A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

# Food Access Challenges and Health Outcomes

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# Core Objectives and Data Overview

## Key Points:

- **Objective:** To identify regions most in need of food access programs and analyze the health impacts of poor food access.
- **Data Sources:**
  1. *CDC 500 Cities Project:* Local-level health data.
  2. *FDA Food Atlas:* Food access metrics.
- **Guiding Questions:**
  1. Where should we deploy a food access program?
  2. How many people will be included?
  3. Which subgroup might benefit most?
  4. What is the projected impact?

# Findings and Insights

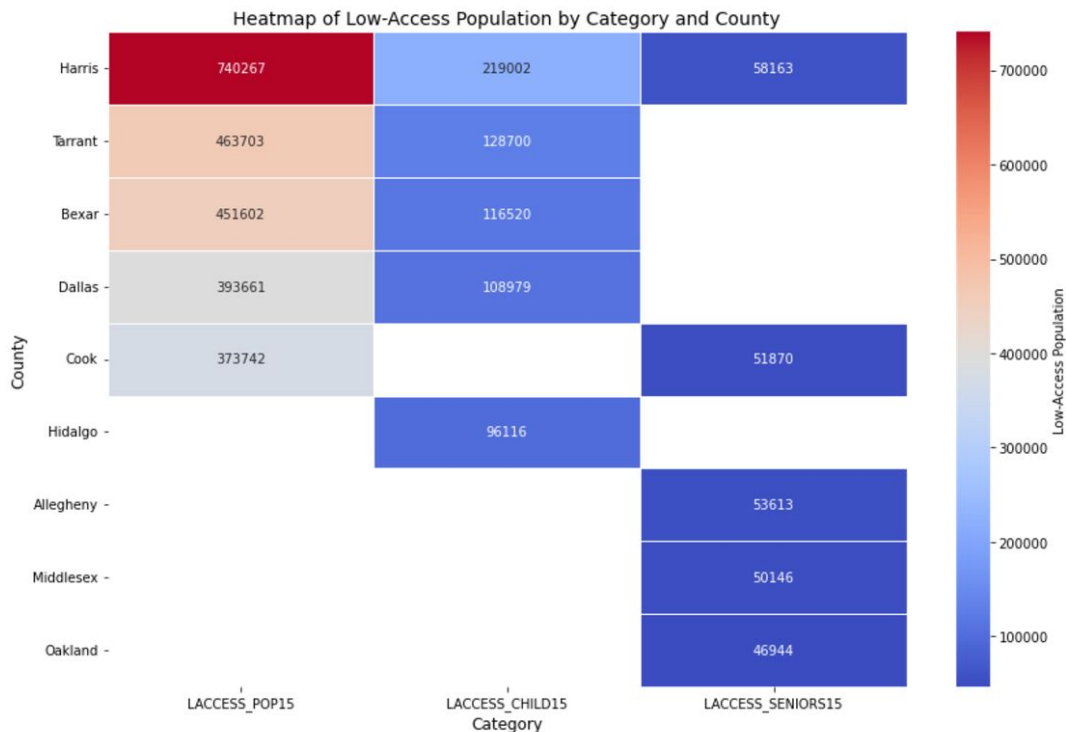
## Key Points:

**Top Region:** Harris County, TX, ranks highest for overall low access to food for the general population, children, and seniors.

- **Why consider children and Seniors?**

1) Strong correlation between children with low access to food and entire counties with poor food access

2) Medicare Advantage Plan clients are primarily seniors, and we want to improve their health outcomes and food access.





## Affected Populations and Subgroups

### Key Points:

- **Deployment Region:** Harris County, Texas.
- **Target Demographic:** Seniors (primary) and children (secondary), with an emphasis on counties with a large total population facing food access issues.
- **Projected Inclusion:** 30,000 seniors in Harris County, TX.

Why 30,000?

- Of the ~800,000 people with poor food access in Harris County, roughly 60,000 are Seniors.
- Seniors are the target demographic of the Medicare Advantage plan

With no current data to measure adherence rates/interest in a Food Access program, I conservatively estimate to include half of this subset of the population.

- Why?
  - Some seniors may not be interested in Food Access programs
  - Unaware of the program
  - No household access to a motor vehicle

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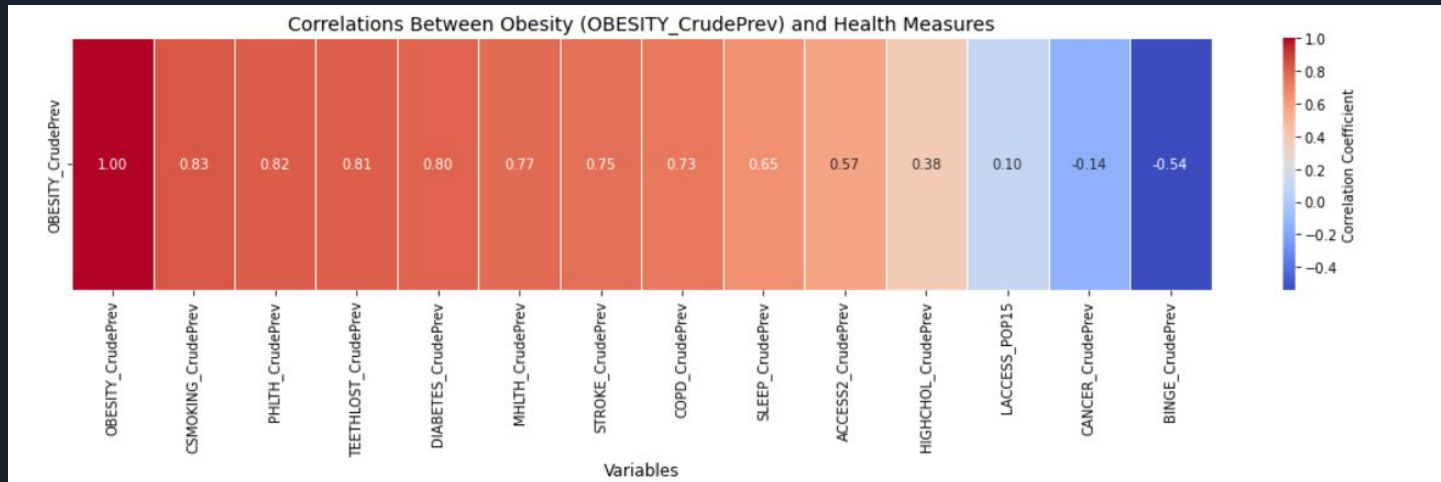
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# Projected Impact

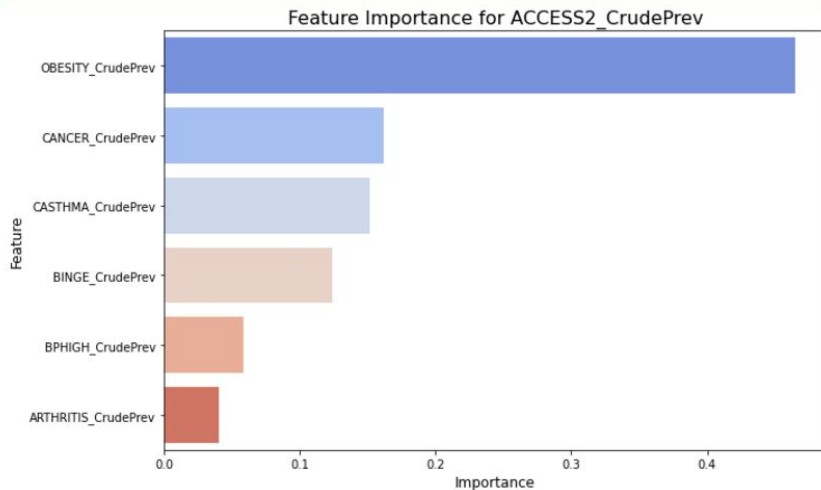
## Key Points:

1. **Projected Impact:** Reduction in obesity rates as a marker of improved health outcomes.
  - Strong correlations with lower diabetes, high blood pressure, and smoking rates.



# What Factors are Linked to Food Access?

I ran a feature selection model to identify the independent variables that are most closely linked with “ACCESS2\_CrudePrev”, which is defined as the portion of the County with poor access to food.



- Seeing as Obesity is heavily linked to other health outcomes such as diabetes, high blood pressure, etc. and Obesity is also heavily linked to poor food access, the projected impact of a food access program delivered in Harris, TX is an overall improvement in health, marked by reductions in measures such as obesity, blood pressure, cancer, and various other metrics.



# Conclusion

Target Population: Harris County, Texas.

**Why?** → Highest number seniors and children with low food access, as well as highest overall population with low food access

Affected people: Aim for 30,000 individuals

- **Why?** → 58,000 seniors in Harris, TX. More may want/need food access assistance, but not all will be aware of a program immediately upon implementation. Not all have cars. No historical data to suggest higher adherence rates, so ~50% is an initial estimate

Subgroup with greatest benefits: Seniors

- **Why?** → Medicare Advantage Plan clients are overwhelmingly seniors. Children are expected to benefit as well, simply due to their high prevalence in counties with poor food access.

Projected Impact: Reduction in Obesity in Harris County

- **Why?** → Obesity was the single variable most strongly correlated to food access, and other metrics such as hypertension, high cholesterol, cancer, etc. are also strongly linked with Obesity. Focusing on reducing Obesity is thought to yield the maximum positive benefit to the community's overall health.