A Randomized Trial of Social and Financial Incentives to Increase Physical Activity Among Overweight and Obese Veterans

NCT# 03563027

April 17, 2020

<p style="text-align: center;"><u>**Analysis Implementation Plan – VA Study Trial**</u></p>

1. **Data Checks**
   a. For each variable (outcome and characteristics/predictor) calculate the following percentiles: 1, 5, 10, 25, 50, 75, 90, 95, 99
2. **Missing Data**
   a. For outcome variables (Daily Steps) identify missing values at weeks 1-12, 1-4, 5-12, and 13-20
   b. For Steps separately list values that are missing from values that are <1000
3. **Participant characteristics**
   a. Create Table 1
   b. Estimate baseline measures
4. **Imputation plan**
   a. Change in mean daily steps
      i. Model driven approach to run 5 imputations for any missing values or values < 1000 steps
      ii. Covariates include: study arm, week of study, calendar month, baseline step count, age, gender, race/ethnicity, education, marital status, annual household income, military service period, and BMI
5. **Unadjusted: Estimate Mean and SD for outcome measures (using imputed data)**
   a. Daily steps during baseline, weeks 5-12, weeks 13-20 and weeks 1-20
      i. Graph monthly trends
   b. Proportion of days achieving step goal during 5-12 weeks and weeks 13-20
6. **Adjusted changes in outcome measures (imputed model is primary; non-imputed is secondary)**
   a. Use generalized linear mixed models (GLIMMIX) with identity link for mean change in daily steps during weeks 5-12 and weeks 13-20.
      i. Adjusted for baseline steps, calendar month, study arm, participant random effect
   b. Use generalized linear mixed models (GLIMMIX) with logit link (logistic model) for proportion of days achieving step goal during weeks 5-12 and weeks 13-20
      i. Adjusted for baseline steps, calendar month, study arm, participant random effect
      ii. Use 1000 bootstrapped samples to find adjusted changes in percentage points with 95% confidence intervals for proportion of days achieving step goals
7. **Survey Measures**
   a. Tech access and use, IPAQ, follow-up survey