Introducing New Faculty from Ohio Universities

In This Issue:

• Functional Communication Camp for Nonverbal Children
• Informed Consent in Clinical Research with Adults with Cognitive
• Mealtime Experiences in Pediatric Feeding and Swallowing Disorders: Caregivers' Perspectives
• Travels of an Auditory Researcher
• Evidence-Based Practice: Where Do We Go From Here?
• Getting Ready for the Next Big Thing in Audiologic Counseling
• The Audiology Counseling Growth Checklist for Student Supervision
• The University of Cincinnati Bioacoustics Lab and Canine Audiology Clinic
• Crisis Intervention Training Effects on Graduate Students' Counseling Perceptions
• Detective work by the SLP: Two Cases of Undiagnosed Neurological Damage
The following Universities have supported the development of this journal and offer programs in Speech-Language Pathology and Audiology:

Bowling Green State University  Ohio University
Case Western Reserve University The University of Akron
Cleveland State University University of Cincinnati
Kent State University University of Toledo
Miami University Baldwin-Wallace College
The Ohio State University The College of Wooster

For detailed information about these Universities go to: www.ohioshla.org, select professional services and then select Ohio Universities.

In The Next Issue

Hearsay is under renovation! Beginning with the next issue, we will be updating the structure of the journal’s featured forums and columns in order to reflect OSLHA’s designated Practice Areas. Each issue of Hearsay will include a column for Health Care, Mental Retardation/Developmental Disabilities, Non-Profit Agencies, Private Practice, Schools, Supervision, and University and Student Affairs. We will retain Hearing Is Believing as our Audiology Column. The forums for Research, Technology, and Getting Down to Business will continue to appear.

To enact this revision, the next issue of Hearsay will not have a specific theme but will be composed around spotlighting each of the columns and forums. We welcome articles that encompass a wide range of subject matter. We invite research and reports on professional techniques or practices regarding any topics that are relevant to the Practice Areas or that pertain to technology and the business aspects of speech-language pathology and audiology.

We invite you to submit articles, to seek out others who might be interested in writing, or to contact the column and forum editors who are listed in the front of this journal to discuss your ideas. Please send submissions for the next issue by e-mail to Laura W. Kretschmer, Ed.D., Managing Editor, at laura.kretschmer@uc.edu, phone 513/558-8514.

Monica Gordon Pershey, Ed.D.
Associate Editor
m.pershey@csuohio.edu
Welcome to Hearsay for 2007-08. The theme for this issue is getting to know the wonderful new or nearly new faculty in the university speech and hearing programs in the great state of Ohio. All the university and college programs in Ohio were contacted for contributions and we are pleased to feature articles from Baldwin-Wallace (Colleen Visconti, Christie Needham, Crysten Skebo & Julianne Wolf), Kent State University (Kate Krival, Erin Redle) the Ohio State University (Laura Justice and Allison Breit), Ohio University (F.C. Jeng), University of Akron (Kris English), University of Cincinnati (John G. Clark and Peter Scheifele). Miami University is represented in the Research Forum by Barbara Weinrich. We look forward to publishing articles from new faculty in the remaining programs in the new (Public) University System of Ohio. (So designated by the new Chancellor, Eric Fingerhut. For information on the USO, go to the web site: http://universitysystem.ohio.gov/)

In the interests of full disclosure, I should mention that the new Kent State University faculty are both recent doctoral graduates from the University of Cincinnati, as is Allison Breit. It would have been very difficult for them to turn me down, but I think you will find that their articles clearly stand on their own. OK, complete disclosure then; four of these articles are on audiology or hearing science topics and yes, I am an audiologist.

There is an additional article that was submitted in response to our request for neurogenic articles about a year ago. The author, James Coyle, is completing his doctorate at the University of Pittsburgh.

If you peruse the Staff page, you will notice some differences that Monica Gordon Pershey, Associate Editor, explains. See In the Next Issue column. We are changing to columns that will feature OSLHA Practice areas. You will note that some of these new forums have editors listed and some do not. If the editorship of a practice area that you are involved in is open, please consider volunteering to help out. Having your name listed as an editor does not mean that you have to write the column but we will encourage you can be on the lookout for manuscripts from your practice area that you know your colleagues would benefit from reading.

Yvonne Gillette and Tina Veale will continue to edit the Technology and Getting Down to Business columns. For those persons who have helped us but chose not to continue as editors, a big OSLHA thank your for your years of service in writing columns and your support in helping to producing a state journal of which we can all be proud.

Laura W. Kretschmer, Managing Editor

OSLHA Director of Public Information
HEARSAY is a publication of the Ohio Speech–Language–Hearing Association for the benefit of its membership and other individuals committed to the highest quality of service to people with communication challenges.

The purpose of this journal is to expand the level of information, research, and clinical science in our professions. It is provided as a vehicle for reporting studies relevant to human communication and its disorders and to provide information on the activities and affairs of members and directors of the Ohio Speech–Language–Hearing Association. Each issue contains (1) invited articles on journal themes or other topics important to state and national issues, (2) peer reviewed research articles, and (3) caucus columns or articles on topics of interest to audiologists and speech-language pathologists employed in a variety of settings, as well as pre-service students, whether undergraduate or graduate.

The appearance of advertising in HEARSAY does not constitute a guarantee or endorsement of the quality or value of such products or of the claims made for it by its manufacturer.


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Claims for missing issues can be honored only up to 3 months for domestic issues and 6 months for foreign addresses. Subscribers should notify the OSLHA Office Administrator of any change in mailing address. Single copy and back volume information is available upon request. Current subscription rates are: Individual rates—$15 per year; Institutional and library rates—$25 per year; Foreign—$25 per year (individual or institutional).

Submissions to any of the HEARSAY forums or columns are encouraged. Material may be sent to the OSLHA Executive Director c/o the specific forum or column editor for consideration. Individuals interested in submitting material to the Research Forum should follow the guidelines outlined below. All submissions will be considered for publication. Articles submitted to Research Forum are carefully reviewed. Membership in the Ohio Speech–Language–Hearing Association is not a requirement for contributors. No manuscript or other material or content that has been published or is under consideration elsewhere should be submitted. Material should be submitted electronically, saved as a Word document (.doc or .docx). Images should be included separately electronically. All electronically images need to be provided at their actual size at 300 dpi and formatted as a jpeg, tiff or eps. A high quality hard copy may be provided to be scanned, either black and white or color but electronic copies are preferred. A black and white head shot photo of all authors would be appreciated as well.
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Colleen F. Visconti  
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Crysten M. Skebo  
Julianne Wolf

Baldwin-Wallace College

Abstract

Purpose: The purpose of the present study was to determine if enrollment of children who are functionally nonverbal in an intensive summer camp program involving interaction with peers and highly responsive clinicians would lead to improvement in functional communication.

Methods: Ten children (ages 3 years 5 months to 14 years) with a variety of communication disorders (e.g., speech/language disorder, autism, apraxia, Angelman’s syndrome, and cerebral palsy) were randomly assigned to one of two groups for an intensive summer functional language camp. The children attended the functional communication camp for two hours, three days a week, for four consecutive weeks. Pre- and post-evaluation measures were collected. During the camp the children participated in individual activities along with small and large group activities provided by two trained undergraduate students and a licensed and certified speech-language pathologist. In addition, once a week, picture book carryover activities were sent home with each child.

Results: The results demonstrated significant increases in the use of functional communication. Specifically, the children improved by attempting to use more communication functions, using more sophisticated modes of communication, using more successful communication attempts, and attempting to communicate with both familiar and unfamiliar communication partners.

Clinical Implications: The results suggest that an intensive speech-language therapy approach that incorporates peer interaction and highly responsive clinicians can lead to significant improvements in the use of functional communication by children who are functionally nonverbal.

Introduction

For most young children, social interaction with peers takes place during play time. However, for children with deficits in communication, play time can be, and frequently is, very difficult. Difficulties in the initiation of play and entering peer groups have been studied in children with specific language impairment and autism. Children with language impairments have been found to demonstrate difficulties in social interaction and have less sophisticated play skills than their typically developing peers (DeKroon, Kyte, &Johnson, 2002). The more severe the deficit in communication, the more severe the social and play deficits tend to be.

Children with autism spectrum disorders (ASD) demonstrate significant deficits in social interaction and communication skills. Communication skills in children with ASD have been found to be highly correlated with the development of social behaviors (Garfin & Lord, 1986). Children with ASD have been found to use a wide variety of conventional and unconventional forms of communication (Keen, Sigafos, & Woodyatt, 2005). Furthermore, “children with autism may rely on idiosyncratic, informal, or problematic behaviors to communicate” (Keen et al., 2005, p. 19). When examining teacher responsiveness to the communicative attempts of children with autism, Keen and colleagues (2005) found that 38% of the time teachers did not respond to the children’s communicative attempts, even though they identified those behaviors as intentional communication forms on a checklist. The findings suggested that intervention should focus on training adults to attend to acceptable “forms of prelinguistic behaviors as a means of increasing the child’s communicative effectiveness and facilitate the transition from prelinguistic to more symbolic forms of communication” (Keen et al., 2005, p. 31).

The role of peers in language intervention has also been examined. DeKroon and colleagues (2002) studied children with language impairment and compared their play skills to those of typically developing peers, as well as to peers with language impairment. The children with language impairment took turns participating in two different play groups: one with children who were typically developing and another with peers who also had language disorders. It was hypothesized that the children would engage in play that is more successful with typically developing peers than language impaired peers, but the findings did not support this. The language skills of the children did not determine the quality of the pretend play they participated in. The results suggested that children with language impairments may benefit from interventions that include peers with or without language disorders (DeKroon et al., 2002).

Based on the previous research, a language intervention approach incorporating peers and highly responsive adults should lead to improvements in communication and social interaction. Therefore, the purpose of the present study was to determine if enrollment of functionally nonverbal children in an intensive summer camp program involving interaction with peers and highly responsive clinicians would lead to improvement in functional communication. Specifically, the study examined whether the children attempted to use more communication functions,
use more sophisticated modes of communication, would be more successful in their communication attempts, and whether they would attempt to communicate with both familiar and unfamiliar communication partners as a result of their participation in the summer camp.

Methods

Participants

The Functional Communication Speech Camp was developed to provide services to children with nonverbal communication needs, with the goal of increasing communication, whether it was verbal or nonverbal. The children that participated in the camp were self-referred from the metropolitan Cleveland, Ohio area. These children ranged in age from 3 years 5 months to 14 years and were divided into two groups of five. Children were selected for the camp on a first-come, first-serve basis. The only enrollment requirements were that the children were functionally nonverbal at the beginning of the camp and were between the ages of 2 and 18 years. For the purpose of the camp, functionally nonverbal was defined as not using verbal communication to convey wants and needs within the home environment. Both groups of children attended the speech camp for two hours, three days a week for four consecutive weeks.

Children were randomly assigned to one of two groups based on when they signed up for the camp and scheduling convenience for the family. Group 1 consisted of five boys, ages 3 years 5 months to 5 years (M = 4.45 years or 53 months; SD = 0.63 years or 7.57 months), while Group 2 consisted of two girls and three boys, ages 3 years 6 months to 14 years (M = 8.2 years or 99.40 months; SD = 3.85 years or 46.26 months). The children presented with disorders including speech/language disorder, autism, apraxia, Angelman’s syndrome, and cerebral palsy. Two of the ten children were blind and both of these children were in Group 2. Seven of the children had previous experience with some form of augmentative/alternative communication. Specifically, two of the children used high-tech dynamic screen devices and the other five used traditional picture exchange communication. Of the two children that used high-tech dynamic screen devices, one had been using it inconsistently for several years and the other had just received the device and had not begun to use it.

The camp was led by a certified and licensed speech-language pathologist and two undergraduate students majoring in communicative disorders who were entering their senior year. One undergraduate clinician had completed three semesters of clinical experience and the other undergraduate had completed two semesters. Both of the undergraduate students participated in six hours of training prior to the beginning of the camp, where they learned about communication devices and methods of treating children who are nonverbal.

Procedures

Each child participated in an individual pre-camp evaluation. This evaluation was two hours in length and involved the child, the parents, the speech/language pathologist, and at least one undergraduate clinician. The evaluation used direct assessment/observation along with an intensive parent interview, which included the Functions of Communication Checklist (Appendix A). Specifically, the parents were asked to provide a list of communication partners, describe how their child communicated with each of those partners, and report if the child attempted to use a variety of functional forms of communication (e.g., greetings, manners, asking and answering questions, initiating turn taking, etc.). For each function of communication that the child attempted, the parents listed what mode of communication was used (e.g., verbal, gestural/sign, AAC, physical contact, etc.), if they were successful, and whether that form of communication was used with familiar and/or unfamiliar communication partners.

During the assessment, probes were conducted to assess each of the items on the Functions of Communication checklist. These items were coded by the undergraduate student clinician. The skills included on the checklist were meant to address the many individual components needed to participate in functional communication within the home environment. The data obtained from the parents regarding functional communication were combined with the assessment of functional communication, with the lower of the two scores being used for data analysis purposes.

Therapy goals were developed for each child through the collaboration of the child’s parents, the speech-language pathologist, and the undergraduate student clinicians. The children then participated in the Functional Communication Speech Camp and were reassessed at the end of the camp using the same measures.

The daily routine of the Functional Communication Speech Camp remained consistent throughout the camp. All children participated in a large group time upon arriving at camp. This time focused on increasing instances of verbal turn-taking and improving pragmatic communication among the campers. Following this time, the children were separated into three groups. One group worked on pre-literacy activities, another group worked on small group play, and the third group worked on an individual art activity. The children were rotated through these activities for the majority of the two-hour session. During this time, the children had a minimum of 15 minutes working one-on-one with a clinician. The remainder of their time was spent in a small group with two to three of their peers. Following the work session, the children were given another period of large group play time, in which they either engaged in free play or a group game (i.e., musical chairs, ball games, etc.) led by the undergraduate student clinicians. The remainder of the session was spent in a “circle time” which included a snack and reading a themed children’s picture book.
Daily Communication Logs (Appendix B) were developed to inform the parents/caregivers of their child’s progress and to assist them with communication at home. These communication logs listed specific examples of utterances produced or used by the child during the camp, activities completed, and behavior monitoring. There were also comments regarding special accomplishments (e.g., a good painting or making a new friend) for the parents to discuss with their child at home. The parents were then invited to write any questions or observations that they had regarding their child’s communication.

Once a week, picture books were sent home. These books came in two forms as appropriate for each child’s language skills. Some of the books were created by the speech-language pathologist and undergraduate student clinicians to facilitate an increase in the length of the child’s utterances when commenting at home. These were colored and assembled by the children as part of their individual work. The other books were published children’s books that were adapted to reflect the individual child’s expressive skills with a picture computer program (e.g., if the child was using two word phrases to request, then two word phrases were developed to follow the story with pictures and placed into the book itself).

**Results**

Pre- and post-test data were collected using the Functions of Communication Checklist. All of the children demonstrated an increase in communication following the Functional Communication Speech Camp. Specifically, when examining the attempts children made on the skills listed on the Functions of Communication Checklist, the children demonstrated improvements on all of the items except asking and answering questions containing where, who, why, and when, and following nonverbal turns. Paired sample t-tests were conducted to determine whether the children attempted more functions of communication following treatment. The results indicated significant differences (p< .05) on the following functions of communication items: gaining attention, greeting, social answers, social questions, manners, more, and comments (see Table 1).

A second set of paired sample t-tests was conducted to determine whether the mode of communication varied for each of the functions of communication following treatment. The modes of communication included the following (from least to most sophisticated): stopping the activity, physical contact, sign or gesture, verbal production with sign or gesture, AAC, and verbal production alone. Improvements were found in all of the functions of communication except asking and answering where, who, why, and when questions. The results indicated significant differences (p< .05) on the modes of communication for the following functions of communication items: gaining attention, greeting, social answers, closure, manners, more, yes/no differentiation, and comments (see Table 2).

The child’s success in improving functions of communication was analyzed pre- and post-treatment. Again, improvements with regard to the successfullness of communication were noted in all of the functions of communication except asking and answering where, who, why, and when questions and following nonverbal turns. Paired sampled t-tests found significant differences (p<.05) for the following functions of communications: greetings, social answers, social questions, closure, manners, more, yes/no differentiation, and comments (see Table 3).

The final area examined was the child’s familiarity with the communication partner. Once again improvements with regard to the familiarity with the communication partner were noted for all of the functions of communication except asking and answering where, who, why, and when questions. Paired sampled t-tests found results approaching significance on several variables, such as social answers, manners, and yes/no differentiation (p= 0.051), with significant differences found on the use of more (p = 0.025).

**Discussion**

Ten children participated in the Functional Communication Summer Camp that provided interaction with peers, highly responsive clinicians,
and an intensive individualized therapy program targeted at increasing their communication skills. Pre- and post-camp test results revealed that all of the children used more communication functions. This may be attributed to the structure of the camp itself. The client to clinician ratio was 5:3, which allowed the clinicians to facilitate interaction within small groups and effectively manage individual behaviors during large group play time and circle time. In addition to the client to clinician ratio, the consistency of the camp routine allowed the children to quickly adjust to each other and their environment and begin making progress in a relatively short period of time. Campers were individually taught to use the communication functions during individual intervention periods. These communication functions were immediately carried over to small group and large group activities. In addition to immediately practicing the same communication functions in both individual and small group settings, communication with the families in the form of the Communication Log and take-home activities allowed for carryover of activities and communication to be facilitated at home. This carryover was consistently reported by parents/caregivers over the course of the camp.

The manner in which the campers communicated was also addressed. At the initiation of the camp, all children were functionally nonverbal. Throughout the course of the camp, the campers were exposed to a variety of modes of communication, such as verbal communication, gestures, signs, picture exchange systems, and AAC. All of the participants demonstrated a change in their communication, with more sophisticated modes of communication being attempted. Once again, this was most likely due to the structure and schedule of the camp itself. It should also be noted that all of the children participating were nonverbal and passive communicators. During the camp, one of the techniques actively utilized was silence. The speech-language pathologist and/or the undergraduate student clinicians would create motivating activities which required communication. These activities were then followed by silence as the clinician waited for the child’s communication attempts. While it is not possible to determine if this strategy directly influenced the change in the sophistication of communication, it is one possible explanation.

Additional improvements were also noted in the campers’ successful-

![Table 2: Modes on Functions of Communication](image1)

<table>
<thead>
<tr>
<th>Functions of Communication</th>
<th>Pre-test</th>
<th>Post-Test</th>
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<tbody>
<tr>
<td>Gains attention</td>
<td>M = 3.60 (SD=.2.99)</td>
<td>M=6.30 (SD= 1.25)</td>
</tr>
<tr>
<td>Greeting</td>
<td>M = 3.10 (SD=3.38)</td>
<td>M=6.00 (SD= 1.05)</td>
</tr>
<tr>
<td>Social Answers</td>
<td>M =2.80 (SD=3.62)</td>
<td>M=6.40 (SD= 0.97)</td>
</tr>
<tr>
<td>Closure</td>
<td>M = 3.80 (SD=3.39)</td>
<td>M=5.90 (SD= 1.10)</td>
</tr>
<tr>
<td>Manners</td>
<td>M = 2.10 (SD=3.38)</td>
<td>M=5.20 (SD= 2.82)</td>
</tr>
<tr>
<td>More</td>
<td>M = 3.60 (SD=3.31)</td>
<td>M=6.70 (SD= 0.48)</td>
</tr>
<tr>
<td>Yes/no differentiation</td>
<td>M = 3.40 (SD=3.60)</td>
<td>M=5.80 (SD= 2.25)</td>
</tr>
<tr>
<td>Comments</td>
<td>M = 1.40 (SD=2.95)</td>
<td>M=4.00 (SD= 3.46)</td>
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![Table 3: Successfulness on Functions of Communication](image2)

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<tr>
<th>Functions of Communication</th>
<th>Pre-test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeting</td>
<td>M = 0.50 (SD=.527)</td>
<td>M=1.00 (SD= .00)</td>
</tr>
<tr>
<td>Social Answers</td>
<td>M = 0.30 (SD=.483)</td>
<td>M=1.00 (SD= .00)</td>
</tr>
<tr>
<td>Social Questions</td>
<td>M = 0.10 (SD=.316)</td>
<td>M=0.50 (SD= .527)</td>
</tr>
<tr>
<td>Closure</td>
<td>M = 0.50 (SD=.527)</td>
<td>M=1.00 (SD= .00)</td>
</tr>
<tr>
<td>Manners</td>
<td>M = 0.30 (SD=.483)</td>
<td>M=0.80 (SD= .422)</td>
</tr>
<tr>
<td>More</td>
<td>M = 0.60 (SD=.516)</td>
<td>M=1.00 (SD= .00)</td>
</tr>
<tr>
<td>Yes/No Differentiation</td>
<td>M = 0.50 (SD=.527)</td>
<td>M=0.90 (SD= .316)</td>
</tr>
<tr>
<td>Comments</td>
<td>M = 0.20 (SD=.422)</td>
<td>M=0.60 (SD= .516)</td>
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ness of communication and their ability to communicate with both familiar and unfamiliar partners. Children were given practice using communication functions with the speech-language pathologist and the undergraduate student clinicians. These functions were then directly reported to the parents/caregiver on the Daily Communication Log. It should be noted that the improvements in the successfulness of communication with a variety of communication partners were demonstrated towards the end of the intensive summer camp program. This is possibly due to the fact that the children developed the skills to be successful communicators during the camp sessions and then carried over these communication skills to a variety of situations within the camp setting and then with a variety of communication partners outside of the camp setting.

Significant changes occurred in all of the campers’ communication skills during the Functional Communication Camp. Intensive intervention utilizing individual therapy, along with peer interaction in small and large group activities, directly contributed to these changes. However, it is difficult to determine which part of this intervention was responsible for the changes seen. It is hypothesized that the combination of the interventions demonstrated by the participants, since all of the participants had previously received individual communication intervention.

In the future, research should continue to examine programming for nonverbal communicators. Some possible areas of research include examining the effect of this type of program for a longer period of time; instead of a month-long summer camp, possibly create a semester long program. Many of the parents involved expressed their desire to continue the program throughout the school year. Additional areas of research may include the effect of typically developing peer models on intensive intervention for the nonverbal communicator. In addition, the parents’/caregivers’ perceptions of their child’s communication abilities should be assessed. Finally, the use of literacy in intervention with the nonverbal communicators should be directly assessed.

In conclusion, all of the children who participated in the Functional Communication Summer Camp demonstrated improvements in functional communication. The children attempted to use more communication functions. In addition, their modes of communication became more sophisticated. They were using signs/gestures, AAC devices, and verbal communication more frequently. The children were also more successful in their attempts to communicate. Furthermore, they attempted to communicate not only with familiar communication partners, but also with unfamiliar partners.

References


Appendix A
Baldwin-Wallace College
Speech Clinic
Summer Speech Camp Assessment

Client Name: _________________________________________________________________________________________________
Birthday: _______________________________________________ Age:________________________________________________
Medical Diagnosis: ___________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
Speech/Language Diagnosis: __________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
Current Modes of Communication: (patient preferred mode, circle family preferred mode)
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________

People children encounter everyday:

<table>
<thead>
<tr>
<th>Person:</th>
<th>Role:</th>
<th>Mode of Communication</th>
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Are there any people who the child shows interest in communicating with, but the child is not successful in communicating with:
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
### Functions of Communication:

<table>
<thead>
<tr>
<th>Function</th>
<th>Attempts (Y/N) Prompt</th>
<th>Mode(s)</th>
<th>Successful (Y/N)</th>
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Requesting:

Question words used: ____________________________________________
Number of words per request: ___________________________________
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Daily Schedule:

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<tr>
<th>Time of Day</th>
<th>Activity</th>
<th>People involved</th>
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Parents Goals for Summer Session:

1. ________________________________________________________________________________
   ________________________________________________________________________________
   ________________________________________________________________________________

2. ________________________________________________________________________________
   ________________________________________________________________________________
   ________________________________________________________________________________

3. ________________________________________________________________________________
   ________________________________________________________________________________
   ________________________________________________________________________________

Family Needs for Education:

• Programming for current communication aid
• Parents       Grandparents
• Siblings       Caregivers
• Babysitters    Others-Specify_________________________
• Creation of communication aid for home
• Creation of communication aid for caregivers
• Use of “My Communication Book”
• Creation of “My Communication Book”
• Development and use of leisure activities for child
• IEP/MFE information
• Networking with other parents
• Networking for siblings
Other:____________________________________________________________________________
______________________________________________________________________________

Other:____________________________________________________________________________
______________________________________________________________________________
Appendix B
Daily Communication Log

Date: ___________________

Today I had a:                       good                              great                        so/so                          Day

Here are some things I did:

Here are some things I said:

Be sure to ask me about:

Consider submitting your research or clinical article to HEARSAY

Contact Laura Kretschmer
(laura.kretschmer@uc.edu)
University of Cincinnati
513-558-8514
Given the need to study the efficacy of treatment (American Speech-Language-Hearing Association, 2005), an increasing number of speech-language pathologists (SLPs) may be planning clinical research. Clinical studies designed to empirically examine patient responses to treatment require approval from a governing Institutional Review Board (IRB). An IRB is a local committee formally designated by the United States Department of Health and Human Services Office for Human Research Protections (OHRP) to approve, monitor and review biomedical and behavioral research and protect the rights and welfare of human subjects. Unless the design of the study exempts it from the requirement (e.g., data collected from existing records in such a way that subjects cannot be identified), a researcher must obtain the informed consent of potential subjects, based on the OHRP Code of Federal Regulations Title 45 Part 46 (45 CFR 46) “Protection of Human Subjects” (Department of Health and Human Services, 2005). Informed consent involves establishing that an individual has been provided with relevant information regarding the study, demonstrates a level of comprehension or appreciation of this information sufficient for making a decision about consent, is able to make this decision in the absence of coercion, and has the cognitive capacity to make this decision (Beauchamp & Childress, 1994; Savage, 2006).

Clinical researchers in several practice areas (e.g. adult traumatic brain injury and stroke) are likely to study adults who have cognitive or communicative difficulties. By definition under Subpart A of 45 CFR 46 (also known as the Common Rule and adhered to by most Federal agencies sponsoring human subjects research), such individuals are members of a vulnerable population. Although there are specific guidelines for managing the consent process with some vulnerable populations, including (a) children; (b) pregnant women, fetuses and neonates; and (c) prisoners, the approach to informed consent for individuals who may have cognitive impairment is not explicitly prescribed. Nevertheless, researchers are obliged to carefully consider issues of vulnerability alongside concerns for autonomy when enrolling individuals with cognitive (or communicative) impairment in clinical research studies. Together with information explaining the rationale for the study and its methodology, the IRB will require a clear plan for how the investigator will obtain informed consent. The purpose of this article is to provide clinician-researchers with an initial discussion of selected issues inherent in obtaining informed consent from potential subjects who may also be persons with cognitive impairment.

Informed Consent

The concept of informed consent is built upon the foundation of three guiding principles governing human subjects research: autonomy of the individual, beneficence, and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Autonomy of the individual refers to the capacity of people to make independent decisions without controlling influence from others. Beneficence ensures the proposed project’s potential risks and benefits are reasonably balanced and presented fairly to prospective subjects for incorporation in their decision (Levine, 1986). Justice refers to the integration of fairness throughout the research plan and involvement of human subjects. For example, subjects should be selected because they represent a population likely to benefit from the research. Additionally, research should be designed so that the participation of subjects is not wasted on projects whose results have little chance of being meaningful (e.g., studies with too few participants, without control groups, or with other methodological deficiencies). Ensuring adherence to these criteria in clinical research requires careful planning and implementation of the informed consent procedure. The following paragraphs will provide some examples of how clinical researchers might approach informed consent with adults who are cognitively impaired.

Who should obtain consent?

In clinical research, the researcher may have a therapeutic relationship with the prospective study participants; e.g., the researcher is the speech-language pathologist managing their care. Patients under a clinician’s care expect the practitioner to have their best interests at heart and may not always understand the difference between clinical care and research activities (Appelbaum, Lidz, & Grisso, 2004). Appelbaum and colleagues (2004) described this as the “therapeutic misconception”. In a typical example, a patient listening to their therapist describe a research project might be more likely to believe, perhaps mistakenly, that the research will benefit her than if a less involved person presented the research information. To ensure the ethical consideration of autonomy is preserved, clinical researchers should not share the role of researcher and therapist; if this is impossible, the researcher should assign a disinterested party to obtain consent.

Determining Capacity and Competence to Consent to Participation in Research

The principles of autonomy and beneficence drive the need to determine a potential subject’s capacity and competence to consent to participation. Conservatively defined, capacity is a health care professional’s
clinical judgment about an individual’s demonstrated ability to analyze information and draw conclusions and competence is a judge’s legal finding regarding the person’s right to make decisions (Marson, 2001). In practice, however, experts use the term capacity to describe the cognitive skills a potential subject uses to provide informed consent in a given situation; the term competence is used to refer to a judgment, either by a health care or legal professional, about whether a person is able to provide informed consent (Appelbaum & Roth, 1982).

In order to judge whether a prospective subject with cognitive impairment is competent to provide informed consent to participate, a researcher needs to assess the individual’s cognitive skills relative to the task of autonomous decision making for the given research study. To assume the patient is not capable (e.g., because he has cognitive impairment, or because he was judged incompetent to make a treatment decision a week earlier during the acute phase of his stroke) is to deny him autonomy. On the other hand, to assume that a patient’s decision-making capacity is sufficient to consent to research without specific evidence about his capacity to consent is not beneficent. Beneficence requires that we do good and protect others from harm; therefore, we should not accept a patient’s autonomous decision if we assess his capacity to be insufficient to appreciate the situation or weigh the risks (Appelbaum et al., 2004). So how should a speech pathologist determine capacity to consent to research?

Because capacity should be assessed as a means to judging competency, clinical researchers should include a procedure for this assessment in the research protocol. Researchers should use an instrument that clearly measures functional capacities related to competence (i.e., evidencing a choice, understanding, reasoning, and appreciation) (Appelbaum & Roth, 1982). Most informal cognitive assessments and even standardized cognitive screening tools such as the Mini Mental Status Examination (MMSE) (Folstein, Folstein, & McHugh, 1975) do not meet this criterion, and were not developed to assess competency.

Sturman (2005) reviewed twelve standardized instruments that claim to measure competency to consent to treatment or research or both. The reader is referred to this review for detailed information about instruments not discussed here (Sturman, 2005). Of the tools reviewed, two stand out based on their design and validation in appropriate populations as instruments that might suit the needs of clinical researchers including patients with cognitive impairment in studies.

The Capacity to Consent to Treatment Instrument (CCTI) (Marson, Ingram, Cody, & Harrell, 1995) assesses competency in relationship to five legal standards:

1. evidencing a choice; 2. making a reasonable decision; 3. appreciating the consequences of a treatment choice; 4. providing rational reasons for a treatment choice and (5) understanding of the treatment situation and choices. The initial development of the CCTI included construct validation in adults with Alzheimer’s disease (AD) compared to a normal, elderly control group (Marson et al., 1995). Although patients with AD have impaired decision-making capacity relative to normal older control groups (Kim, 2001, 2002; Marson et al., 1995) and few may have the capacity for consent, the principles of autonomy, beneficence, and perhaps justice require that researchers make this determination before deciding that proxy consent should be used. The CCTI has also been used to study capacity in patients with Parkinson’s disease (PD) (Dymek, Atchison, Harrell, & Marson, 2001). Compared to a normal control group of older adults, patients with PD performed significantly worse on most legal standards, and as the legal standards increased in complexity, the adults with PD demonstrated increasing incapacity (Dymek et al., 2001). One limitation of the CCTI is the use of vignettes (one about neoplasm, another about cardiac care) as the basis for the questions, which may not elicit the same responses as disclosures related to participation in clinical research. Despite this limitation, the use of the CCTI would be a better tool for assessing capacity to consent in individuals with AD or PD than informal assessment or the MMSE.

The MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR) (Appelbaum & Grisso, 2001) is a more comprehensive assessment than the CCTI. The tool consists of a semi structured interview that assesses a person’s decision making capacities to understand, appreciate, reason and make choices (Appelbaum & Grisso, 2001). Understanding represents the ability to know the meaning of information disclosed; appreciation characterizes the ability to recognize that information applies to the individual being questioned; reasoning describes the ability to compare and describe personal consequences of options and choice reflects the ability to consistently select an option given several opportunities. The MacCAT-CR is designed so that the examiner can modify standard questions to describe the specific research project, and then rate the response to each question according to a three point scale. There is a training manual to help the researcher learn how to present the stimuli and grade the responses. Although the MacCAT-CR has been primarily validated in adults with psychiatric disorders such as schizophrenia (Appelbaum & Grisso, 2001), it has also been tested in patients with AD (Karlawish, 2002) and cancer (Casarett, 2003), among other populations.

**Assent in The Absence of Competence to Consent**

Many individuals with cognitive impairment will not be competent to consent to research; others with communicative impairment may be unable to exhibit competence. Even so, the consent process must remain guided by the principles of autonomy, beneficence and justice. In these situations clinical researchers should still seek the person’s assent and respect his or her dissent, if the subject is capable of providing a clear opinion. Assent is the process of obtaining permission for participation in a research project from a subject who does not possess the legal ability to give consent. Karlawish (2003) recommended that researchers should indicate how measures of decision-making ability demonstrate that a
person can assent, and the informed consent form should include a section to document whether the subject adequately understood key items required for assent, even if a legal proxy is used to consent.

**Who May Provide Informed Consent if the Subject Lacks the Capacity?**

States and IRBs have interpreted the Common Rule’s instruction to ensure that a legal health-care proxy provides research consent for individuals who lack the capacity to consent in different ways (Karlawish, 2003). For example, an IRB may determine that although a Durable Medical Power of Attorney (DPOA) may legally make proxy decisions for treatment, the DPOA may not consent to research on the patient’s behalf unless explicitly instructed to do so in the DPOA document. Other IRBs accept the DPOA as suitable to provide consent for research. Some IRBs will accept a person who is not the DPOA as a surrogate for research consent; this is an individual who although not a legally authorized representative for a subject, is able, in specifically defined situations, to provide research consent. Clinical researchers should determine their governing IRB’s policy and include specific language in the research protocol regarding who may serve as the informed consent for research proxy if the subject lacks the capacity to consent.

**Concluding Remarks**

Additional issues should attract the interest of speech language pathologists who want to apply best practice to the ethical conduct of clinical research. How best to present the risks and benefits of the project, how to ensure that the methodology is optimal for the study and the results will have sufficient meaning, and how to modify the informed consent process for research involving children are among the topics that clinical researchers must consider. Professors in many university departments are often excellent resources for learning more about these considerations. Clinicians who want to collaborate with researchers in academic institutions are likely to find great support for their efforts. Many professors enjoy mentoring and working with clinical researchers; such collaboration in clinical investigations can also alleviate many of the issues of the “therapeutic misconception” (Appelbaum et al., 2004). Finally, for those who work in hospitals, the IRBs of larger institutions are generally glad to provide new investigators with educational materials, training, and answers to questions in the interest of promoting improved protection of human subjects.

**REFERENCES**


INVITED ARTICLE - Mealtime Experiences in Pediatric Feeding and Swallowing Disorders: Caregivers’ Perspectives

Erin E. Redle, Ph.D CCC-SLP
Kent State University

Introduction

The number of children with feeding and swallowing disorders continues to increase, largely due to the increased survival of children with complex medical conditions (Lefton-Greif & Arvedson, 2007). The prevalence of feeding and swallowing disorders is estimated to be as high as 25% in the general pediatric population; in children with developmental delays this number may be as high as 80% (Manikam & Perman, 2000). Speech language pathologists (SLPs) conduct research with and clinically evaluate and treat children with these disorders. Limited research exists in this area and the majority of previous studies have focused primarily on swallowing physiology (Lefton-Greif et al., 2000; Newman, Keckley, Petersen, & Hamner, 2001). Investigations exploring the functional impact of these disorders on families and children are emerging but still provide a limited representation. To provide the best services to these families, SLPs need to recognize the daily struggles and challenges these families endure (Parrish, 1997). Given that SLPs frequently make direct recommendations of modifications and strategies to try during feeding, understanding the caregiver’s experiences with feeding their child is imperative.

Previous investigations identified challenges in finding caregivers besides the parent(s) with skills and patience to feed the child, which results in an increased burden on the primary caregiver (Chamberlin, Henry, Roberts, Sapsford, & Courteney, 1991; Sleigh, 2005). A lack of child care, combined with the additional time spent caring for and feeding the child, limits social opportunities for the family (Franklin & Rodger, 2003). An increased sense of stress was the most commonly reported emotional response to these disorders (Chamberlin et al., 1991; Franklin & Rodger, 2003; Rouse, Herrington, Assey, Baker, & Golden, 2002; Sleigh, 2005). Other emotional responses included guilt (Craig, Scambler, & Spitz, 2003; Rouse et al., 2002), worry about the child’s nutrition (Sleigh, 2005), and fear for the child’s survival (Franklin & Rodger, 2003). The qualitative nature of previous studies on the effects of feeding and swallowing disorders provides a detailed framework to explore the concerns and challenges. These studies have been however, limited by the inclusion of only those children with feeding tubes (Craig et al., 2003) or only those children with specific diagnoses (e.g. cerebral palsy) (Sleigh, 2005). None of the previous studies have included a sample representative of the various types of feeding and swallowing disorders SLPs evaluate and treat, and none of these studies focus on the caregiver’s experiences with mealtimes and feeding.

Drewett and colleagues (2002) examined the interactions of children diagnosed with failure-to-thrive (FTT) and their caregivers during mealtimes through video analysis. Failure-to-thrive is a common diagnosis of children with feeding and swallowing disorders, secondary to their inability to gain weight (Kedesdy & Budd, 1998). There is evidence to support the idea that children with FTT may have subtle oral-motor delays (Reilly, Skuse, Wolke, & Stevenson, 1999). Compared to typical peers, children with FTT consume significantly less food and liquid, are more likely to be fed by their caregiver, and less likely to accept a caregiver placing food into their hand. Although not statistically significant (p=.05), the children with FTT are also proportionally more likely to refuse presentations of food. While the Reilly et al. study illustrates the increased challenge of feeding children with FTT, it examines behaviors from the investigator’s perspective, not from the caregivers’ experience. Additionally, none of the children studied were reported to have diagnosed oral-motor or swallowing disorders.

Currently, few reports of the caregivers’ perspective of the daily challenges associated with caring for a child with a feeding and swallowing disorder exist in the literature. There are no published investigations of the caregivers’ perspective of feeding children with a diverse group of feeding and swallowing disorders. The focus of this qualitative investigation was to explore the caregiver’s experience with feeding their child through their own detailed descriptions.

Methods

Participants

Twenty primary caregivers of children with feeding and swallowing disorders aged 1 year to 4 years, 11 months were recruited for the this study. They were recruited from the large pediatric hospital where their child was referred for feeding and/or swallowing problems. All 20 of the primary caregivers in this study were female; this is consistent with previous investigations (Rouse et al., 2002; Sleigh, 2005). The mean caregiver age was 30.7 years (SD=6.6). Fifteen of the participants were Caucasian, four were African-American, and one was Asian-American. The majority (14) of the participants were currently married, four had never married, and two were divorced. Their highest level of formal education ranged from high school through a master’s degree.
Descriptive information about the children was also collected. The children had a mean age of 33.4 months (SD=11.2). Eleven of the children were male, nine were female. The racial diversity was consistent with that of their primary caregiver. Ten of the children were orally fed while ten were fed via tube (gastrostomy tube and gastrojejunual tube). Information regarding past medical history and specific information about the feeding and swallowing problem was gathered from the oral motor/feeding assessments, video swallow studies, fiberoptic endoscopic evaluation of swallowing (FEES) exams, and interdisciplinary feeding team reports.

Feeding and swallowing disorders were categorized by the terms feeding disorders, oral phase disorders, and pharyngeal phase disorders. Feeding disorders included food refusal, texture selectivity, and inappropriate mealtime behaviors (Arvedson & Brodsky, 2002; Babbitt et al., 1994). Oral phase disorders consisted of deficits in both the oral-motor skills necessary to prepare the bolus and the necessary posterior propulsion of the bolus (Arvedson & Brodsky, 2002; Logemann, 1998). Pharyngeal phase disorders included observed delayed swallow initiation, penetration, aspiration, and the presence of pharyngeal residue (Arvedson & Brodsky, 2002; Logemann, 1998). These three categories rarely existed in isolation and multiple combinations were found. Fifteen children presented with feeding-oral phase disorders, one with an oral phase-pharyngeal phase disorder, and four with feeding-oral phase-pharyngeal phase disorders. Underlying medical etiologies contributing to the feeding and swallowing disorders are presented in Table 1.

Data collection and analysis

Participants were individually interviewed using a semi-structured interview format with an interview guide to facilitate consistency in the questions while allowing the examiner to probe areas in more depth (Patton, 2002). The interview guide contained questions exploring the impact that caregivers perceived that their child’s the feeding or swallowing disorder had on their daily life, including the specific impact on mealtimes. Audio recordings of all interviews were collected and initially stored on a digital voice recorder. Following the interview, the digital interview files were transferred to a computer for storage. The interviews were then transcribed by the primary investigator into a word processing document for editing and storage and then imported into NVivo? software (QSR-International, 2006) for qualitative analysis.

Content analysis was used to analyze interview transcripts. The process of content analysis stratifies the information contained in the interviews into an organized hierarchy through the identification of themes, coding, and categorization of data (Patton, 2002). The procedures for content analysis were consistent with the methods outlined by Patton (2002) but modified to allow for electronic coding. In qualitative research, data are coded to provide a name or label to specific passages representing reoccurring themes and topics (Frankel & Wallen, 2003; Patton, 2002).

Coding was completed in two distinct phases. First, free coding was used to analyze the data. Free coding facilitates an initial review of the data to examine for themes and ideas without predetermined definitions or classifications. These free codes were then analyzed for redundancy and codes with similar features were collapsed into a single code. Operational definitions were created for the second set of codes and the primary investigator then re-coded all of the interview data to ensure all coding was consistent. Using the established codes, a graduate student in speech language pathology coded 33% of the coded data for reliability. These results were analyzed using a Mezzich’s kappa (Eccleston, Werneke, Armon, Stephenson, & MacFaul, 2001); reliability was substantial (I=.70) (Fink, 2003).

Results

Multiple themes were identified across the interviews as part of a larger study. The results presented in this report are specific to the caregivers’ experiences with feeding their child. For all information presented below, feeding refers to oral feedings. The results of the different experiences, along with supporting quotations, are presented below.

Caregiver Experiences with Feeding/Mealtimes

Caregivers illustrated the burden of being the only person to feed their child at mealtimes. One mother stated “It’s usually just [name] and I sitting down… you know there’s no big family meals anymore.” Another mother described mealtime as “I’ll spend 15-20 minutes trying to get her to eat, and her dad’s eating at that time too…until she’s done or I’m too tired of trying to feed her.” In this situation, although the family is together they are not sharing a mealtime experience; rather the mother is focused on caring for the child at the expense of her own eating and interaction with other family members. “He wouldn’t eat for Mike [dad] all day, he would wait for me to get home from work every day.” Mothers also described being the only one in the family with the experience and patience to feed their child, “He [referring to the father] doesn’t work with her at all. And every time I ask him to work with her he gets very frustrated and his answer is [he] just takes it away.”

Parents in this study also described approaches to oral feedings and a variety of approaches were described, largely due to their child’s level of resistance. Some parents described their efforts to facilitate oral eating including more persistent approaches, “He usually clenches his jaw or most of the time and I have to force his food into him” and placing mashed potatoes “on her lips really quick and she’ll lick them off but she gags.” Other parents have relinquished control to the child, describing their experiences “We’ve tried the tricking him and it backfires because if he realizes that’s in it his food he won’t finish eating his regular food” and “you can’t force him to do something because it’s not going to work.” Another mother reported “We just have to totally leave up to her what’s
she’s going to eat and what she’s not going to eat. Because we’ve found in the last two years that if you make her eat something she regresses.” Other caregivers described how they incorporated suggestions from therapists to encourage interaction … “[name] sits in a high chair and we give him food and he usually doesn’t eat it and in order for him to get out of his chair he needs to kiss or lick some part of the meal.”

A unique finding was the reported fear of feeding children with both feeding and swallowing disorders. One mother stated having a child with a feeding and swallowing problem was, in general, “scarier, I mean you are more concerned.” Caregivers were afraid of both the child’s choking and the complications of aspiration. “I’m afraid to give her anything big because I’m afraid she’d really have issues trying to swallow it,” and “She still has an occasional choking…. if she goes somewhere is she going to choke?”

Children’s Responses to Mealtime

Children with feeding and swallowing disorders are known to have negative behaviors associated with feeding and mealtimes (Arvedson & Brodsky, 2002; Babbitt et al., 1994). In this investigation, these behaviors are described directly by the parent. Caregivers frequently described their child’s negative reactions to mealtime using words like “fight” and “battle” to describe their interactions with children with feeding including “Sometimes he sees me getting those out [crackers] and he starts kicking and…you know it’s going to be a fight” and, “We give her food and we try to get her to eat it or taste it… it’s a battle.” Another caregiver described her daughter’s intense reactions to the spoon, “You try to go at her with her spoon and she knows something’s on there she’s, I mean she’s, flying herself backwards and having a fit.” Even the sight of food was reported to elicit negative responses, “Even when he sees food coming he will start to cry.”

Another dilemma for caregivers was the child’s inconsistency with eating. Parents reported their children were inconsistent in what they would accept on a day-to-day basis. “I mean one day he may eat something so we try to give that to him the next day. And he won’t have anything to do with it.” Parent’s also reported inconsistency between what the children would do in therapy and for the parents. “The professionals can get him to eat. But I take him home and I can’t and I try the same things that they do.”

Discussion

This qualitative study explored the experience of feeding a child with a feeding or swallowing disorder from the caregiver’s perspective. Their descriptions are generally consistent with previous investigations on the impact of feeding and swallowing disorders on daily life with some themes novel for the pediatric population emerging. Because the children in this study had feeding, oral, and pharyngeal phase swallowing disorders, the experiences reported are more representative of caregiver experiences for children and families seen on an SLP’s caseload. The experiences of the role as the only one who can feed their child, a fear of feeding their child, altered approaches to feeding their child, the child’s reactions to eating, and the child’s inconsistency are discussed below.

Within the caregivers’ experiences, multiple caregivers reported being the only one to feed their child. This is consistent with previous investigations of limited population (Chamberlin et al., 1991; Sleigh, 2005) This places a significant burden on the primary caregiver. In a child without a feeding tube, a constant concern exists regarding proper nutrition and this burden generally seems to fall entirely on the primary caregiver. Even in children with a feeding tube, the interaction between child and caregiver during oral feeding is a unique experience. (Sleigh, 2005). Many caregivers are willing to take on this challenge as a way of attempting to improve their skills and the care of their child.

The fear of feeding in this study is a combination of concerns regarding aspiration and choking. Concerns regarding choking are described in studies of children with cerebral palsy (Sleigh, 2005) and adults with dysphagia (McHorney et al., 2000). Caregiver concerns about aspiration directly contrast the findings of Craig et al. (2003) in which parents reported they did not believe the children were aspirating and would feed the child unless overt signs of aspiration were present.

The child’s reactions to eating, and more specifically, their negative reactions with eating, are well documented in children with feeding and swallowing problems (Arvedson & Brodsky, 2002; Babbitt et al., 1994; Crist, Dobbelsteyn, Brousseau, & Napier-Phillips, 2004; Turner, Sanders, & Wall, 1994). Descriptions of mealtime as “battles” and “struggles” are also consistent with previous reports (Sleigh, 2005; Turner et al., 1994). However, the caregivers’ responses to these behaviors through their altered approaches to feeding have not been specifically identified in the literature. These altered approaches ranged from more assertive attempts to feed through a resolve to follow the child’s lead. In this investigation no attempt was made to investigate why caregivers used these different approaches and if any, or all, were successful. The motivation and success of altered approaches to feeding should be investigated in further detail.

Implications for Clinical Practice

The inclusion of parents in the therapeutic process is crucial for the treatment of their children with feeding and swallowing disorders (Arvedson & Brodsky, 2002; Manikam & Perman, 2000). Parents routinely receive direct training as a component of treatment programs for children with feeding problems (Birch, Gunder, Grimm-Thomas, & Laing, 1998; Farrell, Hogopian, & Kurtz, 2001; Galensky, Miltenberger, Stricker, & Garlinghouse, 2001; Werle, Murphy, & Budd, 1993). However, the results of this study indicate the experience of the caregivers of these children is very stressful. The SLP must insure he/she understands the family circumstances when a parent is asked to carry out activities and exercises.
Clinicians need to be acutely aware of the caregiver’s level of stress. Previous studies have documented the increased stress in caring for a child with a feeding and swallowing problem (Chamberlin et al., 1991; Franklin & Rodger, 2003; Rouse et al., 2002; Sleigh, 2005). Having a sensitivity to stress does not mean that clinicians should not offer strategies and activities to implement in the home. Rather, clinicians need to use the caregiver’s capacity to help their child as an opportunity to empower the caregiver by interviewing them about their day to day feeding experiences. Providing caregivers with the opportunity to feel they are assisting their child may empower the family, a key component to successful families (Luterman, 1996).

Caregivers must be provided with opportunities to successfully implement therapy strategies. Frequently in clinical practice caregivers are given a “take home recommendation” the therapist has tried with the child during the session or that has never been tried with the child. Clinicians need to provide caregivers the opportunity to try out recommendations with the therapist present to ensure the caregiver understands the recommendation and how to implement it. Further, if the therapist can see the child’s reaction and be available for immediate feedback to the parent, outcomes at home may be significantly improved. Providing positive feedback to the caregiver regarding their efforts is also recommended to increase the caregiver’s confidence and self-esteem (Hanson & Lynch, 1995; Luterman, 1996).

**Summary**

Further investigations of the functional impact of feeding and swallowing disorders, especially from the perspective of the caregiver, are greatly needed. Additionally, we need to find ways to help families to have more successful feeding experiences, both to help the child, and just as importantly to help the caregiver and family. Doing so will improve the child’s long term health and development, and foster an improved parent/child and family/SLP relationship.

| Table 1: Primary and Secondary Diagnoses of the Participants Children |
|---------------------------------|-----------------|-------------------|
| **Diagnosis**                  | **Primary Diagnosis** | **Secondary Diagnoses** |
| **(n=20)**                     | **(n=20, can have 2 secondary)** |
| Shaken baby syndrome           | 1                | 1                |
| Cardiac disorders              | 2                |                  |
| Chiari malformation            | 1                |                  |
| Chronic vomiting               |                  | 2                |
| Congenital neurological disorder| 4                |                  |
| Genetic syndrome               | 4                |                  |
| GERD                           | 3                | 5                |
| Metabolic disorders            | 1                |                  |
| Neural tube defect             | 2                |                  |
| Seizures                       |                  | 1                |
| Sensory Integration Disorders  | 2                | 4                |
| Classified as complex medical disorders* | 4 | |

* Children with >3 secondary conditions were categorized as medically complex.
REFERENCES


Fuh-Cherng Jeng, MD, PhD
Ohio University

This brief article describes the background and travels of Dr. F.C. Jeng who has been employed at Ohio University since September, 2006 as the Principal Investigator at OU’s Auditory Electrophysiology Lab.

Dr. Jeng received an MD degree in at the China Medical University (Taiwan) in 1992 and specialized in Otolaryngology after a four-year resident training at the Cathay General Hospital in Taiwan. He practiced in Taiwan until January 2002 when he began a Ph.D. program in Speech and Hearing Science at the University of Iowa. He completed and received a PhD in 2006. His study interests are in auditory physiology with emphases in evoked potentials and mechanisms of perception of complex sounds in normal and hearing-impaired listeners.

His 2004 pre-dissertation research project on estimating air-bone gaps by using auditory steady-state responses in human subjects with simulated conductive hearing losses was published in the Journal of the American Academy of Audiology. In 2005 the article, “Estimating air-bone gaps using auditory steady-state responses” was selected by the Hearing Journal (2005, 58(6) page 40-46) as one of the best articles published in 2004 in the “Diagnostic Audiology” category. His dissertation entitled “Electrically Evoked Auditory Steady-State Responses (ESSR) in Guinea Pigs”, won the 2005 Student Investigator Research Award from the American Academy of Audiology. This project managed to record the auditory response that reflects the periodicity of electrical stimulation, similar to the type of stimulus produced by the speech processors of cochlear implants. In his dissertation, Dr. Jeng successfully separated the response from the continuous electric stimulus artifact and the background noise by using frequency analysis techniques implemented in custom-made LabView and MatLab programming codes. Furthermore, the divergence of modulation transfer function at low (13 -55 Hz) and high (65 – 320 Hz) modulation frequencies suggested that the sources of these potentials might be different. The electrically evoked responses at the high rates of modulation show a latency of 2.23 ± 0.68 ms, while those to the lower rates show a latency of 22.13 ± 4.84 ms. Based on the latency derived from the modulation transfer function, it is likely that nuclei in the auditory brainstem pathway are important participants of the evoked response elicited by using amplitude modulated electric sinusoids at the higher rates but rather that the cortical, subcortical areas and the thalamus play important roles for the lower modulation rates (Jeng et al., 2007, 2008).

Dr. Jeng continues explanations of his research in his own words:

Since the very beginning of my study of the ear, I dreamed to find a place that would allow me to continue my work in the field of auditory electrophysiology and to fulfill my dream to develop a technique that can be used to record a response that reflects the modulation of speech signals. For this reason, I moved to the School of Hearing, Speech and Language Sciences at Ohio University in 2006 and am currently setting up an Auditory Electrophysiology Laboratory. The Lab is housed in a newly renovated Grove Center at Ohio University and is a state-of-the-art facility which contains equipment to conduct basic and applied research projects. I am currently expanding the research lines that I have been doing during the past five years as well as developing new ideas and research projects.

As a continuation of my research in Iowa, I am currently developing a collaborative research project with my colleagues at the University of Iowa. The purpose of this project is to determine the auditory origin of the electrically evoked auditory steady-state response in human cochlear implant users, to examine the various generator sites and signal processing mechanisms of the elicited response, and to assess the utility of the elicited response to program speech processors for cochlear implant users. Electrical activities of the brain will be recorded from the scalp using a multi-channel recording system in adult cochlear implant users and age-matched normal hearing subjects. Dipole source analysis and modulation transfer functions will be derived to evaluate the various generator sites and signal processing mechanisms of the evoked response in cochlear implant users. Linear regression will be used to estimate and predict the relationship between the electrophysiological measures and behaviorally estimated programming levels. Although the proposed study is primarily concerned with the fundamental principles and potential clinical applications of the elicited response in adult cochlear implant users, it has important implications for young children and those who cannot provide reliable behavioral clinical responses. A better understanding of the signal processing mechanisms of the electrically stimulated auditory system will be helpful in future designs of cochlear implants and of speech processor fitting strategies. Thus, results of the proposed project have strong potential to improve the quality of life for many cochlear implant users.
In addition to the collaborative research project with the University of Iowa, I am currently expanding new lines of research at Ohio University. These projects focus on exploring how our ears and brains respond to sounds and how the sensory information of simple and complex sounds is represented in these responses. Specifically, I plan to continue pursuing investigation of the amplitude-modulation and frequency following responses, lexical-tone elicited responses, and cognitive auditory potentials in normal and pathological populations. These objectively obtained electrophysiological responses will then be compared with each individual’s behavioral measurements. For people who are interested in my research, details can be found on the OU AEP website: http://oak.cats.ohiou.edu/~jeng/jeng.htm

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INVITED ARTICLE - Evidence-Based Practice: Where Do We Go From Here?

Laura M. Justice
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Researchers, practitioners, and program administrators are increasingly interested in identifying and addressing the gaps in knowledge that limit the effectiveness of speech-language pathology services. At least in part, this interest is derived from the paradigm shift towards engaging in evidence-based practice (EBP), in which clinical professionals are expected to integrate knowledge of the empirical evidence in their decision-making practices (Dollaghan, 2004; Fey & Justice, 2006). Of particular import is clinicians’ awareness of and access to specific techniques or approaches that have been shown to “work” with specific populations or under specific conditions. Characteristically, the type of research that attempts to show whether something works (or not) uses experimental methodologies, such as the randomized controlled trial (RCT). In the RCT, the researcher manipulates an independent variable and looks at its presumable causal relation with a particular outcome. Although there are other methodologies that allow one to make causal inferences, the RCT, when conducted well, can provide quite strong evidence regarding the causal relations between a particular treatment (the independent variable) and a specific outcome (the dependent variable).

Large-scale experimental RCTs, in particular, can help us identify important gaps in our understanding of treatment. For instance, in a forthcoming article, Gillam et al. (in press) will report findings from the largest and most rigorously conducted study of the efficacy of language intervention for school-aged children with language impairment (LI). In this randomized controlled trial, 216 children (ages 6 to 9 years) were randomly assigned to one of four conditions. Two conditions featured computer-assisted language intervention (Fast ForWord (Scientific Learning Corporation, 2007), Earobics (Houghton Mifflin, 2007)), one featured academic enrichment, and one featured one-on-one language intervention with a certified speech-language pathologist (SLP). Children in all groups received intervention for more than 45 hours over a 6-week period of daily sessions. Although children showed “clinically significant gains” over time in terms of effect-size estimates on standardized measures of language ability (Cohen’s d values for pretest/posttest comparisons ranged from .56 to .79), there were no statistically significant differences across conditions. While the primary hypothesis tested in this study concerned the use of computer-assisted instruction, the finding of a general null effect for all conditions is quite troubling, as it suggests that one-on-one treatment by a certified SLP using ‘gold standard’ clinical protocols does not accelerate language growth beyond that we see for enrichment or computer-based instruction. Clearly, the results of the Gilliam and colleagues study suggest that RCTs can offer speech-language pathologists important information regarding “what works” in the way of current practice. This type of experimental methodology, however, has yet to be implemented widely among language intervention researchers and practitioners. Therefore, the field of speech-language pathology would greatly benefit from more large-scale “use-inspired research” that establishes testable hypotheses regarding possibly potent approaches to language intervention that can then be studied in controlled trials.

Our own research interests are directly aligned with the EBP paradigm in that we are deeply invested in improving the capacity of clinicians to engage in EBP by asking and answering pressing questions about “what works.” A particular interest of ours is the issue of speech-language therapy dosage. To date, we know surprisingly very little about dosage (see Warren, Fey, & Yoder, 2007) even though many SLPs view dosage as a critical component of treatment delivery. While textbooks today typically steer clear of making explicit recommendations regarding intervention dosage, the tacit assumption in treatment manuals is that dosage matters greatly. For instance, Klein and Moses (1999) describe a management plan for 5-year-old “Darryl” in which four long-term goals will be “achieved within three years” (p. 113), although more specific dosage recommendations are vague (e.g., “individual sessions may range from 15-min to 45-min”). At least in part, this stems from the dearth of information regarding how intervention dosage is associated with children’s language growth. Drawing from the work of Warren and colleagues (2007), we define dosage as the cumulative intervention intensity which consists of the product of three components: (1) dose, (2) dose frequency, and (3) total intervention duration. Dose refers to the number of times the SLP addresses a target or uses a technique during a given therapy session (e.g., 30 models in 30 minutes). Dose frequency refers to how long a therapy session lasts in minutes and how often therapy is delivered throughout a week or month (e.g., 1 hr. per wk). Total intervention duration refers to the time period during which intervention is delivered (e.g., 9 months). Taken as a whole, dosage refers to the overall intensity of intervention that a given child experiences. As Warren and colleagues recently noted, intervention dosage may indeed play a critical role in maximizing the effects of language intervention. Yet, virtually no studies in the literature on child language impairment to date have studied dosage as an independent variable. Therefore, we inform our work through the empirical consideration of dosage in the adult aphasia literature, a literature which has carefully considered the way in which dosage alone – particularly intervention intensity – may impact language gains for adults whose language abilities have been compromised due to left hemisphere damage.

Theoretically, research in the field of aphasia on dosage effects is based on the notion that individuals who experience more intensive intervention will make greater gains in language, and studies involving adults with aphasia lend support to this notion. Contrast-comparisons based on the same language intervention delivered at regular and intensive rates (i.e., 60 sessions vs.
130 sessions in 6 months) indicate that individuals receiving intensive therapy achieve higher language scores (Basso & Caporali, 2001; Denes, Perazzolo, Piani, & Piccione, 1996; Hinckley & Craig, 1998). However, despite the seemingly direct comparison between variations in intervention dosage, aphasia dosage studies have focused exclusively on dose frequency and have failed to account for the distribution of learning trials within each session – that is, the actual dose in learning opportunities. As a result, it is somewhat unclear as to whether dose frequency is a critical determinant of language gains or whether dosage (learning opportunities within a session) is most important.

Several meta-analyses designed to estimate the effects of language intervention techniques on child language outcomes have included consideration of the intensity of the intervention, focusing exclusively on dose frequency (and not dosage per se). These reviews offer no consensus on optimal dosage of intervention or even whether dosage matters to treatment effectiveness. The most recent meta-analysis to date, by Law, Garrett and Nye (2004), suggested that language interventions lasting longer than eight weeks are more effective than those of shorter duration. Nye, Foster, and Seaman (1987), however, found interventions lasting between 4 and 12 weeks to have the highest effect sizes (over those of shorter or longer duration), whereas Fey, Cleave, and Long (1997) proposed an optimum length of 4.5 months (18 weeks). Despite the lack of agreement regarding whether dosage matters and whether SLPs ought to configure dosage for children on the basis of specific language profiles (e.g., higher treatment dosage for more severe cases of impairment) or background characteristics (e.g., lower treatment dosage for children who access more language-learning supports in the classroom or at home), dosage is one of the most highly specified and at times one of the more contentious features of a student’s Individualized Education Program (IEP).

Given the pressing nature of this clinical question and lack of research, in the next several years we will study dosage by generating hypotheses regarding the association of dosage to children’s language gains within intervention in descriptive work that uses causal modeling. In descriptive work we do not manipulate an independent variable; rather, we study the associations among variables. By collecting data on dosage of treatment and language growth over time for a large group of children who receive language intervention within schools, we can explore whether dosage (e.g., cumulative amount of time spent in therapy) is associated with the magnitude of language growth. If dosage emerges as an operative variable (i.e., is associated with children’s language growth, particularly when we control for other potentially influential variables, like age or severity of language impairment), we can then design and implement RCTs in which we actively manipulate dosage. For instance, we might study language growth in children with language disabilities who are assigned to two different conditions. In one condition children receive language intervention two times per week, whereas in the other condition children receive language intervention four times per week. Although many SLPs would argue on a theoretical basis that more treatment is better, we are not aware of any experimental data which support this contention. In the age of evidence-based practice, it is not desirable (although it is common) to rely solely on theoretical understandings as the basis for such important clinical decisions as how many treatment sessions a child should receive in a week. As tedious as it may be to practice in the midst of yet another paradigm shift – the movement to EBP – a likely outcome will be that we do have more empirical guidance when we seek to answer pressing issues in our practice, even ones which seem relatively simple (e.g., How many times should I provide treatment to a child in a week?) in comparison to the host of more complex issues that we face everyday.

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1. I’m not even going to guess at what your title might mean, so give it to me straight. What is the Next Big Thing in audiology counseling?

Actually, if you had asked me that 5 years ago, I would have said the Next Big Thing was a growing interest in preparing audiology students to address our patients’ psychological and emotional reactions to living with hearing problems. As you know, patients have a lot to work through before they successfully use hearing aids, and I don’t mean getting used to new auditory input. Their challenges are considerable. They must work and grapple with: (1) the discouraging reality that they have a problem, (2) the uncomfortable fact that they need to ask for help, (3) the disappointing news that help comes in the shape of hearing aids, (4) changes in body image and self-concept of “who I am,” (5) deciding not to worry about what others think about these changes, and (6) calibrating their high hopes (expectations) with the inherent limitations of hearing aid use. And that’s just with adult patients! There are also significant others in their lives to consider, and when the patient is a child, the entire family struggles with its own challenges.

2. Wait a minute! Nobody ever trained me to address all these issues!

You are in the majority. For years, audiology training programs reported no concerted effort to prepare students to interact with these aspects of patient care. Most students knew nothing about these reactions, passively witnessed them, perhaps even documented them. However, they were not taught any interpersonal or counseling skills to provide support to patients as they struggle, to intercede, and to facilitate the adjustment process. Consequently, patients have reported a disconnect between what they seek from audiology (personal support for the hard work of adjusting to a chronic disability) and what audiology tends to provide (information and technology). What is the Next Big Thing in audiology counseling?

3. Sounds a little grim. Any improvement on that front?

Yes, I’m happy to say. A recent study collected information from accredited AuD programs in the US and found that 71% of them required a course in counseling, while another 14% had actively integrated counseling content into existing coursework. That’s 85% of the programs addressing counseling training, which is quite a change compared with the 12%-18% rates reported in the days of master’s degree programs. So, what used to be the Next Big Thing is actually here: AuD programs are preparing their students as non-professional counselors. And my informal observations indicate that counseling is showing up more and more often in conference programs, suggesting that practicing audiologists are sensing a gap in their training and are eager to grow into counseling as well.

4. When will we know if this development of counseling skills is having a positive effect on patient care?

As soon as several randomized controlled trials indicate an increase in patient satisfaction and adherence to audologic recommendation. In other words, not any time soon. For now we can only extrapolate from other research. For instance, the medical literature is replete with outcome data indicating that when practitioners attentively listen to their patients’ stories, actively acknowledge their emotional state, and respect their abilities to handle their problems (fundamental counseling strategies), patients are more likely to adhere to their recommendations. We hope to find the same outcomes.

5. Great! It sounds as if we’re moving in the right direction. But you still haven’t told me what is the current Next Big Thing.

Be patient. Remember that I mentioned literature from the medical field, and it is important to note that medicine has been putting itself under a microscope, examining its own philosophical foundations with some pretty big questions, including how do we interact with patients, and what are the outcomes. The consensus is that the historic “clinical method” (or medical model) of service delivery is inadequate. It is not a big leap in logic to consider that if it isn’t adequate for medicine, it probably isn’t adequate for audiology, either.

6. What exactly is the clinical method?

Interestingly, it wasn’t until the late 1800s that physicians began to treat patients by making observations, using instruments, and collecting data, with a tunnel visioned focus on the pathology. This approach is analytical and impersonal; patients’ reactions to the health problem and their life experiences are not acknowledged. So, for well over 100 years, the clinical (or biomedical) method was the only paradigm for patient care, and it didn’t even have a name. It was just the way things were done. It’s important to remember the broader historical context. This approach developed during the Industrial Revolution, and scientists developed the philosophical construct that humans are complex machines, requiring a type of service like what a mechanic would give to a broken machine. Physicians were trained to attend to their patients’ bodies, not to their “problems of living.” Does that approach sound familiar? Might audiologists also tend to “treat the audiogram” rather than the patient’s problems of living?
7. Are you saying the clinical model is inadequate because it views the body as a mechanism?

Exactly. By definition, this model of care does not address the human aspects of disease or disability: emotional reactions, life events, relationships, environmental challenges. The clinical method sees disease as an entity located in the body unrelated to the sick person. Research abounds describing how unimpressed patients are with this approach. And audiology’s adoption of this model certainly leaves us with a problem, since hearing loss cannot be separated from the person.

8. Have any alternatives been proposed?

In 1964, Balint proposed a “patient-centered” model of care, and finally there was a model to compare with the clinical method. He pointed out that two perspectives are involved in a healthcare encounter: the clinician interprets the health problem in terms of symptoms and signs, and the patient interprets it in terms of experience (e.g., what it’s like to suffer from hearing loss). The exchange of perceptions between clinician and patient should result in the development of mutual understanding, of common ground. In the patient-centered model, clinicians do not see themselves as detached observers and dispassionate dispensers of therapy. Being patient-centered means to attend carefully to those “problems of living” and provide help to reduce those problems. In audiology, we use this approach when we relate all treatment to self-reported patient concerns, using a self-assessment scale such as the Client Oriented Scale of Improvement (COSI) or other self-assessments. The treatment addresses the problems of living with hearing loss, not the audiogram. Engel later proposed a “biopsychosocial” model, to help practitioners consider at least three domains of human existence (biological, psychological, and social) and focus attention on the integrated nature of health problems. Both approaches view patients not as machines with broken parts, but rather as organisms that can grow, heal, learn, and transcend problems.

9. Any objections to either of these models?

Although the biopsychosocial model attempts to focus attention on the integrated nature of illness, some feel this model still objectifies patients as a sum of their parts. There have been no criticisms of the patient-centered model to date. But, what has caught my eye in this literature is the suggestion to evolve even beyond patient-centered care, to what is being called “relationship-centered care.” It seems to suit audiology particularly well, and that’s what I am referring to as the Next Big Thing.

10. Before you explain why, where did relationship-centered care come from?

In 1992, the Pew Health Professions Committee and the Fetzer Institute collaborated to consider patient dissatisfaction regarding healthcare and to develop an integrated approach to healthcare. While the biopsychosocial and patient centered models strongly influenced this task force’s thinking, the members felt yet another evolutionary step was in order. After reviewing the research, they concluded that “for patients, the relationship with their provider frequently is the most therapeutic aspect of the healthcare encounter” (italics added). The task force then coined the term “relationship centered care” (RCC), which emphasizes the centrality of the patient-provider relationship.

11. Why “relationships”?

Medicine offers compelling data indicating that when relationships between healthcare provider and
patient are supportive, caring, personal, and trusting, i.e., central to the care provided, the patient is more likely to adhere to recommendations. The Pew-Fetzer Task Force concluded, “Relationships form the content within which people are helped to maintain their functioning and grow in the face of changes within themselves and their environments.” We already know this to be true in audiology. Our colleagues in private practice know that their success depends on the relationships they develop with their patients. Pediatric and educational audiologists know that the relationships they develop with families have a direct impact on children’s audiologic care.

14. The problem is the relationship?

Yes, or more accurately, the lack of trust in the relationship. Luterman reminds us, “In initial stages of a relationship, where trust is not high, there are usually a great many questions. As the relationship develops and grows, the client becomes more willing to offer statements and observations. The professional can facilitate this therapeutic movement by not always answering questions and supplying content” (italics added). When relationships with patients are strained or tense, we can safely assume that they still do not trust us. That’s why they are still asking so many questions. And, chances are, the questions asked are not content questions, yet we are giving content answers—a classic case of communication mismatch.

Here’s an example: The patient asks, “Does everyone struggle with hearing aids the way I am?” The audiologist answers, “Yes, your brain is rewiring itself with the new input.” This audiologist should simply have asked, “You’re struggling?” This response focuses directly on the patient, not on the apparent question about “everyone” or adjustment. Luterman suggests not even answering some questions, but instead finding out why the patient is asking them.

15. If the relationship is not developing, what do we do?

We need to appreciate that only the practitioner can advance patient relationships. By drawing on our counseling and interpersonal skills, we give patients reasons to trust us with their hearing problems. Granted, some patients’ problems are quite deep-rooted, and in these instances a referral for professional counseling would be in order. Most patients, however, are psychologically healthy; they are just “stuck” in their adjustment to their hearing problem, and audiologists can help them “unstick.”

16. Then a key word in RCC is trust, right?

Yes, and trust in patient relationships is where we might not be “walking the walk.” Audiology has been known to impose the “expert” approach with patients (“follow my recommendation and you will be fine”), but the expert approach does nothing to develop trust. A good example is our classic description of group aural rehabilitation: The audiologist establishes the agenda, decides what will be taught, and then teaches it, as if patients were audiology students. An RCC approach would turn this process on its head: The audiologist would ask the group of attendees, “What are your questions? What do you want to learn?” The patients then determine the agenda and decide what they want to learn, and the audiologist facilitates that process.

17. Audiology is practiced in so many settings. Some audiologists have no opportunity to develop relationships with patients. What then?

Good point. In medical settings, for instance, audiologists see a patient once, conduct the prescribed tests, and advance the patient forward in his medical care. RCC would not apply to audiology in this circumstance. The unique contribution of relationship-centered care is its three dimensions. We’ve looked at the first one: the patient/audiologist relationship. But the developers of the RCC model also recognized the need for relationships between practitioners and other professionals, and between practitioners and their community.

18. Can you give an example of an audiologist-professional relationship?

One that jumps to mind is the mental health field. How many audiolo-
gists have working relationships with counselors, social workers, psychologists, psychiatrists? Not many it seems, based on my informal queries. Yet how many of those professionals understand hearing loss, and how to help patients with impaired hearing when they seek mental healthcare? Simmons and colleagues wrote a valuable article about the details that mental healthcare providers need to consider when their client has a hearing loss: the counseling setting (e.g., lighting and seating distance may need to be changed), auditory access, visual attention, patient fatigue, and so on. Are the mental healthcare professionals in our work setting aware of these concerns? If more audiologists develop professional relationships with them, they will be.

19. And the audiologist-community relationship?

We fret over the number of persons who do not seek hearing help, but we usually do not try to reach them except through marketing. Marketing does not develop relationships. I frankly have no great ideas on how to develop relationships between audiologists and their communities, but surely some bright minds out there can crack this problem, make audiology a household word, and help patients know they can trust the profession when they need help with a hearing problem. I encourage every audiologist to ask him/herself, “What is my relationship with my community?” If the answer is “non-existent,” “distant,” or “vague,” well, we have our work cut out for ourselves.

20. Final question: Audiology has not exactly received rave reviews for being philosophical. Why should we start now?

Thanks for making the last question an easy one. The answer is, because we are becoming a doctoring profession. As doctors, we have a greater responsibility than ever to develop wisdom as well as techniques, to understand ourselves as well as our patients. Audiologists should be “reflective practitioners” who regularly analyze their practices, their philosophies, their underlying assumptions of care. In every profession, the most important areas of practice actually lie beyond the conventional description of professional competence. These areas are where the “artistry” of the profession can be found. In audiology, our artistry lies in our ability to connect with patients, develop therapeutic relationships with them, and help them face their challenges. Given how many patients have not asked for hearing help, I’d say we haven’t developed our artistic or philosophical sides enough yet. It’s been said ad nauseam that the world’s best hearing technology is useless if patients will not accept it. Patients typically do not get to the acceptance stage by themselves; relationship centered care may be a model to help get them there.

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Abstract

Most of the new professional doctorate programs in audiology have acknowledged the importance of the development of student’s counseling skills through the establishment of separate courses in audiologic counseling or the incorporation of counseling education within their existing course offerings. A recent survey has suggested that many clinical supervisors/preceptors affiliated with Au.D. programs may not be fully prepared to nurture student development in this area. Yet training in the development of a trusting relationship between health-care providers and their patients is paramount to clinical success. This article discusses the use of the Audiology Counselor Growth Checklist as a means to facilitate the development of positive clinical relationships. Through examination of five distinct areas of clinical interaction, supervisors can help students increase their confidence within the clinician-patient dynamic, feel more comfortable when delivering the bad news of hearing loss, and respond to angry or confrontational patients in a manner which may help move sessions in a more positive direction.

Key words:  supervision
counseling
patient-centered

Abbreviations: ACGC – Audiology Counselor Growth Checklist

Learning Objectives:
1. The reader will be able to identify at least three areas of patient counseling that concern students and describe an approach to alleviate student concerns in each of these areas.
2. The reader will be able to discuss how student clinicians can help put patients at ease and increase patient confidence in student-delivered services.
3. The reader will be able to demonstrate to students means of assisting patients to explore viable treatment options.

Multiple Choice Questions

1. Today’s hearing instrument technology
   a. provides greater benefit than ever before.
   b. eliminates the need for tailored counseling for patients.
   c. may impede student’s development of personalized delivery of care.
   d. a and c

2. When patients clearly lack motivation to improve hearing, students should
   a. fit them with appropriate amplification under supervised direction with a refundable adjustment period.
   b. guide patients through a re-visit of problem areas which were identified through self-assessment questionnaires.
   c. provide an opportunity to reflect on their communication difficulties with a follow-up appointment scheduled in a few months.
   d. b & c

3. Patients should be made to feel comfortable in the clinical environment. To attain this goal students should
   a. greet patients with a handshake and good eye contact calling patients by their first name whenever possible.
   b. be seated as soon as the patient and others are seated.
   c. ensure that they can be heard as well as possible using a personal amplifier as needed.
   d. all of the above
   e. b & c only

4. Students should be encouraged to
   a. be conscious of the impact their non-verbal behaviors may have on clinical exchanges.
   b. provide clear and concise explanations of all test findings for all patients.
   c. make opportunities to demonstrate appropriate use of professional vocabulary thereby increasing patients’ confidence in their skill level.
   d. avoid silences in clinical discussions which can be both awkward and suggest less than full competence on the part of the student.

5. When parents or patients become angry or confrontational it most frequently is
   a. not related to anything the student has done or has failed to do.
   b. an indication that they are uncomfortable with the student’s lack of experience.
   c. a reflection of the emotions they are working through following diagnosis.
   d. b & c
   e. a & c

Key:  1 = d  2=d  3=e  4=a  5=e
Through the years audiology has swung on a pendulum from service delivery steeped within rehabilitative practice to a profession immersed within the wonders of a burgeoning technology. The person-centered practice of audiology has often taken a backseat to the more mechanical administration and interpretation of diagnostic measures and the electrophysiology of hearing instrumentation. It is unfortunate that the rapid expansion in the computerized electronics of corrective amplification, which has afforded sometimes near miraculous sound manipulation for the improvement of hearing, frequently serves to stunt students’ development of a truly personalized delivery approach to the care they are learning to provide.

Many of today’s audiologists grew up professionally within the technological boon already beginning to surround diagnostic testing and hearing aid fittings. As a result, direct training and supervision in the personal care/counseling aspects of service delivery often were not emphasized, and sometimes ignored. However, time, experience, and the learning afforded through our own mistakes have allowed most of us to hone our personal patient counseling skills, much to the benefit of those we serve.

While many of the professions’ new Au.D. programs are embracing the importance of counseling skill development, the supervisors and preceptors affiliated with these programs may not fully be prepared to nurture skills in this area. Many of us had a strong past experience with our own clinical supervisors when we were in training which now serves as a guide for our supervision of developing diagnostic and amplification skills. What we often lack, because we frequently did not receive it, is this same type of past experience to guide our supervision of counseling skills.

When surveyed, current audiology students are aware of this imbalance, reporting meaningful and constructive guidance from their supervisors in the development of diagnostic and hearing aid fitting expertise with little or no mentoring in the development of strong counseling skills. The reason for this perception may lie directly within the history of our profession which led us from our rehabilitative roots as technology progressed.

What Are Students Looking For?

Although clinicians frequently report they may feel ill-prepared to provide needed personal adjustment counseling to their patients with hearing loss, such counseling has long been recognized as a vital component to successful intervention. Student clinicians quickly become comfortable in the administration of routine diagnostic tests and fundamental information transfer. However, they correctly recognize that successful management entails much more than the simple delivery of information in a clear and concise fashion, free of jargon (English and Zoladkiewicz, 1).

To help our students develop comfort in their clinical interactions and success in their interventions, we need to provide guidance and instruction in aspects of service delivery which may bolster patient and family trust. The success of the care which future audiologists provide depends, as does our own, upon the positive and interactive relationship they develop with those seeking their care. The Audiology Counseling Growth Checklist (ACGC) (Clark and English, 2) was designed to foster positive patient-practitioner dynamics in five specific areas of clinical interaction: the manner in which students greet the patient and open the session; their clinical demeanor and style of information delivery; their ability to affirm the worth of their patients; their success in encouraging patients to share their stories; and the manner in which they help patients explore potential solutions to their hearing difficulties (see appendix).

Greeting and Opening

The first section of the ACGC recognizes that the manner in which patients are greeted can shape the way the session will unfold in a variety of ways. While the tone is initially set by front office personnel through their telephone manners and the tone with which patients are greeted when arriving at the office, it quickly becomes the student audiologist’s responsibility to carry this forward. Over the past several decades, American culture has drifted toward informality within almost all interpersonal exchanges. However, our patients, frequently older than ourselves and significantly older than the students we are mentoring, may find some of the informalities that seem natural to us somewhat disconcerting within a professional setting.

Those entering our door seeking professional care should be greeted by students with an introduction which identifies themselves by name and position as well as the preceptor with whom they are working. Students may need instruction that on first meeting, all adult patients should be addressed by their title (Mr. Ms. or Mrs.) and their last name and that this should be continued unless the patient expressly states a desire to be addressed on a first-name basis. To do otherwise may seem presumptuous to many of our elderly patients and only serves to diminish their sense of dignity. An introduction such as the following, accompanied by a firm yet gentle handshake and direct eye contact is always appropriate: “Hello, Mr. Robinson. I’m Kathy Littleton, an audiology doctoral student at the university. I’ll be working with you under Mrs. Albertson’s supervision today.” Certainly students should be instructed to avoid speaking in “elderske” in which elderly and more feeble adults are spoken to as if they were children.

When all parties are within the treatment room, the best protocol is for the audiologist to have a seat as soon as the patient and others are seated. The goal always is to make patients feel at ease in the new environment they find themselves in. Allowing for an eye-to-eye dialogue, rather than towering over patients while obtaining case history information makes an empathic delivery possible.
Finally, it is often best to ask the patient why they have sought the consultation, if they have had a previous hearing evaluation and what they hope to gain from the present evaluation. Answers to these questions permit the student to assess the patient’s awareness and understanding of the current situation and to see the problem as the patient perceives it. Certainly the student’s opening questions may follow a brief period of small talk which many believe may help put patients at ease. However, students need to be aware that such social “niceties,” especially if excessive, can be viewed by patients as irrelevant to the real business at hand and may even imply that we are not taking their concerns seriously.

**Demeanor and Delivery**

Verbal and nonverbal communications both play an important role in the development and maintenance of a strong professional/patient relationship and students frequently require feedback to aid in the development of appropriate communication skills. Students are frequently proud of the professional vocabulary they are learning and may feel a need to demonstrate mastery of new terms when working with patients in front of their supervisors. Sometimes the use of professional jargon becomes a habit as these words become increasingly familiar to students and practitioners alike. We have all been guilty of using a word in our clinical exchanges with patients that once was on a vocabulary quiz in an introduction to audiology class. Even a term as simple as “pitch” can create confusion if a patient interprets it as referring to how one “pitches their voice” (projects their voice).

Students may also need to be reminded to be sure that their voices are loud enough to be heard, that they do not speak too loudly or rapidly, and that they address the patient directly whenever possible using a personal amplifier as needed. It can be quite disconcerting to patients to be left on the sidelines as marginal participants while others discuss findings and recommendations that impact them directly.

It is not enough for audiologists only to understand patient’s difficulties from their perspective but we must also continually demonstrate our desire to gain this understanding. Toward this end, our nonverbal responses are frequently as critical as what we say. A variety of nonverbal behaviors can facilitate or impede dialogue and students need frequent feedback to develop their own vigilance of the manner in which they interact with patients (Table 1.)

A particularly strong nonverbal response that is frequently under used in clinical interactions is silence. Silences are often felt to be uncomfortable and we are quick to fill in the gap with what is often an ill-timed question or remark. When silence is allowed to stand by itself, it permits a temporal space for reflection as well as an opportunity for patients to assume some of the responsibility for their own progress.

Students who are afforded opportunities to role play their interactions with patients frequently find their concerns of appearing nervous or incompetent begin to diminish. When health care providers, whether professionals or students in training, demonstrate their respect for the patients they are working with through their introductions and their clinical demeanor positive perceptions of their abilities will naturally follow.

When working with parents of young children, students are quick to learn that the presentation of diagnostic information is not a simple delivery of findings. The astute student clinician also realizes the emotional impact of receiving the audiological diagnosis is often present in adult patients, even if less apparent (Martin, Krall, & O’Neal, 3). Guidelines for breaking the bad news of hearing loss to parents (Clark & English, 2) are also appropriate for adults. Key among these guidelines may be to ensure for a private, unhurried time together; encourage feelings to be expressed (i.e.: “I know this must be very difficult for you.”); respond with empathy and warmth (i.e.: “I’m sorry. I know that’s not the recommendation you were hoping for.”); and arrange for a follow-up appointment.

Not all parents or adult patients desire the detailed description of test results that students have proudly mastered, and when emotions are high, research indicates that the ability to process new information is low (Sprenger4). As Martin5 cautions, a detailed disclosure of all we have found is not appropriate for most patients immediately subsequent to

**Table 1**

**Nonverbal Behaviors to Facilitate Communication**

- Achieve eye-level communication to place others at ease
- Come from behind your desk to enhance a more open dialogue
- Maintain good eye contact and an attentive expression to display your interest
- Refrain from multitasking behaviors that convey less than full attention
- Allow for silent reflection to encourage expansion of a thought or statement
- Lean forward to display heightened interest and a desire to hear the other’s story
- Use purposeful head nodding to convey agreement and a desire for the other to continue

* From Clark, J.G. & English, K.E. Counseling in Audiology Practice: Helping patients and families adjust to hearing loss. Published by Allyn and Bacon, Boston, MA. Copyright © 2004 by Pearson Education. Reprinted by permission of the publisher.
the examination. Students need to learn that this is the time to begin with a statement such as, “Would you like an overall summary of the findings or would you prefer a detailed description of these test results.” Allowing some control over the direction of the appointment often helps parents and adult patients ask the questions weighing most heavily on their hearts and minds. Once again, students learn that it is the manner in which they interact with patients which will contribute most highly to the success of clinical relationships.

**Patient Affirmation**

English and Zoladkiewicz report three of the top six concerns audiology doctoral students have in clinical interactions are how to respond when the patient or family member becomes angry; how to minimize hostility; and how to redirect confrontation (see Table 2). It is important for students to understand that stress and aggravation frequently attend the communication failures which may accompany hearing loss and that this is not isolated to just the individual with the hearing problem but also to family members who find themselves confronting ineffectual communication on a daily basis with their loved one.

We know that all communication problems are not resolved with hearing loss treatment and we can anticipate that frustrations leading to stress and aggravation, while hopefully lessened with hearing aids, for many will continue to some degree. When students are faced with anger, hostility or a confrontational demeanor it is easy to view statements and actions as an affront to their training or level of experience. In reality, the behavior exhibited is most often an expression of that person’s inner stress and has little to do with the provider of services.

Rather than feeling threatened or challenged, students need to learn how to diffuse hostility by showing their own respect and understanding for the other person’s feelings and by helping that person recognize the universality of those feelings.

Sometimes all that is needed is a positive listening posture and an acknowledgement such as, “It must be extremely frustrating when you don’t hear as well as you feel you should.” The patient affirmation section of the ACGC looks specifically at a students’ ability to demonstrate a desire to understand the feelings which may underlie patient statements and to respond to these feelings appropriately.

English and Zoladkiewicz also report that not knowing the answer to a patient’s questions is another frequently cited concern among students. Students need to be helped to realize that hearing loss management is not an exact science and clear answers are not always available. They must also realize that it is a sign of professional strength, not weakness, to admit that an answer is not known, if this admission is coupled with a clear promise to seek the answer or to refer to those who may have an answer. One aspect of patient affirmation is helping patients perceive the strengths they may bring toward their own treatment. Encouraging questions, even when students fear they may not have the answer, allows patients to be stronger partners in their own treatment – a position that can be both empowering and affirming.

**Patient Encouragement**

In the course of their education and clinical training, students learn a great deal of information regarding hearing and balance disorders, and management strategies. Armed with this new-found knowledge, students are eager to share insights with patients. While this is entirely appropriate, they also need to be aware of a potential problem: when they are viewed as the experts, patients may become more dependent. The student’s goal, of course, is for their patients to achieve greater independence and an ability to define and solve the communication difficulties they face. Students may need to be reminded of this. An atmosphere that encourages patients to dialogue as they discover solutions is paramount to building the trusting relationships that make for successful hearing loss treatment. Items 18 through 23 of the ACGC reflect on how well students set the stage for patients and family members to explore solutions to the communication difficulties they face.

**Exploration**

Patient encouragement and solution exploration often go hand-in-hand. Student skill development in one area will frequently facilitate hearing loss management attempts in the second. When students encourage patients to talk of the communication difficulties they experience, they can begin to perceive the patient’s own level of acceptance. The level of motivation that exists to tackle the problems encountered depends on whether the patient has taken ownership of the problem or whether a certain level of denial of personal responsibility still persists.

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**Table 2.**

**Primary Student Concerns When Counseling Patients**

- The patient becomes angry, hostile.
- Not knowing the answer to the patient’s questions.
- Informing parents that their baby has a hearing loss.
- Appearing nervous or incompetent.
- The patient is confrontational.
- The patient challenges my credentials ("Are you sure you know what you are doing?").

*As reported by English & Zoladkiewicz.*
At times patients are reluctant to act on recommendations due to preconceptions that lead them to dismiss recommendations before they fully consider them. In order to help a patient examine the validity of the actions they are choosing to take, students need to know how to address these preconceptions directly. A patient who feels he may be viewed as less competent at work if he shows up with hearing aids may be asked to explore this statement with questions like, “In what ways do you think your co-workers will treat you differently if you have hearing aids?” “If they do treat you as you suspect, how would you feel?” “Have you ever felt that way before?” “What did you do?” “Do you think the potential benefits of hearing aids we have discussed would be worth the test to see if your thoughts (fears) on this pan out?”

Some of the direct questioning of personal thoughts inherent in a cognitive counseling exploration may be beyond what many students can effectively deliver. However, modeling this exploratory approach for students, with discussion after the patient leaves the office, can be a valuable instruction in a supervisory setting.

Students also need to recognize through their explorations with patients when it is time to proceed and when the requisite motivation for success is lacking. When motivation is clearly lacking students may find it most beneficial to revisit the self-assessment questionnaire they may have had the patient complete. The following statement may help drive home the need to take action: “Mr. Robinson, you indicated earlier that your hearing loss sometimes causes you to feel embarrassed when meeting people

[Heart Handicap Inventory for Adults] (or that difficulty with your hearing upsets you at times [Self–Assessment of Communication]; or that people sometimes avoid you because of your hearing loss [Denver Scale of Communication Function]; or that people sometimes act annoyed when you don’t understand what was said [McCarthy-Alpiner Scale of Hearing Handicap]; etc.). If you and I could make it so that happened less frequently, would that be a good thing.”

A valuable counseling lesson for all audiology students is recognizing when the best present solution is to offer guidance in building the internal motivation necessary for success. Rather than proceeding with treatment, students need to know when it might be best to give a patient time to reflect on their hearing loss through journaling, a hearing aid diary, attendance in a hearing loss support group or some other avenue. A follow-up appointment some months later may then prove more fruitful.

When patients do proceed with hearing aid amplification, students must recognize that hearing aids are only part of the answer and that it is their responsibility to help patients to explore tactics for improving communication behaviors and settings. The final items in the ACGC help explore the students’ effectiveness in this area.

Summary

A large part of the counseling that students must learn to provide is setting the stage for the exploration of solutions patients seek. The first sections of the ACGC help supervisors and students evaluate ways in which patients and family members may be put at ease in the sometimes foreign environment presented by a clinical setting. Clinical comfort is attained when a trusting relationship evolves which is built upon a mutual respect, a reflective and attentive listening posture, a non-judgmental acceptance, and a full recognition of the individual differences we all bring to the table.

While providing needed direction, we would all be wise to reflect on two comments students provided in the English and Zoladkiewicz study. Students requested that their supervisors step back a bit when students are speaking so that students can begin to form what they already perceive as an important bond with patients. Yet, of even greater importance was a message from one student pertaining to the critical area of constructive criticism: that supervisors be careful not to criticize their students directly in front of patients.

Clearly supervisors and preceptors of audiology students need to provide clear direction and supervision in patient interaction if students are going to master development of positive relationships with their patients. Research has shown that how readily health-care provider recommendations are accepted and implemented often hinges upon the nature of this relationship (Smith & Thompson6) and as such supervision in this area becomes as important as clinical guidance in audiological diagnosis. The Audiology Counselor Growth Checklist may prove useful to supervisors as they strive to incorporate a greater amount of counseling guidance for their students.

REFERENCES


Appendix
Audiology Counseling Growth Checklist (ACGC)

The ACGC may be used as a self-assessment measure for those wishing to increase their awareness of effective audiologist/patient dynamics or as a means to appraise the effectiveness of others whose service delivery approach may serve as a springboard toward growth in counseling. While observing another, or upon reflection of a concluding patient visit that you have conducted, simply circle the most appropriate response to the statements presented. All items are worded so that a yes response signifies a positive behavior on the part of the audiologist. The word “patient” refers to the individual seeking services during the session whether this is the individual with the hearing loss, or that individual’s parent, guardian, or spouse. If you are working with a supervisor, comparison of your self-assessment on the ACGC with that of the supervisor can be beneficial in developing a constructive dialogue toward growth. Notation of examples of observed behaviors or responses, or examples of lost opportunities to present a behavior or response, can further discussion and facilitate the development of counseling skills.

**GREETING AND OPENING**
1. The audiologist introduced him/herself by name (or greeted the patient if formerly met), with a handshake and direct eye contact.
   - Yes
   - No
   - NA

2. The audiologist seated him/herself at eye level with the patient.
   - Yes
   - No
   - NA

3. The audiologist began with an appropriate opening that invited the patient to express his/her immediate concern and actively acknowledged and addressed this concern.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

**DEMEANOR AND DELIVERY**
4. The audiologist maintained eye contact with the patient.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

5. The audiologist's facial expressions were appropriate to the context at hand.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

6. The audiologist maintained an attentive yet relaxed posture conveying a responsiveness of an undivided attention.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

7. The audiologist's nonverbal expressions were appropriate to the dialogue and not distracting.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

8. The audiologist's voice was easily heard by the patient and maintained a tone of interest.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

9. The audiologist spoke at an appropriate rate to enhance understanding.
   - Yes
   - Example: _______________________________________
   - No
   - Example: _______________________________________
   - NA

10. The audiologist avoided jargon within his/her comments making every effort to ensure that meaning was understood.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
    - NA

11. The audiologist avoided both verbal statements and nonverbal expressions that might appear judgmental.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
    - NA

12. The audiologist seemed aware of potential conflicts between his/her social style and that of the patient.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
    - NA

**PATIENT AFFIRMATION**
13. The audiologist appeared conscious of multicultural issues that might influence the dynamics of the interaction.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
    - NA

14. The audiologist employed reflective listening responses to ensure patient's meanings were understood correctly and to display a desire to attain that understanding.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
    - NA

15. The audiologist made affirmative statements regarding perceived patient strengths.
    - Yes
    - Example: _______________________________________
    - No
    - Example: _______________________________________
16. The audiologist seemed aware of and responded to the feelings underlying the patient’s statements.

Yes Example: _______________________________________
No Example: _______________________________________
NA

17. The audiologist used statements that affirmed something expressed by the patient.

Yes Example: _______________________________________
No Example: _______________________________________
NA

18. The audiologist avoided closed questions that might elicit simple yes/no responses.

Yes Example: _______________________________________
No Example: _______________________________________
NA

19. The audiologist made appropriate use of silence to encourage further comment from the patient on a current topic before changing the direction of discussion.

Yes Example: _______________________________________
No Example: _______________________________________
NA

20. The audiologist’s nonverbal expressions were encouraging to the continuation of dialogue.

Yes Example: _______________________________________
No Example: _______________________________________
NA

21. The audiologist interjected positive affirmations (yes, mm-mm, etc.) to encourage continuation or expansion of the patient’s comments.

Yes Example: _______________________________________
No Example: _______________________________________
NA

22. The audiologist encouraged the patient to express his/her feelings.

Yes Example: _______________________________________
No Example: _______________________________________
NA

23. The audiologist avoided signs of defensiveness of expressed feelings of anger, frustration, etc., that may have appeared directed at the audiologist.

Yes Example: _______________________________________
No Example: _______________________________________
NA

24. The audiologist appropriately challenged statements made by the patient that might impede the positive actions taken by the patient and helped him/her to identify more positive views.

Yes Example: _______________________________________
No Example: _______________________________________
NA

25. If exploring solutions for specific communication breakdowns, the audiologist asked the patient to identify at least one action that might be taken to address the problem.

Yes Example: _______________________________________
No Example: _______________________________________
NA

26. The audiologist suggested alternative actions that might be useful.

Yes Example: _______________________________________
No Example: _______________________________________
NA

27. The audiologist helped the patient to develop actions that might facilitate an identified goal.

Yes Example: _______________________________________
No Example: _______________________________________
NA

28. The audiologist provided an opportunity to practice identified actions.

Yes Example: _______________________________________
No Example: _______________________________________
NA

29. The audiologist encouraged the patient to critique the effectiveness of actions taken to address the identified goal when attempted at home, work, or during social activities.

Yes Example: _______________________________________
No Example: _______________________________________
NA

30. The audiologist recognized when a topic could not be fully explored during current time constraints and offered an opportunity to return for further exploration.

Yes Example: _______________________________________
No Example: _______________________________________
NA

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INVITED ARTICLE - The University of Cincinnati Bioacoustics Lab

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University of Cincinnati

This article will introduce one of the new audiology faculty at the University of Cincinnati, Dr. Peter M. Scheifele, who has opened the University of Cincinnati Bioacoustics Lab and Canine Audiology Clinic. His collaborators are Dr. Michael T. Johnson- Marquette University, Speech and Signal Processing Laboratory, Dr. Frank E. Musiek and Dr. Michael J. Darre- University of Connecticut (UCONN), Bioacoustics Lab, Dr. David Browning- University of Rhode Island (URI), Physics Department, and Mr. Robert Michaud, Director of the Groupe de Recherche et D’Education sur les Mammifères Marin (GREMM), Quebec, Canada, and the entire audiology faculty and clinicians at UC. Co-PI is Dr. David Brown, Cincinnati Children’s Medical Center, Division of Developmental Disabilities, Director of Audiology. The Lab collaborating veterinarian is Dr. Debbie Kemper DVM.

The University of Cincinnati Bioacoustics Lab is currently serving the Georgia Aquarium on two projects. The first regards the exhibit acoustics for the Cold Water Quest (Beluga Whale) exhibit and the Ocean Voyager (open-ocean exhibit). We are working with the keepers, trainers and Life Support System (LSS) engineers to ensure that the LSS remains quiet and that the exhibits are audiologically safe and comfortable for the animals that reside in them. Dr. Scheifele and a UCONN collaborating student (Kristine Sonstrom, MS) performed the original pool system acoustic mapping before the Georgia Aquarium opened. In October, 2007, this team with the addition of Ms. Katie Starke and Ms. Sara Tremblay (UCONN) performed an acoustic maintenance and upgrade check on these two systems since 8 new pumps and filters were added to the LSS. Our own students: Ms. Shawn Makepeace, Ph.D. student in Hearing Science and Ms. Jennifer Dively, and Ms. Katie Brinkman, first year AuD students are currently engaged in the acoustical analysis of these measurements.

We are tasked with an second acoustic project that merges human audiology with animal bioacoustics. The Georgia Aquarium’s Ocean Ballroom is a beautiful 16,400 square foot facility that can host up to 1,100 people for dinner. (See Figure 1) Many events including weddings are held there with dining, music and dancing. The ballroom allows visitors to have a direct view into the Ocean Voyager and Cold Water Quest exhibits. The aquarium staff is committed to keeping animals safe while allowing the visitors to enjoy the spectacular view of these exhibits. Our job is to determine how much sound enters these exhibits from the ballroom during various events and to assist the aquarium staff in setting appropriate limits for sound in the ballroom relative to the two exhibits both for the animals that inhabit them as well as for the people attending such events. This requires knowledge of noise, hearing thresholds of humans and each animal species, hearing in-noise, and signal processing. Students Katie Starke (UCONN) and Hillary Vargas (URI) are working on aspects of this second project.

More than Marine Mammals

The lab is also working closely with the University of Cincinnati Institutional Animal Care and Use Committee to obtain approval for a protocol that will allow us to open our canine audiology clinic. Deafness is not an uncommon problem for dogs. Congenital deafness has been reported for approximately 80 breeds, with the list growing at a regular rate so that it can appear in any breed. For the person seeking to buy or adopt a pet, failing to check for deafness can cause unexpected hardships and may ultimately end the relationship. Deafness can occur by two processes. Sometimes dogs have congenital or early onset deafness that develops within a month after birth. Just as humans, dogs can develop deafness at any time later in life. due to the use of ototoxic drugs, noise trauma, ear infections and age-related hearing loss. The current way that most veterinarians test for deafness is behaviorally, by making a loud noise and then observing the dog’s behavior. There are, of course, inherent weaknesses to this casual examination. Dropping a large book may convince you that the dog actually “heard” a sound. In reality, he may have felt the vibration of the floor. Banging pots and pans together may also prove futile. A puppy that has spent its life devoid of sound often learns to constantly scan for visual cues. If the puppy perceives a subtle change in ambient light, shadows or peripheral movement, as you bang a pot, it may still beat the loud noise test.

The Canine Audiology Clinic will perform Auditory Brainstem Response (ABR) testing in conjunction with Otoacoustic Emission tests (OAE). These tests are equally as valuable with assessing auditory status in dogs as they are in humans. It is very important to be able to accurately determine if there is a complete or partial deafness because there is a greater likelihood of death from being hit by cars or other injuries from objects coming toward them. Dogs who cannot hear can be more prone to injuries, since they cannot hear commands or avoid environmental dangers. There are also behavioral concerns. A deaf dog can startle easily when asleep and
this can cause aggression and fear. This research is very significant in that its outcome will be used to more efficiently determine if there is a hearing loss and will allow us to improve the quality of living of deaf dogs and their owners.

Presently Auditory Evoked Potential (AEP) testing is not taught in veterinary medicine. It is hoped that canine and indeed, animal audiology will be embraced by animal medicine community as it has been by the human medical community. The relationship of the “animal audiologist” to the veterinarian can be the same as the relationship of the human audiologist to the (ear-nose and throat specialist) ENT medical doctor. Being able to accurately determine if there is a hearing loss, can lead to proper breeding, and to training, and handling of deaf dogs and potentially aid in eliminating genetic and sensorineural hearing loss in dogs. The impact of establishing canine “normative data” will be a tremendous advancement in animal welfare and veterinary medicine.

Speech and Animals?

The UC lab is also working with our collaborators at Marquette University on a large project involving understanding the acoustical and behavioural aspects of animal vocalizations. As part of a National Science Foundation grant awarded to Dr. Mike Johnson at Marquette we have been using a neural-like Hidden Markov Model speech recognition system to classify animal vocalizations. Dr. Johnson’s project originally was applied to elephant vocalizations but has now been used to acoustically “observe” beluga whales in the St. Lawrence River Estuary in Quebec, Canada with good success. The use of this acoustic monitoring may prove to be a useful conservation tool. In October our colleagues at GREMM contacted the labs with an emergency request to send them digital acoustic files of St. Lawrence beluga vocalizations to be used as a “playback” in an attempt to entice a stranded beluga known as M147 out of a shallow water tributary and back into the river. As it turns out he did swim out without the play back but we were able to get good, clean digital beluga vocalizations of his own kind to Canada within about 12 hours.

Being close to Kentucky, the land of the horse has advance interest in this species vocalizations as well. Our Equine Vocalization Project (EVP) is working with collaborators at UCONN (Dr. Mike Darre and Ms. Rebecca Pond) and Marquette (Dr. Mike Johnson and Mr. Kuntoro Adi) and URI (Dr. David Browning) on horse vocalizations and acoustic welfare monitoring. The EVP was featured in the editorial section of this month’s EQUUS magazine. We are also investigating the possibility of doing ABR testing on horses as well, here at UC.

Questions? Inquiries? Newsletter updates on lab activities? Contact Dr. Pete at scheifpr@uc.edu or call at 513-558-8519.

Figure 1. Floor plan for the ballrooms and exhibits of the Georgia Aquarium
RESEARCH FORUM - Crisis Intervention Training Effects on Graduate Students’ Counseling Perceptions

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Abstract
Crisis intervention workshops may be a valuable tool in the education of speech-language pathology and audiology graduate students. The current research focused on the affects that a four-hour crisis intervention counseling workshop had on 33 first and second year graduate students’ perceived knowledge of information about counseling and on their perceived confidence in their counseling abilities. Participants completed pre- and post-workshop questionnaires to rate their counseling knowledge and confidence. Significant differences were found between pre- and post-workshop responses. Results would support the use of crisis intervention workshops in graduate education programs.

KEY WORDS: crisis intervention, counseling, speech-language pathology, audiology, graduate students, ASHA-accredited training programs

A communication disorder may create a negative impact on the psychosocial well-being of affected individuals and their families (Shipley, 1997). A person with a communication disorder can be alienated from her family, her friends, and her culture. Affected persons and their families may experience feelings of anger, guilt, shame, anxiety, frustration, and disappointment. Counseling individuals with communication disorders and their families is a crucial component of therapeutic interventions for communication disorders.

Counseling Training in Graduate Education Programs
Preservice speech-language pathologists (SLPs) and audiologists may ask what role they play in effectively counseling individuals with communication disorders and their families. The American Speech-Language-Hearing Association (ASHA) has developed a preferred practice pattern regarding counseling. Preferred practice standard 07.0 states that,

Professionals assist patients/clients and their families to develop appropriate goals for recovery from, adjustment to, or prevention of a communication or related disorder by facilitating change and growth in which patients/clients become more autonomous, more self-directing, and more responsible for achieving their potential and realizing their goals to communicate more effectively (ASHA, 1997, p. 23).

Counseling services include assessing clients’ counseling needs, providing information on clients’ disorders, modifying clients’ behaviors, modifying clients’ environments, developing clients’ coping mechanisms and systems for emotional support, and coordinating client and family self-help and support groups. Referrals to mental health professionals are an integral part of the counseling process.

Documentation of counseling interventions should include background information, results of counseling, recommendations, and referrals.

Despite these professional expectations, many SLPs and audiologists do not feel comfortable attempting to meet the counseling needs of their clients (Stone & Olswang, 1989). This discomfort may be due to the relative lack of educational requirements for coursework in counseling and lack of experience providing counseling during pre-professional practica. The current standards of the Council on Academic Accreditation in Speech-Language Pathology and Audiology (CAA) require that institutions of higher education provide graduate students with knowledge of the nature of the psychological correlates of communication disorders and differences (ASHA, 2001). Academic programs have various options for providing counseling knowledge to students, such as offering courses or workshops.

Exposure to knowledge is required but skills training and demonstration of skills is not required. Student clinicians are permitted to count the time spent counseling clients toward their required 400 clinical training hours but counseling experience is not required. Professionals who supervise novice clinicians are required to evaluate the effectiveness of counseling performed by graduate students and clinical fellows under their supervision (ASHA, 2001). Because counseling training may be new to academic programs in speech-language pathology and audiology, it would be useful for academic programs to have potential models to consult. For example, Rosenberg (1997) proposed training in informative counseling and personal adjustment counseling. Informative counseling is when clinicians provide resources to clients. Personal adjustment counseling delves into the feelings and attitudes associated with communication impairments. Rosenberg’s (1997) survey of graduate students revealed that students were fairly satisfied with their ability to provide informative counseling but wanted further training in personal adjustment counseling.

Crisis Intervention Counseling
Crisis intervention counseling is the specific type of personal adjustment counseling that is needed during temporary periods of upset and disequilibrium. Individuals experience crisis as a result of a hazardous event or situation. Crisis is chiefly characterized by an individual’s inability to cope with an event by utilizing familiar coping strategies (Aguilera,
Persons in crisis could experience ideations of suicide, anxiety, depression, frustration, and hopelessness. Roberts (2000) developed a seven-stage crisis intervention model. The ultimate goal of crisis intervention is for the individual in crisis to progress from maladaptive thinking to a healthier outlook on the situation. Roberts’ stages for this model consist of the counselor (a) assessing the lethality of the situation, (b) establishing rapport with the individual in crisis, (c) defining the problem, (d) exploring the client’s feelings and emotions, (e) exploring the client’s past coping mechanisms, (f) exploring the client’s alternative coping mechanisms and establishing a plan, and (g) providing follow-up after the crisis.

Crisis intervention counseling has traditionally been performed in mental health settings by trained professionals. Various other disciplines utilize crisis intervention as a means to assist the individuals in their care. Crisis intervention counseling is carried out by health care workers, school teachers, and professionals who work with developmentally delayed individuals and psychiatric patients (Davidson et al., 1995; Eldred, 1995; Nassar-McMillan & Borders, 1999; Taylor, Brady, & Swank 1991; Vinzant, 1989). Clients may be children, adolescents, or adults (Baronet & Gerber, 1997). For professionals in speech-language pathology and audiology, crisis intervention is a short-term means of dealing with emotions. SLPs and audiologists can be trained to utilize crisis intervention counseling techniques. Of course, professionals treating communication disorders need to be aware of when to make referrals to mental health professionals for persons with long-term counseling needs.

The purpose of the current research was to examine how a crisis intervention counseling workshop affected speech-language pathology and audiology graduate students’ knowledge of counseling techniques and their confidence in their abilities to counsel individuals with communication disorders.

### Methods

#### Participants

Thirty-three graduate students enrolled in accredited master’s level programs for speech-language pathology or audiology voluntarily attended a four-hour workshop on crisis intervention. Sixteen of the 18 first year students (89%) and 10 of the 15 second year graduate students (67%) had never taken a counseling skills workshop. Four of the first year students (22%) and three of the second year graduate students (20%) had received crisis intervention training prior to this workshop.

#### Materials

A crisis intervention counseling skills questionnaire (Appendix A) was administered to participants to examine participants’ perceptions of their (a) knowledge of crisis intervention counseling techniques, and (b) their confidence in their abilities to counsel clients and their families.

#### Procedures

Participants completed the questionnaire prior to attending a four-hour crisis intervention workshop conducted by Carol Middendorf, DEGREE AND CERTIFICATION, from Columbus, Ohio. Ms./Dr. Middendorf provided information from the professional literature on crisis intervention and from her own clinical experiences. Using lecture, discussion, role play, and simulation of scenarios, the workshop leader defined the characteristics of crisis, taught the steps of crisis intervention, and described techniques for effective communication. A workshop handout (Appendix B) was provided for all participants. At the completion of the workshop the crisis intervention counseling skills questionnaire was re-administered to participants.

#### Results

Descriptive statistics were used to compare differences in group mean scores on the pre- and post-workshop questionnaires. Statistical significance was determined using t-tests for dependent samples at an alpha level of $p < 0.01$.

To compare participants’ perceptions of their knowledge about counseling, aggregate measures were taken of questions #10a, 11a, 12a, 13a, and 14a. The difference between pre- and post-workshop responses was significant for first year graduate students ($p = .0001$), for second year graduate students ($p = .0001$), and for all participants combined ($p = .0001$) (Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Total Subjects (N = 33)</th>
<th>1st Year (N = 18)</th>
<th>2nd Year (N = 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Mean</td>
<td>2.6303</td>
<td>2.5000</td>
<td>2.7866</td>
</tr>
<tr>
<td>Pre SD</td>
<td>0.6857</td>
<td>0.5667</td>
<td>0.7980</td>
</tr>
<tr>
<td>Post Mean</td>
<td>4.1575</td>
<td>4.0888</td>
<td>4.2400</td>
</tr>
<tr>
<td>Post SD</td>
<td>0.3192</td>
<td>0.3007</td>
<td>0.3312</td>
</tr>
<tr>
<td>Mean Change</td>
<td>1.5273</td>
<td>1.3773</td>
<td>1.4533</td>
</tr>
<tr>
<td>SD</td>
<td>0.6261</td>
<td>0.4255</td>
<td>0.8158</td>
</tr>
<tr>
<td>$t$</td>
<td>14.01</td>
<td>15.84</td>
<td>6.90</td>
</tr>
<tr>
<td>$p$</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>
Regarding participants’ perceptions of their confidence in their ability to provide counseling, aggregate measures were taken of questions #10b, 11b, 12b, 13b, 14b. There was a significant increase from pre- to post-workshop scores for first year graduate students (p = .0001), for second year graduate students (p = .0001), and for all participants combined (p = .0001) (Table 2).

### Table 2: Aggregate Measures of Confidence

<table>
<thead>
<tr>
<th></th>
<th>Total Subjects (N = 33)</th>
<th>1st Year (N = 18)</th>
<th>2nd Year (N = 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Mean</td>
<td>2.4727</td>
<td>2.3888</td>
<td>2.5733</td>
</tr>
<tr>
<td>Pre SD</td>
<td>0.6797</td>
<td>0.7275</td>
<td>0.6273</td>
</tr>
<tr>
<td>Post Mean</td>
<td>3.8484</td>
<td>3.8000</td>
<td>3.9066</td>
</tr>
<tr>
<td>Post SD</td>
<td>0.4062</td>
<td>0.3564</td>
<td>0.4651</td>
</tr>
<tr>
<td>Mean Difference</td>
<td>1.3758</td>
<td>1.5889</td>
<td>1.3333</td>
</tr>
<tr>
<td>SD</td>
<td>0.6398</td>
<td>0.4255</td>
<td>0.6335</td>
</tr>
<tr>
<td>t</td>
<td>12.35</td>
<td>9.08</td>
<td>8.13</td>
</tr>
<tr>
<td>p</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Conclusions**

Similar to the situation described by Rosenberg (1997), graduate students who participated in this study were beginning their professional careers without adequate knowledge about counseling. The results of this study provide support for the use of a crisis intervention training workshop. Interestingly, at pre-workshop, the second year graduate students had more clinical experience than the first year students but they did not report having counseling knowledge and confidence in their counseling abilities. This might imply that the second year students had not received adequate counseling training during clinical practicum. Therefore, graduate programs may find it necessary to address the need for supplemental counseling training. A crisis intervention workshop would be a viable option.

### REFERENCES


ADDITIONAL REFERENCES


Appendix A

Crisis Intervention Counseling Questionnaire for Graduate Students in Communication Sciences and Disorders

Please complete the following information.

Age: __________ Gender: (circle one) Male Female

Place an X on the appropriate lines:

Educational Standing 1st year graduate student 2nd year graduate student 3rd year graduate student Other (specify)

Please specify which university you are affiliated with:

Miami University University of Cincinnati

Please specify which graduate program you are involved in: (check one only)

Masters Degree Speech-Language Pathology Masters Degree Audiology Masters Degree Speech-Language Pathology and Audiology other (please specify)

Number of adult clinical hours completed in the speech-language pathology or audiology master’s program:

0-25 75-100
25-50 100+
50-75

Number of child clinical hours completed in the speech-language pathology or audiology master’s program:

0-25 75-100
25-50 100+
50-75

Have you completed a counseling skills course while attending undergraduate or graduate school?

a) YES__________ b) NO__________
If yes, how many credit hours? ______________

Have you attended a counseling skills workshop while attending undergraduate or graduate school?

a) YES__________ b) NO__________
If yes, how many have you attended? ______________

Have you received any training in crisis intervention counseling?

a) YES__________ b) NO__________

Please rate your counseling training with crisis intervention skills.

5 excellent 4 good 3 fair 2 poor 1 none
Based on your knowledge and understanding of counseling, answer the following questions. Please read each statement carefully and CIRCLE the response that best represents your views (circle only one response for each question).

1. It is within the speech-language pathologist and audiologist’s role to provide counseling services to individuals with a communication disorder or hearing impairment.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

2. It is within the speech-language pathologist and audiologist’s role to provide counseling services to parents and family members of patients with a communication disorder or hearing impairment.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

3. I am capable to adequately judge the intentions of my patient’s non-verbal communication behaviors.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

4. I am knowledgeable of the skills and steps of crisis intervention counseling.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

5. I am knowledgeable of the essential characteristics of a crisis situation.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

6. I do not feel confident identifying a person who is experiencing symptoms of a crisis.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

7. I feel I can effectively use crisis intervention skills when counseling my patients and their families.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

8. I feel I do not have the necessary qualities to be considered a skilled listener.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree

9. A workshop on crisis intervention counseling skills would be beneficial for speech-language pathology and audiology graduate students.

   5 4 3 2 1
   strongly agree  agree  neutral  disagree  strongly disagree
10. During the therapy session a patient becomes upset and agitated due to her/his inability to communicate effectively.
   a) I feel **I have the knowledge** to counsel this patient regarding attitudes and feelings about her/his communication disorder.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree
   b) I feel **confident** counseling this patient regarding attitudes and feelings about her/his communication disorder.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree

11. A mother has been recently informed that her child has a disability. She has come to you for assessment and treatment of her child’s communication problem. She confides in you some of the emotions she is experiencing.
   a) I feel **I have the knowledge** to counsel this patient regarding attitudes and feelings about her/his communication disorder.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree
   b) I feel **confident** counseling this patient regarding attitudes and feelings about her/his communication disorder.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree

12. Your patient’s husband has become extremely agitated because he is not satisfied with the quality of hospital care his wife is receiving.
   a) I feel **I have the knowledge** to address this man’s feelings and attitudes about this situation.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree
   b) I feel **confident** addressing this man’s feelings and attitudes about this situation.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree

   a) I feel **I have the knowledge** to address a patient’s suicidal ideations.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree
   b) I feel **confident** addressing a patient’s suicidal ideations.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree

14. A husband and wife come in for an outpatient therapy session. Throughout the session the wife indicates that she is having difficulty dealing with her husband’s communication deficit and that his communication deficit is having a negative impact on their marriage.
   a) I feel **I have the knowledge** to address the attitudes and feelings she is expressing.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree
   b) I feel **confident** addressing the attitudes and feelings she is expressing.
       5 strongly agree   4 agree   3 neutral   2 disagree   1 strongly disagree

Comments or Suggestions:
Appendix B

Crisis Intervention Counseling Skills Workshop for the Pre-Professional Speech-Language Pathologist and Audiologist

Please Listen!

When I ask you to listen to me, and you start giving advice,
You have not done what I have asked.

When I ask you to listen to me, and you begin to tell me why I shouldn’t feel that way,
You are trampling on my feelings.

When I ask you to listen to me, and you feel you have to do something to solve my problem,
You have failed me, strange as that may seem.

LISTEN!
All I asked was that you listen,
Not talk or do—just hear me.

Advice is cheap;
Twenty-five cents will get you both Dear Abby and Billy Graham in the same newspaper.

And I can do for myself.
I’m not helpless.
Maybe discouraged and faltering, but not helpless.

When you do something for me, that I can and need to do for myself,
You contribute to my fear and inadequacy.

BUT, when you accept, as a simple fact,
That I do feel what I feel, no matter how irrational,
Then I can quit trying to convince you,
And can get about this business of understanding what’s behind this irrational feeling.

And, when that’s clear the answers are obvious, I don’t need advice.
Irrational feelings make sense when we understand what’s behind them.

So, please listen, and just hear me.
And, if you want to talk,
Wait a minute for your turn,
And I’ll listen to you.

-Dr. Ray Hought
Defining a Crisis and Crisis Concepts

What is a Crisis?
The term crisis can be defined as a temporary period of upset and disequilibrium, experienced as a result of hazardous event or situation, chiefly characterized by an individual’s inability to cope with that event utilizing familiar coping strategies (Roberts, 1995; Roberts, 2000).

What are the essential characteristics of crisis?
1. Crises are precipitated by an event that is thought to be meaningful or threatening. Ultimately the event is too much for the person’s typical problem solving skills.

2. Crises are normal. Everyone has felt overwhelmed at one time or another. Today you may be the one helping someone with his or her crisis, but tomorrow you may be the one reaching out for help.

3. Crises are personal. A situation that is difficult for one individual may not even phase another. It is the individual’s perception and interpretation of the event that is crucial, not the nature of the event.

4. Crises are resolved within a brief period of time.

5. The resolution of the crisis can be adaptive, as reflected by the individual’s use of new problem solving skills or maladaptive by the person demonstrating continued distress (France, 1990).

How do you know when someone is in crisis?
A person in crisis can exhibit a number of different symptoms (Link, 1999).

Short Attention Span
• Exhibits a fixed span of attention
• Returns to the topic of crisis, despite a person’s attempt to move the conversation forward.

Change in Attachments
• This person is willing to talk to anyone who will listen.

Distress
• Person will indicate they are having a difficult time coping.

Change in Performance
• Person’s normal level of functioning whether it is with work, school, or social life is decreased.

Reduced Decision Making Ability
• Person’s ability to make even the most basic decisions is greatly reduced.

Altered State of Consciousness
• Person puts blinders on. They cannot see what is obvious
Crisis Intervention Counseling

What is crisis intervention?

Through the techniques of crisis intervention, the crisis situation can be reevaluated with the hopes of coming to a healthy resolution. Therefore the individual can emerge with greater strength, self-confidence, and empowerment over one’s own life (Roberts, 1995). A key factor of crisis intervention is that it is a form of short-term treatment. Several systematic practice models and techniques have been developed for crisis intervention work. The crisis intervention model applied for this workshop has been adapted from Roberts’s Seven-Stage Crisis Intervention Model.

Five Basic Steps of Crisis Intervention Counseling

1. Establish a Rapport/Relationship:
   • Proceed slowly; allow the patient to set the pace of the conversation.
   • Reinforce the patient’s willingness to seek help.
   • Provide unconditional support, positive regard, and concern.

2. Define the Problem:
   • Define the problem with the patient’s vocabulary.
   • Explore the depth and implications of the situation.
   • Utilize open-ended questions.
   • Focus on now and how rather than then and why.
   • Use key questions, “What event led you to seek help at this time?” and “When did this take place?”

3. Explore Feelings and Emotions:
   • Participate in active listening: This involves listening in an empathetic and supportive way to the patient’s feelings of what happened and the precipitating crisis event.
   • Accept, acknowledge, and promote hope.
   • Reduce anxiety, denial, and blame.

4. Explore and Assess Coping Attempts:
   • Bring to the conscious level the patient’s past coping attempts.
   • Transition from the problem to a solution.
   • Focus on the patient’s strengths, “The patient is an untapped resource!”
   • Explore possible solutions that were prematurely rejected.
   • Avoid already failed solutions.

5. Explore Alternatives and Develop a Plan
   • Collaborate with the patient to generate multiple solutions. (Allow the patient to do this independently with you assisting.)
   • Explore possible consequences of each solution.
   • Explore the patient’s feelings regarding each solution and consequence.
   • Have the patient commit to a plan of action.
   • Follow up with patient’s response to the crisis event and solution.
Basic Skills of Crisis Intervention

1. Attending Behavior (Active Listening)

Five key concepts comprise active listening:

• Eye Contact: If you are talking with someone, maintain eye contact. Breaking eye contact indicates to the patient that you are not interested.

• Attentive Body Language: Everyone establishes his or her own active listening style. Choose one that you feel comfortable with.

• Patient-Clinician Positioning (Proxemics): Respect your patient’s personal space.

• Vocal Tone and Rate: Be aware of your consistency, pitch and softness. This is a key skill that conveys to your patient you care about their well-being. Your voice is a powerful instrument.

• Silence: Silence can be powerful. It allows the patient more opportunity to share. “The silence is a primary vehicle for responsibility assumption, and it is vital that I do not take that responsibility from the clients” (Luterman, 1996, p.102).

2. Questions and Minimal Encouragers

Questions can be categorized into two types: open and closed. To be an effective counselor, one must know the difference between the two.

• Open questions probe for broad information. They allow the person to express him or herself without any sort of restrictions. Questions should be developed to help the patient clarify his or her problem, rather than provide information for the clinician. Clients retain the freedom to select the nature and amount of information revealed. “Can you tell me more about…?”

• Closed questions specify the precise information needed. They request a small bit of usually factual information in which a simple “yes” or “no” suffices. Closed questions demonstrate to the patient a lack of interest in what he or she is feeling. When the clinician relies on closed questions to structure the interaction, he or she is often consumed with thinking of new questions rather than listening to the client. “Are you…?”

Minimal encouragers are small indicators to the patient that you are following them. The purpose of this skill is to encourage the patient to keep talking. There are two types: non-verbal and verbal.

• Verbal Minimal Encouragers: Brief utterances that indicate to the patient that you are tuned into them. Some verbal minimal encouragers are: “Oh?”, “So?”, “Then?” or “And?”, “Tell me more.”, “Umm-hummm.”, repeating key words, restating the patient’s last statement, and silence.

• Non-verbal minimal encouragers: Elaboration of the body language for attending and active listening. Some non-verbal minimal encouragers are: making eye contact, leaning forward with interest, head nods, and gestures.

3. Paraphrasing

The purpose of paraphrasing is to clarify complex issues and recognize important emotions. It requires that the clinician demonstrate his/her ability to give back the information to the patient. Paraphrasing requires the clinician to actively attend, empathize with the patient, and take on the patient’s point of view. If paraphrasing is successful the patient will typically respond with a “Yes!”

An example of paraphrasing is given below.

Patient: “I’m really not involved with the autism society. I’m into other parental organizations.”

Clinician: “The autism society isn’t important to you.”

Patient: “Right. I used to be a member but then I found another organization where I felt more useful.”

The key to paraphrasing is to find the essence of what is said, rather than repeating the exact statement.

4. Reflection of Feelings

The purpose is to reflect the emotions that are underlying the problem. Do not attend solely to content and decision issues. Rather take time to understand the patient’s feelings. A clinician must be very alert and responsive. For this skill it is not important what the patient said, but how the patient said it. Reflecting feelings is a skill that is appropriate at any time regardless of the nature.

5. Summarizing

The purpose of summarizing is to organize complex information and help the patient problem solve. When summarizing, the clinician selectively attends to the patient’s statement over a period of time and then re-states for her or him as accurately as possible.

This allows the clinician the check his/her perception of the conversation with the patient. Summarizing indicates to the patient that you understand his/her story.

Summarizing is very similar to reflection of feelings and paraphrasing. Not only are you summarizing content but also emotional feelings. There are specific behaviors to use when summarizing.

• Use questions, minimal encouragers, paraphrasing, and reflection of feelings to indicate to the client you are actively listening.

• Note the patient’s inconsistencies with their feelings. Many patients feel very torn with their emotions. Acknowledging this will allow the patient to feel someone understands what he or she is going through.

• Pay close attention to the main issues. Summarizing them to the patient will help him/her make an informed decision.

• Time your summarizations appropriately. Allow the patient to finish his/her thought before jumping in.
Nonverbal Communication and What it Communicates

1. Anger:
   **Speech**
   - Fast rate and loud intonation
   - Short duration of phrases with brief pausing
   **Facial Expressions**
   - Frowning
   - Tense neck and facial area
   - Chin and head tilted forward
   - Wide eyed

2. Anxiety:
   **Speech**
   - Fast rate with little silence
   - Repetitive
   - Change in volume
   - Stuttering
   - Frequent shift of topic
   **Body Language**
   - Grandiose gestures
   - Perspiration and flushed appearance
   - Frequent fidgeting
   - Increased participation in unhealthy behaviors (i.e. drinking and smoking)

3. Grief, Sadness, and Depression:
   **Speech**
   - Slow rate
   - Frequent pauses
   - Frequent sighing
   - Crying
   **Facial Expression**
   - Flat affect
   - Drooped eyes

4. Warmth, Content, and Happiness:
   **Speech**
   - Consistent rate, inflection, and intonation
   **Body Language**
   - Smiling
   - Eye-contact
   - Open posture

How To Become a Skilled Listener

Listening is the foundation upon which communication is built upon. Listening not only creates successful communication, it also provides an avenue for understanding. In order to become a skilled listener, it is important that the following activities take place.

1. **Find the Time to Talk.** Providing the person the opportunity to share their emotions enables that individual to become calm and relaxed, thereby empowering them to cope with his/her disability.

2. **Give Your Undivided Attention.**
   Don’t be easily distracted by other ongoing events. Giving your undivided attention demonstrates willingness to listen and support.

3. **Listen Between the Lines.**
   People get caught up in what is being said, rather than how it is being said. Sometimes more information is communicated through emotion. Active listening means hearing the words and perceiving the feelings behind them.

4. **Put Yourself in Their Shoes.**
   People are too quick to condone patient/family decisions. Take a step back and reexamine. By doing this you are showing empathy. This demonstrates to the patient your true interest with his/her well being.

5. **Allow Full Expression of Emotion.**
   Listen carefully to the point of view and emotions being expressed. Each situation is individualized. People differ from each other in what they believe and how it affects their life.

6. **Evaluate and Process What Is Being Communicated.**
   Make sure you understand what is being said before reacting. Utilize the basic skills of crisis intervention.

7. **Treat Private Conversations as Privileged Communication.**
   This allows trust and rapport to be built with your patients.

Ineffective Communication for Crisis Intervention

1. **Advice:** “You should not see her again.”
   - The intent of advice is to tell an individual what to do
   - This takes the power of choice away from someone
   - It decreases the patient’s willingness to freely discuss issues

2. **Analysis:** “You are having trouble because your expectations are too high.”
   - The intent of analysis is to explain the underlying cause of the concern
   - Analysis changes the focus from what the patient has to share to the ideas the clinician has to give
   - Discussion of feelings decline while intellectual explanation increases

3. **Sympathy:** “I feel bad for you.”
   - The intent of sympathy is to decrease feelings of loneliness, depression, and isolation
   - Sympathy shifts the discussion from the patient’s feelings to the clinician’s feelings

4. **Interrogation:** “Why did you do that?”
   - The intent of interrogation is to gain information
   - Interrogation inhibits the patient from talking freely, especially if the patient is asked questions repeatedly
Suicide

The suicide crisis is defined as a process where the person loses, over a period of time, the capacity to cope. The inability to cope with unbearable pain is the primary issue of suicide. The suicidal person has the mind set that his/her problems are chronic. For a suicidal person, death appears to be the ultimate solution to the problem. When working with a person who is suicidal it is important to remember that suicide cannot be prevented if the person really wants to die. When working with a person who is suicidal there are four steps, which can help assess the lethality of the situation.

1. Identify:
   • Look for warning signs. They may be verbal, “I am going to kill myself” or an indirect statement, “I can’t take it anymore”. Eight percent of individuals with suicide ideations will exhibit warning signs. These include:
     • Hopelessness
     • Helplessness
     • Depression
     • Anxiety
     • Inability to cope
     • Recent loss
     • Change in physical well being
     • Difficulty at home with care takers
     • Increased alcohol/drug consumption
     • No life pleasure with activities

2. Clarify:
   • Ask the person if he/she is suicidal. Use the word suicide. Using the word suicide will not put the idea in the person’s mind. Explain to the person that you have observed warning signs and that you are concerned.
   • Anything but a firm NO is a YES.

3. Assess:
   • Ask the person if he/she has a plan
   • Discuss the lethality of the method, availability of the means, and the details of the plan

4. Communicate:
   • Discuss what the suicide will solve
   • Do not express shock or belittle the crisis
   • Be a reflective listener
   • Reassure that he/she has someone to turn to.
   • Provide referral information

Some Good Open-Ended Questions

• How does that make you feel?
• How do you think this treatment will turn out?
• How do you feel about what happened?
• How did that affect you?
• How are you going to explain this to…?
• How does your husband feel about this?
• How do you plan to…?
• What will that mean to you?
• What have you tried in the past?
• What would you like to see happen?
• What do you mean by that?
• What was the significance of that event for you?
• What are some other things you could try?
• What is the worst thing that could happen?
• What is important to you?
• When did this happen?
• When do you think is the best time to deal with this?
• When did you first feel this way?
• When did you first notice your…?
• When can you…?
• Where do you think we can start?
• Where do you see this going?

Some Good Reflection of Feeling Statements

• Perhaps you were feeling…
• It sounds like…
• It seems that…
• Are you saying…?
• It seems to me…
• You appear to be feeling…
• If I’ve understood you, …
• Let me see if I understand what you are saying…
• I get the impression you…
• You feel…because…
Case Examples

These cases are presented to provoke thought about the importance the SLP’s neuroscientific knowledge and to illustrate the practical effectiveness of this knowledge in patient care. The cases are fictional composites of actual clinical cases seen by the author in community and teaching hospitals within a large university health care system.

Case Example 1

A 72-year-old patient visits his family practice physician complaining of choking episodes while drinking fluids. The physician refers the patient to the speech-language pathology clinic for consultation. During the clinical examination and interview, the patient admits to numerous symptoms he had not related to the physician. The patient admits to coughing after swallowing, typically when drinking liquids, though a few occasions of choking were noted after he had eaten particulate solids. He complains of finding masticated remnants of food in the left side of his mouth after meals, which he cannot feel. He has bitten the left side of his tongue but did not notice until bleeding was observed. The lower left side of his face is “tingly” and the skin over his left cheek is partially numb. He is edentulous and tends not wear dentures and eats soft foods, but he denies trouble chewing. His left eye feels “dry all the time.” His tongue and soft palate are symmetrical and his voice and speech are typical for age and gender.

Videofluoroscopy with repeated trials of various conditions reveals 1) every liquid bolus travels to the vallecula before hyolaryngeal elevation begins; 2) there is laryngeal penetration to the level of the laryngeal vestibule with postprandial laryngeal residue; 3) a Penetration Aspiration Scale score of “3” is obtained while aspiration is not observed (Rosenbek, Robbins, Roecker, Coyle, & Wood, 1996); 4) oral residue is observed. A chin-down posture causes the bolus head to remain anterior to the pharynx until hyolaryngeal elevation begins. The SLP trains the patient in the use of this compensatory positioning technique and the patient is very happy with the results. But what is the problem causing his abnormal swallow? What further evaluation is necessary? What factors need to be included to arrive at a differential diagnosis?

First, it is true that head postures often improve swallowing disorders caused by delayed pharyngeal onset. It is also true that aging changes the timing of biomechanical and sensorimotor functions (Kim, McCullough, & Asp, 2005). Laryngeal penetration is a frequent and possibly normal finding in many older adults, as is slowing of the onset of the pharyngeal stage in relation to bolus transit toward the pharynx (Gleeson, 1999; Robbins, Coyle, Rosenbek, Roecker, & Wood, 1999). This patient exhibited age related biomechanical changes. It is speculative whether his reported history of choking was associated with the observed bolus transit events described above. However, there are also the issues of previously unexplained sensory symptoms and undetected motor abnormalities.

It is necessary that the SLP conduct additional neurological examination of the patient. First, like a neurologist assessing cranial nerve functions, the SLP can test facial sensation using a cotton swab to stroke the three regions of the face repeatedly while asking the patient whether symmetrical sensation is present. The patient tries to discern if one side of the face feels “stronger” or “weaker” (Murray, 1999; Wilson-Pauwels, Akesson, & Stewart, 2002). Second, the SLP can assess facial motions by observing facial expressions. Third, mandibular motion is sampled by having the patient enact active jaw movements. Denate patients will be asked to “clamp down” on a tongue depressor placed between upper and lower molars and to clench their teeth while the SLP pulls on the tongue depressor. This cannot be performed in edentulous patients but it is possible to test the resistance of the elevated mandible by pressing against the mandible in the “open position.” This should not be done in patients with temporomandibular joint problems or with prior radiation or surgery to the mandible. Patients
can also be asked to hold their mouths closed against resistance applied to the jaw.

The Case 1 patient exhibited asymmetrical mandible elevation. The right (stronger) side elevated while the left did not. The SLP concluded that the patient exhibited the pattern of unilateral motor and sensory dysfunction that would be seen in a peripheral injury to the trigeminal nerve. A visit to the hospital library to review relevant literature helped the SLP prepare a report to the physician that suggested some potential differential diagnoses that would coexist with this pattern of impairment.

The disposition of this case was that, after conferring with the SLP, the referring physician diagnosed the patient with trigeminal neuralgia and referred the patient to a neurologist. The neurologist examined the patient and requested a thin-slice MRI of the brain and skull base which detected a mass in the middle cranial fossa compressing the trigeminal nerve distal to its pontine exit. It was found to be a meningioma. The “choking” was caused by undetected postprandial oral remnants entering the pharynx. The patient was successfully treated before the mass caused irreversible damage.

Patients with oral sensory anesthesia (loss of sensation) do not respond normally to tactile stimuli such as remnants of food or liquids remaining in the affected areas of the oral cavity after the swallow. To detect such a case, the SLP needs to be sure that the sensory components of the oral-facial examination are not overlooked. In this case the damage to the trigeminal nerve was discovered by the SLP. The pathways of the facial and trigeminal nerve are often confused. It is the trigeminal nerve that carries facial sensation back to the central nervous system. All sensory information for the face and oral cavity from the soft palatal to the lips is carried through the trigeminal sensory nerve fibers. All of the muscles of mandible elevation and lateralization and two of the three muscles of mandible depression (which are also hyolaryngeal elevators) are supplied by the trigeminal motor fibers.

Knowledge of the function of the cranial nerves and the peripheral nerve fields enables the SLP to investigate sensorimotor abnormalities. Familiarity with the effects of injuries to cranial nerves allows the SLP to better diagnose their patients.

Case Example 2

A 68-year-old man exhibited an acute onset of dizziness, nausea and vomiting, weakness in one arm, falling, fever, productive cough, and diplopia. His spouse called the patient’s primary care physician who recommended the paramedics be called to transport the patient to the local hospital. He was admitted to the medical surgical unit with a tentative diagnosis of a possible stroke and gastroenteritis. His usual medications and a clear liquid diet were ordered. The patient’s oral medications were offered by his nurse. The patient coughed violently. The nurse asked the unit secretary to call the speech-language pathology department.

A summary of case information from the medical record is lacking for this patient. The patient has not been hospitalized in this institution prior to this admission. The patient’s medical record is brand new.

The SLP initiated a neurological examination of the patient. The patient is oriented and provides a concise history of his symptoms. He states that he is unable to swallow and the room is spinning, making him nauseous. Articulation is precise. The patient displays gurgling phonation, diplopia, and hypernasal resonance. His left eyelid droops slightly though he can open and close it; the sclera is red and the pupil is constricted. The eyes seem to be twitching from side to side and they do not appear to converge on the examiner. He is sweating on only the right side of his face. The soft palate elevates only on the right side. The tongue protrudes at midline. Sensory testing reveals diminished tactile detection in all three trigeminal fields on the left side of the face, and the patient reports that he notices the absence of taste on the left side of his left tongue. His elicited cough is weak without audible sharp glottic closure. He is unable to hold his breath with his mouth open. His right arm is weak and uncoordinated. Palpation during elicited saliva swallowing reveals absent motion of the larynx with immediate coughing after the attempted swallow. At the time of the examination the patient was overdue for his embolus control medication.

The disposition of this case was that the SLP phoned the admitting physician to discuss the observations obtained during the clinical examination and interview and to offer some thoughts on possible etiology. This patient exhibited signs consistent with damage to the fields innervated by cranial nerves V, VII, IX, and X. The SLP had worked with several lateral medullary stroke (LMS) patients over the years. Given the patient’s fever, productive cough, and neurological signs, the SLP discussed this possibility with the physician.

An LMS can damage the motor nucleus (ambiguus) from which the ipsilateral laryngeal and pharyngeal motor supplies emanate, along with associated interneurons and centers. These lesions are notorious for producing aphagia (absent swallowing) and vocal fold and ipsilateral pharyngeal paralysis in the acute phase (Robbins & Levine, 1993). LMS is caused by occlusion or hemorrhage of the vertebral or posterior inferior cerebellar artery. They can produce a cluster of other signs including contralateral limb weakness and disconnection of some autonomic (sympathetic) reflexes on the side of lesion. Some studies have reported bilateral pharyngeal paresis after unilateral LMS (Aydogdu et al., 2001).

A neurology consult was entered. It was agreed that any oral medications would be administered intravenously. The neurologist later confirmed the diagnosis of LMS with Wallenberg’s syndrome. MRI of the brainstem confirmed the causative lesion. Otolaryngology consult confirmed left vocal fold paralysis. Serial instrumental evaluations of swallowing revealed the absence of upper esophageal sphincter opening with
asymptomatic aspiration during the swallow and symptomatic aspiration after the swallow. The patient’s upper esophageal sphincter function remained unchanged and the patient underwent placement of a gastrostomy tube at approximately 16 days post onset. In the long term he underwent thyroplasty to treat the paralyzed vocal fold. After nine months of recovery and aggressive swallowing treatment including serial assessment with videofluoroscopy, he recovered the ability to swallow safely with compensatory maneuvers. His gastrostomy tube was subsequently removed.

The SLP’s recognition of the speech and non-speech signs of laryngeal and pharyngeal denervation facilitated the medical team’s rapid response and averted a potential disastrous outcome. The SLP’s understanding of the cranial nerve fields contributed to the team’s preventive care of this patient.

In summary, the SLP must conduct systematic testing of the patient’s sensorimotor status. The SLP understands any abnormalities observed during the examination and investigates the potential causes of the patient’s dysphagia. The SLP needs to be prepared to identify potentially life-threatening conditions and can be the first team member to be alert to the need for further medical assessment of patients with neurological symptoms.

REFERENCES


