

# Introduction—Implementing the Act: Where We Begin

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Americans with disabilities are the largest, poorest, least employed, and least educated minority in America. The Americans with Disabilities Act (ADA) is a bold and comprehensive mandate intended to eliminate one of the key barriers to independent living in the mainstream of American life for persons with disabilities: discrimination. This book presents a synthesis of what we know as a result of research and analysis about establishing and maintaining an accessible and inclusive world for people with disabilities. The audience for this book is made up of people concerned about public policy in general and the ADA in particular—at the federal, state, and local levels in the public sector, and in the for-profit and nonprofit arenas of the private sector.

Although many policies have been initiated in the past 15 years to promote the independence, productivity, and inclusion of persons with disabilities, the accomplishments have been modest. The ADA is a policy with ambitious goals. It is a policy that requires us to change our thinking about people with disabilities. The ADA demands that we focus on *people*, not on *disabilities*; that we focus on what they *can* do, not on what they *cannot* do. It is a policy that proclaims independence for people with disabilities—economic, social, and personal. The Act says participation in the mainstream of daily life is an American right.

The policy represents the culmination of years of progressive and

proactive efforts of persons with disabilities, the disability-rights movement, dedicated professionals, committed legislators and government leaders, service providers whose programs have demonstrated outcomes of independence for persons with disabilities, and visionaries in the private sector who have seen beyond disabilities to abilities. The ADA is a law supported by almost two decades of statutory, legal, and programmatic building blocks. For the first time, our nation has one overarching policy that provides a framework for reshaping related policies and programs and a standard against which to measure those policies and programs.

The ADA was initiated and drafted in 1988 by the National Council on Disability, an independent federal agency composed of 15 members appointed by the President. The law is a comprehensive antidiscrimination mandate for persons with disabilities extending to virtually all sectors of society and every aspect of daily living—work, leisure, travel, communications. It provides civil-rights protections to persons with disabilities that are comparable to those in force for women and minorities. Physical and communication barriers must be removed and discriminatory practices and procedures are to be eliminated. Reasonable accommodations must be made for persons with disabilities, including the provision of auxiliary aids and services. The ADA authorizes the federal government to enforce the standards outlined in the Act.

This volume is a contribution to the effective implementation of the ADA. As a synthesis of knowledge resulting from efforts to date to ensure full participation in society by persons with disabilities, it is intended to be a knowledge base for technical assistance efforts related to ADA. Its goal is to provide information that will illuminate the route from mandate to practice.

## THE TARGET AUDIENCE

The broadness of the ADA mandate necessitates a large audience for this book. One of our key motivations for undertaking a synthesis of current knowledge about the independence, productivity, and inclusion of persons with disabilities is the fact that disability is a relatively new area of social policy, and the broad sweep of the ADA mandate requires that a broader range of implementors be involved than ever before. Individuals who are skilled and knowledgeable in discrete areas

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of public policy, such as employment or transportation, will need to expand their knowledge bases to include disability policy. Individuals who have dedicated their lives and careers to one area of disability policy and services, such as supported employment or special education, will need to learn about the full gamut of disability policy. Similarly, researchers from different disciplines, such as law and economics, will have to adopt an interdisciplinary perspective.

The ADA will be administered by four key federal agencies: the Department of Justice, the Equal Employment Opportunity Commission, the Department of Transportation, and the Federal Communications Commission. Technical-assistance efforts will be funded through the Department of Justice, the Equal Employment Opportunity Commission, and the Department of Education's National Institute on Disability and Rehabilitation Research. Other federal agencies will be involved in implementing the ADA by issuing guidelines, developing informational materials, providing technical assistance, and assessing the implementation of the law. This book is intended to be a resource for individuals in those agencies as well as federal grantees and contractors who will be providing technical assistance around the country.

The book is also directed to state and local government officials who are required to comply with the law themselves, but who will also undoubtedly be called upon by their constituents to provide information. We designed it to serve as a resource in the business of assessing the implications of the ADA for policies, practices, programs, and funding in individual communities.

Businesses and industry in the private sector, both small and large, are another targeted audience. Personnel directors and human-resources specialists must be informed about the requirements of the ADA and must have an understanding of the expertise available to facilitate compliance. As consumers of the products of the human-resources industry, they will have to assess both their own needs and the efficacy of the technical assistance available to them. This book is intended to address those concerns.

The private nonprofit sector has been actively organizing to contribute to the implementation effort. Under the leadership of some 15 major national grantmakers, a Funding Partnership for People with Disabilities is being created to award grants totalling about \$1 million. These grants will be awarded to local coalitions, which will facilitate the integration and participation of persons with disabilities in all aspects of American life. Many nonprofit disability and human-services organi-

zations are assessing their skills and organizing themselves to provide ADA-related services and technical assistance. This volume is intended as a resource for those efforts.

We also seek researchers as an audience: in academia, state and federal agencies, private think tanks, and consulting firms. We would like to harness the interest of researchers by presenting a case for the necessity of data collection and evaluation and policy-relevant analysis. There is simply too much at stake to proceed with implementation in the absence of impact evaluation.

Generalists constitute another audience as they search for a resource to orient them about the ADA and its origins. In this category would be journalists, students of public policy, and interested parties in the public at large.

Persons with disabilities and disability rights organizations are another audience. The book is intended to provide them an understanding of the rights they are guaranteed under the Act and a sense of the history and experience that serve as building blocks for those rights.

Finally, we intend to contribute to the ADA industry forming in Washington and nationwide. Composed of consultants, researchers, attorneys, and academics who earn their living by assisting nonprofit organizations to provide services and technical assistance, and aiding businesses in their steps toward compliance, this industry is developing rapidly in conjunction with the large implementation effort.

## HOW TO USE THIS BOOK

Some will want to read this book from cover to cover; others will select topics of particular interest. The book will be useful both in orienting those who need a general sense of the law and its mandates and in supplying a reference for specific areas of inquiry, such as how technology can be used to provide reasonable accommodations. We encourage everyone to read this introduction, which provides a summary and overview of the knowledge detailed in the book. For readers who seek specific information about a particular topic, a short index is provided.

Two appendices are included as references: Appendix A is a chart, entitled ADA: Implementation Dates, indicating which federal agencies monitor the implementation of the different titles of the law, the

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effective dates of the provisions of the law, and the dates for issuance of regulations by the various federal agencies. Appendix B, Resource Organizations, is a list of organizations with a national scope which could be used as resources for additional information or assistance.

## TOWARD IMPLEMENTATION

Like religion, policies have their greatest impact when they are translated into daily behavior. This translation, referred to as implementation in the world of public policy, is already underway. At the time we go to press, all five sets of regulations required by the law have been issued in proposed form. Proposed guidelines for barrier-free environments have been published as well as a federal government-wide technical-assistance plan. Over \$13 million have been appropriated by the U.S. Congress for specific technical-assistance efforts. Workshops and conferences are underway throughout the country. Compliance manuals are being drafted.

All of these activities might be considered the first level of implementation—organizations and agencies reviewing and preparing information about the law as we approach effective dates. The next level of implementation will come when the rubber meets the road—when the effective dates of the law arrive and entities are legally responsible for complying with the Act.

## WHAT WE KNOW

The book addresses itself to a range of questions. First, what exactly does the ADA require? What is the basis of those requirements? What do we know about creating a world that supports, promotes, and enables persons with disabilities to live independent, productive lives? What does the research tell us? What do the experts tell us? What is the best thinking in the emerging field of disability research? Furthermore, how can we use the knowledge we have to implement the ADA?

One of the clear conclusions of this book is that we do not know enough. Rare are the circumstances, however, when we have sufficient knowledge. Although our research-based information is limited, it is certainly adequate to support effective implementation efforts. Ignor-

ing the knowledge we already have about creating an accessible world would not be in the spirit of the ADA. Finally, it is important that we publicly determine what we know and what we do not so that our future research efforts will be meaningful.

The fact that our knowledge base is limited should not be disheartening nor should it provide a rationale for doing anything other than proceeding full speed ahead. After all, the Americans with Disabilities Act and most of its predecessor legislation is about rights—and rights are based on values, not on knowledge. Knowledge plays a critical role in policy fine tuning and in effective implementation by assisting us to discover what works under what conditions; however, knowledge alone is never the sole determinant of public-policy choices. Now that the key public-policy choices have been made, the task before us is to use the knowledge we have to implement the law effectively and to generate more knowledge in order to improve the results of our efforts.

The following points of knowledge relevant to the implementation of the ADA are distilled from the articles presented in this book:

- We have the knowledge and skills to make jobs, places, and services accessible for people with disabilities.
  - The cost of making places of employment and public accommodations accessible is generally reasonable and manageable.
  - Negative attitudes toward persons with disabilities and discrimination have contributed to the status of persons with disabilities as the poorest, least educated, and least employed minority.
  - The precise number of persons with disabilities varies widely depending upon the definition used, the situation of the particular individual, the nature of the impairment and the concomitant degree of limitation, and the particular aspect of society in which participation is being sought.
  - Most persons with disabilities are not working and want to work.
  - Employers find persons with disabilities to be good employees; however, the labor-force participation rate for persons with disabilities has declined in the last two decades.
  - In terms of programs intended to gain and maintain employment for persons with disabilities, effectiveness is more a function of the management of the programs and the severity of the disability of the individuals served than of the type of program providing the service.
  - Full implementation of the ADA will require a re-examination of public and private programs intended to serve persons with disabilities to ensure that their goals are in harmony with the goals of the ADA.
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- When people with disabilities work and are consumers of goods and services it is good for the economy.
- With almost two decades of experience in implementing civil-rights laws for people with disabilities, we are well equipped to implement the ADA.

## ONWARD

At this point, when the promise of a new mandate has captured our attention, yet the daily toil of transforming the policy into practice has not fully arrived, a range of anticipatory thoughts about the impact of the law is surfacing in the American consciousness. In a recent letter to a U.S. senator, a businessman requested that the legislation be amended or abolished. He said that the law is so vague it is a “horror story for American employers.” The reasonable accommodation provisions are so general that employers will be required to make expenditures until they reach the brink of bankruptcy. In his view, “The law constitutes a hunting license for lawyers and for unscrupulous persons with fictitious or questionable ‘disabilities.’ ”

A well-known disability-rights activist expressed a view at the opposite end of the spectrum. She holds that people with disabilities are not organized enough to insist on a level of enforcement that would result in the ADA being anything more than a “public-spirited gesture.” She feels that the administration’s support of the ADA was a “low-risk commitment to a relatively unorganized group.” In fact, enactment of the legislation represents a token gesture intended to remove disability rights from the public agenda. In her words, “One of the best ways to kill a civil rights concept is to pass a law and not enforce it” (Johnson 1989).

In this book, we stand in the water between these two shores. Perhaps these two very different perspectives articulate the challenge of implementation. The law is not intended to bankrupt businesses, nor to be a one-time raising of the flag. It is not crafted to be a hunting license for attorneys; neither is it crafted to be ignored. It is in the implementation of this law — the movement from policy to practice — that we have the opportunity to prove both commentators wrong. It is our belief that a reasoned and steady approach using the considerable knowledge and experience we have gained in the last few decades will

yield the result intended by the law: increased independence and inclusion of persons with disabilities. This is the end toward which this book is dedicated.

The next few pages, along with the editor's notes preceding each article, provide a guide to the requirements of the law and the knowledge and distilled experience that can guide us as we implement it.

## SECTION I: GETTING ORIENTED

Section I orients us by considering the social and policy context that generated the ADA. It considers the American experience of disability, the growth of the disability-rights movement, and the identity of persons with disabilities as a minority group; attitudes toward persons with disabilities; the nature of discrimination and civil rights in terms of persons with disabilities; the legislative and programmatic building blocks on which ADA is based; a history and overview of the requirements of the legislation; definitions of disability and the demographics they have generated.

In the first article, "The Social and Policy Context of the ADA," I consider the ADA as a policy that sends a message about what society's attitudes should be toward persons with disabilities: respect, inclusion, and support. I scrutinize the status of persons with disabilities: the largest, poorest, and least educated minority in America. They are a minority of second-class citizens: socially, economically, vocationally, and educationally. Their history is largely one of isolation and segregation. They are a group of people who have been defined by what they are not, rather than by what they are. They have been described in terms of "diseases, deformities, and abnormalities," identified by labels and diagnoses, and have frustrated the medical profession because it could not cure them. They have been considered lifelong children who need to be taken care of and shielded from life's vicissitudes.

People with disabilities share the experience of discrimination with women and other minorities, repeatedly confronting obstacles of prejudice and stereotypes. In addition, physical and communication barriers have kept them outside of the mainstream. They have encountered policies that exclude them by implication. In virtually every aspect of society—housing, employment, education, recreation, transportation,

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public accommodations, communication, health services, and even voting—persons with disabilities have been shunned.

Efforts to change this state of affairs have been underway for at least 15 years—in terms of shifts in attitudes, the growth of the disability-rights movement and the identity of persons with disabilities as a minority group, the changing language of disability, and the gradual evolution of disability-rights laws.

A wide range of programs, services, and organizations is in place throughout the nation to provide support for persons with disabilities. The Americans with Disabilities Act is the new framework that comprehensively articulates the goals toward which all these programs and services must now reorient themselves.

In the second article, “Essential Requirements of the Act: A Short History and Overview,” Nancy Lee Jones describes the legislative history of the ADA and provides an overview of the requirements of the Act. Drawing on the substantive requirements and history of the application of section 504 of the Rehabilitation Act and the procedural requirements of title VII of the Civil Rights Act of 1964, the ADA is more noteworthy for its breadth of application than its novelty of concept and procedure.

Intended to provide civil-rights protections to persons with disabilities that are comparable to the rights afforded to women and other minorities, the ADA extends the existing prohibition against discrimination (which applies only when federal funds are involved) to a prohibition in virtually every segment of society. Discrimination is prohibited in employment, state and local services, transportation, public accommodations, and telecommunications. For the first time, the private sector must comply with a comprehensive disability antidiscrimination mandate.

The law requires that “reasonable accommodations” be made in the employment setting for persons with disabilities who are qualified to perform the “essential functions” of the job. If the accommodation creates an “undue hardship” on the business, it is not required. All state and local services are prohibited from excluding participation or denying benefits of services, programs, or activities to persons with disabilities. (This prohibition is currently in force under section 504 of the Rehabilitation Act, which obligates states and localities that receive federal funds to comply. Therefore, considerable experience with compliance already exists in this arena.)

Transportation must be accessible to people with disabilities, in

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time. All newly purchased or leased public buses must be equipped so that they are accessible for persons with disabilities. (Retrofitting of existing buses is not required.) All new rail vehicles and stations must be accessible. At least one car on each train must be accessible within five years of enactment and key rail-transit stations must be accessible within three years. In addition, paratransit or alternative transportation services (most frequently minivan service) must be available to those who cannot use accessible mainline bus services because of a mental or physical impairment. If the provision of paratransit and other special transportation services would impose an undue financial burden on the entity, it is only required to the extent that providing the service would not impose such a burden.

Places of public accommodation must be accessible to persons with disabilities—motels, restaurants, bars, movie theaters, convention centers, grocery stores, clothing stores, museums, libraries, amusement parks, schools, day-care centers, gyms, bowling alleys . . . Alterations that are “readily achievable” must be made to existing buildings and new construction must be barrier free. Reasonable modifications must be made to policies and auxiliary aids provided they do not create an undue burden on the business or fundamentally alter the nature of the goods or services provided.

Title IV of the Act requires the establishment of interstate and intrastate telecommunication relay services. These services will enable persons with hearing or speech impairments to have equal access to the telephone system.

The last title of the Act contains a range of provisions, including an application of the Act to the U.S. Congress, and a list of categories of individuals excluded from coverage by ADA, such as drug users, transvestites, and homosexuals.

Jones notes, “The challenge facing disability policy makers will be to integrate financial support for rights at a time of increasing budgetary concerns.” She proposes an examination of the Individuals with Disabilities Education Act (formerly the Education for All Handicapped Children’s Act, P.L. 94–142) as a model for such an effort.

In the final article in this section, “The Demographics of Disability,” Mitchell P. LaPlante explores various definitions of disability and the numbers they have generated. Persons who consider themselves to have a disability, disability-rights advocates, professionals who study disability, and the general public disagree about the meaning of disability. Researchers tend to think of disability as involving a degree of limita-

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tion in some aspect of functioning. Differences exist in defining the degree of the limitation and types of functioning included in the meaning of disability. Some disability-rights advocates hold that persons with health conditions who may not experience any limitation in functioning may be stigmatized and discriminated against simply because of their condition. They believe these individuals should be included in the definition of disability. Finally, some persons who have activity limitations do not perceive themselves as having a disability.

The ADA defines disability as a physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment. Although the definition denotes the perimeters of who will be covered by the ADA, the final determination will be made on a case-by-case basis according to the particulars of the individual situation.

The ADA estimates the number of persons with one or more physical or mental disabilities as 43 million, noting that this number is increasing as the population ages. Data from various surveys described by LaPlante provide estimates of people with disabilities ranging from 34- to 120 million depending on the definition of disability being utilized.

Disability prevalence varies considerably in different regions of the country. One study reported a range of work-disability rate (defined as activity limitation) from 5.7 percent (in Denver) to 19.8 percent (in San Bernadino/Riverside). Another study indicated that differences in characteristics such as income, employment levels, educational levels, and health explained 90 percent of the variation. With such geographic variation, the impact and implications of the ADA are likely to vary in different parts of the country.

Although estimates of the numbers of persons with disabilities are useful in providing rough guides, their application in determining the numbers of persons ADA will cover must be approached with caution. Disabilities are not necessarily immutable characteristics, like sex and race. A particular disability may limit functioning in one situation (e.g., riding a bus), while having no impact in another situation (e.g., using a word processor). All persons with a particular disability will not be limited in the same manner, mainly because of other intervening characteristics, such as educational level and availability of family and community support. Beyond the obvious accommodations, such as ramps for persons using wheelchairs and braille for persons who are

blind, the determination of appropriate accommodations demands an individualized approach.

## SECTION II: EMPLOYMENT—THE HEART OF INDEPENDENCE

Our jobs are inextricably woven into the fabric of our identities. Competence, self-esteem, financial independence, and security are all fruits of working. As Chai R. Feldblum writes in the opening article, "Employment Protections," "Having a stable and fulfilling job is a basic component of the American dream."

Persons with disabilities have frequently been denied the opportunity to pursue employment according to their choice and abilities. The 1986 Harris Poll estimated that there are approximately 8 million working-aged persons with disabilities who are not working, but would like to work. In the marketplace, stereotypes and prejudice have kept some doors firmly closed to them. The closed doors have been reinforced by many of our public policies, which have sent the message that dependence is what we expect from persons with disabilities.

Feldblum reviews the antidiscrimination requirements of the ADA as they relate to employment. She writes: "The basic principle . . . is that qualified persons with disabilities must be judged on their merits and abilities for particular jobs and must not have employment opportunities unjustly foreclosed to them because of myths or stereotypes regarding their disabilities." The discrimination prohibition extends to all aspects of employment: the application and recruitment processes, working at the job, job promotions, firings, and participation in benefits and privileges of the job that are offered to employees without disabilities.

The ADA prohibits employment discrimination against persons who are "otherwise qualified." A person who is "otherwise qualified" is a person who can perform the "essential functions" of the job with or without "reasonable accommodation." The "otherwise qualified" individual must satisfy the skill, experience, education, and other job-related criteria. The employment requirements take effect for employers with 25 employees or more on July 26, 1992, and for employers with 15 employees or more on July 26, 1994.

In the second article in this section, "Employment Strategies for People With Disabilities: A Prescription for Change," Paul G. Hearne

reviews what we know about increasing the employment and employability of people with disabilities. A substantial majority of persons with disabilities of working age are not working (66 percent), and the overwhelming majority of them want to work (78 percent). Most managers give employees with disabilities high ratings for performance and note that the cost of accommodating an employee with a disability is quite manageable; one study indicates that 50 percent of accommodations cost \$50 or less. Persons with disabilities are not frequently hired, except by companies that make concerted efforts.

In terms of the economy, changes in demography, manufacturing processes, and the rise of the service sector are creating opportunities for persons with disabilities. However, the recession and pressures of international competition are reducing overall demand for labor, particularly in terms of employees who may require expenditures.

There are numerous programs and services intended to result in employment and increased employability for persons with disabilities. These include an infrastructure of services provided by the state vocational-rehabilitation programs, sheltered workshops, and rehabilitation facilities. Collaborative and relatively recent models include job-matching programs, supported employment, Projects with Industry, and Independent Living Centers. Differences in the success of these programs are primarily a function of the severity of the disabilities of the program participants and the management of the program.

The ADA mandate serves as a prescription for change in the future design and delivery of programs and services intended to result in increased employment for persons with disabilities. Tax incentives, changes in the Rehabilitation Act, and more private and public-private partnerships are in order.

In "The Recent History and Immediate Future of Employment among Persons with Disabilities," Edward H. Yelin challenges the widely held optimism about future employment prospects for persons with disabilities. He notes that in the last two decades the labor-force participation rate for persons with disabilities fell 4 percent while it increased 12 percent for persons without disabilities. Despite the anti-discrimination mandate in the public sector (section 504 of the Rehabilitation Act) and a huge expansion of the labor force in the 1980s, persons with disabilities are worse off than they were 20 years ago in terms of employment.

"Persons with disabilities, like those from minority races, appear to constitute a contingent labor force, suffering displacement first and

disproportionately from declining industries and occupations, and experiencing gains in ascending ones only after those without disabilities are no longer available for hire," writes Yelin. In terms of the impact of section 504 on the employment of people with disabilities in the public sector, Yelin notes that its contribution may have been one of "things getting worse more slowly." The implication is for proactive and highly visible monitoring of the impact of the ADA.

Monitoring is particularly critical for industries and occupations undergoing rapid expansion and contraction. In these industries, history indicates that people with disabilities have not shared commensurately with other workers during periods of the growth, and have suffered disproportionately during retrenchment. Yelin recommends modifications to the National Health Interview Survey and the Current Population Survey as a means of monitoring the employment of persons with disabilities. The Equal Employment Opportunity Commission (EEOC) should establish a statistical database on the employment of persons with disabilities as part of the monitoring effort. More data on the interaction among impairments, job demands, and work status would provide an objective basis for determining whether employment status is related to discrimination or to actual functional capacity.

Finally, Thomas N. Chirikos considers "The Economics of Employment." In one calculation, the EEOC recently concluded that the total annual benefit of this title of the law could be \$402,663,000 (Equal Employment Opportunity Commission 1991). This calculation includes a consideration of the overall macroeconomic impact of the provisions: productivity gains brought to the marketplace by persons with disabilities and decreased support payments to persons with disabilities as well as increases in taxes generated by these employees. In a separate calculation, Chirikos (Personal communication: memo to Milbank Memorial Fund, October 1, 1990) postulated that if the ADA were to eliminate totally job-related discrimination, about \$10 billion in earnings of persons with disabilities already at work could be added to the national income in a year. Clearly, it is to the economic interest of the nation for people to be employed rather than unemployed or receiving public support.

Chirikos concludes that a rise in accommodation costs could be used as an indicator of the ADA's success in increasing employment for persons with disabilities. He notes that although available evidence indicates little or no expense for the cost of reasonable accommodations in the past, that may change in the future. "Evidence of negligible

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accommodation costs would be more compelling if a very large fraction of the population of persons with disabilities was already employed," he observes. In addition, as more persons with disabilities join the labor force, they are likely to have more severe impairments than people with disabilities who are currently in the labor force. Accommodation costs are likely to rise for persons with more severe impairments. If costs are more than is currently anticipated, we may have to explore the expanded use of subsidies and alternative means of cost sharing between the employer and the employee.

### SECTION III: AN INCLUSIVE INFRASTRUCTURE

In concluding her article, Feldblum notes that the ADA is a law deliberately designed to be comprehensive because of the interdependent nature of the various aspects of society that must be accessible. "In order for people with disabilities to enter the mainstream of America, they must have meaningful opportunities to obtain employment; they must have access to public services and to goods and services offered by private businesses; they must have accessible transportation in order to get to these jobs, goods and services; and they must have a means of communicating with employers, businesses and others. " An inclusive infrastructure supports persons with disabilities in exercising their rights in the marketplace.

In "Equal Access to Public Accommodations," Robert L. Burgdorf Jr. notes that persons with disabilities are an isolated segment of the population. They go to the movies, attend the theater and other live performances, attend sporting events, and eat in restaurants far less frequently than persons without disabilities because they feel unwelcome and fearful, and also because of physical barriers and explicit exclusion.

Intended to increase the participation of persons with disabilities, the ADA prohibits discrimination in a broad range of places of public accommodation including motels, restaurants, theaters, movie houses, stadiums, concert halls, auditoriums, stores, doctors' offices, gas stations, museums, parks, zoos, schools, day-care centers, banks, gyms, and golf courses. Persons with disabilities are entitled to the full and equal enjoyment of the goods, services, facilities, privileges, advantages, and accommodations of all covered entities.

The Architectural and Transportation Barriers Compliance Board (ATBCB) has issued proposed accessibility guidelines for ADA, which build on the ones they issued for the Architectural Barriers Act of 1968 and section 504 of the Rehabilitation Act of 1973. Experience in using accessibility guidelines is considerable. Already two-thirds of the states currently incorporate or reference the standards that ATBCB used to develop their guidelines. Particularly noteworthy is the National Park Service, which has a number of guides available for making parks and fishing accessible to person with physical, hearing, and speech impairments.

The cost of making new construction accessible is generally considered to be between one-tenth and one-half of one percent of the total construction costs. The cost of remodeling existing inaccessible buildings is generally estimated to be between one-half and three percent of construction costs of an overall renovation or of a building's underlying value.

Concluding that we all stand to benefit from a more accessible world, Burgdorf writes: "Given that a significant portion of the populace has a disability or will experience one at some point, such requirements do not represent a fiscal sacrifice for a select few, but a basic insurance policy provided by our entire society on behalf of the entire society."

Robert A. Katzmann addresses another critical component of an accessible infrastructure: transportation. In "Transportation Policy," Katzmann notes that the best estimates of persons with disabilities who are limited in the use of public transportation date from 1977, when a total of 7.4 million persons over five years old who lived in urban areas were identified as being constrained to some extent from using public transportation. Of that total, 1.4 million were unable to use public transit at all. These estimates are generally considered low, particularly in light of demographic shifts from cities to suburbs.

Persons with disabilities have long been concerned about inadequate transportation. One survey reflected that 28 percent of nonworking people with disabilities cited a dearth of accessible or affordable transportation as a reason why they were not employed. Manufacturers have developed accessible vehicles and usually do so when it is required by law or government rules. The absence of standards for devices to secure wheelchairs and similar mobility units, however, has complicated the task for manufacturers.

Localities vary in the nature and level of accessible and paratransit



services. One study indicated that a substantial number of systems have a policy in place whereby they will only purchase accessible buses. Over the last decade, many subway systems have improved accessibility, in some cases fully (notably San Francisco and Washington, D.C.). Improvements have been made in bus-lift maintenance. Over time, costs have gone down and operators have learned to anticipate and prevent problems. Some states have innovative training programs for transit personnel.

The cost of attaining accessible transportation also varies, with most estimates being criticized by different parties as too high or too low. In 1990, 35 percent of the national transit fleet was equipped with accessible features. The Department of Transportation (DOT) estimates that the cost of lift-equipped buses nationwide will range from \$675 to \$735 million over 30 years on a present-value basis. They estimate that the provision of paratransit services on a 24-hour response-time basis will be \$1.1 billion. Estimates of rail transit accessibility range from \$21,334,057 to \$72,669,809 annualized for 10 years.

Karen Peltz Strauss examines the telecommunications requirements of the ADA in her paper, "Implementing the Telecommunications Requirements." These provisions are an extension of the 1934 "universal service" mandate, which requires that communication by wire or radio be made available to all Americans wherever possible. The ADA requires that telephone relay services be available for all local and long-distance telephone calls by July 26, 1993. Relay services enable persons who are hearing or speech impaired who use TDDs (telecommunication devices for the deaf) to communicate, through a third party, with users of conventional telephones.

The relay services are required to operate 24 hours per day, seven days a week with no restrictions on the content of the messages. Calls are to be confidential and messages must be relayed without being altered. Users of the relay services are to pay rates no greater than the rates paid for functionally equivalent voice communication services.

In July 1990 approximately 40 states either had statewide systems in place or planned to have them begin operation shortly. Although many states have some system in place, almost all will need to make some changes in order to comply with the ADA—for example, provide 24-hour service or add interstate service. Costs of providing relay services range from four to seven dollars per minute, with costs distributed among all telephone subscribers at a rate of 5 cents to 13 cents per

month. Three million dollars was the figure provided by the FCC as the potential start-up cost figure for a relay service.

The demand for relay services has been remarkable. For example, the California system originally anticipated 50,000 calls per month, but received 87,511 in the first month alone. By July 1988 they were handling nearly 250,000 calls per month.

The considerable experience to date yields numerous recommendations for providing relay services: they should be fully integrated into the existing telecommunications network; adequate funds should be available to avoid temporary limitations in services; consumers should be involved in designing and monitoring services.

The availability of relay services will result in increased freedom, independence, and privacy for persons who are deaf, hearing impaired, and speech impaired. "These individuals will be able to use the telephone to easily access businesses, colleagues, friends, and relatives, something that hearing individuals have taken for granted for approximately half a century," Strauss concludes.

In the final article of Section III, "Public Health Powers: The Imminence of Radical Change," Lawrence O. Gostin examines the convergence of public-health policy and disability-rights mandates. He suggests that the ADA will be the impetus for reestablishing the boundaries on the exercise of public health powers. "Seen through the lens of the ADA," he writes, "public health regulation may be regarded as discrimination against persons with disabilities."

Persons with communicable diseases are clearly covered by the ADA. However, if they pose a "direct threat to the health or safety of others" and such a direct threat cannot be eliminated by reasonable accommodations or reasonable modifications, they may not be protected by the ADA. Although the ADA clearly allows for taking action to protect the health and safety of all persons in employment and public accommodations, it also provides antidiscrimination protection for persons with communicable diseases. Yet the essence of public-health regulation is that persons may be treated differently based upon a scientific assessment of the risk of transmission of a disease or condition.

The convergence of the rights of individuals with communicable diseases and the responsibility of the public health authorities to regulate in the public interest hinges on the application of scientific evidence in determining what constitutes a "direct threat." Congress resolved one of the most controversial issues raised during consideration of the ADA (the question of whether an employee with an infectious or

communicable disease could be transferred from a food-handling job) by turning to the application of science. If the infectious condition is determined by the Secretary of Health and Human Services to be transmitted through the food supply, an employer may refuse to assign an individual with that condition to a food-handling job. Gostin argues that this same application of scientific and medical analysis should be used in determining whether an individual poses a "direct threat."

The ADA is particularly significant for public-health law and for individuals who others believe may constitute a danger, but who in fact do not. Gostin concludes that the ADA will engender a new way of thinking about public-health law, a way in which "courts must search for scientifically convincing evidence of harm to the public to justify depriving persons with disabilities of equal opportunities."

#### SECTION IV: REINFORCEMENTS FOR THE MANDATE

This last section examines two areas of resources available for implementing the ADA. Certain provisions in the tax code and assistive technology for people with disabilities can both be used in the creation of a more inclusive world. At least three provisions in the tax code could alleviate some of the financial burden of implementing the ADA. The application of technology to solve accommodation challenges can provide remarkable and effective solutions.

In "Tax Incentives," Daniel C. Schaffer reminds us that Congress often uses the tax code to promote social and economic goals. Since 1976 a deduction has been available to businesses for removing barriers in facilities or public transportation vehicles. The current limit on that deduction is \$15,000.

Shortly after the enactment of the ADA, Congress added an "access credit" to the tax code, which enables small businesses to claim credit against taxes for one-half of eligible expenditures exceeding \$250, but not greater than \$10,250. The credit can be claimed for a broader range of expenses than the deduction, including the provision of auxiliary aids and services.

Virtually no information is available about the usage of the deduction over the past 15 years. It appears likely that its use has been minimal based on estimates of annual revenue loss to the federal treasury (\$7 million in 1986). An analysis of the use of the deduction and

the credit could provide a revealing picture of the types of expenditures and accommodations taking place in a range of settings. Such an analysis would be an important contribution to assessing the implementation of ADA.

A third provision of the tax code, the Targeted Jobs Tax Credit (TJTC), has been available to employers since 1978. The credit is available for hiring members of particular groups whose rate of unemployment is high or who have special employment needs. The credit allowed is 40 percent of the wages paid to an employee (up to \$6,000) during the first year of employment. Persons with disabilities constitute a small group of those targeted by TJTC. (In 1987 only 6.9 percent of the total number of TJTC-certified persons were members of the target-group "vocational rehabilitation referrals.") The TJTC needs to be examined in light of ADA, both in terms of how it might be further strengthened to support the goals of the ADA and in its application to preemployment inquiry.

In "The Role of Technology in Removing Barriers," John C. DeWitt examines the use of technology in removing communication and other barriers encountered by persons with disabilities. Known as "assistive technology," these devices and interventions have exploded in the marketplace; however, they are not yet widely deployed or available for persons with disabilities. Capable of making dramatic changes in the lives of persons with disabilities, DeWitt notes that "assistive technology has extended horizons in education and employment, for personal independence and social integration."

Assistive technology can enhance limited functions, such as seeing, or it can enable one function to be substituted for another (e.g., hearing for seeing). Limitations in hearing, seeing, speaking, interpreting, and moving can be addressed by a range of assistive-technology applications, most of which have proven track records in a variety of settings. Many assistive-technology features, such as curb cuts and volume amplification on telephones, provide benefits for virtually everyone, not just persons with disabilities. DeWitt reviews basic design features that incorporate accessibility standards for a broad range of disabilities.

Using assistive technology is an accommodation best understood as a process of removing barriers to opportunities. It requires a problem-solving approach that must incorporate training, maintenance, upgrading, and replacement if necessary.

The benefits of technology include enhanced functioning and productivity for the individual as well as increased participation (and there-

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fore financial contribution) in the marketplace. Having an accessible workplace and marketplace is good business. The costs of assistive technology are often minimal, particularly as demand for them increases. Assistive technology is frequently limited to the cost of an "add-on" for existing equipment, such as a personal computer.

Many tasks become possible for persons with disabilities by the use of assistive technology. DeWitt holds that the success of the ADA will depend on the creative use of technology as much as upon the good will of the American public.

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