

ABSTRACT

Primary Area of Interest: e-Health/ Internet-based Application

Secondary Subject: Mental health (Neuropsychology)

Title: Computerized Neuropsychological Assessment of Army Aviators

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Abstract Narrative:

The web-enabled neuropsychology cognitive screening tools project was initiated to address the lack of standardized cognitive screening methods within ARMY Aviation as well as develop a uniform database system with electronic data transmission capabilities. The objectives include:

- 1) Develop a digitized database for computerized neuropsychology measures,
- 2) Develop a system to electronically transmit neuropsychological test data collected at a remote location to a centralized database,
- 3) Explore the relationship of select neuropsychological variables (derived from ANAM, CogScreen and MicroCog) to initial checkflight performance during Initial Entry Rotary Wing (IERW) training.

We are developing this web-based system with Microsoft SQL 7 as the database platform that can be accessed through our US ARMY Neuropsychology website. Included on the website is a brief history questionnaire, the Neuropsychology History Questionnaire-Aeromedical Edition (NHQ-AE) and a test battery derived from ANAM001, the US Army-Aeromedical Cognitive Assessment Tool (USA-ACAT). The NHQ-AE was designed to function as an on-line instrument to collect demographic information and an abbreviated medical history. The USA-ACAT was configured to function as a relatively brief computerized neuropsychology test battery that can be downloaded from the website to a remote computer.

Preliminary results for objectives 1 and suggest that it is feasible to use the website and the MS SQL7 platform to administer the NHQ-AE and to upload data files containing test data from the USA-ACAT. The website and the SQL7 database system allows the investigators at WRAMC and MAMC to have access to the data collected at Ft. Rucker, AL.

Further development and analysis is in progress regarding the feasibility of uploading datafiles containing test data from CogScreen and MicroCog. Results for objective 3 are pending completion of data collection and correlational analyses.