RehabWire
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Assistive Technology Outcomes
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NIDRR Grantees on the Cutting Edge

Advancing Assistive Technology Outcomes

Duke University (H133A010401) led by Frank DeRuyter, PhD. Carol Cohen, Project Officer.

Abstract: This program advances the field of AT outcomes measurement. Research activities include: (1) performing a critical analysis of existing approaches to measurement and further developing instruments that are promising; (2) identifying unmet needs and assessing barriers to AT outcomes measurement; and (3) undertaking a prospective longitudinal study of factors associated with assistive device adoption, use, and discontinuance. Development activities include: (1) developing and evaluating independent electronic data collection or computer-assisted systems for the capture, analysis, and interpretation of AT outcomes information; (2) developing and evaluating improved methods and systems for communication of outcomes information among significant stakeholders; (3) automatic log file performance data-capturing for AT outcomes assessment; and (4) development of new or improved AT outcomes tools.

Find out more at: www.AToutcomes.com

ATOMS Project: Assistive Technology Outcomes Measurement System

University of Wisconsin/Milwaukee (H133A010403) led by Roger O. Smith, PhD. Carol Cohen, Project Officer.

Abstract: The ATOMS Project (Assistive Technology Outcomes Measurement System) targets the definition and pre-development phases of a next-generation AT outcomes measurement system. A comprehensive needs assessment, prototype instrument development, and consensus building activities frame an integrated set of research and development activities to address urgent needs to identify components of a future AT outcomes measurement system. In addition, these activities generate information about the relationships

Additional Resources

AT Outcomes and Benefits Journal is available online at www.atia.org/atob/ATOBWeb/index.htm

A new AT Listserve is now available from RESNA. Email listserv@email.resna.org with SUBSCRIBE AT-FORUM firstname lastname (i.e., John Smith) in the body.

Proceedings from RESNA's annual conference are available in the Publications section at resna.org

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of AT outcomes factors that produce a better understanding of AT use and abandonment. Find out more at: www.atoms.uwm.edu

Assistive Technology and Cognitive Disabilities
University of Akron (H133A030810) led by Roberta DePompeii, PhD, Bonnie Gracer, Project Officer. Abstract: This project assesses the use of several types of information technologies by children and adults with cognitive disabilities, specifically individuals with TBI and mental retardation. Outcomes include: (1) a catalog of existing portable devices for memory and organization (2) a list of features that enhance or inhibit use of these general purpose and special-use technologies, (3) results of needs surveys regarding use of these technologies, (4) white papers describing project findings, (5) tip cards to assist families in purchasing devices, (6) stronger partnerships between the consumer and research and development communities, and (7) recommendations for memory and organization device modifications and features for individuals with brain injury and mental retardation. The Brain Injury Association, Inc. leads and administers this collaborative partnership, which includes theDevelopment of an Assistive Technology Outcomes Measurement System Utilizing the International Classification of Functioning (ICIDH-2/ICF)
University of Colorado Health Sciences Center (H133G030187) led by Cathy Bodine. David W. Keer, Project Officer. Abstract: This project furthers the development of a secure, Health Insurance Privacy and Accountability Act of 1996 (HIPAA) compliant, multi-site, web-based assistive technology (AT) outcomes system designed to capture data that enables the measurement of the impact of AT devices and services for children and adults with disabilities. The project results in the design and development of a working prototype complete with instructional support for users. The project is designed for easy addition of databases to support the ever-evolving schema for outcomes assessment in AT. The use of the International Classification of Functioning, Disability and Health (ICIDH-2/ICF) as the framework for development builds on initial pilot work already completed by faculty of Assistive Technology Partners, University of Colorado Health Sciences Center, and collaboration with two NIDRR funded national projects focused on AT outcomes development (ATOMS/CATOR). Information gained leads to maximizing the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, especially individuals with the most severe disabilities; and will lead to improved information and research on the effectiveness of AT devices and evidence-based practices. Find out more at: www.uchsc.edu/atp

Please note: These abstracts have been modified. Full, unedited abstracts, as well as any available REHABDATA citations, are available at naric.com.

Schwanke, T., Smith, R. (2005) Assistive technology outcomes in work settings. Work: A Journal of Prevention, Assessment, and Rehabilitation, 24(2), 195-204. NARIC Accession Number: J48749. Project Number: H133A010403. Abstract: Article describes efforts to identify existing data that might be used to develop a system for measuring AT outcomes in the workplace. Researchers evaluated sample records from five AT service programs. Analysis revealed that generally, AT service programs fail to collect consistent or sufficient data for outcome analysis, but the AT programs that serviced state vocational rehabilitation agencies interacted with a larger data collection and management system. Combining the data from these two diverse systems could provide information on a range of AT outcomes. Legal and ethical issues related to the linkage of the two existing databases are discussed.

Lenker, J., Scherer, M. (2005) Psychometric and administrative properties of measures used in assistive technology device outcomes research. Assistive Technology, 17(1), 7-22. NARIC Accession Number: J49545. Project Number: H133A010401. Abstract: Article summarizes the evaluation of 82 outcome studies published between 1980 and 2001 involving AT devices (ATDs). Three principle characteristics were examined: the comparability of sample populations, the outcome measures used, and the scoring procedures used. Findings indicated that the “typical” ATD outcomes study: (1) used a sample population that was diverse in terms of age, disability population, and type of ATD being used; (2) measured user-reported dependent variables with instruments designed specifically for the study; and (3) did not report the psychometric or administrative properties of the measurement tools used. Recommendations are offered to researchers, policymakers, journal editors, and reviewers in order to improve the reporting of ATD outcomes research.

Rust, K., Smith, R. (2005) Assistive technology in the measurement of rehabilitation and health outcomes: A review and analysis of instruments. American Journal of Physical Medicine and Rehabilitation, 84(10), 780-793. NARIC Accession Number: J49728. Project Number: H133A010403. Abstract: Study examined how AT is treated in the scoring process of selected health and rehabilitation outcomes assessment instruments. Review of 100 instruments revealed that: (1) 30 percent of the instruments did not mention AT in their scoring procedures; (2) a majority of the instruments included AT, 44 percent of the instruments lowered the functional outcome score; (3) 22 percent of the instruments allowed AT to raise the outcome score, but did not differentiate among types of device used; and (4) 4 percent of the instruments provided a mix. The findings indicate that rehabilitation and health outcome instruments inconsistently consider AT as an intervention for people with disabilities, which leads to potentially invalid assessments of rehabilitation outcomes.