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CLINICAL MANIFESTATIONS

POSTER PRESENTATION

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NEUROPSYCHOLOGY

Description of the ARMADA (assessing reliable measurement in Alzheimer's disease) general population study cohorts

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Abstract

Background: Given the growing population of aging adults, and subsequently individuals with dementia, there is a need for instruments that can detect cognitive impairment in early stages. The NIH Toolbox® for Assessment of Neurological and Behavioral Function (NIHTB) is a computerized battery of assessments measuring multiple domains cognition, emotion, sensation, and motor abilities. The goal of the ARMADA study is to validate the NIHTB in individuals with mild cognitive impairment (MCI) and dementia of the Alzheimer type (DAT). Here, we describe the demographic and clinical characteristics of participants ages 65 to 85 from the general population sample.

Method: Normal control (NC), MCI, and DAT groups racially proportional to the US population were recruited from existing cohorts across nine Alzheimer's Disease Research Centers and sites with cognitive aging studies. Diagnoses were based on the Uniform Data Set methodology, and included multiple clinical and cognitive assessments. Participants completed the NIH Toolbox at baseline, 12-, and 24-month visits.

Result: Groups were matched with respect to multiple demographic characteristics. There were some differences in age and sex, such that the NC group had more female participants and was the youngest. Dementia severity levels differed as expected, with the DAT group demonstrating greater cognitive and functional impairment compared to the MCI group, and the NC group demonstrating minimal cognitive or functional symptoms. Additionally, the DAT group reported more neuropsychiatric symptoms compared to the NC and MCI groups. There was no difference in reported family history of cognitive impairment across groups. Many participants across groups had at least one Alzheimer biomarker collected.

Conclusion: The study cohorts included in the ARMADA study accurately reflect their respective clinical syndromes for validating the NIHTB across the cognitive aging spectrum. The goals for the ARMADA study include comparing performance on all four modules of the NIHTB across groups, evaluating the relationship between Alzheimer biomarkers and NIHTB measures, and measuring changes in performance longitudi-

nally. Special emphasis groups, including individuals over age 85, African American participants, and Spanish-Speaking participants, were also recruited and are reported elsewhere.