Helping People Denied Disability Benefits for a Mental Health Impairment: The Supported Employment Demonstration

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Social Security Administration demonstration projects that are intended to help people receiving disability benefits have increased employment but not the number of exits from disability programs. The Supported Employment Demonstration (SED) is a randomized controlled trial (RCT) of services for individuals with mental health problems before they enter disability programs. The SED aims to provide health, employment, and other support services that help them become self-sufficient and avoid entering disability programs. The target population is people who have been denied Social Security disability benefits for a presumed psychiatric impairment. Thirty community-based programs across the United States serve as treatment sites; inclusion in the SED was based on the existence of high-fidelity employment programs that use the individual placement and support model, the ability to implement team-based care, and the willingness to participate in a three-armed RCT. In the SED trial, one-third of 2,960 participants receive services as usual, one-third receive services from a multidisciplinary team that includes integrated supported employment, and one-third receive services from a similar team that also includes a nurse care coordinator for medication management support and medical care. The goals of the study are to help people find employment, attain better health, and delay or avoid disability program entry. This article introduces the SED.

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The Social Security Administration (SSA) funds two large disability programs: Social Security Disability Insurance (SSDI), an insurance program for workers who have accumulated a sufficient number of work credits, and Supplemental Security Income (SSI), a means-tested program for individuals with low income who have never worked or who have not accumulated enough work credits to qualify for SSDI. In December 2018, almost 12.5 million adults between the ages of 18 and 64 received SSDI, SSI, or both on the basis of disability. About 7.8 million (62%) received SSDI cash benefits only, 3.5 million (28%) received SSI cash benefits only, and 1.3 million (10%) received cash benefits from both programs concurrently. In 2018, these programs paid about $121 billion in cash benefits to SSDI-only beneficiaries, $30.5 billion in cash benefits to SSI-only beneficiaries, and $13.5 billion in cash benefits to concurrent beneficiaries (1).

SSA's Annual Statistical Supplements for the SSDI and SSI programs have revealed that nearly 30% of those in the SSDI program, and about 28% of those in the SSI program, were awarded benefits on the basis of a mental impairment (1, 2). Self-report data collected in the 2015 National Beneficiary Survey indicated that people with mental impairments accounted for large proportions of beneficiaries in both programs (30% of SSDI-only beneficiaries, 42% of SSI-only beneficiaries, and 43% of concurrent beneficiaries) (3). Because of the large number of individuals who rely on the SSDI and

HIGHLIGHTS

- People with mental health problems who are denied benefits after filing claims for Social Security disability have poor outcomes and may benefit from vocational and health care supports.
- The Supported Employment Demonstration (SED) is a randomized controlled trial involving nearly 3,000 people who recently filed and were denied initial claims for Social Security disability.
- SED's goals are to help people find employment, attain better health, and delay or avoid entering Social Security disability programs.

SSI programs to earn enough money to live and concerns about solvency of the disability trust fund, SSA has explored ways to reduce the number of disability beneficiaries.

SSA has funded several demonstration programs to reduce dependency among disability-program beneficiaries. These efforts have helped people to increase employment and social inclusion but have not reduced dependence on disability benefits (4). For example, in the past 10 years, the Mental Health Treatment Study (5), the Benefit Offset National Demonstration (6), the Accelerated Benefits study (7), and the Youth Transition Demonstration (8) showed many positive effects but failed to enable people to exit disability programs through employment earnings. SSA therefore proposed an earlier intervention, the Supported Employment Demonstration (SED), to test the hypothesis that providing medical treatment, employment services, and other supports (including reimbursement for out-of-pocket health care expenses) to people at high risk for disability will enable them to become self-sufficient and avoid dependence on disability benefits.

In 2018, 65% of people who applied for benefits were denied benefits at the initial determination; however, 13% received benefit awards after various appeals (9). Many others may reapply later and receive disability benefits. Across all levels of appeals, approximately half who appealed receive disability benefits (10). Approximately one-third of successful applicants with a mental health impairment are reapplicants. Thus, people who have been denied benefits after an initial application for disability benefits for a presumed psychiatric disorder have a high likelihood of a later benefit award through appeals and reapplications. With the SED, SSA's hypothesis is that intervening before a disability benefit award may help people to improve their health, find employment, and delay or prevent the need for further disability applications. In fact, people who are denied disability benefits are more than twice as likely to work as those who enter disability programs (11).

A second motivation for the SED was the consistent finding that people who are denied disability benefits generally do not fare well. Early research found that more than half of denied applicants reported their health prevented them from working altogether, about 90% reported that their health at least limited the kind or amount of work they could perform, and >85% reported being incapable of either doing any work or of doing the same kind of work they did before their health limitation began (12). Data from the Survey of Income and Program Participation showed that in the 37–39 months after application, those who were denied benefits had average labor earnings and employment rates substantially below their preapplication levels (13). More recent research replicated early findings by using administrative data on SSDI application and receipt from 1981 to 1999 and earnings data before and after application from 1978 to 2006 (14).

SSA funded the SED in 2016 and selected Westat to test a package of integrated mental health, employment, and other support mechanisms for applicants with a presumed mental health impairment who were denied disability benefits. The SED adapted many of the methods and interventions provided to SSDI beneficiaries in the Mental Health Treatment Study, but it targets a new population of people with recent disability denials rather than current disability beneficiaries. The individual placement and support (IPS) model of supported employment (15) is the centerpiece of the multidisciplinary interventions. The SED's goals are to foster employment, improve quality of life, and delay or eliminate the need for disability benefits. In this article, we describe the design, settings, recruitment, participants, interventions, implementation, and evaluation plan for the SED.

DEMONSTRATION DESIGN

The SED tests the real-world effectiveness of multidisciplinary teams that combine IPS supported employment (15), mental health interventions (16), including medication management support (17), and care management. The SED's overarching goal is to provide effective services to people who have been denied benefits after an initial disability claim for mental health problems so that they can achieve self-sufficiency through employment and avoid the need for future disability benefits. In addition, the SED systematically varies the presence of a nurse care coordinator within each site to assess the added value of medication management and medical supports. In the SED, participants are randomly assigned to one of three conditions: a full-service treatment team, a basic-service treatment team, or a usual-services (control) group. We describe the two treatment conditions in the Interventions section below. All uninsured participants also receive help to access health care. The SED makes services available and follows each participant for 3 years.

Westat directs the SED by using independent operations, implementation, and research teams. The operations team oversees all study operations that support implementation and evaluation activities, including recruitment and enrollment of the 2,960 study participants, development and maintenance of the study's electronic management information system, facilitation of access to health care for uninsured participants, and collection of follow-up self-report data from participants on a quarterly basis. The implementation team consisting of IPS and behavioral health specialists provides training, technical assistance, and consultation to the multidisciplinary treatment teams at 30 sites. The research team is responsible for evaluation of the demonstration, including the overall design, development of data collection instruments and protocols, and analysis and reporting of the evaluation. The implementation and research teams are entirely separate to ensure that research data do not influence the implementation process.

The Westat Institutional Review Board as well as SSA initially reviewed plans and continue to monitor the study. In addition, one site's county department of mental health

has an affiliated human subjects committee that also reviews and monitors the project.

SETTINGS

The Westat team selected 30 treatment sites for the SED on the basis of several criteria: geographic and racial-ethnic diversity; experience serving people with mental illness and other low-income populations; already providing high-fidelity, IPS supported employment; and interest in participating in a randomized controlled trial (RCT) for people who were denied benefits after initial claims for disability based on a presumed mental health impairment. State mental health and vocational rehabilitation agencies nominated sites, and Westat followed up with telephone vetting, site visits, and contracting.

The participating treatment sites include 23 community mental health centers, five social service agencies, and two employment agencies. The service areas include surrounding counties or locales of the following cities: Anderson, South Carolina; Ashtabula, Ohio; Bethesda, Maryland; Boston; Bowling Green, Kentucky; Chapel Hill, North Carolina; Chicago; Cincinnati; Denver; Elizabethtown, Kentucky; Evanston, Illinois; Everett, Washington; Galesburg, Illinois; Hollywood, Maryland; Huntington, New York; Johnson City, Tennessee; Knoxville, Tennessee; LaCrosse, Wisconsin; Lancaster, California; Lorain, Ohio; Madison, Wisconsin; Midland, Michigan; Minneapolis-St. Paul; Mission, Kansas; Portland, Oregon; Round Rock, Texas; St. Petersburg, Florida; Sumter, South Carolina; Tulsa, Oklahoma; and Wichita, Kansas. The service areas include rural, suburban, and urban sites in all geographic regions of the United States. We designated 10 half sites to serve 60 participants (40 in the two treatment groups and 20 in the control group) and 20 full sites to serve 120 participants (80 in the two treatment groups and 40 in the control group), depending on the number of recent disability denials within the sites' service areas.

RECRUITMENT

Westat received monthly files from SSA containing the contact and other information of applicants denied disability benefits in the previous month who lived within the local service area of one of the 30 study sites. Eligibility criteria were ages 18–49, not living in a residential or custodial setting, self-identified or documented mental illness, denied benefits after an initial application for SSA disability benefits based on a presumed mental health impairment in the past 30–60 days, not currently receiving employment services from the study site, and expressing interest in employment. Westat field recruiters received extensive training and completed a comprehensive assessment before the start of recruitment. Westat developed and implemented a structured training program that included standardized protocols, materials, and manuals to ensure that each potential participant received the same information. Field recruiters enrolled the full complement of 3,000 participants within 15 months.

After completing baseline interviews, recruiters accessed an online program to obtain the randomization assignment for each participant. A dynamic (instead of deterministic) randomization strategy, called the covariance-adjusted imbalance tolerance method (18), adjusted for site and stratum balance by using age and claim type (SSDI or SSI) as strata. Recruiters enrolled and assigned 3,000 participants: 1,002 to usual services, 1,004 to the basic-service teams, and 994 to the full-service teams. However, we excluded 40 prospective participants from the experiment who were discovered to be receiving SSA disability benefits already at enrollment, yielding a final sample of 2,960 eligible participants.

PARTICIPANTS

The 2,960 participants in the SED represent a new service population for IPS and mental health services: people denied benefits after an initial application for SSA disability benefits for a self-reported or identified mental health impairment. Some of these participants were already working at entry, and some were continuing with appeals or new applications for disability benefits. Little was known about this population before recruitment. Research interviews evaluated the participants extensively at baseline, and we will report the details of participant characteristics in an upcoming companion article.

INTERVENTIONS

Participants in each of the three conditions who lacked health insurance received access to needed health care and help finding health insurance. Westat referred them to federally qualified health centers or study-approved public clinics that offered medical services free of charge or on a sliding scale. The study paid for health care expenses of these uninsured participants, including for general medical care through a primary care physician, approved specialty care, behavioral health care, dental care, and emergency or urgent health care, until they could enroll in an insurance plan through their state's health exchange (marketplace) during the Affordable Care Act open enrollment period.

Full Service

Before starting treatment, the participating agencies conduct a full intake, including history, clinical and social issues, diagnosis, and insurance review of the participants. Full-service treatment comprises a multidisciplinary team providing IPS supported employment that is integrated with behavioral health care and medical care: an experienced team leader, at least one IPS employment specialist, a behavioral health care manager, and a nurse care coordinator. The team meets at least weekly to plan services, review participants' data, and integrate

services. The team leader supervises other members. The employment specialists are primarily responsible for IPS services, including developing a job profile, searching for jobs, and supporting the participant before and after obtaining employment. Care managers provide outreach and engagement services as well as support services for housing, client and family education, and other practical and educational tasks. Care managers receive ongoing training and supervision in problem-solving therapy (19) to enhance the varied skills they bring to the job and to standardize the approach.

For participants who need specialized behavioral health treatments (e.g., trauma treatments, dialectical behavior therapy, or substance abuse groups), the team links them with services within the participating mental health agency or outside the agency if necessary. The nurse care coordinators are part of the full-service team meetings. They provide thorough assessments of medical and medication histories; medication and adherence education to participants; linkage with primary care and medication prescribers; and regular assessments of prescribed medications, symptom response, and adverse effects with standardized scales. By communicating these data to prescribers, they support medication management, following a detailed protocol. If needed, the nurses help participants to access a psychiatric prescriber or a primary care provider; however, participants may choose to remain with prestudy providers.

In addition, the SED provides funds to cover approved treatments (e.g., copays or deductibles for doctor's visits), work-related expenses (e.g., computers, work clothes, or certification classes), and short-term financial assistance intended to help resolve emergent financial crises that create barriers to employment (e.g., assistance with car repairs to travel to work).

Basic Service and Usual Services (Control)

Basic-service treatment replicates the multidisciplinary, full-service treatment with one critical exception: the basic-service team lacks a nurse care coordinator. Inclusion of this second treatment group permits a test of a team-based service model at greatly reduced expense (<66% of the cost of full-service treatment, as specified by SSA). In the absence of a team nurse, the team helps participants to access medication prescribers and primary medical care within or outside the agency. Basic-service participants can also access funds to cover treatment, work-related expenses, and short-term financial assistance to facilitate employment. Participants in the usual-services group received a manual of available behavioral health and employment services in their service areas at study entry.

IMPLEMENTATION

Study sites receive monthly capitation payments on the basis of the number of full-service and basic-service participants assigned to their teams, existing salaries in their agencies, and administrative fees for participation. These payments cover core team members according to estimated hours of services. Each site agreed to work with the Westat implementation team on monitoring and quality improvement efforts to ensure provision of high-fidelity services. Sites had 6 months to negotiate contracts, hire staff, and prepare teams to participate in the SED. Westat encouraged them to shift experienced staff to the new teams whenever possible.

The Westat implementation support team includes four IPS trainers who serve in technical assistance and quality assurance roles, as well as an IPS supervisor, a registered nurse experienced in medication management support, a psychiatric pharmacologist, a substance abuse specialist-internist experienced in combining behavioral and general health care, a problem-solving therapy trainer, a psychologist specialized in helping homeless people, a family therapist, several assertive community treatment team specialists, and a statistician. One IPS trainer joins each team meeting monthly and follows up with the team leader afterward to discuss challenges and progress. The nurse care coordinator supervisor meets weekly with all of the full-service team nurses and reviews their records regarding medication management support. The problem-solving therapy expert trains care managers (i.e., those who provide practical assistance), reviews two taped interview sessions from each care manager yearly, and provides individualized feedback. The implementation team meets weekly to review progress and offers consultations as needed. The implementation team also offers monthly webinars on pertinent topics such as outreach, personality disorder, co-occurring disorders, sleep hygiene, medication-assisted treatment for addiction, homelessness, and COVID-19 safety procedures.

EVALUATION PLAN

Process Evaluation

The random assignment controls for observed and unobserved confounders, but it is critical to evaluate basic implementation features regarding service integrity, service receipt, and individual participant responses. The process evaluation therefore addresses three basic questions: First, do programs implement the services as planned? Second, do clients participate in services as planned? Problems in either implementation or compliance can undermine the validity of an RCT (20). Third, how do we understand success or failure of the interventions? An extensive qualitative approach examines the experiences of mental health staff, employment specialists, and different subgroups of participants to help explain quantitative responses (21).

To assess implementation fidelity, the research team uses records of service providers; monthly ratings by the implementation team; and yearly fidelity assessments by independent, trained fidelity reviewers who use the IPS Fidelity Scale (22) as well as fidelity scales for systematic

medication management and nurse care coordination designed for the SED. To assess treatment compliance, the research team tracks service participation through a combination of electronic health records, monthly ratings of each participant's engagement made by the treatment teams, and quarterly participant surveys via telephone. To enhance understanding of the treatment process and participant responses, the research team uses site visits and qualitative interviews with site administrators and service providers, focus groups with study participants, and individual ethnographic interviews with participants and nonparticipants. Whenever possible, the team uses triangulation of data from different sources to validate assessments.

Impact Evaluation

The first primary outcome is employment, measured in several aspects and from several sources. A complementary outcome is the status of disability benefits (i.e., whether participants have appealed, reapplied for, or received disability benefits and, if so, benefit amount). Secondary outcomes include time employed, wages earned, time to employment, mental health status, life satisfaction, and health service utilization. Baseline interviews gathered information on demographic characteristics, work history established with the Vocational Update Form (23), psychiatric diagnoses obtained with the Composite International Diagnostic Interview (24), psychiatric symptoms assessed with the Colorado Symptom Index (25), comorbid conditions determined with a checklist of chronic disorders, criminal justice system involvement (26), mental and general health status assessed with the 12-item Short-Form Health Survey (27), work disability evaluated with the Work Disability Functional Assessment Battery (28), neuropsychological function assessed with the Digit Symbol Coding Test (29), and life satisfaction evaluated with the Quality of Life Interview (30). With a list of potential services, quarterly interviews assess recent work history (23) and health service use. Annual interviews assess recent work history, health service use, comorbid conditions, health status, and life satisfaction. All assessments use standardized research instruments.

The research team will evaluate the SED's effectiveness by comparing outcomes for participants receiving the three conditions of full service, basic service, and usual services. Analyses will include cross-sectional comparisons among the three groups at key time points (e.g., univariate comparisons, multilevel model-based comparisons, and assessment of the drivers of outcomes), longitudinal analyses (e.g., duration comparisons, multilevel model-based comparisons, and assessment of the drivers of outcomes), and subgroup analyses. The unit of analysis is the individual participant nested within the 30 service areas. The SED follows the intent-to-treat principle, a fundamental feature of RCTs (31). Analyses will include all eligible SED participants regardless of withdrawal, engagement, and compliance. Even if a participant does not complete the follow-up interviews, we will use SSA program data and earning records to assess his or her disability benefit program participation and earnings.

To enhance the impact analysis, we will use process data from participants and nonparticipants to interpret outcomes. For example, ethnographic observations of participants and nonparticipants in natural settings and of service delivery will assist further in articulating the challenges involved in providing IPS and health services to applicants who were denied disability benefits (21).

Benefit-Cost Analysis

In estimating net benefits of the treatment conditions, the research team will follow the basic principles of benefit-cost analysis and apply standard procedures assessing employment programs (32). Researchers will estimate the net benefits of the intervention to determine whether benefits exceed costs. The benefits will include reduction in health care expenses paid by public programs (e.g., Medicaid and Medicare), enrollees' after-tax earnings and fringe benefits, taxes paid by enrollees, reduction in disability benefits (e.g., SSI and SSDI), and reduction in other public benefits (such as the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families). Costs will include resource costs for direct health service provision and IPS services program costs.

CONCLUSIONS

The SED targets a new population: working-age adults with a presumed mental health impairment who have been denied benefits after an initial application for Social Security disability benefits. By testing the effectiveness of interventions delivered before people enter disability programs, the SED is unique among SSA demonstrations. SSA considers these individuals to be at high risk for negative outcomes and subsequent entrance to SSA disability programs. The large study sample will permit analyses of several subgroups, for example, people who were employed or unemployed at baseline, people living in different U.S. regions, and people with or without health insurance.

The SED promises to produce valuable information about those who are denied benefits after an initial disability application. For example, how many participants will continue to pursue disability applications? How many will be willing to engage in team-based services? Will those who joined the SED while already working maintain or improve their employment status? Will age, race-ethnicity, justice system involvement, and other background characteristics affect outcomes? Will financial support to address work-related expenses, including short-term certificate programs, influence employment outcomes? Will health care payments and help with acquiring insurance make a difference for the uninsured participants? Will the nurse care coordinators' support for medication management and medical care add substantially to mental health and general health outcomes? Will these services be cost-effective? Will the 3-year

perspective add to findings from the usual 1- or 2-year perspectives of employment studies? How will the COVID-19 pandemic affect services and outcomes?

For people with a mental health disability, as well as for other working-age adults in the United States, employment provides income and also confers dignity, identity, social integration, structure, and self-esteem. For people who are denied disability benefits, employment may even determine survival because unemployment can lead to hopelessness, suicide, and other premature deaths (33). Employment for people with mental health disabilities has remained low for years (34), but economists' predictions that low-skilled workers will be displaced from the workforce by technology have been wrong for many years (35). Jobs for people with disabilities are available (36). Nevertheless, the COVID-19 pandemic and the economic recession are providing a new employment challenge to people with mental health impairments and employment service providers. The SED may help to better understand these issues.

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