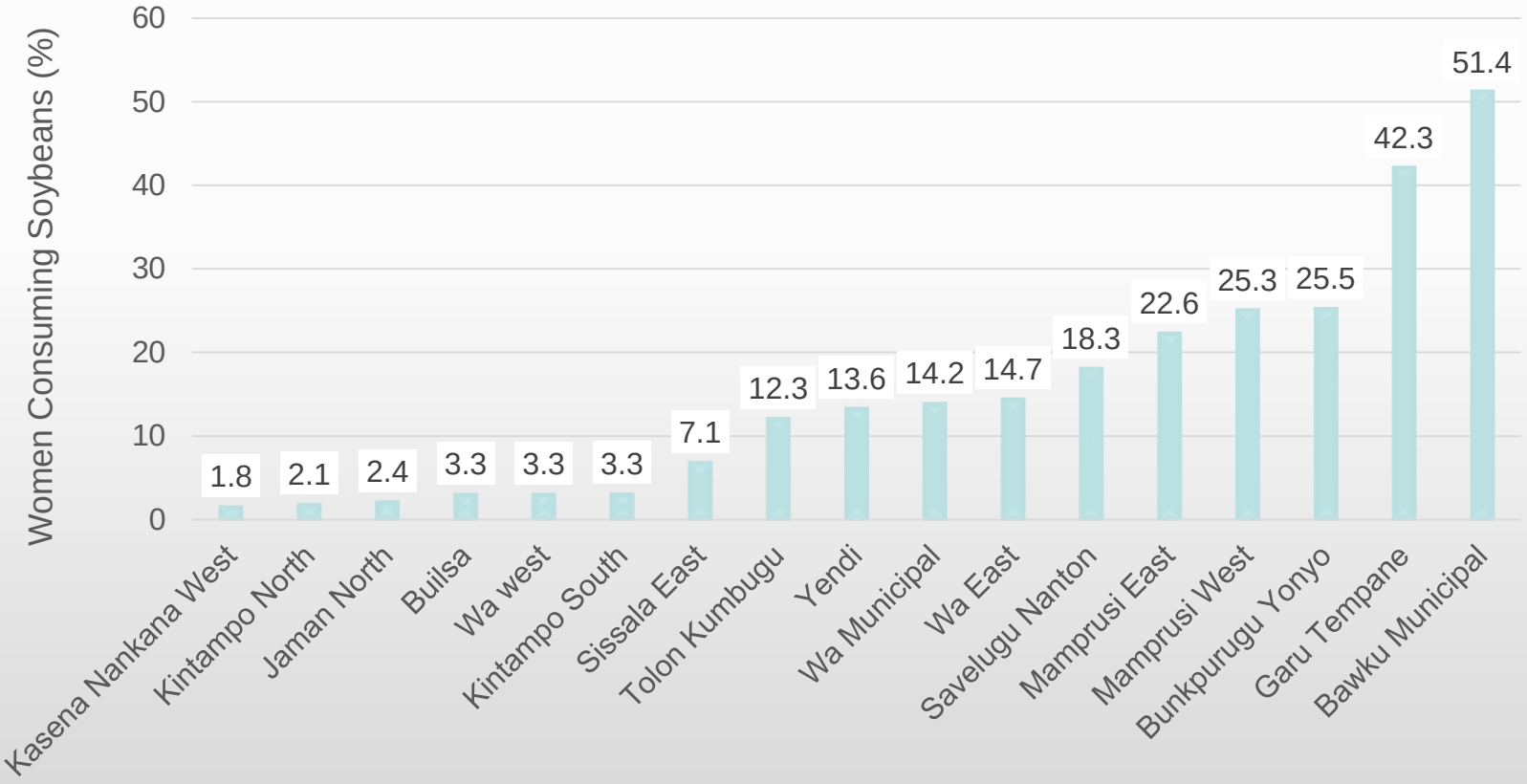
Proportion of Women Achieving Minimum Dietary Diversity by Food Group



Proportion of Women Consuming Soybeans by Region



Proportion of Women Consuming Soybeans (Select Districts)



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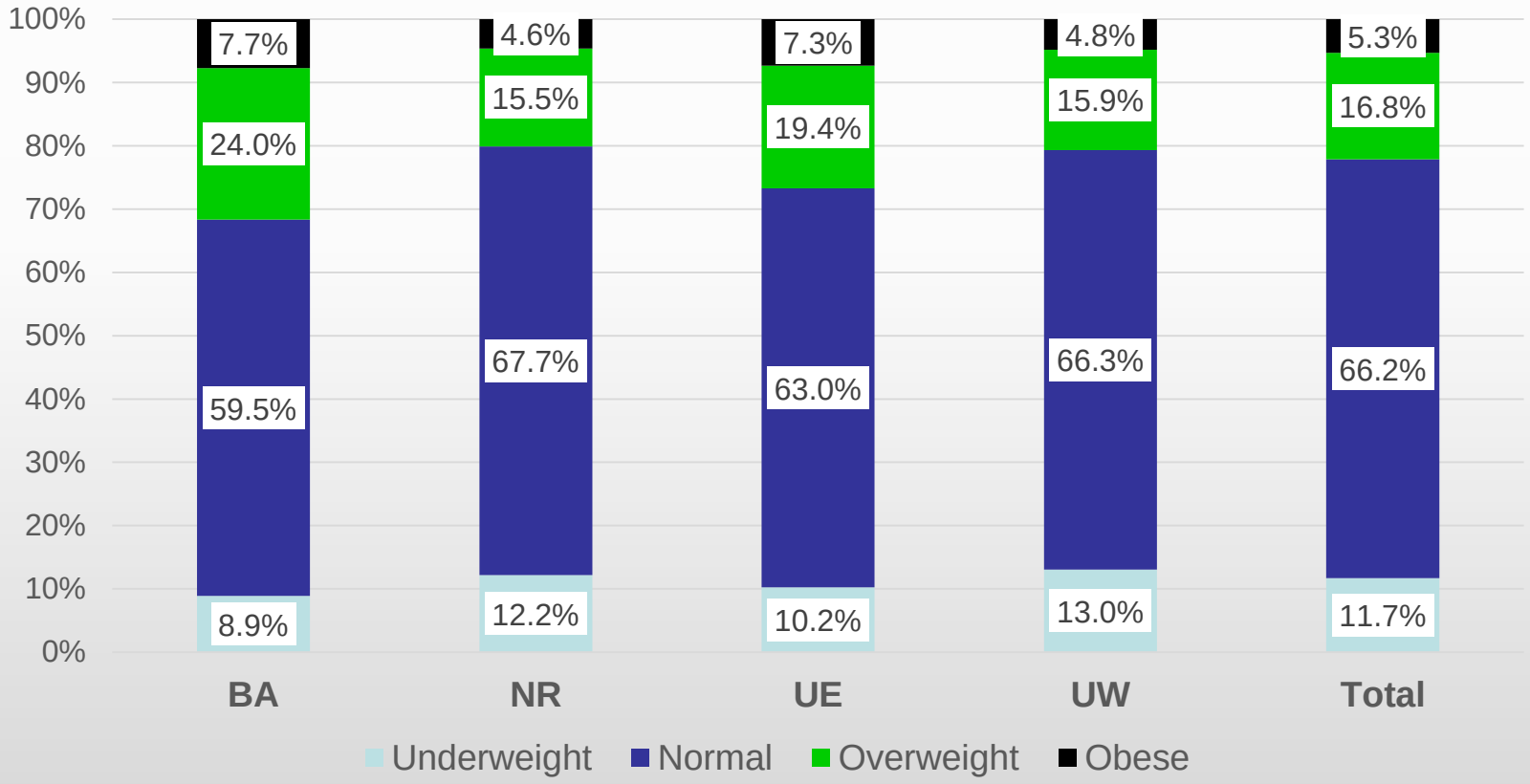
Anthropometrics

Anthropometry

- Body Mass Index is a useful indicator for assessing current and potential health challenges
- The focus is on women of reproductive age – i.e., 15-49 years
  - Note: This is the only time females younger than 18 are counted in an adult group
- Children's anthropometric measures encompass underweight, stunting and wasting
  - Focus on children under 5 years

Distribution of Women by BMI



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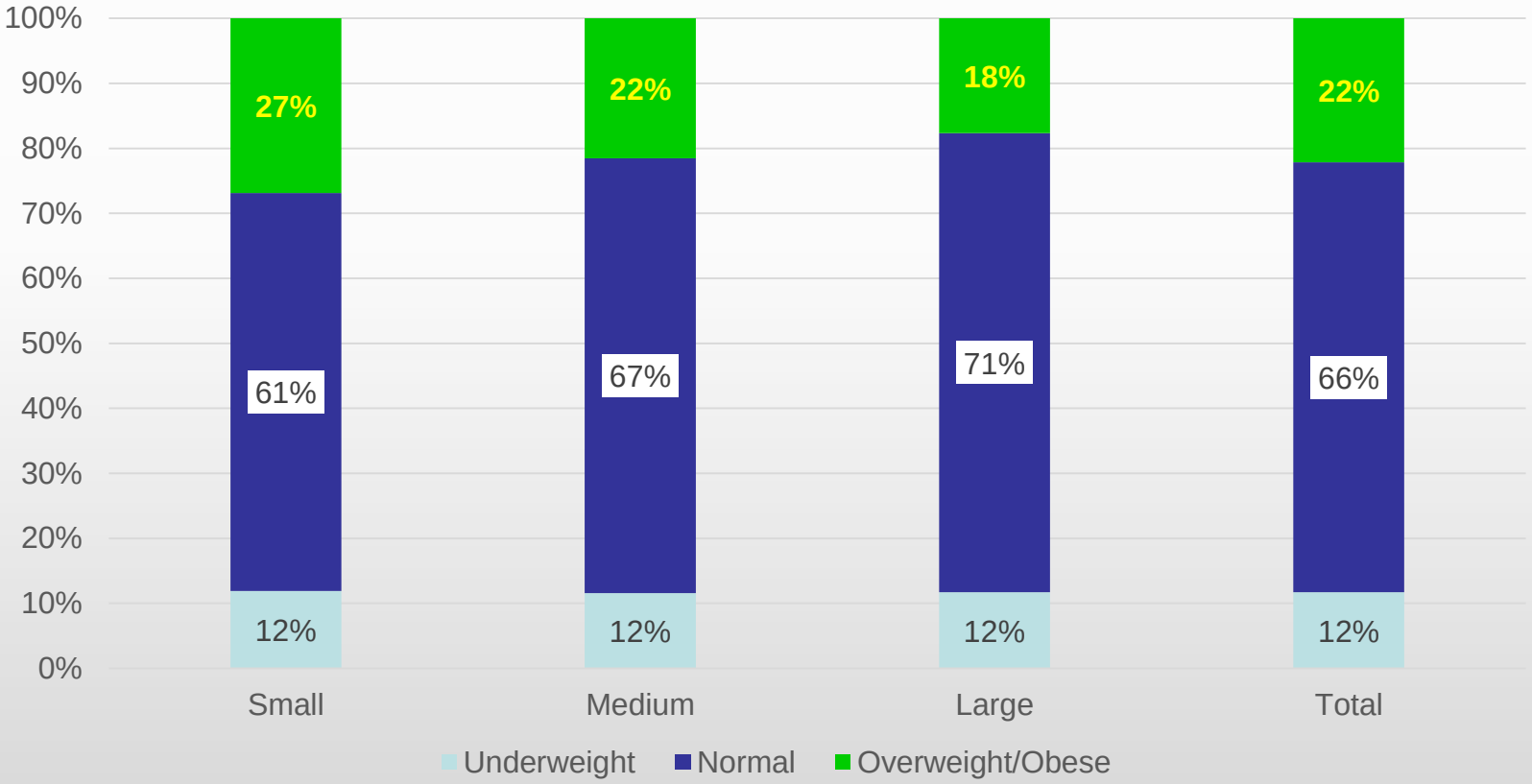
BMI by Household Size

There is a statistically significant negative correlation between BMI and HHS



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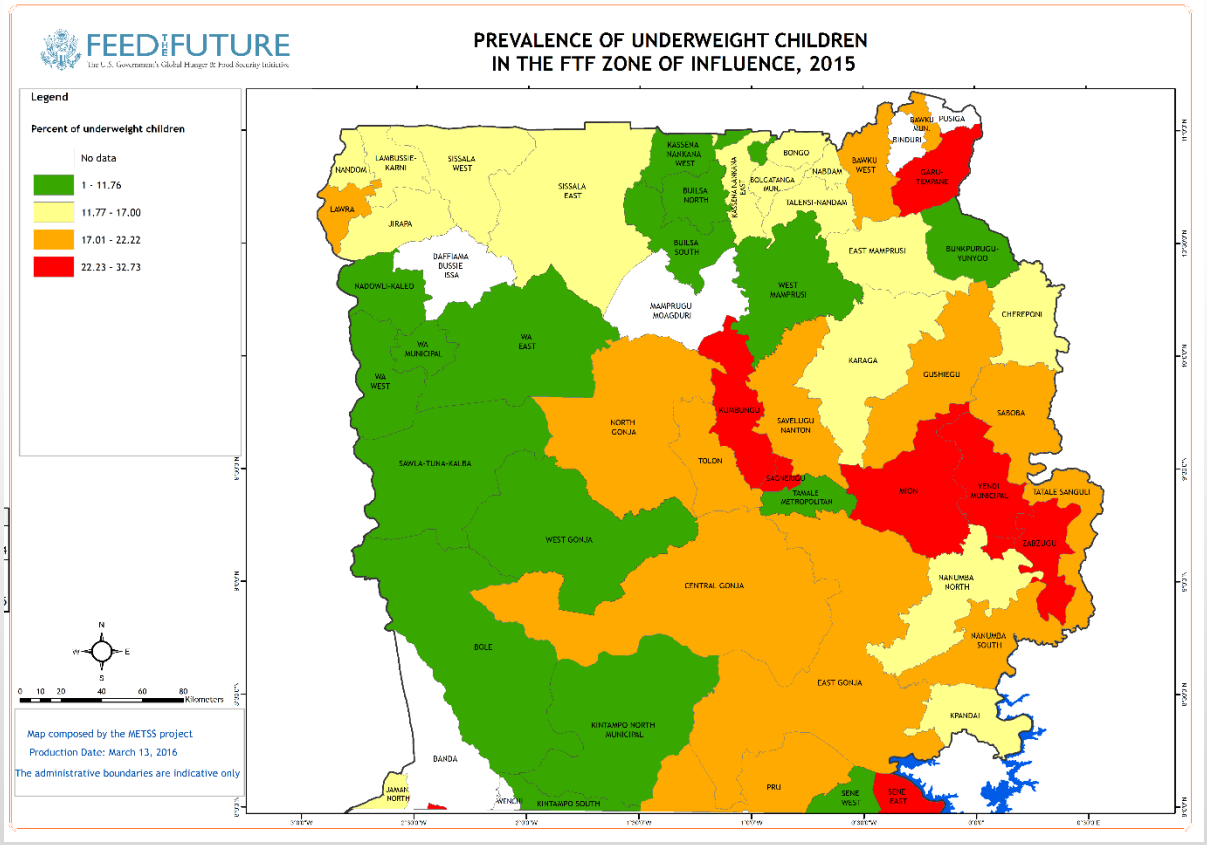
Children's Anthropometry: Underweight



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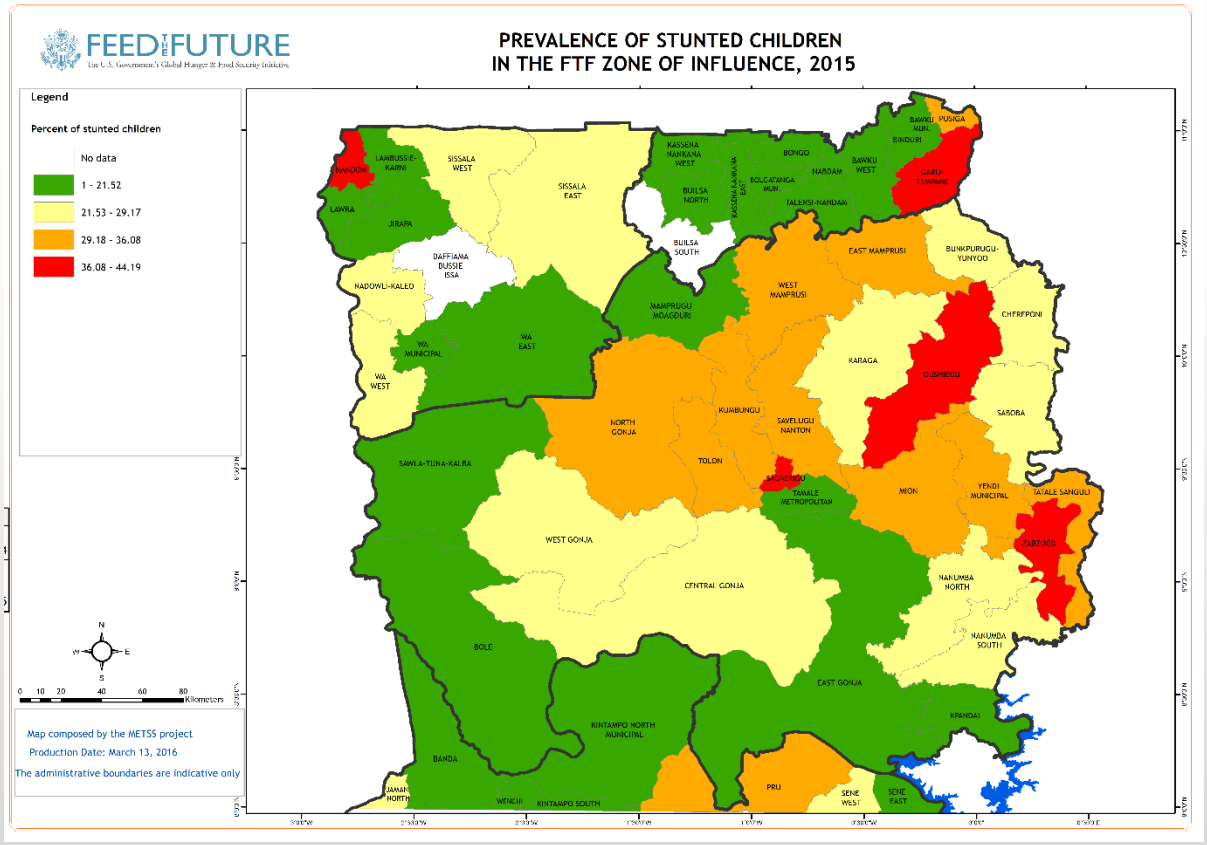
Children's Anthropometry: Stunted



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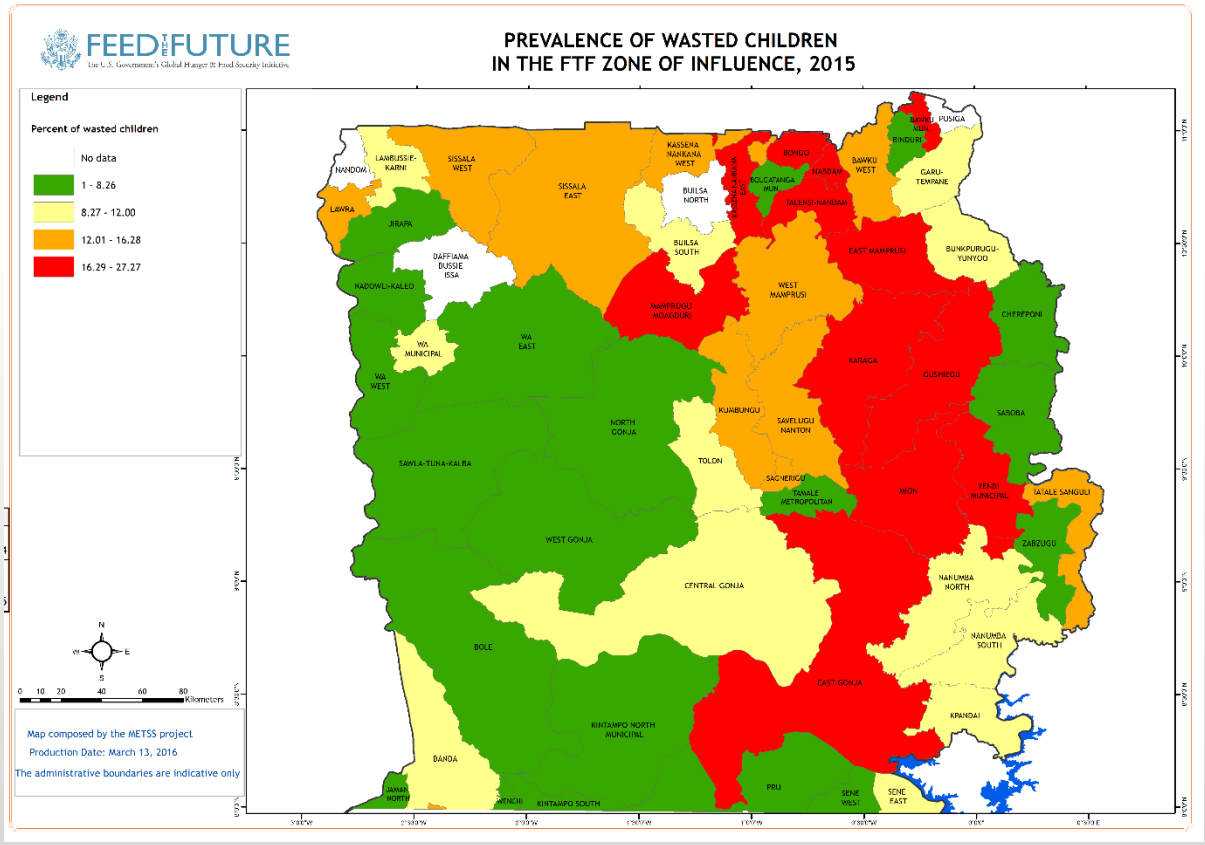
Children's Anthropometry: Wasted



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WEAI

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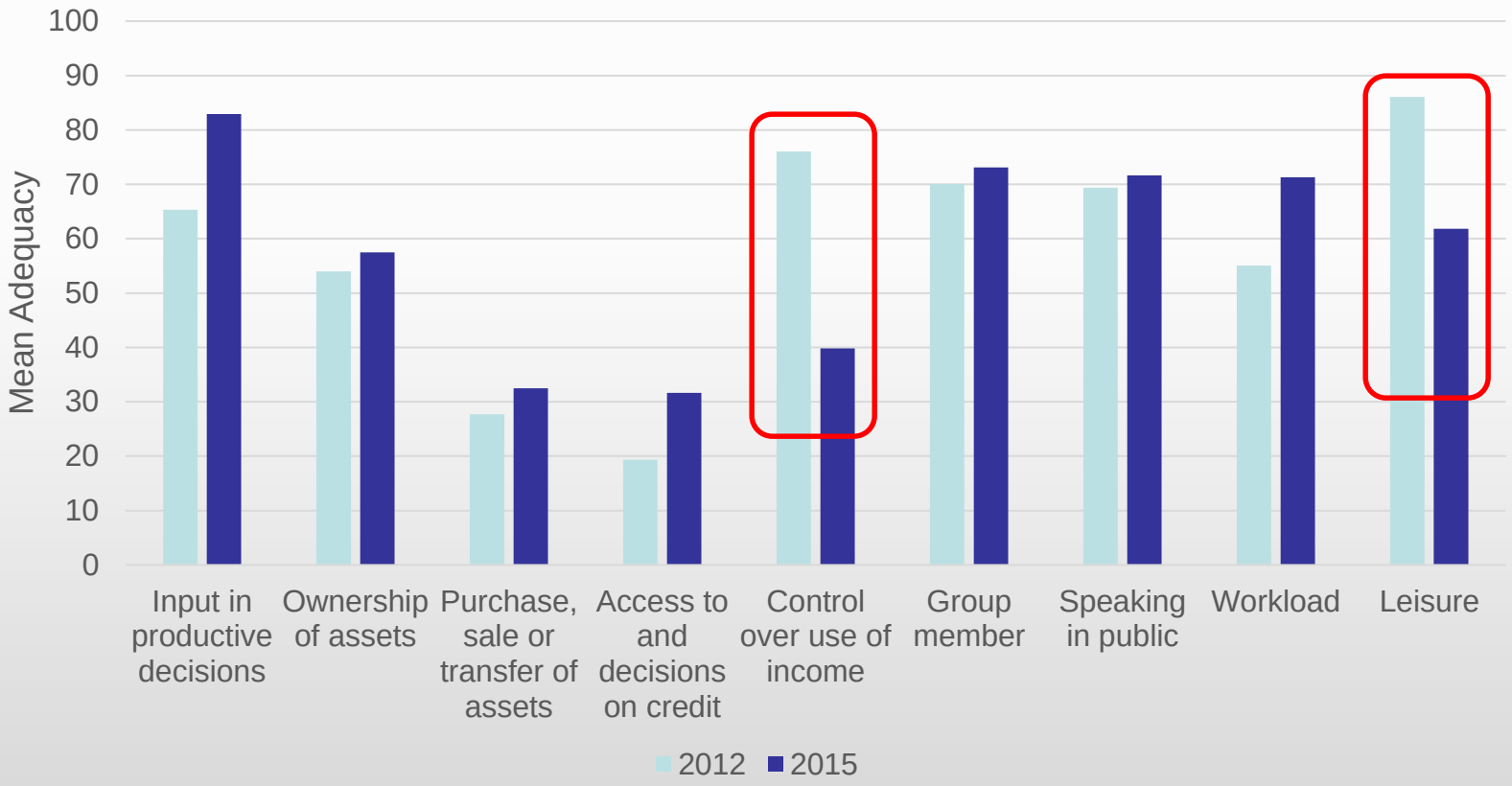
WEAI

- Comprises five domains
  - Production
  - Resources
  - Income
  - Leadership
  - Time
- Interested in level of achievement of respondents' adequacy in each of the domains

WEAI by Component Adequacy



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Summary

Take Aways

- Expenditures have increased
  - As proxies for income, we infer that incomes have increased too
- Poverty prevalence has declined from the baseline
- However, the gap between the top and the bottom quintiles has increased

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Take Aways

- Women's economic and social situation has improved over baseline, however . . .
  - In the crucial components of control over income use and leisure, we saw a decline in adequacy
- While stunting and underweight declined, wasting increased
- Areas where we have seen focused activity has produced some of the most positive results

Next Steps

- A broader discussion of these results will be presented tomorrow at the Poverty and Nutrition Situation in Northern Ghana 2015 Conference
- Watch out for numerous research papers and theses using both 2012 and 2015 data to seek explanations for the changes

Next Steps

- Explore the differences seen among districts by superimposing intervention activities and other programmatic initiatives on performance
- We invite you all to come on this exciting journey with us as we find innovative levers to enhance incomes, reduce poverty and increase nutrition in Ghana

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Thank You

Questions, comments, ideas