Innovating Tablet-Based Cognitive Assessment for CNS Disorders of Aging

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Country

USA

Title of project or programme

Innovating Tablet-Based Cognitive Assessment for CNS Disorders of Aging

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

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Start date of award

15/05/2016

Total duration of award in years

1

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease Related Dementias (ADRD)... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Basic Behavioral and Social Science... Behavioral and Social Science... Brain Disorders... Cerebrovascular... Clinical Research... Clinical Research - Extramural... Dementia... Neurodegenerative... Neurosciences... Translational Research... Vascular Cognitive

Impairment/Dementia

Research Abstract
? DESCRIPTION (provided by applicant): Aging populations have become a key target for therapeutics developers, particularly for indications impacting cognitive function. Conditions such as Alzheimer's disease and vascular dementia affect the quality of life of aging Americans, largely due to their impact on cognitive function, with insufficient therapeutic options. Recent reports indicate that early identification of at-risk individuals may help to slow progression and onset of cognitive decline. Thus, new cognitive tests, capable of screening patients for mild or moderate cognitive decline associated with the earliest stages of neurodegenerative disease, are urgently needed. Tests such as the ADAS-Cog (Alzheimer's Disease Assessment Scale – Cognitive subscale) lack sensitivity to milder forms of cognitive impairment, and are cumbersome and time-consuming to administer and score. Effective screening tests for cognitive impairment must be brief, simple to administer, and automatically scored. These tests must be tailored toward aging populations and demonstrate sensitivity to mild cognitive decline. In order to allow meaningful interpretation of individual's performance, well-powered, demographically-targeted normative studies are essential. ""Pen and paper"" testing remains largely the standard for the assessment of cognitive decline. Some recently developed computerized tests have demonstrated improvement in ease of use, data reliability and cost-effectiveness in most demographic groups. In the aging population, however, performance on computerized tests is often poorly correlated with performance on pen-and-paper tests, calling into question the validity of data collected with computerized tests in this population. The Brief Assessment of Cognition (BAC) test battery developed by NeuroCog Trials has been employed in a range of studies associated with cognitive impairment, and has recently been adapted as a computerized test, the BAC App, administered via iPad(r). In our company-funded ""Phase I Report,"" we provide details regarding the development of the BAC App, as well as data from our validation study showing a strong correlation between performance on the pen-and-paper BAC and performance on the BAC App in aging adults. These data are extremely encouraging, and we propose to expand the number of tests included in the BAC App. This would allow for greater sensitivity to deficits in episodic memory and spatial working memory, which are among the earliest signs of cognitive decline, particularly in Alzheimer's. Our Phase II program will focus on integrating these new tests into the BAC App, conducting a well-powered normative data study in aging adults in collaboration with Dr. Kathleen Welsh-Bohmer (Duke University), and determining the ability of the BAC App to discern healthy subjects from those experiencing cognitive decline. Successful completion of the Phase II program will enable NeuroCog Trials to offer the BAC App in cognitive decline studies specific to aging populations, a need reflected in both the literature and recent feedback from NeuroCog's customers.

Lay Summary
PUBLIC HEALTH RELEVANCE: As the United States population ages, more therapies are being developed and marketed to address cognitive decline, particularly for neurodegenerative indications such as Alzheimer's disease. A key element to the development of these therapies is reliable assessment of cognition in aging adults. Computerizing cognitive tests represents an excellent means to improve cost-effectiveness and ease-of-use. However, several studies indicate that aging adults' performance on computerized cognitive tests may not always correlate well with their performance on pen-and-paper cognitive tests. To address this urgent and unmet need, NeuroCog Trials proposes the tailoring of the Brief Assessment of Cognition Application (BAC App), a neurocognitive assessment administered via iPad(r), to aging adult

populations for assessment of cognitive deficits.

Further information available at:

Types:
Investments > €500k

Member States:
United States of America

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
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