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EXPLORATORY STUDY OF HEALTH CARE COVERAGE AND THE EMPLOYMENT OF PEOPLE WITH DISABILITIES

SUMMARY

The purpose of this project, which is being conducted for the Assistant Secretary for Planning and Evaluation, DHSS, by The Lewin Group, is to review and analyze available information on how health insurance coverage and the particular provisions of health care policies are related to employment by people with significant disabilities. The review will examine available research literature on the relationship of health care coverage and employment among people with disabilities; information from States which extend health care coverage to people with disabilities through employers mandates or State-supported coverage; employment rates and patterns among recipients of Veterans Administration disability benefits; and other relevant available data including available international data.

BACKGROUND

In recent years, substantial interest has emerged in improving opportunities for people with disabilities to join, remain in, or return to the work force. A growing consensus has emerged among many advocates in the disability community that virtually all working age adults regardless of the severity of their disability should be assumed to be capable of work and have the opportunity to engage in competitive employment. Employment rates for people with disabilities are significantly lower than for people without disabilities and lower than people with disabilities desire. In 1992-93, 23 percent of people with a severe disability worked. Unemployment rates are twice as high for those reporting the existence of a work disability than for those reporting no work disability (U.S. Bureau of the Census, 1994). General surveys indicate that only between 18 and 40 percent of individuals with disabilities have jobs, despite the fact that the majority indicate that their disability did not prevent them from working. The 1994 Louis Harris Survey of persons with disabilities found that 42 percent of those people with disabilities without jobs would prefer to work and say they would be able to able to do so.

The lack of adequate health care or particular covered services in health care is cited by many as a major barrier to labor force participation by people with disabilities. Disability advocates and rehabilitation professionals often cite the fear of losing medical coverage as one of the most significant barriers to the participation of SSI and SSDI beneficiaries in vocational rehabilitation and return to work.

In 1994/95, ASPE/DHHS sponsored a project aimed at understanding the barriers and incentives to labor force participation among persons with significant disabilities. Among the barriers identified in that report are low education and skill training, lack of knowledge of and easy access to assistive technology, negative attitudes, lack of accessible transportation for people with physical disabilities, and lack of support for personal assistance services. Also identified are lack of access to health care and the work disincentives of income maintenance programs, particularly the loss of public health care benefits in the event of return to work. That earlier project suggested several opportunities for gaining more information about the relationship between health care coverage and employment.

ANALYSIS PLANS

This project will pursue additional information about health care barriers to employment for people with

disabilities. While there are strong reasons to believe that high health care costs and lack of access to health care are a significant barrier to employment for people with disabilities, the earlier review found no direct, rigorous evidence that this barrier deters a substantial number of workers from competitive employment. Empirical evidence is needed in order to demonstrate the importance of this effect and to quantify the impact of policies that would extend health care coverage to people with disabilities. This exploratory study will examine information from several settings in which the barrier to health insurance coverage is reduced in an effort to address the question of whether the availability of health care coverage increases employment among people with disabilities.

At least two States have provisions for people with disabilities to have health care benefits when they join the work force. Hawaii subsidizes health care of low-income individuals who are not covered by employer insurance and who are not poor enough to qualify for Medicaid. Econometric analysis of state-level SSI growth in Hawaii between 1988 and 1992 shows that SSI program growth in Hawaii was very low in comparison to other states, even after adjustment for other factors related to program growth. In 1974, Hawaii enacted the Prepaid Health Care Act, which required employers to provide health care to full-time employees, part-time workers, and the self-employed. In 1989, Hawaii created a state-funded State Health Care Program to provide basic coverage to people not covered by the employer mandate or Medicaid. CPS data indicate that Hawaii has the lowest uninsurance rate in the Nation--8.3 percent of the nonelderly population is uninsured in Hawaii, compared to 15.8 percent for the Nation as a whole.

Massachusetts has folded its former CommonHealth program into its statewide Medicaid waiver, MassHealth, which was approved by HCFA in April 1995. CommonHealth required disabled adults or the parents of disabled children to purchase health care, if available, from an employer, and provided wraparound coverage on a sliding scale basis. If no employer insurance were available, CommonHealth provides coverage. CommonHealth addresses the health needs of persons with disabilities which are greater than those for most other populations. In addition, Massachusetts offers tax credits for employers who have historically not offered health insurance to their employees and subsidizes the employee share of the premium.

Another instance in which the barrier to health insurance is eliminated for people with disabilities is in the Veterans' Disability Program. Recipients of veterans disability compensation benefits retain both their cash benefits and their health coverage when they return to work. Both veterans with service-connected disabilities and those receiving veterans pensions are given priority for free hospital care in the VA system. Free VA outpatient care is available to those with service connected disabilities and to veterans receiving pensions with incomes below a certain level.

This project will look at employment data from these two States and the VA. The investigators will also seek out any other relevant data sets with information on health insurance and employment of people with disabilities. Analyses of relevant national survey data and international data will also be conducted.

The project began in September 1996 and is expected to be completed in July 1997.

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AN EXPLORATORY STUDY OF BARRIERS AND INCENTIVES TO IMPROVING LABOR FORCE PARTICIPATION AMONG PERSONS WITH SIGNIFICANT DISABILITIES

Final Report Summary

Prepared under HHS Contract No. 100-0012 for:

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VALUE HEALTH

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FOREWORD

The Office of Disability, Aging, and Long-Term Care Policy (ODALTCP) is a newly created office within the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the U.S. Department of Health and Human Services (DHHS). ASPE provides data and analysis to inform policy making in the DHHS, and ODALTCP has a mandate to expand ASPE's research agenda on persons with disabilities of all ages, focusing on health care services and long-term supports. ODALTCP supports a number of disability-related research projects including research on independent living, long-term supports, and health care services for people with disabilities.

In August 1994, ODALTCP contracted with Lewin-VHI to prepare a summary report on existing research on "Barriers and Incentives to Improving Labor Force Participation Among Persons with Significant Disabilities," in an effort to update policy experts in the DHHS and to guide our research agenda on supports needed by people with disabilities who wish to gain and maintain employment. The resulting report covers a broad and continually expanding literature on the employment of people with disabilities. It reviews the general research literature and addresses several topics of special interest to the Department. Each review concludes with recommendations for additional policy relevant research.

The first chapter of the report gives a broad overview of the project, and is being reproduced separately for a general mailing to interested persons. The full report is approximately 300 pages in length. It can be obtained by contacting:

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A New Paradigm

This report on the research on "Barriers and Incentives to Improving Labor Force Participation for People with Significant Disabilities" comes at a time of rapid change in how disability is considered in American society. Over the last several decades, there has been a steady trend toward inclusion and participation by people with disabilities in mainstream institutions. In 1990, a strong movement among people with disabilities and their advocates resulted in the Americans with Disabilities Act which supports the full participation of people with disabilities in society and mainstream social institutions, including educational institutions, community housing, and the competitive work force. Advocates in the disability movement refer to these changes as a significant "paradigm shift" in how people with disabilities view themselves and how society as a whole considers disability. The old paradigm viewed disability as a social problem and disabilities themselves as conditions to be cured. The new paradigm views people with disabilities as people with problems that can be solved if society provides sufficient support and access. In many instances, disabling conditions must be accepted as long-term and provision made for dealing with them so that individuals can lead full and participatory lives to the extent possible.

The new paradigm will surely lead to greater participation and independence for some people with disabilities. At the same time, the new paradigm may not reflect the situations and concerns of certain segments of the population of people with disabilities. Those who have chronic illnesses which steal strength and energy for performing work and those with functional limitations who because of lack of education or updated skills or downturns in the business cycle can be expected to have a difficult time gaining and maintaining employment. Research needs to continue to inform us about the conditions and needs of people with disabilities.

The chapters of this report reflect the "paradigm shift" with their emphasis on such supports as personal assistance services, assistive technology, and integrated programs designed to help enable people with significant disabilities to enter the competitive job market. It is clear that little research has addressed many of these issues, while a great deal of research has focused on overall trends in labor force participation by people with disabilities, on trends in receipt of disability-related public benefits, and on patterns of work by those receiving benefits.

Future Research

Future research on work and disability faces several challenges. Although research on labor force participation by people with disabilities is a well-developed area with large-scale studies and major texts, research still suffers from lack of consistent definitions and detailed information about people's conditions and circumstances. Many studies, including many of the major national surveys, continue to rely on self-reported work limitation as a measure of disability in labor force studies. The work limitation question is an imprecise measure of disability and is mixed with the respondent's view of the labor market and his or her employability.

Traditional conceptual models of labor force participation need adjustment when the focus is on people with significant disabilities. The supports needed by those with severe disabilities should be built into models of individual choice. In addition, the amount of knowledge people with disabilities have about sources of support should be taken into account when trying to understand the factors associated with labor force participation.

Not only are conceptions of disability changing, but the population of disabled people is changing. For instance, there are many more disabled people who have no work experience. While in the past, research focused on disabled older workers and those who became disabled on the job, new research needs to focus on the increasing numbers of younger people who are disabled and who have never worked.

As encouraged in this report, research needs to give attention to the effects on disabled persons of major social policy reforms and reform proposals. Welfare reform research needs to recognize that a significant proportion of welfare recipients have disabilities. The far reaching changes in health care financing and delivery beg for research on the effects on people with disabilities of managed care systems in both the public and private sectors. ASPE is supporting a number of studies of managed care serving people with disabilities, but, as is also encouraged in this report, more research is needed on the effect of health insurance provisions as they relate to the employment of people with disabilities. ASPE has also developed and supported a major national survey of people with disabilities (National Health Interview Survey Disability Supplement) which will become a valuable resource for research on many topics related to disability.

This report pulls together many findings from the recent literature on work and disability. We hope it will contribute to the further development of policy-relevant research aimed at explicating and improving the lives of people with disabilities.

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June 1995

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ACKNOWLEDGMENTS

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The draft report greatly benefited from the advice and suggestions received from the members of its Advisory Group at the Group's initial meeting and in follow-up communications from individual members. The Advisory Group members are: Richard Burkhauser (Syracuse University), Nancy Eustis (ASPE), Don Galvin (Commission on the Accreditation of Rehabilitation Facilities), Mary Harahan (ASPE), William Kiernan (Institute for Community Inclusion), Madeleine Kimmich (Human Services Research Institute), William Mann (SUNY-Buffalo), Greg March (U.S. Department of Education), Leo McManus (Social Security Administration), Virginia Reno (National Academy of Social Insurance), Robyn Stone (ASPE), Bob Williams (Administration for Developmental Disabilities), and Barbara Wolfe (University of Wisconsin).

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Each of Chapters II through VI was prepared by a team of authors. David Stapleton and Gina Livermore wrote Chapters II (literature review) and V (welfare study), with the assistance of Kimberly Dietrich, Gilbert Lo, and Jeffrey Furman; Lisa Alecxih wrote Chapter III (PAS study), with the assistance of Steven Lutzky and Andrea Zeuschner; Kevin Coleman wrote Chapter IV (AT study), with the assistance of Gilbert Lo; and Burt Barnow wrote Chapter VI (case studies of selected programs), with the assistance of Gilbert Lo.

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FINAL REPORT SUMMARY *

A. INTRODUCTION

Over the last several years, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the U.S. Department of Health and Human Services (DHHS) has been pursuing a number of research efforts to better understand the participation of persons with significant disabilities in competitive employment. As part of this effort, ASPE's Office of Disability, Aging, and Long-Term Care Policy (ODALTCP) has contracted with Lewin-VHI to conduct an exploratory study of the barriers that impede and incentives that encourage the labor force participation of persons with significant disabilities. Of particular importance is how DHHS programs and policies can interact with other federal agency, state, and private sector activities to help or hinder employment. DHHS programs include the health care programs (Medicare and Medicaid), and the social service and aid programs including those of the Administration for Children, Youth and Families (ACF), the Administration for Developmental Disabilities, the Administration on Aging, and the research and service programs of the Public Health Service. Until March 1995 the Social Security Administration (SSA) was part of DHHS. The programs of DHHS and SSA remain strongly linked. The objective of the project is to inform and provide direction to ODALTCP's future research agenda for policy-relevant studies on issues under the purview of these programs.

Employment opportunities for persons with significant disabilities are an important focus for public policies related to social service, income maintenance, and health insurance. Many people with disabilities want to work. Their participation in the labor force contributes to their independence and integration into society, provides tax revenues, and reduces income support program outlays. At the same time, many persons with disabilities are not able to work or to find work. Others may choose to pursue non-market activities rather than engage in work.

People with significant disabilities often need support of some sort to engage in work, including health care, vocational rehabilitation, personal assistance services,

* The table of contents for the entire report is in Appendix A of this docu

assistive devices, and employers accommodating their work environment and duties. How best to provide this support is an ongoing concern for policy makers.

This report contains the findings from five separate exploratory studies on issues related to the labor force participation of persons with disabilities. The report draws primarily from published studies in order to identify areas of research with conflicting claims and areas in which little or no research has been conducted. Based on the review of this body of research, we make recommendations for needed additional research in the specific areas studied. The studies included in this report examine:

- various aspects of the competitive labor market for persons with disabilities, including factors affecting the labor supply of and demand for disabled workers;
- the use of personal assistance services and assistive devices by disabled workers;
- the impact of welfare reform strategies on persons with disabilities; and
- selected programs that offer comprehensive services to help persons with significant disabilities participate in competitive employment.

In this summary report, we first describe the conceptual framework used to approach each of these studies. We then provide an overview of the report and summarize the findings from each of the studies. We conclude this report with a discussion of the need for additional research to support the analysis and formulation of government policies that may have an impact on the employment of persons with disabilities.

B. CONCEPTUAL FRAMEWORK

In studying the factors that promote and discourage labor force participation among persons with disabilities, it is useful to define a framework in which these factors may be organized, analyzed, and evaluated as to their ability to be addressed by public policy. Below, we describe the conceptual framework used in this report, discuss the policy options implied by this framework, and briefly note some of the issues associated with defining "disability" in the study of the labor force participation of persons with disabilities.

1. An Economic Perspective

We approach this project from an economic perspective. That perspective emphasizes the role of individuals making choices between various alternatives as key to understanding behaviors such as labor force participation. A well developed theory of the labor market exists in the economics literature, and it is this theory that forms the conceptual framework and organizing scheme we use to present information on various factors that act as either barriers to or incentives for work among persons with disabilities.

The basic economic theory of labor markets posits that the amount of labor individuals are willing to supply will depend on their preferences and an hours/earnings tradeoff. Individuals must choose how to allocate their limited time between (market) work activities and all other activities. Non-work activities are euphemistically called "leisure", but include all forms of unpaid work and self-care. Market work is necessary to obtain earnings, which are used to purchase goods and services. Therefore, the allocation of hours to market work and other activities represents a choice based on the individual's preferences and the tradeoff between the consumption of goods and services and the consumption of leisure.

Economic theory also posits that the amount of labor firms demand will be dependent upon the demand for the firm's product, the productivity of labor (and other inputs), the wage rate and other costs firms must incur to hire labor, and the costs associated with other inputs that are substitutes or complements to labor. The textbook profit-maximizing firm will demand that amount of labor at which the value of the additional output produced by the last worker hired is just equal to the cost of hiring that worker.

This economic view of how individuals decide how much labor to supply and how firms decide how much labor to demand is simple, but it forms a basic framework in which predictions may be made and hypotheses may be tested. This basic framework may also be modified and enhanced with details specific to the issues under study; in this case, to the labor market for persons with disabilities.

For persons with disabilities, the tradeoff between work and leisure is likely to be influenced by the availability of other sources of income in the absence of work

(disability benefits or spousal earnings, for example), availability of health insurance, which is often contingent on employment or public program participation, and the wage rate. Wage rates for persons with disabilities may be affected by the disability itself, as impairment may reduce productivity, influence employer perceptions of productivity, or be a source of discrimination by employers.

Persons with disabilities may also be required to incur additional expenses in order to participate in the labor market, such as the costs of rehabilitation, special transportation, equipment, or personal assistance services. All else equal, these additional work-related expenses will make labor force participation less attractive or even render the net gains to working negative, unless paid by a third party.

In addition, the labor/leisure tradeoff and decision to work for persons with disabilities may be affected if disability reduces the number of hours available for work and leisure. Disability has been characterized as a condition that "steals time" (Oi, 1991). Persons with disabilities may require more time for personal care or medical care activities and, thus, have less time available for work. Assistance that helps reduce the time required for non-work activities, such as housework, may increase the time available for work and, hence, increase labor force participation.

The labor supply of persons with disabilities is in part determined by individual preferences, which are themselves likely to be influenced in a variety of ways by the presence of a physical or mental impairment. For example, impairments often steal time by reducing life expectancy. Other things constant, it seems likely that the shorter an individual's life expectancy, the less the individual will want to work today.[1]

The demand for workers with disabilities by firms will depend on the productivity of these workers and the costs the firm must incur to hire them. If disabled workers require special accommodations in order to work, the costs of these accommodations will be taken into account when deciding whether or not to hire workers with disabilities. In theory, if firms do not believe that a worker's compensation plus the cost of their investment in accommodations or their support for developing the worker's capabilities will be entirely offset by the worker's productivity, accommodation will not occur and

[1] Although we have characterized the effect of reduced life expectancy on labor supply as an effect on preferences, from a lifetime perspective, reduced life expectancy can be viewed as a tightening of a lifetime time constraint. From this perspective, it seems likely that most people would spread their loss in expected lifetime across all activities, including work.

workers with disabilities will not be hired. Economic theory predicts that, in a competitive labor market, if the government imposes labor regulations or a benefit mandate on employers, workers will bear the burden through lower wages and employment in the long-run. Regulations, including the Americans with Disabilities Act (ADA), may reduce the ability of employers to shift costs onto workers, but if the cost of a regulation to employers is high, enforcement of the regulation is likely to be difficult.

Institutional policies and practices associated with the labor market will also affect the demand for workers with disabilities. A forty-hour work week, wage scales that do not adjust for productivity, and other occupational rigidities may reduce the likelihood that persons with disabilities are hired. Some regulations may have a positive impact on employment and wages by reducing or eliminating such rigidities.

Changes in the macroeconomy (business cycles and economic restructuring) affect the demand for disabled workers just as the do the demand for other workers. Workers with disabilities, however, may find it more difficult to adjust to macroeconomic change than those without disabilities. Their disabilities and, in many cases, low skills may make it more difficult to find a new job, especially if available jobs require skills that they don't already have. Unemployment insurance and employment and training programs that have been designed for workers without disabilities may be inadequate for the needs of those with disabilities.

In addition to the principal players in the labor market (individuals and firms), third parties have a direct or indirect interest in the lives of persons with disabilities and the behavior of the third parties may encourage or discourage employment of those with disabilities. There is a broad social consensus that persons with disabilities deserve, or even have a right, to assistance from others. Such assistance comes from many sources including other family members, charitable organizations, and the various levels of government. The amount of assistance is often conditioned on the perceived financial need of the disabled person. Employment earnings are likely to reduce perceived need, thereby reducing assistance – an "implicit tax" on earnings that may discourage work. At the same time, however, those who provide assistance have an interest in encouraging employment in order to reduce their own financial obligation. Thus, availability of public and private disability insurance benefits and welfare payments to a disabled individual may discourage the individual from working, but at

the same time those who pay the benefits have a financial interest in encouraging work.

Other examples of interested third parties are state and local governments, which may encourage those with disabilities to obtain federal disability and health benefits to reduce state and local expenditures for income support and health care, and health care providers, who may encourage their patients with disabilities to apply for federal income support and health benefits. These actions may discourage employment because eligibility for federal benefits is conditioned on financial need.

2. Defining Disability

In studying the barriers and incentives to labor force participation of persons with disabilities, it is necessary to define the concept of "disability" being used. Disability is a multi-faceted concept that represents the relationship between an individual and his or her environment. It typically refers to a limitation in functioning that stems from the presence of a physical or mental impairment. The definition becomes complex, however, because an individual who is limited in his or her ability to function in one environment may not be limited when components of that environment are modified or when functioning in alternative environments. In addition, disability status may be dependent on the skills or abilities an individual had prior to the onset of impairment and how the impairment has reduced or destroyed those abilities. For example, a concert pianist who loses her hand might be considered to have a work disability, whereas a singer who loses his hand may not be considered work disabled. Finally, a disability may itself constitute a barrier to the acquisition of skills.

For the most part, this report focuses on the ability of impaired individuals to adapt to the competitive labor market environment, taking that environment as given. Little consideration is given to a symmetric issue about which much less is known, namely the ability of the economy to provide employment opportunities to those with impairments.

The definition of disability used in the Americans with Disabilities Act serves as a useful starting point for defining disability:

"*Disability* means with respect to an individual (1) a physical or mental impairment that substantially limits one or more of the *major life activities* of such individual, (2) a record of such an impairment, or (3) being regarded as having such an impairment."

"*Major life activities* means functions such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working" (Americans with Disabilities Act, 1990).

Because the focus of this report is the labor force participation of persons with disabilities, disability is viewed from the perspective of an individual's capacity to engage in work. This perspective in no way simplifies the concept of disability, nor its measurement in national surveys used to analyze work disability issues. In this report, we review studies of disability that use a variety of sources of information and data on disability. We therefore do not propose a standard definition of "disability", but rather, take care to describe the definition of disability used in each study whenever possible.

The major national surveys frequently used to study disability and labor force participation are the National Health Interview Survey (NHIS), the Current Population Survey (CPS), and the Survey of Income and Program Participation (SIPP). The NHIS uses activity limitations to define disability (inability to engage in major activity, limitation in amount or kind of major activity, and limitation in non-major activities). The CPS also uses self-reported activity limitation as an indicator of disability, but asks respondents if they are limited specifically in their ability to work, rather than a more general question concerning limitations in any major activities. The NHIS also uses functional limitations (need for personal assistance in activities of daily living and instrumental activities of daily living), and/or the presence of chronic health conditions as a basis for defining and measuring disability, as does the SIPP. A description of these and other surveys that may be used to study disability issues is presented in Exhibit I at the end of this summary report.

C. OVERVIEW AND SUMMARY

In this section we summarize the findings from the studies conducted for this project:

- the literature review on various aspects of the competitive labor market for persons with disabilities;

- the use of personal assistance services and assistive devices by disabled workers;

- the impact of welfare reform strategies on persons with disabilities; and

- selected programs that offer comprehensive services to help persons with significant disabilities participate in competitive employment.

We begin each subsection with a description of how the study was conducted, and then state the major findings. Citations refer to studies that form the basis for the findings. An expanded discussion of each finding appears in the full report.

1. Literature Review

If the employment of persons with disabilities is a desirable social objective, then a better understanding of the factors affecting the labor market for disabled workers is a necessary starting point for the development of public policies to promote their employment. Therefore, we began our study with a review of the literature that describes the extent of labor force participation by persons with disabilities and examines the major factors believed to affect the labor supply of persons with disabilities and the demand for disabled workers by firms. More specifically, we review: the historical trends in labor force participation of persons with disabilities; the characteristics of workers and working- age persons with disabilities; the earnings of workers with disabilities and evidence of wage discrimination; the impact of income support programs on labor supply; the availability of health insurance and incentives associated with health insurance contingent on program participation; the effect of business cycles and industrial restructuring on the employment of persons with disabilities; and workplace accommodations provided by employers. The principal findings of the literature review include:

Trends in the Labor Force Participation and Earnings of Persons with Disabilities

- The labor force participation of men, both with and without disabilities has been steadily declining since the 1970s; the largest decline has been among disabled men age 55-64 (Yelin, 1993).

- The labor force participation of women, both with and without disabilities has been increasing dramatically for those without disabilities and steadily for those with disabilities since the 1970s. The greatest increases were experienced by women age 18-44 (Yelin and Katz, 1994a).

- The percent of disabled workers who are employed full-time has been declining and rates of part-time employment have been increasing. In contrast, full-time employment among workers without disabilities has remained relatively constant, while part-time employment has increased, although not by as much as for workers with disabilities (Yelin and Katz, 1994b).

- In general, there was a substantial decline in the earnings of workers with disabilities relative to those of workers without disabilities during the 1980s (McNeil, 1989). There are many possible explanations of this trend, but we have not found any study that attempts to determine the relative importance of each one.

Characteristics of Disabled Workers

- Workers with severe disabilities are more likely to be older, female and black or Hispanic, and to have less education than workers without severe disabilities (NIDRR, 1992).

- Workers with severe disabilities experience higher unemployment and lower earnings than workers without severe disabilities and are more likely to be employed in service or craft occupations or to be self-employed (NIDRR, 1992) (Mathematica Policy Research, 1990).

- Older workers who become disabled are substantially less likely to return to work, less likely to recover from disability, and equally likely to fall into poverty as younger individuals following the onset of disability (Burkhauser and Daly, 1994b).

- A recent study examined the employment changes among workers between the ages of 51 and 61 after the onset of disability. Subsequent to the onset of a disability, about one-fourth of workers change employers, about one-fourth exit from the labor force, and approximately half remain with their original employer. Within this group, labor force withdrawals were positively associated with age and negatively associated with education (Daly and Bound, 1994).

International Comparisons

- We find little population-based cross-national research on the labor force participation rates of persons with disabilities. Most cross-national comparisons tie the definition of disability to receipt of disability transfers. An exception is a comparison of labor force participation in the U.S. and Germany using national sample data. The study shows that the overall participation rates are approximately the same in the two countries, but that working age men with disabilities in Germany are more likely to be working full-time and receive higher earnings than their U.S. counterparts (Daly, 1994).

- The U.S. spends less in income support per person with a disability than Germany, Sweden, and the Netherlands. Within age groups, the U.S. had the lowest rates for those aged 45 to 64, but the German rate was by far the lowest for those aged 15 to 44: just five per thousand compared to 23 per thousand in the U.S. The study attributes the low German rate for young workers to both

the rehabilitation focus of German policy and the relatively low income replacement rate for younger transfer recipients (Aarts and DeJong, 1994).

- Other industrialized countries, particularly those of western Europe, have a variety of incentives and supports to aid the labor force participation of workers with disabilities. Among the types of programs supported are disability allowances provided regardless of employment status, hiring quotas, vocational rehabilitation, constant attendance allowances, wage subsidies, job placement services, sheltered employment, payment for work-related assistive technology, and universal health insurance (Aarts and DeJong, 1994) (Zeitzer, 1994).

Income Support Programs and Their Effect on Labor Supply

- Four of the major programs (Supplemental Security Income (SSI), Veterans Pensions, Aid to Families with Dependent Children (AFDC), and General Assistance (GA)) are "means-tested" – eligibility requires that the individual's or household's income and other resources fall below specified limits. Although special provisions of these programs have been designed to encourage work, in general any earnings are implicitly "taxed" by a reduction in benefits.

- The other four major programs (Social Security Disability Insurance (DI), Workers Compensation (WC), Veterans Compensation (VC), and Private Disability Insurance (PDI)) are designed to provide insurance benefits to replace earnings for workers (including members of the armed forces) who suffer significant reductions in earnings due to a disability. DI and PDI provide benefits regardless of the cause of disability, and WC and VC provide benefits for disabilities caused by a work-related injury. With the exception of VC and, in some cases, WC, all benefits are lost if the recipient returns to work at a sufficiently high level of earnings.

- Some individuals qualify for benefits from multiple programs, and the work disincentive from the combined programs may be substantially greater than that from just one of them; it is the combined incentive that is relevant. An important example is that the work disincentive associated with DI is very low for a worker with high earnings because DI benefits replace a low share of his or her earnings, but combined benefits from DI and PDI may replace as much as two-thirds of earnings.

- With some exceptions, individuals who qualify for income payments under these programs automatically qualify for medical benefits, and the value of these benefits is likely to be considerable for a person with disabilities – perhaps larger than the income benefit itself.

- The large, long-term decline in the labor force participation rates of men between the ages of 45 and 64 is mirrored by the increase in the percentage of men in this age group who are DI beneficiaries (Parsons, 1980). A variety of evidence indicates that the increases in the generosity of DI benefits relative to earnings does account for a significant share of the decline in older male labor force participation rates, but that much of this decline is due to other factors (Haveman and Wolfe, 1984) (Haveman, Wolfe, and Warlick, 1987) (Bound, 1989) (Kreider, 1994). The share due to DI benefits has not been precisely estimated. This literature does not include significant analyses of the effects on

women or younger men. The role of private disability insurance, alone and in combination with DI, has also been largely ignored.

- The substantial literature on Worker's Compensation finds conclusive evidence of the effect of WC benefits on work effort (Butler and Worall, 1985) (Worall et al., 1988) (Johnson and Ondrich, 1990) (Krueger, 1990) (Meyer et al., 1991) (Currington, 1993). The strength of the estimated effect depends on the nature of the program and the methodology used to estimate it. We have not found a study that carefully reviews all of the WC literature and examines the relationships between findings, the nature of the program, and methodology. The findings of the studies reviewed for this report suggest that the substantial increases in generosity of WC that occurred following federal legislation in 1972 may have contributed significantly to the decline in labor force participation of older men, but to our knowledge, no one has attempted to estimate the magnitude of this effect.

Health Insurance Coverage and Incentives to Work

- Working-age persons with disabilities are less likely to have private insurance and are more likely to receive public health insurance through Medicare and Medicaid than the overall population (LaPlante, 1993).

- Working-age persons with disabilities use substantially more health care services than persons without disabilities (Lewin-VHI, 1995a).

- Average health care expenditures for those with disabilities are more than seven times the average of those for persons without disabilities (Lewin-VHI, 1995a).

- There are compelling reasons to believe that high health care costs and access to health insurance discourage labor force participation and encourage participation in SSI and DI, but we have found no research that examines the effect of these factors on labor force participation or program participation of persons with disabilities. Research on the work disincentives associated with high health care costs and access to public and private insurance has focused on how the availability of Medicaid affects the labor supply and AFDC program participation of young mothers. Although evidence of work disincentives is mixed, the more recent and methodologically superior AFDC studies find statistically significant and substantial effects (Blank, 1988) (Winkler, 1990) (Moffit and Wolfe, 1992) (Yelowitz, 1994).

The Effect of Impairment on Earnings

- Numerous studies have demonstrated the impact of poor health on earnings, both through its impact on hours of work and on wages (Luft, 1975) (Bartel and Taubman, 1979) (Chirikos and Nestel, 1981). Fewer studies, however, have focused specifically on the experience of persons with severe disabilities or on the differences across individuals with different types of impairments.

- A recent study that focuses on disability found that wage offers to individuals with specific impairments range from 74 percent to 101 percent of those to individuals without impairments, depending on impairment and holding other important characteristics of the worker constant. This study also shows that wage losses from specific impairments vary by gender: limitations to mobility and strength reduce male wages more, and limitations to sensory capacities and appearance reduce female wages more. The methodology used to develop these estimates is complex and uses strong assumptions; hence these results should be viewed with some caution (Baldwin, Zeager, and Flacco, 1994).

- A study that compares the earnings of persons before and after the onset of disability indicates that women and persons with less than a high school education experience the largest declines in average earnings following the onset of disability (Burkhauser and Daly, 1994b).

Business Cycles and Industrial Restructuring

- There is evidence that cyclical changes in the economy affect the labor force participation of persons with disabilities to a greater extent than that of persons without disabilities (Yelin and Katz, 1994a). Applications, and to a lesser extent, awards, for DI and SSI benefits are also sensitive to the business cycle (Lewin-VHI, 1995b).

- Economic restructuring reduces good job opportunities for disabled workers with low skills, but may increase opportunities for those with technical expertise. To date, however, there are no estimates of the magnitude of the effects that economic restructuring has on workers with disabilities.

Wage Discrimination Against Persons with Disabilities

- Recent wage discrimination studies find that male and female workers with disabilities receive wage offers that are, on average, 86 and 90 percent, respectively, of those made to workers of the same gender without disabilities and with comparable levels of measured productivity. These studies differ from studies of the effect of impairment on earnings because they attempt to control for productivity. It could be, however, that a substantial portion of the wage differences reported is due to unmeasured differences in productivity (Baldwin and Johnson, 1992a, 1992b).

Workplace Accommodations by Employers

- Only two national data sets have collected information on work accommodation. The 1978 Survey of Disability and Work and the 1991 Health and Retirement Survey. These surveys show that between one-fourth and one-third of workers who become impaired are accommodated following the onset of their conditions (Burkhauser, Butler, and Kim, 1994) (Daly and Bound, 1994).

- The Americans with Disabilities Act (ADA) may be limited in its ability to increase the prevalence of accommodation for economic reasons. Costs of accommodation would be expected to rise and the ability of employers to shift those costs onto workers will be reduced under the ADA (Chirikos, 1991). There is, however, no empirical research currently available to support this theory.

- Work accommodation has been shown to increase the length of time a worker will remain at his job following the onset of a limitation (Burkhauser, Butler, and Kim, 1994).

- Among persons who continue to work following the onset of disability, most (66 percent) remain with their current employer. Those who stay at the same job are more likely to be accommodated than those who change employers; however, those who change jobs are significantly more likely to experience a reduction in job demands (Daly and Bound, 1994).

2. Personal Assistance Services and Assistive Technologies

We examined the literature on the use of personal assistance services and assistive devices, respectively, and evidence of their potential impact on labor force participation of persons with disabilities. Information on the types, costs, mode of financing, and place of use (home or workplace) is presented in order to identify use-related issues that affect the propensity of individuals with disabilities to work or that influence the productivity of workers with disabilities. The most important findings are:

Use of PAS by Workers

- In our review of existing research, we found that very little is known about the use of personal assistance services by workers with disabilities, and even less is known for those with severe disabilities. We cannot determine the prevalence of the use of PAS in the work place or if the provision of PAS at home enables people to join the work force. We have difficulty assessing how many people are using personal assistance services, even on a national level.

- The research to date has not adequately addressed the effectiveness of potential public policy changes. The research we found had been conducted or commissioned by a small number of research organizations that also have an advocacy orientation. These analyses tend to be hampered by insufficient

sample sizes, unrepresentative samples, inadequate measures of disability, and limited detail on personal assistance services required and received.

- The information available suggests that a relatively small proportion (less than one million) of the working-age population needs PAS. Data from the 1990/1991 Survey of Income and Program Participation (SIPP) revealed that 2.6 percent of the working age population or 3.7 million people (between 21 and 64) needed personal assistance with at least one activity of daily living (ADLs) or instrumental activity of daily living (IADLs) (McNeil, 1993). Of these people, 20.6 percent, or 763,000, were employed. Analyses of data from the 1987 National Medical Expenditure Survey (NMES) conducted by Lewin-VHI revealed that 1.3 percent of the population under 65 needed assistance or supervision with one or more of their ADLs (see Appendix 1 for a breakdown of PAS utilization in the general population).

Access to PAS Among Workers

- For workers who do receive formally provided personal assistance services, funding is not likely to be provided by public sources (Litvak, 1994). Most publicly funded programs that provide PAS exclude people who could be employed, for several reasons. First, many public PAS programs have strict means-testing that acts as a disincentive to work. Working may mean that the person with a disability would have to purchase services on their own (Nosek, 1990). Second, some PAS programs, such as those funded by the Older Americans Act, require that the PAS recipient be elderly. This may partially explain why the PAS population tends to be concentrated more among the elderly (Litvak, 1991). Elderly PAS users are probably much more likely to be retired and not working. Third, many programs require strict limitations in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) or that the person be at risk for institutionalization, so only those with very severe disabilities are eligible. Such persons are the least likely to be employed (Louis Harris & Associates, 1986, 1994; McNeil, 1993; World Institute on Disability and Rutgers University Bureau of Economic Research, 1990).

- Public programs that do minimize work disincentives allow: (1) recipients to employ their own assistants, (2) encourage people to obtain management training through Independent Living Centers, (3) allow for 24-hour-a-day services, and (4) have no income limit or have an income, asset and allowable deduction limit generous enough to encourage individuals to work.

- Massachusetts and Pennsylvania have programs that provide PAS which attempt to eliminate work disincentives. Massachusetts allows for a Medicaid buy-in, that is individuals with income above the financial eligibility criteria can purchase Medicaid coverage on a sliding fee scale. Pennsylvania, which uses Social Services Block Grant Funds to support PAS, does not impose an income or resource eligibility criteria (poverty level enrollees pay no fee and others pay on a sliding scale).

- We know very little about the extent to which private employers compensate for this lack of publicly funded assistance by providing assistance themselves. Two studies suggest that a substantial number of companies make some kind of accommodation for people with disabilities (Berkeley Planning & Associates,

1981; Louis Harris & Associates, 1987). However, we do not have information on what types of personal assistance were being provided, who is providing this assistance, who pays for it, and what role it plays in allowing the person to enter and remain in the work force.

- The recipient's ability to pick and choose which services will be provided may determine how successful the services are in assisting the person to work. Persons with disabilities pay for much of their assistance themselves or receive specified services through public programs which are often means-tested. Although cash benefits or vouchers provide ultimate consumer control (a major theme among groups within the disability community) very few public programs offer participants the opportunity to receive cash benefits (Litvak, 1991a). Several European countries provide cash benefits that give workers with disabilities greater discretion for the use of PAS to assist in their employment. Issues regarding accountability for and efficient use of public funds are often raised as reasons to limit consumer control.

Use of Assistive Technology by Workers

- The financing of AT for workers with disabilities is fragmented – there is no central source of public or private funds for AT for workers with disabilities. The most important source of funding is private, out-of-pocket expenditures made by the users of AT and their families. Unfortunately, many potential users of AT and their families lack the resources needed to purchase AT. Public funding is divided among numerous federal and state programs, each with its own potential clientele, types of AT funded, and restrictions on the use of AT funding. The federal government has also passed a considerable amount of legislation, including modifications to the tax code, that encourage or even mandate the funding of some AT by third parties.

- There is no "typical" AT user – AT is often commercially available products used by workers with and without significant disabilities and impairments. AT can help workers with numerous and/or severe physical impairments function on and off the job, but AT is less successful in helping workers with mental impairments cope with their job requirements. Finally, AT is being designed that provide workers with disabilities with "access" in the workplace, rather than "adapting" the workplace to meet the particular needs of these workers. (DeWitte, 1991), (Ward, 1992), (NCD, 1993), (Tan and Horowitz, 1993), (Beattie, 1991), (Scaddon, 1991), (Vanderheiden, 1991a), (Hauger, 1991a), (Kauppi and Dzubak, 1992), (Phillips and Zhao, 1993), (Mann ard Svosai, 1994), (NIDRR, 1992), (Horstmann, Levine, and Kett, 1990), and (Vagnoni and Horvath, 1992).

- Careful selection of appropriate AT and training in its use is essential – for AT to be most useful, there must be careful communication between workers with disabilities, their employers, and AT professionals to define the requirements of each job, the abilities and limitations of each worker, and appropriate AT and related services allowing workers with disabilities to meet their job requirements. To insure success, workers with disabilities need training in the use of AT, and employers and AT professionals need to provide continued technical assistance and to conduct periodic reassessments of the needs of workers with disabilities. (Phillips, 1989), (Steinfeld and Angelo, 1992), (Kimmel, Ourand, and Wheatley,

1992), (Lysaght and Hurlburt, 1992), (ABLEDATA, 1992), (The President's Committee on Employment of Persons with Disabilities, 1994), and (NARIC, 1993a).

- There are many unmet needs and other barriers limiting the use of AT – potential users of AT on the job often cannot afford to buy these items themselves, and other sources of funding are often limited. Many workers with disabilities are also unaware of products that now exist that can assist them on the job. Many users of AT are not trained in the use of their AT, while others feel that using some AT may isolate them from their coworkers and other members of society. (Enders, 1990), (NCD, 1993), (Phillips, 1989), (Ward, 1992), (Laplante, Hendershot, and Moss, 1992), (Weaver, 1991), (Dean and Dolan, 1993), (GAO, 1993), (Horstmann, Levine, and Kett, 1990), (Vanderheiden, 1991a and 1991b).

3. Impact of Welfare Reform

The Aid to Families with Dependent Children (AFDC) program is a means-tested income support program that provides cash benefits to needy children deprived of parental support because a parent is absent from the home, incapacitated, deceased, or unemployed. Support may also be provided to others in the household, and is usually provided for the caretaker of such children. AFDC recipients are automatically eligible for Medicaid insurance coverage. Each state determines the eligibility requirements (within federal guidelines) and benefit levels. The program is financed through a combination of state and federal funds, with federal funds covering from 50 to 80 percent of benefit costs and 50 percent of the administrative costs associated with the program (Committee on Ways and Means, 1994).

The AFDC program has been the target of many proposed welfare reform strategies designed to promote labor force participation of recipients and decrease AFDC caseloads. In 1988, the passage of the Family Support Act introduced many of these reforms. The Act established the Job Opportunity and Basic Skills (JOBS) program which is to provide education, training, and job placement for AFDC recipients. The Family Support Act also established "transitional Medicaid benefits" under which Medicaid coverage may be extended for twelve months to families who leave the AFDC rolls due to increased earnings.

Welfare reform strategies are again being debated and proposed at both the federal and state levels. President Clinton's proposed Work and Responsibility Act limits the receipt of AFDC to two years for most recipients, increases the percentage of recipients who must participate in the JOBS program, and restructures benefits to

increase work incentives. Many states are currently conducting welfare demonstrations that incorporate one or more of these proposed reforms. Proposals that would presumably make it easier for states to implement reforms without federal approval are also being debated in Congress.

We investigated the impact of welfare reform strategies designed to encourage labor force participation of AFDC recipients with disabilities and recipients with disabled children. This is an important issue given the finding that approximately one in five women aged 15 to 45 on AFDC have some type of impairment, and approximately one in eight have a child with a disability (Adler, 1993). We reviewed the literature on labor force participation of AFDC recipients, the prevalence of disability in the AFDC population, and on the relationship between work incentives, health status, and labor force participation of AFDC recipients. The key findings of this review include:

Findings from General Studies of AFDC

- The findings from studies of the labor supply effects and work incentives associated with the AFDC program indicate: the program does have a significant negative impact on the labor supply of recipients (a reduction in hours worked from 10 to 50 percent); benefit levels negatively affect the probability of exiting AFDC; and changes in the benefit reduction rate for additional earnings do not have any net impact on the labor supply of female household heads – the increased work effort of existing recipients is offset by the decreased effort of new recipients drawn to the rolls by the change in the benefit reduction rate (Moffit, 1992).

- Studies of the duration of time spent on AFDC estimate that about 75 percent of new recipients would be affected by a two-year time limit on benefit receipt; that is, they would remain on AFDC for more than two years in the absence of an imposed limit (Ellwood, 1986). Those most likely to exit AFDC are those with higher wages, more education, and those with fewer children (Moffit, 1992).

- Studies of the impact of training programs on the earnings of AFDC recipients show that such programs have a positive effect on earnings and that the costs associated with these programs are offset by reduced AFDC payments after two to five years. These studies also show, however, that the earnings gains do not typically lift families out of poverty and that training programs are least successful in raising the earnings of long-term AFDC recipients (Gueron and Pauly, 1991).

Findings with Respect to Recipients with Disabilities

- Studies of the prevalence of disability in the adult AFDC population show that 11 percent have a disability that is work limiting, and 19 percent have a functional impairment. The prevalence of disability among female AFDC recipients is about twice that of women in the general population (Adler, 1993) (Wolfe and Hill, 1993).

- The findings of a study of the impact of reform strategies on AFDC recipients with health impairments indicate that the labor force participation of recipients with impairments is much less sensitive to changes in benefit levels and wage subsidies than that of healthy AFDC recipients. This study also showed that the provision of health insurance independent of AFDC participation would have a substantial positive impact on the labor force participation of both healthy and impaired recipients (Wolfe and Hill, 1995).

- A few studies have shown that recipients with disabilities do remain on the AFDC rolls longer than recipients without disabilities; however, the statistical significance of these findings has not been adequately demonstrated (Plotnick, 1983) (Shea, 1992) (Adler, 1993).

- A study that examines the likelihood of AFDC recipients with disabilities to work, to leave the rolls, and to leave the rolls with earnings found that those with disabilities are not significantly less likely to leave the rolls, but are significantly less likely to leave the rolls with earnings. This study also estimates that 30 to 40 percent of recipients with functional limitations do work at some time during the first year on AFDC (Acs and Loprest, 1994).

- Several studies demonstrate that recipients with disabilities may encounter difficulties participating in work or training programs. A recent survey of JOBS enrollees conducted at seven sites found that nearly one in five enrollees believed they were unable to engage in education or training activities because of a health or emotional problem (Office of the Inspector General, 1992) (Manpower Demonstration Research Corporation, 1994).

Findings with Respect to AFDC Children with Disabilities

- The prevalence of disability among children in families on AFDC is 5.4 percent compared to 3.7 percent in the general population (Mathematica Policy Research, 1990). Other studies have shown that 7.5 percent of AFDC families have a child with a disability (Acs and Loprest, 1994) and that female recipients with disabilities are about twice as likely to have disabled children as female recipients without disabilities (22.6 percent versus 10.4 percent) (Adler, 1993).

- The evidence of the effect of a disabled child on maternal labor supply, and labor supply of AFDC mothers in particular, is mixed. Studies including all mothers or all single mothers have generally found a negative impact of a child's disability on maternal labor supply. However, a few studies have either found no impact or, in a few cases, a positive effect on maternal labor supply (Salkever, 1982) (Mauldon, 1992) (Wolfe and Hill, 1993) (Acs and Loprest, 1994).

We also interviewed AFDC administrators in eight states to obtain information about how their programs and policies provide work incentives or disincentives for recipients with disabilities, a subject about which little is currently known. The states we selected were chosen based on the nature of their recent welfare reforms: Colorado, Florida, South Dakota, and Vermont limit the duration of benefit receipt; Iowa, Oregon, and Utah require recipients to participate in employment or training activities in order to receive benefits, and impose immediate sanctions for non-compliance; New York requires those AFDC applicants who may be eligible for Supplemental Security Income (SSI) to apply for SSI in order to receive benefits. The findings from these interviews include:

Findings from the State Welfare Agency Interviews

- Disability is a factor in determining eligibility for AFDC benefits (usually in the case of a two parent family) and in determining exemption from JOBS participation. Persons with disabilities are generally exempted from JOBS participation. Programs in most of the selected states have two sets of criteria to determine disability: one set for determining AFDC eligibility, and another, more strict set, for determining JOBS exemption. The JOBS programs has offered a setting for a more comprehensive assessment of persons with disabilities.

- Of the JOBS programs in these states, most do not have specific provisions or procedures that directly relate to participants with disabilities; however, most do provide individualized services for all participants, allowing those participants with disabilities to have any special needs addressed. It is extremely rare, though, for an individual with disabilities who is exempt from JOBS to participate voluntarily.

- The AFDC programs in these states refer individuals with disabilities primarily to SSI and Vocational Rehabilitation. Some programs also make referrals to alcohol and drug treatment centers, mental health providers, and Veterans' Affairs. Some programs require recipients to apply for other benefits (e.g. SSI, Unemployment Insurance) in order to receive AFDC benefits.

- These AFDC programs identify children with disabilities only when it is an issue for exemption from JOBS. Most of the programs do not automatically exempt recipients from JOBS if their child has disabilities and is on SSI. Recipients must show that they must care for the child full-time in order to be exempt.

- Utah's Single Parent Employment Demonstration (SPED) is unique in that it does not allow any exemptions to the program even for persons with disabilities, who are typically exempted from employment programs in other states. SPED requires all recipients to participate in some type of income-increasing activity, ranging from employment to applying for SSI benefits. SPED also allows a one-

time crisis need payment in order to help the recipient get over the crisis and prevent them from becoming recipient.

4. Descriptions of Selected Programs

For the final exploratory study, we identified and examined four promising programs that provide comprehensive employment-oriented services to people with significant disabilities. For each program, we present information on the population served by the program, the vocational-related services it offers, sources of referrals and funding for the program, and evidence of success. We also discuss the distinguishing components of each program, and offer possible explanations for their apparent success in placing their clients in competitive jobs. It should be kept in mind that these programs are not representative of all training and rehabilitation programs for people with disabilities, nor are they known to be "the best." The main findings are:

Program Characteristics and Clients

- San Francisco Vocational Services (SFVS) offers comprehensive vocational services, including evaluation and assessment of skills and interests, vocational and skills training, job search skills training, and job placement. SFVS mainly serves individuals with visual, orthopedic, or emotional disabilities, most of whom have severe disabilities.

- Career Design, Inc. (CDI) focuses on providing a variety of evaluation and job placement services in its Worknet program. In addition, CDI's private sector program provides case management and job placement services for workers' compensation cases. CDI's Worknet program serves individuals with a wide variety of disabilities, including those with orthopedic disabilities, mental illness, mental retardation, and visual impairments. The majority of Worknet clients have severe disabilities. CDI's private sector program provides services for workers' compensation cases, and most of these clients have musculoskeletal impairments.

- Thresholds' comprehensive vocational services include vocational assessment, skills and social training, job placement, and ongoing mobile job support. Thresholds serves only those with severe mental illness, the majority of whom are diagnosed with schizophrenia.

- The Vocational Rehabilitation Department (VRD) of the Rehabilitation Institute of Chicago (RIC) offers comprehensive vocational services, including vocational evaluation, internships, job seeking skills training, and job placement. VRD serves mainly those with neurological impairments.

Program Outcomes

- SFVS served 437 individuals in 1994, 114 of whom participated in its job placement program. Of the 114 in its job placement program, 100 (87 percent) were placed into competitive employment.

- CDI served 408 individuals in its Worknet program in 1994, and 59 percent of these participants were placed into competitive employment. CDI also provided services for 238 workers' compensation cases in 1994, and 62 percent of these cases were successfully resolved.[2]

- Thresholds served 2,803 clients in 1994. Of the clients in day programs who were receiving vocational services, approximately 80 percent were employed while in Thresholds. This represents 50 percent of all individuals who participated in day programs.[3] Six months after leaving Thresholds, the percent who remained employed ranged from 34 to 45 percent of all day program clients.

- RIC's VRD serves approximately 700 individuals each year, a portion of whom have job or training placement as a goal. In 1994, 184 clients in VRD had placement as a goal, and 84 percent of these individuals were successfully placed.

Replicability of Key Program Features

- All of the programs provide a comprehensive range of services that are individually tailored to meet each client's specific needs and goals, and three of the programs' administrators cite their comprehensive and individualistic approach as a key to their success. The one remaining program cited its strong connection to the business community as a key to its success; other programs also had connections to the business community, but they did not specifically cite the connections as keys to their success.

- It appears that many of the characteristics of the programs, though often unique, are replicable – it does not appear that these distinguishing characteristics can only exist within particular programs.

Obstacles to Evaluation

- In general, there is insufficient information to distinguish between the impact of the program on successful employment outcomes and the extent to which the program selects clients who have a high probability of success even without participation in the program. It is possible that the success of the program is due to the services it provides; however, it is also possible that the program may only select and serve individuals who have characteristics (e.g. motivation, work experience, skills) that enable them to be easily placed. Ray Sakalas, Director

[2] Case resolution may involve a lump sum payment for injuries, medical treatment, and/or returning to employment.

[3] Day programs are part of the multitude of services and programs that Thresholds offers, and vocational services are just one aspect of the services provided by day programs.

of the Vocational Rehabilitation Department for the Rehabilitation Institute of Chicago, commented that the criteria for selecting individuals to become clients of a program have become more rigorous due to the Federal Department of Rehabilitation's movement towards basing funding for programs on their ability to place clients into employment. The result is that programs may select only those individuals who have characteristics that make them easy to place, and not accept individuals who are more difficult to place.

- Programs define the terms "success" and "placement" differently. For example, some programs only consider a person placed if he/she remains in a competitive position for at least 60 days, while others may consider a person placed if they hold any job for at least one day.

- Programs differ on which clients are included in computing the placement rate. Some programs may compute the placement rate for all clients who participate in the program, but others may include only clients who were interested in obtaining a job.

- Programs focusing on workers' compensation determine success by how the case was resolved, not necessarily by how many clients were placed into employment.

- Programs differ in their objectives and the services they offer. For example, programs that have job placement as their primary goal only provide services that are focused on placing their clients into employment. Their success in placing clients, then, may be higher than other programs that include job placement as only one of several goals of the program, and therefore only devote some of their resources to placing clients.

D. NEED FOR FUTURE POLICY-RELEVANT RESEARCH ON THE EMPLOYMENT OF PERSONS WITH DISABILITIES

As the summary in Section C indicates, a substantial amount is known about the employment of persons with disabilities, but much more information is needed to assist the government in analyzing the impact of current policies on the employment of persons with disabilities and in formulating policies that are designed to increase their participation in competitive employment. In this section we present our recommendations for further policy-relevant research. We begin by briefly describing some guidelines that we followed in the development of our recommendations. These guidelines are based in part on the findings reported in the previous section, but also reflect our understanding of the interests of the ODALTCP and of the ongoing debate about employment policy for working-age persons with disabilities.

1. Guidelines for the Development of a Research Agenda

The following observations guided our thinking in the development of the research agenda:

a) *The main objective of the research agenda is to contribute to understanding of barriers and incentives to employment opportunities for persons with disabilities.* In recent years substantial interest has emerged in improving opportunities for people with disabilities to join, remain in, or return to the workforce. A growing consensus has emerged among disability advocates that increasing employment opportunities of persons with disabilities will both improve their well-being and increase their contribution to society. Removing existing barriers to employment and creating employment incentives is believed to be a powerful and cost-effective -- perhaps even cost-saving -- way to improve the well-being of those with disabilities because it will allow them, as well as society in general, to take better advantage of their productive potential.

b) *There is a high premium on policy relevance.* The ASPE Office of Disability, Aging, and Long-Term Care is interested in how its research on independent living, long-term supports, and health services for people with disabilities can be applied to the area of employment. Our suggestions for new research are mostly relevant for DHHS policies. However, we also recognize the importance of research that is relevant to policies lying within the purview of other departments and agencies -- especially the newly independent Social Security Administration, the Department of Education, and the Department of Labor -- as well as the importance of inter-agency coordination of policies that have an impact on persons with disabilities. Collaborative projects with other agencies are possible. Information on the costs of policies and programs and on direct and indirect benefits to individuals, the government, and society as a whole is a high priority.

c) *Good research and public policy must recognize the heterogeneity of the population of people with disabilities.* In the past, research has often failed to specify or focus on particular groups of persons with disabilities. Policies that do not recognize this fact may be very inefficient and inequitable. At the same time, policies that do recognize this fact will be difficult or impossible to implement if they require detailed information about the characteristics of persons with disabilities and their jobs. Hence, feasible policies that recognize the heterogeneity of persons with disabilities must give individual decision-makers -- the individual, government agents, employers, and others -- considerable flexibility to adapt assistance to the individual's specific circumstances.

d) *Although the focus of the research agenda is employment, research on other aspects of the lives of people with disabilities is very relevant.* The challenges that disabled persons face at home or elsewhere can deter participation in the labor force. Thus, policies that impact any aspect of the life of a person with disabilities may have direct or indirect effects on their employment -- sometimes intended, but often not.

e) *Other things equal, research that simultaneously addresses many issues is more valuable than separate research projects on individual issues.* There is a need to integrate, or at least coordinate, the many aspects of disability policy, but this is difficult to do when analysis is confined to addressing each aspect in isolation. Research that jointly examines a wide variety of approaches to promoting employment (financial incentives, rehabilitation, training, employer accommodations, assistive technologies, personal assistance services, etc.) and their relative cost-effectiveness should be encouraged.

2. A Research Agenda

The following list of major research and policy issues below reflects the guidelines presented in the previous section. For each issue, we provide a brief discussion of its importance and briefly discuss possibilities for research that would address the issue. We group the recommendations into five categories: welfare, health, personal assistance services and assistive technologies, - employment strategies, and other. These issues do not exhaust the potentially useful research that could be done. Other possibilities are discussed in the first section of each chapter in the larger report.

a. Public Income Support and Insurance Programs

1. *What are the effects of welfare reforms and demonstrations that do not exempt mothers with disabilities or mothers who have children with disabilities on the mothers' employment, family well-being, and AFDC participation?* Most welfare reforms and demonstration projects that encourage the employment and economic independence of welfare recipients exempt those with disabilities, and those whose children have disabilities (Chapter III). Utah's current demonstration program is an exception. Under this program, individualized plans to increase income from other sources (primarily from work, but also from other sources, including SSI and DI) are developed and implemented for all recipients. An evaluation that focused on the success of this or similar programs in promoting employment for recipients with disabilities, or recipients whose children have disabilities, could be expected to provide useful information about the potential for helping such recipients achieve that goal.

2. *How might the JOBS program be changed to encourage participation and employment by welfare recipients with disabilities and improve their family's' well-being?* We found no information on the effectiveness of training programs for AFDC recipients with disabilities, but did find evidence that many persons who have self-reported health or emotional problems that make them unable to participate in education and training are enrolled in JOBS. An evaluation of how health problems are addressed in JOBS programs and the cost-effectiveness of JOBS for recipients with severe mental and physical impairments would seem warranted.

3. *What are the effects of work incentives and disincentives in the SSI and DI programs?* What would be the employment and program participation effects of

changes in the implicit SSI tax on earnings and in the DI benefit "cliff"? What will be the employment and other impacts of the new three-year time limit on benefits awarded on the basis of drug and alcohol abuse?

b. Health

1. *To what extent do restrictions on access to health care and health insurance deter the labor force participation of persons with disabilities?* There are strong reasons to believe that high health care costs and lack of access to public health insurance for disabled workers are a significant barrier to employment for persons with disabilities, but we have found no direct, rigorous evidence that this barrier deters a substantial number of disabled workers from competitive employment. Empirical evidence is necessary, both to demonstrate the importance of this effect and to quantify the impact of policies that break the links between health insurance and employment, SSA program participation, and tax revenue. The following approaches might be considered:

   - Aaron Yelowitz (UCLA) is currently studying the relationship between the value of Medicaid benefits and participation in the adult SSI disability program. Differences across states and over time in the value of Medicaid benefits may have an impact on participation at the state level. If this line of research is successful, it could be extended to examine the impact of Medicaid provisions on employment and taxes.

   - Evaluations of Medicaid demonstration programs that have the effect of increasing the availability of Medicaid to low-income workers with disabilities could include specific examination of this issue. ODALTCP is already providing support for such work, in conjunction with evaluations sponsored by the Health Care Financing Administration. Evaluation of Medicaid buy-in programs, such as that in Massachusetts, is also warranted.

   - The importance of the provision of health insurance for the success of employment programs could be examined as part of rigorous evaluations of such programs (see below).

   - A careful study of Hawaii's experience with employer mandates, state subsidized health insurance for low-income individuals who are not covered by employer insurance and who are not poor enough to qualify for Medicaid, and a generous Medicaid benefit for people with disabilities might provide strong evidence on this issue. Econometric analysis of state-level SSI growth in Hawaii for the 1988 to 1992 shows that growth in Hawaii was very low in comparison to other states, especially after adjusting for other factors that had an impact on growth (Lewin-VHI, 1995). An evaluation would need to focus on changes in employment of persons with disabilities, and would need to distinguish between the role of Hawaii's health care financing system and other possible explanations of Hawaii's experience.

   - The historical experience of other countries in implementing universal health care might also provide valuable information on this issue. Observers of western European experience suggest that universal coverage does play a

positive role in the employment of people with disabilities in those countries, but a more systematic analysis is needed to support this observation.

- Simulations of the employment effects of health insurance could be conducted using a major survey database (e.g., the 1990 SIPP or the 1994-96 NHIS) along with the best available evidence on behavioral responses.

2. *What impacts are current changes in employer-provided health insurance -- particularly the growth of managed care -- having on the employment and well-being of workers with disabilities?* Employer efforts to contain the growth of their own health care expenditures have resulted in rapid growth of managed care and other methods to control costs. The theoretical impact of these changes on employment of workers with disabilities is ambiguous. On the one hand, controlling cost growth reduces the burden that workers with high health care utilization may place on an employer; on the other hand, managed care insurers may limit access to care that is critical to employees with disabilities. One way to examine this issue would be to identify cases where employers have switched to exclusive contracts with managed care insurers, and compare the experiences of employees with severe impairments in such firms to those of their counterparts in other firms. Employer personnel data and insurer claims data would be needed to conduct such an analysis. Examination of claims for Social Security Disability Insurance (DI) and private disability insurance (PDI) from the firms' employees would provide another, less direct way of measuring the impact of the change on employment of workers with disabilities. ASPE is currently sponsoring some research on the impact of managed care on people with disabilities. Future ASPE-sponsored research should include employment as one outcome in its managed care evaluations.

3. *To what extent are community-based mental health services available to support the employment of those with mental illnesses, and how effective are they?* The Thresholds program in Chicago supports employment of those with mental illnesses with ongoing services. We do not know the extent to which states provide support for such services, the effectiveness of such services, or the cost and revenue impacts.

c. Personal Assistance Services and Assistive Technologies

1. *How can PAS and AT be used to increase employment of persons with disabilities?* Although some existing data could be exploited to examine this issue there is a need for collection of new data. Studies of state, local, insurer, and employer programs that provide support for PAS and/or AT should be considered. Studies should not be limited to use of PAS and AT in the workplace only because availability of PAS and AT away from the workplace may remove barriers to employment. The extent to which PAS and AT may complement or substitute for each other should also be considered.

2. *To what extent would removing current restrictions on funding for PAS and AT (e.g., means testing) and increasing overall funding levels increase the employment of persons with disabilities and improve their well-being, and how could scarce funds be more efficiently targeted to increase employment and earnings of those with disabilities?* Current funding for PAS and ATs imposes limits on the types of equipment or services covered, on the place of use, and on the characteristics of the user. It would be very valuable to find or create opportunities to evaluate the

impact on employment of relaxing such restrictions and to assess the associated costs and benefits.

3. *How effective would greater outreach to those with disabilities - - regarding the availability of support for PAS, ATs, and various other types of support – be in encouraging their employment and improving their well-being, and how much would it cost?* There is some evidence that persons with disabilities lack knowledge about ATs and the availability of financing for PAS and ATs that would benefit them, including enabling them to enter the labor force or increase their earnings. Evaluations of the effects of outreach efforts intended to provide such knowledge are needed to determine whether this is a cost-effective approach to increasing employment of persons with disabilities, relative to other approaches.

4. *Who provides PAS to disabled workers in the workplace today?* To what extent are they provided by co-workers who have other duties to perform, on a formal or informal basis? Do firms or employee cooperatives hire attendants to serve multiple workers? Case studies of PAS use in the workplace could help answer these questions. How do assistants fit into the culture of the workplace? How are they counted against "full-time equivalent" quotas?

5. *What would be the costs and benefits of a tax credit for PAS?* The Clinton Administration proposed such a policy in its health care reform proposal.

6. *Should the federal government pursue the development of standards in telecommunications and computer technology that would aid in the development of access technologies for workers with disabilities?* Appropriate standards allow manufacturers of telecommunications equipment and computer technology to design products to suit the special needs of workers with disabilities. Building these accommodations into products during the design phase is often a much less expensive way of providing access to persons with disabilities than subsequently modifying existing products. While the potential gains of appropriate standards are clear, it is critical that any standards adopted are flexible and easily modified when technology changes and new products become available. Rigid standards may have the unintended effect of stifling innovation and creativity.

d. Employment Strategies

1. *How successful and cost-effective are "individualistic, comprehensive" programs that help persons with disabilities obtain the goal of employment?* The programs selected for the case studies (Chapter VI) all use individualistic, comprehensive strategies to help persons with disabilities obtain employment. While these programs show promise, more rigorous evaluations are needed to address the following issues:

   - Are these programs cost-effective relative to other types of programs, including smaller, less comprehensive ones?

   - To what extent are positive outcomes actually due to the programs' interventions? Some of the evident success of the programs may be due to

the selection of clients who have a high probability of future employment even without the program.

- How important are individual program features, such as job placement vs. job training, in determining outcomes?

- Is the availability of assistive technologies and personal assistance services to clients critical to success for some groups? Do programs take advantage of innovations in assistive technologies?

- How do employment strategies and their success depend on the type and severity of disability?

- How important is client age and prior work experience to program success?

- How much do these programs cost and what are the economic returns? From the perspective of the government, can some programs pay for themselves through reductions in future transfer payments to clients and increases in future tax revenues from clients? How does this vary with client characteristics?

- What role does access to health care and health insurance play in the success of these programs?

2. *What is the most efficient way to provide assistance that gives those with disabilities maximum control over how the assistance is used to support their employment (e.g., tax credits or vouchers), and how cost-effective would such a system be in increasing employment and earnings among persons with disabilities in comparison to programs that give the consumer less control (e.g., case management or agency-directed allocations of ATs, PAS, etc.)?* While credits and vouchers have great appeal because recipients can use them in ways that are tailored to their particular needs, we have not found empirical evidence on the impact of such funding or on the extent to which such funding would in fact be used in an efficient manner. Rigorous evaluation of demonstrations that use vouchers or credits, including impact analysis and analysis of the extent to which such programs pay for themselves, would be very desirable. Results should be compared to findings from analyses of individualistic employment programs that provide comprehensive services (see above) and of case management demonstrations such as SSA's Project NetWork. ODALTCP might also benefit from reviewing the plans for the Project NetWork evaluation and assessing whether additional evaluation might provide useful policy information for ODALTCP programs that would otherwise be lost.

3. *To what extent do programs under the Job Training and Partnership Act (JTPA) provide assistance to persons with disabilities, to what extent do JTPA policies favor or discriminate against persons with disabilities, and how might JTPA become more cost-effective in providing assistance to persons with disabilities?* We found that JTPA funds support many San Francisco Vocational Services clients, and that JTPA is a source of client referrals. While JTPA supports many employment programs targeted at those with disabilities, current JTPA performance standards have incentives to "cream" among the disabled population and may underserve them as a result (Barnow, 1994). It would be worthwhile to at least explore the role

of JTPA in funding employment programs for persons with disabilities further and, if feasible, evaluate the impact of that funding.

4. *To what extent is the sensitivity of employment of workers with disabilities to the business cycle influenced by current disability and unemployment programs and how could these programs be redesigned to better meet the temporary needs of this population?* Several studies show that participation in Social Security's disability programs is sensitive to the business cycle, and other studies show that workers with disabilities are often both the "first-fired" in a recession and the "last-hired" in a recovery. Better unemployment insurance (UI) benefits might reduce the impact of recessions on disability program participation by helping those with disabilities through difficult times. A number of demonstration projects have been conducted with support from the Department of Labor during the past 15 years, with the objective of determining how changes in the UI benefit structure affect return-to-work. To our knowledge nobody has examined the impact of the demonstration benefits on people with disabilities. If data collected would permit it, analysis of the impact of these demonstrations on workers with disabilities would be worthwhile; if not, future demonstration plans should consider the collection of appropriate data.

5. *What is the impact of economic restructuring on employment opportunities for persons with disabilities, and what policies would assist them in adapting to permanent changes in the nature of work?* Some studies have documented changes in the nature of work, and there are reasons to believe that these changes reduce employment opportunities for some persons with disabilities, but improve prospects for others. More information is needed on what differentiates the "winners" from the "losers" in order to develop cost-effective policy responses.

6. *How important is the role of employers and private disability insurers in return-to-work for newly disabled workers, and how could public policy best encourage employer and insurer efforts in this area?* The Americans with Disabilities Act (ADA) places substantial legal responsibility on employers to employ workers with disabilities. There is a general belief that efforts of employers to accommodate or otherwise assist employees with disabilities are key to the latter's success in competitive employment. Private disability insurers, who are interested in controlling their claims costs, may also play a key role. Yet there is little hard evidence on the impact that employers and insurers can have on employment of workers with disabilities, or on how public policy can encourage that role. Evaluation of employer/insurer "disability management" programs and examination of how public policy can create incentives for employers and insurers to promote employment of workers with disabilities is needed. Research on small businesses that are exempt from ADA accommodation requirements is also needed. Such businesses may serve as useful control groups for studies of larger firms that are not exempt.

7. *To what extent is the relatively low labor force participation of persons with disabilities due to their low levels of education, rather than their disabilities, and to what extent are low levels of education due to educational barriers faced by persons with disabilities?* In many employment studies "disability" may be serving as a proxy for education. It is important to understand the many links between education, disability and work in order to determine whether a particular intervention will be effective. Removing barriers to education and training will be most effective

in promoting work if lack of education and training is the primary deterrent to work, not the disability itself.

8. *What more can be learned from the successes and failures of policies and employment strategies that have been implemented in other countries?* How important are rehabilitation programs? Benefit limitations for younger workers? Incentives for employers?

e. Other

1. *What can be learned from existing longitudinal data and what other opportunities are there to improve our understanding of the dynamics of disability, employment, and welfare?* Data from simple cross-sections tell us little about dynamic aspects of disability and employment that are critical to the design of appropriate policies.

   - To what extent do educational and other characteristics of persons who have at any time experienced or been labeled as having had a disability differ from the characteristics of those with disabilities who are observed in a single cross-section? Characteristics may be quite different because a relatively large share of those in a cross-section will have very long term, or even lifetime, disabilities. Age at onset and duration of disability are important aspects to consider.

   - What are the characteristics of the disablement process, and how do they vary? What are the critical determinants of whether an impairment or health condition becomes a work disability? What roles are played by family members, employers, government programs, private insurers, and medical and rehabilitation professionals?

   - To what extent are persons with disabilities more responsive to employment incentives and training immediately following disablement than years later, when their skills may have deteriorated and when they have grown accustomed to living on insurance or welfare benefits?

   - Are AFDC families that have one or more children with disabilities typically families that would be out of poverty if it were not for their children's disabilities, or are they typically families whose low education levels and skills contribute to both their poverty and their children's disabilities? Is the extremely high rate of disability among older AFDC mothers due to long-term dependence of a core group of women or because the onset of disability at middle age is a frequent cause of AFDC participation for older women?

   Existing longitudinal surveys, such as the Panel Survey of Income Dynamics (PSID), the Health and Retirement Survey (HRS), the National Longitudinal Survey of Youth (NLSY) and High School and Beyond (HSAB) should be exploited as much as possible to learn more about the work and welfare transitions of persons with disabilities and changes in their economic well-being over time. Analysis of foreign longitudinal data sets such as the 11-wave German Socio-economic Panel could also be fruitful. Opportunities to collect and analyze other longitudinal data are also needed.

2. *What analysis should be conducted using the 1994-96 disability supplement to the NHIS when the data become available?* These data will offer many opportunities to

conduct analyses that have not been possible in the past, as well as to replicate earlier research. For instance, it will be possible to examine how work patterns vary by type of disability at a level of detail that has not been possible previously.

3. *What more can be learned from survey data that are already available, or soon to be available, about the employment of persons with disabilities or of parents of children with disabilities?* There are several existing sources of data that may be further analyzed to learn more about the labor force participation of persons with disabilities: the 1990 SIPP has sufficient information on disability to explore employment differences among persons with different types of impairments, and to examine the relationship between children with disabilities and their parents' employment; and the assistive devices supplement to the 1990 NHIS (NHIS-AD) could be used for analyzing the importance of assistive technology in the employment of persons with disabilities, although the number of persons with disabilities in the sample is relatively small.

We conclude with two general observations. First, in the past many inexpensive opportunities to study the employment of persons with disabilities have been missed because of failure to include appropriate measures of disability or employment in databases that were being constructed for other purposes. We strongly recommend that ODALTCP consider employment for those with disabilities as an issue in any evaluation of a demonstration or program that it supports, if at all relevant. We further recommend that ODALTCP do whatever it can to support similar efforts in other government departments and agencies.

Second, there is an evident need for integration of government policies and programs for persons with disabilities. At the federal level, major programs of the Department of Health and Human Services, the Department of Education, the Social Security Administration, and the Department of Labor all provide support of some sort. Other federal agencies, state and local governments also provide support in a variety of ways. Research is needed on how programs and services could be integrated in ways that would promote employment, improve the lives of persons with disabilities, and reduce waste of government resources.

EXHIBIT I

Survey Data on Health and Disability*

Survey	Date(s)	Sample	Type of Disability	Identification of Disability	Measures of Disability	Scope of Disabled Population
Current Population Survey (CPS)	Conducted monthly; March surveys have information on persons with disabilities.	Nationally representative sample of approximately 160,000 persons.	Physical, mental, and other health problems.	Self-reported information on ability to work. Receipt of SSI or Medicare (adults under age 65).	Work limitations.	National estimates of adults (ages 15 to 64) with work limitations.
National Health Interview Survey (NHIS)	Conducted annually since 1957.	Nationally representative sample of approximately 116,000 persons.	Physical, mental, and other health problems.	Self-reported information on functional limitations. Receipt of SSI or Medicare (adults under age 65).	Work and activity limitations.	National estimates of persons with ADLs and IADLs; also adults with work limitations.
NHIS Supplement on Serious Mental Illness	1989 Topical Module.	113,000 persons in the 1989 NHIS. Children age 4 or younger are excluded.	Severely disabling mental illness.	Self-reported information on serious mental and emotional disorders. Receipt of government disability payment.	Work and activity limitations.	National estimates of persons with serious mental illnesses.
NHIS Disability Supplement	1994-1995 (phase I) and 1994-1996 (phase II)	Approximately 220,000 persons from NHIS and 4,000 persons from SS records. Phase II samples 40,000 persons.	Physical, mental, and other health problems.	Self-reported information on functional limitations. Receipt of SSI.	Work and activity limitations.	National estimates of persons with disabilities (all ages).
1990 Census	1990	Short form surveys sent to entire U.S. population; long form survey (includes questions on disabilities) sent to one-in-six households.	Physical, mental or other health condition lasting for 6 months or longer that limits activities.	Self reported information on work and activity limitations caused by disabilities.	Work and activity limitaitons.	National estimates of persons with work and activity limitations.
National Health and Nutritional Examination Survey (NHANES)	Four most recent in a series of seven national examination studies conducted since 1960.	Most recent survey on random sample of approximately 40,000 persons, with oversampling of children, elderly, African-Americans, and Hispanics.	Physical, mental, and other health problems.	Functional limitations of elderly determined during examination.	Activity limitations.	National estimates of physical and mental disease prevalence.
Survey of Income and Program Participation (SIPP)	Conducted annually; topical modules on disability in 1984, 1987, 1990. Collects longitudinal data over 32-month period.	Nationally representative sample of approximately 32,000 persons.	Physical, mental, and other health problems.	Self-reported information on functional limitations.	Work and activity limitations.	National estimates of children and adults with disabilities.

EXHIBIT I (continued)

Survey Data on Health and Disabilities*

Survey	Date(s)	Sample	Type of Disability	Identification of Disability	Measures of Disability	Scope of Disabled Population
Medical Examination Study (MES)	1994-1995 (planned).	Not known.	Physical, mental, and other health problems.	Clinical and functional diagnoses verifying self-reported information.	Clinical assessments and work and activity limitations.	National estimates of persons with disabilities.
ICD Survey of Disabled Americans	March 1986 (telephone survey).	Random sample of 12,300 households and 1,000 persons with disabilities.	Physical, mental, and other health problems.	Self-reported information on functional limitations.	Work and activity limitations.	National estimates of disability among adults age 16 and over.
Health and Retirement Survey (HRS)	Collects longitudinal data every two years: 1st wave started 1992, 2nd wave planned 1999.	Nationally representative sample of approximately 12,000 persons ages 51 to 61 in 1992.	Physical, mental, and other health problems.	Self-reported information on functional limitations. Also identifies medical conditions.	Work and activity limitations.	National estimates for persons in age group.
Panel Study of Income Dynamics (PSID)	Longitudinal data collected annually since 1968.	11,000 families in 1994. Over-sampling of blacks and hispanics.	Physical, mental, and other health problems.	Self-reported functional and work limitations. Some years more detailed than others.	Work limitations, ADLs, IADLs (some years), learning disabilities of children (1995)	National estimates of household population (all ages).
Survey of Disabled Veterans (SVD)	1989.	10,000 veterans with service-connected disabilities.	Physical disability	Self-reported type, degree, and source of physical disability.	As determined by veterans disability benefit program.	Veterans with compensable service-connected disabilities
Survey of Disabled and Nondisabled Adults	1972.	Nationally representative sample of 18,000 adults (ages 18 to 64).	Physical, mental, and other health problems.	Self-reported functional and work limitations.	Work and activity limitations.	National estimates of adults with disabilities.
Survey of the Recently Disabled	1971.	In depth survey of 500 persons (age 18 to 64) with disabilities that began recently.	Physical, mental, and other health problems.	Self-reported information on functional limitations.	Work and activity limitations.	Newly disabled adults.
Survey of Disability and Work	1978.	Approximately 10,000 adults (ages 18 and 64). Persons with disabilities over sampled.	Physical, mental, and other health problems.	SSDI beneficiaries or self-reported work limitations.	Work limitations for persons not receiving SSDI.	National estimates of adults with work limitations.
Luxembourg Income Study	Cross-sectional and longitudional survey data from 26 countries, miscellaneous years.	Varies by country and year.	Varies by country and year.	Primarily based on disability income and self-reports, but varies by country and year.	Varies by country and year.	National for nations represented.

EXHIBIT I (continued)
Survey Data on Health and Disabilities*

Survey	Date(s)	Sample	Type of Disability	Identification of Disability	Measures of Disability	Scope of Disabled Population
National Longitudinal Survey of Youth	1979 to 1993.	More than 12,600 individuals have been interviewed annually since 1979.	Physical, emotional, mental, and health conditions.	Self-reported information on functional limitations, and physical and mental health conditions.	Work and activity limitations.	Survey sample includes individuals who were aged 14 to 21 in 1979.
Epidemiologic Catchment Area Study	1980 to 1984	18,244 respondents aged 18 and over in five study areas.	Prevalence rates of specific mental disorders.	Uses a Diagnostic Interview Schedule (a case identification instrument that assesses the presence, duration, and severity of individual symptoms)	N/A	National estimates of prevalence of specific mental disorders among US population aged 18 and over.
National Comorbidity Survey	1990 to 1992.	Nationally representative sample of 8098 respondents aged 15 to 54.	Comorbidity of substance use disorders and nonsubstance psychiatric disorders.	Uses a Diagnostic Interview Schedule.	N/A	National esimates of prevalence of comorbidity of substance use disorders and nonsubstance psychiatric disorders among US population aged 15 to 54.
HIV/AIDS Surveillance	June 1982 to present.	Reported AIDS cases in all U.S. states and terrotories.	HIV/AIDS.	Diagnosis of AIDS	N/A	National Estimates of individuals with AIDS.

* For further description of available disability data see Office of the Assistant Secretary for Planning and Evaluation, Office of Disability, Aging, and Long-Term Care Policy,"Disability Data for Disabilty Policy: Availability, Access and Analysis", U.S. Department of Health and Human Services: Washington, DC, March 31, 1995.

APPENDIX A:

Table of Contents for the Final Report

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