

Project Description:

1. Dietary sugar intake: assessment and intervention for metabolic syndrome in primary care

2. Dietary sugar is clearly linked with every aspect of metabolic syndrome (obesity, hypertension, hypercholesterolemia, type 2 diabetes, and others). It has been shown to be causative in obesity, coronary artery disease, and diabetes. 50% of Americans consume 4-fold the maximum sugar intake recommended by the American Heart Association. The World Health Organization (WHO), American Academy of Pediatrics (AAP), and others have set similar limits. Some estimate that sugar related diseases could account for as much as 75% of current US medical expenditures.

There is currently **no standardized method of measuring a patient's sugar intake** in a primary care setting in the way that alcohol or smoking is. There is also **no standardized method of intervening** through education for patients who overconsume sugar. We hope to find a simple, fast, and effective way to measure sugar intake and behaviors related to sugar consumption in the outpatient setting and intervene with a simple and brief educational piece. Impacts of the education will be measured and evaluated using biometric data and labwork which is already on the patient's medical record with the patient's consent.

3. Development and implementation of a standardized, office friendly sugar intake instrument has yet to be developed. The impact of motivational interviewing on lowering sugar intake and its impact on various aspects of Metabolic Syndrome has not been studied. Metabolic syndrome involves: Hypertension, Diabetes II, Obesity, Hypercholesterolemia, metabolically associated steatohepatitis (MASH), and some would say polycystic ovarian syndrome and obstructive sleep apnea.

4. What is the direct effect of lowering sugar intake on metabolic syndrome-associated metrics? Weight, BMI, SBP, DBP, fasting glucose, Hgb A1c, ALT, cholesterol, LDL, HDL, Triglycerides will be analyzed vs. change in sugar intake for each patient and results compared.

5. Students doing the intake will assess sugar intake over a 12-month period with 16, 15-minute meetings with multiple patients.

6. Labwork and metrics as per (4.) will be gathered on EPIC and analyzed. These correlations of delta sugar intake and delta metrics will be compared and associations analyzed

7. The fellow will contribute great value by gathering and helping to analyze the data.

Student Fellow Training / Mentoring Plan:

1. The fellow will participate in organizational meetings of the students and help coordinate interactions with the site (Boardman Family Medicine and Dr. Thomas Macabobby) The fellow will be actively involved in data analysis with statistical help from NEOMED
2. There will be statistical help from Dr. Phil Turk, and interaction with the student leadership (Burkhanova, Stalnaker, and Snowden) as well as Dr. Macabobby
3. The actual data collection will occur virtually by video or phone, and the patient recruitment will occur at Boardman.