



Minnesota Demonstration to Maintain Independence and Employment:

Final Outcome Evaluation Report

Prepared for:

State of Minnesota

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February 2010

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I. INTRODUCTION

Without access to needed health, mental health, and employment support services, working individuals with serious mental illness are at risk of losing stability and developing long term dependence on federal disability programs. Social Security Disability Insurance (SSDI) beneficiaries with psychiatric disabilities are a particularly important group for several reasons: they are the fastest-growing and largest disability group, they become disabled at a young age and remain on the rolls for many years, and they are the most costly population in the SSDI program. The percentage of individuals on the SSDI rolls with psychiatric impairments increased from 11% in 1981 to 41% in 2006, and over one third of all SSDI beneficiaries under age 50 have a mental disorder as their *primary* impairment.¹ In addition, a recent study by the Center for Health Care Strategies found that nationally, 49 percent of Medicaid beneficiaries with disabilities have a psychiatric illness.² Despite the growing number of beneficiaries with psychiatric disabilities, most have fluctuating levels of impairment that trend toward improvement and functional recovery over time.

In the United States it is estimated that 75-80% of people with severe mental illness (SMI) are unemployed.^{3,4} Despite these high unemployment rates, surveys consistently show that most people with SMI want to work and believe they could work if the needed health and employment services and supports were available to them.^{5,6,7} Additionally, employers feel that workers with disabilities are a productive segment of the labor force, and that their needs are very similar to those of workers without disabilities. The lack of employment among consumers of mental health services reflects a tremendous loss of productivity and potential for these individuals personally and for the economy. In Minnesota, approximately one million people experience a diagnosable mental illness in a given year. Due to poor access to appropriate health care services and employment supports, many individuals with SMI are forced to leave their jobs and seek public assistance when their impairment escalates to a point where they are no longer able to work. For many disability beneficiaries, health insurance plays a critical role in the decision to seek disability benefits initially, and once benefits are secured, in the decision to pursue employment opportunities, which itself might jeopardize health care coverage.

II. BACKGROUND

The following evaluation report presents the summative assessment of the Stay Well, Stay Working Research Demonstration that was implemented by the Minnesota Department of

¹ Bond, G, Xie, H and Drake, R. Can SSDI and SSI Beneficiaries with Mental Illness Benefit from Evidence-Based SE? Psychiatric Services 2007 November.

² The Faces of Medicaid III: Refining the Portrait of People with Multiple Chronic Conditions, Center for Health Care Strategies, Inc., October 2009.

³ Lehman AF. Vocational rehabilitation in schizophrenia. Schizophrenic Bulletin 1995;21:645-56.

⁴ Ridgeway P, Rapp C. The active ingredients in achieving competitive employment for people with psychiatric disabilities: a research synthesis. Lawrence, KS: Commission on Mental Health and Developmental Disabilities, 1998.

⁵ Shepherd G, Murray A, Muijen M. Relative values: the different views of users, family caregivers and professionals on services for people with schizophrenia. London: Sainsbury Center for Mental Health, 1994.

⁶ Fray W, Azrin S, Goldman H, et. al. The Mental Health Treatment Study Psychiatric Rehabilitation Journal 2008.

⁷ Hatfield B, Huxley P, Mohammad H. Accommodation and employment: a survey into the circumstances and expressed needs of users of mental health services in a northern town. British Journal of Social Work 1992;22:60-73.

Human Services (DHS) from December 2006 through September 2009. Minnesota was one of five states participating in the Demonstration to Maintain Independence and Employment (DMIE) funded by the CMS. Under this research Demonstration, DHS developed an intervention called Stay Well, Stay Working (SWSW) that offered working persons with a serious mental illness a comprehensive set of health, behavioral health, and employment support services. The program operated for nearly three years (January 2007– September 2009) and was implemented in two regions in Minnesota – the Twin Cities (Anoka, Dakota, Hennepin, and Ramsey counties) and the northeast (Carlton, St. Louis, Pine, and Lake counties).

The goals of the Stay Well, Stay Working program were:

1. To create a comprehensive and coordinated set of health care, behavioral health, and employment based supports for employed individuals with serious mental illness.
2. To determine how access to and utilization of these services and supports influences the progression of potentially disabling conditions.
3. The ultimate goal of the SWSW program was to prevent or delay a person with serious mental illness from becoming disabled and no longer able to work.

A. The Stay Well, Stay Working Model

The SWSW intervention model involved a public-private partnership between the Minnesota Department of Human Services and a provider network administered by Medica (a non-profit managed care organization), and encompassed oversight and management functions and provision of direct services. Program participants had access to a health care benefit package similar to MinnesotaCare,⁸ with the addition of employment supports. At the core of the model was the concept of Wellness and Employment Navigation facilitated by the Minnesota Resource Center (MRC), which is a division of RESOURCE. Participants were assigned a Wellness and Employment Navigator (Navigator) who assessed their health, behavioral health and employment support needs. In collaboration with the Navigator, participants developed a Wellness and Employment Success Plan (WESP) to establish goals to guide the enrollee in using the range of benefits available through the SWSW provider network.

The SWSW model was a client-driven, holistic approach to wellness and employment, allowing participants to identify strengths, goals, stresses and weaknesses in multiple areas of life. Participants had very few program requirements outside of meeting with the Navigator for an Initial Intake and Assessment, the development of the Wellness and Employment Success Plan, and periodic updates. To the best of their ability, Navigators educated, supported and empowered participants to better manage health, behavioral health and employment issues and to use available services effectively to meet their needs. Following the development of a plan, however, participants were free to make their own health care and employment service decisions. One of the many program expectations was to move participants toward self-navigation of the various service systems to maintain independence, wellness and employment.

⁸ MinnesotaCare is a publicly subsidized program for Minnesota residents who do not have access to affordable health care coverage.

B. Oversight and Management

Medica was contracted by the Minnesota DHS to deliver health care services and coordinate a network of service providers to deliver behavioral health and employment support services. The DHS managed the overall contract and day-to-day operations of the program. Medica, as the prime contractor for the provider network, was responsible for day-to-day management and coordination of service providers, claims and encounter processing and reporting. Medica was also responsible for training coordination for the navigators and other providers, as needed, developing marketing and other informational materials for enrollees, as well as other contract management related activities.

Table 1 provides an overview of the core model components and the organizations responsible for implementing them.

Table 1: Stay Well, Stay Working Intervention Model Components:

Intervention Component	Responsible Organization
<i>Oversight and Management</i>	
Overall Program Management, Oversight, and Coordination	MN Department of Human Services
Provider Network	Medica
<i>Program Enrollment and Direct Service Provision</i>	
Outreach, Eligibility Determination, Enrollment, Eligibility Monitoring, and Premium Collection	Minnesota Department of Human Services
Wellness and Employment Navigation (Navigator)	Minnesota Resource Center
Health Care Services	Medica
Mental Health and Chemical Dependency Services	Medica Behavioral Health
Employment Assistance Provider	Optum
Peer Support Services (Wellness Recovery Action Plan Services (WRAP))	Consumer Survivor Network
Employment Assistance & Support Entity (EASE)	Minnesota Resource Center
<i>Program Evaluation</i>	
Implementation Process and Outcome Evaluation	The Lewin Group, Inc.
National Cross-State DMIE Evaluation	Mathematica

C. Direct Service Providers

Each entity in the provider network was responsible for providing specific services from the comprehensive SWSW benefit set. The following briefly describes the services offered by each member of the provider network:

- **Medica:** Physician and health clinic visits, prescription drugs, inpatient hospital, dental, and eye care services
- **Medica Behavioral Health:** Mental health services, chemical dependency treatment services, crisis intervention, prescription drugs
- **Minnesota Resource Center – Wellness and Employment Navigation:** Initial assessment, wellness and employment success plan for all enrollees, supportive consultations, helping enrollees navigate the SWSW provider network to access

appropriate health and work supports, training on wellness planning, one-on-one wellness counseling

- **Optum (Employee Assistance Provider (EAP)):** 24/7 EAP services, including legal consultation, financial consultation, telephonic solution focused counseling, assistance with child care, parenting, and elder care needs
- **Minnesota Resource Center – Employment Assistance and Support Entity:** Work-related support visits, vocational evaluation and training, and job retention services
- **Consumer Survivor Network (Wellness Recovery Action Program (WRAP)):** Individually driven, person-centered, peer facilitated system that empowers individuals to manage their illness and lives, reach individual goals, and is based on the recovery wellness model as opposed to an illness deficit model

D. External Evaluation Design and Data Sources

Evaluation Design. The evaluation of the SWSW research Demonstration used an experimental design in which participants were randomly assigned to either the intervention or the control group. Prior to randomization, all applicants were assessed for program eligibility. Eligibility criteria included: 1) currently working at least 40 hours per month; 2) diagnosis of mental illness as determined by a clinical assessment conducted by a mental health professional during the application process; and 3) not eligible to participate in other Minnesota-sponsored public programs (e.g., Temporary Assistance for Needy Families (TANF) or other Medicaid waivers). Once determined eligible, individuals were randomized into the intervention or control group, enabling comparison of the impact of the program on individuals with similar characteristics. To enhance comparisons across the groups, the randomization was stratified by four variables: age, functional status (as measured by the Global Assessment of Functioning (GAF)), geography, and income. Individuals in the intervention group had access to the full array of services covered under the SWSW benefit, while individuals in the control group received “usual care” and participated in the research component of the Demonstration by completing an annual survey.

Data Sources. The following data sources were used for the evaluation:

- **Annual SWSW Participant Survey:** The SWSW Participant Survey is one of the main data sources for measuring differences between the intervention and control groups. All Demonstration participants (intervention and control) were surveyed annually. The survey collects self-reported information on health/mental health status and functioning using standard measures such as the SF-12, the World Health Organization’s Health and Work Performance Questionnaire (HPQ), Activities of Daily Living (ADLs), and Instrumental Activities of Daily Living (IADLs). The survey also measures quality of life factors (Lehman Quality of Life Scale) and work motivation (derived from the Substance Abuse and Mental Health Services Administration’s Employment Intervention Demonstration Protocol (EIDP)). Individuals were compensated for completing the baseline survey with a \$25 VISA gift card (intervention) or a \$100 VISA gift card (control). The response rate for the baseline survey was 97 percent.

The second annual survey was mailed to enrollees on the first anniversary of their enrollment. The second annual survey covered many of the same topics as the baseline survey. The survey also collected self-reported data on an individual’s health

insurance coverage and if an individual had applied for Social Security disability benefits. Individuals were compensated for completing the second annual survey with a \$25 VISA gift card (intervention) or a \$125 VISA gift card (control).

The third annual survey was mailed to enrollees who enrolled in SWSW in 2007. Topics covered in the third annual survey were similar to the previous two surveys but the third annual survey also included additional questions specific to the intervention and control groups. Individuals received compensation for completing the third annual survey with either a \$25 VISA gift card (intervention) or a \$150 gift card (control).

All participants who completed the required number of surveys were compensated for completing the program with a \$200 VISA gift card.

- **DMIE Central Database:** The DMIE Central Database was designed to collect data for the research Demonstration. The database contains information on all individuals applying to and enrolling in the Demonstration, including outreach and recruitment information, and eligibility and enrollment data.
- **Minnesota Resource Center (MRC) On-Line Data Manager (ODM):** The Minnesota Resource Center maintains a database (ODM) that stores Initial Assessments, the Wellness and Employment Success Plans (WESPs), and WESP Annual Reviews (12 months and 24 months) for all individuals enrolled in the intervention group. The Initial Assessment was conducted by a Navigator to gather background information on the challenges and issues a person needs to manage or overcome to stay employed. After the assessment was completed, the navigators worked with participants to develop the WESP that includes participants' goals related to health, behavioral health, and employment. Goals made on the WESP were reviewed 12 and 24 months later and progress on the goals, changes to the goals, and any new goals were recorded in the WESP Annual Review. These documents were printed, coded for content, and then entered into a database for analysis.
- **Employment Services Usage Data:** This database contains the number and types of services SWSW enrollees use from the Employment and Support Entity (EASE), an employment counseling service offered by the MRC, and Optum, an employment assistance program (EAP).
- **State of Minnesota MMIS Encounter and Fee-for-Service Claims Data:** This database contains utilization data for health and behavioral health claims covered by Medicaid and other state health insurance programs. Cost and service utilization data were tracked for both the intervention and control group participants.
- **Wellness and Employment Navigator (WEN) Encounter Data:** This database records encounter data for the navigation component of the SWSW program, including the issues addressed during each encounter and resulting outcomes.
- **Fit Choices Usage Data:** This database lists the SWSW participants who were enrolled in Fit Choices, a wellness program sponsored by Medica. The database records the number of times participants have attended a gym or health club in a given month, and if a participant qualified for a rebate for gym or health club membership.

III. OUTREACH, ENROLLMENT, AND RETENTION

Overall the outreach and recruitment strategies used by DHS were successful in identifying and enrolling a hard to reach target population – individuals with mental illness who are working and at-risk of pursuing Social Security Disability. Identifying potential enrollees through MMIS claims and wage data bases proved to be a successful and efficient process for the state. Applicants responded to targeted mailings, and the state enhanced the response rate by tailoring their outreach letters to be more welcoming and inviting and conducting thorough and intensive follow up efforts.

The pace of enrollment was affected by the low volume of outreach mailings, but once the state intensified the mailings, they were able to exceed their enrollment target of 1500 Demonstration participants. Ultimately DHS enrolled 1794 individuals into the Demonstration (1494 intervention, 300 control). DHS tracked several performance measures to identify potential barriers in the eligibility determination process and as a result were able to streamline and expedite this process over the course of the enrollment period.

The program retained almost 75 percent of the enrolled participants over the 3 years of the Demonstration. During this time, a total of 393 participants were closed out of the program for a variety of reasons, including long-term unemployment, failure to pay required premiums, pursuit of disability, and moving from the target region.

A. Outreach

Individuals eligible to enroll in the SWSW program were required to meet the following baseline conditions:

- Must be between 18 – 62 years of age
- Must be a Minnesota resident, residing in targeted county (Anoka, Dakota, Hennepin, Ramsey, Carlton, St. Louis, Pine, Lake counties) at time of application/enrollment
- Must have a diagnosis of serious mental illness
- Must be employed at least 40 hours per month and earning at least the State's minimum wage
- Must not be certified eligible for Social Security benefits (SSI, SSDI)

Outreach strategies. The State's primary outreach strategy was to send informational letters and applications to individuals enrolled in MinnesotaCare and General Assistance Medical Care (GAMC) who, based on their employment history (available through Minnesota's Department of Economic and Employment Development) and diagnostic record (available through DHS's MMIS data warehouse), appeared to be eligible for the Demonstration. DHS developed an algorithm for identifying these individuals that used ICD-9 diagnostic codes (290-301 and 308-319) and health care claims associated with these diagnoses. Individuals flagged through this process were then matched against DEED data to verify a history of work and earnings that would meet program eligibility criteria. To augment this outreach strategy, the program also accepted referrals from community health and mental health organizations and clinicians, counties, and "family and friends" of enrolled participants.

Recruitment strategy yield. As shown in **Table 2**, DHS mailed applications to nearly 20,000 individuals and achieved a response rate of 16 percent, which is very strong compared to the usual market research metric of less than 10 percent for direct mailings. DHS received approximately 3500 applications through their recruitment effort. Of these, 1794 (51%) were approved and randomized (n=1494 intervention, n=300 control) into the Demonstration study. The direct mail outreach strategy yielded the majority (90%) of applications received, while the friends and family referral strategy, implemented in August 2007, resulted in 7 percent of the referrals. The Counties and Clinics/Health providers were the least effective referral sources.

Table 2: Outreach Statistics December 2006 - August 31, 2008

	Total
Unique Individuals Mailed Applications	19,537
Mailing Response Rate	16.2%
Total Applications Received	3,527
Mail	3,174 (90.0%)
Clinic/Health Provider	66 (1.9%)
County	15 (0.4%)
Family and Friends/Self	253 (7.2%)
Other	19 (0.5%)
Applicants Denied	1,918
Applications Approved/Randomized	1,794 (50.8%)
Intervention	1,494
Control	300

Source: DHS Central Database

As shown in **Table 3**, nearly half (46%) of the application denials were due to applicants not meeting the work requirement. Other reasons for denial included applicants not completing the required diagnostic screen (13%), already being enrolled in other federally funded health care programs (e.g., TANF) (7%), or already having a disability determination through SMRT or SSA (7%).

Table 3: Top Three Reasons for Denial (through August 31, 2008)

Reason	Total
Not working	865 (45.1%)
Did not complete mental health diagnostic screen	251 (13.1%)
On a federally funded health care program	138 (7.2%)
Did not complete application	134 (7%)
Disabled by SMRT or SSA	132 (6.9%)
Did not provide requested verifications	86 (4.5%)
Client request	81 (4.2%)
Received after deadline	81 (4.2%)
Working too few hours/below min. wage	54 (2.8%)
No mental health condition	45 (2.3%)
County of residence (Outside target area)	40 (2.1%)
Age	7 (0.4%)
Over assets	4 (0.2%)
Total	1,918 (100%)

Source: DHS Central Database

B. Enrollment

Figure 1a shows quarterly enrollment statistics from the beginning of the SWSW program in the first quarter of 2007. Enrollment grew steadily over the course of 2007, from 44 in Quarter 1 to 157 in Quarter 4. In late 2007, the State intensified recruitment efforts to reach the enrollment target of 1500 by significantly increasing the volume of mailings (**Figure 1b**), which was evident starting in Quarter 4. In the first quarter of 2008, 442 people were enrolled in SWSW nearly tripling the number of new enrollees from the previous quarter. Enrollment growth continued to be strong in the second quarter of 2008 with 593 new enrollees in SWSW. By the third quarter of 2008, the enrollment goals of SWSW had been met, but the program continued enrollment through August 2008.

Figure 1a - Enrollment by Quarter

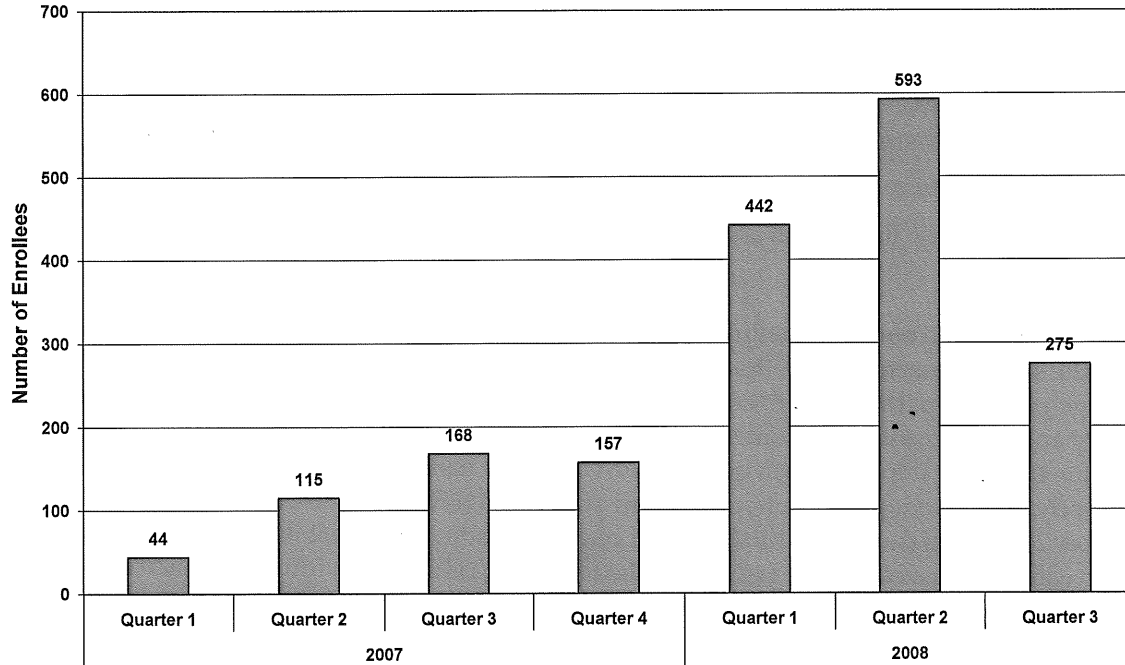
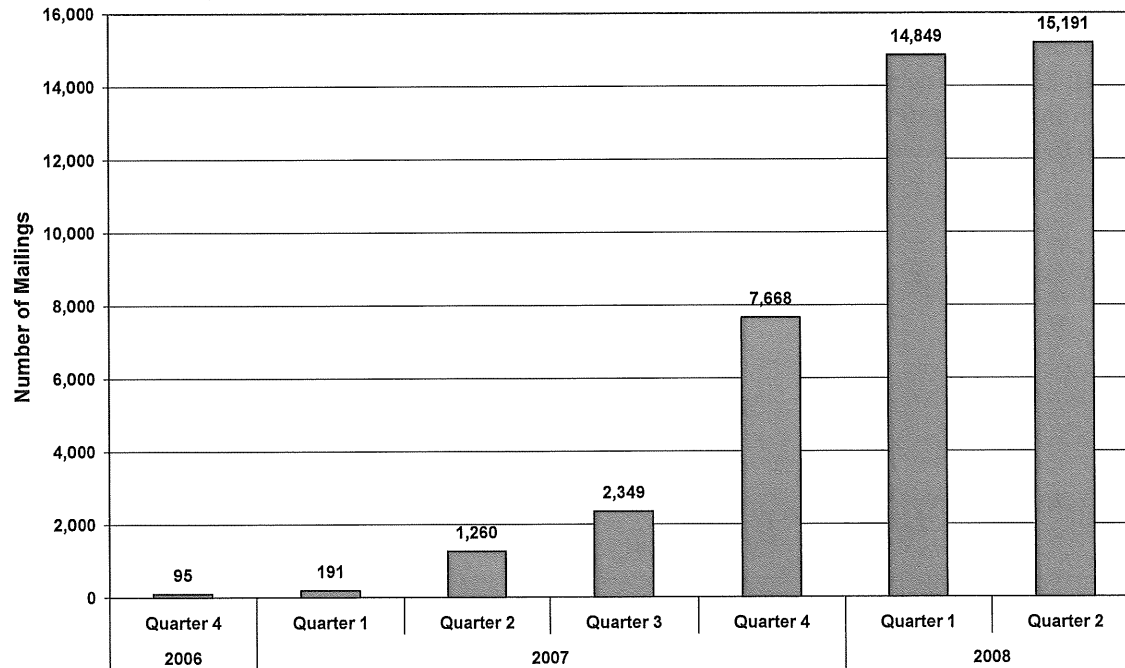


Figure 1b - Number of Mailings per Quarter

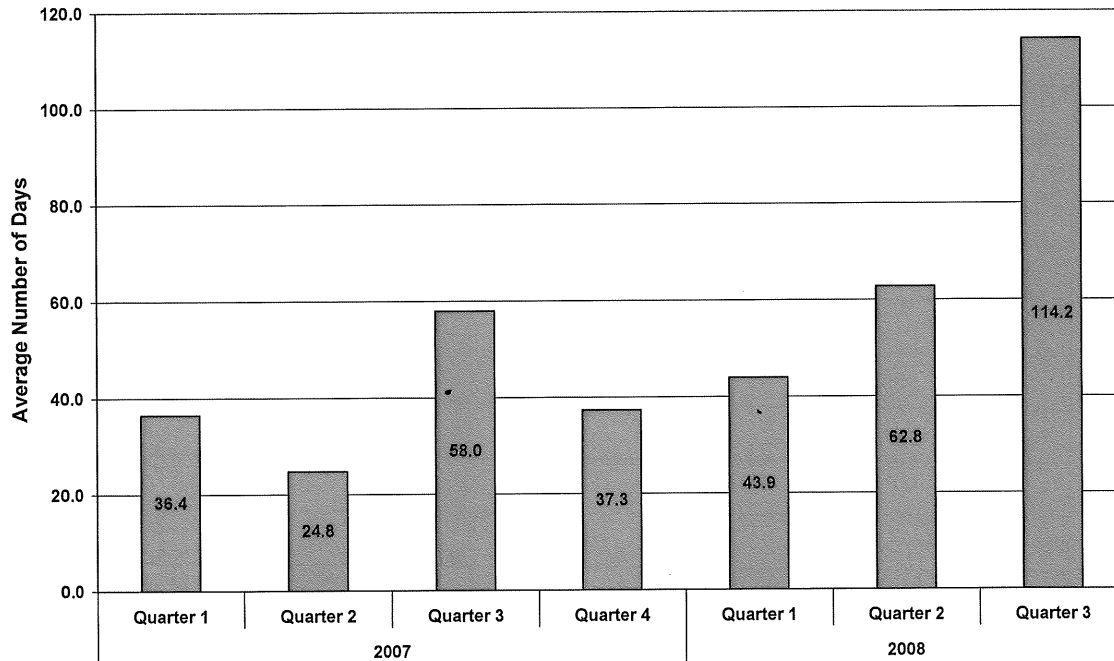


During the enrollment period, the evaluation tracked several performance measures to identify potential barriers in the outreach and enrollment process. Reports with this information were provided to the State weekly, and included the following measures:

- Time between the state sending a mailing and receiving a person's initial application (Figure 2).
- Time between receiving an application and randomizing the applicant into the Demonstration (Figure 3).
- Time between receiving an application and the applicant's clinical assessment (Figure 4).
- Time between the clinical assessment and the applicant enrolling in Demonstration (Figure 5).

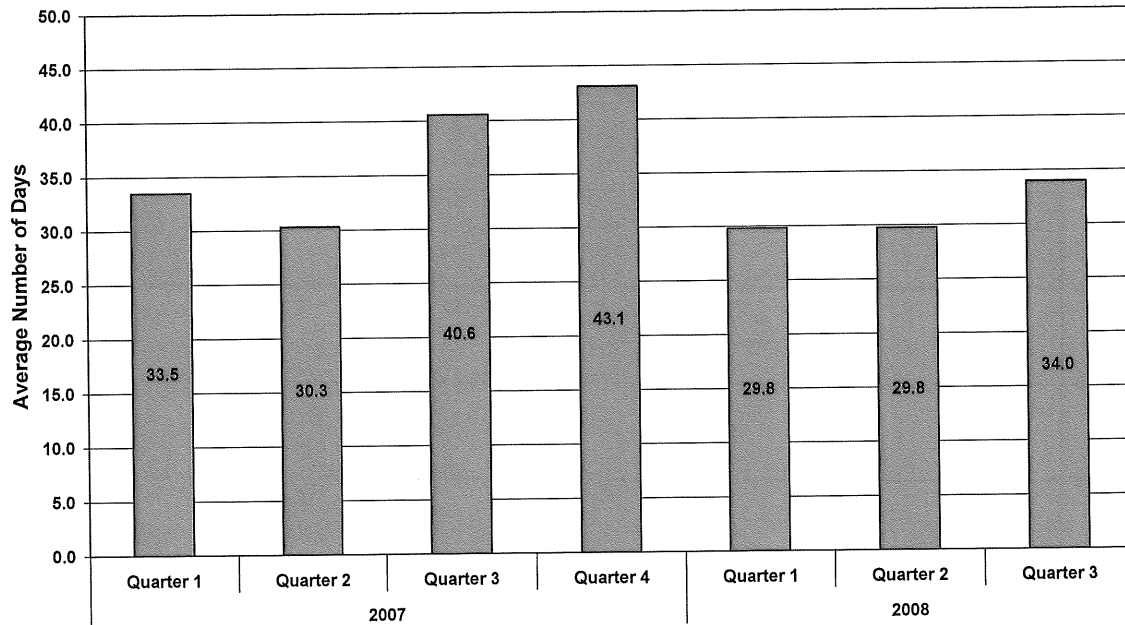
The time between the outreach mailing and initial application increased from an average of 24.8 days in the second quarter of 2007 to an average of 58.0 days in the third quarter of 2007. To encourage potential participants to complete and submit the application as soon as possible, eligibility and enrollment staff initiated follow-up calls after recruitment packets were mailed. During the third and into the fourth quarter, the volume of mailings and applications increased significantly, which reduced the amount of time staff could devote to outreach calls. In November 2007, DHS contracted Medica's call center to assume responsibility for conducting outreach calls. Medica call center staff made the follow-up calls to individuals who had already received mailings, which allowed SWSW staff to work on new mailings and to process new applications. The combined efforts of SWSW staff and Medica helped to reduce the time between a mailing and an initial application to an average of 37.3 days in the fourth quarter of 2007. This reduced timeframe continued through the first quarter of 2008.

The increase in the time between a mailing and receipt of an application in quarters 2 and 3 of 2008 has two likely explanations. First, multiple mailings were sent to potentially eligible individuals who did not respond to an initial SWSW mailing. It is possible that some applicants were still linked to the original mailing instead of the follow-up mailings. Second, all SWSW outreach mailings ended before June 2008. If applicants did not respond until August, it would increase the average wait time.

Figure 2 - Mailing Sent to Initial Application Received

The time between application receipt and enrollment in the Demonstration reached a peak of 43.1 days during quarter 4 of 2007 before declining to 29.8 days in quarter 1 of 2008. The application processing time remained stable in quarters 1 and 2 of 2008, with a small increase during the third quarter of 2008.

Figure 3 - Application Received To Enrollment / Randomization



Figures 4 and 5 present processing times of two components of the eligibility determination process: 1) the time between application receipt and diagnostic assessment; and 2) the time between diagnostic assessment completion and enrollment.

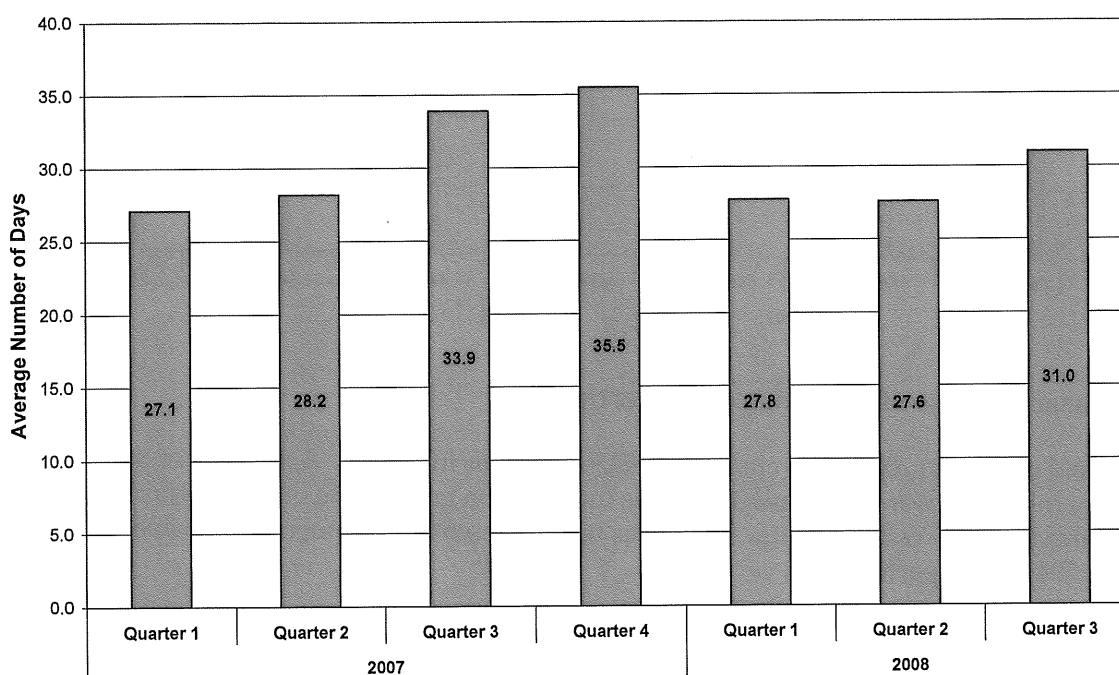
Diagnostic assessments were conducted at clinics contracted by Medica. At the beginning of and throughout program implementation, DHS expressed concerns that the capacity of community mental health clinics to conduct diagnostic assessments would be a barrier to or slow down the enrollment process. To address this concern, Medica assessed the capacity of the clinics to meet the anticipated volume of assessments, increased the reimbursement rate for the assessments, and met with administrators and clinicians to provide an orientation to the SWSW program.

The time from application to clinical diagnostic assessment increased from 27.1 to 35.5 days between the first and the fourth quarters of 2007. Based on an assessment of pending applications conducted by DHS and Medica in December 2007, one of the major factors affecting the time between application submission and scheduling of the diagnostic assessment appears to have been the applicants themselves. This analysis showed that 65 percent of pending cases had not responded to outreach efforts to schedule their appointments or had not attended scheduled appointments. Applicant “no shows” to clinic appointments was a factor contributing to the increase in time between application and clinical assessment. The number of missed appointments was high enough in the fourth quarter of 2007 to prompt DHS to establish a policy of issuing a denial letter if an applicant missed three scheduled appointments. In addition, the Medica call center conducted outreach calls to motivate applicants to schedule and

attend appointments. As a result, the time between application and clinical assessment decreased from 35.5 days in the last quarter of 2007 to 27.8 days in the first quarter of 2008.

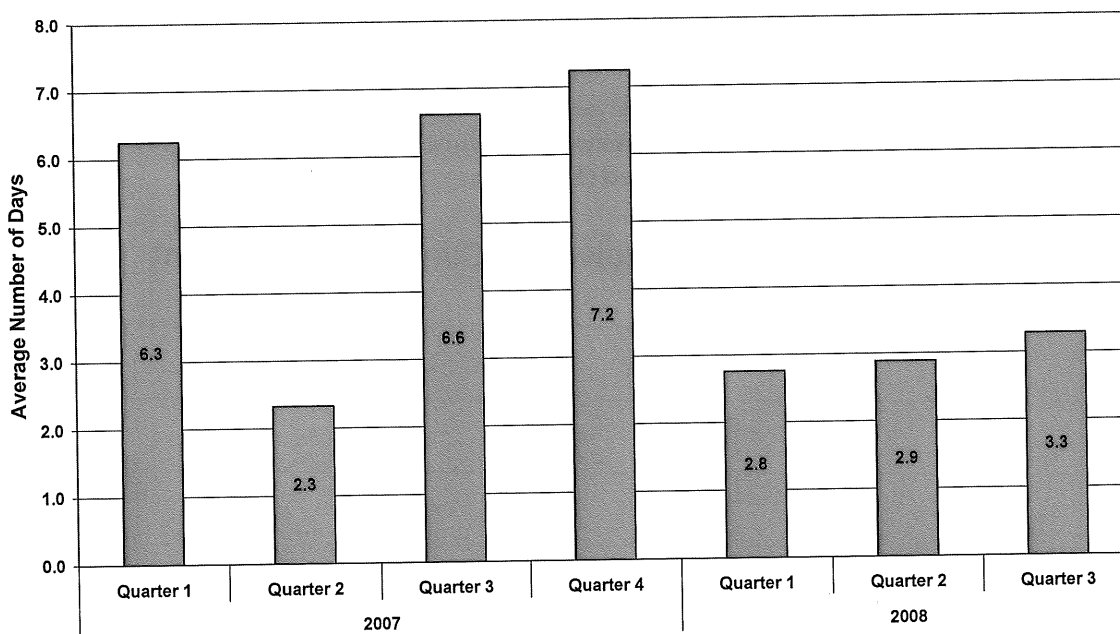
As shown previously in **Figure 1a**, enrollment intensified significantly in 2008. Through ongoing communication between Medica and the contracted mental health clinics, the providers were prepared to accommodate the increased volume of diagnostic assessments. As a result, the average time from application to diagnostic assessment *remained stable* in the first half of 2008 (between 27.6 and 27.8 days), the most intensive enrollment period of the program, and only increased slightly before enrollment closed (**Figure 4**).

Figure 4 - Application Received to Clinical Assessment



Over the course of implementation, the time between diagnostic assessment and enrollment (randomization) was relatively brief, averaging seven days or less (**Figure 5**). The time increases experienced in quarters three and four of 2007 can be attributed to delays in scanning diagnostic assessment results in a location different from the location DHS eligibility and enrollment staff were based.

Figure 5 - Clinical Assessment to Enrollment / Randomization



C. Characteristics of Demonstration Participants

By the end of August 2008, DHS enrolled 1,794 individuals in SWSW. A majority of the enrollees (n=1,494), were randomized into the intervention group. The other 300 enrollees were randomized into the control group. The tables below present the demographic characteristics for all 1,794 SWSW participants.

A majority of participants are female (61%), over the age of 35 (58%), white (82%), and had never been married (59%). Forty-three percent of participants reported that their highest level of education was high school; however, 29 percent had at least some college or a two year degree and 17 percent had a college degree or more. Most participants (65%) reported renting their living quarters and the average monthly income was \$1, 574 (Table 4).

Table 4: Demographic Information

Characteristic	Intervention N=1494	Control N=300	Total N=1794
Gender			
Female	61%	62%	61%
Male	39%	38%	39%
Missing	0%	0%	0%
Age			
Over 35	59%	55%	58%
Under 35	41%	45%	42%
Race			
White	82%	81%	82%
Black	11%	12%	11%
American Indian or Alaska Native	2%	4%	2%
Asian	1%	1%	1%
Pacific Islander	0%	1%	0%
Other	3%	1%	3%
Missing	1%	1%	1%
Marital Status			
Never married	59%	58%	59%
Divorced	26%	25%	26%
Now married	9%	8%	9%
Separated	2%	5%	3%
Widowed	1%	1%	1%
Missing	3%	2%	3%
Education			
8th grade or less	1%	0%	0%
Some high school	9%	9%	9%
High school graduate	42%	45%	43%
Some college or 2 year degree	30%	27%	29%
4-year college graduate	13%	12%	13%
More than 4-year	4%	4%	4%
Missing	3%	3%	3%
Housing			
Rents	65%	67%	65%
Owns	15%	14%	15%
Other	19%	15%	18%
Missing	2%	5%	2%
Average Monthly Income	\$1,585	\$1,522	\$1,574
Average GAF Score	57	56	57
Percentage Living in North	13%	21%	14%

Source: DMIE Central Database

Table 5 presents primary mental health diagnosis for participants. A majority of participants (52%) have a primary diagnosis of depressive disorder. The second most common primary diagnosis is anxiety disorder (18%), followed by bipolar disorder (14%). **Table 6** presents the types of occupations participants held when they entered the Demonstration. Approximately two-thirds of all participants are in either the service or retail sales sectors (food and beverage service, janitorial/cleaning service, home health service worker, cashier or retail workers.) It is important to note that there is a higher percentage of control group participants with professional, technical, and managerial occupations (24% compared to 15% in the intervention group). This artifact has an effect on earnings averages when comparing the two groups.

Table 5: Primary Diagnosis

DSM IV Category	Intervention		Control		Grand Total N	Total Percent
	N	Percent	N	Percent		
Depressive Disorders	771	52%	155	52%	926	52%
Anxiety Disorders	271	18%	55	18%	326	18%
Bipolar Disorders	214	14%	44	15%	258	14%
Adjustment Disorders	72	5%	14	5%	86	5%
Substance Disorders	46	3%	7	2%	53	3%
Attention Deficit Disorders	35	2%	10	3%	45	3%
Schizophrenia & other Psychotic Disorders	25	2%	5	2%	30	2%
Other	60	4%	10	3%	70	4%
Grand Total	1494	100%	300	100%	1794	100%

Source: DMIE Central Database

Table 6: SWSW Participants by Occupation

Dictionary of Occupational Titles	Intervention		Control		Grand Total N	Total Percent
	N	%	N	%		
Service Occupations	478	33%	88	31%	566	33%
Clerical & Sales Occupations	468	32%	82	29%	550	32%
Professional, Technical, & Managerial Occupations	224	15%	68	24%	292	17%
Machine Trades Occupations	35	2%	7	2%	42	2%
Benchwork Occupations	36	2%	6	2%	42	2%
Structural Work Occupations	23	2%	3	1%	26	1%
Processing Occupations	11	1%	1	0%	12	1%
Agricultural, Fishery, Forestry, & Related Occupations	10	1%	1	0%	11	1%
Miscellaneous Occupations	119	8%	19	7%	138	8%
Missing	55	4%	6	2%	61	4%
Total	1459	100%	281	100%	1740	100%

Source: SWSW Annual Survey; only includes participants who returned a baseline survey

D. Program Compliance Issues Affecting Retention

1. Inactive Participants and Reasons for Closure

Enrollment in the Demonstration ended in August of 2008. A total of 1,494 participants were randomized into the intervention group. During and since the time of the enrollment, several intervention enrollees failed to meet program requirements and were closed from the SWSW program. Issues of non-compliance included failure to pay the \$10 monthly premium, not meeting with the navigator for the initial assessment and program orientation, or exceeding the 4-month unemployment grace period and not having active communication with the navigator to access employment supports. Individuals who were closed (i.e., became “inactive”) no longer received navigator assistance, employment support services, or health insurance. They had the option of continuing to participate in the DMIE research project by completing the SWSW annual survey. There were 393 participants closed from the intervention group prior to the end of the Demonstration in September 2009. Of the closed individuals, 341 were considered inactive, but still participating in the research, while the other 52 left the study completely. As shown in Table 7 the three top reasons for a participant to be dropped from the intervention were continual unemployment (33%), failure to pay ongoing premium (21%), and pursuing disability (10%).

Table 7: Intervention Group – Reason for Closure

Reason Inactive	Count	Percent
Not employed	129	33%
Failure to pay ongoing premium	82	21%
Pursuing disability	39	10%
Moved out of area/state	33	8%
Failure to complete renewal	27	7%
Chose other MHCP	26	7%
Failure to complete Initial Assessment	20	5%
Failure to pay initial premium	17	4%
Other health insurance	9	2%
Death	5	1%
Failure to Complete Research Survey	3	1%
Incarcerated	2	1%
Refuses to participate in DMIE	1	<1%
Grand Total	393	100%

Source: DMIE Central Database

2. Policy decisions to address program non-compliance.

From January 2007 through January 2009, DHS (often in collaboration with Medica, MRC, and the evaluation team), developed a series of policies to address issues of participant non-compliance. The following describes the core policies that were developed and implemented.

Establishing a flat monthly premium. A monthly premium was built into the SWSW intervention to mirror enrollee cost sharing in other Minnesota state healthcare programs and to test the idea of a cost sharing component in the event that the Demonstration be considered as a permanent

program.⁹ Premiums were initially assessed on a sliding scale based on an applicant's ability to pay. However, individuals in the Demonstration have unstable employment, making it a struggle to keep premium amounts in line with a participant's income. Also, minimal premiums posed significant barriers in the program's ability to recruit and retain individuals on GAMC. In November 2007, DHS made the decision to simplify the premium policy to minimize staff burden, enhance retention, and eliminate barriers to participation. None of the individuals transitioning from GAMC or determined GAMC eligible were required to pay a premium. All other participants were charged a flat premium of ten dollars a month. By removing the premium policy barriers, DHS underscored its commitment to SWSW as a research Demonstration, rather than treating it as a traditional Minnesota health care program.

Establishing a final cut-off for inactive enrollees to return to the intervention of September 2008. For the first 20 months of the Demonstration, participants who were closed from the intervention group because of a failure to comply with program requirements were allowed to re-enter the SWSW program if the reason for closure was resolved. During this period, 31 individuals re-entered the Demonstration, many after resolving premium payment issues. Starting in October 2008, however, the policy was changed and individuals who were closed from the intervention could not re-enter the SWSW program. This policy decision was made to ensure that all active program participants were enrolled in the program for a continuous 12 month period prior to the end of the Demonstration (September 2009) and eliminate the possibility of individuals cycling on and off the program when they wanted to access the covered services.

Developing a protocol for unemployed intervention participants. Individuals in the intervention were required to work at least 40 hours a month at minimum wage. The initial protocol developed for the Demonstration gave participants a grace period of four months from job loss to re-employment. In September 2008, the policy regarding unemployment was revisited¹⁰ because of the number of individuals who were unemployed longer than four months. The updated policy permitted an extension of the four month unemployment grace period as long as participants were actively seeking work and routinely communicating with their navigator about their status. Navigators communicated with DHS staff about the status of unemployed enrollees. Closure of unemployed individuals was evaluated on a case by case basis by a monthly workgroup consisting of staff from DHS and MRC. The workgroup was allowed to extend the grace period up to eight months. By September 2009, 129 participants had been closed for unemployment.

Participating in an initial meeting with the navigator. Intervention enrollees were required to meet with their navigator at least once. During this initial meeting, the navigator conducted an initial assessment to determine participant health, behavioral health, and employment needs. This meeting also allowed the navigator to provide each participant with the comprehensive Medica health planner and to orient the participant to the range of services available through the program. In March 2008, a protocol was developed for intervention group participants who failed to have an initial meeting with their navigator.¹¹ The protocol regarding this issue involved DHS working closely with the MRC and the participant's navigator to determine if the

⁹ SWSW Policy Issue Paper #125

¹⁰ SWSW Policy Issue Paper #135

¹¹ SWSW Policy Issue Paper #132

participant had made little or no effort to schedule the initial meeting. Participants who were not actively engaged in scheduling this initial meeting received a letter from MRC and, if there was no response within 30 days, DHS sent a follow-up letter. Both letters reminded the participant of the requirement to meet with their navigator and strongly encouraged the participant to schedule an appointment. If the individual did not get in contact with the navigator after the letters were sent, the case was discussed at regular meetings between DHS and MRC. By the end of the Demonstration, 20 participants had been closed for failure to meet with their navigator and complete their initial assessment.

Participating in research through the completion of annual surveys. Implementing a policy of closure for failure to complete the annual SWSW survey was considered because participation in the evaluation is a condition of SWSW enrollment. Prior to enrollment, enrollees signed consent forms indicating their understanding of and willingness to participate in the evaluation. In October 2008, DHS sent letters to individuals who failed to complete the baseline survey reminding them that participating in the research was a requirement of the intervention. This letter and efforts by navigators to encourage survey submission led to 107 participants returning their baseline survey, bringing the intervention group response rate from 90% to 97%. Participants that did not return their surveys despite the effort of DHS and navigators were closed from the intervention.

IV. SERVICE UTILIZATION PATTERNS OF SWSW PROGRAM PARTICIPANTS

Participants in the intervention group had access to a Wellness and Employment Navigator (navigator), as well as a comprehensive benefit set of health, behavioral health, pharmacy, and employment supports delivered through the SWSW provider network.

In general, participants engaged with their navigator every other month once they completed their initial assessment and developed a Wellness and Employment Success Plan (WESP). Intervention participants significantly increased their utilization of health, behavioral health, dental, and pharmacy services after enrolling in the program. Approximately 25 percent of intervention participants accessed employment support services.

The following section presents data on navigation, health care, and employment support service utilization patterns.

A. Participant Use of Navigation Services

One of the tasks of the evaluation was to understand the role and utilization patterns of the navigation service. The following section presents findings regarding the navigation component of Stay Well, Stay Working. The first section addresses the workload demands and mode of service delivery of the navigators, while the second section focuses on the content of participant encounters with navigators and types of referrals.

Wellness and Employment Navigation services were available to all intervention group participants. The navigator was the primary contact for SWSW participants and served as an intermediary between participants and the network of providers. Upon enrollment, intervention group enrollees were required to meet their navigator and complete an initial

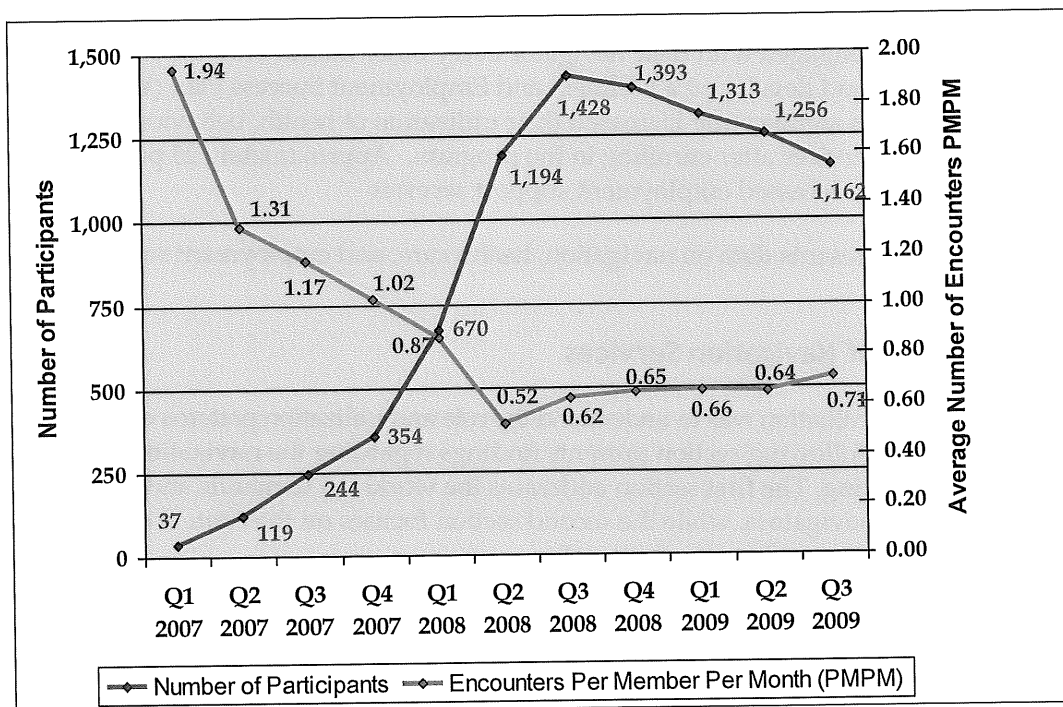
Intake Assessment and develop a Wellness and Employment Success Plan. All SWSW participants were encouraged to contact their navigator regularly for assistance and guidance in obtaining needed medical, mental health, and employment support services.

1. Navigator Workload Demands and Mode of Service Delivery

Volume and average number of contacts between navigator and participant. Participants used navigation services in a variety of ways and for a range of reasons. All encounters between the navigators and the participants were recorded in an encounter database maintained by MRC. The navigators documented 17,815 *substantive encounters* between January 2007 and September 2009. Substantive encounters were meaningful interactions that addressed participants' issues and offered some sort of resolution either in the form of supportive consultation or direct referrals to the provider network.

As described in the enrollment section of this report, the SWSW program used a rolling enrollment process that began in January 2007 and ended in August 2008. The overall pace of enrollment had a significant impact on the frequency of contacts between navigator and participant. Enrollment peaked with 1,428 participants in August 2008 and then gradually declined until the end of the Demonstration in September 2009. Figure 6 shows that the average number of encounters per participant declined as enrollment grew. In the beginning of the program, (first quarter of 2007), participants were averaging nearly 2 contacts per month with their navigator. At the height of enrollment in the third quarter of 2008, participants were averaging 1 contact with their navigator every other month. When the enrollment period ended, the average number of encounters per member per month stabilized.

Figure 6: Use of Navigation Services from January 2007 through September 2009



Sources: DMIE Central Database, December 21, 2009 – Encounter Table; December 21, 2009 – Intervention Start Table

Table 8 provides additional evidence of the impact of enrollment pace on navigator/participant encounters. Navigators attempted to schedule their first meeting with new participants within two weeks off their enrollment in the program. Participants that enrolled in the first half of 2007 waited an average of 11 days between their enrollment date and first contact with their navigator. In contrast, those enrolled in the second and third quarters of 2008 experienced a delay of nearly 63 days, or just over two months from the time they entered the program and their first navigator encounter. It is important to note, that this delay in meeting with the navigator did not have a significant effect on overall service utilization or the primary outcomes of interest in the study.

Table 8: Average Number of Days from Enrollment to First Substantive Encounter

Time to First Encounter	Enrollees	Enrollment to First Encounter in Days
2007 Enrollees		
1 st Quarter 2007	34	9.2
2 nd Quarter 2007	77	12.1
3 rd Quarter 2007	119	21.6
4 th Quarter 2007	98	17.9
2008 Enrollees		
1 st Quarter 2008	280	29.2
2 nd Quarter 2008	462	60.6
3 rd Quarter 2008	215	66.8
Total	1,285	43.6

Source: DMIE Central Database, December 21, 2009 – Encounter Table

Table 9 shows the average delay from enrollment to first contact with the navigator for two groups of enrollees. Participants in cohort A enrolled in SWSW between January 2007 and March 2008; these participants had their first encounter with the navigator an average of 22 days after program enrollment. However, the second group, cohort B, experienced a substantial delay between enrollment and their first encounter with the navigator (over 60 days). Participants in cohort B enrolled in SWSW between April and August of 2008, the period of the research Demonstration when enrollment more than doubled in the intervention. Analyses of the two cohorts did not yield significant differences in health, mental health or employment related outcomes. Therefore, despite having delayed access to and fewer overall contacts with the navigator, participants in both cohorts experienced improvement.

Table 9: Cohorts based on contact delay

Cohorts by Time of Enrollment in <i>Stay Well Stay Working</i>	Enrollees N	Enrollment to First Encounter in Days	Total Number of Encounters
Cohort A: Jan 2007 - March 2008	608	22.6	9,821
Cohort B: April - August 2008	677	62.5	7,030
SWSW Total	1,285	43.6	16,851

Sources: DMIE Central Database, December 21, 2009 – Encounter Table

Frequency of navigation services. To understand how frequently participants interacted with their navigators, we calculated the average number of encounters per month over the length of their entire enrollment experience. For example, a participant that was enrolled in SWSW for 18 months and had a total of 15 encounters with a navigator during that time averaged 10 encounters in a 12 months period. **Table 10** shows the proportion of participants that averaged ten or more encounters over a twelve months period. Nearly 73 percent of SWSW participants with at least one year of experience in the intervention averaged fewer than 10 encounters over a 12 month period; approximately 27 percent averaged 10 or more encounters every 12 months. The early enrollment cohort (participants that enrolled between January 2007 and March 2008) had a larger share of participants that averaged 10 or more encounters over 12 months than the later enrollment cohort (participants that enrolled between April and August 2008). Approximately 30 percent of the early enrollees averaged 10 or more encounters over 12 months, compared to 24 percent of those who enrolled in the second and third quarters of 2008.

Table 10: Average Number of Encounters over a Period of Twelve Months

Average Number of Encounters over 12 Months	Cohort A		Cohort B	
	Participants	Percent	Participants	Percent
Fewer than 10 Encounters	424	69.7%	513	75.8%
10+ Encounters	184	30.3%	164	24.2%
Total	608	100.0%	677	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

Duration of Contacts between Navigators and Clients. To understand the level of effort required in providing navigation services, **Table 11** presents data on the frequency and average duration of navigator-client encounters. Navigators and clients spent an average of 75 to 90 minutes completing the Initial Assessment and generally less than 45 minutes developing the Wellness and Employment Success Plan (WESP). In terms of other navigator/participant encounters, in-person meetings averaged 30 - 45 minutes and phone conversations averaged ranged between 15 and 30 minutes, while e-mails averaged 15 minutes or less.

While the majority (65%) of all encounters lasted 15 minutes, there were a few instances (n=4) when a single documented encounter took up to four hours (240 minutes) to complete. Generally, these very long encounters occurred when the navigator had several, separate meetings to resolve an important issue for their client. When the navigator recorded the meetings, she/he consolidated the multiple meetings into one encounter.

The majority of Initial Assessment and WESP encounters were in-person, which facilitated the rapport building process between navigator and participant. Developing rapport early through in-person meetings allowed the navigator to maintain effective contact telephonically for ongoing follow up. The majority of encounters after the assessment and WESP activities were conducted by phone.

Table 11: Average Duration of Navigation Services (N=17,815)

Encounter Type	Total Encounters	Average Minutes	Minimum	Maximum
Initial Assessment	1,441	75 - 90	15	240
WESP Development	2,195	30 - 45	15	150
In Person	1,221	30 - 45	15	180
Phone	10,376	15 - 30	15	240
Email	2,582	15	15	120

Sources: DMIE Central Database, December 21, 2009 – Encounter Table

Third-party consultations on behalf of SWSW enrollees. In addition to direct encounters with participants, navigators also had many discussions with network providers on their behalf. **Table 12** shows the number of “consultations” navigators had with other providers when coordinating access to services or advocating for the needs of participants. Navigators documented a wide range of consultations with providers related to participant concerns regarding service access and satisfaction. Overall, the majority of navigator consultations were with DHS to address issues such as employment verification, premium payments, retroactive coverage, and eligibility. In addition, navigators consulted with non-network community providers and local charities regarding potential resources and referrals. Approximately one in ten (10%) encounters required third-party consultation.

Table 12: Navigator Consultations with other Providers (N=17,815)

Consultant	All Enrollees
<i>Number of Consultations</i>	1,727
Minnesota DHS	55.6%
Medica Healthcare	14.2%
Other	13.4%
EASE	8.4%
Medica Behavioral Health (MBH)	5.4%
Dental	2.4%
Optum	0.5%
Consumer Survivor Network (WRAP)	0.1%
Total	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

2. Nature of Navigator/Participant Interactions and Referrals

The following analyses of the navigation component focus on the frequency and mode of communication, the types of issues discussed, the outcome, and resulting referrals. This section focuses on a group of participants that were enrolled in SWSW for at least one year. There are 1,285 participants that meet that criteria; the group accounts for 16,851 encounters.

Initial Assessment and Wellness and Employment Success Plan. Once a participant was randomized into the intervention, the navigator contacted the participant to schedule an appointment for the initial intake assessment. After completing the initial assessment,

participants and their navigator jointly developed the WESP, which documented health and employment goals for the participants to achieve over the next year. The WESP also provided participants with a framework to access services in the SWSW program.

During the initial assessment and WESP, navigators helped participants connect immediately to the range of services available in the SWSW program (Table 13). Navigators addressed issues identified by participants, provided supportive consultations, and made referrals to providers in the SWSW network and other resources in the community. The most common referrals from the initial assessment and WESP were for employment support services (Optum and EASE, 39%), mental health services (Medica Behavioral Health, 25%), and medical care (Medica Healthcare, 17%). All three reflect the three main issues the Demonstration was designed to address.

It is important to note that the documentation practices for navigator-client contacts were amended during the implementation of SWSW. For instance, the documentation of referrals to “non-network providers” was added in September 2008 to enable navigators to distinguish between referrals to service providers in the SWSW network and those publicly available in the community. The evaluation team conducted several training sessions for MRC navigators throughout 2008 to standardize documentation procedures for the evaluation. A data entry decision guide was developed to streamline the documentation process and assist new navigators as they joined the staff of the research Demonstration. In addition, the capacity of the database was expanded in August 2008, and navigators were able to document two additional issues and outcomes for each encounter. These factors, both the formal training and the expansion of the database, may have influenced the distribution of issues and referrals over the length of the research Demonstration.

Table 13: Distribution of Referrals Resulting from Initial Assessment (IA) and WESP

Referrals	All Enrollees
<i>Number of Encounters</i>	2,668
<i>Total Referrals</i>	3,766
Medica Behavioral Health (MBH)	24.5%
Optum	23.4%
Medica Healthcare	16.5%
EASE	15.1%
Non-Network Provider	6.6%
Minnesota DHS	3.1%
Dental	4.9%
Consumer Survivor Network (WRAP)	2.8%
Fit Choices	3.0%
Total	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

Navigation after the Initial Assessment and WESP. The initial intake assessment and the success plans were typically completed in person. After these initial meetings, approximately 73 percent of encounters between navigator and client occurred over the phone (Table 14). Less than 9 percent of ongoing encounters were in person, compared to nearly 19 percent via email.

Table 14: Percent of Encounters by Type of Interaction

Encounter Type	All Enrollees
<i>Number of Encounters</i>	13,494
In Person	8.7%
Phone	72.7%
Email	18.6%
Total	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

During any given encounter, navigators and clients discussed a variety of issues. As shown in **Table 15**, the majority of the issues discussed were the three main issues targeted by the Demonstration: employment (24%), physical health (14%), and mental health (11%). Insurance benefits and premium related questions were also important issues raised during client and navigator encounters. Personal finance, family and housing issues, and questions about medication were less common issues brought up by some participants.

Table 15: Range of Issues Discussed between Navigator and Clients

Encounter Issue	Total Percent of All Issues
<i>Number of Issues</i>	26,956
Employment	23.8%
Physical Health	14.3%
Mental Health	11.1%
Monthly Check-In *	8.2%
Transition Planning**	7.7%
Benefits	4.7%
Premiums	4.0%
Other	3.6%
Finances	3.2%
Family	3.2%
Housing	2.8%
Medication	2.1%
Chemical	1.8%
Exercise	1.5%
Stress	1.0%
Legal	1.0%
Community Resources	0.7%
Transportation	0.6%
Miscellaneous	4.8%
Total	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

* Each month, navigators attempted to contact all clients on their caseload. During this “monthly check-in,” navigators reviewed a list of items, including: health status, employment status, referral status (i.e., whether or not clients followed through with prior referrals), premium payment status, transition planning, preventative care, the Fit Choices rebate program, the annual survey, and SWSW renewals. The occurrence of the monthly check-in category appears low because navigators only use this category when no significant issues are discussed and there are no changes to update.

**Transition planning for the end of the Demonstration became an issue in the 2nd and 3rd quarters of 2009 and nearly a third of all issues raised concerned transition planning.

Outcomes of Encounters between Navigators and Participants. Table 16 summarizes the results of all encounters or interactions between navigators and clients. The outcomes of these interactions included referrals to the provider network, referrals to other organizations and non-network providers in the community, as well as supportive consultations. Supportive consultations, as defined by the navigators, include: 1) reflective listening to client situations that do not result in a referral, 2) answering questions related to SWSW benefits, and 3) following up on the status of previous referrals and their respective results.

The majority of the navigator-client interactions were supportive consultations. Other encounters resulted in referrals to the DHS, the provider network, and non-network community organizations such as the Minnesota WorkForce Center, Legal Aid, the Minnesota Disability Linkage line, and other housing and transportation assistance service providers. Nearly a quarter of issues raised by participants during meetings with navigators focused on employment (Table 15). However, referrals to employment support services account for less than seven percent of encounter outcomes (EASE and Optum combined). It is likely that the majority of the employment issues raised by participants were addressed through supportive consultations by the navigators.

It is important to note that each issue raised during an encounter did not necessarily lead to a documented outcome. For instance, a client may have discussed both mental health and employment related issues in one phone call with the navigator but no referrals were made. The final result recorded for the call would have been one supportive consultation outcome for both issues. Of all the documented outcomes, about 20 percent resulted in referrals to the provider network (i.e., Medica, MBH, Optum, EASE, Dental, and WRAP). Approximately 4 percent of outcomes were referrals to non-network providers in the community.

Table 16: Outcomes of Navigator Encounters

Encounter Results	All Enrollees
<i>Number of Encounters</i>	13,494
Supportive Consultation	57.5%
Referral - Minnesota DHS	10.7%
Referral - Medica Healthcare	5.5%
Referral - Medica Behavioral Health (MBH)	4.6%
Referral - Non-Network Provider	3.8%
Referral - EASE	3.7%
Referral - Optum	3.1%
Referral - Dental	2.0%
Confirmed Appointment	1.6%
Fit Choices	0.8%
Referral - Consumer Survivor Network (WRAP)	0.6%
Miscellaneous (e.g. address change, mailed materials)	6.1%
Total	100.0%

Source: DMIE Central Database, December 21, 2009 – Encounter Table

B. Participant Use of Health Services

Adults with serious mental illness who receive comprehensive, affordable health insurance after periods of having no insurance or inconsistent coverage will greatly increase their use of most health services including behavioral health services, dental care, pharmacy, physician, and outpatient services. An important component of the SWSW intervention was the provision of comprehensive health and behavioral health coverage. The following section presents an analysis of health care utilization patterns for all individuals in the intervention using fee-for-service and encounter claims data from all public health insurance programs administered by the State of Minnesota.

Analyses show that intervention group participants significantly increased their use of outpatient health and behavioral health services in the first and second years post-enrollment in the SWSW program. Participants also increased their use of pharmacy services and maintained this utilization across both years of the program. In addition, the comprehensive health benefits of the SWSW program significantly reduced hospitalizations for individuals in the intervention group with an 85 percent decline in hospitalizations in the first year for individuals enrolled in SWSW compared to the previous year. The following analyses include 1,058 individuals in the intervention group with MMIS claims data who had a minimum of one year of active participation in the Demonstration. The analyses include five major subgroups of services: dental, inpatient hospital, outpatient hospital, pharmacy, and physician. The analyses also include two types of behavioral health services (physician and outpatient),¹² as well as analyses of claims for services received in hospital emergency rooms.

It is important to understand the service units being reported when reviewing the health utilization tables. For dental, outpatient hospital, physician, outpatient behavioral health, and physician behavioral health, the number of services is reported. *The number of services an individual receives is often much higher than the number of visits she or he makes to a health provider.* For pharmacy claims, the number of prescriptions filled is reported. The data include both original prescriptions and refills. Emergency room data count the number of visits that individuals make to the emergency room, and inpatient hospital data count the number of inpatient hospital admissions.

Table 17 presents service utilization before and after participants enrolled in the Demonstration. The pre-enrollment period measures service utilization in the 12 months prior to enrollment and the post-enrollment period measures service utilization during the first year of participation in SWSW. The analyses found that participants in the intervention group were more likely to use health care services after joining the Demonstration than before participating in the program. Increased service utilization post-enrollment occurred across several categories of services including dental care, outpatient hospital services, outpatient behavioral health services, emergency room services, pharmacy services, professional services, and professional services for behavioral health care. Only the utilization of inpatient hospital services declined (85% decrease) for the intervention group during the year after enrolling in SWSW.

¹² Vicki Kunerth, Director of Performance Management and Quality Improvement at DHS, consulted on the analytic approach.

**Table 17: Number of SWSW Intervention Participants Using Services during Their First Year in SWSW
1,058 Total Participants**

	Users Pre- enrollment	Users 12 Months Post- enrollment	Percent Change	Total Services Used By Service Users 12 Months Post- Enrollment	Average Services Used By Service Users 12 Months Post- enrollment
HOSPITAL SERVICES					
Inpatient	58 (5.3%)	9 (0.9%)	-84.5% *	9	1.00
Emergency Room	218 (20.6%)	377 (35.6%)	72.9% *	825 ¹³	2.19
OUTPATIENT AND RESIDENTIAL SERVICES					
Dental	249 (23.5%)	668 (63.1%)	168.3% *	6,566	9.83
Outpatient	346 (32.7%)	635 (60.0%)	83.5% *	10,537	16.59
Outpatient Behavioral Health	149 (14.1%)	188 (17.8%)	26.2% *	2,922	15.54
Pharmacy	671 (63.4%)	1,007 (95.2%)	50.1% *	35,011	34.77
Physician	659 (62.3%)	1,026 (97.0%)	55.7% *	33,494	32.65
Physician Behavioral Health	580 (54.8%)	883 (83.5%)	52.2% *	16,633	18.84
Residential Chemical Dependency	32 (3.0%)	2 (0.2%)	-93.8% *	2	1.00

Note: Participants referred to SWSW by Friends, Family, or Self were excluded from this analysis.

* Post-Enrollment Change is significant at the 5% level.

Statistical Test:: Sign Test

Source: State of Minnesota Department of Human Services

Regional Differences in Health Care Utilization. Table 18 compares service usage between the Twin Cities and northeast regions for the intervention group before and after enrollment in SWSW. Service utilization patterns are similar across the regions with the exception of emergency room and outpatient medical services. The percentage of individuals living in the northeast region using ER and outpatient medical services is higher than the percentage using these services in the Twin Cities region.

¹³ Most common reasons for ER visits in the post-enrollment period for intervention participants include: 1) symptoms generally undefined; 2) lumbago (lower back pain); 3) unspecified dental disorder and 4) migraine headache

Table 18: Number of SWSW Intervention Participants Using Services during Their First Year in SWSW by Region

	Twin Cities Total Participants	Northeast Total Participants	Twin Cities Total Users	Northeast Total Users	Percentage Point Difference Between Twin Cities and Northeast Total Users
HOSPITAL SERVICES					
Inpatient					
Pre-enrollment	924	134	50 (5.4%)	8 (6.0%)	-0.6
12 Months Post-enrollment	924	134	8 (0.9%)	1 (0.8%)	0.1
Emergency Room					
Pre-enrollment	924	134	187 (20.2%)	31 (23.1%)	-2.9
12 Months Post-enrollment	924	134	311 (33.7%)	66 (49.2%)	-15.6 *
OUTPATIENT AND RESIDENTIAL SERVICES					
Dental					
Pre-enrollment	924	134	220 (23.8%)	29 (21.6%)	2.2
12 Months Post-enrollment	924	134	588 (63.6%)	80 (59.7%)	3.9
Outpatient					
Pre-enrollment	924	134	301 (32.6%)	45 (33.6%)	-1.0
12 Months Post-enrollment	924	134	543 (58.8%)	92 (68.7%)	-9.9 *
Outpatient Behavioral Health					
Pre-enrollment	924	134	135 (14.6%)	14 (10.4%)	4.2
12 Months Post-enrollment	924	134	167 (18.1%)	21 (15.7%)	2.4
Pharmacy					
Pre-enrollment	924	134	589 (63.7%)	82 (61.2%)	2.6
12 Months Post-enrollment	924	134	879 (95.1%)	128 (95.5%)	-0.4
Physician					
Pre-enrollment	924	134	564 (61.0%)	95 (70.9%)	-9.9 *
12 Months Post-enrollment	924	134	894 (96.8%)	132 (98.5%)	-1.8
Physician Behavioral Health					
Pre-enrollment	924	134	506 (54.8%)	74 (55.2%)	-0.5
12 Months Post-enrollment	924	134	772 (83.6%)	111 (82.8%)	0.7

	Twin Cities Total Participants	Northeast Total Participants	Twin Cities Total Users	Northeast Total Users	Percentage Point Difference Between Twin Cities and Northeast Total Users
Residential Chemical Dependency					
Pre-enrollment	924	134	28 (3.0%)	4 (3.0%)	0.1
12 Months Post-enrollment	924	134	1 (0.1%)	1 (0.8%)	0.6

* Percentage of users in the Northeast is significantly different from the percentage of users in the Twin Cities at the 5% level.

Source: State of Minnesota Department of Human Services

Statistical Test: Independent t-test

C. Participant Use of Employment Support Services (EASE, Optum, and WRAP)

EASE Service Utilization. EASE services were intensive employment support services offered by a division within the Minnesota Resource Center (MRC). By providing intensive and flexible employment services within MRC, participants had access to a local, community-based provider that was familiar with their needs and challenges related to maintaining employment or finding new job opportunities. EASE providers were available in and familiar with the employment environment in the Twin Cities and Duluth, and could give career guidance regarding the best available opportunities in the area. Employment support services were provided either over the phone or in-person depending on the needs of the individual. Finally, EASE providers could easily coordinate and communicate with the participant's navigator about progress, challenges and contextual factors that may facilitate better outcomes for individuals.

The following services were offered through the EASE:

- **Intensive Assessment of Needs:** An intensive assessment to determine emergent needs and the type, amount, and frequency of appropriate services to address those needs. (e.g., disclosure, figuring out accommodations, Family Medical Leave Act consultation, ergonomic assessments, questions about discrimination, employer and co-worker education about a participant's disability);
- **Career Counseling:** Implementation of the Career Scope testing to determine how participants' skills and interests match their current job; vocational counseling following testing to determine how participants can acquire the necessary skills and training to advance their careers;
- **Worker Supports/Coaching:** Ongoing job-related assistance, coaching and counseling on or off participants' job site. Assistance could include developing checklists or to do lists, counseling on strategies for communication or interpersonal skills (i.e., anger management), implementing the accommodation recommendations, and time management strategies;
- **ADA Disclosure Training:** Overview of the Americans with Disabilities Act (ADA), common misconceptions of the ADA, disclosure approaches and practical accommodation solutions;

- **Family Education:** Education for families of participants (participant permission required) on how mental illness affects loved ones and how family members can develop coping strategies for managing mental illness in the workplace;
- **Referrals/Workforce Center Referrals:** Referrals to the Workforce Center for services such as placement, job leads or other vocational counseling to assist participants in determining and achieving their employment goals. Originally this service was the designated referral within the SWSW program for job placement services. However, long time frames for determining eligibility for job placement services as well as lack of participant follow through (due in part to concern over becoming part of the State Rehabilitation Services system) led the SWSW leadership to add job placements services as an EASE service (see next bullet).
- **Job Placement:** Placement services provided by MRC to meet participant demands for job search related assistance. Services included: direct placement, resume development, interviewing skills assistance, job club or other job seeking skills activities. This service was added in December 2008, when the economy was poor and the State Rehabilitation Services system was not timely enough to meet participant placement needs. The intent was to help many unemployed participants find new jobs before they were determined not eligible to continue in the SWSW program. Participants appeared to be more willing to follow through on advice from MRC as opposed to the Workforce Center, possibly because participants were familiar with MRC through navigation and other EASE services.

The following analyses include 1,285 individuals in the intervention group who had at least one year of active participation. One-third of individuals in the intervention (424 participants) used EASE since SWSW started. In addition, most individuals that used EASE used multiple services. The average EASE user in SWSW used over 14 EASE services while in the intervention (**Table 19**). The most frequently used EASE service was job placement which was offered starting in January 2009 in response to the economic downturn and demand for job placement assistance due to loss of employment. The second most frequently used service was worker supports and coaching. The total cost to provide EASE services for the SWSW program was approximately \$232,000 or around \$550 for each individual using this service.

**Table 19: Employment and Assistance Support Entity (EASE)
Service Use Analysis (N = 1,285)**

Total Users	Total Services	Services per User	Average Cost per User
424 (33% of Intervention Group Participants)	6,025	14.2	\$548
Service Use Results			
Service	Number of Users*	Number of Services Used	Cost of Services Used
Job Placement**	166 (39.2%)	2,333 (38.7%)	\$105,255
Worker Supports and Coaching	129 (30.4%)	2,052 (34.1%)	\$70,425
Career Counseling	173 (40.8%)	875 (14.5%)	\$25,752
Intensive Assessment - High Risk Members	71 (16.7%)	757 (12.6%)	\$30,394
Employer and Co-Worker Education	8 (1.9%)	8 (0.1%)	\$384
Totals	424 (100%)	6,025 (100%)	\$232,209.75

* A person may use more than one type of EASE service. Therefore the sum of the "Number of Users" column will be greater than the total number of EASE users.

** Job Placement services were first offered in EASE in January 2009.

Source: EASE usage data from Medica and SWSW Central Database

Regional Differences in EASE Service Utilization. The SWSW program was implemented in the Twin Cities and northeast regions of the state. EASE service utilization patterns differ significantly between these two regions due to provider capacity, participant preferences, and employment conditions. The following tables illustrate some of the regional differences in utilization. As **Table 20** shows, a higher proportion of metro participants used EASE services than those in the northeast. In addition, of those using the service, metro participants averaged a significantly higher number of services than those in the northeast (15.2 services compared to 4.7). The type of services used also differed by region (**Table 21**). The most frequently used services in the metro region were "job placement" and "worker supports/coaching," while in the northeast, the most frequently used services were "career counseling" and "intensive assessment for high risk members."

**Table 20: Employment and Assistance Support Entity (EASE)
Service Use Analysis for the Twin Cities Region (N = 1,125)**

Total Users	Total Services	Services per User	Average Cost per User
384 (34% of Intervention Participants from the Twin Cities)	5,837	15.2	\$590.14
Service Use Results			
Service	Number of Users*	Number of Services Used	Cost of Services Used
Job Placement**	165 (43.0%)	2,326 (39.8%)	\$104,940.00
Worker Supports and Coaching	122 (32.8%)	2,026 (34.7%)	\$69,887.50
Career Counseling	147 (38.3%)	780 (13.4%)	\$22,776.00
Intensive Assessment - High Risk Members	61 (15.9%)	701 (12.0%)	\$28,818.75
Employer and Co-Worker Education	4 (1.0%)	4 (0.1%)	\$192.00
Totals	384 (100%)	5,837 (100%)	\$226,008.25

* A person may use more than one type of EASE service. Therefore the sum of the "Number of Users" column will be greater than the total number of EASE users.

** Job Placement services were first offered in EASE in January 2009.

Source: EASE usage data from Medica and SWSW Central Database

**Table 21: Employment and Assistance Support Entity (EASE)
Service Use Analysis for the Northeast Region (N = 158)**

Total Users	Total Services	Services per User	Average Cost per User
40 (25% of Intervention Participants from the northeast)	188	4.7	\$139.89
Service Use Results			
Service	Number of Users*	Number of Services Used	Cost of Services Used
Career Counseling	26 (65.0%)	95 (50.5%)	\$2,976.00
Intensive Assessment - High Risk Members	10 (25.0%)	56 (29.8%)	\$1,575.00
Worker Supports and Coaching	7 (17.5%)	26 (13.8%)	\$537.50
Job Placement**	1 (2.5%)	7 (3.7%)	\$315.00
Employer and Co-Worker Education	4 (10.0%)	4 (2.1%)	\$192.00
Totals	40 (100%)	188 (100%)	\$5,595.50

* A person may use more than one type of EASE service. Therefore the sum of the "Number of Users" column will be greater than the total number of EASE users.

** Job Placement services were first offered in EASE in January 2009.

Source: EASE usage data from Medica and SWSW Central Database

EASE Services in Year Two. Additional analyses of individuals with at least two years of active participation in the intervention examined the distribution of EASE service use during the participants' first and second years in the program (Table 22). The amount of worker supports and coaching services used were similar between the first and second year of SWSW. However, there was a noticeable decline from the first to the second year in the number of services used

for intensive assessments and career counseling. Over the course of implementation, it became clear that job placement services were a critical component of the employment support services benefit package. Although available only since January 2009, job placement services were the second most frequently used service in the second year of the program.

**Table 22: Employment and Assistance Support Entity (EASE)
Service Use Analysis: At Least 2 Years of Active Participation in the Intervention by Year
of EASE Usage (N = 194)**

Service	First Year in SWSW		Second Year in SWSW	
	Number of Users*	Number of Services Used	Number of Users*	Number of Services Used
Intensive Assessment - High Risk Members	9 (18.8%)	131 (22.3%)	7 (14.3%)	60 (7.7%)
Career Counseling	21 (43.8%)	99 (16.8%)	14 (28.6%)	50 (6.4%)
Worker Supports and Coaching	20 (41.7%)	355 (60.4%)	19 (38.8%)	363 (46.8%)
Employer and Co-Worker Education	3 (6.3%)	3 (0.5%)	1 (2.0%)	1 (0.1%)
Job Placement**	0 (0.0%)	0 (0.0%)	23 (46.9%)	302 (38.9%)
Totals	48 (100%)	588 (100%)	49 (100%)	776 (100%)

* A person may use more than one type of EASE service. Therefore the sum of the "Number of Users" column will be greater than the total number of EASE users.

** Job Placement services were first offered in EASE in January 2009.

Source: EASE usage data from Medica and SWSW Central Database

Optum EAP Services. Optum is an Employee Assistance Program (EAP) that provides work-life support for an array of issues, including financial planning and debt management, legal consultation, stress management, dealing with conflict in the workplace, and grief counseling. The majority of Optum's services were provided telephonically via national call centers stationed outside the state of Minnesota. Optum primarily serves a private sector clientele, which required additional training for Optum phone counselors on how best to meet the needs of the SWSW population. Low or no-cost service referrals were encouraged, and a dedicated line was established that directed SWSW and other Medica participants to target call centers that had greater training on more appropriate resources for the range of needs presented.

As shown in Table 23, 15 percent of intervention group participants used services through Optum. In most cases, the individuals who used Optum only used it rarely with an average of less than two contacts per Optum user. The most frequently used Optum services were phone counseling, financial consultation, and legal consultation. The low number of services used per Optum user indicates that Optum was not a preferred service provider given other options available across the SWSW provider network. According to participant and navigator feedback, Optum's lack of presence in Minnesota and limited knowledge of local resources affected utilization rates. Participants also indicated a preference for in-person assistance on many of the employment, legal and financial related issues addressed during the course of implementation.

**Table 23: Employment Assistance Program (Optum)
Primary Service Use Analysis (N = 1,285)**

Total Users	Total Services	Services per User
199 (15%)	345	1.7
Primary Service Use Results		
Services Used		
Phone Delivered Counseling		37.4%
Legal Consultations		17.7%
Financial Consultations		15.7%
Adult/Elder Care		13.9%
Education Consultations		6.4%
Other*		9.0%

Source: Optum usage data from Medica and SWSW Central Database

The following services are included in the other category: Child Care/Parenting Consultations; Chronic Conditions Consultations; Dependent/ Adult Care Consultations; In-Person Counseling; Outreach; and Other Services Not Defined.

Optum sponsored in-person workshops. In the spring of 2008, Optum began offering in-person workshops on a variety of topics in response to common needs among enrollees identified by the MRC navigators. The content of the workshops was developed in collaboration between MRC and Optum, and was tailored to the health, financial employment and needs expressed by the SWSW program participants.

Topics covered during these workshops included:

1. **Money Matters: A Program from the FDIC** (budgeting, personal spending, tax liability, and debt and credit management);
2. **Wellness and You: Feeling Good, Feeling Fit** (factors influencing health, creating balance, benefits of exercise, smoking cessation, risks of alcohol use, dealing with stress, healthy nutrition, orientation to the food pyramid, obesity, and eliminating health risks);
3. **Dealing with Conflict: A Process for Resolving Discord** (understanding conflict, conflict management styles, tools for conflict negotiation, and costs and dangers of unmanaged conflict);
4. **Polite Practices in the Workplace** (benefits of courteous behavior, good manners in the workplace, understanding personal/professional boundaries);
5. **Stress Management 101: Keeping Your Head Above Water** (learn how to define stress and identify situations that cause stress, learn how individual choice determines stress reactions, awareness of stress management options); and
6. **Improving Communication Skills** (learn value of assertive communication, practice active listening skills, role of non-verbal communication, using positive communication for problem solving.
7. **Temperature Rising** (exploring triggers of anger, learning to recognize anger, identifying methods to respond to anger, examining the role of forgiveness).

Given the nature of these topics and enrollee preferences regarding opportunities to access information in-person and in the community rather than over the phone, Optum worked with MRC to schedule and coordinate these evening workshops, which were held at MRC, a location familiar and accessible to participants. Workshops were held in Minneapolis and in Duluth. In total, 12 classes were held and each class had between 2 and 10 participants.

Wellness and Recovery Action Plan (WRAP). WRAP is an 8-week wellness and peer support program. Classes meet once a week, but some individuals only take occasional classes rather than participating in the full course. Less than 25 individuals in the entire SWSW program either completed the 8-week program or took enough occasional classes to fulfill the requirements of WRAP.

WRAP was a service that was not frequently used by SWSW participants. Fewer than 25 individuals completed the 8-week program or took enough occasional classes to fulfill the program's requirements. WRAP traditionally serves a population with more severe mental illness and different employment development needs than the SWSW participants. The majority of SWSW enrollees worked more than 35 hours a week and had limited flexibility to attend the WRAP sessions that were available only during regular working hours. Despite changes made by the Consumer Survivor Network to increase program accessibility by offering evening WRAP sessions, this service was not widely used by SWSW enrollees.

Fit Choices Wellness Program. In September 2008, Medica started a program called Fit Choices. The goal of the program was to help improve the physical fitness of SWSW participants by encouraging attendance at a gym or health club. A participant enrolled in Fit Choices, who attends a gym or health club at least eight times in a month, received \$20 to cover the cost of their gym or health club membership. As of September 2009, 7 percent of individuals in the intervention group (95 participants) were enrolled in Fit Choices, and approximately half of these individuals (42 participants) had enough visits to receive \$20 off their monthly gym or health club membership.

V. PARTICIPANT OUTCOMES

The following section presents the major findings of Minnesota's Demonstration to Maintain Independence and Employment. Differences between the intervention and control groups are presented on several outcomes of interest, including: access to and utilization of health services, applications to SSDI, health and mental health status, functional impairment, earnings, job and financial stability, and quality of life. In addition, findings are presented on the differences in outcomes within the intervention group to highlight factors that may be associated with greater program success.

Findings show that intervention group participants used more health and behavioral health care services after enrolling in SWSW, while control group participants did not have significant increases in health care services over the same period. Findings also show that health service utilization after enrollment remains steady after two years in the Demonstration, with some increase in the use of pharmacy and outpatient services.

Findings from the baseline and annual surveys show that participation in SWSW significantly reduces the likelihood that an individual with serious mental illness will apply for Social Security Disability benefits. In addition, participants in SWSW were less likely to have a current medical debt, and less likely to delay or skip medical care because of cost issues. Individuals in the intervention group also showed improvements in their health, financial situation, and quality of life. Individuals in the control group showed improvement on some of these indicators, however many of the changes are not significant.

Sample used for outcome analyses. This section of the report presents results from analysis of the survey data. Of the 1,583 participants who were enrolled in SWSW for at least one year, 1,434 or 91% returned both a baseline and a 12-month survey; this includes 1,173 intervention group participants and 261 control group participants (Table 24).

Table 24: Survey Datasets: Baseline and 12-month survey

Group Type	Returned Survey	Total N	Percent who returned survey
Intervention	1,173	1,285	91%
Control	261	298	88%
Total	1,434	1,583	91%

Source: SWSW Baseline and Second Annual Surveys

Some analyses focus specifically on the sub-sample of participants who were enrolled in SWSW for *two years* and returned a baseline, 12-month, and 24-month survey. This sub-sample includes 173 intervention group participants and 63 control group participants (Table 25).

Table 25: Survey Datasets: Baseline, 12-month, and 24-month survey

Group Type	Returned Survey	Total N	Percent who returned survey
Intervention	173	194	89%
Control	63	74	85%
Total	236	268	88%

Source: SWSW Baseline and Second Annual Surveys

A. Health Care Utilization Differences

Differences in health service utilization. The SWSW program provided a comprehensive health, behavioral health and pharmacy benefit package for participants, and 100% of the individuals enrolled used health services during the course of the program. There were significant differences between the intervention and control groups in their utilization of all health care services. When asked about health service access on the annual survey, all of the control group members indicated it was important or very important to have regular access to a medical provider, and nearly all (98%) indicated it was important or very important to have access to prescription medication. Despite recognizing the value of accessing these services, of the control group participants who used services in the pre-enrollment period, only 77% used physician services and 80% used pharmacy services in the post-enrollment period. Table 26 shows the differences in health service utilization between the intervention and control groups in the year before and after enrollment in the Demonstration.

Table 26: Comparison of Number of Participants Using Health Services in the Intervention and Control Groups*
1,058 Intervention Group Participants
149 Control Group Participants

	Users Pre-enrollment	Users 12 Months Post- enrollment	Percent Change	Pre- enrollment Total Services Used By Service Users	Pre- enrollment Average Services Used By Service Users	Post- enrollment Total Services Used By Service Users	Post- enrollment Average Services Used By Service Users
HOSPITAL SERVICES							
Inpatient							
Intervention	58 (5.3%)	9 (0.9%)	-84.5% *	71	1.22	9	1.00
Control	7 (4.7%)	2 (1.3%)	-71.4%	14	2.00	2	1.00
Emergency Room							
Intervention	218 (20.6%)	377 (35.6%)	72.9% *	400	1.83	825	2.19
Control	49 (32.9%)	45 (30.2%)	-8.2%	108	2.20	97	2.16
OUTPATIENT AND RESIDENTIAL SERVICES							
Dental							
Intervention	249 (23.5%)	668 (63.1%)	168.3% *	1,966	7.90	6,566	9.83
Control	42 (28.2%)	48 (32.2%)	14.3%	260	6.19	367	7.65
Outpatient							
Intervention	346 (32.7%)	635 (60.0%)	83.5% *	4,269	12.34	10,537	16.59
Control	80 (53.7%)	77 (51.7%)	-3.7%	1,244	15.55	1,337	17.36
Outpatient Behavioral Health							
Intervention	149 (14.1%)	188 (17.8%)	26.2% *	1,547	10.38	2,922	15.54
Control	28 (18.8%)	21 (14.1%)	-25.0%	273	9.75	357	17.00
Pharmacy							
Intervention	671 (63.4%)	1,007 (95.2%)	50.1% *	15,588	23.23	35,011	34.77
Control	121 (81.2%)	120 (80.5%)	-0.8%	3,307	27.33	3,366	28.05

	Users Pre-enrollment	Users 12 Months Post- enrollment	Percent Change	Pre- enrollment Total Services Used By Service Users	Pre- enrollment Average Services Used By Service Users	Post- enrollment Total Services Used By Service Users	Post- enrollment Average Services Used By Service Users
Physician							
Intervention	659 (62.3%)	1,026 (97.0%)	55.7% *	14,003	21.25	33,494	32.65
Control	115 (77.2%)	115 (77.2%)	0.0%	3,600	31.30	3,757	32.67
Physician Behavioral Health							
Intervention	580 (54.8%)	883 (83.5%)	52.2% *	7,494	12.92	16,633	18.84
Control	104 (70.0%)	89 (59.7%)	-14.4% *	1,590	15.29	1,488	16.71
Residential Chemical Dependency							
Intervention	32 (3.0%)	2 (0.2%)	-93.8% *	54	1.69	2	1.00
Control	8 (5.4%)	0 (0.0%)	-100.0% *	13	1.63	0	N/A

* Percentage of users in the Northeast is significantly different from the percentage of users in the Twin Cities at the 5% level.

+ Participants referred to SWSW by Friends, Family, or Self were excluded from the Pre-enrollment analysis.

Source: State of Minnesota Department of Human Services

Statistical Test:: Wilcoxon Ranked Sign Test

Access to Services (Control group only). Control group participants were asked how important access to certain medical and employment support services was to them (Table 27). Participants reported believing that access to most medical services is very important, particularly access to prescription medications, a primary care provider, and dental care. However, only 73 percent of control group participants reported having some form of health insurance. Additionally, 60 to 70 percent of participants reported that access to employment support services such as job placement and resume assistance is important or very important to them.

Table 27: How important is access to . . . ?

3 rd Annual Survey (N=63)	Not Important	Important	Very Important
Medical Services			
Primary Care Provider	0%	30%	70%
Specialist	5%	28%	57%
Hospital Care	2%	48%	51%
Surgery	13%	54%	33%
Dental care	0%	32%	68%
Prescription Medication	2%	13%	85%
Counseling/Therapy	3%	36%	61%
Employment Support Services			
Job Placement Services	31%	37%	32%
Job Coaching	33%	49%	18%
Resume Writing Assistance	40%	44%	16%

Source: SWSW Annual Survey

B. Applications to Social Security Disability

A primary goal of the SWSW intervention was to prevent participants from becoming disabled and applying for Social Security disability insurance. Significantly fewer intervention group members (4%) applied for social security disability benefits during their first 12 months in SWSW compared to the control group (14%).

Among those who applied for disability, most are between the ages 40 and 60, diagnosed with depression or bipolar disorder, and live in the northeast/Duluth region. In addition, SSDI applicants had almost twice the average number of ADL/IADL limitations at enrollment and their level of functioning declined in the year post-enrollment. Applicants also reported significant declines in physical health status between enrollment and 1 year post enrollment; however, mental health status did not decline over this period. It is important to note that individuals applying for SSDI continued to indicate a strong motivation to work and reported positive associations between working and maintaining wellness. However, confidence in their future work outlook significantly decreased in the year post-enrollment, suggesting that the desire to work and the recognition of its value may be separate from the individual's capacity to work and decision to apply for SSDI.

For more detailed analyses, see **Appendix B** for information on the region, age, and primary diagnosis of those who applied for Social Security disability benefits during their first 12 months in SWSW.

Table 28: Social Security Disability Benefits Applications

Intervention vs. Control	Intervention N=1 140	Control N=253
Applied prior to enrolling in SWSW	18.0%	16.2%
Applied during first 12 months of SWSW *	4.3%	13.8%

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); Source: SWSW Annual Survey

Table 29 presents data on social security applications for intervention and control group participants enrolled in the program for two years or longer. The results mirror those from the entire sample for the first 12 month of SWSW, indicating that the trend of fewer applications to SSDI for the intervention group remains consistent over time.

Table 29: Social Security Disability Benefits Applications

Intervention vs. Control	Intervention N=171	Control N=62
Applied during 2 nd 12 months of SWSW	4.7%	12.9%

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); Source: SWSW Annual Survey

C. Economic and Employment Stability

Implementation of the SWSW Demonstration coincided with an economic downturn that has produced levels of unemployment in the United States unseen since the Great Depression. In Minnesota, unemployment steadily increased from 4% in 2006 to a high of 8.4% in 2009. Despite the bleak employment outlook, both intervention and control groups experienced greater job stability and higher earnings during their time in the study. However, intervention group participants showed greater increases in earnings the longer they were in the program. Moreover, the earnings of lower functioning intervention participants increased, while the earnings of lower functioning control group members decreased dramatically. This finding is particularly striking considering the majority of participants in both groups indicated the current economic crisis affected their employment situation, citing layoffs, pay freezes, reduced hours and wages.

There are both health and financial drivers that influence the decision to pursue SSDI, and medical debt is an important factor in overall financial security for individuals. After a year in the program, there were significantly fewer individuals in the intervention group reporting medical debt than in the control group. In fact, the percentage of control group participants reporting medical debt mirrors national statistics while the percentage of intervention group participants reporting medical debt falls well below national estimates.

Earnings. Table 30 displays self-reported earnings data. The intervention and control groups both showed an increase in annual earnings after one year and the increase was statistically significant for both groups. However, earnings data for the control group is skewed by the high proportion of individuals working in higher paid professional/technical/managerial occupations (24% compared to 15% in the intervention group). Professional workers in the control group (Table 31) had significantly higher wages at enrollment and larger increases in earnings post-enrollment, which skews the earnings averages for the control group as a whole. Analyses of the intervention group (Table 32) illustrate that since the proportion of professional/technical/managerial workers is not as large, earnings disparities have less of an impact on the overall average.

Table 30: Earnings in Year 1

Baseline vs. 12 month	N [^]	Baseline	12 month	Difference	Percent Change
Intervention	921	\$18,884	\$19,952	\$1,068	5.7% *
Control	210	\$18,784	\$20,031	\$1,247	6.6% *

* difference between baseline and 12 month is statistically significant at the 5% level (Paired t-test); ^excludes missing responses; Source: SWSW Annual Survey

Table 31: Earnings of Professionals Compared to Other Workers - Control

Baseline vs. 12 month	N [^]	Baseline	12 month	Difference	Percent Change
Professional, Technical, & Managerial Workers	53	\$21,849	\$24,215	\$2,366	10.8% *
Others	157	\$17,749	\$18,618	\$869	4.9%

* difference between baseline and 12 month is statistically significant at the 5% level (Paired t-test); ^excludes missing responses; Source: SWSW Annual Survey

Table 32: Earnings of Professionals Compared to Other Workers- Intervention

Baseline vs. 12 month	N [^]	Baseline	12 month	Difference	Percent Change
Professional, Technical, & Managerial Workers	150	\$22,619	\$24,519	\$1,900	8.4%
Others	771	\$18,158	\$19,064	\$906	5.0% *

* difference between baseline and 12 month is statistically significant at the 5% level (Paired t-test); ^excludes missing responses; Source: SWSW Annual Survey

Earnings by GAF Score. Table 33 displays changes in income with participants stratified by functional status. In both the intervention and the control groups, higher functioning participants (those with a Global Assessment of Functioning score greater than or equal to 50) experienced a statistically significant increase in income. However, lower functioning participants in the intervention group also reported an increase in income. Lower functioning participants in the control group, experienced a statistically significant *decrease* in income. Almost a quarter of lower functioning control group participants reported an income loss of

more than \$10,000 from baseline to 12 months and no participants had income increases of the same magnitude, resulting in an average income loss of \$5,323.

Table 33: Change in Income - by GAF score

Baseline vs. 12 month	N^	Baseline	12 month	Difference	Percent Change
GAF<50					
Intervention	89	\$18,304	\$20,194	\$1,891	10.3%*
Control	33	\$19,812	\$14,489	-\$5,323	-26.9%*
GAF>=50					
Intervention	832	\$18,946	\$19,926	\$980	5.2%*
Control	177	\$18,592	\$21,064	\$2,472	13.3%*

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test);

^excludes missing responses; Source: SWSW Annual Survey

Earnings 2-Years Post Enrollment. According to self reported earnings data, both the intervention and control group showed an increase in annual earnings two years post-enrollment (Table 34). However, the increase in earnings at 24 months was only statistically significant for the intervention group.

Table 34: Earnings Baseline to 24 Months

Baseline to 24 month	N^	Baseline	12 month	24 month	Difference	Overall Percent Change
Intervention	132	\$16,700	\$18,208	\$19,073	\$2,374	14.2%*
Control	44	\$19,268	\$20,730	\$20,817	\$1,549	8.0%

* difference between baseline and 24 month is statistically significant at the 5% level (Paired t-test); ^excludes missing responses; Source: SWSW Annual Survey

Job Status. Survey respondents also answered questions about job changes over the past year. Both the intervention group and the control group experienced a statistically significant decline in the number of job changes (Table 35). When asked if the job change was an improvement (e.g., promotion, higher wages, increased responsibility), nearly half of both the intervention and control groups thought their job change was an improvement over the job they held previously.

Table 35: Did you change jobs in the past year

Baseline vs. 12 month	N^	Baseline	12 month	Percent Change
Intervention	1161	45% (524)	32% (377)	-28.1%*
Control	254	53% (134)	37% (93)	-30.6%*

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); ^excludes missing responses; Source: SWSW Annual Survey

Medical Debt and Bankruptcy. Medical bills trigger over 60% of all bankruptcies in the United States. According to a recent report by the Commonwealth Fund¹⁴, 41% of adults aged 19 to 60 struggle to pay medical bills and have accrued medical debt. Demonstration participants enrolled for at least two years answered questions related to medical debt. As shown in Table 36, almost half (48%) of the control group reported current debt due to medical expenses compared to only 17 percent of the intervention group. Additionally, only 2 percent of the intervention group and 5 percent of the control group have filed for bankruptcy because of medical expenses.

Table 36: Medical Debt and Bankruptcy

Intervention vs. Control	Intervention N=171	Control N=62
Have current medical debt *	17%	48%
Filed for bankruptcy due to medical debt	2%	5%

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); Source: SWSW Annual Survey

Delaying or Skipping Care Due to Cost. The Commonwealth Fund report also found that nearly two-thirds of those with medical debt reported going without needed care due to cost, compared to 19 percent of Americans with no reported medical debt. DMIE participants in both the intervention and control groups reported delaying or going without needed care due to cost. However, across all categories of care, the control group was significantly more likely to delay or skip care due to cost (Table 37). Individuals with medical debt in both the intervention and control groups were more likely than those without medical debt to delay or skip care due to cost. However, this pattern was more significant among control group members with medical debt. More than half (59%) delayed dental care, 45% skipped prescription refills, and more than a third (35%) delayed family doctor visits. .

Table 37: Health Care Costs

Delaying or Skipping Care Due to Cost^	Intervention N=1173	Control N=261
Family doctor visit *	5%	39%
Specialist visit *	8%	33%
Hospital care *	2%	11%
Surgery *	3%	8%
Dental care *	21%	55%
Filling a prescription *	13%	41%
No, I have not delayed or missed care due to cost *	61%	21%

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); ^categories not mutually exclusive; Source: SWSW Annual Survey

¹⁴ Seeing Red: The Growing Burden of Medical Bills and Debt Faced by US Families, Findings from the Biennial Commonwealth Fund Health Insurance Survey, August 2008.

D. Functioning and Health Status

Health and mental health status and level of functional impairment are important to examine due to their relationship to the disability trajectory for individuals with mental illness. The goal of SWSW was to provide support services that would help individuals at-risk of becoming disabled to remain stable and independent. Individuals in the intervention group reported greater improvements in functioning than individuals in the control group. Both groups experienced improvements in mental health status, while physical health status remained the same over time. It is important to note that the physical health status of both groups at baseline is similar to the health of the general population; therefore we would not necessarily expect to see significant improvements on this measure post-enrollment.

Functional Status. Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) are two standard measures that assess how well participants function in their daily lives and in society. ADLs measure the ability of an individual to perform basic personal care including eating, bathing, getting out of bed, dressing, and using the toilet. As shown in Table 38, a majority of participants in both the intervention and control group have zero ADL limitations at baseline. During the first year of SWSW, there was a statistically significant increase (from 58% to 65%) in the number of people reporting no functional limitations in the intervention group (Table 39). Over the same period, there was no statistically significant change in the percent of participants in the control group reporting zero ADL limitations.

Table 38: Activities of Daily Living (ADLs)

Number of ADL Limitations	Intervention				Control			
	Baseline		12 month		Baseline		12 month	
	N	%	N	%	N	%	N	%
0	677	58%	758	65%	144	55%	150	57%
1	210	18%	170	15%	41	16%	35	13%
2	113	10%	103	9%	31	12%	34	13%
3 or more	173	15%	142	12%	45	17%	42	16%
Grand Total	1173	100%	1173	100%	261	100%	261	100%

Source: SWSW Annual Survey

Table 39: Change in Percent of Participants with no ADL limitations

Baseline vs. 12 month	N	Baseline	12 month	Percent Change
Intervention	1173	58% (677)	65% (758)	12.0% *
Control	261	55% (144)	57% (150)	4.2%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); Source: SWSW Annual Survey

Table 40 presents the number of IADL limitations reported by participants in the intervention and control groups at baseline and after one year of SWSW. IADLs measure the ability of an individual to perform tasks needed to live independently such as preparing meals, managing money, shopping for groceries and personal items, and using a telephone. As shown in Table 41,

there was a statistically significant increase in the percent of participants in the intervention group reporting no IADL limitations. For the control group, there was no statistically significant change in the percent of participants without IADL limitations.

Table 40: Instrumental Activities of Daily Living (IADLs)

Number of IADL Limitations	Intervention				Control			
	Baseline		12 month		Baseline		12 month	
	N	%	N	%	N	%	N	%
0	539	46%	589	50%	119	46%	126	48%
1	239	20%	241	21%	42	16%	48	18%
2	149	13%	136	12%	28	11%	30	12%
3 or more	246	21%	207	18%	72	28%	57	22%
Grand Total	1173	100%	1173	100%	261	100%	261	100%

Source: SWSW Annual Survey

Table 41 Change in Percent of Participants with No IADL limitations

Baseline vs. 12 month	N	Baseline	12 month	Percent Change
Intervention	1173	46% (539)	50% (589)	9.3% *
Control	261	46% (119)	48% (126)	5.9%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); Source: SWSW Annual Survey

Functional Status by Region. Table 42 presents the change in the percent of participants with at least one ADL limitation by group type and region. In the metro region, there was a decrease in the percent of participants reporting at least one ADL for both the intervention and control groups. However, in the non-metro region, the number of control group participants reporting at least one ADL increased. This increase may signify a difference between control group participants in the metro and non-metro regions or it may be a result of underreporting of ADLs by participants in the control group at baseline (as evidenced by the smaller percent of non-metro control group participants with at least one ADL at baseline).

Table 42: Change in Percent of Participants with No ADL limitations - by region

Baseline vs. 12 month	N	Baseline	12 month	Percent Change
Metro				
Intervention	1023	58% (597)	65% (670)	12.2% *
Control	203	50% (101)	57% (115)	13.9%
Non-metro				
Intervention	148	53% (78)	58% (86)	10.2%
Control	58	74% (43)	60% (35)	-18.6%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); Source: SWSW Annual Survey

The same pattern of regional differences is seen in changes in IADL limitations. The percent of control group participants in the non-metro region reporting at least one IADL limitation increased from baseline to the end of the first year of SWSW (Table 43). Also, at baseline, the control group in the non-metro region had a smaller percent of participants with at least one IADL limitation. The increase could be a result of regional differences in the control group or a result of underreporting of IADLs at baseline.

Table 43: Change in Percent of Participants with No IADL limitations - by region

Baseline vs. 12 month	N	Baseline	12 month	Percent Change
Metro				
Intervention	1023	46% (473)	51% (518)	9.5% *
Control	203	43% (87)	48% (98)	12.6%
Non-metro				
Intervention	148	43% (64)	47% (69)	7.8%
Control	58	55% (32)	48% (28)	-12.5%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); Source: SWSW Annual Survey

Functional Status 2 Years Post-Enrollment. As shown in Table 49, the percent of intervention group participants reporting no ADLs increased between baseline and the end of the second year in the program. Changes in the percent of participants reporting no ADLs in the control group also increased, however, the change was not statistically significant.

Table 49: Change in Percent of Participants no ADL limitations

Baseline to 24 month	N	Baseline	12 month	24 month	Overall Percent Change
Intervention	173	49% (85)	55% (95)	58% (100)	17.6% *
Control	63	54% (34)	60% (38)	63% (40)	17.6%

* difference between baseline and 24 month is statistically significant at the 5% level (Sign Test); Source: SWSW Annual Survey

In terms of IADL changes over two years, the intervention group reported a statistically significant decline in IADLs between baseline and the end of the second year in the program (Table 50). The control group also reported a decline in IADLs over time, but the change was not statistically significant.

Table 50: Change in Percent of Participants with no IADL limitations

Baseline to 24 month	N	Baseline	12 month	24 month	Overall Percent Change
Intervention	173	40% (69)	48% (83)	51% (89)	29.0% *
Control	63	48% (30)	49% (31)	57% (36)	20.0%

* difference between baseline and 24 month is statistically significant at the 5% level (Sign Test);
Source: SWSW Annual Survey

Health Status. The SF-12 is used to assess health status, both physical and mental. The data are normalized on the general population and scaled such that a score of “50” indicates average physical or mental health. Scores below 50 indicate poorer than average physical or mental health, while scores above 50 show better than average physical or mental health.

For the Physical Component Score (PCS), the SF-12 asks about topics such as the ability to do activities requiring a moderate amount of physical effort, limitations in types of work and activities, energy levels, and general physical health. **Table 51** presents the scores for participants in the intervention and control groups. After one year of SWSW, neither group showed a statistically significant change in physical health status. This is likely because their average baseline scores were very close to the average for the general population, meaning that any significant improvement would not be expected.

Table 51: Change in SF-12 Physical Component Score

Baseline vs. 12 month	Baseline	12 month	Difference	Confidence Interval	Standard Deviation	p-value
Intervention	48.01	47.98	-0.03	-0.57 to 0.50	8.7770	0.9064
Control	48.51	48.11	-0.40	-1.52 to 0.73	8.8363	0.4906

Source: SWSW Annual Survey; Statistical Test: Paired t-test

Table 52: SF-12 Health Status (PCS)

SF-12 PCS Score	Intervention				Control			
	Baseline		12 month		Baseline		12 month	
	N	%	N	%	N	%	N	%
Less than 40	222	22%	228	22%	52	22%	61	25%
40 to 50	333	32%	303	29%	68	28%	50	21%
More than 50	482	46%	506	49%	119	50%	128	54%
Grand Total	1037	100%	1037	100%	239	100%	239	100%

Source: SWSW Annual Survey

For the Mental Component Score (MCS), the SF-12 asks topics such as how often a person feels depressed or calm, if their emotional state caused them to be less careful in performing work or other activities, and if emotional problems affected their social activities, such as visiting friends. A majority of participants had mental component scores below 40, well below the

national average (Table 53). Mental health status improved for both the intervention and control groups between baseline and the end of the first year in the program; both groups had a statistically significant improvement in mental health status.

Table 53: Change in SF-12 Mental Component Score

Baseline vs. 12 month	Baseline	12 month	Difference	Confidence Interval	Standard Deviation	p-value
Intervention	35.42	39.48	4.06	3.39 to 4.74	11.1100	0.0001
Control	34.52	37.65	3.13	1.86 to 4.38	9.9113	0.0001

Source: SWSW Annual Survey; Statistical Test: Paired t-test

Table 54: SF-12 Mental Health Status (MCS)

SF-12 MCS Score	Intervention				Control			
	Baseline		12 month		Baseline		12 month	
	N	%	N	%	N	%	N	%
Less than 40	686	66%	529	51%	165	69%	140	59%
40 to 50	249	24%	328	32%	49	21%	60	25%
More than 50	102	10%	180	17%	25	10%	39	16%
Grand Total	1037	100%	1037	100%	239	100%	239	100%

Source: SWSW Annual Survey

E. Health Promotion Behaviors

Engaging in preventative care and health promoting behaviors is critical to the stability of the DMIE population. Participants were asked about their health insurance coverage and satisfaction, whether they had a regular medical provider or clinic they routinely visited, and the extent to which they engaged in preventative health screens and were compliant with prescription medication protocols. Survey findings showed that the intervention group was more likely to have health insurance (100% compared to 60%), reported greater satisfaction with their health care coverage, and were significantly more likely to have a provider or clinic they visited regularly for health care. In addition, intervention group participants were more likely to have preventative health screens and fill needed prescriptions. The control group was more likely to rely on free samples and split pills to make the prescription last longer.

Regular Medical Provider and Insurance Satisfaction. As shown in Table 55, individuals in the intervention group were significantly more likely to have a medical clinic or provider that they visit regularly. Eighty-four percent of the intervention group had a regular medical provider compared to 69 percent of the control group.

Table 55: Regular Medical Provider

Intervention vs. Control [^]	Intervention N=1153	Control N=259
Regular Medical Provider *	84% (970)	69% (179)

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); [^]excludes missing responses; Source: SWSW Annual Survey

Table 56 presents findings on insurance satisfaction. Participants with insurance were asked to rate satisfaction with their insurance on a 1 to 5 scale where 1 is very dissatisfied and 5 very satisfied. The intervention group had an average satisfaction rating of 4.2 compared to the control group, which reported an average satisfaction rating of 3.4 on a 5 point scale.

Table 56: Insurance Satisfaction

Intervention vs. Control [^]	Intervention N=1053	Control N=149
Average Insurance Satisfaction Score *	4.2	3.4

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); [^]only includes participants who indicated they had insurance; Source: SWSW Annual Survey

Health Screens and Prescription Drug Management Strategies. Participants were also asked questions regarding their preventive health and prescription drug behaviors. As shown in Table 57, a significantly greater proportion of the intervention group reported engaging in preventative health behaviors, (e.g., health screens and exams). Among intervention group participants, pap smears, dental exams, eye exams and mammograms were the most commonly reported preventative health screens and the control group was significantly less likely to report having these four preventative screens. However, the control group was significantly more likely than the intervention group to use different strategies for managing the cost of prescriptions, such as participating in a pharmacy assistance program or not filling some prescriptions (Table 58).

Table 57: Differences in Use of Preventative Health Screens

Health Screens [^]	Intervention N=1173	Control N=261	% Difference
Mammogram (women only)	37%	27%	10%*
Pap Smear (women only)	73%	57%	16%*
Prostate (men only)	17%	12%	5%
Colonoscopy	12%	7%	5%*
Melanoma	3%	<1%	3%*
Eye Exam	53%	31%	22%*
Dental Exam	67%	40%	27%*
Flu Shot	34%	29%	5%

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); [^]categories not mutually exclusive; Source: SWSW Annual Survey

**Table 58: Strategies to Maintain Access to Prescription Drugs
Differences between Intervention and Control**

Prescription Drug Behavior [^]	Intervention N=1173	Control N=261	% Difference
Obtain free samples from doctor or clinic	25%	32%	7%*
Obtain free or low cost medications through a pharmacy assistance program	9%	15%	6%*
Buy stronger dosage and split pills	7%	6%	1%
Split pills one or more days/week or month	13%	25%	12%*
Continue to use a prescription until you run out even though your doctor has prescribed a different drug or dosage	4%	8%	4%*
Don't fill some prescriptions	11%	30%	19%*
No, I don't use any of these strategies	53%	35%	18%*

* difference between intervention and control is statistically significant at the 5% level (Independent t-test); [^]categories not mutually exclusive; Source: SWSW Annual Survey

F. Quality of Life

Participants in both the intervention and control group responded to questions aimed at measuring satisfaction with various aspects of their lives. Quality of life responses for both groups were very low at baseline, particularly in the areas of their financial situation and health. Over 90 percent of the participants expressed feelings of dissatisfaction with their financial situation and more than 75 percent were dissatisfied with their health status. The intervention group showed significant improvements in their quality of life after being in the program for a year, but their overall levels of satisfaction are still quite low, indicating this population continues to suffer from many hardships that profoundly affect their quality of life.

Quality of Life. The Lehman Quality of Life scale includes a series of 20 questions that address seven categories: financial situation, work and salary, social life, living arrangements and neighborhood, free time, health, and life in general. The scale ranges from 1 to 7, where a score of "1" indicates feeling terrible and "7" indicates feeling delighted. **Table 59** presents the percent of participants in each category who reported positive feelings ("Mostly Satisfied," "Pleased," or "Delighted"). Across all of the quality of life categories, the intervention group showed statistically significant increases in the percent of participants with positive feelings. Participants in the control group only showed statistically significant quality of life improvements in two categories: social life and life in general.

Table 59: Percent of Participants with Positive Feelings

Baseline vs. 12 month	N [^]	Baseline	12 month	Percent Change
Financial Situation				
Intervention	1125	5% (54)	9% (102)	88.9% *
Control	252	8% (21)	6% (15)	-28.6%
Work and Salary				
Intervention	1061	28% (295)	31% (331)	12.2% *
Control	238	26% (62)	31% (73)	17.7%
Social Life				
Intervention	1126	35% (398)	44% (499)	25.4% *
Control	251	33% (84)	46% (115)	36.9% *
Living Arrangements and Neighborhood				
Intervention	1096	48% (522)	54% (592)	13.4% *
Control	249	44% (110)	43% (107)	-2.7%
Free Time				
Intervention	1139	30% (345)	38% (432)	25.2% *
Control	256	30% (77)	35% (90)	16.9%
Health				
Intervention	1133	18% (213)	29% (332)	55.9% *
Control	256	24% (61)	29% (74)	21.3%
Life in General				
Intervention	1150	40% (456)	51% (581)	27.4% *
Control	258	37% (95)	45% (117)	23.2% *

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); ^excludes missing responses; Source: SWSW Annual Survey

Participants were also asked whether they have enough money for food, housing, clothing, traveling around the city, and social activities. As shown in **Table 60**, intervention group participants reported statistically significant improvements in their ability to afford food, housing, clothing, travel around the city, and social activities. The control group reported no statistically significant changes. Despite the improvement for the intervention group, both groups continue to demonstrate financial hardship with nearly 30 percent having difficulty affording food, nearly half expressing difficulty paying for housing, and over 60 percent not having enough money to engage in social activities.

Table 60: Do you have enough money for . . .

Baseline vs. 12 month	N [^]	Baseline	12 month	Percent Change
Food				
Intervention	1149	69% (789)	72% (826)	4.7% *
Control	258	64% (165)	69% (177)	7.3%
Housing				
Intervention	1148	49% (565)	54% (626)	11.6% *
Control	254	49% (125)	52% (133)	6.4%
Clothing				
Intervention	1133	62% (701)	68% (765)	9.1% *
Control	255	58% (149)	64% (163)	9.4%
Traveling Around the City				
Intervention	1147	49% (568)	57% (658)	15.8% *
Control	256	49% (125)	49% (125)	0.0%
Social Activities				
Intervention	1133	30% (343)	36% (412)	20.1% *
Control	254	34% (87)	32% (81)	-18.4%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); ^excludes missing responses; Source: SWSW Annual Survey

G. Impact of Program Engagement: Differences in Outcomes within the Intervention Group

The following section examines outcomes of the intervention group only to examine the differences in outcomes for participants with varying levels of program engagement in the SWSW intervention. The SWSW intervention was a person-centered, client-driven intervention that tailored service based on client needs and goals established upon entering the program. After completing the initial assessment and development of the Wellness and Employment Success Plan, contact with navigators was voluntary and up to the individual preferences of participants. Navigator utilization patterns suggest that individuals with higher needs, crises, and more complex health and employment needs had navigation encounters, while participants with stable mental health and employment had fewer navigator encounters.

Engagement. At the core of the SWSW intervention is the goal setting and WESP development process that allows participants to identify needs and possible solutions or strategies to address them through available services. After a year in the program, participants had the opportunity to review progress on goals set at the beginning of the intervention and to re-evaluate any goals that remained incomplete. Because utilization of the navigation service was voluntary after the initial assessment and WESP development, participants who completed an annual WESP review were considered “more engaged” than participants not going through this review process. In other words, the completion of an annual review was an indication that participants were in communication with navigators and willing to spend additional time reviewing progress after 12 months of the intervention. Of the 1,173 intervention group participants who

returned a 12 month survey and stayed in the program for at least one year, 861 (73%) completed an annual review.

The more engaged program participants experienced better outcomes than their less engaged counterparts. More engaged program participants reported higher earnings increases one year post enrollment than the less engaged participants, and showed greater improvements in mental health status and overall functioning.

Improved functioning and mental health status. For participants who completed an annual review, there was a statistically significant increase in the percent of participants reporting no ADL or IADL limitations. (Table X). Less engaged program participants did not show significant improvements in functioning between baseline and 1 year post-enrollment.

Table 61: Change in Percent of Participants No Functional Limitations

Baseline vs. 12 month	N	Baseline	12 month	Percent Change
No ADL limitations				
Completed Annual Review	861	57% (487)	66% (564)	15.8% *
No Annual Review	312	61% (190)	62% (194)	2.1%
No IADL limitations				
Completed Annual Review	861	46% (399)	51% (443)	9.9% *
No Annual Review	312	45% (140)	47% (146)	4.3%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test);
Source: SWSW Annual Survey

While both groups reported statistically significant improvements in their mental health status, participants who completed the annual review had greater levels of improvement. After one year in the program, the average MCS for more engaged participants was 39.48 compared to 37.65 for less engaged participants.

Table 62: Change in SF-12 MCS Score

Baseline vs. 12 month	N^	Baseline	12 month	Percent Change
Intervention	1037	35.42	39.48	11.5% *
Control	239	34.52	37.65	9.1% *

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test); ^excludes missing responses; Source: SWSW Annual Survey

Earnings. Participants who completed an annual review had an average increase in earnings of almost 7 percent, a statistically significant increase in earnings (Table 65). Those who did not complete an annual review had no statistically significant change in earnings.

Table 65: Change in Earnings

Baseline vs. 12 month	N [^]	Baseline	12 month	Difference	Percent Change
Completed Annual Review	696	\$18,911	\$20,192	\$1,281	6.8% *
No Annual Review	225	\$18,802	\$19,208	\$407	2.2%

* difference between baseline and 12 month is statistically significant at the 5% level (Sign Test);

[^]excludes missing responses; Source: SWSW Annual Survey

VI. CONCLUSION

The Stay Well, Stay Working program was flexible and responsive to the diverse needs of program participants. Overall, the program was a success and participants with a variety of health, behavioral health, and employment related issues were able to access needed services, achieve progress on their wellness and employment goals, and maintain stability and independence. A strength of the model is that the navigators are not affiliated with any particular service system; rather, they remain neutral advocates for the participants to enhance access to and understanding of all three systems (mental health, primary care and employment support).

The goals of the Minnesota's Stay Well, Stay Working Demonstration program were to:

1. Create a comprehensive and coordinated set of health care, behavioral health, and employment based supports for employed individuals with serious mental illness.
2. Determine how access to and utilization of these services and supports influences the progression of potentially disabling conditions.
3. Delay a person with serious mental illness from becoming disabled and no longer able to work.

This final report provides evidence that the SWSW program was successful at achieving each of these goals. Through the navigation component and the SWSW provider network, the Demonstration was able to create a coordinated set of health, behavioral health and employment supports for individuals enrolled in the program. Individuals in the intervention had consistent health insurance coverage, a personal navigator to assist them in accessing needed health and employment support services, and therefore had significant increases in utilization during program implementation.

The outcomes of personal navigation and increased access to and utilization of needed health and employment services include:

- Fewer applications to SSDI
- Improved functioning, reductions in limitations in ADLs/IADLs
- Improved mental health status
- Higher earnings and greater job stability
- Greater connection to a regular medical provider or clinic for routine care and preventative services
- Lower rates of medical debt

- Less likely to delay or skip needed care because of cost
- Better quality of life

Findings from this Demonstration also underscore the interconnectedness of health, mental health, and employment stability. Individuals with mental illness at-risk of going onto SSDI demonstrate a strong motivation to work and view employment as a positive strategy for managing their mental health condition and maintaining stability and independence. Employment, therefore, should be acknowledged as a protective factor and incorporated into the treatment plans across various service sectors (e.g., mental health, vocational rehabilitation services).

The low rate of employment among consumers of mental health services reflects a tremendous loss of productivity and potential for these individuals personally and for the economy. In Minnesota, approximately one million individuals experience a diagnosable mental illness in a given year. Due to inadequate health insurance coverage, many individuals with mental illness have poor access to needed prescription medications, and health and mental health services. As a result, many are forced to leave their jobs and seek public assistance when their impairment escalates to the point they can no longer work. In addition, without access to affordable health care coverage, these individuals can be in the position of having to choose between working and qualifying for public assistance, which is often the only affordable way for them to access health care. Findings from the Stay Well, Stay Working Demonstration provide insight into the importance of better coordination and integration of health and employment support services to address the needs of individuals with serious mental illness at risk of becoming disabled.

VII. APPENDICES

A. Demographic Information for SWSW Participants

This section presents demographic characteristics for the 1,583 SWSW participants with at least one year of active participation.

Table A-1: Demographic Information

Characteristic	Intervention N=1,285	Control N=298	Total N=1,583
Gender			
Female	62%	62%	62%
Male	38%	37%	38%
Missing	0%	0%	0%
Age			
Over 35	61%	56%	60%
Under 35	39%	44%	40%
Race			
White	84%	81%	83%
Black	10%	11%	10%
American Indian or Alaska Native	2%	4%	2%
Asian	1%	1%	1%
Pacific Islander	0%	1%	0%
Other	2%	1%	2%
Missing	1%	1%	1%
Marital Status			
Never married	58%	58%	58%
Divorced	27%	25%	26%
Now married	9%	8%	9%
Separated	2%	5%	3%
Widowed	1%	1%	1%
Missing	3%	2%	3%
Education			
8th grade or less	0%	0%	0%
Some high school	8%	9%	8%
High school graduate	42%	45%	43%
Some college or 2 year degree	30%	28%	29%
4-year college graduate	13%	12%	13%
More than 4-year	4%	4%	4%
Missing	3%	3%	3%

Characteristic	Intervention N=1,285	Control N=298	Total N=1,583
Housing			
Rents	64%	66%	65%
Owns	16%	14%	15%
Other	18%	15%	18%
Missing	2%	5%	2%
Average Monthly Income	\$1,591	\$1,520	\$1,578
Average GAF Score	57	56	57
Percentage Living in North	12%	21%	14%

Source: DMIE Central Database

Table A-2: Primary Diagnosis

DSM IV Category	Intervention		Control		Grand Total N	Total Percent
	N	Percent	N	Percent		
Depressive Disorders	674	52%	155	52%	829	52%
Anxiety Disorders	235	18%	54	18%	289	18%
Bipolar Disorders	188	15%	43	14%	231	15%
Adjustment Disorders	56	4%	14	5%	70	4%
Substance Disorders	37	3%	7	2%	44	3%
Attention Deficit Disorders	30	2%	10	3%	40	3%
Schizophrenia & other Psychotic Disorders	17	1%	5	2%	22	1%
Other	48	4%	10	3%	58	4%
Grand Total	1,285	100%*	298	100%*	1,583	100%

Source: DMIE Central Database

* Percentages may not equal to 100% due to rounding.

Table A-3: Secondary Diagnosis

DSM IV Category	Intervention		Control		Grand Total N	Total Percent
	N	Percent	N	Percent		
Depressive Disorders	137	11%	26	9%	163	10%
Anxiety Disorders	345	27%	74	25%	419	26%
Bipolar Disorders	13	1%	1	0%	14	1%
Adjustment Disorders	21	2%	5	2%	26	2%
Substance Disorders	185	14%	47	16%	232	15%
Attention Deficit Disorders	44	3%	12	4%	56	4%
Schizophrenia & other Psychotic Disorders	3	0%	1	0%	4	0%
Other	109	9%	23	8%	132	8%
None	428	33%	109	37%	537	34%
Grand Total	1,285	100%	298	100%*	1,583	100%

Source: DMIE Central Database

* Percentages may not equal to 100% due to rounding.

Table A-4: Personality Disorders

Personality Disorders	Intervention		Control		Grand Total N	Total Percent
	N	Percent	N	Percent		
Personality Disorder NOS	32	2%	5	2%	37	2%
Borderline Personality Disorder	23	2%	10	3%	33	2%
Avoidant Personality Disorder	15	1%	2	1%	17	1%
Antisocial Personality Disorder	7	1%	4	1%	11	1%
Dependent Personality Disorder	8	1%	2	1%	10	1%
Paranoid Personality Disorder	3	0%	1	0%	4	0%
Schizoid Personality Disorder	4	0%	1	0%	5	0%
Obsessive-Compulsive Personality Disorder	3	0%	1	0%	4	0%
Schizotypal Personality Disorder	3	0%	0	0%	3	0%
Narcissistic Personality Disorder	1	0%	0	0%	1	0%
Other Codes	440	34%	89	30%	529	33%
None	746	58%	183	61%	929	59%
Grand Total	1,285	100%*	298	100%*	1,583	100%*

Source: DMIE Central Database

* Percentages may not equal to 100% due to rounding.

B. Characteristics of Social Security Disability Applicants

Table B-1: Region of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention				Control			
	SSDI		Total		SSDI		Total	
	N	%	N	%	N	%	N	%
Twin Cities	43	86%	1023	87%	25	71%	203	78%
Northeast	7	14%	148	13%	10	29%	58	22%
Grand Total	50	100%	1171	100%	35	100%	261	100%

Source: SWSW Annual Survey and DMIE Central Database

Table B-2: Primary Diagnosis of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention				Control			
	SSDI		Total		SSDI		Total	
	N	%	N	%	N	%	N	%
Depressive Disorders	30	60%	614	52%	21	60%	135	52%
Anxiety Disorders	5	10%	213	18%	3	8%	48	18%
Bipolar Disorders	10	20%	176	15%	8	23%	41	16%
Adjustment Disorders	3	6%	52	5%	2	6%	13	5%
Substance Disorders	0	0%	32	3%	0	0%	4	2%
Attention Deficit Disorders	0	0%	28	2%	0	0%	6	2%
Schizophrenia & other Psychotic Disorders	2	4%	15	1%	1	3%	5	2%
Other	0	0%	43	4%	0	0%	9	3%
Grand Total	50	100%	1173	100%	35	100%	261	100%

Source: SWSW Annual Survey and DMIE Central Database

Table B-3: Age of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention				Control			
	SSDI		Total		SSDI		Total	
	N	%	N	%	N	%	N	%
Less than 30	7	14%	263	22%	4	11%	65	25%
30 to 39	10	20%	277	24%	6	17%	63	24%
40 to 49	15	30%	294	25%	15	43%	66	25%
50 to 59	16	32%	305	26%	10	29%	58	22%
60 to 64	2	4%	34	3%	0	0%	9	4%
Grand Total	50	100%	1173	100%	35	100%	261	100%

Source: SWSW Annual Survey and DMIE Central Database

Table B-4: GAF Score of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention				Control			
	SSDI		Total		SSDI		Total	
	N	%	N	%	N	%	N	%
Less than 30	0	0%	1	0%	2	6%	3	1%
30 to 39	2	4%	11	1%	1	3%	4	1%
40 to 49	7	14%	108	9%	13	37%	39	15%
50 to 59	33	66%	576	49%	12	34%	109	42%
60 to 69	6	12%	390	33%	7	20%	88	34%
More than 70	2	4%	87	8%	0	0%	18	7%
Grand Total	50	100%	1173	100%	35	100%	261	100%

Source: SWSW Annual Survey and DMIE Central Database

Table B-5: Average Number of ADLs of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1173)	SSDI (N=35)	Total (N=261)
Number of ADLs at Baseline	1.62	0.97	1.63	1.09
Number of ADLs after 12 months	1.64	0.82	1.94	1.11

Source: SWSW Annual Survey and DMIE Central Database

Table B-6: Average Number of IADLs of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1173)	SSDI (N=35)	Total (N=261)
Number of IADLs at Baseline	2.36	1.31	2.60	1.56
Number of IADLs after 12 months	2.56	1.19	2.69	1.38

Source: SWSW Annual Survey and DMIE Central Database

Table B-7: Average SF-12 Physical Component Score (PCS) of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1037)	SSDI (N=35)	Total (N=239)
PCS at Baseline	43.89	48.01	40.30	48.51
PCS after 12 months	39.14	47.98	40.94	48.11

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses

Table B-8: Average SF-12 Mental Component Score (MCS) of Participants Who Applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1037)	SSDI (N=35)	Total (N=239)
MCS at Baseline	32.48	35.42	33.62	34.52
MCS after 12 months	34.22	39.48	37.21	37.65

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses

Table B-9: Average Work Motivation of Participants Who applied for SSDI in First 12 months of SWSW

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1149)	SSDI (N=35)	Total (N=255)
Positive Feelings at Baseline	96%	96%	92%	95%
Positive Feelings after 12 months	94%	97%	92%	96%

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1150)	SSDI (N=35)	Total (N=254)
Negative Feelings at Baseline	71%	64%	67%	65%
Negative Feelings after 12 months	64%	63%	74%	63%

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1147)	SSDI (N=35)	Total (N=251)
Goals at Baseline	98%	96%	98%	97%
Goals after 12 months	95%	98%	96%	96%

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses

Intervention vs. Control	Intervention		Control	
	SSDI (N=50)	Total (N=1076)	SSDI (N=35)	Total (N=232)
Future Plans at Baseline	96%	98%	89%	97%
Future Plans after 12 months	79%	97%	86%	96%

Source: SWSW Annual Survey and DMIE Central Database; excludes missing responses