# Impact of Rater Change on Data Variability in ADAS-Cog and CDR Assessments



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### BACKGROUND

The past decade has seen numerous research trial failures in Alzheimer's Disease1. The CDR and ADAS-Cog are the two most frequently used primary outcome measures of memory and cognition in clinical trials of Alzheimer's Disease (AD)2,3. Given the high number of failed AD trials in recent years, data reliability of these measures is paramount. In an effort to minimize data variability and increase data quality, study designs often require the same rater assesses the subject/caregiver at each study visit4. However, the impact of rater change on data reliability of these measures is largely unknown. This analysis investigates the impact of rater change on data variability in these measures.

#### **METHODS**

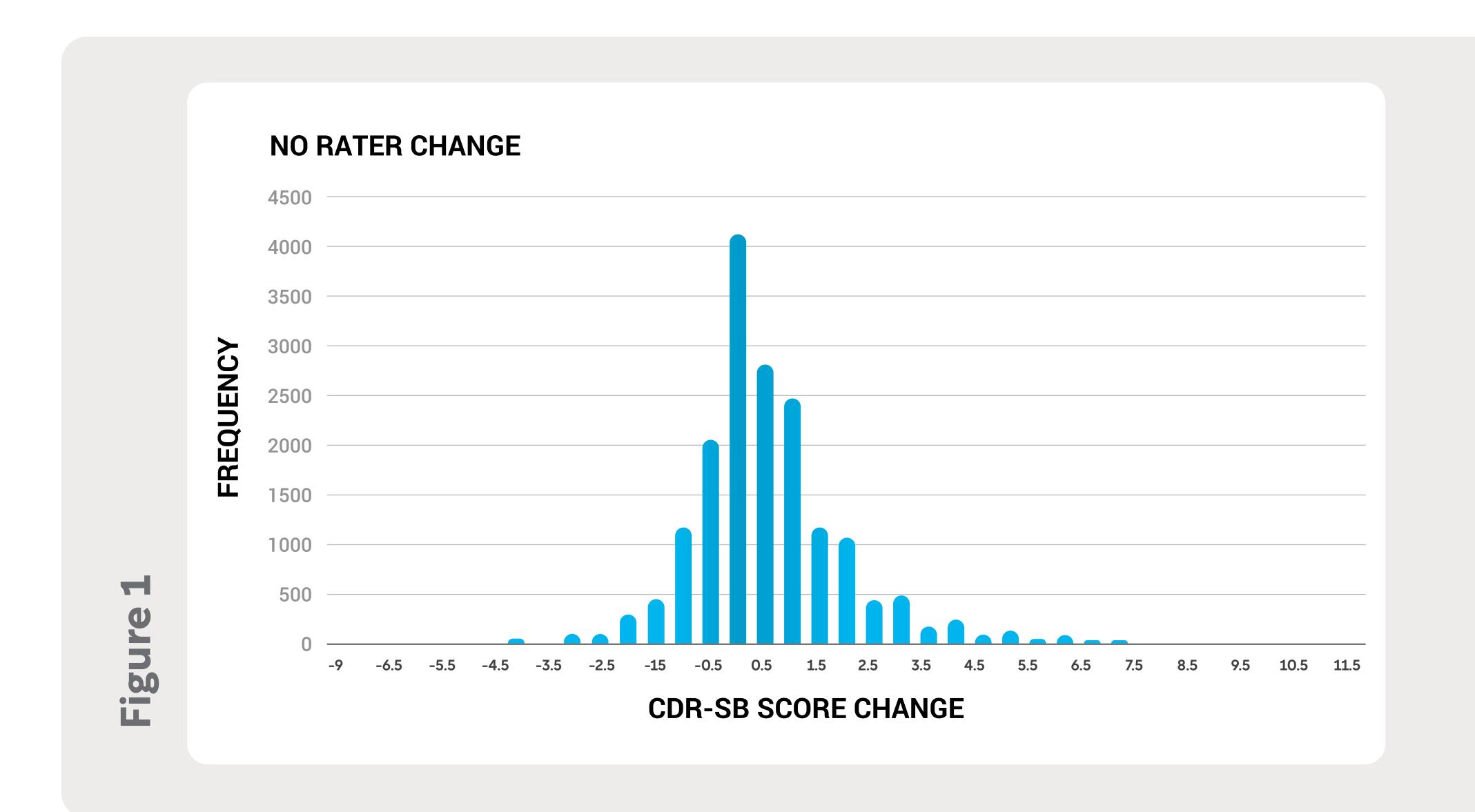
Data from 13 multinational clinical trials of early symptomatic and mild to moderate AD were analyzed. ADAS-Cog and CDR assessments conducted by site raters were arranged according to visit sequence and divided into two groups: Rater Change (different raters administered subject's consecutive visits) and No Rater Change (same rater administered consecutive visits). Visit-to-visit absolute score changes for CDR-SB and ADAS-Cog Total Score were calculated, and frequency distributions were evaluated.

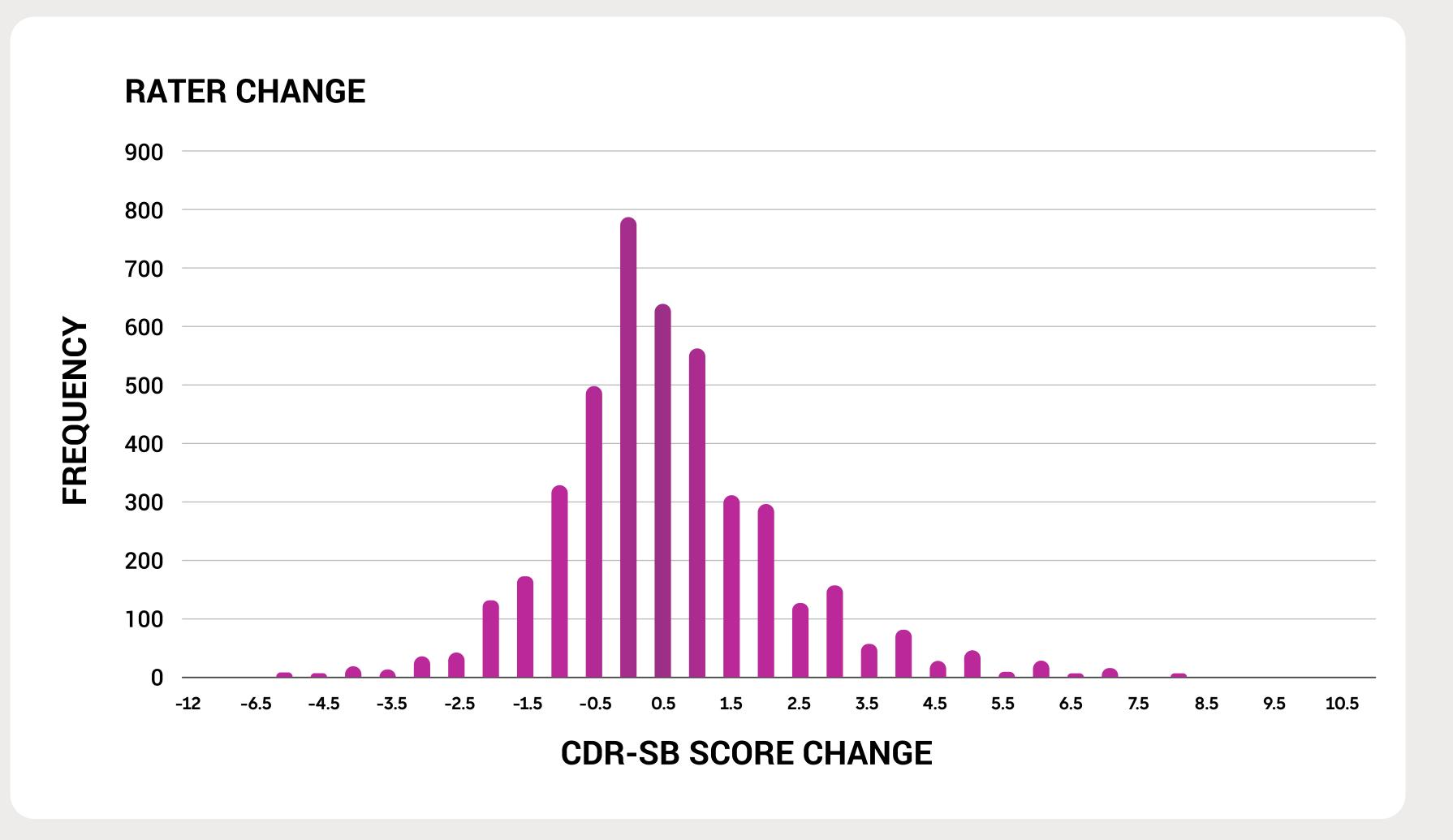
#### **RESULTS**

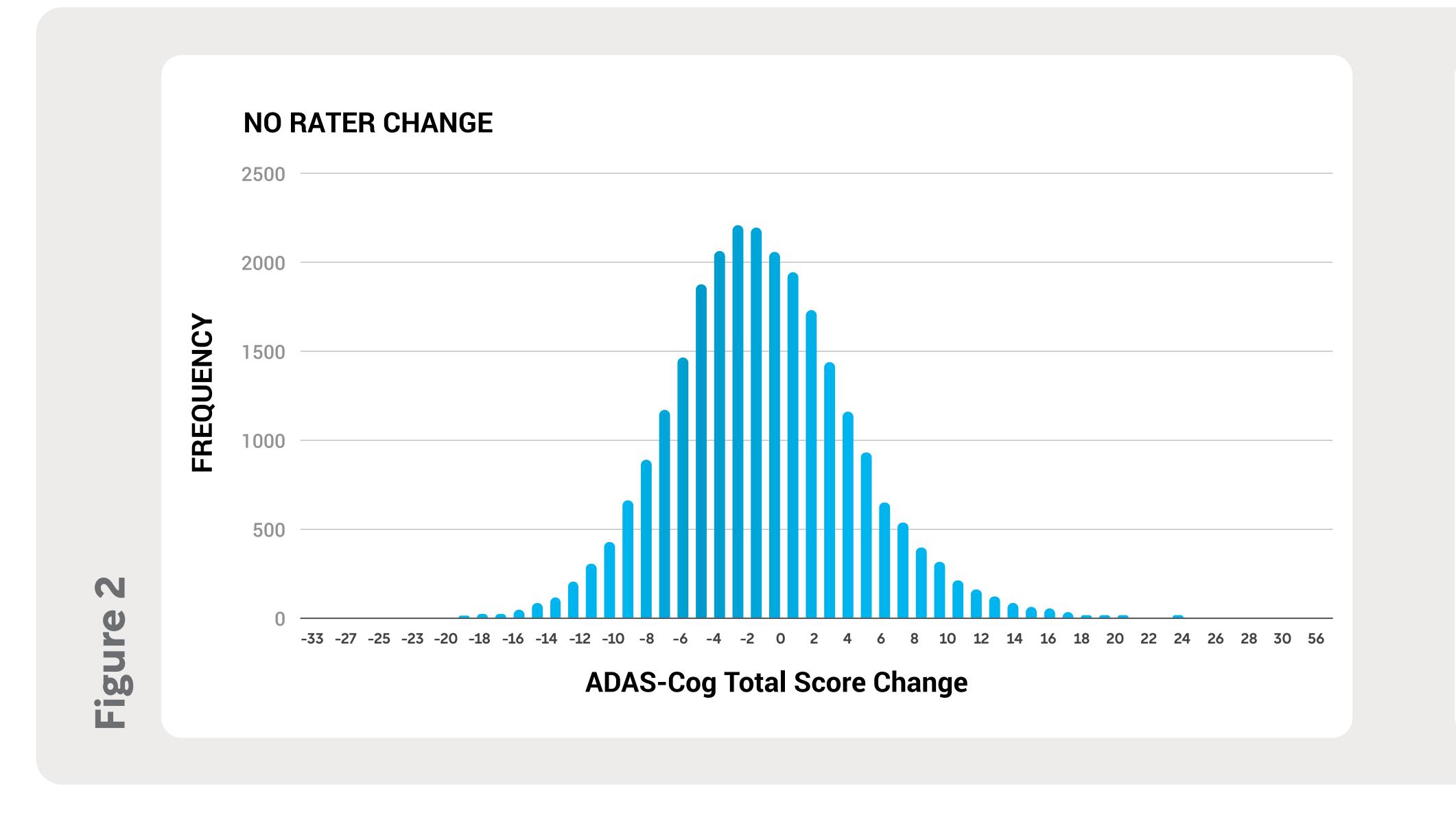
Welch corrected, two sample t-tests were conducted to compare score changes between rater change groups. For CDR, the Rater Change group showed a higher mean visit-to-visit score change (mean = 1.26, SD = 1.32) compared to the No Rater Change (mean = 1.02, SD = 1.13) group (Figure 1). The Rater Change group also showed a higher mean score change on ADAS-Cog (mean = 4.44, SD: 3.77 and mean = 4.06, SD = 3.50, for Rater Change and No Rater Change Groups, respectively) (Figure 2). These group differences reached significance for both ADAS-Cog (t = -7.2925, df = 9769.1, p < .001) and CDR (t = -11.228, df = 6122.7, p < .001).

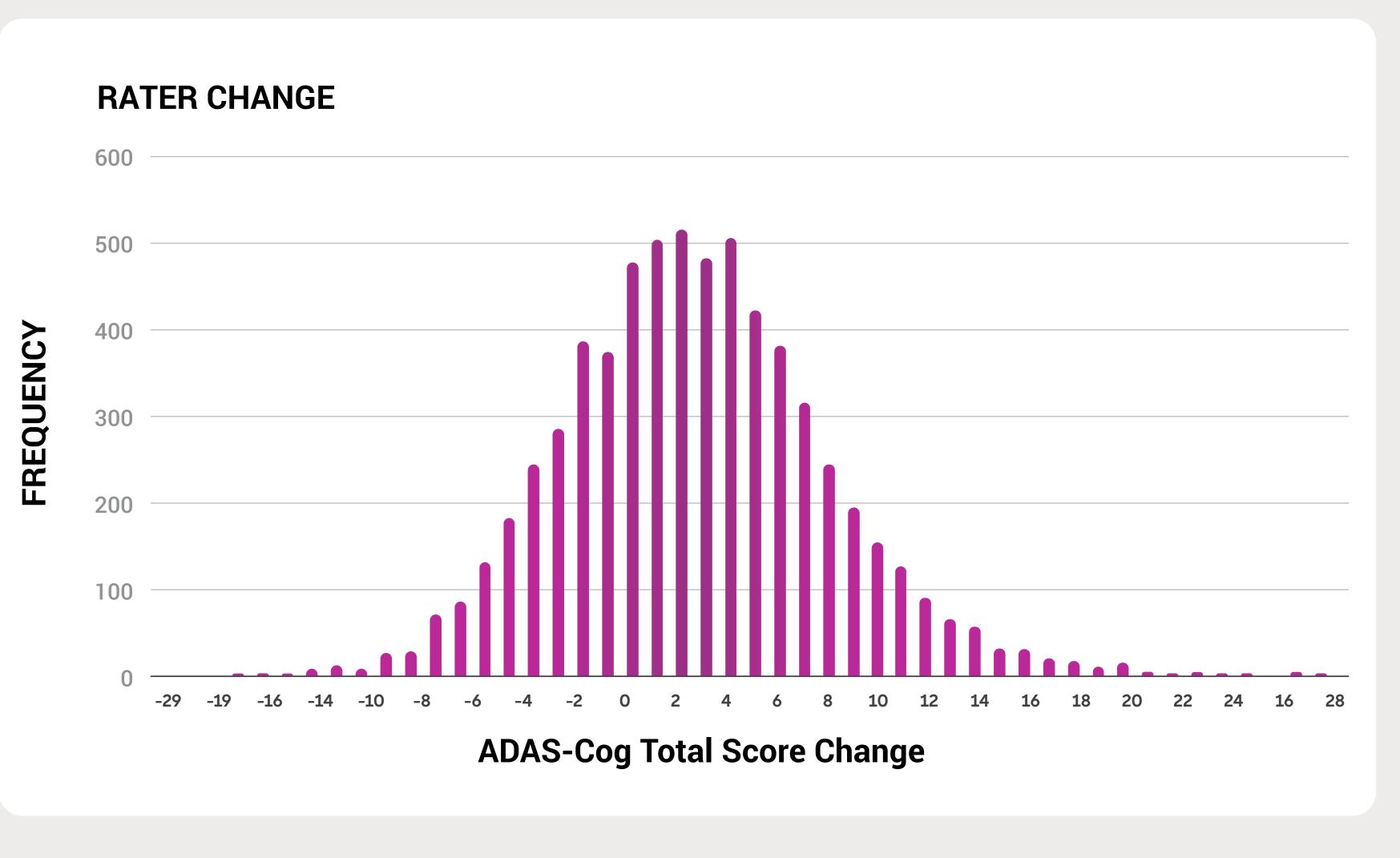
## CONCLUSION

The findings from the study indicate significantly higher score changes when there is a rater change between visits than not for both CDR and ADAS-Cog assessments. These results highlight the importance of rater consistency in reducing variability in an effort to improve data quality in AD trials.









# REFERENCES

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