

Information on Groups:

Group 1 and Group 2 represent two randomized stratified sampling groups, weighted to selected more people with the following risk factors: slightly less educated, slightly older, and African American. This was to make sure we got enough major decliners in our sample.

We decided not to go with the original proposed plan of 250 maintainers, 500 minor decliners, and 250 major decliners because conditioning on the outcome would have made us more restricted in analyses.

Methods:

Three cognitive groups were identified using mixed models with random intercepts and slopes over time of 3MS scores measured in years 1, 3, 5 and 8 among those with 3MS scores of at least 80 in year 1. Maintainers were defined as having no change or positive slopes over time, minor decliners declined less than the mean-1SD of all predicted change scores, and major decliners declined more than the mean-1SD of change scores. 2509 were classified into one of the 3 cognitive groups.

The 2509 individuals classified as maintainers, minor decliners, or major decliners were then stratified according to how many of the following year 1 demographic risk factors they met: age ≥ 75 years, less than a high school education, and Black. Two groups were identified: group 1 containing those with 0 or 1 demographic risk factor, group 2 containing 2 or more risk factors. 1000 of the 2509 were then randomly sampled 6 times, and the distribution of the 3 cognitive groups for the 1000 sampled was checked at each step. In the first sampling step we selected 750 of group 1 and 250 of group 2, decreasing/increasing the group size by 50 until reaching 500 in each group for the final step (group 2 could not be increased by another 50 because there were less than 550 available to sample from). The sampling of 500 from each risk group resulted in the cognitive group distribution that was closest to our desired goal, with 226 maintainers, 537 minor decliners, and 237 major decliners.

Assays were performed by R&D Systems' Analytical Testing Service, using their own commercial kit employing an enzyme-linked immunosorbent assay method. The detection limit for this assay is 1250pg/mL. The mean inter-assay coefficient of variation is 9.2%. And the mean coefficient of variation within assay is 6.5%.