

# Council for Interdisciplinary Service

## National AUCD Network Technology Survey Results

### Introduction

Increasingly programs throughout the Association of University Centers on Disabilities (AUCD) network are using distance and online methods to train students, disseminate information and to provide clinical services. In 2010, the Council for Interdisciplinary Service (CIS) took steps to better understand how the AUCD network utilizes distance and online technology in their work. The CIS conducted a survey and follow up interviews to gather information. This report provides a summary of this information. Moving forward, the CIS will be sharing stories about how the AUCD network utilizes distance and online technology on a blog hosted on the AUCD website. ([www.cisaucd.org](http://www.cisaucd.org))

Services and training provided through distance or online means have been endorsed by several national organizations including the American Speech-Language-Hearing Association (ASHA, 2005), Centers for Medicare and Medicaid Services (CMS, 2008), US Department of Education (DOE, 2009) the American Academy of Child and Adolescent Psychiatry (AACAP, 2008) and others. According to the American Telemedicine Association, “over 10,000 peer review papers have been published over the past 20 years supporting the clinical effectiveness and cost savings of telemedicine” (retrieved 2/1/11 from <http://www.amdtelemedicine.com>). Likewise, a meta-analysis conducted by the US Department of Education (2009) found that, “on average, students in online learning conditions performed better than those receiving face-to-face instruction”.

*Services.* The use of distance technology to provide health assessment, diagnosis, consultation, and treatment has been called many things. Common references are “telepractice”, “telemedicine”, “telehealth”, and “e-health”. According to ASHA, telepractice is “the application of telecommunications technology to deliver professional services at a distance by linking clinician to client, or clinician to clinician for assessment, intervention, and/or consultation.” In ASHA’s most recent position statement (2005), telepractice is viewed as an appropriate model of service delivery and is consistent with the quality of services delivered face-to-face. A secondary document from ASHA (2010) identifies current professional issues in telepractice for the discipline of speech-language pathology and offers possible solutions in providing telepractice services. In addition, the Medicare Learning Network (2009) from CMS has issued a fact sheet regarding telehealth services and provides guidance for further defining telehealth services and billing codes for reimbursement of services. As agencies navigate health care reform and may be faced with cutting costs while maintaining best practices, especially in rural areas, information gathered from the AUCD network will be beneficial and provide insight into the capacity of the AUCD network to address growing technology needs.

*Training.* In a recent meta-analysis published in the Journal of Online Learning and Teaching (June 2010), overall results based on 125 qualifying studies concluded that distance education “not only is comparable to traditional instruction, but also, subject to our criteria, can outperform traditional instruction” (pg. 326). Similar results were found by the US Department of Education in 2009 where they conducted a meta-analysis of 51 independent effects and found that distance education methods were more effective in achieving student learning outcomes than traditional face-to face instruction.

## **Survey Background and Methodology**

A network-wide survey was developed to gather information on how University Centers for Excellence in Developmental Disabilities (UCEDDs) and Leadership Education in Neurodevelopmental and Related Disabilities (LENDs) use technology, program comfort with the use of technology, barriers encountered and solutions found. The survey also asked programs to highlight exemplary programs. Survey questions were initially focused on service delivery but were expanded to address training needs as well. Sample questions were generated by CIS technology subcommittee members and circulated to the general CIS group for further revisions. A final list of survey questions were presented at the 2010 AUCD national conference during the CIS meeting. In April 2011 a *SurveyMonkey* survey was developed and pilot testing of the survey’s functionality and content occurred. In May 2011, the final survey was sent electronically to all UCEDD and LEND Directors. Of the 106 surveys sent, 54 were returned for compilation yielding a 51% return rate.

## **Summary of Responses**

*Please indicate what type(s) of technology, if applicable, are being used to provide the following interdisciplinary services and/or training at your UCEDD or LEND:*

There were fifty-four people who responded to this question. Table 1 indicates the most frequent and least frequent technologies utilized to provide various services and training. The most common occurrence was utilizing webinars to provide training and technical assistance across the AUCD network. “Other” comments included use of an online curriculum management tool, local network storage, telemedicine, internal shared documents, administrative meetings, evaluation, customer service, and evaluation and quality improvement data systems.

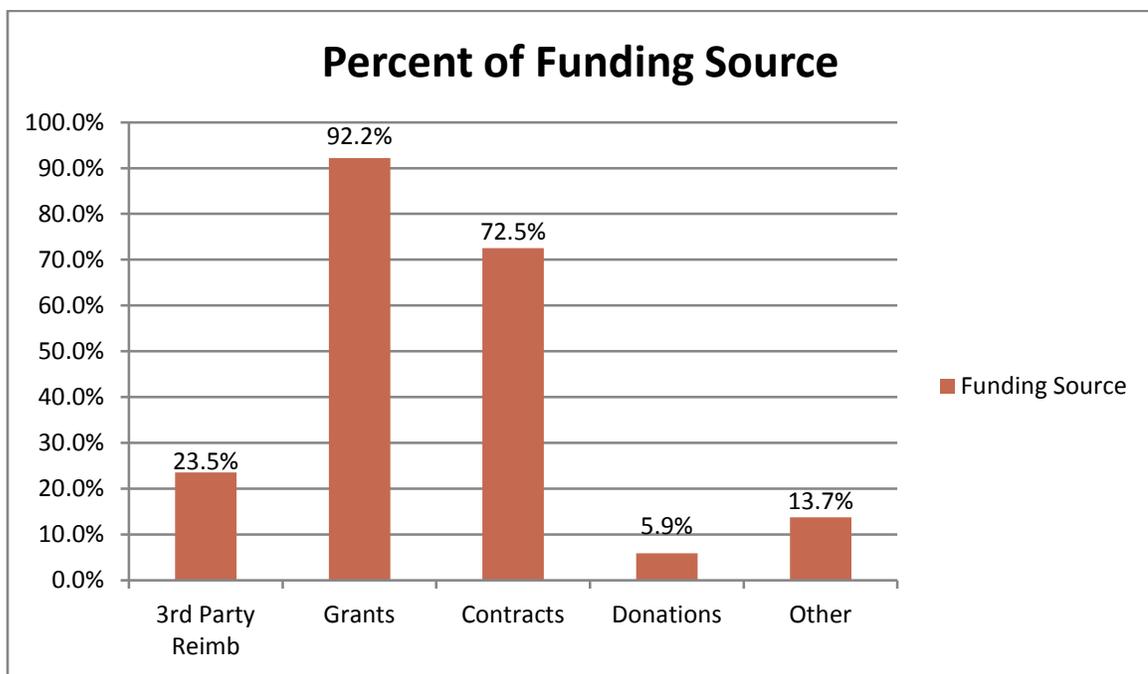
Table 1. Type of Technology Used

<b>Please indicate what type(s) of technology, if applicable, are being used to provide the following interdisciplinary services and/or training at your UCEDD or LEND:</b>										
	Plain old telephone service (POTS)	Computer to computer (video communications)	Small group (3-4 people) videoconferencing	Large group (4+ people) videoconferencing	Webinars	Online courses	Online Storage and document sharing	Electronic Health Record	Other	Other (please specify)
Diagnostic Services	17	10	7	3	2	2	7	16	1	
Consultation Services	35	21	26	15	10	4	8	14	1	
Treatment Services	8	8	5	3	4	2	3	16	0	
Follow-Up Services	36	14	20	13	4	2	6	15	1	
Training and Technical Assistance	38	33	38	44	49	35	21	5	0	
Team Communication	41	30	31	17	12	3	26	7	0	
Report Writing	13	10	11	6	6	2	25	10	1	
Other (specify)	1	1	2	1	0	0	7	0	1	
N/A	2	4	2	2	1	5	6	18	8	
<b>Response Count</b>	<b>51</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>51</b>	<b>42</b>	<b>46</b>	<b>39</b>	<b>10</b>	<b>8</b>

*How are you financed to provide services and training using technology? (please check all that apply)*

Fifty-one people responded to this question. The majority (92.2%) indicated grants as a financial source to provide services and training followed by contracts (72.5%) and third party reimbursements (23.5%). Specifically, third party reimbursements and “other” responses were expanded to include: Indiana state appropriation line item budget, Medical billing, research studies, fee for service (3), foundation awards, hospital, insurers and Medicaid, per participant fee for most trainings to cover costs, and the utilization of university-provided technologies at no cost including Adobe CONNECT and Microsoft Lync.

<b>How are you financed to provide services and training using technology? (please check all that apply)</b>		
<b>Answer Options</b>	<b>Response Percent</b>	<b>Response Count</b>
Third party reimbursements	23.5%	12
Grants	92.2%	47
Contracts	72.5%	37
Donations	5.9%	3
Other	13.7%	7
If you selected “Third party reimbursements” or “Other” – please provide comments		10
<b>Total Respondents</b>		<b>51</b>



*Please briefly describe any innovative models using technology to provide services or training at your UCEDD or LEND (e.g., tele-psychiatry, tele-speech therapy)*

There were thirty-one respondents for this question. Below is a list of responses taken verbatim from the survey.

- Models include an autism research project that developed a remote reciprocal parent training model and a community demonstration project that developed a tele-health model for providing a medical home to children with special health care needs in the state;
- ePortfolio and web-based training;
- Problem based learning using 'real, live families/children' as subject with LEND trainees in a 3 state region;

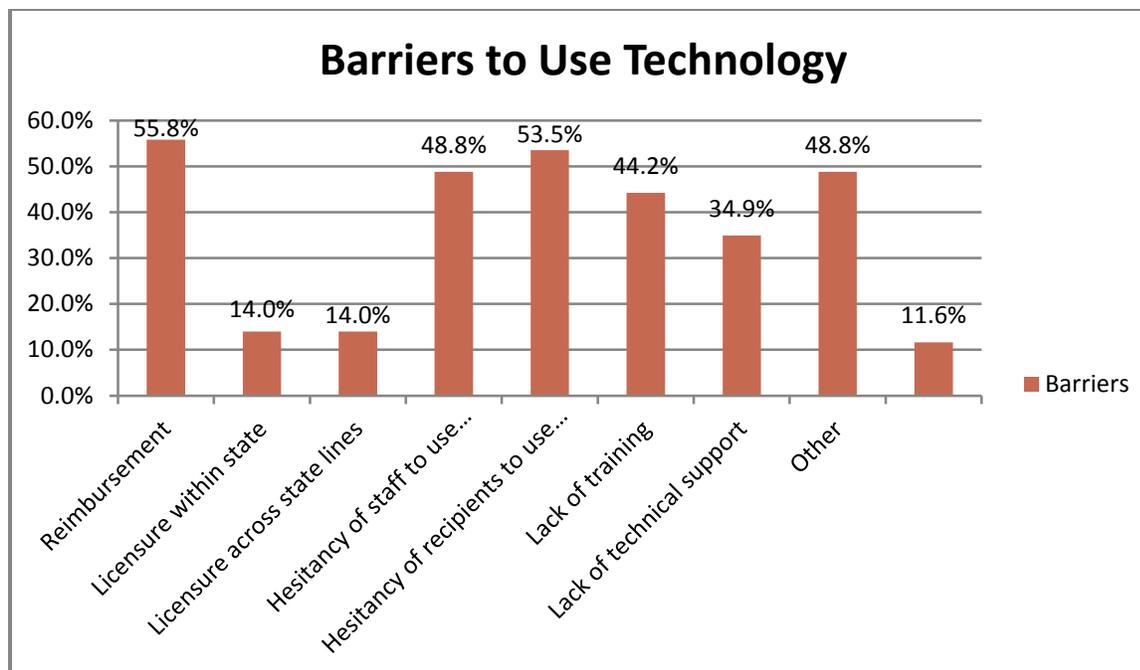
- Webinar to train primary care providers in use of MCHAT;
- Use of Camtasia for module development; use of blackboard, gotowebinar for professional development; use of social media for dissemination and communication;
- Our Sound Response Program involves a centrally located monitoring site connected to residences through a variety of electronic sensing devices. Each residence has the necessary monitoring equipment to meet the needs of each individual to support their living alone. When an emergency arises, Sound Response staff are able to physically respond within five minutes. Sound Response supplements direct staff in our use of advanced technologies. Sound Response staff assesses each person, develops an individual service plan with the respective team, installs necessary monitoring devices and provide ongoing support;
- One of our faculty team teaches a telehealth interdisciplinary course every summer;
- The course is designed to help professionals become comfortable with and use telehealth in their practice;
- Using health monitoring and diagnostic telehealth equipment for patient care and patient/ caregiver education;
- The Chromosome 22q11.2 Deletion Syndrome (22q11.2DS) Translational Clinic provides developmental behavioral pediatric and neuropsychological assessment for participants in our NIH 22q11.2DS research program, with feedback and follow-up support for families and the professionals providing care in their home communities available through telemedicine;
- Not necessarily innovative, but very successful use of short web-cast educational modules to reach community providers;
- Live chat for immediate and real-time assistive technology technical assistance;
- Tele mental health;
- Tele - consultation with remote Interdisciplinary team;
- Telehealth;
- College of Direct Support;
- Online modules;
- Our clinical services have been using telehealth video conferencing for a variety of services for many years;
- Developmental peds telehealth consultations to families of children newly diagnosed with ASD in rural southern IL;
- Telemedicine appts for psychiatry; and PKU follow-up (phenylketonuria, an inborn error of metabolism);
- Statewide interdisciplinary graduate program in early intervention is delivered though web-based technology with students opting for participation through either live class or distance technology---both combined with on-site supervision, mentoring, and community of practice web interaction;
- Our behavioral psychologists provide treatment services for behavioral management for ASD and other developmental disabilities using Polycom. We are beginning a tele-audiology project this month;
- Data collection via I-Pads;
- We currently use video conferencing to provide telehealth psychiatry services to rural areas of West Tennessee;

- TeleCopes is a HRSA funded program at JFK that retrofitting an evidence based model (Face Your Fears) that is typically done in a face-to-face setting to an online format for families in rural Colorado. The model focuses on children with ASD and co-occurring anxiety;
- We are piloting a LEND satellite program with U Arkansas for Medical Sciences (fiscal host) and Southern Mississippi;
- The CDD REACH program provides videoconference and webinar technology assistance, training and support for all the programs at our CDD/AUCD. Often we use more than one technical tool at a time to produce a hybrid event that provides access to the greatest number of participants;
- We are proposing to videoconference to provide LEND seminar in the next grant cycle;
- We use Adobe Connect Pro to allow online and real-time use of face to face connections for training, technical assistance, and data and evaluation efforts.

***What are the barrier(s) to the use of technology for the provision of interdisciplinary services at your UCEDD or LEND? (please check all that apply)***

Forty-three respondents answered this question. The most common barrier presented was reimbursement followed closely by hesitancy of *recipients* to use technology and then lack of knowledge of what is available and hesitancy of *staff* to use technology.

<b>What are the barrier(s) to the use of technology for the provision of interdisciplinary services at your UCEDD or LEND? (please check all that apply)</b>		
<b>Answer Options</b>	<b>Response Percent</b>	<b>Response Count</b>
Reimbursement	55.8%	24
Licensure within your state	14.0%	6
Licensure across state lines	14.0%	6
Hesitancy of staff to use technology	48.8%	21
Hesitancy of recipients to use technology	53.5%	23
Lack of training to get started	44.2%	19
Lack of technical support	34.9%	15
Lack of knowledge of what is available	48.8%	21
Other	11.6%	5
Other (please specify)		12
<b>Total Respondents</b>		<b>43</b>



“Other” comments for barriers are summarized in the following categories:

- Lack of funding to obtain technical support services and providers
- Privacy and confidentiality concerns
- Lack of awareness of what is available
- Poor recipient bandwidth and equipment
- Lack of staff consensus that the use of technology is the best step forward
- Software and hardware maintenance concerns

***What, if any, creative ideas have you discovered for overcoming these barriers?***

Twenty respondents answered this question. Comments centered on the following categories:

- Practice, use, and refine
- Draw upon staff experience and expertise
- Be proactive to avoid barriers
- Utilize other resources such as training grants or graduate students
- Have a backup plan in case the technology isn’t working properly
- Allow staff to explore using various technology
- Work with Medicaid on reimbursement issues
- Conduct a small scale pilot test first

- Be open-minded that technology might not be the best fit for all professionals or families
- Provide onsite technical support
- Practice-use-refinement, practice-use-refinement...

***What type(s) and frequency of social media do you use for business and/or personal use?***

There were forty-seven respondents to this question. The two most commonly used social media formats are Facebook and YouTube. The formats deemed as “Never” used included FourSquare and Qaiku. “Other” comments included:

- Yammer-weekly (business)
- Our university will not allow us to use Facebook or Twitter. We see this as a barrier but have not been able to convince the administration to change this policy.

<b>What type(s) and frequency of social media do you use for business and/or personal use?</b>											
	Daily (Personal)	Daily (Business)	Weekly (Personal)	Weekly (Business)	Monthly (Personal)	Monthly (Business)	Quarterly (Personal)	Quarterly (Business)	Never	N/A	Response Count
Facebook	14	11	9	13	4	5	2	1	7	3	<b>46</b>
My Space	0	0	0	1	0	0	2	0	28	8	<b>38</b>
Twitter	2	4	4	3	0	0	1	0	26	6	<b>40</b>
Blog(s)	2	1	6	12	2	6	2	3	10	3	<b>40</b>
FourSquare	0	0	0	0	0	0	0	0	29	7	<b>36</b>
YouTube	1	4	11	14	6	8	0	2	10	2	<b>46</b>
LinkedIn	1	1	1	6	8	2	3	1	16	6	<b>42</b>
Qaiku	0	0	0	0	0	0	0	0	26	8	<b>34</b>
Other (specify)											<b>4</b>

***What information and/or training about utilizing technology or social media for the provision of interdisciplinary services and training would be helpful to you and your center or program?***

Twenty-nine respondents answered this question. Below is a summary of responses:

- Utilizing technology for rural populations
- What is available and how to fund
- Video-conferencing
- Hands-on training
- Highlight other programs
- Customized training
- Best practices
- Systems limitations and technology barriers
- Creative ideas for eliminating barriers
- Software comparison
- Lack of capacity to use social media; not enough time
- Conducting outreach, fundraising, and information dissemination using social media
- Outcome Data
- Marketing tips
- Breaking through administrative barriers to use social media
- Evaluation
- Standard guidelines
- Dangers and security issues
- Reimbursement
- Continuing education credits through social media

***Please provide the name of the person(s) completing the survey, what is your position(s), and UCEDD/LEND program name.***

Forty-six people provided their name and program name. Twenty-two respondents of question 3 were interviewed further to yield detailed information about their indicated exemplary program or model. Below is a table summarizing the interviews.

<b>State</b>	<b>Program</b>	<b>Population</b>	<b>Focus</b>	<b>Technology</b>
Alaska	Center for Human Development	Graduate Students	Training	Videoconferencing
Arkansas	Arkansas LEND	LEND Trainees	Training	Videoconferencing
Colorado	JFK Partners	Children ages 8-14 with	Training	Personal Computers,

		ASD and co-occurring anxiety		webcams, ooVoo
Illinois	Illinois LEND	Families of children with ASD	Service	Videoconferencing
Indiana	Indiana Institute on Disability and Community	Preschool and kindergarten teachers	Data Collection	I Pads
Iowa	University of Iowa	Children with DD engaging in behaviors	Service	Polycom
Iowa	University of Iowa	Infants	Service	ABR technology, crossloop communication, Polycom
Louisiana	LSU Health Sciences Center – Human Development Center	Graduate nursing students	Training	Videoconferencing
Maryland	Maryland Center for Developmental Disabilities	All audiences	Training	Adobe Connect Pro
Minnesota	Institute on Community Integration	Direct Support Professionals	Training	Web based training
Missouri	University of Missouri LEND	LEND Trainees	Service	Telehealth Network using Polycom
Nebraska	Munroe-Meyer Institute	Children and families diagnosed with behavior disorders and DD	Service	Tele Mental Health using Polycom
Nebraska	Munroe-Meyer Institute	Children and families diagnosed with epilepsy	Service	Epilepsy Clinics using Polycom
New Hampshire	NH LEND/Institute on Disability	Primary Care Providers	Training	Webinars

New York	Westchester Institute on Human Development	Adults with IDD, TBI, or Progressive Neurological Disorders	Service	Remote sensing technology, videoconferencing
Ohio	Nisonger Center	LEND Trainees	Training	ePortfolio web-based design
Tennessee	Boling Center for Developmental Disabilities	Case Managers for adolescent mental health facilities	Service	Polycom
West Virginia	WV Center for Excellence in Disabilities	Parents of children with autism (ages 18-48 months)	Training	Handheld video camera
West Virginia	WV Center for Excellence in Disabilities	CSHCN and their Families	Service	Medical Home Telehealth using Videoconferencing
Wisconsin	Waisman Center	Individuals with I/DD	Service	Electronic devices monitored at a distance
Wisconsin	Waisman Center	Healthcare and Community providers	Training	Medical Home webcast series
Wyoming	WIND	General Audience	Technical Assistance	Live Chat with UCEDD

### Highlights of Exemplary Programs (Blog items)

Twenty-two respondents of question 3 were interviewed further to yield detailed information about their indicated exemplary program or model. Phone interviews were conducted by UCEDD staff from Minot State University: North Dakota Center for Persons with Disabilities and LEND staff from the University of Minnesota: Institute on Community Integration. Prior to the interviews, the technology subcommittee met and approved nine standard questions. These questions were.

1. Please describe the \_\_\_\_\_ model/program indicated on the CIS Technology Survey.
2. Would you categorize it more as a service model or training program?
3. What was the primary target population?
4. Which disciplines were involved in providing this service/training? (i.e., OT, SLP, Physician, Psychologist, SPED)

5. What validated outcomes were apparent upon completion of the service provision/training? (Include any evaluative measures, consumer satisfaction, documented learning outcomes, etc.)
6. What technology was utilized to provide this service/training?
7. How was the model/program supported in terms of staff time and FTE?
8. How was the model/program supported in terms of finances? (Include any information about how the model is currently funded and any plans for sustainability)
9. If people want to learn more about your model/program, how can they best contact you?

The programs identified and others that are subsequently uncovered will be featured in the CIS blog.