



September 2011

Children Who are Deaf/Hard of Hearing: State of the Educational Practices

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INTRODUCTION

While it is difficult to identify an exact number of children with hearing impairments, the General Accountability Office and IDEAData.org report that the incidence of children who are deaf or hard of hearing is small, representing about 1% of all identified students with disabilities (GAO, May 2011; IDEAData.org, 2009). Variability in the reported number of children who are deaf/hard of hearing can happen because some children with hearing impairments are counted under different categories (e.g., deaf/blind, multiple disabilities). The education of these children has been changed significantly by advances in many areas in recent years. For example, technologies such as visual or text communication devices and speech-to-print software and the expanded use of cochlear implants¹ have brought new means through which students with hearing impairments can communicate and access educational content (Shaver et. al., 2011). The use of these advances can contribute positively to the provision of a free appropriate public education for children with hearing impairments. Project Forum at the National Association of State Directors of Special Education (NASDSE) produced a document in 2005 focused on state infrastructures and programs for this population (Müller, 2005). As part of its cooperative agreement with the U.S. Department of Education's Office of Special Education Programs (OSEP), Project Forum produced this document that reports results from two surveys that inquired about the current state of practice in educational service delivery for children who are deaf/hard of hearing.

METHODOLOGY

During May-June 2011, Project Forum sent surveys to two groups of officials in state and territorial jurisdictions who are responsible for the implementation of the Individuals with Disabilities Education Act (IDEA): one to state directors of special education who oversee services for school-age children with disabilities under Part B of the IDEA and the second to the lead agency in each state for children with disabilities who are involved in early

¹ A cochlear implant is a small, complex electronic device that can help to provide a sense of sound to a person who is profoundly deaf or severely hard-of-hearing. The implant consists of an external portion that sits behind the ear and a second portion that is surgically placed under the skin. An implant does not restore normal hearing, but it can give a deaf person a useful representation of sounds in the environment and help him or her to understand speech. This definition and other information are available in the article on Cochlear Implants by the National Institute on Deafness and Other Communication Disorders (NIDCD) at <http://www.nidcd.nih.gov/health/hearing/coch.html#a>.

intervention programs under Part C of the IDEA.² Part B responses were received from 34 states and one nonstate jurisdiction (hereafter referred to as 35 states). A total of 35 Part C state lead agencies responded to the survey. Analysis of the findings involved the use of Zarca™, a computer-based survey and data analysis tool. The remaining sections of this document report the results of the two surveys.

FINDINGS

Part B Survey Results

Screening

The first area of the survey concerned school practices to screen children for hearing difficulties. Of the 35 respondents, 24 indicated that all children receive a hearing screening upon entry into the school or program. The screener was most often a school or public health nurse. Others who performed screenings included individuals specifically trained for this function or selected by the school district, medical services such as the local health department or a family physician.

Required hearing screenings also occur at other times in 20 of the 35 responding states. Such testing was most often described as part of a referral to a student support team or an evaluation or reevaluation for special education. Some states require screening annually for all children (e.g., *Illinois* and *Utah*), but most states require schools to conduct hearing screenings at specific grade levels, most commonly every other year.

State Schools for the Deaf

Thirty of the 35 responding states have a state school for the deaf. In 22 of those cases, respondents indicated that the provision of instruction and services at that school was overseen by the state's department of education or state board of education. In the remaining eight states, oversight is exercised by various other entities such as:






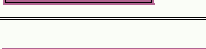
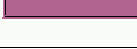


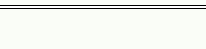



- a local education agency (LEA)/district (*Delaware*);
- a school board appointed by the state governor, a superintendent, a special education director and a school principal (*Minnesota*);
- higher education (*New Mexico*);
- a Department of Human Services (*Illinois*);
- the state Board of Regents (*South Dakota*);
- the state Bureau of Special Education (*Connecticut*);
- the state school for the deaf's own board of education (*Arkansas*); and
- a Board of Visitors (*Virginia*).

Services/Instruction

Respondents were provided a list of 12 types of services and instruction and asked to indicate which of them the state ensured that LEAs provide for students who are deaf/hard of hearing. Patterns of response varied widely. The most commonly ensured items were interpreters and audiology services followed closely by parent and teacher training. The following bar graph illustrates the full set of responses.

² Part B programs cover children ages 3 through 21 and Part C programs include ages birth to 3 years.

Q8. Please indicate which of the following services/instruction your state ENSURES THAT LEAs PROVIDE for students who are deaf/hard of hearing. (Check all that apply)

Responses	Count	%	Percentage of total respondents					
Audiology services	23	65.71%						
Instruction in American Sign Language	17	48.57%						
Interpreters	25	71.43%						
Contact signing (ASL with some English word order)	13	37.14%						
Cued speech	11	31.43%						
Auditory/verbal therapy (exclusive use of auditory skills)	15	42.86%						
Manually-coded English such as S.E.E. (Signing Exact English)	10	28.57%						
Cochlear implant mapping	9	25.71%						
Total Communication (including strategies such as signing, finger spelling, speech reading, oral language)	19	54.29%						
Mental health services specific to students who are deaf/hard of hearing	15	42.86%						
Parent training to support the student.	21	60.00%						
Teacher training to work with parents	20	57.14%						
Other (please specify)	21	60.00%						
(Did not answer)	0	0%						
Total Responses	219		<table border="1"> <tr> <td>20%</td> <td>40%</td> <td>60%</td> <td>80%</td> <td>100%</td> </tr> </table>	20%	40%	60%	80%	100%
20%	40%	60%	80%	100%				

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Of the 21 responses given in the “other” category, 19 referred specifically to the child’s individualized education plan (IEP) as the vehicle that drives the provision of services to

deaf/hard of hearing students and the other two indicated that the LEAs provide services based on “the needs of the child.”

Professional Development

Of the 35 respondents, 30 indicated that they provide their LEAs professional development related to the services the state ensures that the LEAs provide for students who are deaf/hard of hearing. Responses in the supplied frequency categories were as follows:

TABLE 1: Part B Professional Development Schedules		
Category	Number of States	Percent
Monthly	3	10%
Semi-Annually	6	20%
Annually	4	13%
Other	17	57%
Total	30	100%

The 17 respondents who selected “other” and/or added information about their professional development practices were as follows:

- different patterns of delivery by year or other factors (*Georgia, Rhode Island, Minnesota, Oregon, Florida, Tennessee, Maryland, Montana, Virginia, Maine*);
- delivered as needed or requested (*Arkansas, Texas, Pennsylvania*);
- in concert with monthly meetings with the school for the deaf (*Delaware*);
- provided through a state grant to the Center on Deafness (*Illinois*);
- quarterly (*Connecticut*); and
- training is part of the state-funded Deaf Education initiative (*New Hampshire*).

States described the types of professional development they provide related to the services the state ensures that LEAs provide. The main features of those activities include:

- state activities in coordination with LEAs; involving staff from different state agencies; and regional units using strategies such as needs assessment to plan training sessions;
- collaboration with outside entities such as nonprofit agencies, universities, targeted projects, resource centers and focused technical assistance resources (e.g., the *Illinois Services Resource Center* and *Center on Deafness* and the *Connecticut Teachers of the Deaf and Hard of Hearing Discussion Group* that meets five times a year);
- specific areas of focus for professional development sessions, e.g., instruction in American Sign Language or auditory verbal therapy, credentialing and the Louisiana mentoring program for interpreters, review of student records, classroom observations and compliance-related topics; and,
- use of a variety of delivery mechanisms including face-to-face meetings, webinars and other web-based training and conferences.

Respondents identified specific providers of the professional development that included state staff, consultants, school for the deaf staff, university professors, regional service center staff and specialists in specific areas of teaching children who are deaf and hard of hearing.

For the survey item that asked about who is included in the professional development activities, six categories were provided as well as a category for “other.” The number and percent of states whose training included the provided categories are summarized in Table 2.

TABLE 2: Part B Participants in Training Activities		
Category	Number of States	% of States
Special Educators	28	93%
General Educators	24	80%
Related Services Staff	27	90%
Paraprofessionals	25	83%
Administrative Staff	25	83%
Parents	26	86%
Other	10	33%

NOTE: Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

In addition to the supplied categories, respondents listed the following as “other” participants: interpreters, Part C providers, legislators, cued speech transliterators, individuals from other state agencies and future teachers.

The focus of the final group of items about professional development was cochlear implants. Eighteen respondents indicated that they provide *unique* professional development related to children who have cochlear implants and 17 do not. Respondents described the content of that training as follows:

- Collaborative efforts with:
 - the major cochlear implant centers in the tri-state region (*New Jersey*);
 - local hospitals on topics related to mapping and with the School for the Deaf parent-infant program (*Utah*);
 - AG Bell provided seminars on Listening and Spoken Language workshops (*Texas*);
 - the Commission for the Deaf and Hard of Hearing mentor program that provides three years of coaching to staff working with children with cochlear implants (*Colorado*);
 - the *Hear ME Now* oral deaf education center (*Maine*); and
 - a state training and technical assistance center such as PaTTAN (*Pennsylvania*); and
- General resources for training including web-based training programs, use of consultants, university staff, conferences and workshops.

The description of those included by the 18 states that do provide unique professional development related to cochlear implants is similar in pattern to the types of persons included in regular professional development displayed in Table 2.

Funding of LEAs

Eleven respondents indicated that they provide funds to LEAs specifically for children who are deaf/hard of hearing and 24 states do not. The sources tapped for these funds include:

- state and federal funds (six states);
- state funds (three states); and
- state, federal and private (two states).

Changes Since Cochlear Implants Became Available

Respondents provided a wide variety of responses to the item on how the needs of children who are deaf/hard of hearing have changed since the numbers of students with cochlear implants have increased. The most frequently mentioned changes were:

- Seven respondents cited a higher demand for an oral approach such as Auditory Verbal Training (AVT), Listening and Spoken Language (LSL), etc.
- Five states mentioned the need for changes in the type of training needed in schools.
- Three respondents cited the need for more in-class support and consultation.

Other areas mentioned by one or two respondents were:

- the need for specific accommodations in the classroom rather than specialized instruction;
- more acceptance of children who are deaf/hard of hearing by classroom teachers;
- a decrease in the number of schools for the deaf;
- a decrease in the use of sign language; and
- an increased need for speech-language pathologists with experience working with deaf/hard of hearing children.

Nine respondents indicated that they were not sure or did not know what had changed recently in the needs of children who are deaf/hard of hearing and one indicated that there were no changes.

Challenges to Serving Students who are Deaf/Hard of Hearing

The major challenges encountered by SEAs in assisting LEAs to appropriately serve students who are deaf/hard of hearing fell into four main areas:

1. Rural challenges – mainly developing and delivering services in remote areas with small populations;
2. Training – availability of well-prepared teachers and high-quality professional development to support understanding of issues involved in teaching students with this disability;
3. Improving collaborative relationships within the deaf/hard of hearing community; and
4. Funding – especially to support increasing the availability of effective personnel.

About half of the 35 respondents also added comments in the final item of the survey. The responses were as follows:

- *New Jersey* offers a continuum of options through regional programs for the deaf.
- *Wyoming* reimburses school districts at 100% of actual expenditures and the Department of Education provides technical assistance that was formerly provided through the school for the deaf.
- *Utah* has just completed an interagency agreement that helps define expectations of all involved.

- *Nebraska* funds four regional programs that address educational issues as well as psycho-social needs and provide access to deaf role models and opportunities for barrier-free communication.
- *Delaware* described a challenge from some advocates wanting only one method to be used for children with cochlear implants. They are also working on setting up a classroom that will address this population at the school for the deaf.
- *Colorado* has many positive services for deaf/hard of hearing children, but the state is still working on the necessary shift in paradigm to appropriately change practice for children with cochlear implants.
- *Palau* is working to help parents and relatives understand the importance of the ability to communicate for a child who is deaf/hard of hearing.
- *Minnesota* mentioned the difficulty in providing services in rural areas of the state and noted complications that exist for many families in metro areas of the state who do not have English as their primary language.
- In *South Dakota*, many parts of the state have only consultation from the school for the deaf.
- *Florida's* discretionary projects are very active in the national deaf education and assistive technology fields and coordinating work toward the national deaf agenda.
- *Connecticut* does not have a typical school for the deaf and all specialized instruction, supports and services are determined at the local level.
- In *Maryland* multiple entities provide professional development and services/placement for students who are deaf/hard of hearing is based on parental choice.
- *New Hampshire* is collecting data and resources through the NH Deaf Education Initiative Project to drive future training for services to students who are deaf/hard of hearing.
- *Montana* has only one doctor who can map cochlear implants and many parents have to travel out of state for this service.
- *Virginia* contracts with a person who brokers services of specialists to provide training to LEAs in all areas of deafness.

Part C Survey Results

The survey sent to the state coordinators of Part C Programs was structured in the same way as the Part B version with minor differences required by the nature of Part C programs and the ages of their populations.

Screening














The majority of Part C programs (12) reported that they use newborn screening results when a child is referred to their program. Other sources used for screening input on children's hearing were: family questionnaires (7); specific tests or any standardized test (7); parent and/or physician provided information (3); specific screening by the evaluation team (1); use of a form designed for hearing screening (1)³; and four programs reported that they do not do a specific screening for hearing upon entry. The type of individuals who conducted these screenings included audiologists, early interventionists, medical professionals, speech and language pathologists and service coordinators.

³ For a copy of this form see <http://www.infantva.org/documents/forms/3022eE1.pdf>

Responses of the 35 programs to a question about required screenings at other points in the child’s attendance were approximately evenly split—18 do not while 17 do require such screening. The majority of those who responded positively indicated that they require screening annually or upon re-evaluation. Other programs mentioned that they screen if the child has a medical condition associated with hearing loss such as otitis media, if follow-up was recommended in the newborn screening or upon referral for an evaluation. One program indicated that they screen if the child was born prematurely and at exit from the program.

Services

A list of 12 services was provided and respondents could choose one or more of them and/or the category “Other.” The most frequently selected items were: parent training to support the child in the Part C program; audiology services; instruction in American Sign Language; Auditory/Verbal Therapy; interpreters; Total Communication; and provider training to support the child in the Part C program. The frequency of responses is illustrated in the bar graph below:

Q6. Please indicate which of the following services you provide in your Part C program for children who are deaf/hard of hearing: (Check all that apply)			
Responses	Count	%	Percentage of total respondents
Audiology Services	32	90.00%	
Instruction in American Sign Language	29	83.33%	
Interpreters	28	83.33%	
Contact Signing (ASL with some English word order)	19	53.33%	
Cued Speech	21	60.00%	
Auditory/Verbal therapy (exclusive use of auditory skills)	29	80.00%	
Manually-Coded English such as S.E.E. (Signing Exact English)	11	33.33%	
Cochlear Implant Mapping	7	20.00%	
Total Communication (including strategies such as signing, finger spelling, oral speaking, etc.)	28	76.67%	
Mental health services specific to children who are deaf/hard of hearing	7	23.33%	
Parent training to support the child in the Part C program	35	100.00%	
Provider training to work with parents	27	80.00%	
Other (please specify)	11	30.00%	
(Did not answer)	0	0%	
Total Responses	284		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Eleven respondents described services or conditions under “Other.” Their responses fell into two categories: services are determined by family preference and child needs (7) and services are delivered by other providers (4).

Professional Development

All but one of the 35 respondents indicated that their state does provide professional development to local Part C providers to help them better serve children who are deaf/hard of hearing. Responses in the supplied frequency categories are illustrated in Table 3.

Category	Number of States	Percent
Monthly	0	0%
Semi-Annually	3	9%
Annually	6	18%
Other	25	73%
Total	34	100%

Respondents who selected “Other” described the availability of professional development as follows:

- as needed (8);
- conducted in collaboration with other agencies/programs (4);
- varies throughout the year (4);
- training is available online (3);
- depends on what is made available (3);
- when purchased by the program (1)
- quarterly (1); and
- as requested (1).

Descriptions of the type of professional development provided for Part C personnel included the following:

- provided by or through a university, such as the training available from SKI-HI Institute, a unit of the [College of Education's Department of Communicative Disorders and Deaf Education](#) at Utah State University and the training and resources provided by the University of South Carolina School of Medicine Team for Early Childhood Solutions that includes a credentialing process as well as other resources <http://uscm.med.sc.edu/tecs/thecomprehensivesystemofpersonneldevelopment.asp>;
- online training available on demand;
- conferences and regional workshops;
- credential-related training programs;
- conference calls and video conferencing, usually quarterly; and
- other, such as collaboration with a school for the deaf or part of a four-day training on low-incidence disabilities.

Professional development for Part C staff is provided by a variety of individuals and entities, including schools for the deaf, universities, state agencies, organizations and individual professionals and agencies that specialize in services for children who are deaf/hard of hearing and individual contractors such as audiologists or speech and language pathologists.

Responses indicating who attends trainings provided six categories plus “Other.” The number and percent of programs that include each supplied category is illustrated in Table 4.

TABLE 4: Part C Participants in Training Activities		
Category	Number of States	% of States
Early Intervention Specialists	34	97%
Nurses	20	57%
Related Services Providers	32	91%
Paraprofessionals	20	57%
Service Coordinators	24	69%
Parents	27	77%
Other	13	37%

NOTE: Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Participants in training sessions listed by respondents in the “Other” category included interpreters, all administrators and providers, special education administrators, program directors and family support personnel. One respondent indicated that attendance depends on the content of each training.

The final area under professional development asked respondents about *unique* professional development for providers and/or parents that is focused on children who have cochlear implants. Of the 35 respondents, eight indicated they have such training available and 27 that they do not. The content of those professional development activities were described as updates on hardware and software and the process of implantation; how to help students develop listening skills; lab support for parents and professionals; and consultation on specific areas such as speech and language development. Providers of this type of training mentioned by respondents included staff from schools for the deaf, audiologists, representatives of cochlear implant manufacturers, school district staff and speech language pathologists who have received specialized training in the area of cochlear implants. One respondent also mentioned that parents have provided training for program staff.

State Schools for the Deaf

Three items addressed schools for the deaf. A total of 28 out of the 35 respondents indicated that their state did have a school for the deaf, and 22 stated that the school for the deaf provides services for children ages birth to three. Only eight respondents indicated that Part C staff oversee the provision of services at the state school for the deaf.

Funding of Part C Programs

The majority of respondents (18) indicated that their Part C Program is funded with both federal and state funds. In 12 states, federal and state funds are expanded through the use of insurance and other private sources. Two states said their programs are funded only through federal funds and three states mentioned only state sources.

Challenges encountered in Part C Programs

The challenge most frequently mentioned by Part C providers (12) was the availability of appropriately trained staff both in general and specifically related to consistent service coordinators, meeting the full range of supports that families need for their children and staff with training about children who have cochlear implants. A variety of funding challenges were mentioned by eight respondents. Other challenges mentioned by one or two respondents included the following:

- timely referrals by physicians;
- serving students in rural and remote areas of the state;
- resources and capacity in general;
- communication with local school systems;
- inconsistent parent follow-through; and
- meeting the needs of children who have multiple disabilities in addition to a hearing impairment.

Changes Since Cochlear Implants Became Available

The most frequent reply from the 35 respondents was that there were no changes since cochlear implants became available or that they did not know. Other responses indicating changes specified the following:

- less emphasis on sign language and more families choosing an auditory approach;
- need for more consultant services;
- need to update existing providers' skills; and
- increased demand for audiologists to do mapping.

Additional Comments

A few respondents provided additional comments in the final item of the survey. They included:

- *Minnesota* mentioned that coordinating data between the department of education and the department of health can be challenging and data do not always accurately reflect what is happening.
- *Colorado* has an effective family information and support system called CO Hands and Voices.
- *Massachusetts* has identified a contact person for children with hearing loss in each community in the state.
- *Idaho* mentioned that there is great coordination with the state school's outreach program, but it takes concerted effort to ensure coordination.
- *Michigan* noted that providing the full range of supports desired for low-incidence disabilities with shrinking funds is a problem and better opportunities to interact with hearing peers is needed.
- *Illinois's* program is based on the state's Early Intervention Hearing Service Guidelines.
- *Delaware* has a very collaborative effort and, most recently, is implementing Guide By My Side through Hands and Voices.
- *Oregon* sees high poverty and unemployment and state funding issues affecting the availability of adequate services, but the program has a good partnership with Early Hearing Detection and Intervention.

SUMMARY AND OBSERVATIONS

Analysis of the survey responses indicates some significant variations between and within Part B and Part C Programs for the deaf/hard of hearing. Initial screening upon entry is required in only two-thirds of Part B programs and most of the Part C programs reported relying on newborn screening results. Service provision patterns also appear to differ widely, although the differences in the nature of Part B and C programs may exaggerate that difference. The survey results indicate that professional development activities are strong and include both staff and families.

Respondents noted numerous challenges to these programs. Both programs mentioned difficulties in developing and delivering services to children in remote areas with small populations. The availability of adequately prepared personnel and sufficient funding were also cited as problems.

The description of specific aspects of programs, especially in the additional comments provided by respondents, reveals some strongly positive changes and approaches in both types of programs. Dissemination of those strengths should increase with the growing availability of that information online.

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This report was supported by the U.S. Department of Education (Cooperative Agreement No. H326F050001). However, the opinions expressed herein do not necessarily reflect the position of the U.S. Department of Education and no official endorsement by the Department should be inferred.

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