

Background

Food insecurity is a serious and prevalent issue today. It disproportionately affects low socioeconomic status populations which is why it is important to target reaction efforts at improving these communities' access to healthy and affordable food. A program is proposed in tandem with current programs and this program is then broken down into its various components. Cleveland/Cuyahoga County is used as a template so that such interventions can be observed and then subsequently applied to other cities/areas.

Population

The population investigated is low socioeconomic status families, specifically in Cleveland/Cuyahoga County.

Learning Objectives

- Develop materials for locals to learn/get involved in SNAP/WIC food assistance programs
- Understand the various factors contributing to nutritional insecurity across different SES backgrounds
- Identify leverage points and potential interventions to be applied to communities to better their access situations

Activities

- Completed a literature review on and about nutritional access and its association with socioeconomic status
 - This paper includes an in-depth scientific synthesis and collection of reliable resources.
 - Also, areas of potential interventions are included
 - A system dynamics approach was taken and explained as well
- Along with this, products for locals in these low SES communities to have more information/knowledge of current food assistance programs were created

Deliverables

- **Full paper** including literature review, goals for the betterment of the communities, system dynamics review, and intervention proposals
- **Flyer** for distribution in Cleveland/Cuyahoga County areas providing information on food assistance

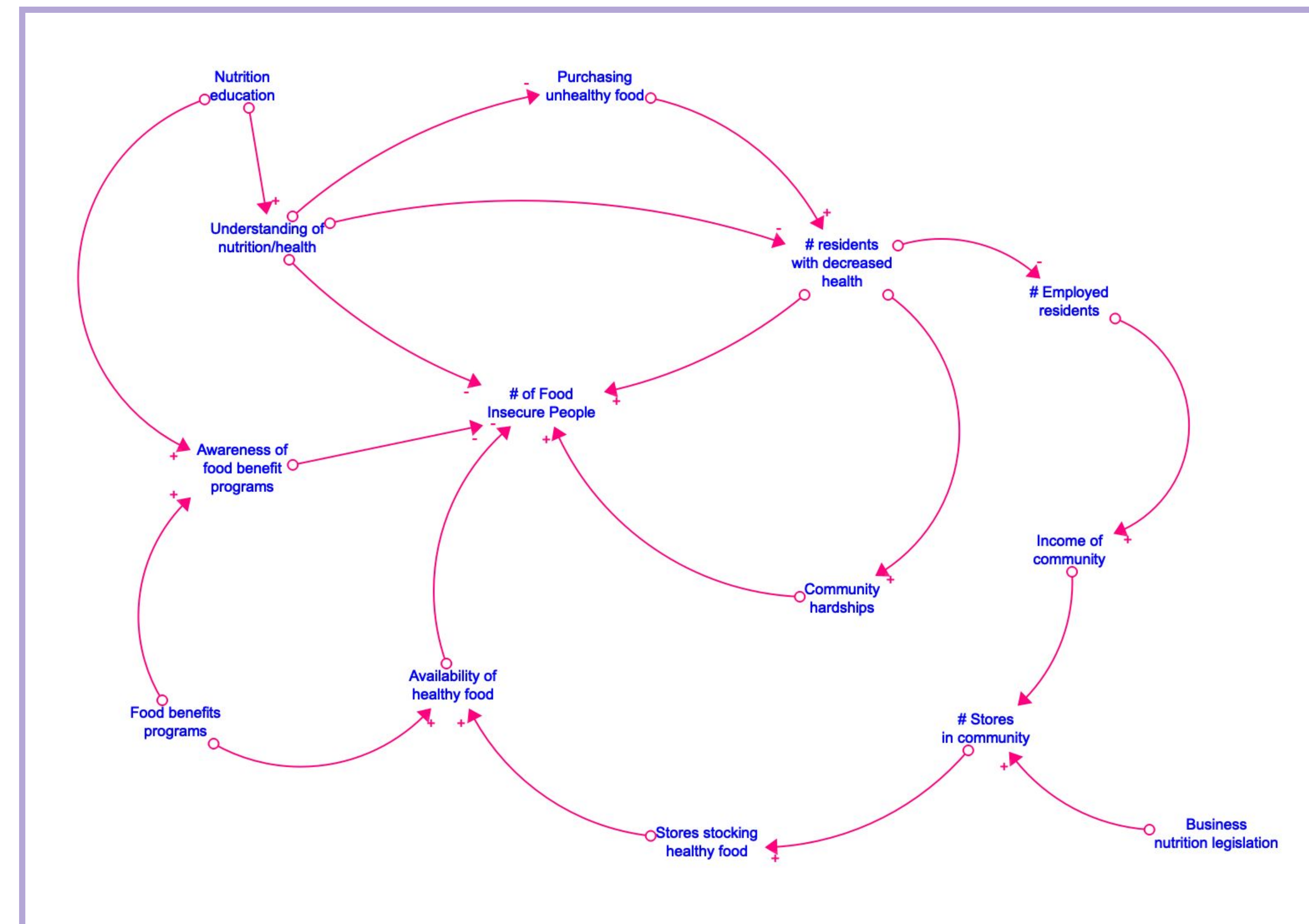


Figure 1: Low-level causal loop diagram describing the factors present in the current food insecurity system along with proposed interventions and their effects.

Methods and Results

- Over 160,000, or 12.8% of, residents from Cuyahoga County were food insecure in 2021 (Feeding America)
- Despite being home to a thriving economy, many individuals and families in Cleveland struggle to access enough nutritious food to meet their basic needs (Greater Cleveland Food)
- Low SES neighborhoods have a decreased likelihood of having access to nutritious foods (Hilmers et al., 2012)
- Low income is associated with a poor quality diet (Hilmers et al., 2012)
- Relative to those who earn higher incomes, low income individuals eat a significantly decreased quantity of fruits and vegetables and have lower overall diet quality (French et al., 2019).
- Food deserts exist in every state. 23 million people inhabited food desert communities in 2012. Approximately 13.5 million were food insecure in 2021 (USDA ERS, 2012; 2021).
- Access to healthy foods is directly associated with overall population health (Powell et al., 2007)
- Access to healthy foods is directly associated with demographic disparities (Dutko et al., 2012).
- Low-income/high-minority communities have a significantly increased prevalence of convenience stores with highly processed/calorically-dense foods with very little fresh produce available relative to high-income/low-minority communities (Ohri-Vachaspati 2019)

Goals/Interventions

- **Individual level**
Increase the purchasing power of residents for healthy foods with food benefit programs
- **Interpersonal level**
Promote healthy eating and positive food discussion among community members
- **Community level**
Facilitate policy changes that address systemic issues such as food access and availability

Lessons Learned

Through the course of this project and work, the extent of nutritional inaccess became increasingly clear. Also, the importance of a focus on removing barriers to access was highlighted throughout the literature. Disparities are pervasive across this already vulnerable population and nutritional access serves as a strong determinant of a community's health status. It is important that interventions are aimed at decreasing the barriers that exist and that they are equitably offered.

Public Health Implications

The project took a specific aim at observing the issue as it stands and offering meaningful recommendations and goals for the community. A program is described in detail in the paper which could be applied to most areas to significantly improve the state of food access and food insecurity. Such strides would go on to affect individuals' health considerably.