FEDERAL POLICY BARRIERS TO ASSISTIVE TECHNOLOGY

National Council on Disability

May 31, 2000

National Council on Disability
1331 F Street, NW, Suite 1050
Washington, DC 20004

Federal Policy Barriers to Assistive Technology

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Letter of Transmittal

May 31, 2000

The President
The White House
Washington, DC 20500

Dear Mr. President:

On behalf of the National Council on Disability (NCD), I am pleased to submit NCD's *Federal Policy Barriers to Assistive Technology*, as required by the Assistive Technology Act of 1998 (P.L. 105-394), Title II, Section 202.

As the title implies, this report describes the barriers in federal assistive technology policy to increasing the availability of and access to assistive technology devices and assistive technology services for people with disabilities.

In the ideal climate, no person with a disability should be denied the opportunity to obtain assistive technology and transfer its inherent potential into viable, life-fulfilling endeavors. However, it is clear that the current patchwork of federal policies have barriers and gaps leaving many people with disabilities without the benefits of assistive technology. This report identifies four major barriers and makes 11 recommendations for reducing those barriers.

NCD calls on Congress to take a hard and fast look at what people with disabilities need to make assistive technology readily available. We hope that this report will show the way.

Sincerely,

Marca Bristo
Chairperson

(The same letter of transmittal was sent to the President Pro Tempore of the U.S. Senate and the Speaker of the U.S. House of Representatives.)

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Executive Summary

Citizens of all ages have come to increasingly rely on technology in every aspect of life: home, work, play, and community. For most people, technology makes life easier, broadens horizons, or for the young provides an earlier start to learning. For people with disabilities, however, technology changes the most ordinary of daily activities from impossible to possible. In an ideal climate, no person with a disability should be denied the opportunity to obtain assistive technology and transfer its inherent potential into viable, life-fulfilling endeavors.

Congress has long recognized its leadership role in providing assistive technology (AT). In response to a growing need for AT and the momentum of the disability rights movement, a myriad of federal laws and policies have been enacted, reauthorized, and amended to address the provision of assistive technology and accessible mainstream technology.

Congress recognized the existence of barriers and gaps in the current network of federal policy regarding assistive technology through the Assistive Technology Act of 1998 (P.L. 105-394). One of the three purposes of the Act is "to identify federal policies that facilitate payment for assistive technology devices and assistive technology services, to identify those federal policies that impede such payment, and to eliminate inappropriate barriers to such payment." Title II, Section 202 of the Act requires the National Council on Disability (NCD) to prepare a report "describing the barriers in federal assistive technology policy to increasing the availability of and access to assistive technology devices and assistive technology services for individuals with disabilities."

In the following section, NCD provides recommendations to address specific overarching policy barriers identified as a result of its extensive research. In the next section, NCD briefly describes the results of stakeholder surveys. The subsequent section—patterned after the policy areas identified by Congress in Title I of the Assistive Technology Act—provides an overview of the current status of federal assistive technology policy with specific attention to the areas of education, employment, health care, telecommunications and information technology, and alternative financing. The information in this section is organized for ease of use and ready access by federal agency administrators and program executives. A brief conclusion completes the document.

The report uses the term "assistive technology" as defined in the Assistive Technology Act to include "any item, piece of equipment or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities."

Overarching Barriers and Recommendations

NCD's research for this report included (a) a review of the professional literature; (b) a review of federal policies; (c) stakeholder surveys; and (d) a review and analysis of findings by Tech Watch. As a result of this research, NCD identified four major barriers and makes 11 recommendations for reducing barriers to assistive technology access for individuals with disabilities.

Barrier: Awareness and Expertise

Aggressive awareness initiatives are needed to educate individuals who could benefit from assistive technology, their families and friends, service providers, and the public about the assistive technology available today. Assistive technology expertise needs to be cultivated and expanded in pre-service preparation programs, consumer empowerment activities, and other training venues. Ensuring a cadre of expertise in assistive technology is somewhat akin to swimming upstream, given the incredible pace at which technology itself is changing. More and more individuals with disabilities and elders find themselves in need of assistive technology to remain independent and productive, yet access to expertise to assist in obtaining such technology is limited. While modest investments have been made in increasing the pool of individuals with assistive technology knowledge and skills, we continue to fall further and further behind the need.

A classic example of change in federal policy dramatizing the void of expertise can be seen with the new Individuals with Disabilities Education Act (IDEA) requirement for every individualized education program (IEP) team to "consider" the assistive technology needs of the student. It is impossible for an IEP team to "consider" assistive technology effectively when no team member is familiar with the range of AT available to address desired goals.

Recommendations:

1. The Department of Education and Department of Health and Human Services should ensure adequate support for assistive technology competency development within and across a variety of personnel preparation and training programs such as instructional technology, computer sciences, information sciences, special education, rehabilitation counseling, social work, medicine, nursing, and related services (occupational therapy, physical therapy, speech-language pathology, and audiology).

Training should provide awareness-level information for practitioners in all disciplines along with consumers and advocates. Training should also develop expertise-level competency in sufficient numbers of providers to meet growing consumer need.

Barrier: Accessible Product Development and Deployment

All technology products and services should be accessible to people with disabilities. Assistive technology must be thought of in the context of the full range of mainstream technology—information technology, educational technology, instructional technology, entertainment technology, medical technology, and so on. To the maximum extent possible, mainstream technology should be produced with accessibility built in, utilizing the principles of universal design. When it is not possible to build in accessibility, products should be compatible with assistive technology to allow access.

Currently, public dollars are being spent on technology for schools, community centers, libraries, and other public entities without clear policy guidance regarding accessibility. As a result, individuals with disabilities frequently find themselves unable to use the newly installed technology and the public agency is left scrambling trying to fix the access problem—usually at significant cost. In addition, in far too many instances, the public entity asks a “special” disability program, with already limited funding, to bear the cost of fixing the access problem. For example, some states and schools are requiring special education budgets to bear the costs of accessibility adaptations for educational technology rather than utilizing general educational technology dollars to provide access. This would be similar to requiring special education to fund the cost of an elevator when building a new school facility. Accessibility costs should be included in overall technology budgets, not shuffled off to special funding sources.

Recommendations:

2. Congress should extend the provisions of Section 508 to apply to any agency expenditure of federal dollars for electronic and information technology. When assistive technology, beyond built-in access features, is needed for accessibility, Congress should encourage the use of generic federal technology funding streams to purchase such “add-on” technology.

Access for persons with disabilities should be viewed as a standard benchmark for the use of federal funds for development and procurement of information and telecommunications technology. Just as agencies that receive federal funds are prohibited from discriminating on the basis of disability by Section 504 of the Rehabilitation Act, they should be prohibited from utilizing federal dollars to develop or procure technology that is inaccessible, as is required currently for federal agencies under Section 508. In addition, generic federal technology funding streams should be used to purchase assistive technologies necessary for accessibility. Agencies that administer federal dollars should require an assurance from all funding recipients that information and telecommunications technology developed or procured will meet accessibility standards and that the funding stream will be used to provide assistive technology needed for access.

Funding applications with inherent substantial technology usage should further require a specific description of the methodology used to deliver built-in access and should identify the proportion of funding that will be used to purchase assistive technologies. Examples of federal funding systems with inherent technology usage and application include a number of library funding streams, a number of educational technology funding streams, E-rate funding, 21st Century Community Learning Centers, and many others.

An example of the need for application of Section 508 requirements on expenditure of federal funds can be seen in the development of the "One-Stop" employment centers through the Workforce Investment Act. While the Americans with Disabilities Act (ADA) requires basic accessibility in programs such as One-Stop Centers, it does not clearly require that the information and telecommunications technologies so critical to One-Stop Center service be accessible. The ADA and Section 504 allow for other accommodations to be used to provide access, such as "a person will do the on-line job search for you." Federal policy intervention is needed to require *direct* access to information and telecommunication technologies integral to the core employment services offered by one-stop centers with access delivered by built-in features and assistive technology. Such policy should provide *standards* for technology access and could be added to the existing regulations governing One-Stop Centers. Many states have begun initiatives to address accessibility at the One-Stop Centers, but absent federal policy, such activities will be slow-moving and inconsistent nationally.

3. Congress should support the Access Board's role in delivering technical assistance and training to *federal* agencies implementing Section 508 and should establish a national resource center to provide technical assistance and training to support *state and local* application of Section 508 standards.

Federal training by the Access Board should be coordinated with the ongoing efforts of the General Services Administration's (GSA) Center for Information Technology Accommodation and the federal chief information officers. To help address state and local training, the Access Board could convene a state information technology (IT) access advisory committee to review federal Section 508 standards and the variety of state laws regarding IT access and to provide suggestions for achieving uniform IT accessibility in state and local programs. Membership on the committee should include core representation of the National Association of State Information Resource Executives, National Association of State Procurement Officers, Association of Tech Act Projects, and other state and local consumer and affected entity organizations. This advisory committee could suggest core services for state and local entities that should be provided by a national technical assistance center.

4. Congress should authorize GSA to develop testing protocols and mechanisms to evaluate, verify, and report on product adherence to Section 508 accessibility standards.

For consistent application of Section 508 accessibility standards, testing protocols and reports that verify product adherence to established standards are needed. Manufacturers and providers of devices and services, along with those procuring such devices and services, must be able to test and evaluate products for adherence to established benchmarks. Without testing protocols and verification mechanisms, it is likely that some entities will take independent action and will establish a system that meets their goals for procurement decision making, and others will dismiss adherence to standards until such a system is developed. Ether way, the result will be an inconsistent application in which quality, consumer-responsiveness, and cost-effectiveness are compromised.

5. Congress should expand the copyright exemption to eliminate consent requirements for reproducing any audiovisual material for the purpose of adding accessibility through captions, video description, or other technologies that provide access for persons with disabilities.

In 1996, Congress eliminated the need to obtain the permission of publishers or copyright owners to reproduce or distribute a nondramatic literary work in a “specialized format” for the exclusive use of blind persons or others with physical disabilities. Entities authorized to use this copyright exception are nonprofit organizations or governmental agencies whose primary mission is to provide specialized services related to the training, education, adaptive reading, or information access needs of people who are blind or other people with disabilities. “Specialized formats” specifically includes braille, audio, or digital text exclusively for use by people who are blind or other people with disabilities. Unfortunately, there is no similar exemption from the copyright requirements for adding captioning or video description, and as a result it is very burdensome to do so. Often, obtaining such permission can take upwards of six months, eliminating entirely the benefits of such materials for educators and students during a given learning period.

Barrier: Comprehensive and Coordinated Funding

Existing laws and policies that fund assistive technology have gaps that fail to address the needs of many individuals with disabilities. In addition, the laws and policies are frequently misinterpreted or implemented inappropriately by those charged with service delivery and oversight. Federal agencies and others that implement federal policy (such as states and local agencies) commonly lack the expertise and resources necessary to implement existing AT laws and policies.

Laws and policies that provide or fund assistive technology must be more comprehensive, more consumer-responsive, better coordinated, and more consistent across agencies and systems to allow for increased access. Today’s policies are a maze of conflicting definitions, eligibility criteria, philosophical models, and requirements for access to assistive technology. Consumers are left with the daunting task of learning each system’s policies to be able to advocate for the assistive technology they need. Federal policy should be comprehensive, coordinated, and consistently implemented at the state and local levels to ensure equitable delivery of AT to all individuals with disabilities who are eligible for services.

Recommendations:

6. Congress should support a network and infrastructure of state assistive technology programs designed to improve and expand state assistive technology policy.

Access to technical assistance and policy advocacy from a state assistive technology program can be effective tools in helping consumers navigate complex federal-state policies and in reducing frustration-driven litigation. Such technical assistance and policy advocacy are also critical to develop the coordination and resources necessary for a comprehensive AT system. State assistive technology programs should work with state agency staff, elected officials, and other critical decision makers to expand state resources and fill in gaps not addressed by federal programs. State assistive technology programs should advocate for the development and implementation of state policies that support and compliment federal policy.

7. Congress should ensure that the Health Care Financing Administration (HCFA) revises the Medicare and Medicaid definitions and description of "medical care," "medical necessity," and "durable medical equipment" to broaden the range of assistive technology provided.

The current definitions of durable medical care, medical equipment, and medical necessity were enacted in the 1960s, when medical care was viewed primarily as curative and palliative, with little or no consideration given to increasing an individual's functional status. This bias often severely restricts funding of assistive technology that improves function or helps prevent secondary disabilities. For example, Medicare does not routinely fund shower chairs that are necessary for an individual with a disability to bathe safely and independently, hearing aids necessary for an individual to communicate effectively with his or her physician, or electronic enlarging equipment necessary for a person to read prescription labels and follow diet directions specific to a disease.

New definitions of medical care and medical necessity could use the model found in workers compensation statutes that provide for increased functioning. A new definition and description of “durable medical equipment” could either add assistive technology not currently included in the definition or could add AT as a separate category that must be provided if it increases, maintains, or improves functional capacity. These changes would pave the way for comprehensive coverage of assistive technology, such as hearing aids, power mobility, and augmentative communication devices, critical to the health, well-being, and independence of individuals with disabilities. These changes would also affect private insurance plans, as many defer to Medicare definitions in the interpretation of their covered services, and would be one method of driving changes in private insurance without intrusive regulation.

Recognizing that differing technological inputs can yield different types and degrees of functional improvement, it is critical that HCFA work collaboratively with the Agency for Healthcare Research and Quality, in relation to the recommendations below, to develop standards and measures to ensure that the most effective and the most cost-effective AT interventions will be deemed eligible for coverage and reimbursement.

8. Congress should ensure access to basic telephone service to individuals who cannot utilize a traditional telephone due to disability.

Telephone access is fundamental to the safety and well-being of all Americans. For individuals with disabilities who need adaptive telephone equipment, there is currently no system with responsibility to ensure access to such equipment. According to Jim Tobias, Inclusive Technologies (1999), approximately half the states in the nation have programs to distribute telecommunications equipment to people with disabilities. They range from small, means-tested, TTY-only programs to large, entitlement-based programs carrying a wide variety of adaptive telecommunications devices. Unfortunately, the availability of an equipment distribution program, eligibility requirements, and the level of program benefits are quite variable depending on the state or local telephone company that operates the program. A consumer's ultimate ability to access and benefit from an equipment distribution program may be restricted by the mere fact the consumer resides in a state, county, city, town, or street in which a program is not offered.

As a foundation for legislation to support access to adaptive telephone equipment for all Americans, a study could be undertaken on the current status of the myriad of state adaptive telephone equipment distribution programs, including identification of the program content and benefits, eligibility criteria, geographic saturation, and funding mechanisms. The study should be conducted in concert with members of the Telecommunications Equipment Distribution Program Association (TEDPA), telecommunications industry personnel, and state and federal officials. Recommendations for a consistent national policy, identified funding sources, and funding mechanisms needed to ensure the availability and support of universal access could then be developed.

9. Congress should fund Title III of the Assistive Technology Act of 1998 to establish low-interest or no-interest loan programs to purchase assistive technology.

Currently, some tax incentives exist (e.g., Disabled Access Credit, Architectural and Transportation Barrier Removal Deduction) to make AT more affordable to persons with disabilities and to businesses that need to make expenditures on AT to become more accessible to employees and members of the public with disabilities. In a number of states, AT projects are working to implement state tax incentives such as removing state sales tax on many devices and pieces of equipment. For high-cost AT, the savings to an individual with a disability can amount to hundreds of dollars. Yet the initial purchase costs of AT devices, equipment, and services are beyond the financial reach of many individuals with disabilities. The availability of low-interest or even no-interest loans to people with disabilities through Title III would significantly increase the availability of a whole host of AT devices, equipment, and services to people who currently have little or no access to AT.

Barrier: Research, Development, and Technology Transfer

Research and development should be sufficient to ensure that a full range of mainstream and specialized technology is available. Federal dollars currently devoted to research and development of assistive technologies and technology transfer are fairly limited and fragmented among multiple federal agencies. Insufficient dollars in mainstream technology research and development are focused on access features (universal design) and compatibility with assistive technology. Frequently, when new assistive technologies become available they are priced far beyond the range of most individuals with disabilities or elders. Similarly, when mainstream products are produced with access features, they tend to be the “deluxe” models, which are not affordable. In addition, new assistive technologies, with high costs, are frequently not covered by public and private funding sources.

Recommendations:

10. Congress should ensure that the Agency for Healthcare Research and Quality undertakes a study on the role of assistive technology in improving the functional abilities of persons with disabilities.

The growth of managed care has contributed to the development of measures of quality health care delivery for public and private providers; however, few measures have been developed to address health care delivered to persons with disabilities. There is a need to develop and implement quality assurance in managed care for persons with disabilities, with particular attention focused on assistive technology. Congress recently passed legislation that changed the mission and the name of the Agency for Health Care Policy Research. The bill directs the new Agency for Healthcare Research and Quality to study preventive and long-term health care and to focus on services for several groups, including persons with disabilities and the elderly. Part of this new focus should include attention to assistive technology delivered via the health care system.

11. Congress should undertake a focused study of the technology research and development activities of the Department of Defense, National Institute for Standards and Technology, Department of Commerce, National Science Foundation, federal laboratories, National Institutes of Health, Department of Veterans Affairs, and National Institute on Aging to identify projects that should be initiated to develop universally accessible products and to apply existing research to meet the needs of individuals with disabilities through development and commercialization of assistive technologies.

AT is in a constant state of change and evolution because it is, after all, technology. That means that new information, proven practices, and AT policy should be well coordinated, communicated, and accurately transferred among government agencies, industry, and consumers. Technology transfer involves the transmittal of developed ideas, products, and techniques from a research environment (i.e., hosted by many of the federal agencies listed above) to one of practical application by consumers. Many government agencies have programs that are designed to facilitate technology transfer. There is, however, no well-organized mechanism for the development, identification, and distribution of research findings and products by federal agencies to those providing AT services or to industrial partners or consumers. If the nation is to increase its public sector investment in, and reliance on, technology to provide government services and resources, the above named federal agencies must improve their delivery of cutting edge research results and proven products.

Introduction

As we begin the millennium, citizens of all ages have come to rely increasingly on technology in every aspect of life: home, work, play, and community. For most people, technology makes life easier, broadens horizons, or for the young provides an earlier start to learning. However, for people with disabilities, technology changes the most ordinary of daily activities from impossible to possible. In an ideal climate, no person with a disability should be denied the opportunity to obtain assistive technology and transfer its inherent potential into viable, life-fulfilling endeavor.

Congress has long recognized its leadership role in providing assistive technology (AT). In response to a growing need for AT, and the momentum of the disability rights movement, a myriad of federal laws and policies have been enacted, reauthorized, and amended to address the provision of assistive technology and accessible mainstream technology. Examples of such laws and policies include the Rehabilitation Act, Workforce Investment Act, Individuals with Disabilities Education Act (IDEA), Medicaid, Medicare, the Telecommunications Act, and the Assistive Technology Act. In addition, appropriation bills are passed each year with billions of federal dollars directed toward technology research and development with a small portion addressing assistive technology and accessibility of mainstream technology.

Congress recognized the existence of barriers and gaps in the current network of federal policy regarding assistive technology through the Assistive Technology Act of 1998 (P.L. 105-394). One of the three purposes of the Assistive Technology Act is “to identify federal policies that facilitate payment for assistive technology devices and assistive technology services, to identify those federal policies that impede such payment, and to eliminate inappropriate barriers to such payment.” Title II, Section 202 of the Assistive Technology Act requires the National Council on Disability (NCD) to prepare a report “describing the barriers in federal assistive technology policy to increasing the availability of and access to assistive technology devices and assistive technology services for individuals with disabilities.”

Stakeholder Validation

As a part of this report, a survey of consumers, providers, and experts was completed to ensure that the recommendations of this report were based on the actual 1999 experiences of stakeholders who deal with these issues every day. Due to the extremely short time frame of two months, this unscientific survey was done via e-mail and fax. The responses validate the conclusions that the overarching barriers that continue to limit access to AT are lack of awareness, lack of access to expertise, and lack of funding.

Local or even regional eye care professionals have little or no information about Assistive devices beyond magnifiers. I have spent years going to conferences to find out information on my own because there was no one to help me. Accessibility is a fantasy to those of us who desperately need it. We read about, it but cannot possibly afford it on Social Security Disability Insurance. Are we supposed to sit in our chairs all day and listen to talking books until we die? I am only 50. I do not fit in any category except the 'left out.' Charla McMillan, Red Oak, OK

Consumer Survey

The goal of the survey of AT users was to discover what barriers most frequently prevent access to necessary AT and how people have dealt with those barriers. The survey was distributed to 2,000-plus users of AT through various stakeholder networks. Responses were received from parents of children with disabilities; center for independent living participants; individuals with disabilities; membership of organizations of individuals who are deaf and hard of hearing, blind, or veterans; and people with brain injury. There was wide geographical representation. Consumer responses were returned from Puerto Rico and 47 states. Provider responses were received from the state special education director in Wyoming and the state Medicaid director in Arkansas.

A special effort was made to include those over 65 years of age, minorities, and traditionally underserved populations. The responses were consistent across all demographic and geographic groups. The barriers identified in the survey were faced by all the respondents, whether they were rural, inner-city, over 65, African American, Hispanic, low-income, or members of other minority groups. These barriers were also identified no matter whether the respondent's disability was cognitive, sensory, or physical. Wide cross-disability response was received.

The two biggest barriers identified by consumers were lack of information and knowledge about appropriate AT, and lack of funding to purchase the needed AT. Consistently, those who responded to the survey do not have information on what AT is available, where to get it, who pays for it, where to get an evaluation, or what their rights are.   Overwhelmingly, respondents said they do not have the money to purchase AT—either they did not have the out-of-pocket cash, their insurance companies did not cover it at all or denied their claims, or no public funding available was available.

Other common themes were the lack of trained, qualified professionals to evaluate what AT was appropriate; the difficulty finding and trying out AT; the red tape and bureaucracy of public programs and insurance companies; the difficulty of keeping pace with technology developments; the lack of maintenance and support; and the lack of access to AT in other areas, such as housing and transportation.

The cost of computer voice output software is outrageous. Many disabled people are low income and will never have the funds to obtain Assistive technology such as accessible computers. Tony Jorgensen, assistant manager, Training Department, Lighthouse for the Blind, Seattle, WA

I borrowed seven thousand dollars from a bank to get the most up-to-date equipment at home. I have continuously purchased equipment over the past five years. I spend about three thousand dollars a year on new equipment. I call it job retention expenses. Vincent Martin, Atlanta, GA

For many people with present or increasing hearing loss, shame is a huge barrier to getting or using assistive listening devices. Patricia Schmieg, Boston, MA

I went to Vocational Rehabilitation for a job but eventually had to quit because my hearing was so poor that interpreting was impossible. The other jobs that were offered were low paying and not in the least interesting to me. Even the VR counselor did not understand hearing loss and how it impacts your chances of finding employment. She [the VR counselor] wanted me to work as a phone person for the Social Security Office. The SS Office said that a TTY would not be the ideal way of communicating with clients. I dread going back to VR. Claudia Damian, Dearborn, MI

These barriers most often translate into poor quality of life for people who need the assistive technology they cannot get. A significant number of the respondents said these barriers meant they went without the AT, and a significant number said they had to pay out of pocket. These results have serious consequences. Going without necessary AT can lead to a medical emergency, loss of job, poor education, and isolation from community activities. Paying for AT out of pocket is a difficult reality for people with disabilities. Seventy percent of people with disabilities are unemployed and so do not have an income or savings to purchase AT. The high cost of some assistive technology devices can also be prohibitive for people who are employed. Purchase of AT can mean going without something else or paying off loans for a number of years. This can be especially hard on families as siblings might have to go without in order to cover the expenses of the chid with the disability.

I had to be dependent on someone. Sometimes you would get caught in the bed rails and get bruised. Debbie Michel, Park Hills, MO

As a result of the lack of assistive listening devices at two different theaters, *I left the auditorium in one situation, and in the other situation struggled through the play with about a 35 percent understanding of what was happening. I picked up on body language, a few words, laughed when appropriate and generally faked it. It is a social necessity to attend things like this with my wife, even though I can't enjoy it the way she does.* James Horn, Toms River, NJ

I lost a job because of no adequate hearing accommodations. Mary Martin, New Orleans, LA

The results of this survey clearly show that the current system places the burden on the individuals or families who need AT. They have to find out what is out there, navigate the system and funding streams, and know their rights and fight for them. The few success stories that were found in the results were successes only after the parents or individuals became experts at the law and government procedures, spent months fighting the many systems, went through a legal battle, or lobbied legislators. For many, the battle does not seem worth the reward.

I find I've given up fighting for bare necessities. The battle isn't worth it and it makes me suffer.
Lynda Brown, Cortland, NY

Provider Survey

Surveys were also sent to directors of agencies that provide assistive technology, policy experts, and agencies that help people with disabilities to obtain AT. Responses were received from centers for independent living, the National Association of Protection and Advocacy Services, state special education directors, state Medicaid directors, state information executives, and members of the Consortium of Citizens with Disabilities. They were all asked what strategies they had used to deal with barriers in the AT system and what two policy changes would they ask for to improve the federal AT delivery system if they were granted two "wishes." Medicaid directors were asked additional questions specific to their field. The response from Auburn Cooper, the director of the Bureau for Medical Services, was to the point:

> *"Send Money. Send More Money."*

Just as in the assistive technology user surveys, funding was a priority issue for the providers and policy experts. All noted lack of adequate resources as a problem. Staff at centers for independent living asked for more funding for direct purchase of AT. The state program directors asked for more money to fund more fully AT services they provide.

Gordon Riffel, special assistant to the superintendent for special education, Springfield, IL, described his two “wishes”:

1. Most people agree that finding the appropriate equipment is crucial to the successful utilization of a specific piece of assistive technology. Once a general area of need has been recognized and several devices are recommended for consideration, each recipient needs time to use the device to see if it works for them. Therefore, my first wish would be to have Uncle Sam provide funding to establish a statewide loan network that could provide 30-, 60-, or 90-day loans to determine the practicality of a device in the environments in which it will be used. The bank could be maintained with rental fees based on the cost of the equipment.

2. The second wish would be to have Uncle Sam establish a “statewide warehouse of assistive technology” (SWAT). This warehouse would allow the equipment that was tried on a loan basis to stay with the student user if the device proves itself to be appropriate for the student’s needs. Keeping the device that works would eliminate long delays in acquiring the device and not require reprogramming. The learning curve for the student, teacher, parents, and others involved in the child’s education would not be interrupted. The district could then pay the SWAT for the device (already in use by the student) and SWAT could purchase a new device for the warehouse, hopefully at a negotiated volume-buying discount.

The results of the survey also highlighted inconsistencies among the states. For example, answers to the questions on Medicaid coverage of AT demonstrated the variance among states.

The Current Landscape of Assistive Technology Policy

Why does the vision of readily available AT for all Americans with disabilities still seem so elusive? The challenges identified in the findings of NCD's 1993 report on financing assistive technology have not been vanquished. Why not? The factors are varied and many. The number of AT users has increased, and there has been an explosion in the sophistication and variety of devices, many of which are more high tech and costlier than ever. It is difficult to find assistive technology expertise and to see and try out devices. Federal policies that govern systems providing AT, such as IDEA, the Rehabilitation Act, Medicaid, and Medicare, have limited funding, are poorly coordinated, and have been inconsistently implemented at the state and local levels.

Efforts to improve access to assistive technology are akin to chasing a moving target. For example, just as inroads were made in ensuring AT coverage in health care plans, the health care industry underwent a fundamental change from fee-for-service to managed care, and work began anew to ensure access to AT in managed care plans. Even when federal policy is stable, the vast majority of federal programs are implemented at the state level with a corresponding myriad of state policies. As a result, AT access barriers continue to be created and removed at the state level, even when federal policy is unchanged.

People with disabilities, providers, advocates, and policy makers are faced with a need to become knowledgeable about assistive technology and the maze of assistive technology policies and procedures that govern funding. Each federal funding system varies in its policies and procedures and further varies with state-level implementation parameters. Assistive technology that is "medically necessary" for a person under age 21 is suddenly no longer "medically necessary" when the person turns 21. Assistive technology that is considered medical restoration can be funded if necessary for employment, but not if necessary for education. To navigate the AT policy maze, one must understand the AT portions of many different pieces of federal legislation.

In addition to policy information, consumers, advocates, providers, and policymakers must have or be able to readily access knowledge about the range of assistive technology available and how it can be used to address consumer needs. In many states and regions, expertise in specialized areas of assistive technology is in critically short supply. Pre-service preparation programs in education, health care, and other human service areas are simply not producing sufficient numbers of personnel with AT knowledge to minimally meet needs. Similarly, consumers and students themselves are faced with the enormous task of trying to stay current in a technology area that is undergoing unprecedented change.

Recent reports (Mann 1994 and Tobias 1999) continue to illustrate that consumers with disabilities are not aware of currently available assistive technology that could address their functional limitations. Studies also show that persons with disabilities tend to rely on personal interactions with families, friends, and service providers to obtain information about devices and services. Not surprisingly, consumers and providers identify the ability to touch, feel, and try out devices in a comfortable environment as an effective way of enhancing their ability to select a device that will work for them.

Over a 10-year period, state assistive technology programs funded under the Assistive Technology Act (formerly the Tech Act) committed more than $32 million to partnerships with local community-based organizations—such as independent living centers, United Cerebral Palsy affiliates, Easter Seals chapters, and aging organizations—for the establishment of community-based resources with assistive technology expertise and the capacity to provide equipment demonstration. These resources respond to the needs of persons with disabilities to get information in their communities. In addition, a handful of states have allocated state dollars to support statewide short-term equipment loan programs operated through community distribution points. Some state education agencies have also used IDEA discretionary dollars to fund statewide training and technical assistance centers devoted to special education technology for students with disabilities. Many of these state special education technology programs include short-term equipment loan programs, and some provide volume buying agreements and/or long-term loan of certain devices.

Existing resources can respond only to a limited range of such training and technical assistance needs. While national Internet sites, training centers, and other technical assistance programs perform needed functions, they cannot stay abreast of the state and local policies that drive AT access at a consumer level. In addition, underserved groups frequently do not use national sources. One commonality noted among many underserved groups—such as elders, low income people, migrants, and persons who live in rural areas—is that they get their information from their peers and "trusted" providers. As a result, technical assistance, consumer support, and policy coordination must be done at state and local levels to supplement any federal initiatives.

Sometimes assistive technology is not yet available to meet the needs of a specific functional limitation. When new assistive technology is needed, limited resources are available to support such development. Technology transfer is the transmittal of developed ideas, products, and techniques from a research environment to one of practical application. Many government agencies have programs that are designed to facilitate technology transfer and thus increase access to assistive technology and accessible mainstream technology. There is, however, no well-organized mechanism for distribution of research findings to those providing services or industrial partners. In addition, the limited profit associated with products in the AT market frequently makes transfer less attractive to traditional industry investors.

Assistive Technology Policy in Education

...commitment to free quality education for all has been a bedrock principle of our nation. The Internet, in time, will be the blackboard of the future. Knowledge of technology is increasingly essential for life and work. ***How can we allow some children to have access and leave others out?***

—Secretary of Education Richard W. Riley, 1997 (emphasis added)

Educational services for students with disabilities have changed dramatically over the past 10 years. Technology for all students and assistive technology for students with disabilities has become more commonplace in schools across the country. Federal policy regarding school obligation to deliver assistive technology has also changed dramatically in the past decade. Special education law has required the provision of assistive technology if needed as part of a "free appropriate public education" (FAPE) for more than 10 years. In 1990, amendments to IDEA included broad definitions of assistive technology devices and services and a specific requirement for schools to provide AT if needed for FAPE as part of special education, related services, or supplementary aids and services. The 1997 reauthorization of IDEA added a requirement that each individualized education program (IEP) team consider AT as one of a number of "special factor considerations."

As the technology has become more complex, so have the policy dilemmas. The recent U.S. Supreme Court decision in *Cedar Rapids Community School District v. Garret F*. has yet to be clearly interpreted in its application to assistive technology determinations of "medical" versus "educational." Schools continue to communicate confusion regarding their responsibility to provide life-sustaining technology such as respirators and suctioning equipment even after *Garret F*. They also express concern about their obligation to provide assistive technology such as wheelchairs, hearing aids, and eyeglasses when other funding sources (such as Medicaid and private insurance) are not available or refuse to pay for such devices. Policy conflicts continue to exist that increase confusion as illustrated by the IDEA Part C and Medicaid policies for order of payers. Federal regulations stipulate that Part C dollars can only be used after Medicaid dollars that can only be used after private insurance dollars. However, Part C also prohibits requiring the use of private insurance dollars; thus, one of the policies must be violated to get both Medicaid and IDEA funding for early intervention services.

With the new IDEA special factor requirement, every IEP team must consider the assistive technology needs of every student. This new federal mandate has created a policy development and implementation need in every state and local school district. Using IDEA child count information, IEP teams will need to "consider" the assistive technology needs of 5.6 million students each year. This consideration and documentation through the IEP process will be repeated annually for every student, resulting in a minimum of 5.6 million assistive technology considerations per year.

Billions of dollars are being expended on technology for schools, with the promise of every school being wired and every student having a computer. Computer usage for instruction and learning is found today in most every type of program, at every grade level, in every school across the country. From 1997 to 1998, the number of instructional classrooms with Internet access increased from 27 percent to 51 percent (Digest of Educational Statistics, 1998). If that rate of growth continues, almost all classrooms will have Internet access in the next few years.

Unfortunately, the rapid acquisition of educational technology has not sufficiently addressed the needs of students with disabilities. Access for students with disabilities is just beginning to be identified as an important factor when purchasing educational technology. Barriers to the use of advanced telecommunications for students with disabilities in public schools include special education teachers not sufficiently trained to use equipment; insufficient evaluation and support services to meet special technology needs; too few computers with alternative input-output devices; too few computers available to students with disabilities; and school administrators not seeing telecommunications as relevant for many students with disabilities (National Center for Education Statistics, 2000).

There currently are no federal policies or standards regarding accessibility of educational media and materials, and limited resources have been devoted to promoting the concept of universally designed curricula and educational assessment materials. A few states have begun to address the issue. For example, Texas requires textbook publishers who sell to Texas elementary and secondary schools to provide a standardized electronic version of the text for accessibility purposes (e.g., expedient braille production). Missouri recently passed legislation that requires elementary, secondary, and postsecondary schools to procure educational materials from publishers who will provide standardized electronic text. New California legislation requires publishers to provide their products in electronic format for students with disabilities attending state and community colleges in California. In support of these efforts, the American Printing House for the Blind is establishing a central repository of electronic textbooks that will make such files available to schools throughout the country.

Assistive Technology Policy in Employment

Increased access to health care, more assistance at home and in the workplace, remarkable new technologies made more available: This is how we can make sure that all Americans can take their rightful place in our 21st century workplaces.

—President Bill Clinton, 1999

Unfortunately, the unemployment rate for Americans with disabilities remains unchanged from more than a decade ago. It is similarly safe to say that there have been only small strides in the use of assistive technology in the workplace as a tool to level the playing field between workers with disabilities and those without.

For workers with disabilities from diverse backgrounds, this is also particularly true. While there is evidence that AT can improve prospects for successful employment outcomes, and some attention has been devoted to cultural sensitivity involving the families of children with special needs, little has been published about the utilization of such services by American Indians/Alaskan Natives. Current anecdotal evidence suggests that AT utilization rates are lower on American Indian reservations than in urban areas, and that significant barriers include lack of knowledge of cultural issues by providers of AT services and lack of knowledge about AT services by the consumers who need them. Another barrier is that ADA is not binding on Indian reservations because of their sovereign status.

People with disabilities want to work but often encounter barriers such as trying to secure health insurance when they leave the public health care system and enter the workforce. For many individuals with disabilities, the decision of whether to choose employment or health care does not take much in the way of deliberation: Health care is often the more critically needed service, especially for individuals whose disabilities include expensive technology needs. However, this fact does not negate the desire for employment. It is just not an option given the limited choice between having health care or having a paycheck and no access to affordable health insurance.

The new Work Incentives Improvement Act builds on the changes in the Balanced Budget Act of 1997. These initiatives have the potential to improve health care options for persons with disabilities wishing to return to work. However, depending on the assistive technology needs of the individual and the state in which one lives, the measures may be limited in improving access to AT.

The legislation creates new options for states to allow working-age adults with disabilities to “buy into” Medicaid coverage if they leave the Supplemental Security Income program to return to work. States will first have to choose to expand this option for Medicaid coverage for the “working disabled.” In addition, Medicaid coverage of AT varies from state to state, in large part as a result of differences in “durable medical equipment” definitions and provision of other optional services that can include AT. As a result, state decision to allow Medicaid buy-in may not result in improved access to AT needed by individuals who wish to enter or return to the workforce.

Similar issues exist with respect to the Health Insurance Portability and Accountability Act of 1996. One aim of the Act was to assist persons with disabilities who wished to move from one job to another, but who would lose health insurance coverage because of a preexisting condition. Because of the limited AT coverage commonly offered in employer health plans and the ability of insurers to charge unaffordable premiums, the law has had very limited effect on increasing AT access by potential workers with disabilities.

For those individuals eligible for services through the Vocational Rehabilitation program, the Rehabilitation Act has excellent provisions for the inclusion of assistive technology in all facets of the rehabilitation process, from evaluation through placement in employment. The only limitations to these provisions are the limits of funding for vocational rehabilitation and implementation difficulties related to these provisions, such as insufficient staff expertise with assistive technology and lack of service providers with this expertise.

However, the larger employment program implemented through the new Workforce Investment Act appears to be poorly understood in reference to service access for individuals with disabilities. The one-stop employment centers created by the Workforce Investment Act may not be providing services that are accessible to or meet the needs of people with disabilities. It is unclear to what extent Vocational Rehabilitation programs are responsible for ensuring that the services at the One-Stop Centers are fully accessible and appropriate for individuals with disabilities through direct resource deployment at the centers or through other supports.

Assistive Technology Policy in Health Care

As policy makers, I think it's our obligation to [dream things that never were and ask why not?]. To not only consider the problems facing our states—and our nation—but to offer a vision of what could be. A vision of America where every child has the chance to grow up in good health. A vision of America where older and disabled people live their lives to the fullest. In short, a vision of America where every family is able to move ahead and where no one is left behind."

—Health and Human Services Secretary Donna Shalala, 1999

For persons with disabilities, health care coverage of assistive technology remains an enigma. Public and private health insurance programs pay for hundreds of pieces of medically necessary assistive technology. Yet persons with disabilities find that health care coverage does not provide access to hundreds of other devices that improve or maintain functional abilities for rehabilitation and that enhance productivity and independence.

The two primary public health insurance programs are Medicaid and Medicare. The Medicaid program was created by Title XIX of the Social Security Act in 1965 in order to provide medical assistance to individuals in financial need. States implement the Medicaid program and receive matching funds from the Federal Government. The statute mandates that certain categories of services must be provided, while a state can choose whether to provide other categories.

As a result, state programs vary greatly with respect to the optional services provided. Assistive technology may be covered to varying degrees depending on the categories of services a state chooses to provide, such as durable medical equipment, prosthetic devices, or, as with an augmentative communication device, speech services. In some states, children up to age 21 will have access to a wider range of AT thanks to the mandatory Early Periodic Screening, Diagnosis, and Treatment (EPSDT) service requirement. For those older than 21, the available benefits covering AT may be much more restrictive, with some states not covering even traditional durable medical equipment for adults. There can also be vast differences among states as to what types of devices and equipment are covered within a service category, and under what circumstances.

In 1998, the Health Care Financing Administration (HCFA) aided recipients' efforts to obtain access to needed assistive devices though a policy directive to state Medicaid programs. The directive prohibited state Medicaid agencies from—

- Requiring equipment to be on a state's "exclusive list" of covered equipment in order to be provided.
- Denying coverage if the equipment was not on the exclusive list unless the claimant could show the equipment was needed by the "Medicaid population as a whole," not just recipients with disabilities.

While this policy directive prevents some states from further narrowing Medicaid access to assistive technology, the issue vividly demonstrates the inconsistencies in coverage of assistive technology among states.

The Medicare program, created by Title XVIII of the Social Security Act, is a federal health insurance program created for persons over the age of 65. Individuals who have been disabled for 24 months are also eligible for Medicare. Part B of Medicare provides coverage for durable medical equipment. Part B is optional and requires a monthly payment by the individual.

Medicare coverage of assistive technology reflects the acute care bias that existed when the program was established in 1965. Assistive technology that does not meet narrow definitions of durable medical equipment or a prosthesis is generally considered to be a “comfort” or “convenience” item. Items falling outside those definitions are not covered, even when they are connected to the health or safety needs of the individual. As the largest payer for durable medical equipment, Medicare’s standards are commonly followed for coverage of assistive technology in private health insurance.

Private health insurance plans and employer-based health benefits plans can be another source of payment for health related assistive technology. Health insurance plans provided through insurance companies are subject to state insurance laws. However, the U.S. Supreme Court has held that employers with self-insured health plans are exempt from treatment as insurance companies and thus not regulated by state insurance law (see *FMC Corporation v. Holliday*, 498 U.S. 52 (1990)). Self-insured plans are, however, covered by the Employee Retirement Income Security Act of 1974 (ERISA). ERISA regulates the administration of employee benefit plans, which include health plans. ERISA does not mandate that an employer provide health benefit plans, and if an employer does provide a plan, it does not mandate that the employer provide particular benefits.

People with disabilities continue to identify lack of access to health insurance as an obstacle to obtaining assistive technology. About 15 percent of people with disabilities of working age lack any health insurance (96 NCD Report/ McNeil 1993). Even though the implementation of the Children’s Health Insurance Program has enrolled over 1 million children, there remain over 10 million uninsured children in the United States.

Private health insurance, in addition to commonly using narrow coverage standards where assistive technology is concerned, frequently imposes modest dollar caps on coverage of durable medical equipment. Thus, some of the assistive technology that can contribute most to independence and to restoration or maintenance of functional abilities is not covered.

Assistive Technology Policy in Telecommunications and Information Technology

The new digital economy is dramatically changing our world. This New Economy is being defined principally by its power to unlock the potential of markets, to transform retailing and to create unimaginable wealth for a privileged few in our society. I believe that the New Economy must be defined, first and foremost, by its power to unlock the potential of all of our people, by its power to educate our poorest children, to empower people with disabilities, to lift up people in rural and inner city communities and to repair and revitalize the social fabric of our communities.

—FCC Chairman William E. Kennard, 1999

Americans rely on telecommunications every day for routine activities such as making doctor appointments, communicating with family and friends, participating in conference calls at work, checking bank balances, and purchasing products or services. Telecommunications are also relied upon for basic safety, making emergency calls, learning of severe weather, and understanding actions to take in civil emergencies. All of these telecommunications functions are of equal or greater importance to persons with disabilities.

According to the 1999 National Telecommunications and Information Administration (NTIA) report *Falling Through the Net: Defining the Digital Divide*, although more Americans than ever have access to information tools such as the personal computer and the Internet, there is still a significant “digital divide” separating American information “haves” and “have nots.” The digital divide persists between the information rich (such as whites, Asians/Pacific Islanders, those with higher incomes, the more highly educated, and dual-parent households) and the information poor (such as those who are younger, those with lower incomes and education levels, certain minorities, and those in rural areas or central cities).

The U.S. Department of Commerce Census Bureau data from 1998 (Chart I-22) reveal significant disparities, including the following:

- Whites are more likely to have access to the Internet from home than blacks or Hispanics have from any location.
- Black and Hispanic households are approximately one-third as likely to have home Internet access as households of Asian/Pacific Islander descent, and roughly two-fifths as likely as white households.
- Regardless of income level, Americans living in rural areas are lagging behind in Internet access. Indeed, at the lowest income levels, those in urban areas are more than twice as likely to have Internet access as those earning the same income in rural areas.

Several federal efforts aimed at bridging the digital divide have, unintentionally, resulted in the continuation and development of barriers for people with disabilities. The support and implementation of such shortsighted initiatives are not isolated circumstances, confined to one federal agency and easily ameliorated by a single focused intervention.

For example, the U.S. Department of Education's Community Technology Centers are designed to bring computers and the Internet, with all its related information, to community centers, public housing, libraries, and other community locations to reach those excluded from the digital age. Under the Community Technology Centers initiative, $9.9 million was awarded in 40 grants to organizations to help people who do not have computers at home access computers for learning. In a quick sampling of the awardees, those contacted were not aware of the computer access needs of people with disabilities and had made no plans in the application for providing input or output adaptations so people with disabilities could utilize their offerings. Both the 1998 census data and the NTIA report *Falling Through the Net* emphasize the value of these community centers in schools, libraries, and other public access points in providing computer access for groups who lack access at home or at work. However, if persons with disabilities cannot use the computers, they will not help to bridge the digital divide at all.

In another example, the U.S. Department of Commerce Telecommunications and Information Infrastructure Assistance Program (TIIAP) has to date awarded more than 421 grants, in all 50 states, the District of Columbia, and the U.S. Virgin Islands, totaling $135. 8 million, to support community infrastructure development for information technology access. One expected outcome of these grants is to expand access and opportunity for all Americans, particularly the underserved in communities across the nation, to use and benefit from information technology. Many of the awards have been conferred upon communities, schools, libraries, state governments, and community-based organizations. As one of the TIIAP program goals, applicants are clearly expected to implement efforts to "reduce disparities." Applications are reviewed regarding their efforts and abilities to target underserved communities or underserved groups within a broader community. While a few of the TIIAP-funded programs have targeted their programs to ensure access and benefit persons with disabilities as a special initiative, the majority of the awardees using the grant program to establish community access centers or services have not considered the needs of persons with disabilities as a standard principle for expenditure of federal funds.

Another example of a lost opportunity to ensure access is the infusion of funds through the Federal Communications Commission (FCC) E-Rate Discount Program. Many schools and libraries have benefitted from this resource. Access for students, teachers, and school administrators with disabilities and community members that access the schools and local libraries is considered only when self-initiated. Unfortunately, FCC has been silent regarding its expectations or delineation of clear requirements of applicants to ensure access for people with disabilities.

As telecommunications and information technology access becomes a priority issue for all Americans, the many federal agencies that support, monitor, and regulate such programs and distribute supportive federal dollars should ensure that their policies and programs do not unintentionally create new barriers for individuals with disabilities.

Two recent laws are positive steps in the effort to ensure telecommunications and information technology accessibility for people with disabilities. Section 255 of the Telecommunications Act of 1996 (P.L. 104-104) requires that telecommunications equipment and services be accessible where readily achievable. If direct access is not readily achievable, such equipment and services shall be compatible with existing peripheral devices or specialized customer premises equipment used to achieve access, again if such compatibility is readily achievable. The intent of Section 255 is to ensure that telecommunications manufacturers and service providers consider including access features during the design and production of their offerings to avoid needless development of new technologies with access barriers.

Section 508 of the Rehabilitation Act (Workforce Investment Act, P.L. 105-220) was substantially strengthened in 1998 in its requirement for accessibility in electronic and information technology. When federal departments or agencies develop, procure, maintain, or use electronic and information technology, they shall ensure that the information technology provides federal employees and members of the public who have disabilities comparable access to the information or data unless an undue burden is imposed. This requirement is very different from an individual civil right protection such as found under ADA. Section 508 requires accessibility of the information technology itself, rather than the delivery of individual accommodations, which might be assistive technology or might be other accommodation methods.

Section 508 applies directly to the Federal Government; however, the Assistive Technology Act of 1998 (preceded by the Technology-Related Assistance for Individuals with Disabilities Act of 1988, P.L. 100-407, as amended) requires states to provide assurance of compliance with Section 508 as a condition for receipt of federal funding under the Assistive Technology Act. Unfortunately, the Assistive Technology Act provides no direction regarding the scope of application at a state level, nor does it provide authority for rulemaking or standard setting at a federal level to provide such direction. In addition, at least six states have passed information technology access legislation and many more have structured policies or executive orders in place that direct their approach to ensuring information technology access. To date, there has been no clear effort to coordinate these state initiatives with federal proceedings.

Assistive Technology Policy in Alternative Financing

It is universally recognized that funding for AT is an ongoing challenge and is often the barrier that precludes or prevents individuals from acquiring the technology they require for work, school, recreation, and everyday life in the community. Micro-loans are an inclusive and dignified way to provide new opportunities and expand the options for individuals with disabilities.

—National Institute on Disability and Rehabilitative
Research Director Katherine Seelman, 1999

An abundance of potential alternatives exist that could help in reducing financial barriers to assistive technology access. Included among them are a range of avenues related to equipment and monetary loans, tax incentives, and equipment recycling. During the past 10 years, many of these alternatives have been developed to varying degrees, making some headway in increasing access to assistive technology.

We are, however, far from taking advantage of the innovative opportunities that can move us toward a world in which assistive technology is readily available to all individuals with disabilities. Implementation of many alternatives will require policy innovations at the federal level. For the mechanisms that already exist, a lack of information and supports hinders their use on a wider scale.

Existing assistive technology cash loan programs, frequently called micro-loans, have a demonstrated role in filling gaps in access in states where they exist. In 1999, a total of 29 cash loan programs were operating nationally. These programs vary widely in many aspects, such as lending terms, and in total loan fund capacity. Testimony provided in a 1998 public hearing on outcomes of state Tech Act projects cited the need for an adequate initial financial base as the most important element of a successful assistive technology loan program.

In another area, existing tax incentives help make assistive technology more affordable to persons with disabilities and enable businesses to become more accessible to employees and members of the public with disabilities. One of these incentives is the Disabled Access Credit (DAC). The Omnibus Budget Reconciliation Act of 1990 created this tax incentive to encourage small businesses to comply with ADA. DAC provides a credit for 50 percent of eligible expenses up to $5,000 a year. Assistive technology is key among the expenses to which the credit can be applied. Examples can include purchasing screen-reading software and a scanner for an employee who is blind; installing ramps for customers with mobility impairments; providing a TTY for employees and customers who are deaf; and providing visual fire alarms for employees who are deaf.

While the list of eligible assistive technology expenses goes on and on, the use of DAC is sorely limited by a lack of knowledge of its existence among small business owners. The Internal Revenue Service reports that for the 1997 tax year, small businesses claimed only $20.2 million in credits for incurring eligible expenses. Considering the tremendous number of small businesses in the United States, the $404,000 per state average of credits claimed illustrates DAC's underutilization. The same can be said of the Architectural and Transportation Barrier Removal Deduction, which may be claimed for expenses incurred for assistive technology purchases.

The personal income tax deductibility of medical expenses is another tax incentive that some individuals can use to offset out-of-pocket expenses for assistive technology. Among deductible medical expenses on federal returns are expenses for assistive technology used in making homes and vehicles accessible. For example, ramps, railings, grab bars, stairway lifts, visual alarms, hand controls, and wheelchair lifts for vehicles are all eligible medical expenses, as is the cost of brailling books or magazines for a person with a visual impairment. As with the business incentives, many persons with disabilities are unaware of some of the expenses that can be deducted from their individual income taxes.

A number of restrictions limit the benefit even to those persons with disabilities who are aware of some of the assistive technology-related equipment that can be claimed under the federal deduction for medical expenses. First, an individual can only deduct the amount of expenses that are more than 7.5 percent of adjusted gross income. In addition, for home modifications, the amount of the deduction must be reduced by any increase in the value of the home.

In a number of states, assistive technology projects are working to implement state tax incentives such as removing state sales tax on many devices and pieces of equipment or providing tax credits for out-of-pocket assistive technology expenditures. For high-cost assistive technology, the savings to an individual with a disability can amount to hundreds of dollars.

Individual development accounts (IDAs) are matched savings accounts designed to help low-income families accumulate funds to assist them in homeownership or improvement, job training, or other areas. Low-income individuals save monthly, and their savings are matched by funders such as financial institutions, nonprofit organizations, or state and local governments. The match is sometimes funded at greater than a one to one basis. IDAs are just beginning to be explored as a potential financing mechanism for assistive technology.

The market for recycled assistive technology, including durable medical equipment, is expanding at an accelerated pace. In recycled durable medical equipment alone, annual sales had reached $300 million in the United States by 1997. Estimates on the amount saved by consumers through the use of such programs are in the millions of dollars. A national study of recycling programs cited several key reasons for their growth:

- The growing number of persons who are elderly who benefit from durable medical equipment and other assistive technology to remain in their homes and communities.

- Cutbacks in federally funded programs that pay for assistive technology devices, resulting in the increased need for self-paying consumers to seek less expensive equipment alternatives.
- Growth of managed care organizations that seek to cut costs.

Recycling programs vary greatly. Some are limited primarily to durable medical equipment; others include a wider array of assistive technology. Some programs involve equipment exchange only. Such programs connect people who have equipment that is no longer in use with people who are seeking the type of equipment. All other arrangements in the transaction are handled by the individuals in the transaction. Other programs actually take physical possession of equipment, as well as storing, repairing, and transporting the equipment.

Program capabilities of the latter type clearly offer expanded opportunities for individuals with disabilities. Equipment that cannot be included in a simple exchange program because of the need for repairs or refurbishing may be suitable in a program that includes repairing and refurbishing. The shortcoming of such programs, however, is that they require considerably greater funding to operate. In the national study of recycling programs, funding was identified as the most problematic aspect of such programs.

In Conclusion

In the ideal climate, no person with a disability should be denied the opportunity to obtain assistive technology and transfer its inherent potential into viable, life fulfilling endeavors. However, it is clear that the current patchwork of federal policies has barriers and gaps, leaving many people with disabilities without the benefits of assistive technology.

In 1998, Congress recognized that barriers and gaps exist and directed NCD to prepare this report. The major barriers and the 11 recommendations designed to reduce those barriers have been identified and are presented with rationale in this report.

NCD calls on Congress to take a hard and fast look at what people with disabilities need to make assistive technology readily available.

Appendix

Mission of the National Council on Disability

Overview and Purpose

NCD is an independent federal agency with 15 members appointed by the President of the United States and confirmed by the U.S. Senate.

The overall purpose of NCD is to promote policies, programs, practices, and procedures that guarantee equal opportunity for all individuals with disabilities, regardless of the nature or severity of the disability; and to empower individuals with disabilities to achieve economic self-sufficiency, independent living, and inclusion and integration into all aspects of society.

Specific Duties

The current statutory mandate of NCD includes the following:

- Reviewing and evaluating, on a continuing basis, policies, programs, practices, and procedures concerning individuals with disabilities conducted or assisted by federal departments and agencies, including programs established or assisted under the Rehabilitation Act of 1973, as amended, or under the Developmental Disabilities Assistance and Bill of Rights Act; as well as all statutes and regulations pertaining to federal programs that assist such individuals with disabilities, in order to assess the effectiveness of such policies, programs, practices, procedures, statutes, and regulations in meeting the needs of individuals with disabilities.

- Reviewing and evaluating, on a continuing basis, new and emerging disability policy issues affecting individuals with disabilities at the federal, state, and local levels and in the private sector, including the need for and coordination of adult services, access to personal assistance services, school reform efforts and the impact of such efforts on individuals with disabilities, access to health care, and policies that act as disincentives for individuals to seek and retain employment.

- Making recommendations to the President, Congress, the secretary of education, the director of the National Institute on Disability and Rehabilitation Research, and other officials of federal agencies about ways to better promote equal opportunity, economic self-sufficiency, independent living, and inclusion and integration into all aspects of society for Americans with disabilities.

- Providing Congress, on a continuing basis, with advice, recommendations, legislative proposals, and any additional information that NCD or Congress deems appropriate.

- Gathering information about the implementation, effectiveness, and impact of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.).

- Advising the President, Congress, the commissioner of the Rehabilitation Services Administration, the assistant secretary for Special Education and Rehabilitative Services within the Department of Education, and the director of the National Institute on Disability and Rehabilitation Research on the development of the programs to be carried out under the Rehabilitation Act of 1973, as amended.

- Providing advice to the commissioner of the Rehabilitation Services Administration with respect to the policies and conduct of the administration.

- Making recommendations to the director of the National Institute on Disability and Rehabilitation Research on ways to improve research, service, administration, and the collection,
- dissemination, and implementation of research findings affecting persons with disabilities.
- Providing advice regarding priorities for the activities of the Interagency Disability Coordinating Council and reviewing the recommendations of this council for legislative and administrative changes to ensure that such recommendations are consistent with NCD’s purpose of promoting the full integration, independence, and productivity of individuals with disabilities.

Preparing and submitting to the President and Congress an annual report titled *National Disability Policy: A Progress Report.*

International

In 1995, NCD was designated by the Department of State to be the U.S. government’s official contact point for disability issues. Specifically, NCD interacts with the special rapporteur of the United Nations Commission for Social Development on disability matters.

Consumers Served and Current Activities

While many government agencies deal with issues and programs affecting people with disabilities, NCD is the only federal agency charged with addressing, analyzing, and making recommendations on issues of public policy that affect people with disabilities regardless of age, disability type, perceived employment potential, economic need, specific functional ability, status as a veteran, or other individual circumstance. NCD recognizes its unique opportunity to facilitate independent living, community integration, and employment opportunities for people with disabilities by ensuring an informed and coordinated approach to addressing the concerns of persons with disabilities and eliminating barriers to their active participation in community and family life.

NCD plays a major role in developing disability policy in America. In fact, it was NCD that originally proposed what eventually became the ADA. NCD's present list of key issues includes improving personal assistance services, promoting health care reform, including students with disabilities in high-quality programs in typical neighborhood schools, promoting equal employment and community housing opportunities, monitoring the implementation of ADA, improving assistive technology, and ensuring that those persons with disabilities who are members of minority groups fully participate in society.

Statutory History

NCD was initially established in 1978 as an advisory board within the Department of Education (Public Law 95-602). The Rehabilitation Act Amendments of 1984 (Public Law 98-221) transformed NCD into an independent agency.