**Agenda items for 11/22/19 :**

Intervention into the literature

1. Patterns in nutritional shortfalls; compare to existing work

(1a) Calculating other commonly used metrics:

BMI

HDDS

Intake + activity level (sedentary, moderate, active)

Intake + energy expenditure (fancy equations?)

* 1. Demonstrate correlations across measures.
  2. These are different outcome measures related? What one should we use when?

1. How to capture the shortfall for women / kids?
   1. Raw percentage from benchmark? Difference in percentages from benchmark for different household members? Weighting by severity?
   2. Empowerment matter?
2. We also care about the tails –
3. Machine Learning around certain outcomes?
4. Nutritional Benchmarks

See excel document

1. Data decisions/issues
   1. Choice of nutrition data (Golapan vs Govt of Bangladesh)
   2. Secondary sources for Nutrition data and how to adapt
   3. Categorize employment into three categories?
2. References in Mendeley

**Measures Brainstorm:**

**Nutrient = calories, fat, protein, carbohydrate, calcium, iron**

1. Individual consumption of nutrient
2. BMI
3. HDDS
4. rCSI or other food security measures

Calculated measure = Total household consumption of nutrient/measure of household size

1. Variation in Denominator:
   1. HH size (PC)
   2. OECD adult equivalent
   3. AE based on age
   4. AE based on age group
   5. Add on gender
   6. Add on activity as defined by employment category
   7. Add on activity as defined by time use
   8. Add height and weight
   9. Adult Male Equivalent (is this different than AE)
   10. AE benchmarks from Bangladesh./India
   11. AE benchmarks from FAO
   12. AE benchmarks from USDA
2. Variation in Numerator:
   1. Nutrient values from Bangladesh/India Tables
   2. Nutrient values from USDA
3. Inequality Measures
   1. Individual consumption and calculated measure to **regional** EAR/RDA/BMI
   2. Individual consumption and calculated measure to **US** EAR/RDA/BMI
   3. Including pregnant or lactating women or drop category
   4. Include children vs adult only sample
   5. Kuznets curves to both HH income, and to self measure (nonparametric)
   6. Log deviations vs differences in deviations
   7. Average of Mean household deviation vs mean # of household with binary inequality measure
   8. Z-score deviation or other unit free measure

**Next steps:**

**Write up how measures are calculated and where they come from**

Correlations across variations in measures and sensitivity of results to choice of measure

-Correlation heat map

Contextual factors: anemia in Bangladesh may be a function of drinking water

Machine learning aspect with factors:

income, education, empowerment, sanitation, assets