CALIFORNIA'S MENTAL HEALTH COOPERATIVE PROGRAMS

SUPPORTING EMPLOYMENT PARTNERSHIPS

November 2003

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EXECUTIVE SUMMARY

We are pleased to provide the enclosed evidence-based studies that demonstrate that a successful partnership of the vocational rehabilitation and public mental health systems not only benefits consumers, but also leads to higher outcomes and cost effectiveness for service providers.

Overview. *California's Mental Health Cooperative Programs – An Overview* outlines the program elements in our $21.6 million jointly funded effort. Twenty-six cooperative agreements between counties and local DOR offices currently serve over 9,000 mutual clients, with over 1,000 individuals achieving successful employment this last fiscal year. Our statewide DOR/DMH team jointly administers these programs, and provides training, technical assistance, policy development, and research to ensure each mental health cooperative program is provided the latest in evidence-based practices. The Mental Health Cooperative Programs operate on the principles of (1) mental health services supporting employment efforts, (2) emphasizing competitive, rather than sheltered employment, (3) incorporating career planning to ensure services and employment match individual preferences, (4) assisting employers to accommodate special needs, and (5) building extended employment supports into the planning process.

Ongoing Support. In *Factors Leading to Long-Term Job Retention for Persons with Severe Psychiatric Disabilities* two variables were found to be highly associated with job retention. A job that matched the individual's interest was most predictive of long-term job retention, followed by individualized, ongoing counseling support of employment efforts. Thus, consumers benefited most from employment services when these two factors were present.

Employment Success. *Individual Self Sufficiency Planning (ISSP) Project: A Successful Employment Program Model for SSI/SSDI Recipients* reports on the employment success rate of a Social Security Administration funded program that added the ongoing employment supports of a benefits planning team to mental health cooperative program services over a five-year period. The DOR success rate for consumers participating in the project was 72%, as compared to 39% for consumers receiving only mental health cooperative program services.

Cost Effectiveness. *Vocational Rehabilitation and Use of Publicly Funded Mental Health Services* merged DOR and DMH databases to demonstrate that public mental health outlays decreased by 13.9% by virtue of consumers participating in a mental health cooperative program.

Mental health costs went down regardless of whether employment services resulted in the consumer going to work. While there was a 33.5% decrease in inpatient costs during employment services, once the employment supports stopped the inpatient expenditures returned to their pre-service level.

These studies show that ongoing mental health support provided before, during and after vocational rehabilitation services increase the rate of individuals obtaining and keeping a job, increases DOR's success rate, and decreases public mental health costs. Supporting employment systems partnerships has proven to be beneficial to all participants.

We are aware of the funding challenges facing our public mental health and vocational rehabilitation administrators. We provide the following studies as assistance in allocating resources in a manner in which all will benefit.

California's Mental Health Cooperative Programs
An Overview

California's Mental Health Cooperative Programs provide collaborative employment services to assist people with severe psychiatric disabilities enter or re-enter their community workforce. The community-based collaborations between local county mental health and Department of Rehabilitation (DOR) field offices provide improved access and specialized employment services and mental health supports. These programs have been established throughout the state to provide individualized employment services to consumers historically unserved or underserved in vocational rehabilitation.

VALUES

The Cooperative Programs have been built with consumer, family member, county mental health, and local DOR collaboration. They adhere to core values of consumer career choice, comprehensive service linkages, job placement in competitive and integrated employment, reasonable accommodations, and pro-active ongoing support. These values are consistent with the Rehabilitation Act, as amended, the Americans with Disabilities Act, and California Assembly Bills 1288, 3777, and 2034.

DESIGN

This partnership between public mental health and vocational rehabilitation provides for a wide array of individualized services that are delivered through 26 cooperative agreements negotiated and contractually maintained by local mental health and DOR. County mental health contributes 21.3 % cash and/or 25% in-kind staff to the total program amount. The county match draws down federal funds that pay for individual consumer services, public and private non-profit agency contracts for specialized employment services, and DOR staff and resources. California's budget for the Mental Health Cooperative Programs in Fiscal Year 2002-2003 totaled $21.6 million.

PROGRAM SERVICES

Individually tailored services necessary to reach an employment goal are provided through the 26 local Mental Health Cooperative Programs. These services are consumer-driven so that consumers are central to all decision-making and service selections. Services can include, but are not limited to counseling and guidance, coordination in getting services from other agencies, vocational exploration, benefits planning and counseling, specialized employment assessments in the community, college and university education, vocational training, job search and placement assistance, transportation, employment support on and off the job site, tools and equipment, work clothing, assistive technology and self-employment technical assistance.

The addition of new cooperatives and the expansion of existing programs continue to address unmet needs in both urban and rural communities, reflecting California's vast geographic and cultural diversity and strong population growth.

OUTCOMES AND ACCOUNTABILITY

The following table represents DOR-defined service outcomes to mutual consumers of county mental health and local DOR:

	Fiscal Year				
DOR Outcomes	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**
Total Served	7,920	8470	8,875	9,274	9,406
New Applications	3,021	3,106	3,281	3,790	3,289
New Plans	1,528	2,402	2,313	2,567	2,460
Successfully Employed Closures	844	845	1,041	961	1,078

A state/community workgroup is currently piloting a standardized system for evaluating cooperative program services by means of surveying consumers who have become successfully employed. This feedback from consumers complements the above data to assist in continually improving services and employment outcome for consumers.

Reviews of each cooperative program assess the quality and efficacy of services, assure compliance with written agreements, and provide input opportunity for staff. Consumer satisfaction surveys reflect strong support for the cooperative programs, and provide many testimonials to the importance of employment services and supports. Programs are evaluated annually, with a comprehensive review at least every three years.

STATEWIDE INTERAGENCY AGREEMENTS

The State Departments of Mental Health (DMH) and Rehabilitation have developed Interagency Agreements to blend staff into one team in order to provide statewide leadership, oversight and support. The central team of DMH Systems of Care Division and DOR Collaborative Services Section provides staff support for federal program reviews, research and development, contract preparation and review, training and technical assistance, and staff support to public mental health/vocational rehabilitation policy development. Another team from DOR and DMH Long Term Care Division provides support to staff at four state hospitals to prepare people for participation in specialized vocational rehabilitation services upon discharge to their communities.

TRAINING AND TECHNICAL ASSISTANCE

Funded by the DMH/DOR Interagency Agreement, training and technical assistance is available to the local cooperatives as well as other local DOR/public mental health partnerships that emphasize collaborative employment services and supports. Consultants and trainers who contract with DMH through a competitive application process offer training and technical assistance designed to represent best services practices, meet the individual needs of local programs, and build capacity to maximize successful employment outcomes for the consumers served. Training is customized to meet geographic and special needs of individual cooperatives, as well as those of regional cooperative partnerships in multiple counties.

CALIFORNIA'S BEST (Building Employment Services Teams)

BEST Networks were developed statewide to broaden access to local technical expertise and resources, build community partnerships, and provide advisory body input. Seventeen BEST Networks covering 27 counties function as community focus groups to support and maximize employment services and opportunities in their communities. Key stakeholders represent their communities' needs, and include members such as consumers, employers, family members, and representatives of mental health, rehabilitation, community colleges, Social Security, independent living centers, one-stop centers, housing and transportation authorities, and service provider staff. BEST Technicians are contracted through DMH to provide administrative support for the BEST Networks. The technicians have current or past consumer experience with public mental health or DOR, and their support of BEST Networks assist them in their individualized career development.

MENTAL HEALTH EMPLOYMENT ALLIANCE

A joint DMH/DOR Mental Health Employment Alliance (MHEA) advisory body provides an opportunity for anyone in California to collaboratively work on issues that increase employment opportunities for persons with psychiatric disabilities. Workgroups identify, address and report back to MHEA on local and statewide issues that affect the delivery of services to mental health consumers. Workgroup topics include: cooperative contracting, training and technical assistance, hiring consumers/family members in the mental health/vocational rehabilitation system, improved outcome measures, exemplary practices/research, and support of BEST Networks.

Factors Leading to Long-Term Job Retention for Persons with Severe Psychiatric Disabilities

ABSTRACT

Background: California's Mental Health Cooperative Programs have demonstrated effectiveness in combining employment services and mental health supports to enable persons with severe psychiatric disabilities to go to work. However a follow up study revealed that approximately half the individuals successfully placed in integrated employment were not working three years after case closure.

Study aim: This study examines the variables differentiating individuals who were not working from those who maintained their employment over time.

Methods: 146 variables were examined in a case-by-case analysis of 52 persons with severe psychiatric disabilities who were served by the Santa Clara County Mental Health Cooperative Program. These individuals were individually matched for gender, age, and race/ethnicity to create 26 pairs. Each of the 26 pairs was comprised of one individual who retained a job for 24 months or longer, and one individual who retained a job for three months or less.

Limitations: This study is drawn from an in-depth analysis of a relatively small number of individuals.

Results: Two variables were found to be highly associated with job retention. A job that matched the individual's interests was the factor most predictive of long-term job retention, followed by individualized, ongoing counseling support of employment efforts as central to the individual's overall well being. The variables of substance abuse, medication problems, level of stressors, and number of services provided were also associated with job retention, but to a lesser degree.

Discussion: An analysis of the two groups revealed remarkable similarities in terms of education, income, diagnoses, and other factors beyond the case-by-case match of gender, age and race/ethnicity. Thus, differences were significant in light of the similarities between short- and long-term jobholders.

This study supports California's Mental Health Cooperative Programs' stated values of providing (1) career planning to ensure services and employment match individual preferences, and (2) ongoing employment support consisting of individualized, supportive mental health counseling, including substance abuse counseling, as needed.

Implications for Policy and Research: This study provides support for directing resources for career planning and extended employment support to persons with severe psychiatric disabilities in order to improve long-term job retention. It is recommended that variables that demonstrate significant differences between short- and long-term jobholders be replicated in a large-scale longitudinal study to validate this research.

INTRODUCTION

The goal of this study was to identify the most significant variables leading to long-term job retention by individuals diagnosed with severe psychiatric disabilities. A review of the literature revealed studies that focused primarily upon program variables that differentiated a successful placement versus unsuccessful placement (Cook and Razzano, 1995; Dorio et al, 2002; Fabian, 1992; Jonikas et al, 1991; MacDonald-Wilson et al, 1991; Rogers et al, 1997). However, this study was unique in that it followed individuals over two years after services had been provided that resulted in employment, used in-depth interviews, and compared short-term jobholders with long-term jobholders matched on a case-by-case basis across 146 variables.

The study was developed by the California Mental Health Cooperative Programs, a collaborative arrangement between the Departments of Mental Health and Rehabilitation to blend vocational rehabilitation and public mental health services to individuals with severe psychiatric disabilities. The data was collected between June of 1998 and November 1999, and represents the first evidence–based study conducted by Mental Health Cooperative Program staff in California to focus on the factors affecting long-term job retention.

During the first five years since the inception of the program in 1992, more than 3,000 individuals became employed and their cases were successfully closed by the Department of Rehabilitation (DOR, 1996). However, further research determined that approximately half the successfully placed individuals were not working three years after case closure (DOR, 1998). This information replicates other research data showing that between 41% and 77% of participants terminate their supported employment positions within six months (Gervey, et al, 1995 and Becker et al, 1996 as cited in Gowdy et al, 2003.)

This study was conducted in partnership between the Alliance for Community Care (Alliance) and statewide California Mental Health Program staff. Alliance is a private, non-profit mental health agency participating in a Mental Health Cooperative program between Santa Clara County Mental Health and the San Jose office of the Department of Rehabilitation. Alliance provides both vocational rehabilitation and mental health services to persons with severe psychiatric disabilities.

METHOD

Subjects

A total of 245 individuals diagnosed with severe psychiatric disabilities, primarily schizophrenia and bipolar disorder, were placed in employment through Alliance between July 1992 and June 1995. From this total, 52 cases could be paired on a case-by-case basis by common age, gender, and ethnicity. Each pair was comprised of one individual who retained a job for 24 months or longer, and one individual who retained a job for three months or less. By selecting pairs, the researchers controlled for age, gender, and ethnicity in search of other explanations that would explain the disparity in job retention across this population.

In each of the 26 pairs there was a total of 18 males (69.23%) and eight females (30.77%). Their ages ranged from 24 to 55 years and their average age was 37.6 years. Each of the 26 pairs was composed of 21 persons of Caucasian descent, three of Hispanic descent, and two of African American descent. All individuals were diagnosed with a severe psychiatric disability and all were placed in employment through Alliance.

Variables

146 different variables were examined from an extensive cross-sectional paired dataset. These variables were selected through focus group discussions among participating program staff and researchers. All variables deemed to have a possible impact upon job retention were included. Major areas examined were demographic information, psychiatric and physical medical conditions, psychosocial environment, behavior, employment history and community and vocational program support.

Procedures

Researchers collected data from the Department of Rehabilitation and Alliance, who examined intake and progress reports from the Alliance vocational and case management files and Department of Rehabilitation case records, along with in-depth interviews with program participants, staff, and employers. Trained Alliance staff members who were former participants of mental health services conducted interviews with program participants. The interviewers used a script and entered responses on a form designed for the study. Six of the short-term jobholders and fourteen of the long- term jobholders were interviewed in-depth.
The Department of Rehabilitation lead researcher conducted in-person interviews with Alliance staff and telephone interviews with employers. All data was statistically analyzed by a doctorate level statistician at the Department of Rehabilitation, who grouped data obtained from the document review with data obtained from the interviews to determine the most relevant variables.

RESULTS

The study found two variables highly associated with long-term job retention.

- A job that matched an individual's stated interest, and
- Employment support consisting of ongoing individualized mental health counseling, including substance abuse counseling. The professionals providing this employment support came from a variety of disciplines, including psychiatrists, public and private mental health counselors, and substance abuse counselors.

The following tables provide data on the participants in this study. Tables 1-3 provide data on the similarities, and Tables 4-8 provide data on the differences, between long- and short-term jobholders.

SIMILARITIES BETWEEN SHORT- AND LONG-TERM JOBHOLDERS

Table 1. Similarities in Personal and Interpersonal Variables

Table 1 demonstrates the similarities between short-term and long-term jobholders in terms of demographic and certain personal and behavioral factors.
Age, gender and race/ethnicity were matched in the study design. There was little difference noted in marital status, years of education, living arrangements, attempted suicide, and assaultive/criminal behavior.

The researchers rated the level of past psychosocial stressors and current relationships through an examination of case record entries and personal interviews with individuals, using a three-point scale.

Both groups reported equally serious childhood psychosocial stressors, defined as physical abuse, sexual abuse, violence in the home, living with a parent with mental illness or substance abuse, and/or loss of a parent. Both groups reported moderate current relationships with their families of origin, and fairly good current relationships with friends.

TABLE 1. SIMILARITIES IN PERSONAL AND INTERPERSONAL VARIABLES

	Short-term Job holders	Long-term Job holders
Age/Marital Status		
Average age at intake	37.8	37.4
Single (divorced/widowed)	21	24
Educational		
Average number of years of schooling at intake	12.6	13.3
Number who completed a vocational certificate	12	10
Living Arrangements		
Living in board and care facility	8	9
Living in apartment/home	15	15
Behavioral		
Average number of suicide attempts	2	1.9
Average number of assaults/jail	1.8	1.6
Psychosocial		
Level of psychosocial stressors birth to age 16 *	2.9	2.8
Level of current relationship with family of origin **	2.0	1.9
Level of current relationship with friends **	1.6	1.3

* Scale: 1=no stressors; 2=moderate stressors (frequent moves);
3=serious stressors (abuse, death of a family member, parental divorce)
** Scale: 1=good relationship; 2=moderate relationship; 3=poor/no relationship

Table 2. Similarities in Medical Variables

Table 2 describes similarities between the two groups in terms of medical variables. Both groups reported comparable average age their psychiatric illness began (early to mid-twenties), average age of their most recent hospitalization (early to mid-thirties) and average number of psychiatric hospitalizations (4_).

Individuals in each group received an average of 4_ different diagnoses over the 10-year period as measured by the county mental health printout. Diagnoses over time for each group alternated at the same rate between affective and psychotic disorders.

At the time of intake into the vocational program, the Global Assessment Functioning (GAF) score for both groups was virtually identical, and diagnoses were relatively similar.

Individuals in each group took on average 2 _ psychotropic medications, and a few in each group did not take any medications.

TABLE 2. SIMILARITIES IN MEDICAL VARIABLES*

	Short-term Job holders	Long-term Job holders
Onset of psychiatric disorder		
Average age of onset of illness	26.8	22.7
Past psychiatric hospitalizations		
Average number of hospitalizations	4.6	4.4
Average age of first hospitalization	27.7	22.7
Average age of most recent hospitalization	34.5	32.4
Past diagnoses		
Average number of different diagnoses	4.4	4.7
Alternating psychotic/affective disorder diagnoses	12	12
Diagnoses at vocational program intake		
Average Global Assessment Functioning (GAF)	47	46
Psychotic disorder (295/297)	11	14
Affective disorder (296)	14	11
Personality disorder	6	7
Medications at vocational program intake		
Average number of medications	2.5	2.4
Not taking any medications	2	3

* Physical medical conditions were also similar for both groups. These conditions included orthopedic problems related to accidents, obesity, asthma, allergies, speech and learning disabilities, headaches, sleep disorders, memory and concentration dysfunctions, kidney problems, diabetes, and heart attacks.

Table 3. Similarities in Employment Variables

Table 3 describes marked similarities in employment variables. Amount and type of income at intake into the vocational program, average number of prior jobs (7 1/2), average age individuals began a period of consecutive work (mid-twenties), and average length of consecutive work (defined as keeping the same job or having less than two weeks between jobs) were nearly identical.

Vocational program similarities were noticeable, including similar length of time spent by an individual from intake into the program to placement on the first job (five months), the number of jobs obtained through the program (1 _), and the number of entries made by vocational staff in the charts (see Table 4 footnote for a notable exception).

Similarities were also noted in the average wages ($6 per hour in the mid-1990's), hours of employment (slightly under 20 hours per week), services of an on-site job coach, frequency of job coaching (daily or twice weekly), and supportiveness of the individual's employer as determined by interviews with job coaches (very supportive).

TABLE 3. SIMILARITIES IN EMPLOYMENT VARIABLES

	Short-term Job holders	Long-term Job holders
Income		
Average income at intake	$589	$600
Number receiving only SSI	10	9
Number receiving SSI/SSDI	8	8
Prior employment		
Average number of jobs during lifetime	7.6	7.3
Average age began consecutive work	26.7	25.5
Average years of consecutive work	5.5	4.5
Vocational program		
Referred by case manager	6	5
Average months from intake to first job	4.9	5.1
Average number of jobs obtained through agency	1.6	1.7
Average number of entries in vocational chart*	18.7	19
Employed through vocational program		
Average pay per hour	$6.00	$6.23
Average hours of work per week	19.5	17.3
Employment support		
Job coach on site	18	19
Job coach daily or twice a week	13	10
Job coach rating of employer supportiveness**	1.3	1.2

***** A marked difference was noted in the quality of the vocational chart file entries. Entries in the short-term jobholders' charts were sparse and impersonal, with frequent entries about ongoing personal and vocational crises. Long-term jobholders' case documentation was notable for the complete, personalized narrative of steady vocational progress and lack of crisis entries.

** Scale 1=very supportive; 2=somewhat supportive; 3=not at all supportive

DIFFERENCES BETWEEN SHORT- AND LONG-TERM JOB-HOLDERS

Differences between the two groups of paired individuals are striking because of the strength of the paired case-by-case study design and the extent of the similarities between the short- and long-term jobholders. Data from program participant interviews in the following tables are expressed in italicized percentages.

Table 4. Differences in Job Satisfaction

Table 4 describes differences in participants' satisfaction with their jobs. The most important variable differentiating short- and long-term jobholders was having a job that matched with the individual's interests. Nearly all individuals who were interviewed reported that having a good job match was the most important factor in keeping their jobs. A focus on in-depth career exploration and personal attention to on-going satisfaction with employment were seen as vital services to offer individuals with psychiatric disabilities. In contrast, short-term jobholders reported feeling overeducated for the job and less satisfied with pay and number of hours worked.

TABLE 4. DIFFERENCES IN JOB SATISFACTION

	Short-term Job holders	Long-term Job holders
Job matched participant interests		
Participant reports job matched his/her interests	*33% 2/6*	*93% 13/14*
Job matched participants' stated interest in case file	4	10
Participant satisfaction with job		
Participant reports satisfaction with pay	*50% 3/6*	*86% 12/14*
Participant reports satisfaction with number of hours worked	*50% 3/6*	*79% 6/14*
Participant reports s/he felt overeducated for job	*33% 2/6*	*0% 0/14*
Participant reports working too few hours	*33% 2/6*	*14% 2/14*
Job tenure		
Average months of job tenure	1.6	33

Table 5. Differences in Employment Support

Table 5 describes differences in the variables of employment and agency support.

Employment support

The second most important variable was employment support during the job. Both long-term jobholders and short-term jobholders experienced numerous challenges during pre-employment and employment, such as psychosocial stressors, substance abuse problems, training needs and interpersonal needs. However, participants who were receiving employment support of individual mental health counseling and effective substance abuse treatment were significantly more likely to retain their jobs for 24 months or longer. Additionally, participants who maintained a relationship with any professional for over a year were more likely to succeed in retaining long-term employment.

Having stable, positive, individual, personal relationships in several domains of life appears to be key to job retention.

Agency and job coaching support

Interpersonal factors, such as length, stability, and quality of job coaching and other relationships, add to the ability of the individual to maintain employment over time.

Agency stability during job placement was also important, particularly since long-term jobholders remained in regular, often brief, contact with their job coaches for over a year in what appeared to be an effective mentorship-like relationship. Long-term job retention was also positively correlated with regular clubhouse socialization center attendance.

From the data, it is clear that ongoing personal relationships that are in support of employment greatly improve the probability of job retention.

TABLE 5. DIFFERENCES IN EMPLOYMENT SUPPORT

	Short-term Job holders	Long-term Job holders
Employment support		
Receiving supportive mental health counseling	7	16
Receiving substance abuse treatment	4	8
Relationship with at least one professional for over 1 year	5	14
Stable, long-term job coaching support		
Participant had only one job coach	12	17
Job coaching at least once a week for first months	5	12
Average months of job coaching (includes brief contacts)	1.6	13.2
Participant knew the coach prior to the job	*0% 0/6*	*43% 6/14*
Participant liked the coach personally	*67% 4/6*	*93% 13/14*
Participant thought the coach was responsive to needs	*67% 4/6*	*86% 12/14*
Participant reports wanting more job coaching time	*0% 0/6*	*29% 4/14*
Agency support		
Agency experienced no changes during job placement	10	18
Participant began job during peer-focused clubhouse	0	7
Participant attended clubhouse regularly	8	15

Table 6. Differences in Health Needs

Table 6 describes differences in variables related to health needs.

Substance abuse

Short-term jobholders were more likely to have received prior substance abuse diagnoses and treatment, and to have refused current substance abuse treatment, than individuals who maintained long-term employment.

Vocational program staff indicated that nearly all short-term, and half the long-term jobholders, were currently using alcohol and/or drugs. Individual interviews corroborated that more short-term jobholders reported using alcohol than long-term jobholders. In addition, half of all those interviewed reported that they were also having problems with their psychotropic medications.

The use of alcohol or non-prescription drugs combined with psychotropic medications results in a potentiation effect, in which both substances are made more powerful. This combination can be lethal. In fact, three of the 52 participants whose cases were used in the case file research were deceased. Staff stated that two died from drug-related problems.

Stressors

The severity of stressors experienced by individuals was measured using a three-point scale. Most stressors were caused by separation, death of a family member, and other losses.

Short-term jobholders had more stressors, including unstable housing and separation from their partners during their involvement in the vocational program than long-term jobholders.

Short-term jobholders also had a higher level of stressors during the year prior to, and the first three months during, their employment. They reported a higher level of stress with their family of choice as well (i.e., partner, children, or housemates).

TABLE 6. DIFFERENCES IN HEALTH NEEDS

	Short-term Job holders	Long-term Job holders
Prior substance abuse		
Prior substance abuse diagnosis	9	1
Prior treatment for substance abuse noted in case record	6	3
Participant refused substance abuse treatment	3	0
Current substance abuse		
Staff notes participants using alcohol/drugs	23	13
Participant reports drinking alcohol	*50% 3/6*	*7% 1/14*
Participant reports smoking cigarettes	*50% 3/6*	*29% 4/14*
Medication problems		
Participant reports medication side effects during job	*50% 3/6*	*14% 2/14*
Participant reports needing another medication	*50% 3/6*	*7% 1/14*
Stressors		
Changed residences during the past 12 months	15	11
In process of separating from partner	4	0
Level of stressors		
Level of stressors year prior to employment**	3.0	2.6
Level of stressors first three months of job**	3.0	2.4
Current level of relationship with family of choice*	2.7	1.7

* Scale: 1=good relationship; 2=moderate relationship; 3=poor/no relationship

** Scale: 1=none/minor stressors; 2=moderate stressors (i.e., move, new counselor); 3=severe stressors (i.e., death of a close relative, divorce)

Table 7: Differences in Vocational Program Referrals and Services

Table 7 describes differences in variables relating to referrals and services.

Referrals

Individuals who were referred by the Department of Rehabilitation (DOR) and mental health professionals were more likely to become long-term jobholders. Long-term jobholders also had a shorter time between intake and their last job and a longer time between intake and their last hospitalization.

Services

Individuals who received extra services beyond the core services of assessment and job counseling, development, placement, and coaching offered by DOR and Alliance were more likely to retain their jobs for 24 months or longer. It appears that increased personal attention, as demonstrated by the provision of extra services such as books, supplies, and transportation, or vocational staff taking in-depth personal and vocational histories, positively contributed to job retention.

TABLE 7: DIFFERENCES IN VOCATIONAL PROGRAM REFERRAL AND SERVICES

	Short-term Job holders	Long-term Job holders
Referral source		
Referred by Department of Rehabilitation	1	5
Referred by psychiatrist/therapist	2	5
Timing of intake		
Average number of years from last job to intake	4.0	2.8
Average number of years from last hospitalization to intake	3.7	4.8
Services authorized by DOR		
Job counseling/development/placement/coaching only	7	1
One or more “extra” services	8	19
Services provided by vocational program*		
Only assessment/job development/placement/coaching	15	9
One or more “extra” services	7	15

Table 8. Differences in Personal and Interpersonal Needs

Table 8 describes differences in the variables of motivation for work, employment training needs, and interpersonal needs.

Motivational needs

The results of interviews with both vocational program staff and short- and long-term job holders supported external motivation for employment (wanting a job only for the money, pleasing a family member, or just something to do) as more characteristic of the motivations of short-term job holders, while long-term job holders more often reported internal motivators, such as wanting to pursue a career, reaching personal goals, or gaining self respect.

Anecdotal reports indicated that some long-term jobholders initially expressed little interest in working, but became motivated to work after attending the clubhouse socialization center regularly and interacting with employed peers. Personalized career counseling and focusing on long-term career dreams and choices were also recognized as assisting in developing internal motivation.

Employment training needs

When asked about who was responsible for training them on the job, no short-term jobholder reported being trained solely by co-workers, whereas a majority (64%) of long-term jobholders were trained by co-workers. On the other hand, no long-term jobholder reported being trained solely by an Alliance job coach, whereas the job coach trained half the short-term jobholders. Thus, use of the job coach to provide training of job duties appeared more prevalent for short-term jobholders. This may indicate a relative difference in employment and interpersonal skills between the two groups.

Interpersonal needs

Short-term jobholders were more likely to report that the emotional support of the job coach was the most important feature of job coaching. Long-term jobholders, on the contrary, were less likely to report finding the job coach's emotional support important. They were more likely to describe their work relationships focusing directly on employment, including having a job coach who focused primarily on job tasks. They were more likely to report liking their supervisor and co-workers due to having been provided assistance with learning the job.

It appears that short-term jobholders met emotional and peer friendship needs in the workplace more often than long-term jobholders.

TABLE 8. DIFFERENCES IN PERSONAL AND INTERPERSONAL NEEDS

	Short-term Job holders	Long-term Job holders
Motivation for work		
*Participant reports external motivation**	*83% 5/6*	*57% 8/14*
Job coach reports participant has external motivation*	14	5
*Participant reports internal motivation***	*17% 1/6*	*43% 6/14*
Job coach reports participant has internal motivation**	7	20
Employment training needs		
Participant reports s/he was trained only by coworkers	*0 0/6*	*64% 9/14*
Participant reports s/he was trained only by job coach	*50% 3/6*	*0% 0/14*
Participant reports job coach focused primarily on job	*17% 1/6*	*57% 8/14*
Participant reports s/he liked supervisor due to job help	*17% 1/6*	*43% 6/14*
Participant reports s/he liked coworkers due to job help	*17% 1/6*	*36% 5/14*
Interpersonal needs		
Participant reports coach emotional support most important	*67% 4/6*	*36% 5/14*
Participant reports s/he liked having participants on site	*100% 6/6*	*50% 7/14*
Participant reports s/he liked coworkers a lot	*83% 5/6*	*43% 6/14*
Participant reports s/he liked coworkers due to friendliness	*67% 4/6*	*36% 5/14*
Participant reports s/he liked/likes supervisor personally	*67% 4/6*	*93% 13/14*

* Participants stated they wanted a job for money, to please others or for something to do

**Participants stated they wanted a job in order to pursue a career or personal growth.

DISCUSSION

This study examined 146 variables in a case-by-case analysis of 52 persons with severe psychiatric disabilities served by Alliance for Community Care. The pairs were individually matched for gender, age, and race/ethnicity. Each of the 26 pairs was comprised of one individual who retained a job for 24 months or longer, and one individual who retained a job for three months or less.

The study found that having a job that matched an individual's interest and receiving ongoing employment support by means of individual mental health counseling and/or substance abuse counseling were the primary factors that resulted in individuals retaining their jobs for 24 months or longer. The average length of long-term employment was 33 months, as opposed to 1.6 months for short-term jobholders.

Both groups of long- and short-term jobholders experienced high rates of early psychosocial stressors, severe psychiatric disorders, suicide attempts, assaultive behavior, psychiatric hospitalizations, number of medications, and substance abuse problems. However, having a job that matched one's interests and having an on-going relationship with a mental health and/or substance abuse counselor appeared to assist the individual in overcoming adversity and enjoying stable, long-term employment.

Having an ongoing, positive counseling relationship may allow an individual to explore feelings outside the work place, learn interpersonal skills, stay free of addictive substances, resolve stressful life events, and feel cared about in a holistic way. Individuals can then focus on employment tasks without bringing these needs into the work place.

Several additional variables of note were found to positively associate with job retention. These variables were that the vocational program participants:

- Were referred by DOR or mental health professionals, as opposed to being self-referred.
- Had less involvement with alcohol and drugs, and more involvement in substance abuse treatment.
- Experienced less trouble with medication side effects.
- Received more services than just job assessment, counseling, development, placement, and coaching.
- Reported fewer stressors outside work and a better relationship with their family of choice.
- Were motivated more by personal or career goals than by money, outside pressure or boredom.
- Had less reliance on relationships on the job to meet interpersonal needs and placed more focus on job tasks.

Employment is the goal of many individuals with severe psychiatric disabilities. Increasing job retention is clearly a priority for agencies working with these individuals. This study provides a focus for successful long-term employment through services that optimize matching jobs with individual preferences, and providing ongoing employment supports of mental health counseling and effective substance abuse treatment.

ACKNOWLEDGEMENT

This study is a result of successful collaboration between Alliance for Community Care, County of Santa Clara, and the California Departments of Mental Health and Rehabilitation. It would be impossible to acknowledge by name all the people whose generous help and support made this study possible.

We would particularly like to acknowledge all the program participants and staff at Alliance who participated in the study and who gave freely and gladly of their time in interviews. They are at the heart of the cooperative programs, and were pleased to be asked how to help us develop best practices through this research.

We would particularly like to thank the following individuals: Mary Williams, former director of Alliance (then called Community Companions), opened the doors of the agency for the study and provided the team with complete administrative support. Mary McNally from Department of Rehabilitation performed the complex data analysis. Finally, the staff from the Mental Health Cooperative Program, particularly Edie Covent from Department of Mental Health, must be acknowledged for pioneering an extraordinary collaborative group to assist persons with severe psychiatric disabilities become employed in the integrated labor market.

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Individual Self Sufficiency Planning (ISSP) Project:
A Successful Employment Program Model for SSI/SSDI Recipients

ABSTRACT

Background: The Social Security Administration (SSA) recently provided a five-year research and demonstration grant for California to develop innovative services that assist persons with significant psychiatric disabilities receiving Supplemental Security Income (SSI) and/or Social Security Disability Insurance (SSDI) to go to work and lessen or eliminate reliance on SSA benefits. This project, entitled *The Individual Self Sufficiency Planning (ISSP) Project*, developed sites in San Mateo and Kern Counties, and added the ongoing employment supports of benefits planning and service coordination to traditional vocational rehabilitation services.

Study Aim: This study reports on employment outcomes for ISSP project participants who also received services from the California Department of Rehabilitation (DOR) as part of the project.

Methods: Matched groups were comprised of DOR clients receiving SSA benefits. Comparison variables consisted of type of disability (psychiatric versus non-psychiatric), and whether an individual participated in the ISSP project. DOR outcomes included number of new applications, individual plans for employment, successfully employed closures, and unsuccessful closures. The groups were compared for percentage of individuals receiving plan services, and percentage of individuals whose cases were closed as successfully employed.

Results: Over a 44-month period 65% of the cases of active ISSP project participants who had applied for DOR services were closed as successfully employed. This compares to the rate of 26% for a matched comparison group, and 36% for the total DOR client population.

Limitations: The number of project participants served during this five-year period was limited to 150 individuals, and the project sites were competitively selected to ensure the highest quality of service delivery and administrative support.

Discussion: The ISSP project demonstrates a significantly higher rate of employment success for individuals receiving SSI and/or SSDI. The singular differentiating feature of the ISSP model is the addition of ongoing employment supports before, during and after traditional DOR vocational rehabilitation services.

This ongoing employment support consisted of benefits planning and service coordination services provided in a context of counseling support emphasizing career planning and consumer driven informed choice.

Implications for Policy and Research: This study provides clear evidence that persons with significant psychiatric disabilities receiving SSI and/or SSDI can go to work in integrated employment settings provided they are supported by an employment service and support model patterned after the ISSP project. Recommendations are provided to both DOR and SSA for implementation of this model on a larger scale.

INTRODUCTION

The 1992 amendments to the Rehabilitation Act emphasized the need for vocational rehabilitation to focus services on those individuals with the most significant barriers to employment due to disability. For the last decade California's Department of Rehabilitation (DOR) has shifted its resources by means of an order of selection to serve those requiring multiple services over an extended period of time. During this period success rates in California and across the nation have declined, while costs have risen.

A part of California DOR's strategy to counteract this trend and increase successful outcomes has been to intensify its strategy of partnering via cooperative contracts with public and private agencies to work with persons with the most significant disabilities. In particular, the mental health cooperative programs were created in 1992 to dedicate resources to persons with significant psychiatric disabilities. These mental health cooperative programs incorporate the critical components of supported employment as an evidenced-based practice for persons with severe mental illness (Bond et al, 2001). They combine DOR, public mental health and employment service staff in a team approach to assist individuals with significant psychiatric disabilities go to work in competitive, integrated settings. Employment supports in the form of mental health counseling supplement the time-limited vocational rehabilitation process.

Table 1 shows that the enriched services of mental health cooperative programs provide better DOR outcomes for persons with significant psychiatric disabilities. It depicts the percentage of DOR clients who apply for services and whose cases are later closed as successfully employed. DOR clients who participate in a mental health cooperative program (MH Cooperatives) are compared with those DOR clients with a significant psychiatric disability who do not participate in a mental health cooperative program (MH Other DOR), but receive traditional vocational rehabilitation services. The difference in success percentage was found to be statistically significant ($p = .001$).

TABLE 1 - DOR APPLICATION SUCCESS RATE
(Fiscal Year 2001-2002)

Group	Successful Closures	All Closures	Successful Closures as % of All Closures
MH Cooperatives	798	3,076	26%
MH Other DOR	1,277	6,435	20%

These outcomes are consistent with a nationwide study commissioned by the Substance Abuse and Mental Health Services Administration (SAMHSA). Programs that provided integrated mental health and vocational supports, focused on rapid placement into jobs consistent with the participant's career plans, and provided ongoing support was significantly more successful than traditional vocational rehabilitation services.

The SAMHSA report further indicated that the employment patterns of the participants indicated the need for long-term supportive services (SAMHSA, 2003). A study conducted by DOR in 1998 supports this recommendation by determining that approximately half the successfully placed individuals were not working three years after case closure (DOR, 1998).

A more recent study conducted by DOR examined the factors related to long-term job retention by individuals who received employment services through the mental health cooperative programs.

In a case-by-case in-depth analysis two factors were found to be highly correlated with job retention; a job that was consistent with an individual's career interests, and ongoing employment support consisting of individualized, supportive mental health and/or substance abuse counseling (DOR, 2003).

In 1998 DOR applied for and received a five-year research and demonstration grant from SSA to pilot replicable strategies that would enable persons receiving SSI and/or SSDI to go to work and lessen or eliminate reliance on SSA benefits. Entitled *The Individual Self-Sufficiency Planning Project (ISSP)* persons with significant psychiatric disabilities, receiving SSI and/or SSDI and wanting to go to work were invited to participate. Two hundred and fifty one individuals originally signed up for the project, with 150 individuals choosing to participate for the duration of the grant period. Mental health cooperative programs in San Mateo and Kern counties participated in the project by adding an employment support team to the employment and mental health services normally provided by the respective cooperative programs. A project evaluator examined outcomes among matched comparison groups.

Employment support teams consisted of a Benefits Planner and a Service Coordinator. The Benefits Planner primarily assisted the participant with issues related to the impact of employment on various benefit programs (for example, SSI/SSDI, Medicaid, supported housing, welfare), benefit program eligibility, work incentives, and budget planning and management. The Service Coordinator primarily assisted the participant engage and maintain appropriate community resources in support of career plans.

Community resources could include DOR, public mental health, one stop employment service centers, educational institutions, and other resources.

The ISSP employment support team assisted participants to assess their readiness for employment, explore career options, determine the impact of employment on social security and other benefit programs, and engage the community resources needed to pursue work. The ISSP team would then remain involved with both the participant and the various agencies assisting the participant prepare for, obtain, and maintain employment.

This employment support team provided an ongoing continuity of personalized, employment support in order to assist the participant navigate through the process of finding and retaining employment. They were experts in benefit program eligibility and the various work incentives available, budget planning and management, and problem solving. The team would then stay involved on a regular basis with the participant after various agencies (including DOR) stopped services. They would continue to provide employment support and assistance with income reporting, eligibility, and overpayment issues that might arise with local SSA offices. Thus the SSA grant financed an ongoing, individualized employment support team that stayed with the participant before, during, and after the time-limited vocational rehabilitation services of DOR.

In summary, the SSA grant provided a service option in two mental health cooperative programs that incrementally added an employment support team to the existing employment and mental health services.

METHOD

The aim of this study is to determine whether the addition of ongoing employment support, consisting of benefits planning and service coordination, materially improved successful DOR outcomes for persons receiving SSA benefits beyond that achieved by (1) persons with significant psychiatric disabilities participating in a mental health cooperative program, (2) persons with significant psychiatric disabilities receiving traditional vocational rehabilitation services, and (3) persons with a disabling condition other than psychiatric receiving traditional DOR services.

Subjects

ISSP Project. A total of 150 individuals received ongoing employment support through the ISSP project from July 1999 through February 2003, for a total of 44 months. Characteristics of these individuals were that they:

- Received SSI, SSDI, or both.
- Were diagnosed with a significant psychiatric disability, such as psychosis or major mood disorder.
- Expressed an interest in working.
- Were provided the opportunity of receiving vocational rehabilitation services and public mental health treatment through a mental health cooperative program.

This group of individuals (ISSP Project) was matched with the following comparison groups in order to determine differences, if any, in DOR outcomes:

MH Co-op. DOR clients receiving SSI, SSDI or both due to a significant psychiatric disability who participated in a mental health cooperative program.

MH Other. DOR clients receiving SSI, SSDI or both due to a psychiatric disability who did not participate in a mental health cooperative program, but received traditional vocational rehabilitation services.

Non-MH. All DOR clients receiving SSI, SSDI or both with a disabling condition other than psychiatric, and who did not participate in a mental health cooperative program.

All individuals from the above four groups were drawn from DOR's database, and represent individuals receiving SSA benefits who have applied for DOR services in order to pursue work as a means of lessening or eliminating reliance upon SSA benefits.

Variables

DOR outcomes were examined for the ISSP project participants and the three comparison groups. The outcomes measures were:

- The percentage of individuals who received DOR plan services after DOR application. Significant DOR time and resources are dedicated to assessment and evaluation activities designed to bring resolution to an individual's readiness to actively participate in vocational rehabilitation services.
- The percentages of individuals who become successfully employed as a result of participating in DOR plan services. This success rate is one of the Rehabilitation Services Administration's Standards and Indicators that determine continued federal funding for a state vocational rehabilitation program.

- The percentage of individuals who become successfully employed after applying for DOR services. This outcome is a combination of the above percentages of application to plan, and plan to successful closure. It provides a successfully employed outcome percentage that encompasses all of the DOR staff and resources applied to an individual as a result of applying for services.

Procedure

The incidence of various DOR closure categories was chosen as the best indicator of DOR successful outcomes. ISSP project participants served by DOR were compared to the three comparison groups by compiling DOR closure statuses for the period June 1999 through January 2003. Closure categories are as follows:

- Status 08, 30, 38 – These statuses represent a DOR closure after an individual applies for service, but the individual's case is closed before plan services are initiated.
- Status 26 – This status represents a DOR closure that results from an individual receiving DOR plan services and being determined as successfully employed. Successfully employed is defined as an individual being employed in a competitive, integrated job that the client and counselor consider satisfactory for a minimum of 90 days.
- Status 28 – This status represents a closure after plan services were initiated, but the services did not result in successful employment.

RESULTS

Table 2 depicts the number of closures of cases for individuals who received DOR plan services versus all closures. All closures include plan closures plus the number of closures of individuals who apply for services but do not make it to plan. Plan closures divided by all closures gives the percentage of individuals who received plan services after DOR application. ISSP project individuals are compared with the three comparison groups.

TABLE 2 – APPLICATION TO PLAN
(July 1999 through February 2003)

Group	Closures After Plan Services	All Closures	Percentage Receiving Plan Services
ISSP Project	76	84	90
MH Co-op	4,430	6,683	66
MH Other	5,571	10,309	54
Non-MH	29,133	40,246	72

Table 2 shows that an individual receiving SSI, SSDI, or both as a result of a psychiatric disability has a 90% chance of obtaining DOR plan services if they are both participating in a mental health cooperative program, and are receiving the ongoing employment support of the ISSP Project. An individual participating in a mental health cooperative program has a 66% chance of receiving plan services, while an individual with a psychiatric disability who neither participates in a mental health cooperative program nor receives the ongoing employment support of the ISSP Project has a 54% likelihood of receiving DOR plan services. These percentages are compared to the 72% likelihood that an individual without a psychiatric disability and receiving SSI, SSDI or both will receive plan services after DOR application.

It is clear that the addition of staff support from the ISSP project positively contributes to assisting both a consumer and DOR staff to determine when and if DOR services are appropriate.

Table 3 depicts the number of successful and unsuccessful DOR closures as a result of plan services being provided, with the percentage of successful plan closures shown. This success rate is derived by dividing the number of successful closures by the combination of successful and unsuccessful plan closures. Again the ISSP Project participants are compared to the three aforementioned comparison groups.

TABLE 3 - PLAN SERVICES TO CLOSURE
(July 1999 through February 2003)

Group	Successful Closures	Unsuccessful Closures	Total Plan Closures	Success Rate
ISSP Project	55	21	76	72
MH Co-op	1,717	2,713	4,430	39
MH Other	1,868	3,703	5,571	34
Non-MH	14,630	14,503	29,133	50

Table 3 shows that a person who participates in both the ISSP Project and a mental health cooperative program has a 72% success rate from DOR plan services, with a 39% success rate with participation in just a mental health cooperative program, and just 34% when receiving DOR plan services alone.

These success rates are compared with DOR's success rate of 50% for persons whose primary disabilities are other than psychiatric.

Table 3 shows that the addition of staff support from the ISSP Project clearly contributes to a superior success rate for persons with psychiatric disabilities who receive SSI, SSDI or both.

Table 4 shows the number of successfully employed closures as a percentage of all closures after DOR application.

This figure is obtained by dividing the number of successfully employed closures by the total number of closures, which includes closures after application but before plan services are initiated.

TABLE 4 – APPLICATION TO SUCCESSFUL CLOSURE
(July 1999 through January 2003)

Group	Successful Closures	All Closures	Percentage Success
ISSP Project	55	84	65
MH Co-op SSA	1,717	6,683	26
MH Other SSA	1,868	10,309	18
Non-MH SSA	14,630	40,246	36

Table 4 combines the application to plan rate depicted in Table 2 with the plan to successful closure rate shown in Table 3, to illustrate that ongoing employment supports coupled with mental health cooperative program services dramatically increase the likelihood that an individual with a psychiatric disability who receives SSI, SSDI or both will become successfully employed as a result of applying for DOR services.

The 65% success rate of ISSP Project participants is over twice that of persons participating only in mental health cooperative programs (26%), and over three times that of an individual with a psychiatric disability receiving neither (18%). Persons whose primary disability is other than psychiatric have an application to successful closure rate much closer to the control groups without ongoing employment supports (36%) than the ISSP project participants.

DISCUSSION

The Social Security Administration funded a demonstration project consisting of benefits planning and service coordination as an employment support for SSI/SSDI beneficiaries who receive DOR services. It was hypothesized that this ongoing support before, during and after vocational rehabilitation services would increase the rate of individuals obtaining and keeping a job.

The results have been dramatic; ISSP project participants have experienced both a significantly higher rate of receiving plan services after application, and a higher rate of successful employment after receiving DOR plan services.

Two qualifying factors need to be considered. The first is that the ISSP Project was limited to 150 active participants. Of those 150 only 84 have been included in this study, as their DOR cases have reached a closure status. The balance of participants either has a DOR case still open, or has not applied for services. With such a relatively small number this pilot's success may be influenced by variables external to the service elements of benefits planning and service coordination. The project is currently in its fifth year, and is currently undergoing an in-depth process evaluation to explore those variables affecting outcomes. The results will be published under separate cover.

The second factor of note is that the two pilot sites of Kern and San Mateo were selected via a competitive application process. A discriminating selection factor was that the programs enjoyed strong administrative support, and fielded professional staff of the highest caliber. Qualities of staff chosen to be Benefits Planners and Service Coordinators were individuals who were able to grasp the complexities of the multiplicity of benefit programs and their work incentive provisions. Concomitantly, they were capable of understanding how working affects benefits, effectively translating actual and potential income changes to participants, and enabling participants to make reasonable, informed decisions. Staff had a grasp of community resources and employers, and were capable of assisting participants in formulating career aspirations. For this project to be replicated staff must be proficient in these core competencies, and enjoy strong administrative support.

The ISSP Project targeted persons with psychiatric disabilities. The evidence suggests, additionally, that the ongoing employment support provided could benefit all persons with disabilities severe enough to be receiving SSI, SSDI or both. The control group of DOR consumers without psychiatric disabilities and not receiving ongoing employment support experienced a success rate much closer to the comparison groups with psychiatric disabilities who were also not receiving ongoing employment support. The essential elements of the ongoing employment support provided by the ISSP Project should be available to all persons with disabilities struggling to go to work and reduce or eliminate benefits.

IMPLICATIONS FOR POLICY AND RESEARCH

This study provides policy implications for DOR, as the addition of the herein described service supports more efficient use of DOR counselor time and resources, as well as a higher success rate. The Rehabilitation Act, as amended, provides funding for the time-limited vocational rehabilitation services that assist persons with disabilities go to work. It does not fund pre-vocational activities, nor does it fund ongoing support after the DOR case is closed.

Thus ongoing support services have not received dedicated resources from any funding system. However this study shows the significant positive impact on DOR outcomes when the ongoing employment supports of benefits planning and service coordination are competently included as part of a person's vocational rehabilitation before, during and after vocational rehabilitation services are provided.

Through the Ticket to Work and Work Incentives Improvement Act (The Ticket) legislation the Social Security Administration is investing considerable resources to encourage SSI/SSDI beneficiaries to go to work and reduce or eliminate benefits. SSA has increased and broadened financial incentives to employment networks, and has added an outcome and milestone-outcome payment to the current cost reimbursement payment method offered to State VR agencies. This SSA financed pilot study provides an employment service and support model that should be replicated on a larger scale. It is recommended that SSA look at financial means through its Ticket provisions to encourage state DOR and employment networks to form partnerships to cooperatively field service models that includes the service elements described in this study. Further longitudinal research efforts could then be directed toward quantifying on a larger scale the impact of this service model.

ACKNOWLEDGEMENT

This article has been a collaborative effort among the California Department of Rehabilitation, Department of Mental Health, Kern County's On Track Employment Program, San Mateo County's Vocational Rehabilitation Services, Results Group, and the Social Security Administration. In particular, the author wishes to thank Tom Leigh, PhD, Research Analyst, California Department of Rehabilitation, and John Shea, Ph.D., Results Group, for their assistance in data collection and analysis.

This study was funded, in part, through Social Security Grant #12-D-70339-9-01. The contents expressed herein do not necessarily reflect the position or policy of the Social Security Administration, and no official endorsement should be inferred. Comments, questions and requests for reprints should be directed to Warren Hayes, Department of Rehabilitation, 2000 Evergreen Street, Sacramento, CA 95815 (email: whayes@dor.ca.gov).

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Vocational Rehabilitation and Use of Publicly Funded Mental Health Services

ABSTRACT

Background: Support of employment services by public mental health authorities has improved access to vocational rehabilitation by persons with significant psychiatric disabilities. Is there a positive return on this investment in the form of reduced mental health outlays? The answer is important for mental health administrators and other policymakers who must decide where to allocate scarce public mental health resources.

Study Aim: This study examines the extent to which participation in employment services in the mid- to late-1990s, supported cooperatively by the California Departments of Mental Health (DMH) and Rehabilitation (DOR), reduced use of selected, publicly funded mental health services.

Methods: Databases from DMH and DOR were merged to match employment service outcomes with Medi-Cal (California's Medicaid program) expenditures for selected public mental health services. Five hundred and ninety-one persons with significant psychiatric disabilities were followed a year before participation in a DMH/DOR cooperative employment program, during employment service delivery, and a year after DOR case closure.

Limitations: Non-Medi-Cal-funded public mental health services, as well as Medi-Cal costs of psychotropic medications, are not included in this study.

Results: Total mental health outlays decreased by 13.9% for the 591 persons from one year before DOR case opening to one year after case closure. Those whose cases were closed as successfully employed showed a 21.6% decrease, while unsuccessful case closures showed a decrease of 10.8%.

Use of day treatment services dropped by 41.8% overall; 76.2% for successful closures, and 26.4% for unsuccessful ones. There was a 33.5% decrease in outlays for inpatient services while individuals were receiving employment services, but inpatient expenditures returned to pre-DOR service levels after the DOR case was closed.

Discussion: This study supports the hypothesis that participation in cooperative employment service programs by persons with significant psychiatric disabilities reduces public mental health outlays, not only for those who go to work, but also for those who do not achieve their vocational goal prior to DOR case closure.

Implications for Policy and Research: The existence of cost-offsets should encourage mental health administrators to allocate resources toward partnering with vocational rehabilitation in serving adults who want to go back to work.

INTRODUCTION

This study examines the relationship between participation in vocational rehabilitation services and use of selected, publicly funded mental health services by working-age adults in California with significant psychiatric disabilities. Studies relating costs with outcomes for individuals with such disabilities are relatively rare. Hargreaves, Shumway, Hu and Cuffel found that, in the 1960s, about 1% of mental health outcome studies had cost components. The percentage increased to about 5% by 1985, and then stabilized or declined. (Hargreaves et al, 1998). In terms of rigorous studies of cost-effectiveness or cost-benefit ratios, the authors found eight published between 1981 and 1985, decreasing to five between 1986 and 1990, and only three from 1991 to 1995. At that, nearly all of the studies compared hospitalization with community services, rather than certain community services with others. Interestingly enough, there have been several comparative cost studies (with cost-offsets treated as benefits) in the field of alcohol and drug abuse. (Holder, 1998).

Two studies carried out by DMH and DOR in the early 1990s revealed that mental health costs decreased for those with successful DOR case closures. Costs six months prior to receiving employment services were compared with costs six months after closure. Among 47 consumers with successful closures (status 26s) in Santa Clara County, selected mental health outlays declined by 28%. In San Bernardino County, 39 individuals with successfully employed closures decreased their use of publicly funded mental health services by 44%. (DMH/DOR, 1996). Left open was the question of change in use of mental health service by those with unsuccessful DOR case closures.

While access to vocational rehabilitation services and successful employment rates for adults with significant psychiatric disabilities have improved, mental health administrators continue to be faced with economically justifying on a cost benefit basis the redirection of public mental health funds to support vocational rehabilitation services.

This study examines the hypothesis that use of vocational rehabilitation services in California's Mental Health Cooperative Programs by persons with significant psychiatric disabilities results in a reduction in their overall use of other public mental health services. The confirmation of this hypothesis would enable county mental health administrators to connect the investment of mental health resources in vocational rehabilitation to a reduction in the cost of public mental health, and ease the reallocation of resources from day treatment to more cost-effective vocational programs. Latimer recently reviewed eight studies of supported employment (SE) and concluded that "Converting day treatment or other less effective vocational programs into SE programs can be cost-saving or cost-neutral." (Latimer, 2001).

California's DMH/DOR Cooperative Program

In 1992 California formed the Mental Health Cooperative Programs, in which county mental health resources were combined with DOR funded vocational rehabilitation services to assist persons with significant psychiatric disabilities obtain and retain employment. Both the public mental health and vocational rehabilitation systems recognized that this was an underserved population with employment success below that of persons with other disabilities.

By 1996, DOR had budgeted $18.3 million in cooperative contracts with 28 counties to blend employment services with mental health supports. Counties contributed approximately $4 million of the $18.3 million total budget as match to DOR from their existing resources to form this new and different pattern of service. The remainder of the funding was provided by federal vocational rehabilitation dollars allocated to California's DOR through the Rehabilitation Act of 1973, as amended. County mental health staff, DOR counselors and private non-profit employment service providers worked collaboratively as teams in their respective communities, and programs were operated on the principles of (1) mental health services supporting employment efforts, (2) emphasizing competitive, rather than sheltered employment, (3) incorporating career planning to ensure services and employment matched individual career preferences, (4) assisting employers to accommodate special needs, and (5) building extended employment supports into the planning process.

METHOD

This study examines the amount of selected public mental health services utilized by individuals one year before participation in California's Mental Health Cooperative Programs, during participation, and one year after each case had been closed.

Sample

The following criteria were used to select individuals from the total population of individuals participating in mental health cooperative programs between January 1, 1995 and June 30, 1997. The selected individual:

- Was determined to have a significant psychiatric disability by both county mental health and DOR,
- Was receiving Social Security Benefits: Supplemental Security Income (SSI) and/or Social Security Disability Insurance (SSDI),
- Received services as a result of an Individual Plan for Employment (IPE) written by DOR,
- Had his/her case closed by DOR as successfully employed (status 26) or as unsuccessful in achieving this goal (status 28), and
- Had some retrievable Medi-Cal funded mental health service and expenditure data in one or more of the following three time periods:
    - Before – 365 days immediately preceding DOR case opening,
    - During – while the case was open, which averaged 361 days,
    - After – 365 days subsequent to case closure.

A total of 591 individuals met the above criteria and were included in the study.

Variables

- *Employment Success.* Employment success is defined as DOR having provided appropriate vocational rehabilitation services in accordance with the IPE and closing the case because the individual is successfully employed; that is, having achieved a suitable competitive employment outcome, and holding the job for at least 90 days. An unsuccessful closure is defined as DOR closing the case after vocational rehabilitation services have been provided, and determining that the individual cannot achieve suitable employment.

- *Public Mental Health Services.* The following is a list of the Medi-Cal funded mental health services used for analysis:
    - Inpatient services – hospitals and psychiatric health facilities
    - Day treatment
    - Medication support
    - Crisis intervention or stabilization
    - Other outpatient services

  Data is in the form of total dollar claims for each individual by the county mental health program in the above service categories. Inpatient data comes from the Short-Doyle/Medi-Cal Approved Claims (SDMC) file and the Fee-For-Service/Medi-Cal Inpatient Consolidation (IPC) file. Data for the other mental health services is from the SDMC file.

Procedures

Data on employment success was transmitted from DOR field offices participating in mental health cooperative programs to DOR's central database. Data on public mental health expenditures was submitted from county mental health programs to DMH's central database. Using the above subject criteria, staff from each central headquarters shared databases by means of utilizing unique identifiers that preserved the privacy and confidentiality of the individual. Totals for employment success and dollars spent for mental health services were then combined into a single database for analysis.

Qualifying Factors

When interpreting the results, the following qualifying factors should be considered:

- In California, Medi-Cal accounts for an estimated 56% of the public mental health outlays for the services. The remaining non-Medi-Cal, public mental health outlays are largely based on a percentage of the state sales tax, targeted state general funds for specific programs, federal block grant funds, county funds, and revenues from Medicare, insurance and fees.
- Costs for psychotropic medications were not included in this study. This data proved to be prohibitively expensive to obtain, due to the size of the Medi-Cal pharmacy claims files.

- The variation of mental health service costs need to be considered in the larger context of this time period (January 1, 1995 through July 1, 1997), when Medi-Cal's share of California's public mental health expenditures increased.
- Individuals who participated in a mental health cooperative program for many years during this time period were not likely to meet participant criteria, due to the limitations of DMH being able to record expenditure data a full year before the individual's DOR case was opened.

RESULTS

Subjects

The following are demographic characteristics of the 591 individuals:

- Nearly six in ten are men.
- The vast majority (69%) were 30 to 49 years of age at the time.
- Only four percent had a major disability other than psychoses/neuroses or alcoholism.
- Nearly three in ten had some college, including six percent of the total with a baccalaureate or higher degree.
- Sixty-three percent were White, with the rest ethnic minorities (principally African American and Hispanic) or of unknown ethnicity.
- Nearly one-fourth received SSDI benefits, often concurrently with SSI. Three-fourths received SSI Only.

Outlays

Table 1 shows selected Medi-Cal funded mental health outlays over 365 days *Before* DOR case openings, while cases were open (*During,* which averaged 361 days), and 365 days *After* case closures. Across 591 individuals, total outlays fell by $820 (or -13.9%) per person-year. Reduced expenditures for day treatment (-41.8%) account for four-fifths of the decline. The next largest change was other outpatient services, with a drop of –7.6%.

Other changes – *Before* to *After* -- were more modest in both absolute and relative terms. Inpatient outlays, for example, declined by only –2.8%.

TABLE 1. OUTLAYS FOR SELECTED MENTAL HEALTH SERVICES, BY SERVICE (N=591)

	***Before* DOR case opening**	***During* (while case was open)**	***After* DOR case closure**	***After* minus *Before***	
				Number	**Percent**
Inpatient services	$628,835	$417,962	$611,518	-$17,317	-2.8%
Day treatment	820,642	763,282	477,898	-342,744	-41.8%
Medication support	497,493	469,347	471,715	-25,778	-5.2%
Crisis services	134,157	103,475	142,705	8,548	6.4%
Other outpatient services	1,410,012	1,672,182	1,302,706	-107,306	-7.6%
Total (Avg.)	$3,491,139	$3,426,248	$3,006,542	-$484,597	-13.9%
Per person (Avg.)	$5,907	$5,797	$5,087	-$820	-13.9%

Source: DMH and DOR.

An important question is whether changes reported here might simply be a reflection of global changes in the use of mental health services in California from State Fiscal Year (SFY) 1994 to SFY 1998. Unpublished data provided by DMH suggest that the large decrease for day treatment runs counter to statewide trends. Claims for day treatment rose by about 10% per year over this period. The small decline in outlays for inpatient services (*Before* to *After)* among the 591 individuals is also somewhat inconsistent with statewide trends. Such outlays (actually claims) for inpatient services decreased statewide about 9% per year over this period.

When individuals were receiving vocational rehabilitation services (the *During* period), the use of inpatient services declined dramatically. The *During* period involves nearly the same number of days, on average, as the *Before* and *After* periods, each of which is 365 days in length. Across our 591 subjects, the range for the *During* period was 1 day to 847 days, with an arithmetic mean of 361 days.

Without adjusting for this small difference, outlays for inpatient services fell from $628,835 (*Before)* to $417,962 *(During),* or by 33.5%. The use of day treatment does not substantively change while receiving vocational rehabilitation and employment services. It drops subsequently.

As indicated in Table 2, outlays per person dropped for both those with successful closures (26s) and those with unsuccessful ones (28s).

Comparing *Before* with *After,* total outlays per person dropped by $1,194 (or, -21.6%) among those individuals whose cases were closed as successfully employed (status 26), and by $656 (or, -10.8%) for individuals whose cases were closed as unsuccessful (status 28). The direction of change, but not the magnitude, was similar across the two closure types. The change from *Before* to *After* is dominated by change in the use of day treatment services. Those with successful closures reduced their use of day treatment by -76.2%. The reduction among those with unsuccessful closures was about one-third the size at -26.4%. There was a small decrease in inpatient service outlays: -3.1% among 26s, and –2.6% among 28s.

TABLE 2. OUTLAYS, BY SERVICE AND TYPE OF CLOSURE (N=591)

	Before DOR case opening	*During* (while case was open)	*After* DOR case closure	*After* minus *Before* Number	*After* minus *Before* Percent
Successful (26s) *(N*=180)					
Inpatient services	$160,322	$51,572	$155,413	-$4,909	-3.1%
Day treatment	252,731	202,936	60,089	-192,642	-76.2%
Medication support	161,881	151,901	130,663	-31,218	-19.3%
Crisis services	29,724	20,328	38,313	8,589	28.9%
Other outpatient services	388,275	529,511	393,488	5,213	1.3%
Total (Avg.)	$992,933	$956,248	$777,966	-$214,967	-21.6%
Per person (Avg.)	$5,516	$5,312	$4,322	-$1,194	-21.6%
Unsuccessful (28s) *(N*=411)					
Inpatient services	$468,513	$366,390	$456,105	-$12,408	-2.6%
Day treatment	567,911	560,346	417,809	-150,102	-26.4%
Medication support	335,612	317,446	341,052	5,440	1.6%
Crisis services	104,433	83,147	104,392	-41	*
Other outpatient services	1,021,737	1,142,671	909,218	-112,519	-11.0%
Total (Avg.)	$2,498,206	$2,470,000	$2,228,576	-$269,630	-10.8%
Per person (Avg.)	$6,078	6,010	$5,422	-$656	-10.8%

Source: DMH and DOR.
*Less than -0.05%.

Changes in the pattern of outlays from *Before* to *During,* and from *During* to *After* are of interest. From *Before* to *During,* outlays for inpatient services declined by $108,750 (or, -67.8%) among those with status 26 case closures, and by $102,123 (or, -21.8%) among those with status 28 case closures. There was little change in use of day treatment services while receiving employment services. Expenditures for miscellaneous other outpatient services rose considerably. The net change was a slight reduction in use of public mental health services, between both closures types. From *During* to *After,* day treatment outlays fell considerably, presumably as employment took the place of day treatment. Outlays for inpatient services rebounded, to nearly the level they were *Before* receipt of vocational rehabilitation and employment services.

DISCUSSION

This study supports the hypothesis that participation in cooperative program employment services by persons with significant psychiatric disabilities reduces the cost of public mental health for such individuals.

Public mental health costs went down whether cases were closed to successful employment (status 26), or closed without the person's employment goal being achieved (status 28).

Outlays per person-year dropped by $1,194 (or –21.6%) among those with status 26 case closures, and by $656 (-10.8%) for those with status 28 case closures. Both groups used day treatment services less, with the percentage reduction about three times greater for those who achieved status 26 case closure than status 28 case closure (-76.2% and -26.4%, respectively).

Use of inpatient services declined dramatically when individuals were receiving vocational rehabilitation services (-33.5%), and then outlays for inpatient services returned to approximately the same level as when vocational rehabilitation services began. It is hypothesized that an individual's participation in the employment services offered by the mental health cooperative programs materially contributes to the reduction in use of inpatient services. The *rebound* in inpatient service outlays from *During* to *After* warrants attention. This may be a consequence of several factors affecting individuals differently: for example, feeling so good about working that the person does not take needed psychotropic medicine; the job not working out as well as had been hoped; or facing the stresses and strains associated with a different lifestyle and moving from public benefits to greater self-sufficiency. It may also be a consequence of the case being closed by the mental health cooperative program, and extended therapeutic supports not being adequately built into public mental health's service delivery. This lack of extended support may force some individuals to seek out the more expensive inpatient treatment available at a hospital facility.

In the area of day treatment services this data suggests that use of day treatment services are more permanently reduced by employment service participation, while reductions in use of inpatient hospitalization are more temporary, and return to pre-employment service levels once cooperative program staff disengage from an individual due to the vocational rehabilitation case being closed.

IMPLICATIONS FOR POLICY AND RESEARCH

This study models a research methodology in which databases are merged between California's two state agencies (DMH and DOR). Further studies can now be undertaken to measure various service and fiscal impacts by the partnering systems.

The data in this study should be of interest to mental health administrators, for it points to the financial value of investing resources to partner with the vocational rehabilitation system. Public mental health costs are reduced when persons participate in employment services provided cooperatively by vocational rehabilitation and public mental health. This finding should encourage reallocation of mental health resources toward more cost-effective employment services.

It is recommended that further research be undertaken to improve understanding of two matters. One is the relationship between vocational rehabilitation services on the one hand, and use of inpatient mental health services, on the other. The dramatic drop in use of inpatient services (*Before* to *During),* with the subsequent rebound *(During* to *After),* need to be better understood so as to improve job matches and the effectiveness and efficiency of on-going employment support. The second is the relationship between various program practices and job retention, as the data *(During* to *After)* suggests that employment takes the place of costly day treatment services.

A recent study by the DOR looked at the correlates of retaining a job for 24 months versus three or fewer months, and found that the two variables most highly associated with job retention were a job that matched the individual's interest, and ongoing, individualized counseling support of employment efforts. (DMH/DOR, 2003).

ACKNOWLEDGEMENT

This article was a collaborative effort between the Department of Rehabilitation, The Department of Mental Health, the Social Security Administration, and the Results Group. In particular, the author wishes to thank Kathy Styc, Chief of Statistics and Data Analysis, and Sara-Jane Gilb, Research Program Specialist, California Department of Mental Health; Tom Leigh, Research Analyst, Brian Lueck, Research Analyst, and Warren Hayes, Chief of Human Services Cooperative Programs, California Department of Rehabilitation; and Steve Ekstrom, Partner, The Results Group. This study was funded, in part, through a Cooperative Agreement between the Social Security Administration and the State of California (Grant #12-D-70339-9-01).

The contents and opinions expressed herein do not necessarily reflect the position or policy of the Social Security Administration or of the California Departments of Mental Health or Rehabilitation, and no official endorsement should be inferred. Comments, questions, and requests for reprints should be sent to John Shea, Allen, Shea & Associates, 1780 Third Street, Napa, CA 94559 (email: allenshea@sbcglobal.net

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