



HANDS &
VOICES™

© 2010

**The Hands & Voices White Paper on Educational Approaches
and Other Interventions for Children
Who Are Deaf or Hard of Hearing**

to the

Government Accountability Office for the
Senate Committee on Health, Education, Labor and Pensions
and the House Committee on Education and Labor

AUTHORS

Cheryl DeConde Johnson, EdD, Hands & Voices Board President and Deaf Education Consultant with The ADVantage, Leadville, CO

Leeanne Seaver, MA, Executive Director, Hands & Voices (National) and parent of a deaf son; Carthage, Illinois

Christine Yoshinaga-Itano, PhD, University of Colorado Health Sciences Center, Boulder, Colorado; Member, Hands & Voices Board of Directors

With contributions from our H&V network in Arizona, Colorado, Texas, Nebraska, Indiana, Illinois, Minnesota, and Virginia.

I. What is known about the extent and nature of hearing loss among children in the United States?

Extent & Nature: At the present time we are screening over 95% of all newborns in the U.S. by one month of age. There is a significant loss to documentation or loss to follow-through such that we can document about 55% to diagnostic evaluation by three months. This figure changes each month as states continue to improve their follow-through. However, we anticipate that we are identifying only a little more than 50% of newborns with hearing loss. We do not know how many are receiving sign language instruction and/or amplification within a month of confirmation of hearing loss. Hearing aids are not currently covered by insurance in most states, and therefore there is a

significant delay in auditory access to spoken communication. With the data available, we hypothesize that only about one in every four children born with a hearing loss is reported as enrolled in early intervention services.

Hearing loss is the most common birth defect among newborns, according to the CDC. In the definitive Colorado study, one affected child in every 650 newborns was identified. In this group of 86 infants, 59 had bilateral sensorineural hearing loss, 17 had unilateral sensorineural hearing loss, four had bilateral conductive hearing loss, and six had unilateral conductive hearing loss. Mild hearing loss was present in six infants, moderate hearing loss was present in 42 infants, severe hearing loss was present in 33 infants, and profound hearing loss was present in the remaining five infants. Only 32 of the 86 affected newborns in 1999 had one or more risk factors for hearing loss subsequently identified (Mehl & Thomson, 2002).

Beyond congenital hearing loss, acquired hearing loss affects an increasingly larger population of children. It is estimated that three children in 1000 are born with permanent hearing loss and an additional three children in 1000 acquire deafness in early childhood (Northern & Downs, 2002, p 3). Illness, ototoxic drugs and genetic causes expand the problem of hearing disability beyond the purview of newborn screening and identification and the Part C (birth to three years of age) population. Popular culture is also having an effect on hearing loss in older school-aged children. *The Journal of the American Medical Association* recently published an article stating that one in five teens are suffering from hearing loss (Shargorodsky et al, 2010). *Time* magazine reported "more teens are having trouble hearing, but those ubiquitous iPods may not be the only culprits. Over the past decade, 31% more teens showed some form of hearing loss but reported no increased exposure to noise from headphones. Diet and poverty may be affecting inner-ear function, say the authors of a new study. But even they are not ready to exonerate iPods just yet. Teens don't accurately report noise exposure and may not consider headphones a major source of such trouble." (*Time*, August 30, 2010) Acquired hearing loss in high school students may go unidentified as the source of problems that could be incorrectly attributed to learning disabilities, speech problems, attention deficits and other conditions if schools do not place a high priority on recognizing this potential issue for each child.

Intervention: There is evidence that children who are screened by one month, identified by three months, and enrolled in early intervention by six months of age into programs provided by specialists in early childhood deafness and hearing loss, will demonstrate age appropriate receptive and expressive language skills from 12 months through seven years of age, thus preventing the historically reported significant language, communication and academic delays. Unfortunately, this body of literature

only comes from a single state's population, the state of Colorado, and although EHDI programs began in 1992 and the majority of states had legislation in the early 2000 years, no other state has been able to provide outcomes of their population that mirror the Colorado statistics. Rhode Island has reported outcomes to three years of age, but their population was primarily follow-through from the newborn intensive care unit with a significant portion of children with additional disabilities and therefore, outcomes were not commensurate to age level peers.

Carmen, H&V Parent Consultant: "You might as well put 'years' after the 1-3-6 goals for EHDI instead of 'months' when it comes to our kids from other cultural communities. We have to do a better job providing culturally appropriate services and support to children who experience multiple languages and whose parents have limited access to information in the community. We can identify these kids, but we continue to fail when it comes to implementing effective educational programming that's truly accessible to kids from other cultural communities."

Issues

- Ninety-five percent of deaf or hard of hearing (d/hh) babies are born to hearing parents—90% of those parents have no background or foreknowledge of deafness or the communication needs of their child. Their successful emotional adjustment and skill acquirement will prove to be as challenging as it is predictive of the eventual positive or negative outcome for their child.
- There are significant issues in data management from infancy through Part B or regular education because the respective databases are difficult and in some cases almost impossible to coordinate.

Charlene, H&V parent, "at least in our state, we are still having problems with certain school districts meeting the 45 day deadline to develop an IFSP/IEP. This is a REAL struggle in the summer...even though it's not supposed to be. Something big has to change."

- The Early Hearing Detection and Intervention (EHDI) programs throughout the U.S. are designed to prevent the significant negative outcomes associated with deafness and hearing loss in children. Delivering early-identified and well served youngsters with age-appropriate language levels from early intervention at age three to public school services is a goal that EHDI has made possible in the last ten to 15 years. However, it often contrasts significantly with Part C goals. Success for the EHDI programs is to prevent language delays in children with deafness and hearing loss. Success for the Part C* programs is to keep delay from increasing, ameliorate delay if possible, but at least maintain rate of developmental growth. The emphasis on prevention versus intervention is sometimes the distinction between EHDI and Part C goals. The EHDI program focuses on *prevention* for an at-risk population and the Part C program focuses

on the identification of disability and treatment. Further, Part C is a non-categorical program, providing services across a large breadth of disabilities, whereas EHDI systems are focused on the specific d/hh population and its unique and highly diverse needs.

**Part C of the Individuals with Disabilities Education Act describes the services and supports to families with eligible infants and toddlers from birth to age three.*

Clearly, there is an immediate necessity to address the needs presented by a child who is deaf or hard of hearing, but that effort often focuses on medical/clinical aspects of the situation, and may rarely, if ever, recognize the social-emotional issues. D/hh students are often socially isolated because they cannot hear what's going on, there are often no communication access technologies or strategies in place during social activities (like recess and lunchtime) making it difficult or impossible to communicate successfully with classmates and staff in school or extra-curricular settings. Social and emotional considerations for a d/hh child are complex and widely varied, and they can definitely affect a child's educational performance. The need to address them is paramount. University of Colorado/Boulder Professor Brenda Schick points out that "A major philosophy of education is that social interaction is the medium of learning. You simply don't learn without social interaction. There are lots of learning theories that maintain that every bit of learning is within a social context." See: <http://www.handsandvoices.org/articles/education/ed/cognition.html>

Carmen, H&V Parent Consultant: The social emotional needs of children who are deaf and hard of hearing are often unaddressed. Our schools have so much responsibility to have kids perform up to standards, which every parent wants for their child. However, our kids have unique social needs not fully appreciated by all educational professionals. I would like to see more IFSP/IEP's address the emotional needs of the students they need and take those needs into consideration and schools should have more support by administrators to put dollars towards addressing those needs.

Debbie, parent of a deaf child: When my hearing impaired son entered high school, his behavior changed dramatically. He'd been a very successfully mainstreamed oral kid all the way up to ninth grade, but then his grades dropped. He no longer got involved in any social activities and became really depressed. He just clammed up whenever we tried to find out what was wrong. We found a counselor and forced our son to see her. She started meeting with Zak and eventually got him to talk about what he was feeling. We were absolutely shocked to learn that he thought he was going to die—that he had some disease we never told him about and he only had a few years left to live. When his counselor asked him why he felt this way, he told her that he'd never seen someone like him who had grown up—an adult who was deaf—and figured that deafness must be a terminal disease."

- Research clearly proves that children have a "language acquisition window" that may begin in utero and continue to about age four to five. This sensitive/critical period of development compels urgency in provision of appropriate services for

children with hearing loss. Though there are no comparative studies, the only early intervention programs that have been able to provide evidence of the impact of early identification and earlier intervention have been provided by professionals with d/hh specialized skills. While some Part C programs have mechanisms for the provision of specialized services, many state's Part C programs do not have that capacity. The professionals with specialized skills are frequently individuals who are in the IDEA Part B* system. In some cases, these individuals lack knowledge and experiences with family-center education and developmentally appropriate activities. The mismatch between Part C generalists and the intense communication development needs of a d/hh baby can create delays in appropriate service and support, which can in turn create language delays even in an early identified infant with hearing loss.

*Part B of the Individuals with Disabilities Education Act describes the services and supports to special education eligible students from age three through high school graduation.

II. What common technological and educational approaches are used to help deaf and hard of hearing children acquire language and literacy skills and what is known about their effectiveness?

Technological Approaches

Hearing Aids: Typically, the first technological approach offered to the family is the use of hearing aids. There is some evidence that the earlier children have access to amplification, the better the developmental outcomes of the child. However, there are many other variables that impact success of amplification. Appropriate fitting of hearing aids by a qualified pediatric audiologist is the starting point. Parents must be consistent in assuring their child's appropriate use of personal amplification. Additionally, they need to provide a language-rich spoken environment for their child and utilize strategies that are age-appropriate and have demonstrated developmental outcomes. Many children with severe-profound hearing loss have a trial usage of hearing aids prior to becoming candidates for cochlear implantation. Again, research evidence supports that earlier cochlear implantation yields better outcomes. However, in addition to hearing loss, physicians and parents must consider the other medical/health risks related to earlier and earlier cochlear implantation and whether there is evidence in the literature that implantation at six months is better than 10-12 months.

Cochlear Implants: There has been a significant emphasis on the outcomes of children with cochlear implants who represent about 25% of the population of children with hearing loss and many of these reports come from private early intervention providers who do not participate in the public systems. Because some of the criteria for candidacy is related to consistent follow-through in early intervention services, the income levels and educational levels of the families whose infants receive cochlear

implants are considerably higher than the average family in the U.S. Maternal level of education has been found to be one of the most powerful predictors of outcomes among these children. It is interesting to note that in the public state-wide program in Colorado, in the first three years of life, maternal level of education does not emerge as a significant predictor of outcome concurrently or prospectively. However, maternal level of education emerges as a significant predictor for the age four to seven year Colorado group.

Assistive Technologies:

- *FM amplification technology* provides an enhanced speech signal to the child eliminating listening barriers created by noise, excessive reverberation, and distance from the speaker. While the use of FM technology has not been adequately studied in young infants, as these children spend more and more time in noisy environments, FM technology provides a more optimal listening environment resulting in better access to speech communication. Technological advancements continue to improve the performance of hearing aids and FM systems as well as adding features that improve ease of use.
- *Classroom audio distribution systems* (also known as classroom amplification systems) are frequently used in classrooms across the U.S. to overcome poor acoustic conditions and to provide better access to the teacher's voice and other speech and sound communication in the classroom. Evidence has clearly shown that these systems improve listening for many children, including those with hearing loss, learning disabilities, language disorders, attention deficits, and English language learners. They also help ease teacher voice fatigue. Judicious use of these systems is necessary because if they are used in highly reverberant classrooms they may actually exacerbate the acoustical problem thereby decreasing speech intelligibility. As the use of classroom audio distribution systems have increased, there are more companies producing them. Without product standards there is a high degree of variability in the quality of the systems.
- *Classroom captioning* or *CART (computer-assisted real-time captioning)* provides a written transcript of the classroom dialogue that can be accessed by the student in real time as well as outside of class as a review tool. This written record fills a critical gap in communication access that benefits many children in addition to children with hearing loss. It also provides a method for teachers of the deaf who pre-teach/re-teach and tutor students to reinforce the instruction and teaching strategies used in the classroom. It provides the same information to parents to support their children's learning outside of school. And it provides a transcript for students when they are absent. Captioning may occur by a trained person in the classroom or can be provided by a person located remotely via the internet.

[Lisa, H&V Parent Consultant:](#) "The advances in assistive technology (like computer software such as Typewell or CART) have had an enormous impact on many students' success as well as on parents and school districts across the nation."

Educational Approaches

1. *The Communication Debate:* In the field of deaf education, the starting point for most discussions relative to effective programming actually focuses on the mode or method of communication that is used or should be used by students who are deaf or hard of hearing. The debate divides the field into pro-spoken language or pro-sign language camps, with many sub-groups that have combined or created methods and their own ideologies. Currently there is no published research evidence that conclusively demonstrates the superiority of one method or approach over another. In fact, in a 2001 study for the National Association of State Directors of Special Education's Project Forum that analyzed 181 Research studies (or so) "...the most frustrating finding concerning language development of children who are deaf is the fact that the *researchers* have not yet found *the* approach that supports development across the domains of social functioning, educational achievement, and literacy. A single such approach is unlikely...." (Marshcark, 2001, p. 39).

In the descriptive studies available, children using visual approaches and those using auditory approaches were not significantly different on their developmental outcomes. Articles that state that one method is superior to another are typically describing a convenience sample whose characteristics include high socio-economic status levels and higher levels of maternal education. Further, there is no evidence that the use of sign language necessarily impedes or prevents learning to speak and use spoken English.

- *Methods of instruction are not the same thing as modes of communication;* however school systems often take the stance that their IDEA-given right to determine the instructional methodology (which they interpret to include methods/modes of communication) overrules parent requests for IEP support and services that address the unique needs of the student based on his/her mode or method of communication. This creates program-driven IEPs not individualized education programs.

Cara R.* an interpreter in a large metropolitan high school, quit her job in ethical protest because she was "required to provide American Sign Language interpreting for six students with varying levels of hearing loss and communication modalities—two who were oral with no sign language competency, one who was ASL, one who used SEE—Signing Exact English—and one who was oral with a cochlear implant. "All these students are required to take the same electives so the school will only have to provide one interpreter during those sessions. I feel terrible at the end of every day because I know I have done a disservice to each of the students on my case load. I complained to our unit leader, but was told that the district has the right to establish this policy. But this is not what I became an interpreter to do, and I just can't do this any more." (*Cara R. sent a copy of her resignation letter to *Hands & Voices*)

Breanna B.* received a cochlear implant at age four and received private speech & hearing therapy until she entered kindergarten at 10 months post-implant. Her parents provided research and resources plus a letter from a cochlear implant expert to support their written request for their daughter to receive speech and listening IEP services from a qualified service

provider during what is the most critical auditory rehab window/24-months post-implant. The school district response was that “we all know how to listen and speak here at our school—your daughter will be fine.” Breanna joined a group for pull-out speech services by the school’s speech therapist (who had not worked with nor had knowledge of cochlear implanted children’s needs) because the school insisted that the method by which her needs would be met was up to them.

2. Hearing loss is a “low incidence disability” that presents a high degree of individualized need: This is an expensive combination that can work against meeting the needs of each d/hh student, which can vary by type of hearing loss, age of identification, communication mode, educational placement, academic performance, language fluency and so much more.

- Educational placement should include a continuum of options from fully mainstreamed in the child’s neighborhood school to services/residence at the state school for the deaf. Choice schools, charter schools, private schools, and center-based programs with a critical mass of d/hh students together to share resources and promote social learning in public schools are all important in the programming and placement options that exist to support the extremely diverse needs of this student population. However, public schools often withhold information about options that might be the most appropriate for a deaf or hard of hearing child out of concern that they do not offer said option within their own district boundaries and could be forced to transport the child elsewhere at considerable cost.

Anne, parent of a deaf child and Hands & Voices parent advocate says, “There is often a disincentive to genuinely discuss a d/hh student’s individual needs because it becomes abundantly clear that a district often cannot meet them. So a lot of effort by the school to homogenize the kid’s situation is how I would describe many of the IEPs I attend as an H&V advocate—and the parents and I bringing the discussion back to the basics: this child’s right to communication access—to teachers, language peers, friends and extracurricular activities—as mandated to this school.”

Laryssa, parent of a child with conductive hearing loss writes, “I have never found it so hard to find information on anything anywhere. And if there are other families like ours with permanent conductive loss, it would be very frustrating or isolating to reach out and learn there is no research or scant literature available. I eventually found it because I am passionate and stubborn.”

Carmen, H&V Parent Consultant: “Cued Speech/Language continues to be underappreciated for the effectiveness it has at providing visual access to spoken English. It remains the case that unless a particular school district embraces cued speech by training staff and using it, it remains only a theory and not a practice. For some children, cued speech can change a child’s life/future.”

Naomi, Certified Teacher of the Deaf & State Administrator: “‘Least Restrictive Environment’ is still a sensitive subject for me, but I do appreciate that we are no longer warehousing our d/hh students in state schools or self-contained classrooms – regardless of their skill level. I

personally think the pendulum has swung too far to the inclusion side but I believe it will eventually right itself and we will truly look at the child's needs before determining programming. I think of this as a plumb line with the weight on the end. At some point, everything will be "plumb" as the field looks at the student rather than the budget. (OK, I still have a bit of idealism left in me.)"

3. Historical Underachievement & Grim Statistics: "The debate over deaf education has continued for decades and yet one thing remains unchanged--many of our children continue to leave school unprepared, without the communication, language, or literacy skills necessary for an individual to become a productive and happy adult. We know the statistics all too well—third grade reading skills, deficiencies in many academic subjects and yet as Marc Marschark has recently written, 'There is general agreement that such difficulties are not direct consequences of hearing loss.'" (Lawrence Siegel, J.D., Home Page of *National Deaf Education Project* available at <http://www.ndepnow.org/>) Given that deaf education has had the longest formal history and opportunity to do its job, with schools for the deaf being among the very first to be established in the U.S. more than 150 years ago, we should be seeing better outcomes for students who are deaf or hard of hearing. Yet, in spite of mandates and new technologies, statistics remain grim for the average d/hh high school graduate who is behind his hearing peers in every curricular area (Johnson, 2000). Educational approaches in most public schools have not caught up to the potential of the new population of d/hh students.

Angela, parent of a hard of hearing mainstreamed son writes, "Boy do I have an opinion, first of all - many of our University programs are still teaching Deaf Education to meet the needs of kids 10-20 years ago instead of the needs of kids today. Teachers are graduating and going to work in the field ill prepared to meet the needs of the students of today and unable to anticipate the needs of students in the next 5-10 years. With technology advancements, this population is going to increasingly look different. Secondly, in our state literally millions of dollars of state money are being put into the state Deaf School that offers a bi-lingual bi-cultural program. The school portrays themselves as serving d/hh students statewide but the reality is that they don't have the expertise to meet the needs of any who are communicating in modes of communication other than bi/bi. If the deaf schools across the US are going to continue to receive this kind of funding, their programming needs to reflect the current trends of deaf and hard of hearing students and the modalities that they are using."

Carmen, H&V parent consultant: "We continue to have kids who are deaf/hard of hearing plus pinned with low expectations by professionals, but in particular, educational professionals. We need a stronger emphasis on the education and training of professionals specifically for DHH Plus, in particular how to adequately assess these children to gain an understanding of their true IQ and potential. We continue to fail these kids miserably."

4. *Lack of qualified, experienced professionals and a lack of empirical research proving what kinds of educational programs & instructional delivery actually work:* A visit to www.deafed.net is to review what constitutes arguably the best constellation of resources in deaf education and research that has been published (within the last ten years) via a federal grant under the direction of Harold Johnson, PhD, from Michigan State University. Currently—as of spring 2010—Dr. Johnson has seen his vanguard program at MSU folded (due to low enrollment) and the funding period for the vanguard website ended. This dynamic is a composite of a serious problem of scant research and resources for teachers, plus fewer people entering the field—all the while those who've been working in it for the past 30 years are retiring en masse. It might not be an overstatement to say that deaf education is reaching a true crisis state. The demand for qualified educational interpreters far exceeds the supply. Availability of strong programs, effective professionals, and high achieving d/hh students is at great risk right when the potential for achievement for this student population may never have been higher.

Diane, program administrator reports, "Regarding language and literacy—through efforts with Hands & Voices Guide By Your Side program—there are more parents seeing the need for making informed decisions and pursuing effective early intervention services. This summer there was a Focus on Literacy meeting here in Virginia with a literature review compiled by Susan Easterbrooks of Georgia. Bottom line, so much still needs to be done. The See-the-Sound Visual Phonics program has been especially hopeful. It's a very simple tool but is making all the difference in the world to make the sound-letter connections for good early reading skill development. I've trained well over 400 teachers of d/hh, slps, ed interps, gen ed teachers and some parents in its use. Many school divisions require all students to take the Phonological Awareness and Literacy Screening (PALS) in K -2 grades. . .there a students with severe/profound hearing loss who have had Visual Phonics used as a strategy in their classrooms who are now passing their PALS tests! Mind you . . . we have to remember that language comes before reading and developing a full rich communication system is critical. . .but we are moving forward... I was supposed to be retired by now!"

Lisa, H&V Parent Consultant: "The lack of knowledge that some districts and the community have about the importance of certified InterpretersToo often individuals are not receiving knowledgeable, skilled interpreters in the school setting, work place, and hospitals that have the skills and vocabulary necessary to appropriately communicate the message. The ultimate impact on the d/hh student's language fluency when availability of skilled communication access is compromised can't be dismissed. Another thing--we need specialized training for teachers and interpreters getting out of college to "hone" or increase their skills specifically in reading and writing. Funding going to states should be targeted for such specialized educational training."

III. What steps does the Department of Education take to ensure children with hearing loss receive the educational services they need?

The population of children with hearing loss is changing rapidly. As demonstrated in the annual U.S. Department of Education special education data collection

(www.ideadata.org) most children with hearing loss on IEPs are now educated in the general education classroom (69.5% received their instruction more than 40% of the time in the general education classroom in 2007). If this trend continues, fewer of d/hh children will be served in specialized programs (e.g., center-based classrooms, special day schools, residential schools for the deaf) and the vast majority will receive most, if not all of their education in the general education classroom. There is evidence to indicate that deaf or hard of hearing children who are mainstreamed a portion of their school day are now performing on average within one standard deviation of their hearing peers (Antia, Jones, Reed, & Kreimeyer, 2009). Evidence also indicates that most children who are deaf and hard of hearing are making at least one year's growth in one year (Johnson, 2006; Antia, Jones, Reed, & Kreimeyer, 2009). However, these children still have significant hearing impairments. In order for them to access information in the typical classroom, the acoustic environment must be addressed including noise and reverberation, loudness of the primary language user (the teacher), and access to the speech of peers, media and other technology used. Acoustic and visual treatment of the classroom environment, as well as use of technology such as personal FMs or classroom audio distribution systems are commonly used in the classroom. Children who use sign language or cued speech need qualified educational interpreters or cued language transliterators in order to access classroom instruction. Classroom captioning and notetakers are additional supports that are used. In addition to these supports, students rely heavily on their teachers' abilities to manage communication in the classroom by providing accommodations such as flexible specialized seating, restating student questions, and always facing the student when talking.

Issues:

Problems that prevent our d/hh children from fully accessing their educational program are pervasive in our education system. The likelihood that a deaf or hard of hearing student will find his/her individual needs subjugated to the administrative agenda remains high.

1. One of the most critical issues is lack of appropriate implementation of recommendations made in the IEP or through the 504 plan. When these accommodations are not provided, or are inconsistently provided, our children are shut off from access to the very content and instruction for which they are being held accountable to learn. The consideration of special factors section of IDEA (34 CFR 303.324(2)(iv)) is not consistently used to identify the communication needs and accommodations of students served through special education within the IEP process. Without adequate identification and implementation of accommodations, the education system is handicapping the children it is supposed to serve.

Recommendation #1. Special factors and considerations must be consistently and formally addressed within the timely development of the IEP to identify communication access accommodations,

current available technology and other individualized needs of students who are deaf and hard of hearing. This includes the needs of children who are from other cultural communities, have conductive hearing loss or have medical concerns in addition to hearing loss. There must be greater support to general education teachers so that they understand how to provide the accommodations as well as accountability by administrators to insure they are provided as intended. This includes accommodations for students who benefit from sign language, cued speech and auditory/oral training and adequate training for the professionals working with them.

2. Most administrators who are responsible for services for our children and youth who are deaf and hard of hearing have very little knowledge regarding their unique issues and needs. This situation results in teachers, other service providers, and parents having to continuously request, and sometimes demonstrate, the benefits of common services and supports used by these students. There is also a perception among administrators that educational services exclude social and emotional support. This problem results in difficulty accessing these services which are critical to preparing children to learn and setting them up to be successful in school. Lack of administrator knowledge also creates supervision and evaluation problems as these administrators do not have sufficient expertise to evaluate teachers' teaching techniques to determine if they are relevant, appropriate and of high quality particularly as they relate to student learning outcomes. Time, energy, and instruction could be more productive if administrators had expertise in the education of deaf and hard of hearing children or had the support of someone with this expertise. Further, quality practice standards should be used to guide administrators, teachers, other service providers and parents regarding recommended practices to serve our children.

Recommendation #2. There must be a qualified administrator who can provide relevant oversight of teachers, other service providers, and programs and services for students who are deaf and hard of hearing in order to insure access to appropriate instruction and supports that result in student progress that minimally reflects one year's growth in one year. Practices need to represent accepted professional practice standards in deaf education.

3. Parents are integral partners with schools in the education of their children. Parents need to be encouraged and supported to be involved in school activities as well as to support their own child/youth's learning. Schools remain reluctant to provide meaningful parent counseling and training in the IEP.

Recommendation #3. Schools should be encouraged to create strategies and mechanisms for meaningful parent involvement as well as support to fulfill their role and responsibility in helping their children meet their IEP goals.

4. Many states are unable to track their statewide assessment performance for d/hh students. In addition to annual performance, we need to know how much progress each of our children is making each year to meet the minimal goal of one year's growth in one year. Schools need to know this information to provide relevant professional development to its teachers as well as to evaluate program and service effectiveness. Because deafness and hearing loss is a relatively low incidence population, schools often overlook the needs of these students and lack the knowledge and resources to adequately address them.

Recommendation #4. Local school districts and state departments of education need to develop models for tracking student performance that include measures of annual growth. State Department of Education leadership in this area is critical because local districts frequently do not have the expertise or resources to provide this support.

5. The education of deaf and hard of hearing children and youth requires specialized expertise, resources and technology which together can be expensive. Two problems result...
 - a. First, even though the needs of our students are rapidly changing, they still require specialized services to provide access to instruction so that they do not fall behind or to prevent the performance gap with their typical peers from widening. Special education has been a failure-based model that results in inflexibility in the funding streams for traditional types of service delivery to support children with hearing loss, specifically those students who are performing at grade level.
 - b. Second, school districts struggle to provide a range of services to address the individual communication and developmental needs of its students. Providing multiple program options for listening and spoken language, American Sign Language (ASL), simultaneous communication, Cued Speech as well as services for children with developmental disabilities or for English language learners are costly and often result in spreading resources so thin that all services are compromised.

Recommendation #5. Schools need flexible funding options that allow them to support students with hearing loss to maintain their grade level or higher performance levels. School districts should also be encouraged to share their resources to reduce duplication of programs and encourage greater expertise in specialized areas where it is geographically feasible.

Summary

Deaf and hard of hearing children and youth now have the potential to leave their public school years achieving the same outcomes as their hearing peers. However, there are significant challenges for schools to overcome in order for that potential to be realized. Hands & Voices, a non-profit organization led by parents of children with hearing loss, has taken a leading role in educational advocacy and support for all d/hh children, regardless of their mode of communication. We urge the GAO to share the issues and concerns described in this paper at every opportunity. The U.S. Department of Education must take steps, including compliance monitoring and required measures of student outcomes as part of each state's State Performance Plan to assure that schools provide the services that our children need to achieve their potential. If not, the education system at all levels must live with the fact that rather than preparing students to be productive citizens it has further disabled them, effectually leaving them behind.

References

Antia, S., Jones, P., Reed, S., & Kreimeyer, K. (2009). Academic Status and Progress of Deaf and Hard-of-Hearing Students in General Education Classrooms. *Journal of Deaf Studies & Deaf Education*, 14 (3).

Johnson, C.D. (2000). Colorado Individual Performance Profile (CIPP) results of statewide assessments. *Colorado Outreach Network News* (Nov/Dec 2000).

Johnson, C. D. (2006). Performance levels vs Growth: A comparison of Colorado assessment data for students who are deaf and hard of hearing. *Counterpoint Spring 16*

Mehl, A., & Thomson, V. (2002). The Colorado Newborn Hearing Screening Project, 1992-1999: On the Threshold of Effective Population-Based Universal Newborn Hearing Screening. *Pediatrics* 110(4), p 848.

Northern, J.L. & Downs, M.P. (2002). Hearing and Hearing Loss in Children, *Hearing in Children*, 5th Edition. Philadelphia: Lippincott, Williams & Wilkins.

Time Magazine, August 30, 2010. Lab Report: Health Science, and Medicine.

Marschark, M. (2001). Project Forum: *Language Development in Children Who are Deaf: A Research Synthesis*. Available from www.nasdse.org

Seaver, L. (2004). *Cognition in the Classroom: The Academic and Social Implications An Interview with Dr. Brenda Schick*. Available at <http://www.handsandvoices.org/articles/education/ed/cognition.html>

Shargorodsky, J., Curhan, S., Curhan, G., & Eavey, R. (2010). Change in Prevalence of Hearing Loss in U.S. Adolescents. *JAMA* 304(7), 772-778.

Hands & Voices is a nationwide non-profit organization dedicated to supporting families and their children who are deaf or hard of hearing, as well as the professionals who serve them. We are a parent-driven, parent/professional collaborative group that is unbiased towards communication modes and methods. Our diverse membership includes those who are deaf, hard of hearing, and hearing impaired and their families who communicate orally, with signs, cue, and/or combined methods. We exist to help our children reach their highest potential.

What works for your child is what makes the choice right.™