

Beukelman, D., Fager, S. (2007) **AAC for adults with acquired neurological conditions: A review.** *Augmentative and Alternative Communication*, 23(3), 230-242. NARIC Accession Number: J53104. Project Number: H133E030018.

Abstract: Article reviews recent advances in AAC for adults with acquired neurogenic communication disorders. Specifically, the topics of AAC advances, acceptance and use, limitations, and future needs of individuals with amyotrophic lateral sclerosis; traumatic brain injury; brainstem impairment; severe, chronic aphasia and apraxia of speech; primary progressive aphasia; and dementia are discussed.

Higginbotham, D., Shane, H. (2007) **Access to AAC: Present, past, and future.** *Augmentative and Alternative Communication*, 23(3), 243-257. NARIC Accession Number: J53105. Project Number: H133E030018.

Abstract: Article presents a conceptual framework for examining access to AAC that considers technical, physical, cognitive, and social aspects. AAC access entails a complicated interrelationship among the features of the AAC technology, the user's physical ability and cognitive and linguistic skills, and the ability of the device users and their communication partners to interact and communicate. The authors evaluate recent scientific and technical advances that enable people with physical disabilities to have better control of existing AAC technologies and discuss the challenges to accessing AAC technologies for a range of communication activities.

DeRuyter, F., McNaughton, D. (2007) **Enhancing AAC connections with the world.** *Augmentative and Alternative Communication*, 23(3), 258-270. NARIC Accession Number: J53106. Project Number: H133E030018.

Abstract: Article discusses the benefits and challenges associated with increasing the ability of AAC devices to exchange information with and control other mainstream technologies. The implications of recent changes in technology are examined for 6 key stakeholder groups: (1) individuals who use AAC, (2) individuals who assist in selecting and supporting use of AAC devices, (3) AAC researchers, (4) AAC device manufacturers, (5) mainstream application developers and technology manufacturers, and (6) public policy makers. Suggestions are provided for future research, public policy, and technical development.

Bryen, D., Potts, Blyden. (2007) **So you want to work? What employers say about job skills, recruitment and hiring employees who rely on AAC.** *Augmentative and Alternative Communication*, 23(2), 126-239. NARIC Accession Number: J54121. Project Number: H133E980026.

Abstract: Interviews were conducted with 27 employers to better understand their perspective on hiring and working with people who use AAC and the kinds of employment barriers they believe exist for these individuals. Participants answered questions regarding job requirements, the recruitment process, and the selection process. Forty-eight jobs, representing 25 unique job types, were identified by the employers as jobs for which they hired and would be suitable for people who used AAC. The findings suggest that while level of education is still important to employers, skills such as time management, problem solving, communication, use of an understandable and standard voice, and basic technology may be even more important. The study also found that having an effective job-related network is important, as is the ability to provide credible references and do well during in-person interviews with potential employers.

Caves, K. (2006) **AAC-RERC state of the science conference. 29th Annual RESNA Conference Proceedings.** NARIC Accession Number: O16666. Project Number: H133E030018.

Abstract: Article summarizes information on the 6 key presentations that made up the core of the Rehabilitation Engineering Research Center on Communication Enhancement (AAC-RERC) State of the Science Conference. The AAC-RERC conducts a comprehensive program of research, development, training, and dissemination activities that seek to improve technologies for individuals who rely on AAC technologies. The topics presented were: (1) key principles underlying research and practice in AAC; (2) accessing AAC: past, present, and future; (3) enhancing AAC connections with the world; (4) AAC to improve language, literacy, and communication outcomes for beginning communicators; (5) using AAC technologies to enhance participation and access to meaningful societal roles for adolescents and adults who use AAC; and (6) AAC for youth and adults with acquired communication needs. This paper was presented at the 2006 annual conference of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) and is available on CD-ROM.

NARIC is operated by HeiTech Services, Inc., for the National Institute on Disability and Rehabilitation Research under contract number ED-08-CO-0095.

RehabWire
News from the National
Rehabilitation Information
Center

**Augmentative and Alternative
Communication**
Volume 11, Number 5, May 2009



NIDRR Grantees on the Cutting Edge

Rehabilitation Engineering Research Center for Communication Enhancement (AAC-RERC) *Duke University* (H133E080011) led by Frank DeRuyter, PhD. Thomas Corfman, Project Officer.

Abstract: The mission of the AAC-RERC is to assist people who use AAC technologies in achieving their goals across environments. The goals and objectives of the AAC-RERC are to advance and promote AAC technologies through the outputs and outcomes of its research and development activities; and to support individuals who use, manufacture, and recommend these technologies in ways they value. Research projects include: (1) AAC technologies to reduce cognitive/linguistic load; (2) new interface strategies for AAC technologies; and (3) AAC technologies to increase usability, acceptance, and learnability. Development activities include: (1) connecting to the world - AAC access to mainstream technologies; (2) new interface strategies for AAC technologies; and (3) usability, acceptance, and learnability of AAC technologies.

Find out more at: www.aac-rerc.com

EVIDAAC: A Database of Appraised Evidence in Augmentative and Alternative Communication *Northeastern University* (H133G070150) led by Ralf W. Schlosser, PhD. Pimjai Sudsawad, ScD, Project Officer.

Abstract: This project develops EVIDAAC, an accessible and usable database of appraised research evidence in AAC for practitioners (speech-language pathologists, occupational therapists, physical therapists, special educators, rehabilitation engineers, etc.), individuals using AAC, and their families. EVIDAAC provides access to pre-filtered evidence-based practice by critically appraising studies (randomized control trials [RCTs], non-RCTs, case series, single-subject experimental designs) and systematic reviews. This saves time and reduces the skill-burden associated with having to appraise evidence, a documented barrier to the utilization of EBP. EVIDAAC is developed in accordance with published quality criteria for health-related web sites using formative and process evaluation.

Find out more at: www.evidaac.com

Augmentative and alternative communication (AAC) is used by people with communication disabilities to meet some or all of their communication needs. AAC includes unaided systems such as sign and gesture systems, sign languages, and writing; "low tech" aids such as communication cards and pointing boards; and "high tech" solutions such as voice output and speech gathering devices and eye-gaze tracking communication programs.

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

Thousands of additional resources on these topics are available from NARIC's resource pages at www.naric.com/public

NIDRR research in AAC is funded primarily under the Technology for Access and Function Priority

Systematic Study of the Effectiveness of AAC Intervention to Improve Conversation in Individuals with Degenerative Language Disorders Oregon Health and Science University (H133G080162) led by Melanie Fried-Oken, PhD. Thomas Corfman, Project Officer.

Abstract: This project continues previous research in AAC tool use for adults with primary progressive aphasia (PPA) resulting from frontotemporal lobar dementia. Project objectives include: (1) to test the extent to which AAC intervention is associated with changes in conversation for persons with moderate Alzheimer's disease and persons with primary progressive aphasia under controlled conditions; (2) to test the extent to which AAC use is associated with daily functional changes in conversation for the two participant groups under natural conditions; and (3) to describe the behavioral and socio-relational characteristics of caregiver/partners and participants who display improved conversational skills with AAC treatment. AAC devices are customized for each participant with specific vocabulary depicting autobiographical memories and functional activities. Each participant engages in a spaced retrieval priming task followed by videotaped conversations with and without the AAC device in six controlled conversations with a research assistant (Study 1), and six practical context conversations with a caregiver (Study 2). Spontaneous AAC device use in the home is tracked for six months following Study 2 conversations.

Current Literature - Selections from REHABDATA

Fried-Oken, M., Rowland, C. (2008) **The effect of voice output on AAC-supported conversations of persons with Alzheimer's disease.** *ACM Transactions on Access Computing*, 1(3), 11. NARIC Accession Number: O17435. Project Number: H133G040176.

Abstract: Study examined the effect of a direct selection, customized AAC device with 1- to 2-word voice output on the conversations of individuals with moderate Alzheimer's disease (AD), compared to a similar AAC device without voice output. Thirty adults with moderate AD participated in 2 personally relevant conversations using an AAC device containing 16 messages needed to discuss a favorite autobiographical topic chosen by the participant and his/her family caregivers. Twelve of the 30 participants were randomly assigned to the voice-output-present condition and the remaining 18 were assigned to the voice-output-absent condition. Ten-minute conversations were videotaped in the participants' residences and analyzed for 4 conversational measures related to the participants' communicative behavior. Results showed that AAC devices with digitized voice output depressed conversational performance and distracted participants compared to the devices without voice output. There were significantly more 1-word utterances and fewer total utterances when AAC devices included voice output, and the rate of topic elaborations/initiations was significantly lower when voice output was present.

Light, J., McNaughton, D. (2007) **The AAC mentor project: Web-based instruction in sociorelational skills and collaborative problem solving for adults who use augmentative and alternative communication.** *Augmentative and Alternative Communication*, 23(1), 56-75. NARIC Accession Number: J52314. Project Number: H133G80044.



Did you know the AAC-RERC offers webcasts? The AAC-RERC's website features webcasts on literacy skills, AAC for aphasia, immersion for autism, AAC and college life, transition, and more! Several webcasts may be viewed toward continuing education credits. Visit aac-rerc.psu.edu/index-13327.php.html to see the catalog of webcasts for yourself!

Where Can I Find More?

A quick keyword search is all you need to connect to a wealth of disability and rehabilitation research. NARIC's databases hold more than 75,000 resources. Visit www.naric.com/research to search for literature, current and past research projects, and organizations and agencies in the US and abroad.

Search Engine Snapshots

We ran several searches for "augmentative and alternative communication" in a few of our favorite search engines:

Yahoo!: 740,000

Google: 235,000

Google Scholar: 6,420

Blog Search: 1,382

search.twitter.com: 3

Try it yourself!

Abstract: Study evaluated the effects of a Web-based training program, designed to teach mentoring skills to adults who use AAC, on the participants' sociorelational and collaborative problem-solving skills. Study 1 investigated the effects of Lesson 1 of the program on the acquisition of sociorelational skills by 6 adults who used AAC. Study 2 focused on the effects of Lesson 2 on the acquisition of collaborative problem-solving skills by 15 adults who used AAC. Results indicated that the Web-based instruction was effective and efficient. Limitations of the study, implications of the results, and directions for future research are discussed.

Saito, Y., Turnbull, A. (2007) **Augmentative and alternative communication practice in the pursuit of family quality of life: A review of the literature.** *Research and Practice for Persons with Severe Disabilities*, 32(1), 50-65. NARIC Accession Number: J53069. Project Number: H133B0311330.

Abstract: Thirteen studies were reviewed using the 5 domains of family quality of life (FQOL) to analyze and understand outcomes and perspectives of families of children who use AAC devices. Findings indicate that the impact of current AAC practices encompass all 5 domains: (1) family interaction, (2) parenting, (3) physical and material well-being, (4) disability-related support, and (5) emotional well-being. Implications of the results for professionals and researchers regarding AAC practices that impact on FQOL outcomes are discussed.

Light, J., Drager, K. (2007) **AAC technologies for young children with complex communication needs: State of the science and future research directions.** *Augmentative and Alternative Communication*, 23(3), 204-216. NARIC Accession Number: J53102. Project Number: H133E030018.

Abstract: Article summarizes the research related to AAC technologies for young children who have complex communication needs and defines priorities for future research to improve AAC technologies and interventions and enhance outcomes this population. There have been significant advances in the research on the use of AAC systems by young children with complex communication needs regarding the interplay of various modes of communication, the effects of AAC on natural speech production, and improving the design of AAC technologies. Priorities for future research include investigations of the following: preferences and priorities of young children and their families; improved designs for AAC technologies for young children, for older beginning communicators, and for communication partners; effective AAC interventions to maximize outcomes; public policy and advocacy; and pre-service and in-service training for early intervention professionals.

McNaughton, D., Bryen, D. (2007) **AAC technologies to enhance participation and access to meaningful societal roles for adolescents and adults with developmental disabilities who require AAC.** *Augmentative and Alternative Communication*, 23(3), 217-229. NARIC Accession Number: J53103. Project Number: H133E030018; H133E980026.

Abstract: Article examines existing research describing the use of AAC to support active participation in postsecondary education, employment, and community living for people with developmental disabilities who require AAC. Areas of research and development that are needed to better support individuals who use AAC in assuming these desired roles in society include: (1) face to face communication, (2) distance communication and interconnectivity, (3) training and support for system use, (4) adapted applications and cognitive tools, and (5) supports for independent operation, development, and maintenance.