

Investigating the Relationship Between Food Insecurity and Chronic Medical Conditions at an FQHC



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Background

- Food insecurity is “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”¹
- Food insecurity is associated with disproportionately high rates of chronic disease as well as adverse health outcomes.²
- Lower income is associated with food insecurity.⁵
- Food insecurity is associated with the consumption of ultra-processed foods.⁵
- The prevalence of food insecurity in Rhode Island is 29%.⁷



73% of food insecure patients at PCHC are at medium-high risk for financial strain

Objective

Assess the relationship between food insecurity and chronic medical conditions known to have a dietary component (diabetes, obesity, hypertension, and hyperlipidemia) in patients at a federally qualified health center.

Methods

Design: A mixed-methods study with literature review and quantitative analysis.
Setting: Providence Community Health Centers (PCHC).
Participants: All patients 18 years of age and older who were seen at PCHC between October 6, 2023 and February 5, 2024 and had a screening for social determinants of health.
Instrument: Data from standardized SDOH screening tools analyzed using Excel.

Results

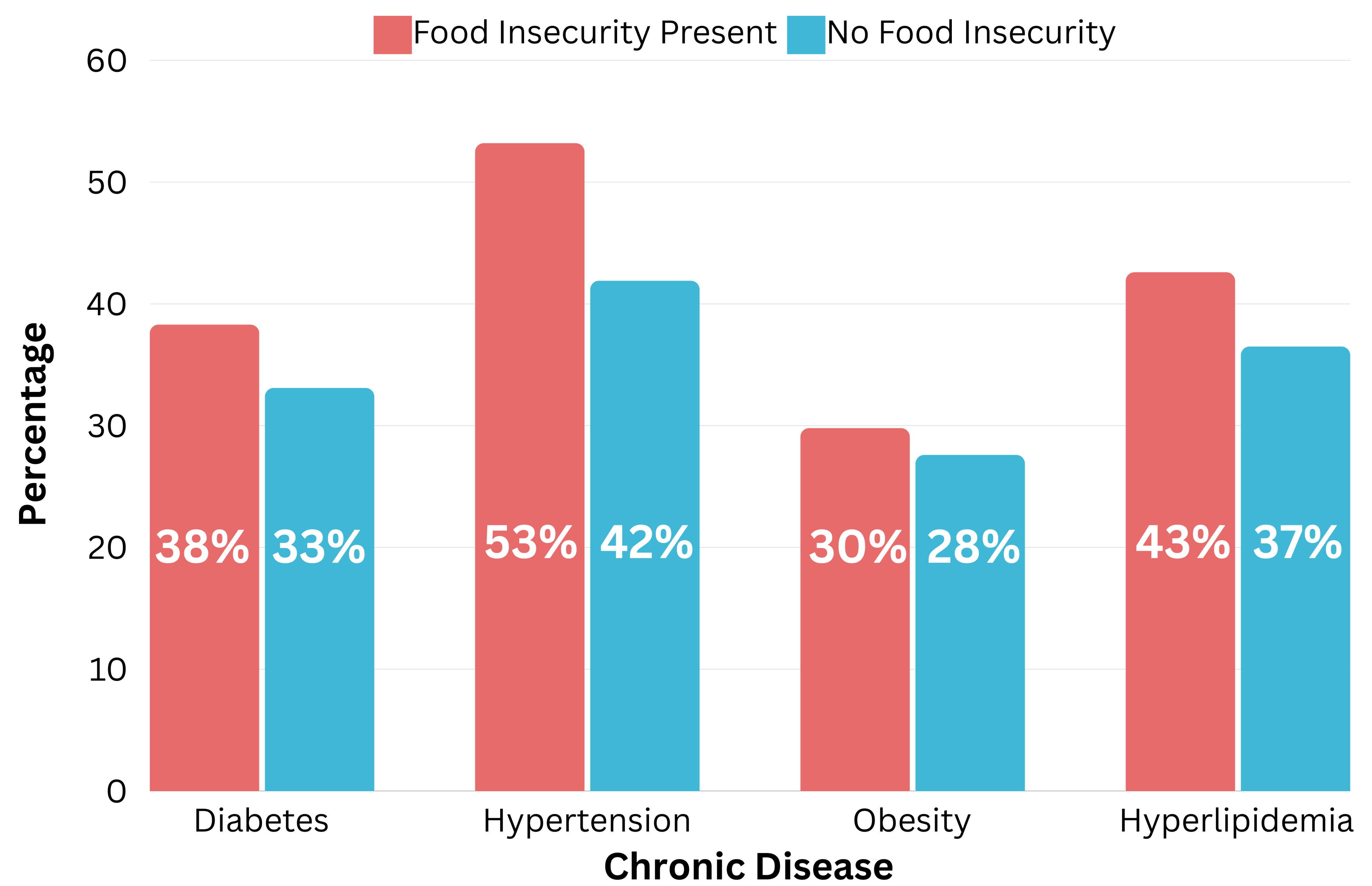


Figure 1. Chronic disease rates in food-insecure patients compared to non-food-insecure patients.

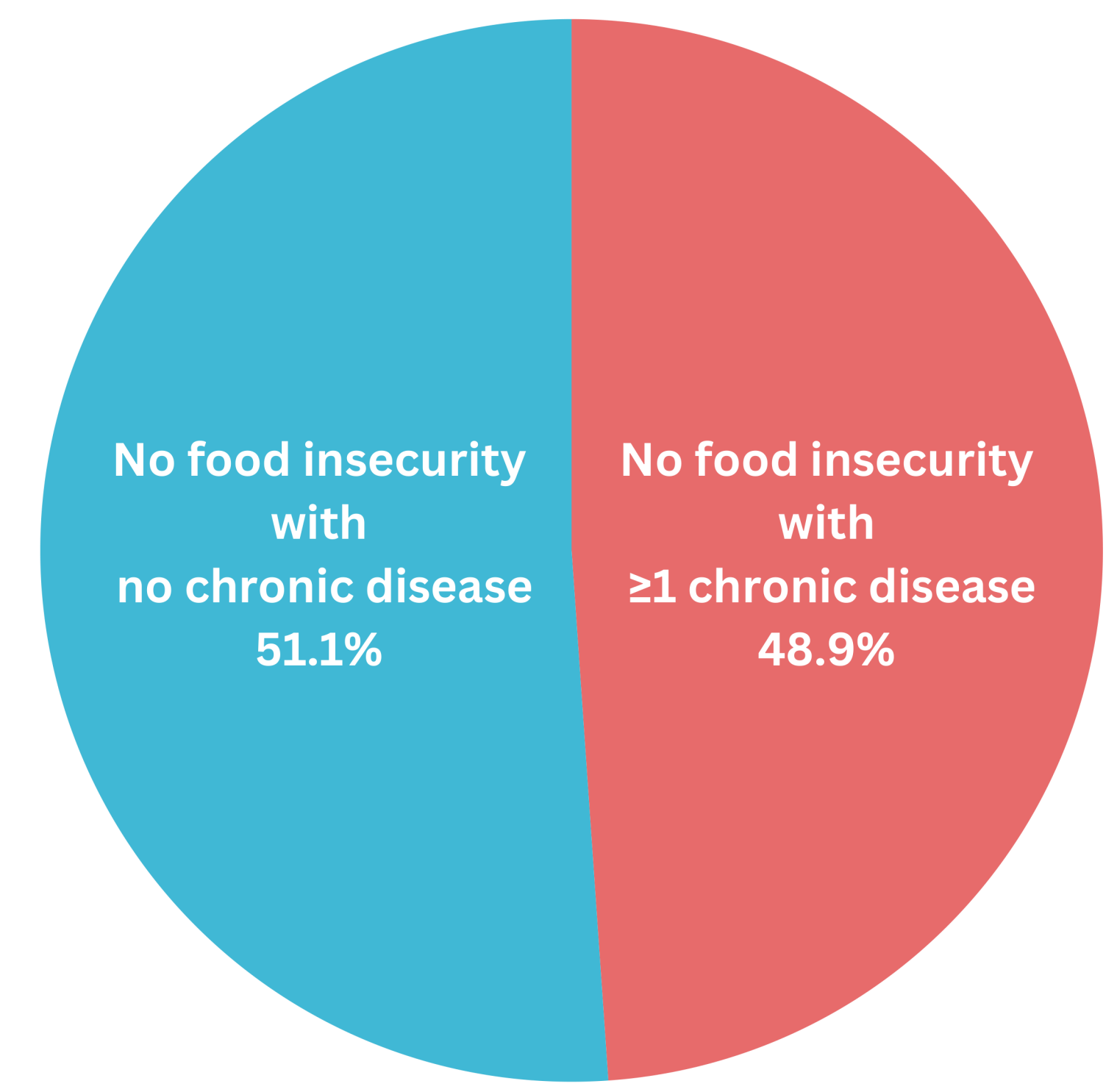


Figure 2. Percentage of non-food-insecure patients with at least one chronic disease vs. no chronic disease

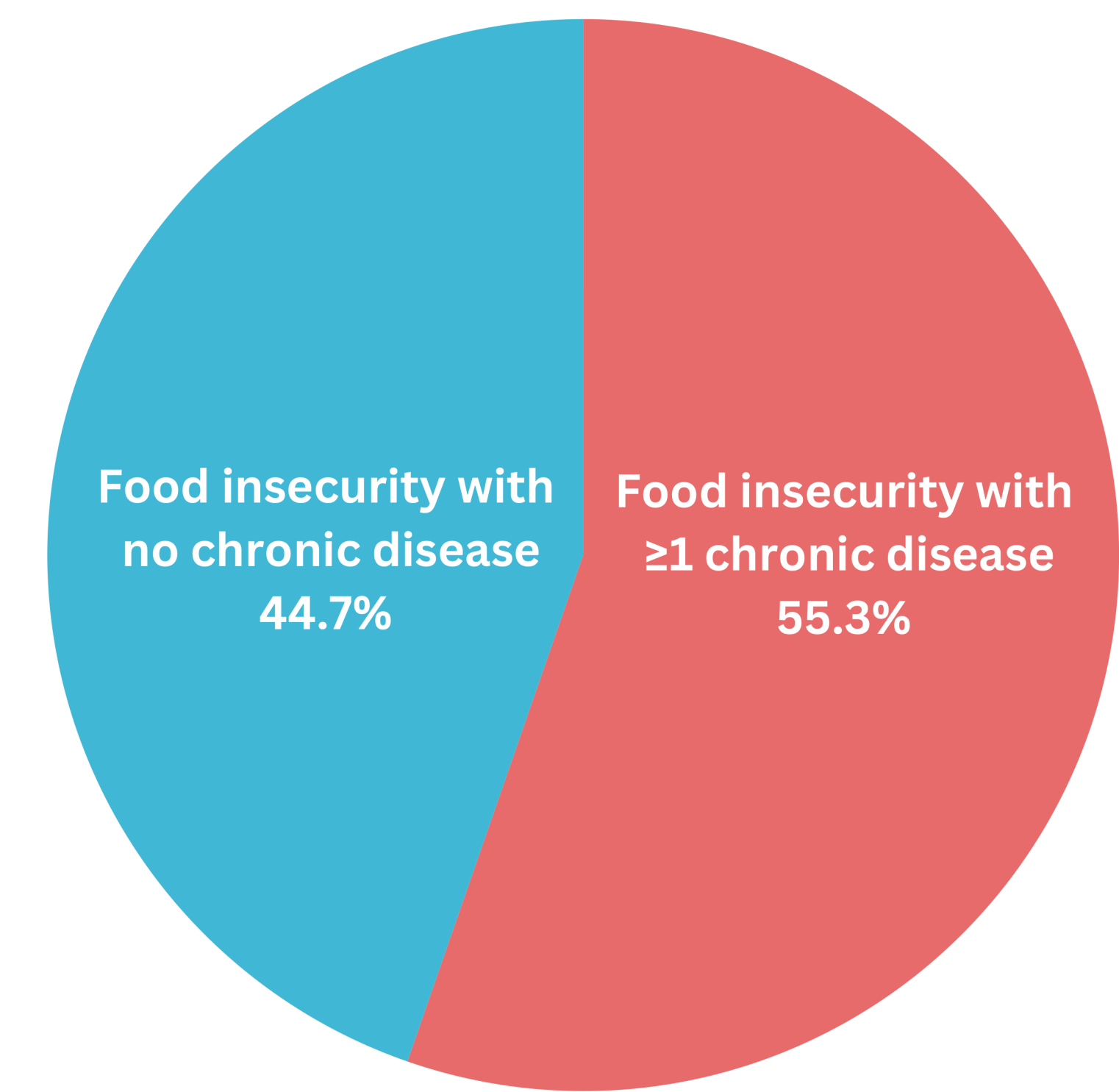


Figure 3. Percentage of food-insecure with at least one chronic disease vs. with no chronic disease.

Additional Results

- A total of 1074 patients met the inclusion criteria. Of these, 47 patients (4.6%) screened positive for food insecurity.
- Overall, 55.3% (26/47) of food-insecure patients had at least one chronic disease in comparison to 48.9% (501/1027) of non-food-insecure patients.

Conclusion/Discussion

- PCHC patients experiencing food insecurity are more likely to have at least one type of the chronic diseases investigated in comparison to patients not experiencing food insecurity.
- It is important to screen all patients for food insecurity, which is done at PCHC.
- Those who screen positive are referred to community health workers who then connect patients to resources.
- Some programs aim to address food insecurity with promising results. These programs are associated with a reduction in the cost of healthcare⁸. Community Servings (CS) is one such program that utilizes partnerships to provide medically tailored meals. A 2019 study⁹ and a 2024 study¹⁰ found that CS was able to decrease food insecurity in patients with diabetes.
- **Limitations:** The relatively low prevalence of food insecurity in this sample compared to recent estimates for Rhode Island suggests that there are patients who have not been screened or who have food insecurity but are not being captured by the screening questions. This may be the result of the recent migration of the electronic health records to a different vendor.
- These results should be verified with a more recent sample with further analysis if food insecurity rates remain low.

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References

