Dietary Sodium Intake: Perceptions of an Urban Heart Failure Population
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Learning Objectives
1. To assess the prevalence of knowledge regarding sodium-restricted diets in patients with heart failure.
2. To assess heart failure patient ability to accurately classify food as containing high-, moderate-, or low-sodium.

Introduction
Dietary sodium restriction is a mainstay of disease management and self-care in heart failure (HF). Heart failure education programs that include recommendations on limiting sodium intake are fairly variable across centers and populations. A clear failure in knowledge and understanding regarding recommendations on sodium intake and knowledge of sodium content in commonly consumed food items. This pilot study was designed to assess the knowledge pertaining to sodium-restricted diets in underserved, at-risk patients with chronic, stable HF at an urban, academic center.

Methods
Adult English-speaking patients with either stable, chronic HF reduced ejection fraction (HFREF) or HF preserved ejection fraction (HFPEF) were included. Baseline characteristics such as demographics, knowledge of HF, self-care including understanding of sodium intake, and related health implications were collected. Subsequently, a pictorial survey was administered that asked participants to categorize food items into high-, medium- or low-sodium based on the FDA-recommended daily sodium intake of 2.4 grams. Unordered Pearson chi-square tests were performed for differences between each group.

Methods- Pictorial Survey Example

Results
A total of 24 participants (mean age 57.3, 58.3% male, 75% HFREF) participated in the survey. Seventy-five percent of participants had a high-school or equivalent level education and 25% had an advanced degree. Participants were able to accurately categorize foods into high-, moderate-, or low-sodium categories 74%, 36% and 63% of the time, respectively (respective 95% confidence intervals 0.69-0.79, 0.29-0.43, 0.56-0.63). These percentages differed significantly from each other (p<0.0001 high vs moderate, p<0.004 high vs low, p<0.001 moderate vs low).

![Comparison of Correct Categorization of Food by Sodium Content](image)

Figure 1: Comparative difference in correct categorization of foods as high-, moderate-, or low-sodium content

Conclusion
Despite intensive HF education, understanding of dietary sodium intake is inadequate among HF patients. Patients were not able to accurately identify sodium content in appropriate categories and were most deficient in recognizing foods that contained moderate amounts of sodium. Further research is needed to understand barriers of dietary education and their effect on outcomes.

References
2. Pan-American Health Organization Questionnaire on Knowledge, Attitudes, Behavior toward Dietary Salt and Health