

SIARC
Specialized Intensive Auditory Rehabilitation Conference

University Training Model
Based on
A SIARC Decade at
University of Texas at Dallas

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SIARC

Specialized Intensive Auditory Rehabilitation Conference

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Introduction

Dr. Linda Thibodeau has conducted the Specialized Intensive Auditory Rehabilitation Conference (SIARC) at the University of Texas at Dallas since 2000. SIARC is a week-long program offered for couples who experience the challenges associated with hearing loss and for graduate students who are working towards degrees in audiology and speech/language pathology. The program has four unique aspects: (1) adults of all ages may participate and are encouraged to attend with a communication partner, (2) graduate students are assigned to participants and take responsibility for comprehensive daily management of their communication/ technology needs, (3) real-world experiences in restaurants and other public venues allow the participants to provide immediate feedback regarding their success, and (4) the community learns about accommodations that benefit persons who are hearing impaired. In addition, SIARC addresses the concerns of the communication partner via specialized assessments, supportive discussions, resource notebooks, and guest speakers (Thibodeau & Cokely, 2003; Thibodeau & Alford, 2010) (Appendix D)

After 15 successful years, the program has expanded to three other university training sequences at the University of Washington, University of Minnesota, and University of South Florida. Efforts towards further expansion include adding at least one university training program each year and exploring options for SIARC internationally. Given the strong emphasis on use of wireless assistive technology, it is appropriate Phonak has generously supplied FM equipment for use during USA SIARC programs. The critical points to consider in developing a SIARC program include the participants, the program, location, dates, responsibilities, equipment, and funding.

Participants

A SIARC-UTD typically operates with 10 couples, 10-15 graduate students, and three faculty. At least one person in each couple must be an experienced hearing aid user for at least one year. Because of the activity travel requirements, the participants must be in good physical health and able to walk on tours for at least one hour. They should also agree they are able to independently get in and out of a large passenger van. A single person may register but will be paired with another single attendee for communication practice.

The couples would complete registration forms and the graduate students would complete applications for the program and indicate their past experiences with wireless technology. Ideally, the participants and students are determined at least months prior to the conference.



Program

To model the program after SIARC-UTD it would begin on Tuesday and end on a Saturday at noon. There would be four classes each day, for a total of four sessions for each class, with some flexibility for tours that may take an afternoon. The proposed content of the four classes is shown in Table 1. A sample daily schedule is shown in Appendix B. In addition, time could be devoted to accurate measurement of speech recognition in noise with their current devices compared to the new wireless technology. The audio visual training will be conducted via computerized programs that can be delivered directly to the bilateral aids via connections with the wireless transmitter to the sound source from the computer. All the equipment for the speech in noise testing and the computerized training will be brought by Dr. Thibodeau.

Table 1.

CLASSES			
1 AUDIO CLASS	2 COMM STRATEGIES/ALD	3 AUDIO VISUAL TRAINING	4 COPING
Audiogram	COMM RULES	Seeing Hearing Speech	COSI
OAE	Audio/Sp Acoust/Simulate HL	CasperSent	<u>Comm</u> Breakdowns Stress Effects
<u>Otosopic</u>	ALD's-Phone Tech/Strategies	LACE	
Tympanometry	ALD-TV/Alerting/Public	Tracking	Changing Behavior
HACK-Elec then Real Ear	ADA		
New Technology			
HINT-No HA or W/persHA			
HINT-New HA, FM			

Location

SIARC is ideally held at the Speech and Hearing Center on the University campus. For the morning classes, one large room is needed with tables/chairs and then another 3 smaller rooms for discussion of the audio information. One large room for all participants would be needed for lunch. For the afternoon classes, two rooms are needed that could hold 3 couples, 3 students, and 2 possible SIARC staff (Dr. Thibodeau and U of MN Staff). Each of these large rooms would need to be equipped with dynamic soundfield systems with pass around microphones to facilitate speech recognition. Dinner could be held at a quiet restaurant since it is the first evening and work up to noisier restaurants as the week progresses.

During the tours, the remote microphone equipment would be used and possible comparisons between old and new technology could be conducted. The proposal includes the four classes that are offered in SIARC-UTD. The flexibility to reduce classes can be determined when the tours/travel details are known.



Dates

A possible schedule would be:

- Mon Training with new equipment
- Tues Begin Four classes, tour, dinner (Appendix B)
- Wed SIARC program, tour, dinner
- Thurs SIARC program, tour, dinner
- Fri SIARC program, theatre, dinner
- Sat SIARC program, Evaluation, depart

A possible timeline for completing preparations would be as follows:

- 4 mo prior Conference call to discuss details of proposal and update on funding sources
- 3 mo prior Develop application for participants and announce program (Appendix A & E)
- 2 mo prior Review applications and select participants
- 1 mo prior Set up Tours and make travel/hotel arrangements, Get audios for all participants
- Event SIARC
- Post Submit manuscript on SIARC outcomes



Responsibilities

The success of SIARC depends on the joint contribution of several individuals including the SIARC faculty, graduate students, informed participants, and administrative assistants. Therefore, the proposal includes suggestions for possible responsibilities for each entity. Once again, these could easily change with further discussion by all involved.

SIARC Faculty-UTD- Linda Thibodeau

- Organize travel from Dallas and keep all informed
- Organize Remote Microphone Systems, Soundfield, and iPads to use in SIARC
- Help Seek funding

SIARC-Faculty

- Solicit applications from couples and graduate students
- Determine transportation to all locations
- Provide soundfield and personal wireless systems for evaluation, batteries
- Arrange times, program, equipment use for tours, dinners
- Arrange for use of rooms at Speech and Hearing Center
- Reserve block of hotel rooms

SIARC Graduate Students-

- Be knowledgeable about all wireless technology used during the week
- Conduct SIARC classes and manage assistive equipment
- Conduct electroacoustic verification
- Conduct speech recognition in noise testing
- Conduct auditory training
- Assist their assigned couple throughout the day with managing technology/troubleshooting, navigating the schedule
- Complete final case report on assigned couple

SIARC Participants

- Wear hearing aids daily, use wireless technology on tours/dinner
- Try new wireless technology and provide feedback
- Participate in all SIARC programs, classes, tours, etc
- Return equipment at the conclusion of the program
- Provide overall evaluation of SIARC - MN

Equipment

All participants' personal technology will be verified prior to SIARC. During the week, the following equipment will be needed.

- Soundfield system in each large room with pass around microphone (from LT)
- Personal wireless equipment to try on tours (devices for those with near normal hearing)
- Projector and screen for powerpoint slide show
- Computer and HA/remote mic programming software/connections
- Power Strips for running multiple computers at the same time or for multiple charging of wireless equipment
- Batteries, 13, 675, 312
- Troubleshooting tools
- Sound Level Meter for Calibration of Speech in Noise Testing
- Electroacoustic Test Box for HA/Remote Mic Verification
- Video Otoscopy (from LT)

The following equipment used in SIARC-UTD will be brought by Dr. Thibodeau.

- Ten iPads for Auditory Training and Speech Recognition Testing
- Three Bluetooth Mini Speakers
- Two Dynamic Soundfield Systems
- Video Otoscopy
- Ten Remote Microphone Systems



Funding

SIARC-UTD has operated on funding provided by the registration fees (\$350 per couple) and a \$5000 grant from local audiology group. More than half of the participants attend on “scholarship” and do not pay. Additional funding was provided by the Texas Department of Assistive and Rehabilitative Services. Manufacturers provided the Remote Microphone equipment and the UTD Callier Center provided the rooms and audiological equipment.

The expenses for SIARC at other Universities will vary greatly depending on the tours, plays, and available staff/faculty resources. Two Budgets for minimal and ideal programs (\$8,000 and \$15,000) are outlined in Appendix C. The estimates include costs for transportation, food, hotel, and tours. Research will be conducted to determine possible grant opportunities from the following sources.

Foundations

Manufacturers

US Dept of Education Training Grants

Hearing Related Organizations such as

National Organization of Hearing Research

Deafness Research Foundation

Ida Institute

Summary and Future Directions

A program modeled after SIARC-UTD is proposed in which students and couples share experiences, listening strategies, and technology trials over a five-day event. Graduate students who are trained in this model where they see the challenges experienced by persons with hearing loss in the real world, potentially will become better service providers as they are more knowledgeable about the benefits of wireless technology. As SIARC is implemented at more Universities, nearby private practices could be invited to participate in joint rehab programs throughout the year. These relationships would enhance graduate student practicum experiences as well as the services offered by those private practices.

The proposed SIARC program also includes a computerized auditory training component. These benefits may set the stage for the next generation of hearing technology that includes auditory training programs. This training to increase one's skills in speech perception in noise combined with the improved signal-to-noise ratio offered by the new wireless technology should result in the highly significant outcomes for persons who struggle with the challenges of hearing loss.



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Appendices

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A.SAMPLE NEWS RELEASE

Conference helps couples communicate with the aid of new technology and listening-and-speaking strategies

Hearing loss is difficult enough, but it is especially hard on a marriage, says Dr. Linda Thibodeau, a professor of audiology at The University of Texas at Dallas.

Thibodeau is hosting the Summer Intensive Auditory Rehabilitation Conference (SIARC) at the Callier Center's Richardson campus from May 17-21 to help couples who experience challenges caused by hearing loss. The conference starts during May is Better Hearing and Speech Month.

"Hearing aids alone are not enough," said Thibodeau. "People who have impaired hearing need to learn new ways to communicate with each other and with family members."

Audiologists often refer couples to the conference, which includes daily classes and real-world practice. Couples learn about new devices, including hearing aids and other technology that help with ordinary sounds, such as phones, televisions and doorbells. Persons with normal and impaired hearing learn strategies for talking and listening, they have an opportunity to get a hearing exam and try some of the latest technology.

Throughout the conference and planned social activities, participants will be able to try digital hearing aids and use various assistive listening devices that work with hearing aids and cochlear implants. In addition, the group will take part in a tour that is designed for the hearing-impaired. The tour guide will be equipped with a wireless transmitter that will send his/her voice to a small receiver worn by the hearing-impaired.

Faculty from the Advance Hearing Research Center at the Callier Center will present innovations in hearing research and opportunities to participate in research projects. Dr. Aage Moller, distinguished Professor in Behavioral and Brain Sciences, will present a lecture on causes and treatments for tinnitus.

For more information about the program call 214-905-3116 or visit utdallas.edu/calliercenter.

B. SAMPLE SCHEDULE

SIARC SCHEDULE OVERVIEW

Specialized Intensive Auditory Rehabilitation Conference
University of Texas at Dallas
Callier Center for Communication Disorders

TUESDAY-DAY 1

8:30	Registration
9:00	Welcome
9:30	Class 1*
10:30	Break
10:45	Class 2*
12:00	Lunch
1:00	Class 3*
2:00	Class 4*
2:30	Break
3:00	Communication Vitamins
4:00	Technology Demo
5:00	SIARC FIESTA
6:00	<i>SURPRISE Entertainment!</i>
6:30	Depart

DAY 2-Similar Schedule but includes our Guest

Speaker, Dr. Moller. Dinner will be a tour of nearby Owen's Farm with dinner there

DAY 3-Similar Morning Schedule but will leave at 11 am for

Lunch Buffet, Stage Tour, and Musical at Fair Park;
Return at 5 pm for lite box dinner

DAY 4-Similar Schedule to Tuesday but will leave at 5 pm for dinner at KOBE Steak House in Addison

DAY 5-Similar Morning Schedule but will end just before Lunch with whole group meeting!!

*Classes will cover Audiological Assessments, Speech Reading, Coping Strategies, Assistive Devices and More!

Transportation is provided from Callier to all dinners/events

C.Proposed Budgets

SIARC- ESTIMATED Expense- MINIMAL FUNDING

Category	# People	Cost	Days	Subtotal
Travel- For SIARC Staff to New Univ.	1	500.00		500.00
Transportation- To/From Tours, Dinners				1000.00
Food	25	50.00	3.00	3750.00
Tickets	25	30.00	2.00	1500.00
Supplies^				1250.00
			TOTAL	8000.00

^Including batteries, notebooks, handouts, nametags, audiological supplies

SIARC- ESTIMATED Expense – IDEAL FUNDING

	# People	Cost	Days	Subtotal
Travel- For SIARC Staff to New Univ.	2	800.00		1600.00
Transportation- To/From Tours, Dinners				1500.00
Food	25.00	55.00	3.00	4125.00
AdminSupport*	1.00	187.50	8.00	1500.00
Tickets	25.00	50.00	2.00	2500.00
Supplies^				1775.00
Faculty- Honarium for SIARC Involvement				2000.00
			TOTAL	15000.00

*Including Fringe Benefits

^Including batteries, notebooks, handouts, nametags, audiological supplies

D. SIARC Publication

Benefits of Intensive Auditory Rehabilitation Training

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and

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Callier Center for Communication Disorders

Published as:

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ABSTRACT

Current models of teaching auditory rehabilitation of the adult with hearing loss often are limited to classroom instruction and eclectic clinical experiences. Two programs at the University of Texas at Dallas, the Summer Intensive Auditory Rehabilitation Conference (SIARC) and the camp for Communication Habilitation via Audition for Teens (Camp CHAT), are designed to immerse both the audiology and speech-language pathology students into the rehabilitative process of adults and teens with hearing loss. SIARC is designed for couples and includes a blend of service delivery, student training, and community awareness that occurs over a five-day period in the clinic and the community. Camp CHAT is designed for teens with hearing loss and their parents who engage in fun activities to learn communication techniques while trying new technology at a weekend retreat center. Participant feedback suggests that these programs have several far-reaching benefits. Communication is facilitated through the use of technology and communication strategies, self-confidence is increased in coping with hearing loss, community awareness is raised regarding the needs of persons with hearing loss, and student training is enhanced through intensive clinical experience.

Typically auditory rehabilitation is included as a core course in the Doctor of Audiology (AuD) curriculum and student experiences for related practicum vary widely, but primarily include hearing aid dispensing experience. The field of auditory rehabilitation includes much more than the dispensing of and orientation to hearing aids. Students must acquire knowledge of and experience in facilitating the development of coping skills, providing auditory-visual training, the use of hearing assistive devices, providing auditory training, and so forth. Students in AuD programs may acquire much of this knowledge and experience over several semesters. However, the time interval between learning the content in the classroom and applying it in the clinic may result in less than optimal retention and limited opportunity to see the positive outcomes of the rehabilitation efforts. Speech-language pathologists who are recognized providers of auditory rehabilitation services and receive reimbursement may have very limited experiences in auditory rehabilitation of persons with hearing loss. Experience with hearing aids and cochlear implants, communication strategies, speechreading, and hearing assistive devices (HADs) is essential when working with the elderly who experience age-related hearing loss in addition to their communication challenges that may result from dementia, stroke, vocal nodules, or head injury. To offer comprehensive training for both audiologists and speech-language pathologists, two programs were developed at the University of Texas at Dallas (UTD) to provide auditory rehabilitation instruction and practicum for audiology and speech-language-pathology students through an intensive interaction with adults and teens with hearing loss. The Summer Intensive Auditory Rehabilitation Conference (SIARC) is a week-long program designed for couples who experience difficulties related to hearing loss (Thibodeau & Cokely, 2003) and a Camp for Communication Habilitation via Audition for Teens (Camp CHAT) is a weekend program designed for teens with hearing loss and their parents (Cardella, Alford, Dornback, & Thibodeau, 2009). The components of each of these programs will be described followed by a review of the graduate student experiences and participant outcomes. Hopefully, these programs can serve as a model to develop similar experiences at other universities.

SIARC

The first SIARC in 2000 was modeled after the Elderhostel program offered at Gallaudet University which began in 1981 (Bally & Kaplan, 1988). The goals of the week-long Elderhostel program were to provide information about the effects of hearing loss and to facilitate the development of coping skills in persons with hearing loss, their families, and friends. In addition, an advanced program was offered to explore assistive devices, learn about medical aspects of hearing loss, and try new approaches to speechreading and problem solving. SIARC is unique in the following four ways: (1) adults of all ages may participate, (2) graduate students are assigned to participants and take responsibility for comprehensive daily management of their communicative/technology needs, (3) real-world experiences in restaurants and other public venues allow the participants to provide immediate feedback regarding their success, and (4) the community learns about

accommodations that benefit persons who are hearing impaired. In addition, SIARC addresses the concerns of the communication partner via specialized assessments, supportive discussions, resource notebooks, and guest speakers.

SIARC begins each year in April with a four-hour planning meeting with the graduate students to explain the program, review the literature, demonstrate equipment that will be used, and assign responsibilities for the conference, such as, organizing registration, making resource workbooks, setting up FM equipment, programming hearing aids, and interfacing FM with hearing aids and soundfield systems. Student participants who need graduate credit may enroll in an elective course in Advanced Auditory Rehabilitation. Speech pathology students are paired with audiology students when possible to work as a team to facilitate peer teaching. SIARC is offered during the week between the end of the spring semester and the beginning of the summer school session so that students can attend daily without competition from other classes or clinical assignments. There are no prerequisites except that students must have successfully completed a course in introductory auditory rehabilitation at the undergraduate level that included basic hearing aid troubleshooting.

Given the clinical resources at the Callier Center for Communication Disorders, the physical space, and the availability of clinical supervisors, the ideal enrollment for SIARC is eight graduate students and eight couples with one or both members having hearing difficulties. Participants are recruited from the Callier Center and through audiologists in the community. Past participants have traveled from Colorado, Massachusetts, Georgia, and Florida to attend SIARC. Each graduate student is paired with a couple enrolled in the program. The daily schedule includes four classes and evening activities. A sample of a daily schedule is provided in Table 1. As shown in Table 2, the daily classes include (1) discussion of audiological procedures, (2) auditory-visual training, (3) coping/communication strategies, and (4) hearing assistive devices (HADs). These eight couples are divided into two groups for the SIARC classes. However, they all meet together daily for lunch and for the lectures given by an invited auditory rehabilitation expert. Speakers at past SIARCs have included Mark Ross, David Hawkins, Nancy Tye-Murray, Pat Kricos, Sam Trychin, Arthur Boothroyd, and Geoff Plante.

The cost is \$375 per couple or \$175 per individual which covers the meals and any tickets to plays or tours. The program is subsidized by generous donations from local dispensing practices and hearing aid manufacturers. In addition to sponsoring two couples, each manufacturer is asked to provide new wireless technology for the week so that participants may choose to try the devices in real-world environments, and students learn first-hand of the benefits of the technology in noisy environments. The funding is used also to support the meals and tickets for the graduate students. Some couples may attend initially on scholarships, but

may return the following year and pay the registration fee. Some scholarships are also provided by SIARC couples who are grateful for the opportunity to attend and want to allow that opportunity for others.

The actual week of SIARC begins with a full day of instruction on Monday with the graduate students. The day is spent in reviewing equipment operation, previewing materials for each of the four classes, practicing clinical procedures, and assigning conference-related tasks. In addition to the auditory rehabilitation content, graduate students also learn about conference organization and management. They brainstorm regarding logistics and volunteer for tasks, such as, photography, serving as greeter, food setup, room setup, soundfield operations, and so forth. Participants arrive on Tuesday with their completed registration packets including release forms for transportation and photography, case history, and past copies of audiograms. After meeting their assigned graduate students and attending the introduction/orientation session, they begin their classes. Half of them attend the Audiological Class while the other half attends the training class, and then after a short break, they switch classes.

Table 1. *Sample Schedule for SIARC*

Time	Action
9:30 AM to 9:45 AM	Introduction and review of activities
9:45 AM to 10:45 AM	Class #1: Audiology
	Class #2: Auditory Visual Skills
10:45 AM to 11:00 am	Break
11:00 AM to 12:00 PM	Class #1 and Class #2 Repeated
12:00 PM to 1:00 PM	Interactive Group Lunch
1:00 PM to 2:00 PM	Class # 3: Hearing Assistive Devices
	Class #4: Communication/Coping Strategies
2:15 PM to 2:30 PM	Break
2:30 PM to 3:30 PM	Class #3 and Class #4 Repeated
3:30 PM to 5:00 PM	Invited Guest Lecture or Group Tour
5:00 PM to 6:30 PM	Interactive Group Dinner
6:30 PM to 8:00 PM	Evening Activity

Table 2. *SIARC Class Information*

Audiology	<ul style="list-style-type: none"> Audiogram OAE Otoscopic Tympanometry Hearing Aid Check - Electroacoustic Analysis then Real Ear New Technology Speech Recognition: No HA or w/ Personal HA Speech Recognition: New HA, FM
Audio Visual Training	<ul style="list-style-type: none"> Speech Banana Speech Tracking Computer Training
Communication Strategies/Coping Skills	<ul style="list-style-type: none"> Communication Rules TELEGRAM Communication Breakdown Stress Effects Changing Behavior
Hearing Assistive Devices	<ul style="list-style-type: none"> HADs- Phone Technique/Strategies HADs- TV/Alerting/ Public American with Disabilities Act

The catered lunch is set up in a classroom where the tables are arranged to maximize small group conversations. Students have opportunities to meet other couples who are not in their groups during this meal time as well as during dinner. Students are required to attend two evening activities during the week, but are welcome to participate in all of them. Evening events include dinner and entertainment at restaurants that are progressively more challenging throughout the week. Meals and entertainment vary in location to give the participants a variety of environments to use trial hearing aids and HADs. For example, last year, the first night was Mexican night; Mexican food was served at Callier ending with a live Flamenco dance and musical demonstration. On the second night, participants went to a German restaurant that provided live accordion music by a performer who wore a FM transmitter microphone. The final night's dining was American fare at a large buffet style restaurant followed by a live production of the musical *Little House on the Prairie*. Activities were purposefully planned to give participants the opportunity to try multiple assistive listening devices including FM systems, infrared assistive listening devices, rear captioning, and personal laptops with scrolling scripts to increase awareness and comfort using HADs. The goal of the intensive nature of the conference is to allow participants to develop comfort and competency quickly, which could facilitate their long-term success with hearing aids and FM technology.

A comprehensive assessment, the TELEGRAM, is administered on the first day during the Communication/ Coping Strategies class while the participants are individually interviewed to identify areas that are the most important to address during the week (Thibodeau, 2004). As shown in Figure 1, the TELEGRAM is intended to be a convenient prompt for the areas that must be considered in any comprehensive rehabilitative program: Telephone, Employment, Legal issues, Entertainment, Group Communication, Recreation, Alarms, and Members of the family. Each participant's functioning in each of these areas is recorded from answers to questions that are provided in Table 3. The responses provide the framework for recommendations for HADs or other rehabilitative strategies. By using a graphic form that is analogous to the audiogram, the audiology student finds it easy to document the participant's current functioning, and determine areas of need. At the conclusion of SIARC, students include copies of all test results in the participant's resource notebook and summarize the findings and recommendations. Any trial equipment that has been used by the participant is returned, but

Figure 1. TELEGRAM

NAME: _____ Date of Birth: _____ Person completing TELEGRAM: _____

		T	E	L	E	G	R	A	M	
		Telephone	Employ-ment	Legislation	Entertain-	Groups	Recreation	Alarms	Members of	
RATING 1 No Difficulty 2 3 Some Difficulty 4 5 Great Difficulty										Live with Normal Hrg Adult
										Live with Young Children
										Live with Teenagers
										Live with Adult with Hrg Loss
										Live Alone

C- Cell phone
 L- LandLine
 J- Job
 S- School
 P- Public Listening
 A- ADA
 T- TV
 M- Movies
 C - Church
 P - Parties
 M- meetings

 S- Smoke
 D- Doorbell
 C- Clock
 Check all that Apply

Three Main Problems to Address:

Recommendations:

T_____ **E**_____ **L**_____ **E**_____ **G**_____ **R**_____ **A**_____ **M**_____

Table 3. TELEGRAM Rating Scale Key

Topic	Question	Rating
T	Are you having difficulty with communication over the telephone ?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5= Can't use the phone <i>Use "L" to designate Landline and "C" to designate Cellphone.</i>
E	Are you having any difficulty with communication in your employment or educational environment?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5=Stopped working
L	Do you know about Legislation that provides assistance for you to hear in public places or in hotels when you travel?	Knowledge 1=Vast, 2=Considerable, 3=Some, 4=Limited, 5=None
E	Are you having difficulty with hearing during Entertainment activities that you enjoy such as television, movies, or concerts?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5= Stopped Going
G	Are you having difficulty with communication in Group settings?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5= Can't hear at all in groups
R	Are you having difficulty with hearing during Recreational activities such as sports, hunting, or sailing?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5= Stopped the activity
A	Are you having difficulty hearing Alarms or Alerting signals such as the smoke alarm, alarm clock, or the doorbell?	Difficulty 1=None, 2=Occasional, 3=Often, 4=Always, 5= Can't hear alarm <i>Use "S" for Smoke Alarm, "D" for Doorbell, and "A" for Alarm Clock</i>

M	Are you communicating with Members of your family?	1=Live with Normal Hrg Adult, 2=Live with Young Children, 3=Live with Teenagers, 4=Live with Adult with Hrg Loss, 5=Live Alone <i>Check all that apply</i>
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documentation is provided to the participant should he/she wish to try it further or purchase it from his/her audiologist. Referrals for follow-up management are made when necessary.

The final session of SIARC on Saturday morning is a group evaluation, in which each participant and student, share with the group what was most beneficial for them during the week. This allows students to learn of the impact of their rehabilitative efforts directly from the participants. Students often express their gratitude to the participants for the sacrifices they may have made to attend SIARC and help them to learn in this unique way. Learning that the audiology profession includes more than diagnostics is a welcome experience for many students, particularly those majoring in speech-language pathology.

CAMP CHAT

Camp CHAT was offered as an elective course in Auditory Rehabilitation in June, 2009. After reviewing the literature, and after interviewing adults who had hearing loss during their teenage years, as well as teens with hearing loss and their parents, regarding their communication experiences and concerns, graduate students determined that a series of activities were needed to provide teens with positive listening experiences while they were using assistive technology, and to simultaneously boost their self-esteem (Barak & Sadovsky, 2008; Sahli & Belgin, 2006; Zheng et al, 2001). The goal of Camp CHAT is to empower teens with hearing loss to achieve independence through effective communication. Although the students found limited resources available specifically for teens, activities from Knowledge is Power Curriculum (Mississippi Bend Area Education Agency, 2009) and Phonak Hearing Aids' (2010) Guide to Access Planning (GAP) provided models for the kind of unique activities they could develop to teach teens in a fun and non-academic way. The four content areas discussed in SIARC, audiology, auditory-visual training, communication / coping strategies, and HADs are discussed in Camp CHAT also.

Camp CHAT is offered during a weekend in June during the summer session. Graduate students have a four-hour planning meeting before the camp to discuss and plan audiological testing procedures, registration, group activities and divide camp duties among the students. The weekend is structured around a baseball theme with "pre-game" interaction, seven "innings" of activities, and graduate students in audiology and speech pathology assigned as coaches for teen campers. The cost is \$250 for one parent and teen and an additional \$50 for a second parent. As with SIARC, scholarships have been made possible through donations from manufacturers and private audiologists. At this time, siblings are

not included in Camp CHAT, although there are potentially some great benefits to have siblings attend. UTD faculty members serve as mentors to the student coaches during the camp. Children with hearing loss between the ages of 13 and 18 years are accepted for the Camp. They are accompanied by at least one family member. The camp starts on a Friday afternoon at the Richardson Callier Center to accommodate audiological testing and dinner for the group. Upon arrival, graduate students meet campers assigned to them, begin audiological testing, and fit the campers with FM systems and new hearing aids, if applicable. The student coaches administer the audiological tests to campers and their parents. This experience offers a new perspective about audiograms to many teens. After completing the audiological testing and equipment fitting, all participants travel 45 minutes to a nearby retreat center for the remainder of the weekend. Accommodations at the camp include a general meeting room used for group activities, air-conditioned guest rooms, swimming pool, sports area, low-ropes challenge course, hiking trails, and a camp dining hall.

FM-enhanced instructions are provided during all camp activities to demonstrate the benefits of FM technology during group and individual communication. Campers participate in activities to increase their awareness of communication strategies, including right-way wrong-way skits, complete individual communication assessment surveys, and learn the importance of auditory and visual group communication at challenge courses throughout the camp. The activities have been compiled into a Camp CHAT sourcebook; an example of an activity is provided in Table 4. In addition, the teens enjoy group activities, such as, playing board games, swimming and a campfire with 'smores' on the first night of camp. Many of the campers who are educated in mainstream settings typically have had limited interaction with other teens with hearing loss. The group activities at Camp CHAT provide these teens with the enriching experience of bonding with peers who have hearing loss. Graduate student coaches participate along with the campers in all activities, including wearing ear level FM technology, to build a sense of community and trust.

During the weekend, campers become very comfortable raising concerns regarding static in their FM transmission or equipment malfunctions. Campers who are hesitant to use FM devices or try new hearing aid technology, become very comfortable asking for what they need and trying new technology when they are surrounded by peers who are participating in similar experiences. One activity used in Camp CHAT involves communicating individual needs regarding technology by writing

an accommodation plan (shown in Table 5) as demonstrated in the GAP program. Self-esteem is also addressed in an activity called “I’m Freakin’ Awesome” described in Table 6. In this activity the teens and their parents independently complete the form in Table 7, and then come together to discuss their answers. It can be quite interesting to note how similar and often how divergent their answers can be.

At the conclusion of the weekend, despite being initially reluctant, many campers announce their plans to use FM systems during the coming school year. The group evaluation is conducted again as in SIARC. All participants, family members, and students are seated in a circle and share their favorite moments, activities, and experiences from the weekend. Parents often state that they find it very beneficial to use FM systems with their teens. They also comment on their surprise to see the confidence with which their teens interact with other teens and the graduate students.

GRADUATE STUDENT EXPERIENCES

SIARC and Camp CHAT provide learning experiences for students that cannot be duplicated in the classroom or traditional clinical setting. At SIARC and Camp CHAT graduate students use knowledge acquired in the classroom and clinical experience to plan and implement technology and aural rehabilitation for the participants assigned to them for the duration of the conference/ camp. The intensive week of training yields dramatic growth for participants and increased self-efficacy for the graduate students. The real-world experiences make it possible for graduate students to see the daily progress their participants are making and adapt the training as needed to optimize the experience for the participants. This process allows them to see the effectiveness of auditory rehabilitation. Additionally, the graduate students interact with and

Table 4. *Sample Activity for Camp CHAT*

Camp CHAT Sourcebook

Pin the Sound on the Speech Banana

Categories: Large Group, Teams, Scored Game, Interactive Game, Audiology Trivia

Players: Large Group (6+ players)

Materials: 2 blown-up blank audiograms with the speech banana drawn and shaded in (not included), 2 sets of Speech Banana playing pieces, Speech Banana key, double-stick tape, whistle

Preparation: Post the 2 blank audiograms on a wall next to each other. Cut out Speech Banana pieces along solid lines. Place pieces in a stack on the floor in front of each audiogram. Copy each of the teen's audiological thresholds onto one of the audiogram in the speech banana key so that they can receive it after game play.

How to play: Divide the players into two equal teams. Each team will line up approximately 10 feet in front their team's copy of the audiogram with the blank speech banana. The referee will blow a whistle, and the person at the head of each line will run and pick up a piece off the top of the stack and turn it over. They will then put a piece of double-stick tape on the back of the piece and place it where they think it belongs on the speech banana. The teammates may help out by either giving directions orally or using gestures. After the piece is taped onto the audiogram, the player runs back and tags the next person in line. The next person will pick the next piece from the stack and tape it onto the audiogram. Play continues until one team runs out of pieces.

The referee will have a copy of the speech banana key and will give the teams a point for each sound correctly placed on the audiogram. If one team has a sound placed in the wrong spot, the other team will have an opportunity to get a point for correcting the misplaced sound. This helps to make sure the teens know where the sounds should be, so if they get some wrong they will find out the correct place for each sound. The team with the most points at the end of scoring wins. After game play, the teens will receive an audiogram with their audiological results plotted on the speech sounds audiogram (the speech banana key included here) so that they can see what sounds they can and cannot hear without amplification.

Spice it up! Forbid the use of gestures, so the teammates will have to learn to take turns giving oral instructions to the player who's pinning the sound on the speech banana.

Rationale: The purpose of this game is to help the teen become aware of how their hearing loss affects what sounds they can and cannot not hear, particularly speech sounds. If they also receive an aided audiogram, they can compare what sounds they hear with amplification to what they hear without it.

Table 5. *Teen Accommodation Plan*

MY PERSONAL PROFILE AND ACCOMMODATIONS PLAN

Date

Dear

My name is I am years old.

I enjoy

I am currently

I have a hearing loss in

I use to communicate with others. My hearing

loss is in the range of hearing. It is a

loss. I have had my hearing loss years

In order to help me hear and communicate better, I use the following personal hearing technology:

Although my

help me to hear and communicate better, these devices do

not make listening and hearing perfect. There are certain situations in which it is more difficult to hear.

These may include:

- Telephone
 - Cell phone
 - One on one conversation
 - Group situations
 - Small group meetings
 - Large group meetings
 - In poorly lit areas (darkened rooms for presentations, movies)
 - Fire alarm
 - Public Address Announcements
 - Computer
 - Radio
-

Table 6. *Self-Esteem Building Teen*

Camp CHAT Sourcebook

I'm Freakin' Awesome!

Categories: No score, Self-Esteem Building, Any Size Group

Players: Any number of players; each teen needs a coach to assist him or her.

Materials: "I'm Freakin' Awesome!" worksheet for each teen and for each parent

Preparation: Give each parent a worksheet and ask them to fill it out as it said "My teen is freakin' awesome because..."

How to play: While the parents are filling out the worksheets, have the coaches go into a separate room with the teens. The teens will complete the worksheet with the coaches to ensure they don't put "I don't know" or "nothing" in any of the blanks. The coaches also need to be present to give the teen ideas if they get stuck on an answer. After everyone is finished, the parents, teen, and coach sit down together and go over what the parent and teen wrote on the worksheet.

Spice it up! Secretly give "I'm Freakin' Awesome" worksheets to the teen's siblings or close friends to fill out in advance. After the teen and parent go over what they wrote, give the teen the completed worksheets from their siblings and friends. It's a wonderful self-esteem builder!

Rationale: The purpose of the worksheet is to help the teens recognize their star qualities and build their self-esteem by learning that their parents (and family and friends if you "spice it up") think highly of them and are proud of them. It takes the focus away from hearing loss and helps foster a positive self-image. The teens will be surprised by how many things their parents wrote that they themselves did not think of.

Table 7. *Freakin' Awesome Worksheet for Teens and Parents*

Name: _____

Camp CHAT Sourcebook

I'm freakin' awesome!

And here's why...

*Physical characteristics do not apply!

One thing I really love is _____.

I'm really good at _____.

People have complimented me on _____

_____.

I'm proud of myself when _____

_____.

My parents/family/teachers are proud of me when _____

_____.

I think other people will remember me for _____

_____.

Some of my greatest accomplishments are _____

_____.

I would never change my _____.

I'm **freakin' awesome** because _____

_____!

learn from all participants, not just the family assigned to them. The daily staffing meetings held during both SIARC and Camp CHAT, in which the successes and struggles of the participants are discussed, are very beneficial also. Mentors and students provide feedback and suggestions collectively to help all participants move forward in the acquisition of knowledge and success with technology, communication/coping strategies, and speechreading.

Audiology students are given the opportunity to use tools that aren't typically utilized in clinical practicum experiences including speechreading and discourse tracking. Speech pathology students become more knowledgeable of hearing tests, communication strategies and HADs. By working together, the students are given the opportunity to cross train and become more competent in administering auditory rehabilitation. Seeing the direct impact that therapy has on social interaction, both at meals, and group activities is a major benefit of experiences conducted outside the typical clinical setting. Additionally, students are able to help troubleshoot and/or adjust technology during these activities so that participants experience the maximum benefit. Further, providing immediate troubleshooting and adjustments for participants helps to sharpen the graduate students' technological skills and increases self-efficacy. The learning process is started by observation of troubleshooting, strengthened through written and verbal instruction, and finally culminates in general operation of the instruments on a daily basis during SIARC activities.

OUTCOMES

The outcomes of SIARC and Camp CHAT extend beyond what can be measured through self-reporting assessments/questionnaires or objective evaluations because the effects are synergistic. For example, participants become more comfortable with technology and adjust their expectations of benefits derived in very noisy environments. Consequently, they become more confident and engage in activities that they previously may not have attempted. As they begin to experience success using speechreading techniques as well as communication strategies, self-esteem is enhanced and willingness to continue attempting challenging activities increases.

At the conclusion of each program, a survey is given to the participants as well as the graduate students. The value of the activities is rated on a scale from 1 having limited value to 5 being extremely valuable. In 2009, for both SIARC and Camp CHAT, the majority of activities typically have been rated greater than 4. Specifically for SIARC, the classes have been rated 4.44 for Audiology, 4.33 for Auditory-visual Training, 4.22 for Communication/Coping Strategies, and 4.22 for HADs. Similarly for the games

for Camp CHAT, the ratings assigned by teens were 4.38 for the IceBreakers, 4.33 for Audiology JepEARdy, 4.19 for Communication Games, and 4.03 for the I'm Freakin' Awesome self-esteem building. The parents' ratings for the same activities were 4.04, 4.67, 4.25 and 4.13 respectively. In summary, the activities were rated as "very valuable."

The evaluation of outcomes for both programs is in process. Responses on functional questionnaires administered at the beginning and at the conclusion of SIARC will be compared. Similarly, for Camp CHAT, self-report questionnaires and teacher evaluations will be completed for those who attended the Camp. Subsequently the data will be compared to data on a control group.

An example of a strong outcome for one of the Camp CHAT participants was an article written by one of the teens for her school newspaper. Her parents reported that she was a "completely different child in school" following her Camp CHAT experience. She was more interactive, participated in cheerleading, and confident in social situations. In her article (Figure 2), she relates how helpful technology and other communication techniques can be.

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Figure 2. Article for school newspaper written by a teen from Camp CHAT.

Collin County Courier

Fall 2009

Camp CHAT



By Desiree Hoverson

Special points of interest:

- Find out what camp CHAT is all about!
- Read what an exciting time Desiree had at camp for hearing impaired teens



Over the summer, I went to a camp for hearing impaired teenagers. The camp was called camp CHAT. My mom and dad went with me, it was exciting and a lot of fun. It was 3 days.

On the first day, we met in Richardson and ate dinner at the Callier center. We looked at different kinds of technology like clocks that vibrate, house phones, light sensors for the house, voice sensor for the phone. After that we watched a magician, magician George. He put fire in his mouth. He squirt something in his mouth and then put a match in his mouth. He put an egg in his mouth. He put an egg in his hand and it ended up in someone else's hand, but it was creepy though. We took our own cars to the camp. At the camp, there was a bonfire and we had marshmallows and s'mores. It was messy and

all over my legs. I met many new people. I met a girl named Leslie. My mom, dad and me stayed in a nice cabin.

We did a lot of different activities. We got into Dr. Thibodeau car and tried out the Bluetooth. I called my



Me with Francesca and Erin.

grandma. We played different game. For example, we broke up into different groups and played "hide and seek" using smart link fm system. The hider will describe where she is by giving directions though the fm system and into an hearing aid. The "seekers" fol-

low the directions to find the "hider." I taught people how to play volleyball. We went though a obstacle course. We had to help each other to get to the other side. We could not talk and had to use to use another way to communicate. We had to cross a log without falling off and pretended that there was "peanut butter." there was a pool, but we didn't swim. I wish we could have swim because it was hot.

On the last day, we got up at 6:30 to eat breakfast. We got a lot of free stuff. I got a alarm clock.

I got all the kids e-mails addresses so I can communicate back and forth. I cant wait to go again next year. I plan on going. it was fun and thanks to Dr. Thibodeau and her students for doing the camp. I hope to see all the same kids next year and some new faces.



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E.SIARC Sample Brochure


Space is limited. Register today!

To register, send completed form with payment to:
 UT Dallas Callier Center, c/o Linda Thibodeau
 811 Synergy Park Blvd., Richardson, TX 75080

Primary Participant's Name _____ Date of Birth _____
 Does the primary participant currently use a hearing aid? _____ Cochlear implant? _____
 Communication Partner's Name _____ Date of Birth _____
 Does the communication partner currently use a hearing aid? _____ Cochlear implant? _____
 Address of primary participant _____
 City _____ State _____ Zip Code _____
 Phone number _____ Email address _____
 Any special accommodations required by either participant? _____
 Any special dietary needs for either participant? _____
 Would you like to be considered for a scholarship? Please explain: _____
Payment Method: Check/money order made payable to UT Dallas MasterCard / Visa (circle one)
 Name on card: _____
 Credit Card #: _____ Exp. Date: _____ / _____ / _____

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May 21-25, 2013



Callier Center for Communication Disorders

Summer Intensive Auditory Rehabilitation Conference

SIARC 2013



The University of Texas at Dallas
 Callier Center for Communication Disorders
 811 Synergy Park Blvd.
 Richardson, TX 75080

What is SIARC?

SIARC 2013 is a unique opportunity for adults with hearing impairment and their communication partners to experience the benefits of cooperative learning in a social environment.

Participants will benefit from the expertise of guest speakers on several occasions during the conference. Topics in the past have included tinnitus, coping skills and assistive listening devices.

Group classes on coping, facilitating communication, and how to use new listening technology will be provided each day.

Throughout the conference and planned social activities, participants will be able to try digital and programmable hearing aids and use various assistive listening devices that work with hearing aids or cochlear implants.

Personnel from the Advanced Hearing Research Center at the Callier Center will present innovations in hearing research and opportunities for research involvement.

Why Two People?

Hearing loss affects a person's communication with others. That's why SIARC is designed for a participant with hearing loss and his/her communication partner. The communication partner may be a spouse, family member, friend or co-worker. Individuals are also welcome to attend.

Guest Speaker

A significant local researcher will be lecturing about their recent findings and how they relate to the field of Aural Rehabilitation. The Guest speaker will be announced in January 2013.

Scholarships

Tuition scholarships may be available. Mail registration form by May 1, 2013 for scholarship consideration.

Evening Activities

There will be special evening activities to utilize the skills learned throughout the week and to experience some of the assistive listening devices in real life situations.

Conference Highlights

- Special Guest Lecture by a local researcher with interests in Aural Rehabilitation
- Personal hearing aid check
- Complete audiological evaluation
- Technology update and trials
- Strategies for listening
- Auditory training activities
- Hearing assistive technology (HAT)
- Real world practice with HATs
- Strategies for repair of communication breakdowns
- Cultural events: plays, tours or concerts
- Coordination with your current hearing health provider
- Cutting edge research reviews

Registration Fee

The registration fee includes all classes, assessments, activities and meals. To insure the highest quality of service and educational experience, registration is limited to ten couples. Submit registration prior to March 1st with \$20 deposit per person to reserve a place. If paid in full by March 1, 2013 registration fee is only \$350 per couple or \$175 per individual. Deposits will be applied to registration fees. After March 1st registration fee is \$400 per couple and \$200 per individual.

When

May 21-25, 2013

Where

Callier Center Richardson
811 Synergy Park Blvd.
Richardson, TX 75080

Registration deadline

May 10, 2013

Additional information

Dr. Linda Thibodeau
Professor, Au.D. Program
214-905-3116
thib@utdallas.edu
www.utdallas.edu/~thib

Hotel information

Conference attendees, even those who are local, are encouraged to take advantage of the special nightly rate at the Hilton Garden Inn in Richardson. The nightly rate is \$79.00 (plus tax) and includes shuttle service to the conference and breakfast daily.

Reservations must be secured by April 25, 2013 to receive this rate. Ask for the SIARC block, code UTD.

To make a reservation, call 877-782-9444.

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1001 W. President George Bush Pkwy.
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SIARC is sponsored in part by the David J. Bruton Charitable Trust and major manufacturers of hearing assistive devices.