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| **Interactive Analytics of Food System Metrics for Health Promotion** |
| **Background/Objectives**Food System is described by the American Planning Association as “the interlinked network of processes, actors, resources, and policy and regulatory tools required to produce, process, distribute, access, consume, and dispose of food—and its connection to other urban systems (such as land, housing, transportation, parks and recreation, etc.).” Therefore, the community-based food system is a complex system with metrics in the categories of 7 principles, 12 topics and 25 strategies. In the 2012 American Planning Association report on community-based food system, food access described as “access to safe, nutritious, affordable, culturally appropriate and sustainably grown food” is one of the food system topics obtained from sustainability plans of selected jurisdictions. The diverse and continuously expanding data assets on food system metrics makes it necessary to develop computational resources that support the interaction between food system stakeholders and the complex information for health promotion. **Methods**We are constructing datasets and interactive visualizations to support the performance of complex cognitive activities including planning, decision-making and knowledge discovery for health promotion. With a focus on food access, 16 variables relevant to food access from the United States Department of Agriculture’s Food Access Research Atlas were used to construct a 16-digit binary number for 72,864 census tracts in the United States.**Results**The census tract dataset and interactive visualizations were applied to discover knowledge on the relationships between access to farmers markets and the locale (urban versus rural). A case study of 121 census tracts (81 urban, 40 rural) from a jurisdiction is available as an interactive analytics resource (<http://bit.ly/afoodsys>). Users of the resource can explore data filters (for example, food access pattern and urban status) to answer specific questions about the data. **Discussion**Improving access to farmers markets is a strategy for sustainability of community-based food systems. The datasets and analytics resources could guide research community-based food systems. Our ongoing research involves infusing the food systems principles, topics and strategies into college-level nutrition and public health courses. **Keywords**Data, farmers market, food access, food system, interactive analytics, nutrition, planning, visualization  |