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The Dietary Quality of Persons with Heart Failure in NHANES 1999-2006

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The Dietary Quality of Persons with Heart Failure in NHANES 1999-2006

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**Objective**

To describe the dietary quality and achievement of recommended dietary goals and assess correlates of goal achievement in a national sample of persons with heart failure.

**Rationale**

- Heart failure is associated with considerable morbidity and mortality.
- American College of Cardiology/American Heart Association (ACC/AHA) guidelines recommend the following dietary guidelines for persons with non-end-stage heart failure:
  - Restricted sodium intake
  - Adherence to dietary guidelines for underlying and comorbid conditions, including coronary heart disease, hypertension, hypercholesterolemia, and diabetes.

However, there is little understanding of the current dietary quality of persons with heart failure.

**Methods**

**Data Source**

- NHANES is a series of cross-sectional studies conducted by the CDC to provide health information representative of the civilian population.
- Uses multistage, stratified sampling design to ensure adequate population representation.

**Target Population**

- Adults 50 years and over.
- Self-reported ever being diagnosed with heart failure by a health care provider.
- Included 524 persons (6.5% of persons age 50+)

**Dietary Assessments**

- Single 24 hour recall administered at mobile exam center.
- Used Food Intake Analysis System (FIAS).

**Goals defined using:**

- ACC/AHA heart failure guidelines.
- AHA dietary guidelines for CVD.
- Dietary guidelines for Americans.

**Covariates**

- Demographic factors: Age, gender, race/ethnicity, education income level.
- Risk factors: Body mass index (BMI), smoking status.
- Medical conditions: Provider diagnosis of coronary heart disease, hypertension, hypercholesterolemia, and diabetes, years since HF diagnosis.

**Statistical Analysis**

- Weighted to general U.S. population age 50+ with heart failure.
- Descriptive statistics of population and dietary components.
- Principal component analysis using orthomax rotation to describe patterns of dietary goal adherence.
- Multivariate Poisson regression model to determine association of covariates with number of dietary goals achieved.

**Implications and Limitations**

- Study limitations include self-reported heart failure diagnosis and diet and cross-sectional design.
- Dietary quality of persons with heart failure is poor, with persons of lower education, overweight and obese persons and smokers at greatest risk.
- Poor diet places persons with heart failure at risk for greater symptoms, poorer quality of life, worsening comorbidities and greater mortality rates.
- Behavioral scientists and clinicians are challenged to develop appropriate dietary interventions targeted for this population.