**September 2017 Hackathon Data Sets, Links, and Research Studies**

**Definitions of food security, food insecurity, and hunger**

***Food security:*** access by all people at all times to enough food for an active, healthy life.

***Food insecurity:*** limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.

***Hunger:*** the uneasy or painful sensation caused by a lack of food, the recurrent and involuntary lack of access to food. Hunger may produce malnutrition over time. Hunger is a potential though not necessary, consequence of food insecurity.

For more information on definitions:<https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security/>

**Measurement of food security and insecurity**

Food security statistics are based on a 10 to 18 question national food security survey conducted as an annual supplement to the U.S. Census Current Population Survey (10 questions for households with no children, 18 questions for households with children.

In data set folder:

*10 - 18 Question Food Security Screen.docx*

Full 10-18 question Food Security Screen. Also, <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/>

*6 Question Food Security Screen.docx*
Short Form Food Security Screen to assess food security, less respondent burden than full screen, with slightly less precision and reliability. Also, <https://www.ers.usda.gov/media/8282/short2012.pdf>

*2 Question Food Security Screen.docx*
Abridged version to minimize respondent burden, assess risk of household food security specifically among low-income families with young children (though it is widely used for other populations as well). Also, <http://www.centerforhungerfreecommunities.org/sites/default/files/pdfs/2_Item_Screener.pdf>

The United States Department of Agriculture describes ranges of food security below based on the responses to this survey.

***Food Security***

High food security: no reported indications of food access problems or limitations.

Marginal food security: one or two reported indications – typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.

***Food Insecurity***

Low food security: 3+ affirmative responses to questions listed below, i.e. indications of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.

Very low food security: 6+ affirmative responses to questions listed below; i.e. reports of multiple indications of disrupted eating patterns and reduced food intake.

For more information on food insecurity screens:

<https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/>

<https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/>

<http://www.fao.org/fileadmin/user_upload/eufao-fsi4dm/doc-training/hfias.pdf> (alternative screen)

<http://advances.nutrition.org/content/4/5/481.full> (international food security assessments)

**Current Food Insecurity Datasets, in data folder: *Food Insecurity Rates.xlsx (multiple tabs)***

**U.S. and Illinois USDA Food Insecurity Rates**

Rates come from an annual survey using the full food insecurity survey instrument described above.

 *Limitations*

* Only available down to the state level
* 2 year delay, limiting our ability to be responsive and data driven (opportunity for predictive analytics?)
* Income-based measure (all questions approach food insecurity as an ability to afford enough food), potentially missing other dimensions of food insecurity (e.g. inability to access foods appropriate for special diets).

**Feeding America Food Insecurity Rates**

Rates come for a statistical model using same raw data as USDA plus local American Community Survey census data for the purpose of estimating food insecurity at the local level (e.g. community area).

*Limitations*

* Dynamics at the national level are not always mirrored locally (e.g. very low food insecurity rates in majority Hispanic or Latino neighborhoods in FA model).
* 2 year delay, limiting our ability to be responsive and data driven (opportunity for predictive analytics?)
* Income-based measure (see above)
* Cannot compare year-over-year data due to changes in methodology.

**Other key need indicators**

**U.S. Census American Community Survey (ACS) Demographic and Income Data**The U.S. Census ACS is an ongoing survey that provides vital information on a year basis about the population, including about ages, incomes, jobs and occupations, educational attainment, housing, citizenship, insurance coverage, SNAP participation, and much more.

At the sub-county level, the Food Depository uses the 5-year estimates to inform local needs assessments. You can access the huge array of census data tables available at <https://factfinder.census.gov>.

The Food Depository has also created an online interactive map/visualization of many demographic and income census data points, available here: [www.chicagosfoodbank.org/community-data-map](http://www.chicagosfoodbank.org/community-data-map)

Community area level data from the 2011-2015 ACS is available in the dataset folder: *Community Area Level Demographic and Income Data \_ 2015 Census American Community Survey.xlsx*

**Resources on intersection of food insecurity and health in dataset folder**

*GCFD Healthcare Strategy FI Screen\_20170911.pdf*The Food Depository’s Strategy Brief on healthcare partnerships.

*Determinants-health-food-insecurity-role-of-hospitals.pdf*

Description of the impact of food insecurity on health, the role of hospitals in decreasing food insecurity among their patient population, and case studies.

*Food-Banks-as-Partners\_HIPAA\_Feeding-America Harvard Final\_.pdf*

Describes how and why food banks partner in health promotion and what Health Insurance Portability and Accountability Act of 1996 (known as HIPAA) implications must be taken into account.

*Seligman\_Issues\_Brief\_1 24 16.pdf*

Helpful summary article on the intersection of food insecurity and health from a leading researcher on the topic.

Fresh Food By Prescription: This Health Care Firm Is Trimming Costs — And Waistlines:

This article draws the connection between A1C level and costs to treat with and without a food intervention at a hospital in Pennsylvania. <http://www.npr.org/sections/thesalt/2017/05/08/526952657/fresh-food-by-prescription-this-health-care-firm-is-trimming-costs-and-waistline>

**Other helpful links and data sources**

**Cook County Open Data Portal:** although less extensive than the City of Chicago’s data portal linked below, the Cook County portal offers a considerable amount of information on county assets and operations on its website. <https://datacatalog.cookcountyil.gov/>

**Chicago Data Portal** (Chicago only): a wide array of easily downloadable datasets and spatial files on everything from city facilities, to public safety, to housing, to transportation and the environment.

<https://data.cityofchicago.org/>

**Chicago Health Atlas:** View citywide information about health trends and outcomes by Chicago neighborhood or zip code. <http://www.chicagohealthatlas.org>

**Veggie Books Survey findings:** show that the majority of clients participating in several Food Depository distributions have cell phones. In dataset folder: *Veggie Books Phase 1 2 data summary\_091117.docx*

**List of Cook County Community Areas**

The Greater Chicago Food Depository’s service area is Cook County, Illinois. A key sub-county geography we use is the community area, defined as the 77 official Chicago community areas and over 100 suburban municipalities. In data set folder: *List of Cook County Community Areas.xlsx*

**Articles on surveying hard-to-reach populations**

<http://www.psi.org/wp-content/uploads/drupal/sites/default/files/publication_files/Sampling-Hard-To-Reach-Populations-Toolkit.pdf> & <http://journals.sagepub.com/doi/pdf/10.4256/mio.2010.0014>
After defining what a hard-to reach-population is, these articles provides an outline of various approaches to surveying hard-to-reach populations.

<http://www.csun.edu/~hbsoc126/soc4/chapter_8_outline.pdf>
Describes an introduction to types of quantitative sampling.

<https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-14-42>

Concludes that to tackle the challenges of research with socially disadvantaged groups and to increase their representation in health and medical research, researchers and research institutions need to acknowledge extended timeframes, plan for higher resourcing costs and operate via community partnerships.