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Study: PD and cognitive function

Topic: Statistical Analysis Plan

Do baseline function tests predict PD and cognitive decline?

For example, evaluate ability to perform average daily activities to see if it is related to the outcomes. Is motor decline predictive of PD. Maybe they cannot perform an activity because the patient is shaking.

Study details:

Previously a cross-sectional study was done. And now we have longitudinal data

* ~4 years of data
  + Check number of visits per person
  + Are there at least 2 per person
  + Currently we have n~64
    - Hoping for 80 around February 2021

Data collected:

* Patient characteristics
  + Age, sex, education, employment, disease duration
* Predictor of interest
  + Motor function score
* Cognitive tests
  + UPSA
    - Total score 0-100
      * 5 domains 🡪 0-20 points/domain
        + Financial
        + Communication
        + Comprehension & planning
        + Transportation
        + Household –managing the household
    - Difficult test
      * Example have patient read and work with bus map and times
  + Neuropsychologic measure
    - 1 score 🡪 from 10 questions?
      * Score is a z-score
      * Maybe use a cut-point to create a binary variable
    - Global cognition
      * Memory
      * Attention
      * Language
      * Executive
        + Focus for PD
      * Visual
        + Also a focus for PD
    - Simple because it does not separate into domains

Possible Hypotheses (confirm with Samantha):

* Does UPSA predict neuropsych
* Is the UPSA more sensitive
* ?

To Do:

* Descriptive stats of variables to check if clean dataset
  + And check if continuous patient characteristics should be reported as parametric or non-parametric
* Create a Table 1: Patient Characteristics
  + Include age, sex, education, employment status, disease duration, UPDRS111 (variable name: UPDRS\_TOT - motor score)
  + Kaitlin, Are there any other variables that might be helpful?
* Check outcome data
  + Provide descriptive statistics and/or figures as appropriate
  + How many visit we have per person