PLATFORM INDEPENDENT AND WEB-BASED AT OUTCOME DATA COLLECTION TOOLS

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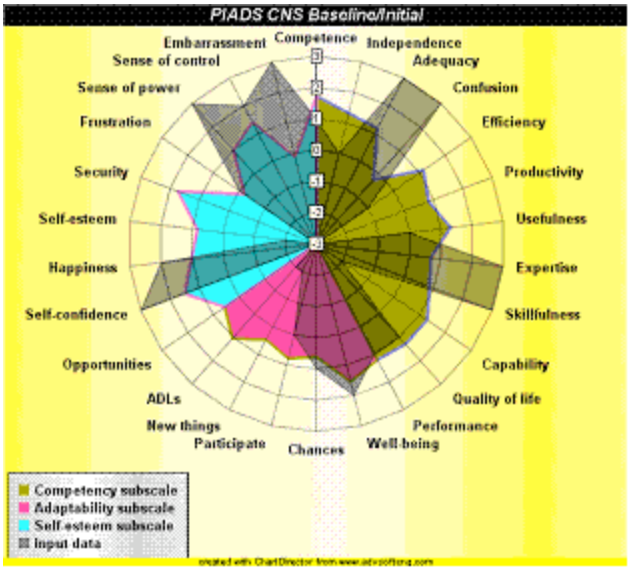
Most AT outcomes instruments are completed with paper/pencil, and as a consequence, the process of entering data into a central database requires significant effort. It has been our contention that the collection of outcomes data using web based interfaces for direct entry, and/or portable devices (such as personal digital assistants [PDAs] or tablet computers) would facilitate data collection in the field. These data could easily be ported digitally into a main data collection/repository site either synchronously or asynchronously.

The goal of this presentation is to demonstrate a number of platform and web-based AT outcome data collection tools that have been developed by the Consortium for Assistive Technology Outcomes Research (CATOR) funded through NIDRR. The work to be presented and demonstrated is the result of two specific projects undertaken as part of the ongoing grant.

The first project was to determine the feasibility of developing platform independent electronic data collection instruments and their subsequent functionality within the clinical setting. In order to be successful, portable/mobile strategies were required to be successful at addressing location, software, and user independence. Facilitation of direct entry of AT outcomes data collection was accomplished through the use of both palm and Tablet PC platforms. To date, the following portable/mobile solutions for specific AT outcome instruments have been developed and will be demonstrated:
• Palm Platform
- AT Satisfaction survey
- Functional AAC Status
- PIADS
• Tablet PC Platform
- PIADS
- QUEST

- ATDPA
To address functionality, each of these developed platform independent AT data collection tools were implemented within AT service delivery programs for beta-testing and evaluation. Results will be presented as well as examples of data collection reports that subsequently developed.

The second project pursued the development web-based AT outcome data collection tools and their subsequent functionality within the clinical and administrative environment. In order to be successful, it was determined that web-based data collection strategies would require location, user, platform, and software independence. To address a broad potential user stakeholder group, it was determined that web-based solutions would need to address both "in-house reporting" within a specific clinical setting as well as "remote reporting". In-house reporting was deemed important to facilitate ease of use by staff that may travel throughout a facility such as inpatient units within a medical center. Remote reporting was required to address not only reporting from remote locations, but also potential data entry from varying systems, the ability to enter data automatically or following portable device synchronization, and finally, the ability to observe results or reports instantaneously. Finally, because many AT devices are web enabled and the web is an equalizer for many within the disability community, this project undertook an additional component of examining the potential of web-based data collection tools as a method of participation by users of AT in community based research. To date, the modules for the Assistive Technology Act (ATA) Annual Performance Report, ATDPA, PIADS, and QUEST have been developed for on-line web-based reporting and will be demonstrated. The following graphic demonstrates the real-time web-based results following administration of the PIADS for a baseline stroke patient compared to normative data for that population with respect to likelihood of success with an assistive technology device.



Finally, as two above referenced projects have continued to evolve, several additional activities are underway that are worthy of mention and will be discussed. First, the Consortium for Assistive Technology Outcomes Research (CATOR) recently pursued international collaboration in the above projects with organizations within the AAATE. To date, Denmark, Ireland, Italy, Netherlands and Sweden are included in pilot testing the web-based data entry format. As a result, the Assistive Technology International Outcomes Consortium (ATIOC) has been formed for the development of an

international web-based data repository for AT outcomes data that would allow data from multiple outcome instruments and stakeholders in an effort to provide a variety of cross-dimensional AT outcome reports. Secondly, with the assistance of an outside consultant, CATOR has undertaken an effort exploring the potential commercialization of the above referenced tools and instruments. To date, development and evaluation agreements have been signed with three industry partners. The results and updates of these efforts will be presented.

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