### Step 1: Identify Unmet Needs

#### 1.1 Community Assessment

*Tools for Collecting Data*

In working to complete the **Community Assessment Worksheet**, the Advisory Panel may determine that additional local level data should be collected to better assess the community's current situation. This is a list of some publicly available resources to support the collection of new information for the community assessment. Click on the title to be redirected to the resource’s website to learn more. Consider that resources developed for use in the U.S. also may be useful in global settings with some adaptations, and vice versa. The list is organized as such, with data sources in each category listed alphabetically:

**DATA COLLECTION TOOLS SPECIFIC TO THE U.S.**

- **Food Security**
  - Hunger Vital Sign
  - Two-item Risk for Food Security Screener
  - USDA Food Security Modules

- **Dietary Assessment**
  - Automated Self-Administered 24-Hour Dietary Assessment Tool
  - Block Food Frequency Questionnaires
  - Healthy Eating Index
  - Register of Validated Short Dietary Assessment Instruments

- **Malnutrition**
  - DETERMINE Checklist
  - Epi Info
  - Interpreting Adult Body Mass Index
  - Interpreting Child and Teen Body Mass Index
  - Mini Nutritional Assessment

**GLOBALLY FOCUSED DATA COLLECTION TOOLS**

- **Food Security**
  - Food Insecurity Experience Scale
  - Household Food Insecurity Access Scale
  - Months of Adequate Household Food Provisioning
  - The Latin American & Caribbean Household Food Security Scale

- **Dietary Assessment**
  - Recommendation Compliance Index
  - World Health Organization Infant and Young Child Feeding Indicators
  - Intake (Center for Dietary Assessment) Resource List

- **Malnutrition**
  - Biomarkers of Nutrition for Development (BOND)-Folate Review
  - Biomarkers of Nutrition for Development (BOND)-Vitamin A Review
  - Biomarkers of Nutrition for Development (BOND)-Vitamin B12 Review
  - Child Growth Assessment Training Course
  - Global Guidelines for Type 2 Diabetes
  - Guide to Anthropometry: A Practical Tool for Program Planners, Managers, and Implementers
  - Interpreting Adult Body Mass Index
  - Iodine Status
    - Assessment of Iodine Deficiency Disorders and Monitoring Their Elimination
    - Biomarkers of Nutrition for Development (BOND)-Iodine Review
    - Urinary Iodine Status for Determining Iodine Status in Populations
  - Iron Status
    - Assessing the Iron Status of Population
    - Biomarkers of Nutrition for Development (BOND)-Iron Review
  - Hemoglobin Concentrations for the Diagnosis of Anemia and Assessment of Severity
  - Serum Ferritin Concentrations for the Assessment of Iron Status and Iron Deficiency in Populations

- **Zinc Status**
  - Biomarkers of Nutrition for Development (BOND)-Zinc Review
  - IZINCG Technical Briefs
COLLECTION TOOLS SPECIFIC TO THE U.S.

**Food Security**

The paper [Validity and reliability of food security measures](http://example.com) by Cafiero et al. (Ann. N.Y. Acad. Sci. 2014;1331:230-248) provides a good primer on food security measurement tools.

**Hunger Vital Sign™ Two-item Risk for Food Security Screener**

- **Developer:** The Children’s HealthWatch/Hager et al.
- **Outcomes:** Risk for food security
- **Important Notes:** Recommended for screening in clinical settings; also refer to [American Academy of Pediatrics screening recommendation](http://example.com) and [Addressing Food Insecurity: A Toolkit for Pediatricians developed by the American Academy of Pediatrics (AAP)](http://example.com)

**Hunger Vital Sign™ Two-item Risk for Food Security Screener – Adult**

- **Developer:** Gundersen, et al.
- **Outcomes:** Risk for food security
- **Important Notes:** Recommended for screening in clinical settings

**USDA Food Security Modules**

- **Developer:** Economic Research Service (ERS), United States Department of Agriculture
- **Outcomes:** Measurement of household food security, including estimates of the level of food insecurity
- **Important Notes:** Recommended for research. Options include guide for implementation and the following food security modules: 18-item household; 10-item adult; 6-item short-form; and 9-item self-administered youth (>12 years old) food security module

**Dietary Assessment**

Collecting accurate, high quality dietary assessment data is challenging. Consider consulting with a registered dietitian nutritionist for help understanding and using these tools.

**Automated Self-Administered 24-Hour Dietary Assessment Tool**

- **Developer:** National Cancer Institute, Westat
- **Outcomes:** Intake of nutrients and food groups over 24-hour periods (recall or diary)
- **Important Notes:** Freely available; researchers are asked to register; can be used on a desktop computer, laptop, smartphone or tablet

**Language(s):** English, Spanish, French; with Canadian and Australian versions
Block Food Frequency Questionnaires
Developer: Block, et al.
Outcomes: Usual intake of nutrients and food groups (varies by questionnaire)
Important Notes: There are costs associated with administration and processing; available in both paper and electronic format; physical activity screeners also available; available in adult and child versions and in brief and screener versions
Language(s): English, Spanish

Healthy Eating Index
Developer: United States Department of Agriculture
Outcomes: Measure of diet quality in reference to the Dietary Guidelines for Americans
Important Notes: Index is periodically updated; ability to calculate at different levels — national food supply, community food environment, individual food intake — and requires appropriate dietary intake data from 24-hour recalls, food records or a food frequency questionnaire; SAS code available to calculate; alternative eating indices have been developed using different reference criteria and populations.
Language(s): English

Register of Validated Short Dietary Assessment Instruments
Developer: National Cancer Institute
Outcomes: Provides easy access to descriptive information about more than 130 validated short instruments
Language(s): English

Malnutrition
Malnutrition includes undernutrition, overnutrition and micronutrient deficiency. To collect accurate anthropometric and biochemical data, it is important to use high quality, regularly calibrated equipment and standardized procedures. The Academy of Nutrition and Dietetics’ Evidence Analysis Library conducted a systematic review examining the validity and reliability of malnutrition screening tools for use in the adult population and pediatric population. See the reviews for recommended tools.

Epi Info
Developer: Centers for Disease Control and Prevention
Outcomes: Software allows for form design, data entry and data analysis; contains several nutritional anthropometry tools; calculates z-scores and percentiles for weight, length/height, BMI and head circumference based on CDC growth reference and World Health Organization growth standard
Important Notes: Free software and user’s guide; available in desktop (Windows), mobile tablet/smartphone and web/cloud versions
Language(s): English
Interpreting Adult Body Mass Index (BMI)
Developer: Centers for Disease Control and Prevention
Outcomes: Describes how to calculate and interpret BMI for adults
Language(s): English

Interpreting Child and Teen Body Mass Index
Developer: Centers for Disease Control and Prevention
Outcomes: Describes how to use and interpret BMI for children and teens
Language(s): English

National Health and Nutrition Examination Survey Anthropometry Procedures Manual
Developer: Centers for Disease Control and Prevention
Outcomes: Describes standardized methods to measure weight; recumbent length; standing height; head circumference; upper leg; length; upper arm length; arm circumference; waist circumference; sagittal abdominal diameter
Language(s): English
## GLOBALLY FOCUSED COLLECTION TOOLS

### Food Security

#### Food Insecurity Experience Scale
**Developer:** Ballard, et al., Food and Agriculture Organization  
**Outcomes:** Individual or household level of mild, moderate and severe food insecurity over the last 30 days or 12 months  
**Language(s):** English, Spanish, French; individual version translated into 170 languages/dialects; documents to guide translation efforts and field worker training available in English, French, Spanish, Russian, Arabic, Portuguese, Chinese and Albanian

#### Household Food Insecurity Access Scale
**Developer:** Coates, et al., FHI 360, Food and Nutrition Technical Assistance III Project, U.S. Agency for International Development  
**Outcomes:** Household Food Insecurity Access Scale score — continuous measure of the degree of household food insecurity in the last month; prevalence of households that are food secure, mildly food insecure, moderately food insecure and severely food insecure  
**Language(s):** English, Spanish, French

#### Months of Adequate Household Food Provisioning
**Developer:** Swindale A, Bilinsky P, Food and Nutrition Technical Assistance III Project, U.S. Agency for International Development  
**Outcomes:** Total number of months out of the past 12 that the household was unable to meet food needs; average total number of months out of the past 12 that all households interviewed were unable to meet their food needs  
**Language(s):** English, French, Spanish

#### The Latin American & Caribbean Household Food Security Scale
**Developer:** Food and Agriculture Organization  
**Outcomes:** Prevalence of households that are food secure, mildly food insecure, moderately food insecure and severely food insecure  
**Language(s):** Spanish
**Dietary Assessment**

**Minimum Dietary Diversity for Women (MDD-W)**

**Developer:** Food and Agriculture Organization, U.S. Agency for International Development, Food and Nutrition Technical Assistance III Project, University of California, Davis

**Outcomes:** Minimum dietary diversity for women of reproductive age indicator (reflects micronutrient adequacy); model questionnaire provided

**Important Notes:** Should be used as a population level indicator (not appropriate for assessing individual diets)

**Language(s):** English

**Recommendation Compliance Index**

**Developer:** Mazzocchi M, et al.

**Outcomes:** Diet quality compared to World Health Organization recommendations for a healthy diet

**Language(s):** English

**World Health Organization Infant and Young Child Feeding Indicators**


**Outcomes:** Early initiation of breast-feeding, exclusive breast-feeding under 6 months and continued breast-feeding at one year; introduction of complementary foods; minimum dietary diversity and meal frequency; minimum acceptable diet; consumption of iron-rich or iron-fortified foods; model questionnaire provided

**Language(s):** English, French, some parts in Spanish

**Intake (Center for Dietary Assessment) Resource List**

**Developer:** FHI 360

**Outcomes:** Extensive collection of resources to assist with dietary assessment

**Language(s):** English

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**Malnutrition**

**Biomarkers of Nutrition for Development (BOND)-Folate Review**

**Developer:** Bailey LB, et al.

**Important Notes:** Reviews usefulness of currently used biomarkers of folate status

**Language(s):** English
**Biomarkers of Nutrition for Development (BOND)-Vitamin A Review**

Developer: World Health Organization  
Outcomes: Serum retinol; retinol-binding protein; breastmilk retinol; serum retinyl esters  
Important Notes: Xerophthalmia and night blindness for the assessment of clinical vitamin A deficiency (in English); Serum retinol concentrations for determining the prevalence of vitamin A deficiency (in English, French, Spanish, Arabic, Chinese, Russian)  
Language(s): English

**Biomarkers of Nutrition for Development (BOND)-Vitamin B12 Review**

Important Notes: Reviews usefulness of currently used biomarkers of vitamin B12 status  
Language(s): English

**Child Growth Assessment Training Course**

Developer: World Health Organization  
Outcomes: Weight; recumbent length; standing height; signs of kwashiorkor and marasmus  
Language(s): English; some parts available in French and Spanish

**Global Guidelines for Type 2 Diabetes**

Developer: International Diabetes Federation  
Outcomes: Prediabetes and diabetes — screening and diagnosis guidelines  
Language(s): English

**Guide to Anthropometry: A Practical Tool for Program Planners, Managers, and Implementers**

Developer: Food and Nutrition Technical Assistance III Project  
Outcomes: Describes standard methods for measuring weight; recumbent length; standing height; mid-upper arm circumference  
Language(s): English

**Interpreting Adult Body Mass Index**

Developer: World Health Organization  
Outcomes: Describes how to calculate and interpret BMI for adults  
Language(s): English

**Iodine Status**

**Assessment of Iodine Deficiency Disorders and Monitoring Their Elimination**

Developer: World Health Organization, UNICEF, International Council for Control of Iodine Deficiency Disorders  
Outcomes: Salt iodine levels; urinary iodine; thyroid size by palpation (goiter); thyroid size by ultrasound; thyroid stimulating hormone; thyroglobulin  
Language(s): English
**Biomarkers of Nutrition for Development (BOND)-Iodine Review**

**Developer:** Rohner F, et al.

**Important Notes:** Reviews usefulness of currently used biomarkers of iodine

**Language(s):** English

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**Urinary Iodine Status for Determining Iodine Status in Populations**

**Developer:** World Health Organization

**Outcomes:** Urinary iodine

**Language(s):** English, French, Spanish

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**Iron Status**

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**Assessing the Iron Status of Population**

**Developer:** World Health Organization, Centers for Disease Control and Prevention

**Outcomes:** Hemoglobin; zinc protoporphyrin; mean cell volume; transferrin receptor; serum ferritin

**Language(s):** English

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**Biomarkers of Nutrition for Development (BOND) - Iron Review**

**Developer:** Lynch S, et al.

**Important Notes:** Reviews usefulness of currently used biomarkers of iron status

**Language(s):** English

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**Hemoglobin Concentrations for the Diagnosis of Anemia and Assessment of Severity**

**Developer:** World Health Organization

**Outcomes:** Hemoglobin

**Language(s):** English, French, Spanish, Arabic, Chinese, Russian

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**Serum Ferritin Concentrations for the Assessment of Iron Status and Iron Deficiency in Populations**

**Developer:** World Health Organization

**Outcomes:** Serum ferritin

**Language(s):** English, French, Spanish, Arabic, Chinese, Russian

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**Pocketbook for Management of Diabetes in Childhood and Adolescence in Under-Resourced Countries**

**Developer:** International Diabetes Federation

**Outcomes:** Diabetes in children — diagnosis guidelines

**Language(s):** English
## Standardized Monitoring and Assessment of Relief and Transitions Survey Planning Tools

<table>
<thead>
<tr>
<th>Developer:</th>
<th>Action Against Hunger Canada and cooperating agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes:</strong></td>
<td>Nutritional status of children under 5; mortality rate of population; food security</td>
</tr>
<tr>
<td><strong>Options:</strong></td>
<td>Includes methodology manual; training materials for enumerators; free software to help with sample size calculation; sample selection, quality checks, anthropometric standardization and report generation</td>
</tr>
<tr>
<td><strong>Language(s):</strong></td>
<td>English, French, Spanish</td>
</tr>
</tbody>
</table>

**Subjective Global Assessment – Adult**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes:</strong></td>
<td>Rating of adult’s nutritional status as normal/well-nourished, moderate malnutrition or severe malnutrition based on practitioner’s clinical judgement</td>
</tr>
<tr>
<td><strong>Language(s):</strong></td>
<td>English</td>
</tr>
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**Subjective Global Assessment – Pediatric**

<table>
<thead>
<tr>
<th>Developer:</th>
<th>Secker DJ, Jeejeebhoy KN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes:</strong></td>
<td>Rating of child’s nutritional status as normal/well-nourished, moderate malnutrition or severe malnutrition based on practitioner’s clinical judgement; age-related questionnaires and rating forms provided</td>
</tr>
<tr>
<td><strong>Language(s):</strong></td>
<td>English</td>
</tr>
</tbody>
</table>

**WHO Anthro Software**

<table>
<thead>
<tr>
<th>Developer:</th>
<th>World Health Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes:</strong></td>
<td>Calculates child z-scores for length/height-for-age, weight-for-age, weight-for-length, weight-for-height, body mass index-for-age, head circumference-for-age, arm circumference-for-age, triceps skinfold-for-age and subscapular skinfold-for-age</td>
</tr>
<tr>
<td><strong>Options:</strong></td>
<td>Free software; also available as macros for R, SAS, S-Plus, SPSS and Stata</td>
</tr>
<tr>
<td><strong>Language(s):</strong></td>
<td>English</td>
</tr>
</tbody>
</table>

**WHO Indicators for assessing vitamin A deficiency and their application in monitoring and evaluating intervention programmes**

<table>
<thead>
<tr>
<th>Developer:</th>
<th>World Health Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes:</strong></td>
<td>Provides principles governing the use of biological indicators for vitamin A deficiency (VAD) surveillance, provides the rationale behind each indicator and its limitations and cut-off points for interpretation in terms of public health significance.</td>
</tr>
<tr>
<td><strong>Language(s):</strong></td>
<td>English</td>
</tr>
</tbody>
</table>

Last revised February 2020. The Food Security Solutions Prioritization Toolkit can be found at www.eatrightFoundation.org/FSSToolkit.
Zinc Status

**Biomarkers of Nutrition for Development (BOND)-Zinc Review**

Developer: Lynch S, et al.

Important Notes: Reviews usefulness of currently used biomarkers of zinc status

Language(s): English

**IZiNCG Technical Briefs**

Developer: International Zinc Nutrition Consultative Group

Outcomes: Advice on assessing and interpreting serum zinc, dietary zinc intake and stunting prevalence

Language(s): English, French, Spanish, Portuguese