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Upfront

This issue is about communication performance assessment (CPA) as it applies to the area of augmentative and alternative communication (AAC). CPA refers to the process of describing and classifying communicative behaviors ***using direct observational techniques.*** *The goal of CPA is to yield results that give a valid description of functional communication skills, and to do so over time. CPA uses a family of tools and procedures that can measure an augmented communicator's use of AAC techniques, strategies and devices to accomplish daily communication tasks.*

CPA is distinguished from non-observational assessment methods such as surveys, questionnaires, formal tests and anecdotal reports. Those methods are designed to measure, among other things, language comprehension, literacy skills, attitudes, perceptions and opinions, rather than functional communication skills. They, too, are important components of AAC assessments.

Increasingly, AAC professionals are being asked to be more accountable and justify the provision of AAC services, and the purchase of AAC devices. We are also being asked to provide proof of functional outcomes. CPA offers a way of documenting and demonstrating the success of AAC interventions. Thus, a challenge for the field is to develop CPA measurement tools and protocols that are valid, reliable and cost effective.

Given the nature of the interactions between augmented communicators and their communication partners, a valid CPA in AAC must be concerned about:

(1) the communication behaviors of both partners in a time-linked fashion, because partners often act as interpreters or co-constructors of messages

(2) the use of multi-modalities, because AAC users rely on low and high-tech devices, signs, speech and gestures to communicate their messages.

Unfortunately, few clinically useful

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Expert Opinions

A consensus of experience

I interviewed six knowledgeable and skilled professionals about the use of communication performance assessments (CPAs) in AAC. (See page 8 for information about these individuals.) What follows is a compilation of their opinions and comments rather than a reiteration or a report of any one person's replies to my questions. While there were individual differences in the responses, these experts agreed on some basic principles of how we should approach CPA. See Table I on page 2.

CPA in AAC research

Since the early 1980s, AAC researchers have studied the nature of interactions between augmented communicators and their speaking partners, using direct observational techniques. Research questions have addressed discourse patterns (*e.g.*, turn-taking, initiations), speed of communication, types of communication acts and different modes of communication (linguistic and nonlinguistic) across a variety of contexts. In addition, researchers have asked important questions about the communicative behaviors of speaking partners in this process. Because CPA in AAC requires the coding of multiple behaviors that

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occur simultaneously, researchers have often used video cameras to capture these interactions. Some have also coded data on-line (*i.e.*, while observing) by targeting specific behaviors.

After observing and subsequently classifying and analyzing communication behaviors, researchers have reported specific characteristics of AAC user communication performance, *e.g.,* they create messages very slowly, play a non-dominant role during interactions, take fewer turns, use multi-modalities, contend with communication breakdowns, co-construct messages with partners and use language in ways that are atypical. Research has also shown that speaking partners dominate conversations, interrupt, act as interpreters and scaffolders and have opinions about speech output devices and other AAC techniques.

Everyone I interviewed referenced Institutional Review Boards (IRBs). IRBs require adherence to human subject guidelines and insure confidentiality of all data in CPA research. AAC researchers must fully disclose information and insure that augmented communicators and/or their families sign forms that give them (and their institutions) permission to collect data for a specific purpose. This is called "informed consent."

Table I. Principles of CPA

1	Identify assessment questions about the functional communication skills/abilities of augmented communicators.
2	Observe and collect valid and reliable information that can answer the questions you are asking.
3	Be careful about how you analyze, interpret, use and store these data.
4	Insure confidentiality of the data and results of the CPA.

CPA in clinical practice

The expert's ideas about the use of CPA in clinical practice evolved into the Principles depicted in Table I and summarized below.

1. Asking good questions about functional communication skills. Romski emphasized that when clinicians ask 'good' questions, they are more likely to get 'good' answers. Conversely, when questions are unclear, irrelevant or peripheral to an augmented communicator's development of functional communication skills, then assessments are less likely to be useful or meaningful. All seemed to agree that CPAs should focus on *functional* communication skills.

AAC professionals should formulate questions in collaboration with augmented communicators and their family members. Clinicians who skip this step risk wasting valuable resources. Obviously, the time and money spent on AAC assessments should yield information that is valued by the augmented communicator and the family, as well as by professionals.

It is important to ask questions that relate to contextual variables. Mastergeorge, who develops performance assessments in educational areas, said, "Contextual variables are particularly important indicators in performance assessments." "In school settings," she pointed out, "there are opportunities and missed opportunities to communicate." Her

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measurement tools exist that address these areas. Some tools are too time-consuming or difficult to use in natural environments. Others have not yet demonstrated adequate validity and reliability. Thus, most clinicians conduct CPAs in AAC by relying on their own observations and expertise, supplemented by interviews from the AAC user, family members and friends.

The purpose of this issue is to encourage dialogue among AAC stakeholders, in an effort to move the field toward a more standardized approach to CPA in AAC. The ***Expert Opinions*** *section shares some thoughts from six professionals with expertise in CPA.* ***Clinical News*** *gives a brief overview of CPA measures in AAC.* ***Equipment*** *describes automated data logging (ADL) and discusses its use as a tool for measuring aspects of communication performance.* ***Governmental*** *highlights the emerging HCFA regulations on the electronic transmission of clinical data. Finally, the* ***AAC-RERC*** *section provides an update on research and CPA tool development underway at University at Buffalo.*

Many thanks to all who contributed their time and expertise. They are listed as Resources on page 8. A special thanks to Jeff Higginbotham who helped plan and develop this issue, and to Michael B. Williams and Carole Krezman, who compelled me to think more deeply about CPA and to encouraged me to write about it.

Sarah W. Blackstone, Ph.D., Author

performance assessment team at UCLA has found that "indicators of successful school performance relate to a student's time on task, the amount of time the student spends communicating and with whom, and the amount of 'engagement time' between a student and the teacher." The team codes these behaviors during on-line observations. Mastergeorge also pointed out that teachers and other students may or may not understand someone's assistive technology. "This," she said, "will affect the communication performance of individuals who rely on AAC."

2. Collecting valid and reliable data. As soon as specific question(s) are delineated, AAC professionals can decide where to observe interactions and what data to collect. Observations can be done in a classroom, worksite, community, home or clinic.

Miller pointed out that how you collect a sample is especially crucial because only valid and reliable CPA data may be used to plan treatment, draw conclusions or track communication performance over time. "Observing a conversation is not the same as asking someone to produce a spoken or written narrative to create a language/communication sample for analysis," he said.

Conversation: Conversations between an AAC user and a speaking partner involve at least two people. Thus, to get a valid and reliable sample of conversation in AAC, Miller said, "the clinician must collect at least the linguistic output from the speaking partner, and the multi-modal, linguistic and non-linguistic data from the AAC user." Collecting a sample of communication behaviors in a conversational context requires that the speech-language pathologist (SLP) (1) code behaviors on-line while observing or (2) use technology to record targeted behaviors for later analysis. For example, a clinician might use a video camera to tape an interaction. Conversations may be observed in structured contexts (*e.g.*, role playing, solving a problem) or natural environments (*e.g.*, work site, school, store).

Narrative: Narratives allow SLPs to set up a specific task within which to observe behavior, code it and analyze the resulting data. Narratives also provide a way to compare communication behaviors over time and across individuals. One characteristic of narratives is that the context is well defined and the focus is on output—typically, written or spoken language. For example, instructions might be "Wr*ite a story about a birthday party." Or "Tell me a story about this picture*." The structured nature of a narrative and the standard types of analysis (type token ratio, mean length of utterance, syntactic analysis) make them a useful way to collect language samples. Currently in AAC, however, we lack a clinically accepted protocol designed to observe and classify multi-modal communication behaviors. Language measures alone are a necessary, but not sufficient way to assess communication performance.

All the experts consulted agreed that there are a plethora of validity and reliability issues in clinical CPA that call for further research.

3. Analyzing and using CPA data. Miller said, "How you collect samples of communication behaviors will determine not only the validity and the reliability of your data, but also the relevance of any subsequent analysis you might chose to do with these data." For example, clinicians might want to analyze:

1. The kinds of conversational tradeoffs augmented communicators make in different contexts. Several noted that augmented communicators use imperfect messages and prestored text in some situations, even when it is not exactly what they want to say.

2. The course of language development in children who use AAC. Bedrosian feels it is essential to take into account (1) the multiple modes of communication and (2) the context within which children are using language. "We must pay attention to the nonlinguistic modes that are co-occurring and look at the whole picture, not just the output from a device, to capture the language development process in young children."

3. The ability of an augmented communicator to take turns, initiate topics, use different modes in specific contexts. Kovach's team at Children's Hospital analyzes the operational skills involved during an interaction, as well as the individual's discourse, strategic, social and linguistic skills.

Another point Miller makes is that "more is not necessarily better." The quality (not the quantity) of the data is what counts. Therefore, CPA requires that a trained SLP conduct observations, code the data and carry out the analysis. Miller pointed out that not all SLPs are trained in observational methods or behavioral analysis, and they do not have years to spend with each family.

Technology can make the collection and analysis of data easier and more accessible. However, using technology to collect and store clinical data means professionals and consumers must exercise a degree of vigilance and technical expertise they may not have gained. Currently, a controversy is percolating around automatic data logging (ADL), a technology that collects information from an AAC device. Cunningham said, "Data logging capabilities are a fairly easy thing to put in an AAC device because it is a computer. However, just because we 'can' do it, doesn't necessarily mean we should do it."

4. Consumer protection issues. There is no equivalent to IRBs in clinical practice, although some institutions require informed consent. In any case, clinicians respect confidentiality, the privacy

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of their clients and maintain client records in locked cabinets. Those interviewed agreed, however, that as we begin to collect, analyze and store more data electronically, a client's privacy is at increased risk.

In the U.S., which is known as a litigious society, laws, regulations and policies are in place to protect individuals who receive clinical services. But, they do not yet specifically address the electronic transmission of clinical data. Email, List Servs, the Internet and ADL are creating widespread concerns. Those interviewed gave examples of employers who monitor employee email, people who forward messages without the permission or knowledge of the original sender and AAC professionals who discuss clients on List Servs. While well meaning, when someone posts a message on a List Serv, they do not know who is "listening." In reality, such practices, which are made easy because of technology, may violate a client's right to privacy and the confidentiality of clinical data. Thus, as we move forward in our efforts to improve clinical practice, we must protect the rights of those we aim to serve.

Summary

There is a need to develop valid clinical tools that measure the communication performance of augmented communicators and, in so doing, capture the unique features of AAC interaction. There is also a need to develop protocols that enable practitioners and researchers to use these tools reliably, to develop a more standardized approach to CPA in AAC and to do so in ways that insure the rights of all involved.

Clinical News

Use of CPA in AAC

Often, the purpose of a performance assessment is accountability. As such, they are commonplace across a broad spectrum of disciplines, including education, health care, business and government. Within the field of communication disorders, SLPs assess communication performance using a variety of observational tools derived from other disciplines (*e.g.*, psychology, child development, behavior analysis, linguistics, and cognitive sciences.) These tools include structural analysis of language samples; pragmatic, discourse and conversational analysis; applied behavior analysis; observational analysis of social interactions; ethnographic observations and interviews.

History

Over twenty years ago, Beukelman and Yorkston investigated the pragmatic and vocabulary profiles of augmented communicators using CPA techniques. Debra Harris, who studied classroom interaction, also used them. A compilation of early research edited by Arlene Kraat in 1985, *Communication Interaction between Aided and Natural Speakers: A State of the Art,* describes studies by 100 clinical researchers from six countries. Subsequent research and years of clinical experience have provided crucial information to the field about the nature of interactions between speaking and nonspeaking partners.

Available measures of CPA

Table II. shows examples of five clinical methods currently being used to conduct CPA in AAC. Each type includes a brief description of the method, its advantages and limitations. According to Higginbotham, "any of the methods listed may be used with direct observation, or with audio or videotaped recordings."

Increasingly, AAC professionals are looking for ways technology can help. Slow communication rates and the multi-modal nature of augmentative communication make direct observation and classification of communication performance laborious and expensive. Exciting new possibilities include:

1. The use of digital audio and video recording technologies for transcription and documentation. Digital sound and video technology enable clinicians to record and play back audio and video recordings using computers.

2. Software that assists in the transcription and coding of communication. Examples are *SALT-Systematic Analysis of Language Transcripts* (a widely used approach to language analysis) and programs that facilitate the transcription and analysis of digital video and audio recordings and the output of AAC devices, such as CHAT.

3. Automated data logging and analysis of AAC user and device activity. An example is the LAM (Language Activity Monitor.)

Most importantly, we need to use our history of success in measuring communication performance in AAC to identify which tools are most effective in answering what questions, and why.

Table II. Examples of CPA measurement tools used in AAC
developed by Jeff Higginbotham, November, 2000

Type	Method	Advantages	Limitations
Fieldnotes	Compile descriptions of events of communication performance, device and contextual issues.	Important for generating clinical & research questions, documenting complicated or critical communication events.	Particularly subject to observer bias. Need to employ other information sources to corroborate results.
Checklists, Inventories, Behavior Rating Methods	Use a predefined list of items, code presence/absence of a behavior, situation or environmental factor. Could also rate target behavior on some type of scale.	Easy to use to summarize whether a variety of behavioral events or contextual factors were present during the observation period.	Not designed to accurately account for frequency, duration or sequence.
Time and Event Sampling	Use a predefined set of behavior categories and code all occurrences of a behavior within an observation session (event sampling) or within a series of time periods (time sampling.).	Can obtain frequency, duration & sequence data. Can use pencil & paper or computers to assist in data collection.	Can usually sample only a portion of the behavior stream. Data collection requires vigilance. *A priori* behavior categories limit descriptive scope.
Language Transcription	Transcribe utterances of subject/client and/or other participants. Generated from written, audio or video recordings. Should also account for paralinguistic and gestural expression. Analyze linguistic content and structure.	Can provide information about an individual's lexical, semantic, syntax and pragmatic and discourse abilities. Potential to provide both quantitative and qualitative evidence about language development and use.	Can focus too much on the linguistic/informational aspects of communication while ignoring social and emotional aspects. Validity not yet established for language produced through AAC devices.
Automated Data Logging	Similar to language transcription. Augmented speaker's devices records selections, device output and a variety of other data.	May one day circumvent manual transcription processes. Can provide detailed data regarding user-device interaction, documentation of vocabulary and language expressed through AAC device.	Can't account for multimodal expression or interlocutor influence. Problems determining utterance meaning when data remotely collected. Validation of technique not established yet. Privacy issues abound.

Equipment

ADL in AAC devices

Automated data logging (ADL) means that an AAC device creates a continuous log of machine activity generated by an augmented communicator. This is possible because some AAC devices are computers, which makes collecting data relatively easy to do. ADL has three advantages over non-automated recording techniques:

1. AAC devices with ADL can collect data anywhere and at anytime.
2. AAC devices with ADL can collect data automatically.
3. Some forms of data analyses may be automated. This means that ADL can help answer questions that relate to user/machine performance.

As depicted in Table III, ADL has the capability of collecting and classifying certain types of data (*e.g.*, time, output, action, input). Because the logs of communicator/machine activity are stored in a machine-readable format, ADL also enables data to be analyzed in a variety of ways, as summarized in Table IV on page 6.

Using ADL

In the research community, ADL has been around a long time. One of the first research studies to incorporate ADL procedures in an AAC device was Beukelman and Wilson's Morse Code Project at the University of Washington in the late 1970's. Researchers tracked the machine input/output of several children who were learning to use a Morse code device. Today, researchers such as Koester and Levine regularly employ computer-assisted logging and analysis to study users' word prediction performance. Higginbotham and colleagues have also used ADL techniques to study interaction, comprehension and device efficiency. As part of the AAC-RERC, researchers at the University at Buffalo have developed a comprehensive log file protocol and software program known as ACQUA to analyze log files produced by AAC devices. They are collaborating with AAC manufacturers to refine this protocol.

AAC device manufacturers began providing ADL options in the mid-to-late '80s. Woltosz developed the first commercially available performance monitoring system for the Words+ E-Z Keys system to assess keystroke savings and communication rate. In the early '90s, Sentient Systems provided on-screen frequency counts of button selections for the DynaVox. Recently, the Prentke Romich Company (PRC) has developed the Language Activity Monitor (LAM)—a data collection system for sampling communication device selections and output. The LAM is now available on a

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Table III. Types of ADL data

Time	Absolute or relative time stamp of each event.
Output	Text/speech output associated with an entry.
Action	Type of user action (key press, mouse click, switch closure).
Input	Type of input device uses for the action.
Selection Type	Source of an entry (*e.g.*, Character key, Word list, Navigation).
Context	Text preceding the current entry.
Page	Location from which the entry originated.

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Table IV. Types of analysis that can be done with ADL

1	Input and output rates, *i.e.,* time it takes a user to enter a message and "speak" or output a message.
2	Efficiency of vocabulary organization. e.g., determining a user' s selections and the locations in the device to assist in redesigning displays and/or reorganizing vocabulary.
3	Location of device and user-related errors to determine errors in selections, misspellings, *etc.*
4	Optimal delays for a scanning interface to compare accuracy between scanning interfaces.
5	Efficiency measures, *e.g.,* measures of selection savings and error rates.
6	Linguistic output of AAC device (*e.g.,* words per minute, utterances per hour, word usage, utterance length and complexity) using the Language Activity Monitor with SALT or the AAC-RERC' s ACQUA to analyze characteristics of language generated by users.

number of PRC's devices. Supported in their efforts by funding from the National Institutes of Health, PRC is now embarking on a study that explores the feasibility of the LAM for digitized speech devices.

In the clinical research community, ADL activities are also underway. Katya Hill is in the final phases of her dissertation (University of Pittsburgh) and is investigating the efficacy of automated data logging for language analysis. Information about the development of the LAM and ADL as an approach to the representation of the language activity of augmented communicators is available at http://www.edinboro.edu/cwis/speech/professors/kjhill/homepage/kjhhome.html and http://ww.prentrom. com/aacassessment/performmeas.html

The efficacy for using ADL as a clinical tool is not yet clear. First, ADL is not readily available across AAC devices. Second, the promise that ADL will enable clinicians to collect important data about device use, as one component of a CPA, is confounded by a plethora of unresolved and very important issues, including the following:

1. The validity, reliability and utility of ADL as a component of a CPA in AAC is not well established.

2. While ADL in AAC devices can create a continuous log of communicator and machine activity and collect data anywhere and at anytime, remote monitoring of performance does not free the researcher or the clinician from the direct observation requirements of a CPA.

3. ADL collects data emanating from a communication device only. It does not collect data on the communication partner's behavior. It does not provide information about the use of other modes or the context. Currently ADL cannot track these systems. By itself, it is not a valid measure of an augmented communicator's communication performance.

4. ADL may underestimate or misrepresent an augmented communicator's true linguistic skills. To overcome the temporal and paralinguistic barriers of modern AAC technologies, AAC device users often reduce utterance complexity, omit words to facilitate interaction, use tactics (*e.g.* abbreviation) and construct messages using multiple modalities. Thus, results from automated data logging, particularly when supporting observations are absent, must be regarded with caution.

5. There are ethical concerns about determining "whose words" are reflected in ADL data, how digital information is stored and the value of remote monitoring of performance. Other concerns relate to how data is used and shared with others, including third-party payers. [The next issue of *Alternatively Speaking* will address issues that relate to privacy in CPA from the perspective of augmented communicators and their advocates.]

Governmental

Heads up!

In the United States, the HCFA (the Health Care Financing Administration) is preparing to issue regulations that will impact the clinical practice of all AAC professionals. These regulations will address privacy issues with regard to the electronic transmission of clinical data. They are in response to the Health Insurance Portability and Accessibility Act (HIPAA) passed by Congress with bipartisan support in 1996. The regulations are meant to standardize the format in which clinical data are electronically transmitted and to insure that their storage and use maintain the client's/patient's right to privacy. This is an increasingly monumental task.

According to Arthur W. Williams, III, a consultant to the American Speech-Language-Hearing Association charged with following the progress of the proposed regulations, "A train is coming down the track that has monetary and compliance implications associated with the regulations and it is not going to stop. Service providers need to become aware of the situation and to ready themselves to respond."

Reportedly, HCFA is taking a look at issues related to all aspects of the clinical data storage and transmission process, and investigating what security features need to be used at the level of the practitioner and other entities:

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The AAC-RERC

CADL on CPA

The Communication and Assistive Device Laboratory (CADL) at the University at Buffalo, in collaboration with Enkidu Research, is conducting several interrelated experiments on the evaluation and enhancement of communication rate. According to Higginbotham:

> To develop AAC technologies that over-come current communication rate restrictions of AAC devices, it is necessary to specify what restrictions currently exist and what speeds augmented speakers need to achieve to sustain non-problematic social interactions. Appropriate communication and interaction speeds appear critical for competent communication performance and academic, social and employment success. However, we know little about optimal rates, or how recent AAC innovations affect interaction performance. To better understand the temporal aspects of communication, it is necessary to study various aspects of production, comprehension and interaction performance.

To do so, however, required Higginbotham and colleagues to identify and develop tools that could automate the CPA process.

The research

Current research underway at CADL focuses on three areas:

1. **Interactive Communication Rate**. They are developing transcription techniques to analyze interactive communication rates, including an analysis protocol that segments talk into "meaning units" (*e.g.*, clauses, phrases). They are comparing a "meaning unit" approach to a standard "words-per-minute approach" to see whether it can accurately portray interactions between augmented and natural speakers. Included are multimodal expressions, telegraphic utterances and co-constructed events. They will investigate how communication devices affect communication speed and utterance production during conversation.

2. Narrative Comprehension. CADL researchers are determining the opti-mal speech output rates needed by listeners to comprehend narratives presented by synthetic speech (*i.e.,* Macintalk Pro). As part of her dissertation, Kim had 50 listeners complete a battery of narrative compre-hension and subjective judgment tasks to determine the effect of communication speeds on comprehension ability. Initial results show discourse comprehension is worse at speech rates of 9-10 wpm and best at rates of 70 wpm. Comprehension of synthesized speech passages begins to decline at faster speech rates.

3. Acquisition of Scanning Skill. Researchers are evaluating the communication speeds associated with scan-ning techniques and examining the course of scanning skill acquisition. They are analyzing data from three groups of college students who have spent 15 hours learning to use a variety of scanning displays: (1) a traditional frequency optimized letter matrix; (2) a letter matrix with word or letter prediction and (3) a ten key "ambiguous keyboard." For the study, each device automatically adjusted scanning intervals based on user performance. The analysis will focus on both objective performance measures (speed, errors, efficiency) and the students' subjective responses to the technologies.

The tools

Some of the tools being used to conduct these investigations are:

1. Digital transcription tools. CADL researchers convert videotaped recordings of conversation into a digital format using *Dazzle Digital Video Creator (*an easy to use, consumer level product that is attached between the VCR and computer). Then they use *Sonic Foundry's SoundForge XP* to transcribe their digital video and sound files. By displaying both acoustic waveform and the video image, sound and gesture can be located, marked and transcribed. They enter transcriptions as annotations that can be exported, along with timing information, into a spreadsheet and statistic program. This approach reduces transcription time by *at least one-half* as compared to traditional methods. Researchers also use *QSR Nvivo*—software to facilitate discourse analysis and provide sophisticated coding, visualization and computation facilities.

2. Logfile format and analysis. Researchers have developed an AAC device logfile format which supports most common data collection requirements and at the same time provides an extendable framework for customized logging needs. Also, the *Augmentative Communication Quantitative Analysis* (ACQUA) analyzes logfiles and is available online. It provides over 30 statistics, processes multiple files and outputs to Microsoft Excel and other statistical applications to analyze data at machine event, user event, word, and utterance levels. ACQUA can analyze PRC's LAM files. CADL has organized a working group of RERC researchers and commercial manufacturers to further specify the function and structure of logfiles.

3. AAC device simulator. *The Augmentative Device Simulator* (ADS) emulates and records the performance of various AAC device configurations and has reconfigurable text and graphic layouts and a logfile generator. CADL will work with individuals wishing to use ADS to pursue research and other projects.

4. Usability assessment tools. Researchers have developed a set of *usability tools* for AAC device assessments. It includes procedures for measuring selection savings and comparing linguistic features of device output to spoken utterances, a usability questionnaire and interview protocols. They are setting up a database to catalog user-reported problems related to device use.

For updates on research and tools, go to http://aac.buffalo.edu or http://www.aac-rerc.com/performance.html or contact Dr. Higginbotham cdsjeff@buffalo.edu

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Thanks also to Katya Hill and Barry Romich for their reviews of some articles.

Websites on CPA in AAC

http://www.aac-rerc.com/performance.html

http://www.edinboro.edu/cwis/speech/professors/kjhill/homepage/kjhhome.html

http://aac.buffalo.edu

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The practitioner. The regulations will address how clinicians and researchers store electronically generated clinical data in ways that are equivalent to a locked cabinet, how they protect access to data, and how they store and use electronic data that they convert to a physical form (print out).

The entities viewing these data. The regulations will address how third-party payers and others involved in the claims payment process secure the transmission of data they require, protect these data over time and use data they receive.

Currently, it looks as though all data that is either collected or prescribed by clinicians and incorporated into an electronic clinical record or printed from an electronic clinical database will fall under the purview of this regulation.

What does this mean?

The regulations being promulgated have implications for speech language pathologists, occupational and physical therapists, physicians and other service providers. In the area of AAC, the regulations will have an impact on all data developed or collected electronically (*i.e.*, reports written on computers, data collected by AAC devices, analysis tools and so on). Service providers will have to come into compliance with these regulations and there will be penalties for those who fail to comply.

Williams recommends that AAC professionals become familiar with the proposed regulations and look at the history of their development over the past four years. He suggests visiting the following websites for current information.

http://aspe.os.dhhs.gov/admnsimp/ This government site utilizes Frequently Asked Questions (FAQs) to present information. Scroll down to the *Answers to Questions About Proposed Rules* section, to see specific references to security standards.

http://www.jhita.org This site, which is maintained by the Joint Healthcare Information Technology Alliance (JHITA), has a good summary of the proposed rules pertaining to data security entitled *Standards for Privacy of Individually Identifiable Health Information* located under the HIPAA section.

For additional information, contact Arthur W. Williams, III, ASHA, 10801 Rockville Pike, Rockville, MD 20852. 301-897-5700 x4364 or awilliams@asha.org

ASHA CEUS for 2000

Those who registered for ASHA CEUs in 2000 will receive the Quiz with this issue. If you did not, call me [831-649-3050] or email me at sarahb@augcominc.com. Quizzes should be completed and returned **before December 17, 2000** to 1 Surf Way, #237, Monterey, CA 93940. As in past years, assume "No news is good news." This means IF you turned in your quiz on time and DO NOT hear from me by December 15, you passed. ASHA's Continuing Education Department will post your 1.2 CEUs for 2000.

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