Interim Report on the Demonstration To Maintain Independence and Employment

April 2009

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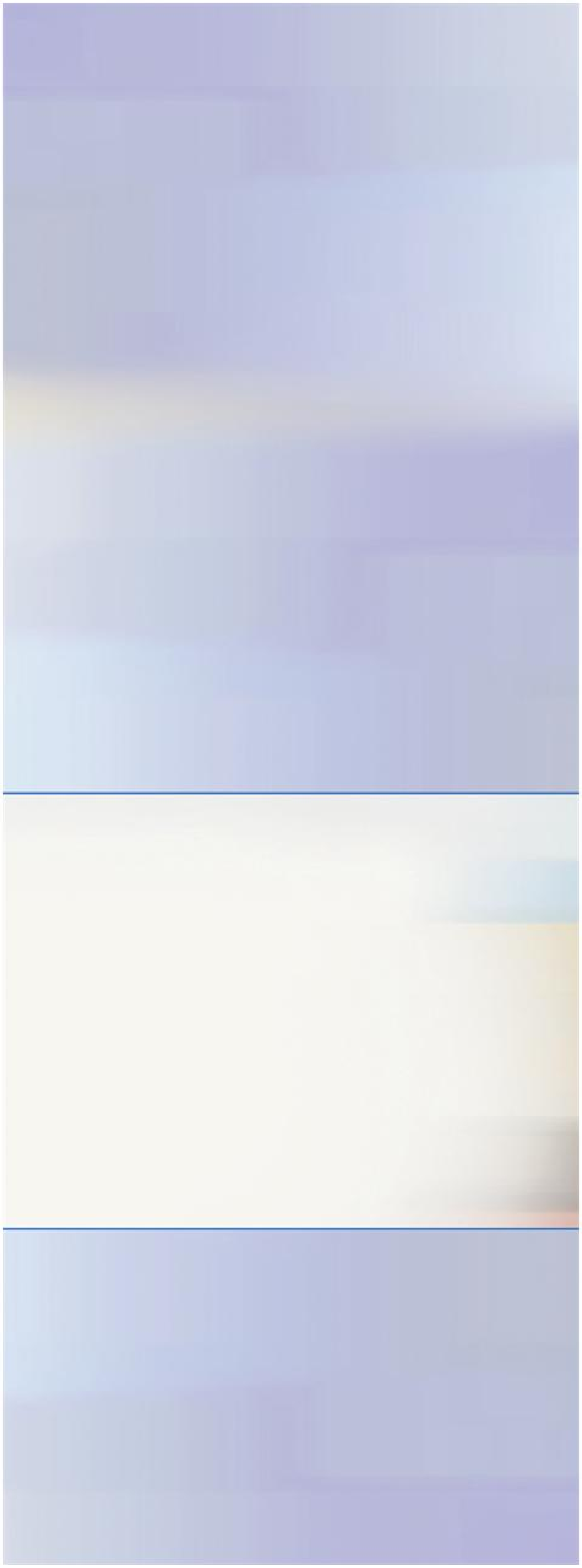
Policy Research, Inc.



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The authors are responsible for the information included in this report. All conclusions and views expressed are those of the authors and do not represent the views of any state or federal agency.

CONTENTS

Chapter **Page**

Chapter **Page**

Chapter **Page**

TABLES

Table **Page**

Table **Page**

Table **Page**

FIGURES

Figure **Page**

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EXECUTIVE SUMMARY

Many working adults with physical and mental impairments do not have adequate access to the health and employment services that could prevent their impairment from becoming a disability. With better access to such services, these individuals may be able to stay employed, maintain or improve their health, and avoid becoming dependent on federal disability benefits. To help American workers with potentially disabling conditions to achieve these goals, Congress authorized the Demonstration to Maintain Independence and Employment (DMIE) under the Ticket to Work and Work Incentives Improvement Act of 1999. The DMIE program provides funds to states to develop, implement, and evaluate interventions for working adults with potentially disabling conditions, such as diabetes, HIV, or mental illness.

This report is an interim assessment of the national DMIE evaluation. It integrates quantitative and qualitative data assembled from multiple sources, including information provided by the state evaluation teams, and presents a summary of the enrollment and implementation experiences of the state DMIE projects through December 2008. The next report, tentatively scheduled for completion in the spring of 2010, will include the results of an analysis of whether the DMIE program improved outcomes for individuals participating in the states' programs, a comprehensive evaluation of the implementation of the DMIE, and a summary of the states' phase-down activities.

DMIE OBJECTIVES

The DMIE initiative is important because it embodies three key Congressional objectives. First, it encourages states to provide health care coverage and employment related services to workers with physical and mental impairments *before* they become so disabled that they can no longer work. The DMIE aims to make accessible the services and supports that will prevent or delay an impairment from becoming the kind of disability that makes work impossible and leads to enrollment in federal income support programs. If individuals with potentially disabling conditions can keep working, they can maintain their independence and productivity.

Second, the DMIE enhances access to both medical care *and* employment supports. The programs implemented by participating states recognize that workers who have potentially disabling conditions need adequate access to both health services that keep them well and job supports that keep them employed. Specifically, states can provide (1) either health coverage equivalent to their standard Medicaid benefit package or "wrap-around" coverage, which supplements employer-sponsored or public insurance and (2) employment supports, such as case management or job coaching.

Third, the DMIE is a *demonstration* program. Congress delayed full scale implementation pending the results of an evaluation to assess the program's impact. The Centers for Medicare & Medicaid Services (CMS), which was given the responsibility for managing the DMIE initiative, developed a multi-faceted approach to the evaluation that will provide strong evidence on the extent to which the program achieves its goals. Specifically, CMS required most states with a DMIE project to conduct independent, state-specific evaluations using randomized trials (generally considered to be the most rigorous evaluation design) and also contracted with Mathematica Policy Research (MPR) to conduct a national evaluation of the DMIE.

OVERVIEW OF STATE DMIE PROGRAMS

State DMIE interventions have two broad components: health-related services and employment assistance. States may provide health coverage that is equivalent to their standard Medicaid benefit package or "wrap-around" coverage for additional services, such as dental or vision care, that are not fully covered under existing public or employer-sponsored plans. States also may offer employment assistance, including case management, vocational rehabilitation services, or job coaching, to encourage people to continue working.

In the 2006 solicitation, CMS approved demonstrations in Kansas, Minnesota, Texas, and Hawaii. In each program, qualifying participants were between 18 and 64 years old at the start of the project, working at least 40 hours per month, and not receiving or applying for federal disability benefits at the time of DMIE enrollment. The state projects focus on different target populations of working adults, which began their enrollment at different times, and enrolled varied numbers of participants:

- Kansas is focusing on workers who are in the state's high-risk insurance pool, which serves people with pre-existing medical conditions; the state program started enrollment in April 2006 and enrolled 500 participants.

- Minnesota is focusing on workers with mental illness participating in public insurance programs in selected counties; the state program began enrollment in January 2007 and enrolled 1,793 participants.

- Texas is focusing workers with severe mental illness or behavioral health conditions occurring with a physical impairment, and who were members of the Harris County Hospital District, a safety net provider in the Houston area. The state program began enrollment in April 2007 and enrolled 1,616 participants.

- Hawaii is focusing on workers with diabetes. The state program started enrollment in April 2008 and enrolled 190 participants.

In addition, an earlier DMIE program, which was approved in 2002 under a prior solicitation, was implemented in the District of Columbia and focused on workers with HIV/AIDS. Unlike the other state programs, the District's program did not use random assignment and ended on December 31, 2008. The District began enrollment in September 2002, with a maximum of 420 individuals enrolled at any one time.

Recruitment of DMIE program participants in the four states ended on September 30, 2008. This enrollment cutoff date ensured that all participants would be enrolled in the DMIE programs for at least one year because the authorizing legislation specified that no DMIE program services could be provided after September 30, 2009. The state evaluations will be completed within the following year; the national evaluation will conclude in May 2011.

OVERVIEW OF DMIE PARTICIPANTS

Because the state DMIE programs differ in their target populations, DMIE participants as a group vary widely with respect to their demographic, health, and employment characteristics. For example, the DMIE participants in Kansas have a variety of diagnostic conditions, reflecting the diverse medical conditions of individuals in the state's high-risk insurance pool; in Minnesota and Texas, DMIE participants have mental illnesses or physical conditions occurring with mental illness; in Hawaii, all DMIE participants have diabetes; and in the District of Columbia, participants have HIV/AIDS. Overall, the mix of potentially disabling conditions of the entire group of DMIE participants reflects the wide differences in the states' target populations and recruitment strategies.

From a national perspective, the group of DMIE participants varies with respect to age, race, education, marital status, and self-reported physical and mental health. The majority of participants in the DMIE programs are between 35 and 54 years old, although there is a greater concentration of older workers (above age 55) in Kansas and younger workers (under age 35) in Minnesota. The large majority of participants in the Kansas and Minnesota programs were white, while substantial numbers of participants in the Texas and Hawaii programs were African American or Asian, respectively. The educational attainment of DMIE participants is generally high across all programs, although Kansas and Hawaii have a higher share of college graduates than Minnesota and Texas. Approximately half of DMIE participants in the Kansas and Hawaii programs were married at the time of enrollment, while most participants in the Minnesota and Texas programs were not. Although a wide range of physical and mental health status was reported, all four states had a substantial number of persons who reported having fair or poor health status.

DMIE participants were employed in a wide range of industries when they enrolled, working as lab technicians, teachers, nurses, or teacher or nursing aides, and in various trades, transportation settings, utility companies, and the hospitality industry. Overall, a majority of DMIE participants were working at least half time in each program; many were working full time. They also had a wide range of personal earnings in the year before their enrollment. In Texas and Minnesota, a majority of participants had earnings less than $20,000; in Hawaii most had earnings greater than $30,000. In Kansas, many participants had self-employment income.

INTERIM REPORT FINDINGS

Overall, states were successful in recruiting individuals to their DMIE programs. Total baseline enrollment in the DMIE as of September 2008 was 4,099 participants across the four states. Three of the four states that used random assignment surpassed their enrollment targets, signaling that the assessment of the impact of the national DMIE (to be covered in a future report) will be based on strong evidence. Analysis of the quantitative and qualitative data collected to date leads to the following conclusions:

The DMIE program can be implemented in a wide range of settings to serve different target populations. One important feature of the DMIE initiative is the flexibility for states to design and customize benefits to meet the needs of different target populations with a variety of potentially disabling conditions. For example, Minnesota targeted its program and services for persons with mental illness and required that each treatment group member conduct an initial assessment with a wellness navigator. Kansas offered enhanced benefits and premium subsidies to address unmet needs of enrollees in the state's high-risk insurance pool. Texas offered health care services, employment assistance, and case management to uninsured members of the Harris County Hospital District. Hawaii provided life coaching and pharmacist counseling as part of its intervention to help with the management of diabetes. The diversity in state programs strengthens the evaluation, because we will be able to evaluate the impact of program interventions across different settings and for different groups.

Focusing the DMIE program on eligible workers already covered under an existing public health program provided an effective means for identifying individuals likely to benefit from enhanced health services and employment supports. One of the initial challenges for states was identifying an appropriate target population of workers with potentially disabling conditions who could be contacted with reasonable efficiency. States that focused on workers already enrolled in existing health programs (such as a high-risk insurance pool or a county-based health insurance program) were able to obtain the administrative data and contact information that supported efficient outreach. Furthermore, the additional services and supports provided through the DMIE could strategically extend benefits already available in the existing program and use existing provider networks. The program that relied on outreach to workers through multiple employers had more difficulty with identifying and recruiting candidates.

Recruitment in each DMIE state required more than 12 months to complete because of various challenges that hindered rapid enrollment. All four states using random assignment for their evaluation had to modify and extend recruitment procedures in ways not anticipated at the start of the project. Some key challenges that hindered enrollment included: (1) developing the operational procedures for identifying individuals potentially interested in participating in the project, (2) poor contact information for potential participants, (3) lack of response to direct mail outreach efforts, (4) obtaining approval from institutional review boards (IRBs) for evaluation protocols and participant consent forms, and (5) screening applicants and verifying employment information. Each step required more time and effort than originally anticipated. All four states changed or adapted their initial recruitment strategy to increase the enrollment of DMIE participants.

Random assignment worked well in all four DMIE states to generate a similar distribution of baseline characteristics between the treatment group and control group. This key finding reflects the successful application of methods to generate two groups with similar characteristics and is a promising start for conducting a rigorous national evaluation of program impacts on health status, employment, and use of federal disability benefits.

NEXT STEPS

In the spring of 2010, MPR will prepare and submit to CMS a report with initial estimates of DMIE program impacts on health, earnings, and use of federal disability benefits. The report will examine whether the DMIE intervention led to an improvement in participant outcomes in the four states with random assignment. Specifically, we will compare outcomes for the groups of individuals who were offered an expanded set of services through the DMIE project with groups of similar individuals who had access to the services normally available. We also will include a detailed assessment of phase-down activities based on a final site visit to be conducted with each state in the later summer or fall of 2009.

MPR will continue to integrate and analyze all data submitted by the states through 2010 with information on participant earnings, employment, and enrollment in federal disability programs gathered from federal databases. A final report on the national evaluation of the DMIE will be submitted to CMS in spring of 2011.

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CHAPTER I

INTRODUCTION

A. POLICY CONTEXT

Many working adults with physical and mental impairments do not have access to adequate health care services and employment supports that could prevent their impairment from becoming a disability. With enhanced medical care and employment supports, these working adults could experience improved health, sustained employment, and greater independence from federal disability benefits. In response, Congress authorized the Demonstration to Maintain Independence and Employment (DMIE) under the Ticket to Work and Work Incentives Improvement Act of 1999, which awards funds to states to develop, implement, and evaluate interventions for working adults with potentially disabling conditions, such as diabetes, HIV, or mental illness.

The DMIE program encourages states to provide health care coverage and employment related services to workers with physical and mental impairments. States have the option of providing either health coverage equivalent to their standard Medicaid benefit package or “wrap-around” coverage, which supplements employer-sponsored or public insurance. States can also provide employment support and case management services to help people maintain their employment. The DMIE program provides a unique opportunity to examine the impact of early intervention on employment and health outcomes *before* a disability occurs. More generally, the DMIE seeks to improve our understanding of the links between comprehensive health insurance and employment for workers with disabling conditions.

B. STATES WITH DMIE PROGRAMS

Each state DMIE intervention has two broad components: health-related services and employment assistance. First, states may provide health coverage that is equivalent to their standard Medicaid benefit package or “wrap-around” coverage for additional services, such as dental or vision care, that are not fully covered under existing public or employer-sponsored plans. Second, states also may offer employment assistance, including case management and vocational rehabilitation services, to encourage people to continue working.

Under a solicitation announced in 2006, the Centers for Medicare & Medicaid Services (CMS) under the U.S. Department of Health and Human Services approved demonstrations in Kansas, Minnesota, Texas, and Hawaii. Each state has designed its own intervention for different target populations of working adults. However, several broad eligibility requirements are consistent across the four DMIE states. For example, qualifying participants must be between 18 and 64 years old, working at least 40 hours per month, and not currently receiving or applying for federal disability benefits at the time of DMIE enrollment.

The demonstration is scheduled to end on September 30, 2009, by which time all DMIE programs will stop providing intervention services. Each state project began enrollment at different times:

- Kansas started enrollment in April 2006 with a target population of workers already in the state's high-risk insurance pool, and reported an enrollment of 500 participants at baseline.

- Minnesota began enrollment in January 2007 with a focus on workers with mental illness who were participating in public insurance programs. Minnesota had an enrollment of 1,793 participants at baseline.

- Texas started enrollment in April 2007 with a target population of workers with severe mental illness or behavioral health conditions along with a physical impairment who were enrolled in the Harris County Hospital District, a safety net provider in the Houston area. Texas had an enrollment of 1,616 participants at baseline.

- Hawaii started enrollment in April 2008 with a focus on workers with diabetes. The state reported an enrollment of 190 participants at baseline.

- The District of Columbia, which was approved under a prior solicitation, began enrollment in September 2002 with a target population of workers with HIV/AIDS. The program had an enrollment cap of 420 people, but did not use random assignment.[1]

Finally, each state also is evaluating its own program in conjunction with a national evaluation. Four state programs are using random assignment in their evaluation to test the impact of the DMIE intervention on employment and federal disability outcomes. For the

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[1] Under a prior solicitation, CMS also awarded a DMIE to the District of Columbia and to Mississippi. Information on the District's program is included in this report because the program was in operation through 2008. We do not include information on Mississippi's program because it ended in 2007; a description can be found elsewhere (Haber et al. 2007).

national evaluation, the use of standard data elements allows for cross-state comparisons of baseline characteristics. These findings can offer lessons to other states about program implementation and impacts if Congress decides to expand the DMIE program.

C. GOALS OF NATIONAL EVALUATION

The primary goal of the national evaluation is to determine whether a program of medical and employment assistance can delay or prevent the loss of employment due to a potentially disabling mental or physical impairment. Specific outcomes of interest to CMS include employment, earnings, and independence from federal disability benefits. A secondary goal is to assess whether the DMIE program improves participants' access to health services and functional status. If successful, the DMIE intervention will result in increased participant employment and earnings as well as a reduction in the use of federal disability benefits.

Congress gave CMS the responsibility for overseeing this evaluation. In turn, the Disabled and Elderly Health Programs Group (DEHPG) at CMS developed solicitations for state Medicaid agencies to submit DMIE applications that required them, among other activities, to contract with research organizations to conduct independent state-specific evaluations. DEHPG also awarded a contract to Mathematica Policy Research (MPR) to conduct a national evaluation of the program. This report is an interim assessment of the national DMIE evaluation and integrates quantitative and qualitative data assembled from multiple sources, including information provided by the state evaluation teams.

One of the most important decisions that DEHPG made during the development of its solicitations was to require states to use strong research designs for their state-specific evaluations. The gold standard for evaluation research is the randomized trial design, in which a target population is recruited and then randomly assigned to two different groups. One group continues to receive existing services while the other group receives the intervention in addition to existing services. The four states that responded to DEHPG's 2006 solicitation all agreed to use this design for their own evaluations. Consequently, the final report of the national evaluation, which will synthesize findings from states and integrate additional information drawn from federal data, promises to provide CMS, Congress, and other stakeholders with strong evidence regarding the impact of the DMIE.

Our early experience in conducting the national evaluation has already led to one clear conclusion: Implementing a demonstration project with a randomized design—and allowing the demonstration to operate for a sufficient period to assess effects—requires a substantial period of time. In the case of the DMIE, most states needed about two years to plan and begin the implementation of their programs and evaluation. This period of time allowed each state to develop procedures to obtain informed consent, assemble methods for collecting data from surveys and administrative files, determine effective strategies for recruiting participants, establish a process for tracking participants through multiple rounds of survey data, and begin participant recruitment and program operations. Between 12 and 18 months were then needed for each state to recruit a sufficient number of participants and ensure the program was fully implemented with enough time for the intended effects to be detectable. Additional time will be needed to analyze the data on the program's impact.

D. PURPOSE OF THE REPORT

The purpose of this interim report is to:

- Provide CMS with a summary of the target populations and implementation processes in the four DMIE states and the District of Columbia
- Document how the interventions are being delivered to date in the four states, based on qualitative and quantitative data sources
- Describe the baseline characteristics of all DMIE participants by state, and separately for those in the treatment group and control group
- Identify lessons learned from program implementation experiences to date
- Describe each state's plans for phasing down its DMIE program

This report provides CMS and policymakers with an update on the early implementation of the DMIE, baseline characteristics of all participants, and a summary of next steps. This is the second in a series of three reports. The first report (Gilman et al. 2008) provided an early update on the status of the DMIE programs as enrollment was in progress, but had not yet been completed. The third report, tentatively scheduled for completion in the spring of 2010, will include the results of an analysis of whether the DMIE program improved outcomes for individuals participating in the states' programs, a comprehensive evaluation of the implementation of the DMIE, and a summary of the states' phase-down activities.

Both quantitative and qualitative data sources are used in the national evaluation to address the objectives of this report. The four DMIE states provided CMS with a uniform data set (UDS) that included standard elements of baseline characteristics obtained through participant surveys conducted at the time of enrollment and other administrative data sources. Under a data-sharing agreement between CMS and the Social Security Administration, MPR obtained information on federal disability program participation and the annual earnings of DMIE participants based on SSA administrative data. The integration of state and federal data sources provides the most accurate and comprehensive information on the annual earnings and SSA beneficiary history of all DMIE participants.

In 2007 and 2008, MPR also obtained qualitative data from monthly conference calls with each state, as well as quarterly reports that were submitted to CMS by all DMIE program directors and evaluation staff. The goal of these reports was to provide additional information about quarterly enrollment, program administration changes, and other issues that arose during the implementation of the DMIE program. A complete description of the data sources and analytic methods used in this interim report is included in Chapter III.

E. OVERVIEW OF THE REPORT

Chapters II and III provide an overview of the state programs and the data sources used in this report. Chapter II describes the conceptual framework that MPR used to illustrate the relationships among participant characteristics and short-term and long-term outcomes, and provides an overview of each state's program design and implementation status as of December 2008. Chapter III discusses the data sources and methods used to conduct the analyses for this report.

Chapters IV through VIII provide an in-depth analysis for each of the four state DMIE programs. Each state-specific chapter provides information about participant characteristics at enrollment, program expenditures, and baseline measures of earnings and prior receipt of federal disability benefits. Chapter IV focuses on the Kansas DMIE program. Chapter V presents early findings from the Minnesota DMIE program. Chapter VI covers the Texas DMIE "Working Well" program. Chapter VII presents early findings from the Hawaii DMIE "Live Healthy, Work Well" program. Chapter VIII provides a snapshot analysis of expenditures and characteristics from the District of Columbia's DMIE "Ticket" program, which was approved under a prior solicitation.

We conclude with a summary of findings across states and a discussion of next steps in Chapters IX and X. Chapter IX includes a summary of findings on DMIE participant characteristics and early lessons learned across the four states as well as a discussion of implications for the national evaluation. Chapter X draws several broad conclusions from a national perspective. We then describe next steps for the 2010 report.

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CHAPTER II

OVERVIEW OF STATE DMIE PROGRAMS

A. RATIONALE FOR THE DEMONSTRATION

Most working-age Americans obtain their health care coverage through an employer-sponsored insurance plan. Eighty-one percent of nondisabled Americans are covered by such plans, compared to only 55 percent of those with disabling impairments (Steinmetz 2006). This disparity is partly attributed to the risk of higher health care costs that come with disabling conditions. Employers who provide health insurance may reduce their liability for these costs by offering plans with limited benefits, higher deductibles, and a greater cost-sharing burden on workers. Small employers may decide not to provide health insurance at all. As a result, people with potentially disabling conditions may have difficulty finding affordable coverage through employer-sponsored health insurance.

Public insurance coverage is also available through programs such as Medicaid or Medicare. But workers with a potentially disabling condition have to meet the eligibility criteria of the Social Security Administration (SSA), which determines whether an applicant has a certified disability. These criteria include the inability to work in “substantial gainful activity” (SGA) because of a health condition that is expected to last at least 12 months or result in death. Therefore, Medicare or Medicaid coverage may not be an option until a potentially disabling condition becomes severe enough to impede work.

Working-age adults with potentially disabling conditions who want to work but need health care services face a “Catch-22” scenario: pre-existing health conditions make it difficult to find comprehensive, affordable private health insurance, yet public health insurance becomes available only when a health condition becomes a work-limiting disability. The result is a steady deterioration in health that could have been prevented or forestalled, a premature exit from the labor market, and increased reliance on federal disability benefits.

Moreover, once a person starts to receive disability benefits, he or she is likely to depend on them for a long time. For example, the average length of time receiving benefits is 9.3 years for disabled SSDI beneficiaries (Rupp and Bell 2003). Younger participants have longer SSDI spells (12.5 years for people age 35-49) compared with older adults (6.5 years for people age 50 to 61). Therefore, preventing even a small percentage of individuals from enrolling in federal disability programs can have a substantial impact over time.

Policymakers have begun to address this problem by expanding access to health care services for people with disabilities. One example is the Medicaid Buy-In program, which allows workers who meet SSA's disability criteria to "buy into" state Medicaid programs by paying a modest premium. Most Buy-In participants are SSDI beneficiaries who are working. SSA recently funded a five-year Accelerated Benefits (AB) Demonstration to test whether earlier access to health benefits improves health and return-to-work outcomes for SSDI beneficiaries who have no medical coverage when they first become entitled to cash benefits (Wittenburg et al. 2008). However, the AB demonstration focuses on people after they have a certified disability.

The DMIE differs from the Buy-In program and the AB Demonstration by providing both health care coverage and employment assistance to workers *before* their condition gets to the point where they are qualified to receive federal disability benefits. Hence, the DMIE provides a unique opportunity to examine the impact of an early intervention on employment and other outcomes *before* a disability occurs.

B. DESCRIPTION OF STATE DMIE PROGRAMS

Each DMIE program incorporates some basic features, such as a study population composed of workers with potentially disabling conditions and the provision of medical assistance and other supports that are designed to forestall the onset of a severe disability. Each intervention has two core components: enhanced health care coverage, such as dental and vision benefits, wellness services, and therapy; and employment-related support, such as case management, vocational rehabilitation services, or a "navigator" who assists with maintaining employment and identifying new job opportunities.

Although certain features are consistent across programs, each DMIE program is tailored to the needs and existing health care systems in each state. For example, each state's DMIE program targets a different subgroup of people with conditions ranging from mental illness and HIV to multiple pre-existing conditions. States vary in the type and amount of medical assistance and other supports that are made available to participants. States also vary in the size of their target populations, depending in part on the program's ability to recruit participants.

Tables II.1 and II.2 summarize the five active demonstration programs. Table II.1 summarizes each DMIE state's intervention, target population, and enrollment targets. The District of Columbia, which did not have random assignment, quickly reached its enrollment cap for treatment group members, but since then has experienced a slight decline in the number of participants because of disenrollment. A more detailed explanation can be found in Chapter X. The other four states expanded their original recruitment activities or changed their intervention design to strengthen their ability to reach enrollment targets. Table II.2 shows the variation in these approaches, and also summarizes the implementation status of each program as of December 31, 2008. Under current legislation, the DMIE initiative is scheduled to end on September 30, 2009.

Table II.1. Description of State DMIE Target Populations and Interventions

State (Start Date)	Target Population	Intervention
Demonstrations with Randomly Assigned Control Group		
Kansas (April 2006)	Working adults (age 18-64) enrolled in the Kansas Health Insurance Association (KHIA) high-risk insurance pool. (T=200, C=200)	Includes coverage of services that augment the existing KHIA high-risk pool benefits. It offers three main advantages relative to standard high-risk pool benefits: (1) premium subsidies, the elimination of deductibles (up to $10,000 per year), and lower co-payments for existing high-risk pool benefits, with an estimated minimum savings of $550 per month; (2) enhanced services such as dental coverage and vision; and (3) case management services.
Minnesota (December 2006)	Working adults (age 18-60) with serious mental illness from eight counties. (T=1500, C=500)[a]	Includes financial assistance through premium subsidies, lower co-payments, and elimination of annual spending limits and access to enhanced medical services such as expanded dental coverage, medical transportation, a wellness navigator, and employment support.
Texas (April 2007)	Working adults (age 21–60) enrolled in the Harris County Hospital District medical program for uninsured residents with either severe mental illness or behavioral health diagnoses co-occurring with a physical diagnosis. (T=800, C=625)	Includes elimination of co-payments for prescription drugs and outpatient visits as well as access to an expanded set of services, including: (1) enhanced behavioral, medical, and dental services in addition to those participants could receive through Medicaid; (2) improved access to mental health services; (3) case management; and (4) employment-related supports.
Hawaii (June 2007)	Working adults (age 18-62) with diabetes living in the city and county of Honolulu. (T=267, C=267)[b]	Includes medication therapy management services provided by pharmacists, individualized life-coaching services, and secondary support services to help address issues related to diabetes management. The uninsured have access to the state's Medicaid plan; participants with employer-based coverage have access to any services not covered by their plan but that are available through Medicaid.
Demonstration without a Control Group		
District of Columbia (September 2002)	Working adults with HIV/AIDS, who have incomes at or below 300 percent of poverty and assets below the Medicare Buy-In resource limit, and are otherwise ineligible for Medicaid. (T=420)[c]	Includes the standard District of Columbia (DC) Medicaid benefit package. The DC program does not provide enhanced medical services or employment-related services. The DC program was implemented before CMS required states to use a randomized control design, and so does not have a control group.

T = treatment group; C = control group. Enrollment figures are for December 2008.

[a] In April 2008, Minnesota reduced its DMIE enrollment targets to T=1,125 and C=375.
[b] In March 2008, Hawaii reduced its DMIE enrollment targets to T=356 and C=178.
[c] The District of Columbia's DMIE program had a point-in-time enrollment cap of 420 participants.

Table II.2. Status of DMIE Program Implementation as of December 2008

State	Implementation Status	Enrollment[a]	% of Target
Demonstrations With Randomly Assigned Control Group			
Kansas	The Kansas DMIE recruited participants using mailings to KHIA members who met the qualifying work and health criteria. KS recruited three cohorts of participants and met their enrollment targets in July 2008. Retention of control group members is a challenge because participants are unable to pay high monthly premiums.	T=225 C=275	T=113% C=138%
Minnesota	The Minnesota DMIE initially relied on mailings to individuals with qualifying diagnoses. To increase enrollment, MN streamlined the application process, encouraged study candidates to refer friends and family who may be eligible, raised the maximum age limit, expanded the program to two additional counties, included members from another state-managed care plan, and adopted a uniform monthly premium of $10 for most treatment group members.	T=1,493 C=300	T=133% C=80%
Texas	The Texas DMIE initially relied on mailings to individuals with qualifying diagnoses, but implemented in-person recruitment at clinics, physician referrals, and pre-verification of employment to increase enrollment. TX also began verifying employment by telephone (with the applicant's approval) to expedite the enrollment process.	T=904 C=712	T=113% C=114%
Hawaii	The Hawaii DMIE initially recruited working individuals with diabetes in a select number of employers; however, this recruitment model did not yield an adequate number of participants. In 2008, HI expanded its recruitment to all working individuals with diabetes residing in the city and county of Honolulu.	T=128 C=62	T=36% C=35%
Demonstration Without a Control Group			
District of Columbia	The DC DMIE reached its enrollment cap in June 2004. After the beginning of 2006, however, enrollment declined because of the new proof of citizenship requirements for Medicaid required by the Deficit Reduction Act (DRA) of 2005. The DC grant was scheduled to end in December 2007, but CMS granted DC a no-cost extension of its program through December 2008.	T=393[b]	T=94%

[a] For each state, counts of enrolled participants include individuals that disenrolled since the start of the the program.

[b] For the District of Columbia, the enrollment count is as of June 30, 2008. Effective July 2008, the District began phasing down operation of its DMIE program. Enrollment in the DMIE program totaled 365 as of September 30, 2008.

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CHAPTER III

CONCEPTUAL FRAMEWORK AND DATA SOURCES

This chapter provides an overview of the conceptual framework and data sources used in this report. It begins with a description of a logic model that illustrates the relationships between participant characteristics, health status, and employment outcomes. We then describe the quantitative data sources that measure these variables and the qualitative sources that were used to provide contextual data on the early implementation experiences of each state's DMIE program. We conclude with a summary of methods and potential limitations.

A. CONCEPTUAL FRAMEWORK

The purpose of the national evaluation is to assess the impact of the DMIE intervention on the employment outcomes and health status of individuals with potentially disabling conditions. We will analyze four DMIE programs and assess their effects on DMIE participants, a population of working adults with physical or mental conditions who could become disabled without early medical assistance. The four states (Kansas, Texas, Minnesota, and Hawaii) approved by CMS under the 2006 solicitation use a randomized control trial for their evaluation design.[1] In each state, program participants are assigned either to a treatment group, which receives a menu of enhanced health benefits and work-related supports, or a control group that does not receive the intervention. Overall, the DMIE evaluation aims to assess whether treatment group participants receiving the DMIE intervention have better outcomes relative to their counterparts in the control group.

In conjunction with CMS personnel, MPR developed a logic model to describe the potential impact of the intervention and illustrate our conceptual framework for the DMIE. Figure III.1 shows how the provision of enhanced health care benefits and employment supports can affect short-term health outcomes, employment outcomes, and reliance on

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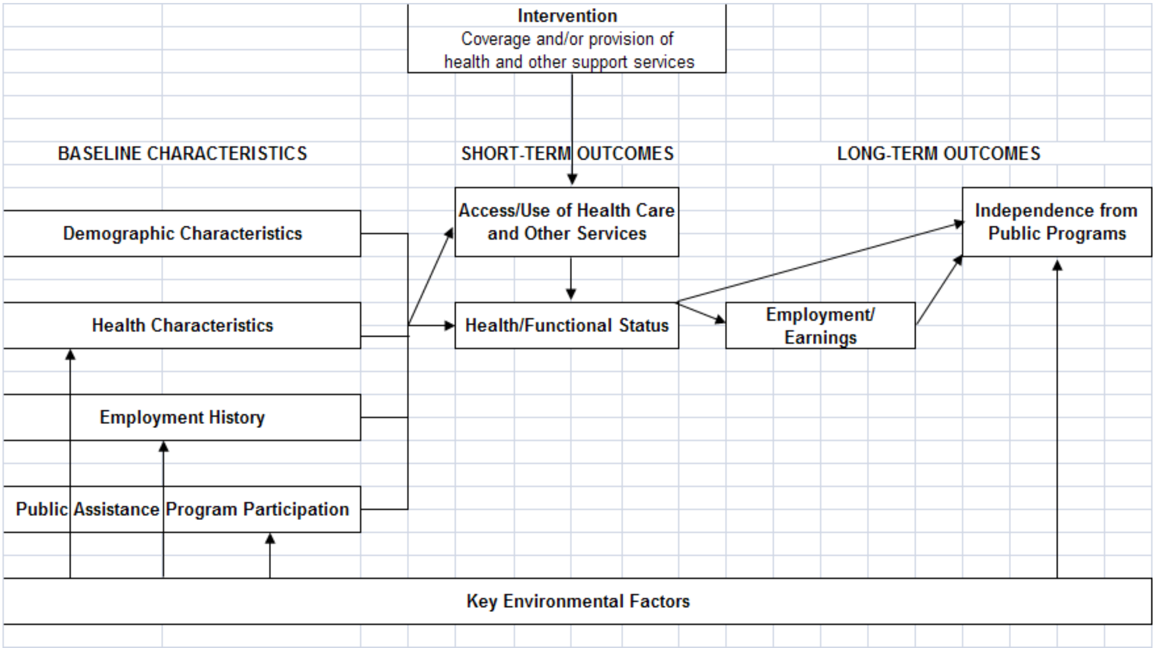
[1] The District of Columbia demonstration, which was approved under an earlier solicitation, did not use random assignment.

public assistance programs. A key question for the DMIE program is whether the intervention has a positive impact on employment and independence from federal disability benefits, which are both long-term outcomes.

Figure III.1. Logic Model for the DMIE



The logic model suggests two additional questions about the DMIE: (1) Does it increase access to and use of health care and other services, and (2) does it improve participants' health and functional status? We hypothesize that the DMIE interventions will have a positive impact on employment outcomes and independence from federal disability programs over time by increasing access to health care and employment-related services, which should contribute to improvements in health and functional status. In turn, better health should enhance long-term outcomes, which we define as improved employment (for example, maintenance of work, increased work hours or earnings) and reduced dependence on federal disability programs such as Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI). Short-term outcomes are hypothesized to occur within two years of the start of the intervention; changes in long-term outcomes may become evident after one or two years of the intervention.

States determine which target populations of workers and potentially disabling conditions to include in the study, as well as the types and amounts of medical assistance and employment supports that will be made available to treatment group members. Each state's unique mix of DMIE participant characteristics, diagnostic conditions, and work experiences (left column in Figure III.1) may influence the magnitude of potential treatment effects. Several environmental factors (bottom of Figure III.1), such as the type of employment available and the strength of the local economy, also affect some baseline characteristics (for example, type of industry) of both treatment group and control group members as well as the long-term outcomes of employment (work hours, earnings) and independence from public assistance programs.

Our analysis of the impact of the DMIE interventions on employment and independence will account for these environmental factors. As described in the next section, each state has provided a uniform data set with the quantitative information that is needed to examine the relationships depicted in the logic model.

B. QUANTITATIVE DATA SOURCES

Multiple data sources are needed to conduct a national evaluation because no single source provides the wide array of measures that reflect participant characteristics, health status, employment outcomes, and independence from federal disability benefits. The information used in this report includes both primary data sources, such as participant survey data, and secondary data sources, such as federal administrative files.

1. Uniform Data Set (UDS)

The purpose of the UDS is to develop a standard set of variables across the DMIE states that will facilitate a national assessment of outcomes and promote high quality data submissions. States are collecting information on the demographic, health, and employment characteristics of treatment and control participants at baseline (time of enrollment) and periodically in subsequent rounds, using both survey instruments and administrative files.[2]

Each state submitted a complete baseline UDS for all DMIE participants between July and November 2008 for analysis. MPR reviewed the completeness of each UDS and verified the accuracy of information with each state evaluator before conducting the analysis of baseline characteristics. The UDS includes the following types of variables, based on data submitted by each participating state:

- ***Baseline Characteristics.*** These measures, obtained through participant survey responses at baseline, and periodically in future rounds of data collection, include demographic variables (age, gender, race), prior access to health care services, and employment characteristics (industry, job type, hours worked). This information will help us to understand who enrolled in each of the state DMIE programs and to make cross-state comparisons of participant characteristics. In addition, we will be able to examine how well random assignment worked in producing a similar distribution of characteristics in the treatment and control groups.

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[2] The District of Columbia started its program in 2002, before CMS modified its DMIE application requirement that a uniform data set be submitted for evaluation. Therefore, the analysis of the District's DMIE program is based on a master eligibility file and quarterly claims data from 2002-2008.

- ***Short-Term Health Outcomes.*** These measures include self-reported health status based on overall physical and mental health scores. In addition, functional status measures are based on indicators of whether or not a participant is having difficulty with activities of daily living (ADLs) such as bathing or dressing, and instrumental activities of daily living (IADLs) such as using the telephone or managing medications. This information will allow us to compare measures of health and functional status between the treatment and control groups.

- ***DMIE Participation Variables.*** The UDS also includes enrollment start and stop dates, group assignment, supplemental fields to indicate reasons for withdrawals, intervention start and stop dates, and baseline survey dates. This information will be useful for tracking attrition for the treatment and control group as well as measuring the duration of exposure to the intervention, which may vary by cohort depending on the month and year when a participant first enrolled.

2. Social Security Administration (SSA) Data on Benefits and Earnings

MPR will add to the UDS by providing aggregate earnings data and a binary indicator of whether or not a participant received SSDI and/or SSI benefits drawn from SSA's administrative data files. States are also collecting personal income data from unemployment insurance (UI) wage records, self-reported family income data, and the number of hours worked, which will be used for comparison with the SSA data.

The Ticket Research File (TRF) is an annually updated file with a 9- to 12-month lag in availability for data cleaning and development. It contains longitudinal data (from January 1994 to December 2007) on SSDI and SSI participation and one-time information on individuals 18 to 64 years of age who received SSDI or SSI benefits at any time between 1996 and 2007. Under a CMS-SSA interagency data use agreement, these individual-level data were culled from various SSA administrative data files and include such items as identifiers, primary disabling condition, SSDI/SSI participation status, and monthly benefit payments.

The TRF provides information for individuals who have received SSDI or SSI benefits between 1996 and 2007, but excludes first-time applicants whose cases have not yet been approved by SSA. An advantage of the TRF is that it will allow us to track future payments of federal disability benefits. Given the DMIE's research focus on preventing or forestalling the use of federal disability benefits, the target population is not likely to have received prior SSA benefits.

The Master Earnings File (MEF) includes annual earnings data (derived from W-2 reports) on nearly all workers in the United States for each calendar year from 1951 through 2007. The MEF, which is updated annually, is also subject to a 9- to 12-month lag in availability. It contains longitudinal data on wages subject to Medicare taxes and provides a comprehensive measure of total annual earnings based on income reported to the IRS.[3] MEF data are available for all DMIE participants as long as participants or their employer reported earned income to the IRS.

An advantage of the MEF is that it provides a comprehensive measure of total annual earnings from multiple sources, including self-employment income. Individuals are likely to have some earnings because of the employment requirement for DMIE eligibility, especially if income verification is a necessary precondition for eligibility. However, some wage-based earnings may not be reported in the MEF if participants earn small amounts of cash income from a casual or part-time job, receive in-kind benefits, or did not report their income.

MPR is not permitted to examine individual-level data from the SSA earnings file. Because the MEF is based on tax information from the W-2 form, the file is accessible only under data privacy rules established by the Internal Revenue Service (IRS); the rules restrict access to micro-level records to SSA employees at SSA facilities only. The CMS-SSA interagency data use agreement does not allow direct access to micro-level data, but MPR can obtain aggregated data tables by using variables approved by SSA.

States are also providing quarterly earnings data from the unemployment insurance (UI) database, which excludes self-employment income and federal government salaries. The advantage of including UI data is that it provides us the ability to analyze individual-level differences in personal income on a quarterly basis. However, states with many self-employed participants are likely to have missing UI earnings. (In Kansas, for example, a substantial proportion of the DMIE population is self-employed.) Therefore, for the purpose of assessing long-term outcomes, we will use total earnings from the MEF, which provides a complete and reliable measure of reported earnings.

MPR integrated these multiple data sources after a careful review of data quality and validation checks. First, we reviewed each state's UDS submission for accuracy and identified coding errors or missing data fields, which were confirmed with each state evaluator. Second, we combined the state UDS datasets into a single national DMIE file. Because SSA requires that SSNs be verified before information can be extracted from the TRF or MEF, we submitted an extract from the national DMIE to be run through SSA's enumeration verification system (EVS), which uses Social Security numbers, first and last names, birth dates, and gender. At the end of this process, 99 percent of the 4,099 DMIE

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[3] In this analysis, we used the amount of wages subject to Medicare taxes to represent annual earnings (reported in Box 5 of the W-2 form). Unlike wages subject to Social Security taxes, there is no maximum wage base for Medicare taxes. Medicare wages include any deferred compensation, 401k contributions, or other fringe benefits that are normally excluded from the regular income tax, and therefore should accurately represent an individual's total earnings.

participants across the four states with a treatment and control group had a valid and verified SSN.

C. QUALITATIVE DATA SOURCES

MPR is also conducting a qualitative assessment as part of the national evaluation, drawing from a wide range of data sources. The purpose of the qualitative assessment is threefold: (1) to enhance our understanding of each state's ongoing experiences with DMIE implementation, (2) to identify lessons learned that may be useful for other states, and (3) to provide a broader context for interpreting empirical findings and identify other state-specific factors related to program administration that may influence short- and long-term outcomes. Sources of information for the qualitative assessment are the following:

1. Site Visit Interviews

MPR conducted site visit interviews with state program directors, program administration staff, key stakeholders, and state evaluators for the purpose of gathering detailed information about each state's experiences with program implementation. Initial site visits occurred during the first or second year of each state's DMIE program implementation and provided an early snapshot of experiences as recruitment was in progress. A second site visit will be conducted in late 2009 to track developments after the close of the demonstration on September 30, 2009. We expect to learn about the successes and challenges of implementing the demonstration as well as the results of phase-down activities during these final site visits. Findings based on this information will appear in the 2010 report.

Examples of discussion topics covered during the initial site visits include the strengths and challenges encountered in each program's design (enrollment goals, target population, covered benefits); planning and administration; coordination with project partners and other state agencies; program implementation such as participant outreach, recruitment, and enrollment processes; data collection and reporting; and research evaluation. Other discussion topics on policy or market environment issues unique to each state include cultural differences among participants, and state policy reforms. After each site visit, MPR compiled a written summary and submitted this document to CMS for review.

2. State-Authored Documents

The qualitative assessment also includes documents and reports authored by state evaluation teams, such as the initial evaluation protocols developed for CMS approval. Before CMS approval, MPR reviewed each state's DMIE evaluation protocol and provided comments and technical assistance on the design and data elements to be collected in each state. The evaluation protocols describe the DMIE's goals, research design, target population, and data collection activities. In addition, each state wrote a separate operational protocol describing the development of intervention services and processes used for implementation. Unless specific modifications were made to them for CMS approval, however, the evaluation and operational protocols have not always been updated since the start of the DMIE program.

MPR also reviewed other state-authored publications, including journal articles, interim reports, and policy briefs. The chapters in this report on the Minnesota DMIE program and the District of Columbia program rely on qualitative information presented in reports authored by the state evaluators. The Kansas evaluation team completed a November 2008 journal publication with findings based on a participant survey of high-risk insurance pool members and expects to complete a second manuscript by the fall of 2009. The Texas program is developing a series of policy issue briefs that describe the DMIE program for statewide dissemination.

3. Monthly Teleconference Calls

CMS and MPR both participate in monthly conference calls with state program administrators and evaluators to discuss various issues and updates on the status and progress of the demonstration. Specifically, topics covered during the monthly calls include updates on enrollment and disenrollment, outreach and recruitment activities, service utilization and program expenditures, care coordination, grievances, contracts, changes to the DMIE program, and research and evaluation. These monthly calls help to ensure that CMS is aware of potential changes in demonstration design or operations and learns about challenges encountered and strategies for addressing them. Also, the monthly calls provide a forum for discussion of ongoing activities related to the quantitative evaluation, such as data collection and reporting.

MPR was also able to learn about new developments with the DMIE in discussions with state evaluators during the annual conferences organized by CMS, and in separate conference calls with state evaluators. These state evaluator calls provided a forum for discussing technical issues and publications across states and helped to facilitate the sharing of findings and collaboration between national and state evaluators.

4. Quarterly Reports

Information is also provided in quarterly evaluation reports that each state is required to submit to CMS. The reports are based on a reporting template that MPR designed in mid-2007 to capture changes in various aspects of the programs over time and across states. Specifically, the quarterly reports allow MPR to track—on a quarterly basis and in a standardized format—changes in design, enrollment and disenrollment, outreach and recruitment, health care service use and expenditures, use of employment support services, administration and implementation, data collection and management, evaluation, and environmental issues.

D. METHODS

In this interim report, we conduct a descriptive analysis of the baseline characteristics of DMIE program participants through cross-tabulations among treatment and control group members in each participating state. The purpose of comparing baseline characteristics across the treatment and control groups is to assess how well random assignment worked in producing a similar distribution of characteristics. We also use a comparison of mean values of historical SSA earnings and receipt of federal disability benefits across the treatment and control groups to understand trends before DMIE enrollment.

All of the DMIE states completed their enrollment activities by September 2008. As a result, some participants began receiving the intervention in the middle of 2008. However, to conduct an impact analysis we need at least two data points in time (one occurring after the start of the DMIE intervention) to analyze changes in short-term health status and employment outcomes. Our next report in 2010 will include an assessment of changes in health and employment across the treatment and control groups.[4] Specifically, we will examine changes in the mean value of earnings, hours worked, and health status. A detailed description of the analytic plan for the impact analysis may be found elsewhere (Gimm and Ireys 2006).

This report also provides a synthesis of early lessons learned during the implementation of each state's DMIE program. The qualitative assessment allows us to identify cross-cutting themes that affect each state's experience with program implementation, including successful strategies, challenges, and adaptations to existing strategies to meet program objectives such as attaining enrollment targets.

E. POTENTIAL LIMITATIONS

One important factor that influences our ability to detect an intervention's effect is the frequency of an outcome event. Generally speaking, it is difficult to show that an intervention significantly decreases the occurrence of a rare event. In the data integration process, we found that only 3 percent of DMIE participants had prior SSDI or SSI benefits. This will make it challenging for any DMIE intervention to show that fewer members of the treatment group will enroll in public assistance programs compared with control group members. However, estimating impacts on earnings, a continuous outcome variable, will be much more feasible.

With a longer time horizon, it is more likely that a treatment effect can be observed in the long-term outcomes of the evaluation, such as earnings and the receipt of federal disability benefits. Presumably, as more time passes, a greater percentage of control group members will enroll in SSDI or SSI relative to treatment group members. Stapleton et al. (2005) found that, among the employed population reporting a work limitation and not yet enrolled in SSDI or SSI, about 3 percent had enrolled the following year, and this proportion increased to 10 percent within four years. However, given the current end date for the DMIE, September 30, 2009, it is likely that at most only two or three years of panel data will be

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[4] Minnesota conducted a preliminary analysis using a partial cohort of DMIE participants that suggested promising evidence of program impacts (see Chapter V). The national evaluation will use a full sample of participants to analyze impacts.

available. An extension of the DMIE beyond September 30, 2009, would greatly improve our ability to detect impacts.

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CHAPTER IV

KANSAS DMIE PROGRAM

This chapter describes the Kansas DMIE program, baseline participant characteristics, and early implementation experiences. We start with an overview of the program's design, funding sources, and partnering organizations that help to administer services, support operations, and evaluate the program. After a brief synopsis of early implementation practices, this chapter describes the baseline characteristics of DMIE participants with a summary of DMIE program expenditures since the start of the program. We conclude with a summary of findings and next steps. Information presented in this chapter is drawn from a variety of sources, including site visit interviews with key informants conducted in May 2008; state-authored documents; publications by the independent evaluators; monthly teleconference calls with program administrators; quarterly report data; Uniform Data Set (UDS) data submitted by Kansas; and Social Security Administration (SSA) data.

A. PROGRAM DESIGN

The Kansas DMIE program began in April 2006 and targets workers in the state's high-risk insurance pool who have progressive health impairments.[1] Without needed medical services and supports, many of these individuals have a high likelihood of becoming disabled. The DMIE intervention is aimed at preventing the progression to disability and reliance on federal disability benefits through improved access to health care services and employment supports. The expectation is that treatment group members will experience improved health status, better quality of life, greater independence, and sustained employment (University of Kansas 2007a). Collectively this may prevent a premature exit from the labor market and the onset of a long-term disability.

Kansas DMIE participants are drawn from the high-risk insurance pool and were identified using Kansas Health Insurance Association (KHIA) administrative data. The

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[1] Potentially disabling conditions include, but are not limited to, advanced heart disease, chronic obstructive pulmonary disease, cancer, congestive heart failure, diabetes, depression, spinal disorders, and connective tissue/autoimmune disorders.

statewide high-risk insurance pool, administered by the KHIA, covers residents with pre-existing health conditions who are not eligible for group insurance and cannot buy, or are unable to afford, individual health coverage. Participants in the demonstration program must be enrolled in the high-risk pool for at least six months, be between 18 and 60 years of age, be employed for a minimum of 40 hours per month for at least six months, and be ineligible for Medicare and Medicaid. Therefore, the Kansas DMIE program fills a unique gap in coverage among workers who lack affordable private insurance but are not eligible for public insurance.

1. Demonstration Benefits

The intervention, administered by Kansas Health Policy Authority (KHPA), provides both a generous premium subsidy and enhanced coverage of services that augment existing KHIA high-risk pool benefits for treatment group members. Individuals assigned to the control group continue to receive their existing high-risk pool benefits plus incentive payments for participating in the study. The intervention offers three advantages for treatment group members relative to the standard high-risk pool benefits (Gimm and Weathers 2007):

- Lower out-of-pocket costs due to a premium subsidy, elimination of deductibles (up to $10,000), and lower co-payments for existing high-risk pool benefits, with an estimated minimum savings of $550 per month. Specifically, treatment group members pay only a fixed monthly premium of $152 (compared with a $450 average monthly KHIA premium) in addition to a $3 co-payment for each KHIA covered service or enhanced DMIE service.

- Additional services that include both Medicaid-like services, such as additional physical therapy, psychotherapy, and home health visits, and enhanced services not ordinarily covered under either KHIA or Medicaid.

- Case management services to prior authorize enhanced services, help individuals decide which benefits best meet their needs, and coordinate services for participants when needed.

The intervention is designed to improve access to high-risk pool covered services for workers with potentially disabling conditions. Steep out-of-pocket costs, such as monthly premiums, deductibles, and coinsurance, represent a financial barrier to accessing KHIA covered services. For example, in 2009, a 30-year old nonsmoking female would pay a monthly premium of $640 for a KHIA plan with a $1,500 deductible and 30 percent coinsurance. In addition, all KHIA members pay 50 percent coinsurance for prescription drugs. Subsidized premiums and the elimination of deductibles make accessing services and prescription drugs more affordable for treatment group members.

Unlike traditional Medicaid programs for people with disabilities, DMIE enhanced services include a broad array of preventative care assistance and health promotion activities including obesity management, smoking cessation, exercise therapy, acupuncture, and biofeedback training.[2] Nurse case managers perform a key role by educating treatment group members about available DMIE benefits and coordinating services when needed.

2. Demonstration Funding

Three funding sources support the benefits covered under the DMIE program:

- KHIA funds cover existing high-risk insurance pool covered services for treatment and control group members. These funds come from monthly member premiums and association member assessments paid by group and individual health insurers operating in the state.
- State general funds, appropriated by the Kansas Legislature, cover 40 percent of costs for all Medicaid-like wraparound services.
- Federal grant funds, awarded by the Centers for Medicare and Medicaid Services (CMS), cover DMIE administrative and operational costs, 60 percent of all Medicaid-like wraparound services, and 100 percent of costs for all enhanced services. Federal grant funds also subsidize treatment group members' KHIA premium so it is fixed at $152 per month.[3]

Despite multiple funding sources, the delivery of services is combined into one service package for treatment group members. The benefit structure of the DMIE wrap-around benefits is shown in Table IV.1. The left side of the table shows the premiums, deductibles, and co-insurance payments KHIA members are subject to. The right side of the table shows the premium and co-insurance payments that treatment group members are responsible for under the DMIE program.

B. ORGANIZATION AND ADMINISTRATION

The administration and operations of the Kansas DMIE program are shared between KHPA, which oversees administration of DMIE Medicaid-like and enhanced services, and KHIA, which oversees the high-risk insurance pool. Descriptions of KHPA and its four partnering organizations that support the Kansas DMIE program operations are presented here.

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[2] This is not an exhaustive list of DMIE enhanced services. All enhanced services require pre-certification from a nurse case manager.

[3] The $152 premium was based on the highest individual premium for participants in the Kansas Medicaid Buy-In program, Working Healthy.

1. KHPA

KHPA was established as the single Medicaid state agency on July 1, 2005, and is the lead agency for the Kansas DMIE program, serving as a liaison with local and federal partners. KHPA is responsible for administering DMIE Medicaid-like wraparound services and also all enhanced services described earlier in this section.

Table IV.1. Structure of KHIA and DMIE Wrap-Around Benefits

KHIA Existing Benefits	DMIE Wrap-Around Benefits
PREMIUM	
Stratified by age and plan, KHIA average premium is $450 per month	DMIE premium is fixed at $152 per month
DEDUCTIBLE	
Annual deductible amounts range from $1,500 to $10,000 per year	Annual deductible amount is zero[a]
CO-INSURANCE	
After satisfying deductible, individual pays 30 percent of in- network, or 50 percent of out-of-network eligible expenses. Individuals also pay 50 percent co-insurance for prescription drugs.[b]	$3 at point of service[c] (point of service payment not available for prescription drugs)
ENHANCED SERVICES	
None	Special services, including dental coverage and home visits, which are not available in the KHIA or Medicaid benefit package.[d]

Source: Kansas Health Policy Authority and Kansas Health Insurance Association, Health Insurance Policy Highlights and Comparisons 8.0.

[a] For DMIE treatment group members, federal grant funds (60 percent) and state general funds (40 percent) cover 100 percent of the deductible.
[b] Co-payments for preventive care are $25 after satisfying deductible; maximum of $250 per year.
[c] Federal grant funds (60 percent) and state general funds (40 percent) cover the 30 percent of co-insurance to which DMIE treatment group members are subject, less $3 co-payment per service.
[d] Federal-only funding pays 100 percent usual and customary benefits, less $3 co-payment per service.

2. KHIA

Established by the Kansas Legislature in 1992 as a nonprofit association, KHIA administers the state's high-risk insurance pool and offers health insurance benefits to residents with pre-existing medical conditions who are unable to obtain group or individual health insurance. KHIA is responsible for its high-risk pool covered services including all policy, operational, and procedural decisions related to coverage. KHIA agreed to partner with KHPA in the administration of the Kansas DMIE program to grant its members access to the rich array of services available through the DMIE program.

KHIA has an annual budget of approximately $25 million that is funded by monthly premiums charged to the plan's members and by association member assessments. The proportion of KHIA revenue from member premiums varies from year to year as KHIA premium rates are based on the average rates of the five largest commercial insurance carriers in the state of Kansas. In 2006, KHIA member premiums funded 66 percent of the total cost of the high-risk insurance pool; this percentage decreased to 41 percent in 2007 (Kaiser Family Foundation n.d.; National Association of State Comprehensive Health Insurance Plans 2008). Health insurers who provide KHIA benefits fund the remainder of high-risk pool costs by paying assessments in proportion to their share of the private insurance market. In Kansas, insurance carriers are allowed to offset a large percentage of the assessment against their corporate income tax liability to the state (Chollet and Achman 2001).

Insurance Costs

Some KHIA high-risk insurance pool plans are capped annually at $100,000 and lifetime benefits are limited to $2 million.[4] Out-of-pocket costs for high-risk insurance pool coverage are steep; KHIA premium rates are 133 percent of those charged in the private insurance market (Hall and Moore 2008a). In 2008, annual deductibles ranged from $1,500 to $10,000 and monthly premiums ranged from $117 (for nonsmoking persons under the age of 18 with a $10,000 deductible) to $1,466 per month (for a smoking male aged 65 with a $1,500 deductible).[5] After satisfying their deductible, KHIA members are responsible for paying 50 percent of the cost of their prescription drugs and 30 percent of the cost of other services. Higher deductible plans have no annual limits on out-of-pocket expenses.

3. Benefit Management Incorporated

KHIA uses a third party administrator, Benefits Management, Inc. (BMI), to serve as the claims administrator for the KHIA high-risk insurance pool. BMI also serves as the claims administrator for the Kansas DMIE program. KHPA contracts with BMI to initiate recruitment for the DMIE program and manage all claims for the enrolled treatment group members. KHPA pays BMI a $32 per enrollee, per month administration fee.

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[4] Plans with $100,000 annual cap are no longer being sold; however, existing plans remain in force. In 2008, the Kansas Legislature increased the lifetime maximum from $1 million to $2 million which went into effect in July 2008.

[5] As of January 1, 2008, KHIA plans with $500, $1,000, and $7,500 deductibles are no longer available.

Billing and Reimbursement Procedures

At the start of the demonstration, BMI developed a claims payment system specifically for DMIE treatment group members. To facilitate efficient claims adjudication, KHPA prepays BMI on a quarterly basis with federal and state funds. The amount of funds is determined by the previous quarter's activity and the projected estimate for the next quarter. During each quarter, BMI draws from these funds to pay for DMIE wraparound and enhanced services for treatment group members. When a provider submits a bill for a treatment group member, the claim is processed as follows (Kansas Health Policy Authority 2005):

- For a high-risk pool covered service, it is paid first at the KHIA allowed amount using KHIA funds.[6] (Until the KHIA deductible is met, the entire charge is paid by the DMIE program at the KHIA allowed amount.)
- If it is also a Medicaid covered service, BMI reimburses the provider a supplemental payment representing the difference between the KHIA allowed amount and the KHIA paid amount, using 40 percent state and 60 percent federal dollars.
- If it is a DMIE enhanced service that was precertified by a nurse case manager, it is paid at the pre-negotiated rate using 100 percent federal grant dollars.

BMI subcontracts with an outside entity, Express Scripts, to manage KHIA pharmacy benefits.[7] This arrangement has led to substantial delays in pharmacy reimbursements, which are burdensome to participants. Treatment group members, like all KHIA members, are required to pay the full cost of their prescription drugs when they are filled. In 2006, it took up to 60 days for individuals to get reimbursed. Since then, the time lag has shortened to approximately 30 days.

4. Shorman Solutions

KHPA subcontracts with Shorman Solutions (hereafter, Shorman) to provide telephonic case management services including pre-certification of enhanced services, educating participants about DMIE benefits, and coordinating services for treatment group members. These case management services are reimbursed on a fee-for-service basis through the BMI claims payment system using 100 percent federal grant funds. Shorman also administers the

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[6] Based on usual and customary amount.

[7] As of July 1, 2009, the pharmacy benefits management changed to Medco; however, the process remains the same.

assessment surveys at enrollment and at eight-month intervals thereafter. Assessment surveys are reimbursed through the University of Kansas (KU) as part of the evaluation subcontract.

Pre-certification is required for all DMIE enhanced services to determine if medical services are necessary. Shorman nurse case managers also are responsible for pre-certifying certain high-cost KHIA services.[8] To determine medical necessity, nurse case managers rely on participants' medical information which can be in the form of medical records or telephonic consultation with providers. Using their experience and industry standard treatment guidelines, nurse case managers determine if each request for an enhanced service or procedure is necessary and appropriate based on the participant's diagnoses. Medically complex cases may be referred to Shorman's medical director for determination. Shorman transmits all pre-certification determinations to BMI, at which point the determinations are entered into the BMI claims system and reconciled when service claims are adjudicated.

5. KU

KU's Division of Adult Studies is conducting the independent state evaluation of the demonstration. Staff members "provide research-based information to policy makers, service providers, individuals with disabilities, and family members that will ultimately empower people with disabilities to live more productively and independently" (University of Kansas 2007b). In addition to serving as independent evaluators of the Kansas DMIE program, KU staff members are tasked with managing the application and eligibility determination processes for the DMIE program, and also dispensing incentive stipends to DMIE program participants.

C. IMPLEMENTATION PRACTICES

In this section, we describe the implementation practices the Kansas DMIE program employed to identify, recruit, and enroll participants into the program, and the methods by which participants were randomly assigned to treatment and control groups. Also presented here are early lessons learned from program implementation.

1. Outreach and Recruitment Strategies

The KU evaluation team, BMI, and Shorman nurse case managers work together to screen and recruit candidates into the DMIE program. By May 2008, the program had reached its enrollment targets. However, in their 2006 DMIE annual evaluation report, KU evaluation staff noted that early recruitment efforts fell short of reaching enrollment targets

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[8] KHIA requires that a utilization review be conducted for inpatient hospitalizations, home health care services, and rental or purchase of durable medical equipment with a cost greater than $500. Shorman case managers pre-certify the above-mentioned KHIA covered services for treatment group members in the DMIE program.

for several reasons. First, the pool of eligible individuals in the high-risk insurance pool was smaller than expected because the number of employed KHIA members was not known until study candidates were screened for eligibility into the program. Second, efforts to initiate contact with potential study candidates were hindered because BMI had outdated contact information. Third, many potential candidates were skeptical of offers that appeared "too good to be true," or refused to provide documentation of employment and earnings (Hall and Moore 2008b). Greater than expected attrition from the control group also made it difficult to meet enrollment targets.

To address the early challenges of recruiting and retaining participants, program staff completed two additional rounds of recruitment to reach enrollment targets of 200 treatment group and 200 control group members. As a result, the Kansas DMIE program includes three cohorts of participants who enrolled in different recruitment periods. Cohort 1 recruitment began on January 1, 2006, and DMIE service delivery began April 1, 2006. Cohort 2 recruitment began on September 1, 2006, and service delivery began January 1, 2007. Cohort 3 recruitment began on April 1, 2008, and service delivery began on July 1, 2008.

Initial Screening and Recruitment

BMI screened potential study candidates for eligibility into the program and notified them about the DMIE program. Using their administrative database, BMI identified KHIA members who were between the ages of 18-60 and were covered by KHIA for a minimum of six months. BMI sent these KHIA members a letter that explains the study, after which they initiated telephone contact with all potential study candidates to screen them for eligibility. Study candidates were asked the following screening questions to determine who might potentially meet the qualifying work and health criteria for the study:

- Are you working a minimum of 10 hours per week or 40 hours per month?
- Have you submitted an application for SSI/SSDI?
- Do you have a potentially disabling medical condition?

Study candidates who met the qualifying criteria were mailed a DMIE application packet to complete and return. Those who were interested returned a completed application packet and informed consent form to the KU evaluation team for assessment.

2. Enrollment Processes

Eligibility Determination

The KU evaluation team assessed all completed applications and determined eligibility for enrollment into the program. The application review process was extensive and included the following steps conducted by staff:

- Reviewed each application for completeness and collected missing elements from study applicants when needed
- Verified the applicant’s employment including hours worked, earnings, and payment of Federal Insurance Contributions Act (FICA) tax or Self-Employment Contributions Act (SECA) tax using a pay stub or tax return[9]
- Confirmed the presence of potentially disabling conditions using KHIA claims files or reviewed medical documentation if claims were not on file

Once KU staff members made their determinations, ineligible applicants received letters explaining the rationale for the denial and their right to appeal. Eligible participants were mailed a letter explaining their group assignment.

Baseline Assessment

After participants were accepted into the DMIE program, they completed the baseline assessment survey with a Shorman nurse case manager via telephone. That information was entered into a web-based tool and sent to the KU evaluation team. In an effort to improve data quality, in 2007, KU began giving participants the survey response scales to reference while they completed the baseline assessment. This was done at the request of participants who reported they could not remember the response scales long enough to answer accurately. In 2008, KU began distributing the full survey instrument to participants to reference while completing the baseline assessment survey.

3. Randomization Procedures

Once all eligibility determinations were made, the KU evaluation team stratified the sample of eligible participants using the Johns Hopkins Adjusted Clinical Groups (ACG)® Case-Mix System, Version 7.1. This case-mix adjustment system uses diagnostic codes to measure morbidity and health care services utilization (Johns Hopkins n.d.). Using statistical software, the KU evaluation team randomly assigned eligible applicants to either the treatment or control group. Demographic characteristics such as age, gender, and ACG scores, were compared afterwards to assure comparability between groups.

Treatment group members received information about the assessment surveys and a DMIE benefits booklet that outlines and explains the scope of services covered by the program. Treatment group members do not receive monetary compensation for completing assessment surveys.

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[9] Payment of FICA or SECA was not verified for cohort 1; only earnings.

Control group members received information about the assessment surveys and are eligible for incentive stipends for completing each survey—$200 after completing the baseline survey and an additional $25 stipend for each subsequent survey. If control group members complete all assessment surveys for the duration of the demonstration, they receive a longevity bonus at the end of the study.[10] Both treatment and control group members who participate in the focus groups receive a $25 stipend in addition to travel expenses.

All "follow-along" participants, that is, those who drop their KHIA coverage but agree to continue participating in the study, receive a $100 stipend per completed survey.[11] The total sample of program participants includes 225 treatment group members and 275 control group members. Of the total sample, 79 individuals disenrolled since the start of the program and, as of November 2008, 52 continue to participate as "follow-along" participants.

4. Early Lessons Learned from Program Implementation

While conducting the process evaluation of the Kansas DMIE program, we identified early lessons learned that might benefit others designing or in a later stage of implementing similar programs. First, building the Kansas DMIE program around an existing insurance program created several natural synergies, but also made it difficult to change certain elements (University of Kansas January 2007). For example, building the program around the high-risk insurance pool made it easier to identify possible candidates and diagnostic conditions from a "captive pool" within an existing administrative database. Also, KHIA included a network of providers and a claims processing system (BMI) that facilitated the rapid deployment of DMIE benefits. However, some KHIA benefits such as prescription drugs were difficult to administer under the DMIE program because existing systems could not be readily adapted. As noted earlier in this chapter, DMIE participants (like all KHIA members) must pay the full cost of prescription drugs when their prescriptions are filled. Due to the complexity of claims processing for prescription drugs, delays in reimbursement for DMIE participants posed a hardship to those with high prescription drug costs.[12] One treatment group member reported in the assessment survey: "I use a credit card so that I can get the prescription, so I am putting out $1,400 dollars twice each month until I get the reimbursement, and then I have to pay finance charges on my credit card because I can't pay them until I am reimbursed" (Hall and Moore 2008c).

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[10] Longevity bonuses were $200 for cohorts 1 and 2 and $150 for cohort 3.

[11] Follow-along participants are able to continue participating in the study so long as they participate in each assessment survey.

[12] KU program staff reported during a May 2008 site visit that early in the program, staff determined that creating a claims processing system whereby treatment group members pay only the $3 co-payment for prescription drugs at the point of sale was cost-prohibitive.

Second, subcontracting with Shorman expanded the capacity to conduct assessment surveys efficiently. Also, having registered nurses case manage treatment group members not only improved the quality of data, but it also improved the overall quality of case management services because they have clinical insight into participants' medical conditions.

Third, certain program design choices may have had unintended consequences. For example, the program incentives spurred increased utilization of high-risk pool covered services. A key component of the intervention heavily subsidizes out-of-pocket costs for treatment group members through a generous premium subsidy, elimination of deductibles (up to $10,000), and lower co-payments for existing high-risk pool benefits. Not surprisingly, elimination of the deductible has caused treatment group members to increase their utilization of KHIA-covered high-risk pool services over the course of the demonstration. This design has improved participant access to needed medical services, which in turn is expected to improve their health status and quality of life. Increased service utilization among treatment group members suggests that there is considerable unmet need among DMIE participants and the KHIA high-risk pool population as a whole, due in large part to steep KHIA deductibles.

However, increased service utilization has likely increased the total operating costs of the high-risk pool. Although KHIA premium rates are not based on prior claims experience, member assessments fund the remainder of high-risk pool operating costs. Assessments to insurance carriers in Kansas are set by the KHIA Board of Directors one or more times annually at an amount that is estimated to pay KHIA covered claims for one year. Member assessments may have risen due to the generosity of the DMIE intervention and increased utilization of KHIA covered services. Since 60 percent of the assessment to insurance carriers can be offset against their premium revenue for state income tax purposes, the state of Kansas may be indirectly funding a larger share of the state high-risk insurance pool costs (National Association of State Comprehensive Health Insurance Plans 2008).

Finally, the sustainability of a program is an important consideration when designing an intervention. In the case of the Kansas DMIE program, the generous premium subsidy and broad service package may be difficult to sustain because of the steep cost. Although continuing the DMIE program as currently structured likely would not gain support in the Kansas Legislature, it may be possible to sustain elements of the program, such as better pharmacy coverage, to provide services and support to workers with potentially disabling conditions. The results of the independent evaluation conducted by KU's Division of Adult Studies may help inform which elements of the program are most beneficial to sustain.

D. DMIE ENROLLMENT AND PARTICIPANT CHARACTERISTICS

This section presents enrollment trends and attrition challenges since the start of the program and reviews participant characteristics at baseline, including demographic characteristics, diagnostic conditions, employment, and income characteristics. Demographic, diagnostic, and employment characteristics are self-reported during the baseline assessment survey and completion of the enrollment application. Personal income data are from state unemployment insurance earnings data. All data presented in this section are from the UDS covering the period from April 2006, the start of the Kansas DMIE program, to July 2008 when enrollment into the program ended.

1. Enrollment Trends and Attrition

The DMIE program completed three rounds of recruitment to reach their enrollment target of 200 treatment group members and 200 control group members. The enrollment targets were surpassed in July 2008, at which point all recruitment and enrollment activities ended. The Kansas DMIE program did not impose an enrollment ceiling nor maintain a waiting list. As of August 31, 2008, the state had 205 treatment group members and 216 control group members.[13] Excluded from these figures are 79 individuals who exited the study since the start of the program. In the 2008 round of recruitment, control group members were over-sampled to account for future attrition.

Participants are officially considered to be enrolled in the demonstration when DMIE service delivery begins for each cohort. As shown in Figure IV.1, there are spikes in enrollment of new participants that correspond to active periods of recruitment. Enrollment into the program peaked three times: total enrollment reached 222 (cohort 1) in April 2006; 367 (cohort 2) in January 2007; and a program high of 426 (cohort 3) in July 2008. Between these recruitment periods, enrollment in the treatment group has remained stable. In contrast, enrollment in the control group has steadily declined due to several factors discussed below.

Attrition Challenges

From April 2006 through July 2008, when enrollment ended, 59 control group members and 20 treatment group members disenrolled from the DMIE program. The most common reason for this is termination of KHIA coverage (77.2 percent).[14] Table IV.2 shows a greater than expected attrition from the control group primarily because individuals terminated their KHIA policy. The independent evaluators believe that rising monthly premiums (treatment group members do not pay any increases above the $152 fixed monthly premium) may have contributed to attrition within the control group.

Control group members are motivated to terminate their KHIA policy because they are not afforded the rich benefits associated with the DMIE program and steep out-of-pocket expenses are a probable barrier to accessing medical services through the high-risk insurance pool. In a recent publication, the KU evaluation team reports that 51 percent of DMIE

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[13] Uniform Data Set submitted by Kansas.

[14] When DMIE participants terminate their KHIA policy or obtain alternative health coverage or both, DMIE benefits discontinue and the individual is disenrolled from the demonstration.

Figure IV.1. Kansas DMIE Cumulative Enrollment Trend, April 2006–August 2008

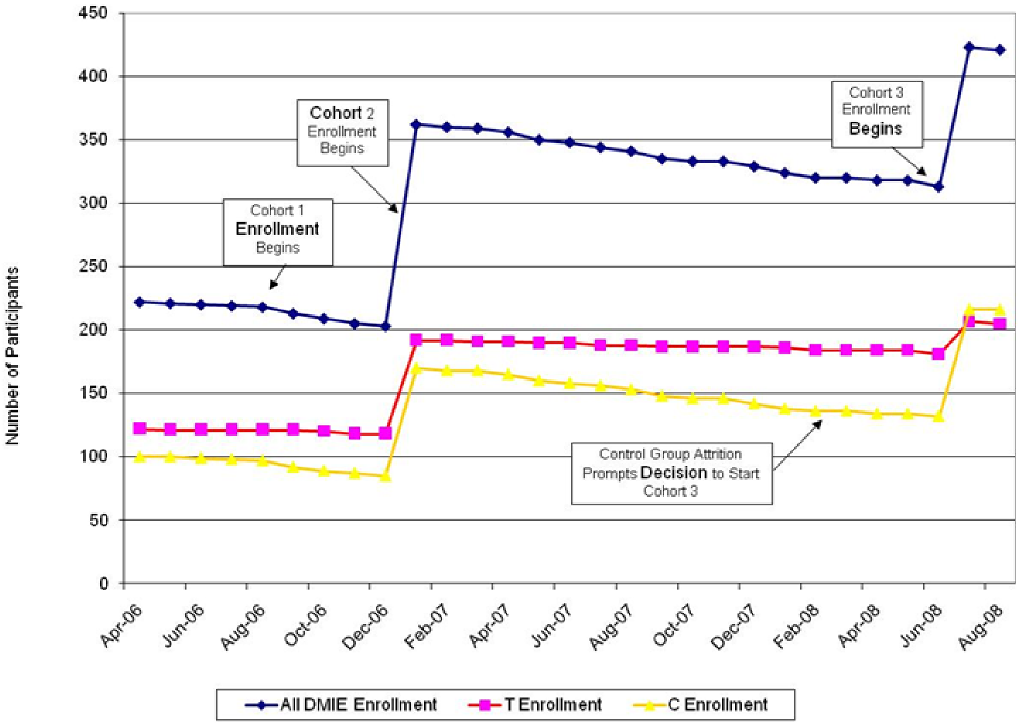

Table IV.2. Reasons for Disenrollment from the Kansas DMIE Program

	Treatment (n = 225)		Control (n = 275)		Total N (n = 500)	Percent of Total Disenrollees
	N	Percent	N	Percent		
Terminated KHIA	12	5.3	49	17.8	61	77.2
Died	5	2.2	0	0.0	5	6.3
Moved out of area	3	1.3	4	1.5	7	8.9
Other reasons[a]	0	0.0	6	2.2	6	7.6
Total	20	8.8	59	21.5	79	100.0

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

[a] Other reasons include unable to contact in long-term care facility, incarcerated, too ill to complete survey, transitioned to Medicaid buy-in, transitioned to Medicare, and transitioned to Medikan.

program participants reported dissatisfaction with KHIA high-risk pool coverage (Hall and Moore 2008b). They attributed their dissatisfaction to high premiums and deductibles, steep out-of-pocket costs, and limited coverage (Hall and Moore 2008b). Conversely, treatment group members are motivated to stay in the KHIA high-risk insurance pool because they receive comprehensive and affordable wraparound benefits through the program and are insulated from premium escalations. The differential rate of attrition suggests the generosity of DMIE benefits may influence attrition from the KHIA high-risk pool. This also suggests that if the cost structure of high-risk pools were to be redesigned to expand coverage for uninsured individuals, imposing a lower cost-sharing burden (lower deductibles and premiums) for covered services would likely achieve higher rates of retention and greater penetration among uninsured individuals.

Another factor that leads to attrition is nonpayment of KHIA premiums. High-risk pool coverage terminates after 30 days if a KHIA member does not pay his or her monthly premium on time. However, KHIA members who fail to pay or are late paying can be reinstated after 30 days provided all overdue premiums are paid.[15] In the event KHIA members are reinstated into the high-risk pool, they are automatically reinstated into the DMIE program. Quarterly report data indicate that participants who re-enter the DMIE program have made it difficult to obtain an accurate census of DMIE enrollees at a given point in time. To prevent unintended attrition, Shorman nurse case managers continually remind treatment group members to pay their KHIA premiums on a timely basis. However, most lapses occur within the control group and appear to be related to difficulty affording premiums.

2. Baseline Characteristics

Demographic Characteristics

Table IV.3 presents the baseline demographic characteristics of DMIE program participants, which are similarly distributed across the treatment and control groups. The majority of participants (81.4 percent) are older adults between the ages of 45–64, with another 16.6 percent age 25–44. This distribution is expected given that the DMIE program serves working adults with potentially disabling physical or mental impairments, the frequency of which increase with age. This is reflected in the study sample being weighted towards adults over the age of 55 (43.6 percent) (University of Kansas January 2007).

DMIE program participants are highly educated—80 percent have some education beyond high school, which is considerably higher than the Kansas population (58 percent)

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[15] KHIA members are entitled to only one reinstatement and must appeal before being reinstated.

Table IV.3. Self-Reported Demographic Characteristics of Kansas DMIE Participants

	Treatment (n = 225)	Control (n = 275)	Total (n = 500)
Age (percent)			
Under 25 years	0.9	2.9	2.0
25-34 years	4.0	4.7	4.4
35-44 years	13.8	10.9	12.2
45-54 years	37.8	37.8	37.8
55 years or more	43.6	43.6	43.6
Gender (percent)			
Female	48.0	52.7	50.6
Male	52.0	47.3	49.4
Race/Ethnicity[a] (percent)			
White and Non-Hispanic	84.4	67.6	75.2
Black or African-American	0.9	0.0	0.4
Hispanic	1.3	0.7	1.0
Asian	0.0	0.4	0.2
Other race	0.9	0.4	0.6
Missing or unknown	12.4	30.9	22.6
Education (percent)			
Less than high school	1.8	1.8	1.8
High school graduate or GED	19.6	16.7	18.0
Some college or 2-year degree	39.1	32.7	35.6
4-year college graduate	17.8	23.6	21.0
More than 4-year college graduate	21.8	24.7	23.4
Missing or unknown	0.0	0.4	0.2
Marital Status (percent)			
Married	57.8	52.0	54.6
Divorced, widowed, or separated	22.7	27.3	25.2
Never married	19.6	19.3	19.4
Other response	0.0	1.1	0.6
Missing or unknown	0.0	0.4	0.2

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Note: Figures include 79 enrollees who subsequently withdrew from the demonstration.

[a] Due to a software error, the race/ethnicity questions were excluded in the cohort 3 baseline assessment survey; however, based on preliminary data, we expect that >97% of DMIE participants will be non-Hispanic white.

(U.S. Census Bureau).[16] Twenty-one percent of all enrollees have a four-year college degree and another 23 percent have post-graduate education. This finding suggests that individuals who can afford KHIA premiums tend to be highly educated with higher earnings. Additionally, the majority of DMIE program participants are married (54.6 percent), which increases the possibility of gaining access to employer-based coverage through a spouse. Treatment group members are slightly more likely to be married (57.8 percent) and male (52.0 percent). However, the observed differences in demographic characteristics are not statistically significant.

Diagnostic Conditions

A wide variation in diagnostic conditions and comorbidity prevalence is shown in Table IV.4. Diagnostic data are self-reported during the baseline assessment survey and on the enrollment application and are not derived from medical claims. In addition, some enrollees reported having more than one condition and are represented in the data more than once.

The Kansas DMIE program targets individuals with progressive impairments, resulting in participants having a wide range of medical conditions, many of which are chronic in nature. The most commonly reported conditions are mental illness (36.4 percent) and musculoskeletal conditions (33.4 percent). Roughly a quarter of both treatment and control group participants reported having diabetes (26.7 and 24.4 percent, respectively) and a cardiovascular condition (22.7 and 25.8 percent, respectively). The heterogeneity of medical conditions suggests that the study sample’s needs are very different with respect to health services and employment supports.

The mean number of disabling conditions is 3.7, which indicates a high prevalence of comorbities. Nearly seven in ten participants reported experiencing at least three medical conditions, which is not surprising given that the study sample is skewed towards older adults who have progressive, often chronic, impairments. The high prevalence of comorbities suggests that the enrolled population has high demand for medical services, as well as a large potential risk of exiting employment and relying on federal disability benefits. Differences in the type and number of diagnostic conditions between treatment and control groups were not statistically significant.

Employment and Income Characteristics

The DMIE intends to improve employment outcomes for working adults with potentially disabling conditions. However, employment support services are not a key feature of the intervention in Kansas. In 2007, vocational rehabilitation services were added as a DMIE enhanced service to provide employment supports to treatment group members. As of

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[16] Cited figure is the Kansas population aged 25 years and older.

September 30, 2008, only three participants have used vocational rehabilitation services. Although a qualifying condition of the study requires all program participants to be employed, minimal utilization of vocational rehabilitation services suggests that the study population is a stable working population. Low utilization of employment supports can also be explained by the fact that 70 percent of DMIE program participants are self-employed for at least part of their income (Hall and Moore 2008a).

Table IV.4. Type and Number of Diagnostic Conditions of Kansas DMIE Participants

	Treatment (n = 225)	Control (n = 275)	Total (n = 500)
Major Diagnostic Categories (percent) [a]			
Mental illness	33.8	38.5	36.4
Musculoskeletal conditions	36.0	31.3	33.4
Diabetes	26.7	24.4	25.4
Cardiovascular	22.7	25.8	24.4
Respiratory conditions	18.2	18.5	18.4
Cancer	16.0	14.5	15.2
Neurological conditions	11.1	7.6	9.2
Immune disorders	8.0	8.0	8.0
Gastrointestinal	6.2	9.5	8.0
Sensory disorders	4.9	2.5	3.6
Blood disorders	2.7	2.5	2.6
HIV	1.3	0.7	1.0
Renal conditions	1.3	1.5	1.4
Stroke and TIA	0.9	1.8	1.4
Endocrine other than diabetes	0.4	0.4	0.4
Number of Conditions (per person) (percent)			
1	12.9	10.2	11.4
2	17.8	19.3	18.6
3 or more	69.3	70.5	70.0

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Note: Figures include 79 enrollees who subsequently withdrew from the demonstration.

[a] Participants may have multiple conditions; counts indicate a person had at least 1 condition within a specific category.

Table IV.5 presents the baseline income and employment characteristics of DMIE participants. Participants are employed in a variety of industries, and the distribution is similar across treatment and control groups. Twenty percent of participants engage in professional services, with another 20 percent employed in education and health care. Sixteen percent are employed in trade, transportation, and utility industries, and the remaining 44 percent work in a wide range of industries such as natural resources (primarily agriculture) and mining, financial services, leisure and hospitality, construction, and manufacturing.

Personal earnings data displayed in Table IV.5 comes from unemployment insurance (UI) earnings data that the state of Kansas collects from employers. Personal earnings data do not portray a complete picture of participants' personal earnings because it does not include self-employment income. Since 70 percent of participants have at least some income from self-employment, the majority of values (57.6 percent) include missing data (Hall and Moore 2008a). The high proportion of self-employed participants has made tracking employment income problematic because some participants who share in the proceeds of a family business do not receive a salary, and others have income on a sporadic basis such as when they sell a product (University of Kansas January 2007).

The high proportion of self-employed participants in the study population may reflect the fact that these individuals lack access to employer-based group health plans and are oftentimes forced to obtain individual coverage (Hall and Moore 2008b). Also, program participants have anecdotally reported that their medical conditions make it difficult to maintain a regular work schedule, and self-employment provides greater flexibility (University of Kansas January 2007). Despite their impairments, program participants have relatively high levels of functioning which is reflected in nearly half (49.0 percent) of the study population working more than 160 hours during the four weeks prior to enrollment in the demonstration. Although slightly more control group members report working full-time in the four weeks prior to enrollment, differences in employment and income between treatment and control group members were not significant.

E. PROGRAM SERVICE USE AND EXPENDITURES

This section presents two analyses of DMIE expenditures from October 1, 2007 to September 30, 2008, which is based on information extracted from quarterly report data provided by the Kansas DMIE program.[18] Analyses are stratified by type of service and show the distribution of health care services paid for and changes in quarterly expenditures over time.

1. Distribution of DMIE Health Care Service Expenditures

The distribution of treatment group members' health care expenditures incurred during this period is shown in Table IV.6. Expenditure data are stratified by type of service and represent only program payments, including both state and federal shares, for health care service costs. Hospital inpatient services accounted for the largest share of total expenditures ($458,194 or 21.9 percent) and case management services comprise the second highest

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[18] Quarterly report data reflect claims paid October 1, 2007, to September 30, 2008. Because of lags in claims processing, some claims may have been incurred earlier.

amount ($340,174 or 16.3 percent). As noted earlier in this chapter, all treatment group members have to get pre-certification for all DMIE enhanced services. Since nurse case managers field and process these requests, case management is predictably a top service category. Prescription drugs comprise the next largest share (15.9 percent) of program expenditures, followed by physician visits (15.3 percent) and laboratory and x-ray procedures (14.3 percent). All other service categories account for the remaining 16.3 percent of total expenditures.

Table IV.5. Employment and Income Characteristics of Kansas DMIE Participants

	Treatment (n = 225)	Control (n = 275)	Total (n = 500)
Employment Industry (percent)			
Professional services	21.3	18.5	19.8
Education and health care	18.7	20.4	19.6
Trade, transportation, utilities	16.4	15.6	16.0
Natural resources and mining[a]	16.0	11.6	13.6
Financial services	7.6	5.8	6.6
Other services	7.6	7.6	7.6
Leisure and hospitality	4.9	9.1	7.2
Construction	3.6	4.0	3.8
Manufacturing	1.8	4.4	3.2
Information services	1.3	1.1	1.2
Public administration	0.9	1.8	1.4
Hours Worked Monthly (percent)			
Less than 80 (half-time)	16.5	18.9	17.8
80 to 159	39.5	28.0	33.2
160+ hours (full-time)	44.0	53.1	49.0
Personal Earnings (percent)			
Less than $10,000	16.9	14.5	15.6
$10,000 to $19,999	7.6	8.4	8.0
$20,000 to $29,999	4.9	6.5	5.8
$30,000 to $39,999	4.4	5.8	5.2
$40,000 to $74,999	4.9	4.4	4.6
$75,000 or more	3.1	3.3	3.2
Missing or refused[b]	58.2	57.1	57.6

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Note: Figures include 79 enrollees who subsequently withdrew from the demonstration.

[a] Includes agriculture.

[b] Many values are missing because of self-employment income that is not reported in unemployment insurance earnings data.

2. Quarterly DMIE Health Care Service Expenditures

Table IV.6 also shows treatment group members' quarterly expenditures stratified by type of service from October 1, 2007 to September 30, 2008. Average quarterly expenditures are represented by payments per treatment group member per quarter, based on treatment group participants' enrollment at the end of each quarter.

Service categories include a wide variety of health care services such as dental services, therapy, and prescription drugs, as well as wellness services and exercise training that are included in the Kansas' DMIE enhanced service package. As illustrated in Table IV.6, considerable variations appear within service-category expenditures across quarters. In 2008, spikes in quarterly expenditures for hospital inpatient services represent high-cost individual episodes of care. High demand for prescription drugs is expected because participants experience a broad range of chronic physical and mental impairments such as musculoskeletal conditions, mental illness, diabetes, and cardiovascular conditions. Low utilization of mental health services, including substance abuse treatment, is somewhat unexpected since 34 percent of treatment group members (see Table IV.4) report having some mental illness.

As expected, the increase in quarterly expenditures through the second quarter of 2008 is partly attributable to increased numbers of enrollees. Cohort 3 participants were enrolled into the Kansas DMIE program in quarter two of 2008; however, service delivery for these participants began on July 1, 2008 (quarter three of 2008). Since utilization patterns for longer-term enrollees reflect a more accurate picture of service use under the demonstration, we expect that expenditure data for 2009 will represent a more complete picture of DMIE service utilization.

F. BASELINE MEASURES OF HEALTH, EARNINGS, AND SSA BENEFITS

In this section, we present baseline measures for health status (including self-reported physical and mental health status and physical and mental 12-item short form (SF-12) scores), annual earnings, and prior SSI or SSDI enrollment. Baseline measures of health status are based on self-reported data. Earnings, employment, and prior SSI/SSDI enrollment are based on SSA administrative data.

1. Health Status

As shown in Table IV.7, approximately one-third of all participants characterize their own physical health as either very good or excellent. Treatment and control group members reported similar perceptions; however a larger proportion of control group members (30.2 percent) reported that their physical health is very good compared to treatment group members (23.1 percent). Among all participants, 34 percent described their physical health as excellent or very good, 47 percent as good, and 19 percent as fair or poor. These findings indicate that DMIE enrollees self-report relatively good physical health despite the fact that they have a high prevalence of physical impairments and comorbities. The vast majority (60.4 percent) of participants described their mental health as either excellent or very good; only 8 percent self-reported fair or poor.

Table IV.6. Kansas DMIE Quarterly Health Care Service Expenditures, by Type of Service (October 1, 2007–September 30, 2008)

	Quarterly Expenditures				Total Expenditures	Percent of Total Expenditures
	Q4 2007	Q1 2008	Q2 2008	Q3 2008		
Hospital inpatient	$8,935	$6,066	$201,098	$242,094	$458,194	21.9
Case management	82,338	83,513	80,837	93,487	340,174	16.3
Prescription drugs	42,862	133,562	82,317	74,482	333,224	15.9
Physician	41,761	96,248	115,971	65,890	319,870	15.3
Laboratory and x-ray procedures	36,721	73,295	118,694	70,379	299,089	14.3
Dental	41,608	36,032	22,967	32,320	132,926	6.4
Therapy	9,933	17,728	12,186	6,414	46,262	2.2
Vision/hearing	16,804	4,326	12,167	8,621	41,918	2.0
Durable medical equipment	3,383	8,963	11,666	7,786	31,799	1.5
Transportation	185	1,876	26,619	666	29,346	1.4
Hospital emergency room	2,146	4,738	7,096	4,924	18,904	0.9
Wellness program/exercise training	3,064	2,979	3,477	3,766	13,287	0.6
Mental health	1,810	5,866	2,491	2,788	12,955	0.6
Home health services	453	1,876	6,908	3,571	12,809	0.6
Outpatient clinic or hospital	767	427	146	232	1,572	0.1
Substance abuse treatment[a]	0	0	0	0	0	0.0
Total	$292,772	$477,496	$704,640	$617,420	$2,092,328	100.0
Treatment group participants[b]	186	185	210	207		
Average expenditures	$1,574	$2,581	$3,355	$2,983		

Source: Kansas DMIE quarterly reports from October 1, 2007–September 30, 2008. Expenditure data are for treatment group participants from October 2007–September 2008.

[a] Substance abuse expenditures are included in the mental health services category.

[b] Enrollment based on the number of treatment group members at end of quarter.

The SF-12, a 12-question self-reported survey of physical and mental health status, is part of the assessment survey administered to all DMIE participants at baseline and eight-month intervals thereafter. The SF-12 score is norm-based at 50 for the general population; lower scores indicate worse functioning than the general population. As shown in Table IV.8, treatment and control group members have similar mean scores for mental health (49.9 and 50.7, respectively) that are comparable to the general population. This finding is not surprising given that the majority of participants (60.4 percent) described their mental health as excellent or very good (Table IV.7). Mean scores indicate that both treatment and control group members have slightly worse than average physical health (43.5 and 45.8 respectively), which is expected since the majority of demonstration participants are older adults over the age of 55 (43.6 percent) with progressive physical and mental impairments.

Table IV.7. Self-Reported Health Status of Kansas DMIE Participants

	Treatment (n = 225)	Control (n = 275)	Total (n = 500)
Physical Health Status (percent)			
Excellent	7.1	6.2	6.6
Very good	23.1	30.2	27.0
Good	48.0	46.5	47.2
Fair	19.6	15.6	17.4
Poor	2.2	1.1	1.6
Missing	0.0	0.4	0.2
Mental Health Status (percent)			
Excellent	23.1	22.2	22.6
Very good	32.4	42.2	37.8
Good	36.0	27.6	31.4
Fair	6.2	8.0	7.2
Poor	1.8	0.0	0.8
Missing	0.4	0.0	0.2

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Note: Figures include 79 enrollees who subsequently withdrew from the demonstration.

Table IV.8. SF-12 Baseline Health/Mental Health Status of Kansas DMIE Participants

	Treatment (n = 225)	Control (n = 275)
SF-12 Physical Component Summary (PCS)		
Mean	43.5	45.8
Minimum	8.2	10.7
Maximum	68.3	64.3
SF-12 Mental Component Summary (MCS)		
Mean	49.9	50.7
Minimum	8.9	22.9
Maximum	68.4	69.6

Source: Uniform Data Set submitted by the independent evaluators at the University of Kansas, Division of Adult Studies. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Notes: SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the 8 subscales of physical and mental health, since raw scores cannot be directly compared. The 8 sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning. Figures include 79 enrollees who subsequently withdrew from the demonstration.

2. Annual Earnings and Employment

In 2005, the year before DMIE enrollment began; nearly all participants (99 percent) were employed with positive earnings, which was the same proportion across the treatment and control groups. Unlike the unemployment insurance data displayed in Table IV.5, which had a majority (57.6 percent) of missing values due to the prevalence of self-employment income, the SSA data had only 15 percent of participants with missing earnings in 2005. Therefore, the SSA data provide a more complete picture of program participants' income. In 2005, the mean annual earnings of all Kansas DMIE participants were $35,253—$36,976 for treatment group members and $33,809 for the control group.

3. Prior SSI/SSDI Enrollment

Only 2.2 percent of the DMIE enrolled population had a history of receiving SSI or SSDI benefits between 1996 and 2005. This low incidence of prior use of federal disability benefits is expected given the program's eligibility requirement that excludes participants who currently receive or have a pending application for federal disability benefits. However, some individuals in the high-risk insurance pool are likely to apply for federal disability benefits because of the prevalence of multiple chronic conditions among the study population.

G. SUMMARY OF FINDINGS

1. Lessons Learned from Early Implementation

National debates on health care reform have looked to high-risk insurance pools as one potential model through which to expand coverage to uninsured individuals. This strategy likely would not improve access to coverage because steep out-of-pocket costs associated with this type of coverage are a probable barrier to accessing needed medical services. For many KHIA members, high out-of-pocket costs relative to their income can create a financial hardship and result in individuals choosing to delay or forgo needed medical care (Hall and Moore 2008b).

This finding has been documented by KU evaluation staff in a recent publication (Hall and Moore 2008b). KU evaluation staff conducted a series of focus groups with DMIE program participants that addressed access to healthcare and experiences with the high-risk insurance pool prior to the study. Participants reported that they avoided or delayed preventative and wellness services (such as annual physicals, dental care, vision care, mental health services) and diagnostic tests (pap smears, mammograms, colonoscopies, and other medical tests) that could improve their health because of the out-of-pocket costs, or limited coverage (Hall and Moore 2008b). The findings suggests that a more effective strategy for expanding access to uninsured individuals would be to impose lower deductibles and premiums for covered services, making medical services and supports affordable and available. By reducing barriers to access to health care, individuals with potentially disabling conditions would be better able to address their medical needs, which in turn will prevent their medical conditions from progressing to a disability.

2. Baseline Participant Characteristics

Self-reported data collected from Kansas DMIE program participants at the time of enrollment capture the baseline characteristics of the enrolled population. The Kansas DMIE program’s enrolled population differs from other states’ DMIE target participants in several respects. First, study candidates are drawn statewide from the KHIA high-risk pool and participants have a wide variety of potentially disabling conditions. By comparison, the enrolled populations of other DMIE states are more homogenous because they target residents with specific diagnoses from a particular geographical location. Second, relative to other DMIE participants, Kansas participants are considerably older (81.4 percent are between the ages of 45–64) and much more likely to be self-employed (70.0 percent), which indicates the enrolled population is more likely to experience multiple comorbities and lack access to employer-based group coverage (Hall and Moore 2008b).

H. PHASE-DOWN PLAN AND NEXT STEPS

Under current federal legislation, the Kansas DMIE is scheduled to end on September 30, 2009. Treatment group members will transition to the KHIA high-risk insurance pool effective October 1, 2009, at which point they will be responsible for 100 percent of standard

KHIA monthly premiums, deductibles, and co-payments. Data collection and independent evaluation activities will continue through September 2010, and will culminate in a final report to KHPA and CMS. MPR and CMS will conduct a site visit to Kansas in summer or fall 2009 to gather detailed information on program operations in the final year of the demonstration.

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CHAPTER V

MINNESOTA DMIE PROGRAM

This chapter describes the Minnesota DMIE program, baseline participant characteristics, and early implementation experiences. We begin with an overview of the program's design, benefits, funding sources, and partner organizations. After a synopsis of early implementation practices, this chapter describes the baseline characteristics of DMIE participants and service use and expenditures among treatment group members. We conclude with a summary of lessons learned and Minnesota's phase-down plans. This chapter relies on information from the Uniform Data Set (UDS), site visit interviews, monthly teleconference calls with program administrators, and quarterly progress reports. The chapter also draws from the evaluation reports prepared by the state's independent evaluator (The Lewin Group 2008a; The Lewin Group 2008b).

A. PROGRAM DESIGN

The Minnesota demonstration, known as "Stay Well, Stay Working," began enrollment in January 2007 and provides health insurance coverage and employment support services to working adults with serious mental illnesses.[1] The demonstration is administered by the Minnesota Department of Human Services (DHS), which manages the state's Medicaid program. The goals of the program are to (1) create a comprehensive and coordinated set of health care and employment support services, (2) provide this benefit package to employed individuals with serious mental illness who do not have an SSA-certified disability, and (3) delay or prevent these individuals from becoming reliant on the disability system for cash assistance.

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[1] Serious mental illness is defined by ICD-9 codes between 290 and 301.9, and includes dementias, alcohol-induced mental disorders, transient mental disorders due to other conditions , persistent mental disorders due to conditions classified elsewhere, schizophrenic disorders, episodic mood disorders, delusional disorders, other non-organic psychoses, pervasive developmental disorders, anxiety, dissociative, somatoform, and personality disorders.

The Minnesota DMIE was originally implemented in six counties. To increase the potential pool of applicants, the program expanded in November 2007 to two additional counties. The original counties included two in the Twin City area (Hennepin and Ramsey) and four rural ones in the state's northeast region (St. Louis, Carlton, Lake, and Pine). The two new counties added were Anoka and Dakota, both in the Twin City metropolitan area.

In addition to residing in one of the eight demonstration counties, participants must also meet the following eligibility criteria:

- Be between ages 18 and 60 (increased from 57 years originally)
- Be employed at least 40 hours per month (including self-employment) and earning at least the state's lowest minimum wage ($5.85/hour in 2008)
- Not be participating in other federally funded public health care programs (e.g. Medicaid)
- Be certified by a mental health professional as having a severe mental illness[2]
- Not be certified as disabled by the Social Security Administration (SSA) (that is, receiving Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) benefits) or have a pending SSA application

The Minnesota DMIE program drew the majority of its participants from two of three public health care programs: MinnesotaCare (single adult benefit set) and General Assistance Medical Care (GAMC).[3] MinnesotaCare for single adults is a state funded program for low-income state residents who do not qualify for or have access to any other affordable health care coverage. GAMC is a state-funded program for residents whose income and resources are insufficient to cover their expenses, and who are not eligible for other public health care programs. Most GAMC enrollees are low-income adults between the ages of 21 and 64 who do not have dependent children.[4] Eighty-four percent of the 1,793 enrollees transferred into the demonstration from MinnesotaCare or GAMC.

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[2] A diagnosable mental, behavioral, or emotional disorder that meets the criteria specified in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and causes functional impairment that limits one or more major life activities.

[3] The third Minnesota public health care program is Medical Assistance (MA), the state's Medicaid program. MA enrollees are ineligible to participate in the demonstration.

[4] To qualify for MinnesotaCare, adults without children must have incomes below 200 percent of federal poverty level (FPL) and assets below $10,000 (for an individual) and $20,000 (for a couple). Adults with children must have incomes below 275 percent of FPL. To qualify for GAMC, adults must have incomes below 75 percent of FPL and assets below $1,000 for full medical benefits, and incomes between

1. Demonstration Benefits

The Minnesota DMIE program offers three main advantages for treatment group members relative to MinnesotaCare and GAMC: (1) enhanced medical services such as expanded dental coverage and medical transportation; (2) employment support services, such as a wellness employment navigator and employment training and support services; and (3) lower out-of-pocket costs due to premium subsidies, lower copayment requirements, and waiver of an annual cap on inpatient hospital costs. The demonstration benefits are summarized in Table V.1 and described individually below.

Table V.1. Comparison of Minnesota DMIE Benefits to MinnesotaCare and GAMC

Benefits	MinnesotaCare and GAMC	Minnesota DMIE
Health Benefits		
Medical services	Standard	Standard
Dental services[a]	Standard	Expanded
Mental health services	Standard	Standard
Other health services	None	Medical transportation, subsidized health club membership
Employment Supports	None	Wellness navigator, career counseling, EAP, and peer support group
Financial Assistance		
Premium	None for GAMC; up to $392/month for MinnesotaCare	None for those previously covered under GAMC; $10/month for all others
Copayment/ Coinsurance	$5-25 for certain outpatient services and 10% the billed amount for inpatient care under MinnesotaCare; $3-5 for certain outpatient services and $1,000 for hospital-only coverage under GAMC	$3 for some nonpreventative visits; $6 for nonemergency ER visits; $3 for eyeglasses; and $1-$3 on prescription drugs up to a maximum of $12 per month, excluding some mental health drugs
Annual limit	Up to $10,000 for GAMC; $10,000 for inpatient hospital stays for MinnesotaCare	None

Source: www.dhs.state.mn.us.

[a] Expanded dental benefits were added to the Minnesota health care programs in May 2007.

(continued)

75 percent and 175 percent of FPL and assets below $10,000 (for an individual) and $20,000 (for a couple) to qualify for hospital-only coverage.

Health Benefits. Participants in the Minnesota DMIE are eligible for the same medical and behavioral health care services available under MA.[5] The basic package includes a comprehensive set of inpatient and outpatient benefits, as well as coverage for dental and eye care, prescription drugs, mental health services, and substance abuse treatment.[6] The scope of benefits offered to treatment group participants initially went beyond the services available under MinnesotaCare and GAMC. However, in May 2007, the state legislature expanded the MinnesotaCare benefits package for single adults and provided access to additional services, including home visits for assistance with personal care and dental and eye coverage for single adults. As a result, the MinnesotaCare health benefits package became more closely aligned with that of the DMIE during the demonstration.

Transportation services are also available to treatment group participants if they do not have access to a car for reaching program services. Transportation services are covered under Medicaid, but are not included in the MinnesotaCare and GAMC benefits packages. In addition, treatment group participants are eligible for a subsidized health club membership if they use the facility at least eight times a month, a benefit not offered under other Minnesota public health care program enrollees.

Employment Supports. In addition to health care services, demonstration participants are eligible for employment support services that are not available with MinnesotaCare or GAMC. These services include ongoing personal contact with and support from a “wellness employment navigator” who is responsible for helping participants assess their health and employment needs, develop an individualized and client-centered wellness plan and monitor their progress toward achieving those goals, and access health and employment services. Treatment group enrollees are also eligible for a range of more formal employment training and support services such as job skills support, career counseling, work place visits, accommodation assessments, employer and coworker education, financial and budget assistance, 24-hour telephonic employee assistance program (EAP) access, and résumé and interview skill building. Finally, treatment group members are eligible to participate in an eight-week, peer-facilitated support group.

Financial Assistance. The Minnesota DMIE provides financial assistance to treatment group members through lower premiums and copayment and coinsurance requirements, and elimination of annual spending limits. Treatment group members (other than those who entered the demonstration from GAMC) were initially required to pay a sliding scale premium for intervention services based on their income level. Eligibility and enrollment

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[5] Treatment group members are enrolled in the state Medicaid program for the duration of the demonstration and identified through a different state eligibility code. Treatment group participants who entered the demonstration with alternative sources of health care coverage and lose that coverage during the demonstration are also enrolled in Minnesota Medicaid.

[6] For a full list of covered services for MA enrollees, please refer to www.dhs.state.mn.us.

staff continually had to recalculate and adjust premiums as enrollees experienced fluctuations in their work hours and compensation. In October 2007, the monthly premium was standardized to $10 for people who did not transfer into the demonstration from GAMC as a way of encouraging participation, preventing disenrollment, and reducing the administrative burden on DMIE eligibility and enrollment staff. (Members who entered the demonstration directly from GAMC are not required to pay a premium.) The demonstration charges copayments of $1 to $6 for some services, including certain nonpreventative office visits, nonemergency ER visits, eyeglasses, and non-mental health drugs The demonstration eliminates the annual spending limits under MinnesotaCare and GAMC.

Individuals assigned to the control group are ineligible for enhanced health and employment support services under the demonstration. Those who entered the demonstration from MinnesotaCare or GAMC continue to receive the standard benefits package available under their existing Minnesota public health care plan as long as they meet the eligibility requirements, and must continue paying any cost-sharing requirements imposed by those plans. However, control group members receive an incentive payment in the form of a $100 pre-paid VISA card for each completed survey. An additional $100 VISA card will be provided to control group members who remain in the study for the duration of the demonstration. Treatment group members receive a $25 stipend for each survey completed. The higher compensation for control group members is meant to incentivize them to participate in the demonstration since they do not receive any other benefits.

2. Demonstration Funding

Three sources of funds support the Minnesota DMIE program:

- State general funds, appropriated by the Minnesota Legislature, cover 50 percent of costs for all services available under the Medicaid state plan.
- Federal grant funds, awarded by CMS, cover DMIE administrative and operational costs, 50 percent of costs for all Medicaid-like services, and 100 percent of costs of all other health and employment support services.
- Enrollee contributions through $10 monthly member premiums for all treatment group members except those who transfer from GAMC.

B. ORGANIZATION AND ADMINISTRATION

DHS was designated by the state legislature to be the grantee of demonstration funds and bears overall responsibility for implementation and operation of the Minnesota DMIE. DHS also administers the three Minnesota public health care programs described above. The agency’s responsibilities under the demonstration include recruiting participants, processing applications, and determining eligibility as well as assigning enrollees to the treatment or control groups and coordinating the initial intake and clinical assessment. Finally, DHS is responsible for contracting with the demonstration managed care health plan, coordinating reimbursement, monitoring program spending, and overseeing the state's evaluation.

DHS contracted with Medica, a local health plan, to provide all health and employment support services under the demonstration. This includes medical care services to treatment group members through its network providers, and subcontracts with other entities to provide behavioral and dental health care services and employment-related support services under the demonstration. The partners in the DMIE provider network, their contracted services, and payment source and method are shown in Table V.2. The roles and responsibilities of the network provider agencies are discussed individually below.

1. Medica

DHS contracted with Medica to deliver medical services under the demonstration and coordinate a network of service providers to deliver dental, behavioral health, and employment support services to treatment group participants. Medica is also a contracted plan under MinnesotaCare and GAMC. Medica's longstanding involvement in Minnesota public health programs and broad provider network, including dental and behavioral health providers, made it a logical choice for coordinating the Minnesota DMIE delivery system. More than 96 percent of Minnesota providers participate in Medica's regional network, and many MinnesotaCare and GAMC members were already members.

Table V.2. Minnesota DMIE Provider Network, Services, and Payment Method

Provider	Services	Payment Method	Payment Source
Medica Healthcare	Medical services	PMPM[a]	Prepaid Medical Assistance Program[b]
Delta Dental	Dental services	PMPM[a]	Prepaid Medical[b] Assistance Program
United Behavioral Health	Behavioral health services	PMPM[a]	Prepaid Medical Assistance Program[b]
Minnesota Resource Center	Wellness and employment support navigator	Capitation	DMIE grant funds
	Employment and assistance support entity	Fee-for-service	DMIE grant funds
Optum	Employee assistance program	Capitation	DMIE grant funds
Consumer Survivor Network	Wellness recovery action plan	Fee-for-service	DMIE grant funds

[a] Per member per month.

[b] The Prepaid Medical Assistance Program (PMAP) is Minnesota's Medicaid capitated managed care program. The state's Medicaid Management Information System (MMIS) reimburses prepaid health care claims for demonstration enrollees. CMS will be billed for the federal share of these claims. The state will draw down the federal match from the federal grant account established for the demonstration. The state share is reimbursed from a separate state general fund account.

Medica was responsible for developing the provider network for the Minnesota DMIE. Other administrative duties performed by Medica include facilitating network provider training, developing informational brochures enrollee handbook, and assessment and referral protocols, conducting educational workshops for enrollees, paying for initial diagnostic assessments, and assuring the submission of required encounter and claims data. At the beginning of the demonstration, a key role for Medica was to review claims of existing MinnesotaCare and GAMC members to identify potential candidates. Medica appointed a liaison to oversee its duties and coordinate with DHS and the state evaluator.

2. United Behavioral Health

United Behavioral Health (UBH) is subcontracted to Medica to provide treatment group participants with the same mental health services it provides to other Minnesota health care program enrollees. In addition to providing behavioral health care services, UBH clinicians are expected to communicate with and refer patients to the wellness navigator for employment-related support services. UBH therapists also conduct an initial assessment of program applicants to verify that they meet the clinical conditions of eligibility. To avoid delays in accessing mental health services, UBH purchases up to two psychiatric visits one week in advance of scheduling appointments for demonstration participants. If a navigator determines that an urgent psychiatric visit is required, the navigator is usually able to schedule an appointment within two weeks.

3. Minnesota Resource Center

The Minnesota Resource Center (MRC), a major community partner for the DMIE, offers two employment support service programs to treatment group participants: Wellness and Employment Support Navigator (WEN) and Employment and Assistance Support Entity (EASE).

WEN. Immediately after enrollment in the demonstration, treatment group members are assigned a personal navigator and required to meet with this person to complete an initial intake and assessment. The assessment usually takes between one and two hours and may be split into two meetings to avoid overwhelming the participant with information. The WEN serves as the primary contact for treatment group participants for the duration of the demonstration.[7]

After completing the assessment, participants meet with their navigators to develop a plan that identifies their personal health and employment goals for the coming year. The navigators also act as an intermediary between the participant and their providers. Navigators are authorized to contact providers to discuss issues related to their clients. Outcomes of the

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[7] For a more complete discussion of the roles and responsibilities of WENs, see The Lewin Group 2008b.

navigator-client interactions include referrals to the provider network for services, to other organizations or providers in the community, and to DHS. Navigators also provide supportive consultation on an ongoing basis. After the initial assessment and development of the employment plan, navigators try to maintain contact with their clients on a monthly basis to monitor progress and address issues as they arise.

EASE. This program provides traditional employment training and support services on an as-needed basis. The program includes three components: (1) employer-focused support, including on-site workplace accommodation assessments, assistance with disclosing mental illness to employers, and general employer education; (2) career counseling, including job skills support, career advice, resume assistance, and interviewing guidance; and (3) personal support, including family education.

4. Optum

Optum operates an EAP for treatment group participants, providing telephonic work-life support to treatment group members for an array of issues, including financial planning and debt management, legal consultation, stress management, coping strategies for workplace conflict, and grief counseling. In the spring of 2008, Optum began offering in-person workshops for participants on these topics.

5. Mental Health Consumer Survivor Network of Minnesota

The Mental Health Consumer Survivor Network of Minnesota (CSN) provides ongoing support, information, and resources to consumers, families, and providers in the state. Treatment group members are eligible to participate in CSN's Wellness Recovery Action Plan (WRAP), an eight-week wellness and peer-support program conducted by certified group facilitators. To accommodate the schedule of working adults in the DMIE, CSN schedules evening classes and allows participants to take classes occasionally rather than participating in the full course and has conducted two group WRAP sessions for DMIE participants; participants are able to meet with facilitators individually as well.

6. The Lewin Group, Inc.

DHS has a contract with The Lewin Group to conduct an independent evaluation of the Minnesota DMIE.[8] The state evaluation team, led by a principal investigator and a project coordinator, are conducting an outcome and process evaluation using quantitative and

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[8] In June 2007, Ingenix, a subsidiary of United Health Group (the parent agency for two provider organizations—UBH and Optum—participating in the Minnesota DMIE network), acquired the Lewin Group. To address potential conflicts of interest, Lewin decided, with approval from DHS, to subcontract with JB Management Solutions for the qualitative data collection and analysis involving the provider network. The coinvestigator for the evaluation changed her affiliation from The Lewin Group to JB Management Solutions and is in charge of managing primary data collection involving the provider network.

qualitative data. The evaluators also work with administrators to ensure that the demonstration remains adherent to the experimental design of the DMIE program.

The state evaluators are also responsible for conducting the annual survey of program enrollees and using it and other sources of data to compile the UDS that supports the national evaluation. Administrative data sources for the outcome and process evaluations include the (1) participant survey, which is completed annually by all demonstration participants and records demographic characteristics and other self-reported information; (2) DMIE central database, which tracks enrollment data and information on outreach and recruitment activities; (3) MRC online data manager, which stores the employment plans and initial assessments collected by the wellness navigators; (4) employment services usage data; (5) MMIS encounter claims data; and (6) income and wage data from the Minnesota Department of Employment and Economic Development (DEED).

The Lewin Group evaluation staff completed construction of the baseline database and used the information, together with qualitative interviews with program staff and navigators, to prepare two interim reports for the state. The first report, submitted on July 31, 2008, examines the baseline characteristics of the DMIE enrollees and analyzes the use of services among program participants during the first year of the demonstration.[9] The second report, submitted on August 8, 2008, describes the roles and responsibilities of the navigators as the core intervention providers in the Minnesota DMIE (The Lewin Group 2008a, The Lewin Group 2008b). Using a partial cohort of participants, the state evaluators presented early evidence of positive impacts on outcomes, including improved functional status, lower job turnover, and fewer disability applications (The Lewin Group 2008c).

7. Minnesota Department of Administration

During the planning phase of the demonstration, the Management, Analysis, and Development Division (MAD) of the Minnesota Department of Administration was contracted to evaluate the existing business processes that could be used to serve demonstration enrollees and to assist in the development of the operational protocol. MAD also assisted with project management, documentation, and strategic planning. MAD staff contributed to the development of (1) a capacity-building training program; (2) project charter; (3) core business processes; and (4) a strategic work and implementation plan. In addition, MAD assisted with developing, facilitating, and maintaining DMIE advisory and working groups during the planning phase, including a DMIE champions group; a working group of DHS managers, supervisors, and professional staff; external advisory groups; and a peer review team.

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[9] Because enrollment occurred on a rolling basis from January 2007 to July/August 2008, results from the second annual survey are not presented in this report. Comparisons of the first and second annual surveys will be presented in the next evaluation report, due in January 2009.

8. DMIE Stakeholder Work Group

A DMIE stakeholder work group was formed in 2006 to provide a coordinated decision making and quality review function for program activities related to both operations and evaluation. Work group members included the DMIE director, the director of the Adult Mental Health Division within DHS, the DMIE liaison at Medica, the director of evaluation, the DMIE operational supervisor and the evaluation team coordinator. Soon after beginning the demonstration, the work group brought in leadership from each of the subcontracted providers. The purpose of the group was to ensure ongoing communication among key stakeholders as each component of the program was initiated or changes in project design were made. The meetings also provided a forum to share information about the target population, develop consensus around key aspects of the project, and identify strategies for addressing program challenges. In addition, the leadership meetings gave Medica an opportunity to evaluate its resource and staffing needs for the program and to guarantee there was sufficient capacity to provide services.

C. IMPLEMENTATION PRACTICES

In this section, we describe Minnesota's outreach and recruitment strategy, enrollment processes, and randomization procedures. Despite a slow start to enrollment, the state made significant changes in its recruitment and enrollment strategies to meet revised enrollment targets.

1. Outreach and Recruitment Strategies

DHS recruited people for the demonstration mainly by mailing application packets to candidates identified from a list based on a review of MinnesotaCare and GAMC claims data by Medica. Eligible participants must have been enrolled in either MinnesotaCare or GAMC for two consecutive months prior to the demonstration and had at least one diagnostic code for severe mental illness. In addition, UBH offered a disease management program for patients with depression and was able to scan its client database for potential candidates as well.

In addition to the packets, DHS sought direct referrals through community mental health centers and clinicians and distributed promotional material at state disability conferences.[10] Medica assisted in this effort by informing its providers about the DMIE and training staff at network clinics to make referrals to the demonstration. A small number of people were recruited through direct referrals from mental health providers. However, direct referral

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[10] DHS staff contacted adult mental health case management representatives from each of the seven targeted counties to provide information about the DMIE and offer recruitment packets and eligibility checklists for county staff to distribute to potentially eligible individuals. Staff members report that this effort was not effective, possibly because county workers with high case loads were already overburdened and did not have the additional time to identify clients who may have been eligible.

proved to be a less effective recruitment strategy than the review of administrative records because patients in care were less likely to be working and more likely to be disabled as a result of their condition.

Reacting to lower than expected responses to their recruitment efforts, the DMIE program staff modified their strategy to increase the potential pool of candidates. Minnesota raised the maximum age requirement from 57 to 60 years and expanded the demonstration to two additional counties. The state also lowered the monthly premium to enrollees who entered the treatment group from plans other than GAMC to $10 as a way of increasing both enrollment and retention. In August 2007, DHS also implemented a “Family and Friends” recruitment strategy. Family and friends of new enrollees were encouraged to call the DHS eligibility staff to request application materials. Finally, in November 2007, the state opened DMIE enrollment to members of Medica’s private health care plans.

2. Screening and Enrollment Processes

Program staff prepared an application packet for individuals who the state identified based on DHS claims data or were self-identified, having learned about the demonstration from other sources. Interested individuals were requested to return the completed form to DHS. Designated DMIE eligibility and enrollment staff, who had experience with MinnesotaCare, were available to speak with individuals who telephoned DHS to inquire about the demonstration. DMIE eligibility staff also went through crisis training, and learned how to link applicants in crisis with intervention services.

DMIE eligibility and enrollment staff reviewed all returned applications and mailed a follow-up packet to individuals who met initial eligibility requirements. The second packet included forms for release of information, consent, and a provider assessment. Applicants were asked to provide written proof of employment, in the form of a pay stub, a statement from their employer regarding employee wages, IRS Form 1040 Schedule SE, quarterly or annual federal income tax returns, or business forms indicating self-employment.[11] Applicants who met the initial eligibility requirements were required to participate in a screening conducted by UBH clinicians to verify a diagnosis of severe mental illness and to obtain a standardized functional assessment.

Despite these efforts, initial enrollment was slower than expected for several reasons. First, the state acknowledged that it did not have enough time to adequately pilot test and revise its recruitment and enrollment strategy. Second, Medica and UBH did not have enough

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[11] DMIE operations staff used the DHS health care information system to verify that an individual was not enrolled in Medicaid or Minnesota’s Medicaid buy-in program for the working disabled, had not been referred for a disability determination through the State Medicaid Review Team (SMRT) process, and had not been certified as disabled by SSA. SMRT is a unit at DHS that determines disability in consultation with medical professionals appointed by the commissioner.

trained clinical staff to conduct diagnostic assessments in a timely manner. Given these capacity constraints, the state had difficulty completing the clinical assessments during the first few months of the demonstration. Third, DHS did not follow up sufficiently with candidates who did not respond to the mailing. Fourth, the enrollment process took a long time. DHS asked for proof of eligibility in the application packet that was mailed to potential applicants. Often, clients did not provide the requested documents and DHS staff was required to follow up once or several times to procure the paperwork necessary to determine program eligibility.

After discussions with other DMIE states, Minnesota began calling and sending reminder letters to potential candidates until they either applied for or declined to participate. DHS sent two follow-up packets of introductory material to candidates who did not respond to the initial mailings. Three attempts were then made by Medica staff to connect with each nonrespondent by phone; those who were not reached received a follow-up letter.[12] Staff also sent follow-up letters to applicants who were originally denied because they did not meet the work requirements in case their employment status changed.[13] The average length of time between application and enrollment was about 44 days between January and March 2007, the first quarter of the demonstration. Between March and October 2008, candidates were enrolled in the demonstration within 31 days, on average, of receipt of application by the state.

Minnesota originally hoped to enroll 2,000 program participants. However, by the end of 2007, the state had enrolled only 476 individuals, less than one-quarter of its initial enrollment target. In April 2008, the state received approval from CMS to revise its enrollment target to 1,500. Reasons given include lack of staff capacity to meet its original enrollment target by the end of the enrollment period and depletion of administrative resources and funds for incentive payments. In the end, the Minnesota DMIE program needed to complete three rounds of recruitment to reach its revised enrollment target. Most of the enrollment occurred in the first two quarters of 2008, only after the state expanded the pool of potentially eligible candidates, lowered the monthly premiums, strengthened its

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[12] Expanding the pool of potential candidates and implementing more intensive follow up to nonrespondents required shifting staff resources internally, hiring additional outreach and recruitment staff, and making use of an unpaid intern. It also required DHS to clarify the scope, role, and responsibilities of individual DMIE staff. In December 2007, Medica employees took responsibility for conducting follow-up calls to assist the DHS eligibility and enrollment staff.

[13] Clients who were originally denied for not working were matched against wage files from DEED to determine if they had become employed. Clients who had wage information were mailed a letter informing them that they could reapply for the DMIE without having to submit a second application if they were employed. The letter also informed them that they were eligible to receive a $20 incentive bonus if they completed the application process. A new letter was also mailed to clients who had been denied for not having submitted the clinical assessment, also with a promise of a $20 incentive payment, in an effort to encourage them to complete the application process.

recruitment protocols, expanded its capacity to conduct assessments, and streamlined the enrollment process.

3. Randomization Procedures

Applicants who were approved for the Minnesota DMIE were randomized into two groups: treatment and control based on a 3:1 ratio. Under its original enrollment target, the state planned on randomizing 1,500 people into the treatment group and 500 into the control group. After the state lowered its enrollment target, it maintained a 3:1 ratio and agreed to assign 1,125 participants into the treatment group and 375 into the control group. The state also created four sampling strata based on participant's age, functional status, location of residence, and income.

Enrollees assigned to the treatment group were required to select Medica as their health plan. Individuals in the treatment group then received a welcome packet that explained the health and employment support services available to them, as well as instructions for accessing those intervention services. Enrollees assigned to the control group received a letter informing them of their assignment to the stipend-only group.

4. Early Lessons Learned from Program Implementation

Minnesota offers several important lessons for other states considering implementing similar health and employment support programs for working adults with potentially disabling conditions. By early 2008, the state of Minnesota eventually was successful in implementing its DMIE program for working adults with severe mental illness. The state strategically designed the demonstration to build on existing programs and network infrastructure. Enrollees were recruited from existing public health insurance programs for low-income adults who did not qualify for Medicaid and the state was able to identify potential candidates using readily-available administrative claims data on existing enrollees in its public health care programs who had severe mental illness. The benefits of transferring into the DMIE from existing public health programs were clear to participants and included a monthly premium subsidy, expanded services, and employment supports.

The state contracted with one managed care organization, Medica, for the delivery of all demonstration-related services. In addition to reviewing its member claims for potential enrollees, Medica was able to use its existing provider network to support the demonstration in several important ways. First, it educated and trained its network mental health care providers to identify and recruit participants for the demonstration through referrals. Second, it expedited the enrollment process by tapping into its network of mental health care providers to complete the clinical assessments. Third, Medica was able to use its existing provider network to deliver all covered medical, mental, and dental health care services. By assuming responsibility for developing contracts with service providers in all demonstration counties, Medica minimized the administrative burden on the state and allowed program staff to focus on other components, such as strategic planning, stakeholder buy-in, recruitment and enrollment, program spending and budget oversight, and evaluation.

The Minnesota DMIE also benefited from a strong management structure and planning process. Early in the planning phase, the state committed administration resources to evaluate business practices and assess its existing capacity for implementing the program, as well as to develop a strategic work plan for addressing challenges. An internal team was formed to create a comprehensive and coordinated plan to implement the DMIE across all policy, eligibility, purchasing, and administrative systems, and dedicated staff were hired to implement the plan. Finally, a manager work group was established, with representation from all public and private partners, to provide an on-going forum for sharing information about the demonstration, developing consensus on design changes, and educating members about the health and employment needs of the target population.

D. DMIE ENROLLMENT AND PARTICIPANT CHARACTERISTICS

This section presents enrollment trends and baseline characteristics of the treatment and control groups in the Minnesota DMIE. The purpose of this section is to describe DMIE enrollees and test for differences in random assignment.[14]

1. Enrollment Trends and Attrition

After experiencing a slow start during the first year of the demonstration, enrollment in the Minnesota DMIE began to increase after the pool of potentially eligible candidates was expanded in the fall of 2007 (see Figure V.1). By May 2008, the state reached its revised enrollment target of 1,125 participants for the treatment group and almost achieved its target of 375 control group members. As of September 30, 2008, the Minnesota DMIE program had enrolled 1,493 treatment group members and 300 control group members, for a total enrollment of 1,793.[15]

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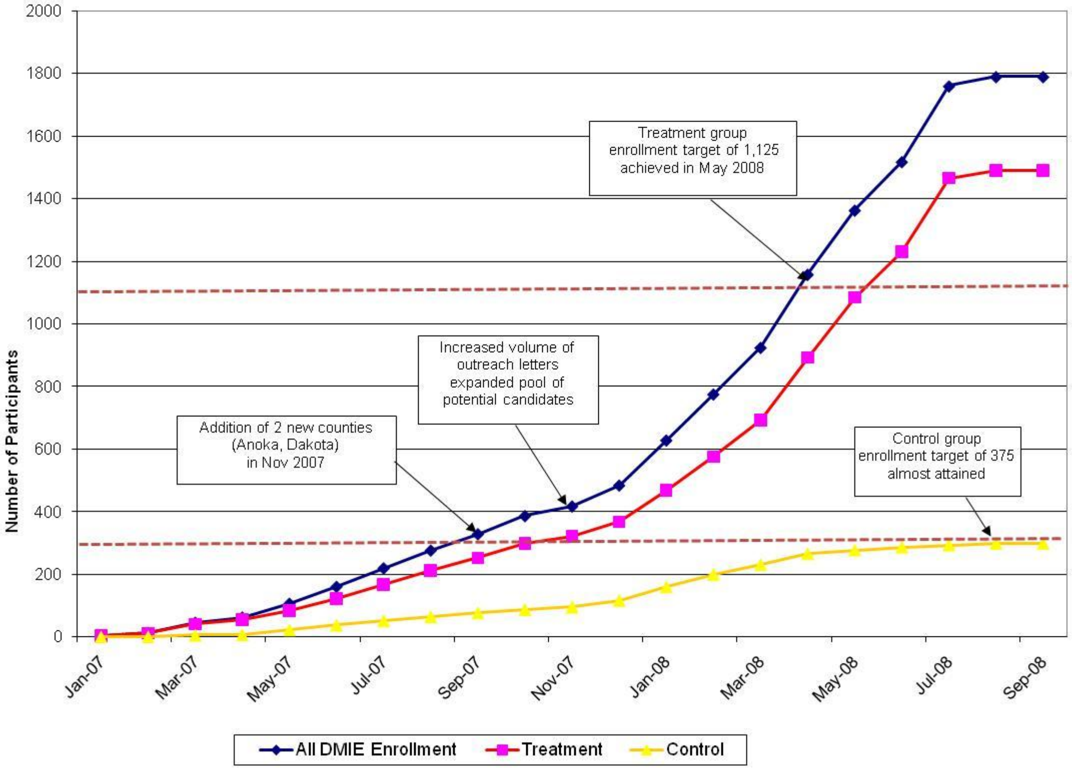
[14] We will adjust for any differences between treatment and control groups that occur by chance when generating site impacts in our final analysis.

[15] Included in these enrollment figures are two treatment group participants who were permanently withdrawn from the study on the basis of incarceration and two control group members who refused to participate in the study after randomization.

Figure V.1. Minnesota DMIE Cumulative Enrollment Trend, January 2007–September 2008



Between January 1, 2007, and September 30, 2008, when enrollment ended, 175 treatment group members (11.7 percent) and 2 control group members (0.7 percent) disenrolled from the program (see Table V.3). Disenrollment may occur if a participant (1) exhausts the six-month grace period for loss of employment, (2) voluntarily chooses to withdraw, (3) applies for disability and/or enrolls in Medicaid, (4) moves from demonstration counties, (5) becomes incarcerated, (6) seeks care for an out-of-network provider, (7) fails to pay the monthly premium at least twice, or (8) dies.[16] Only two of the treatment group disenrollees (those who were incarcerated) and both of the control group disenrollees withdrew from the program permanently (that is, the state no longer has any contact with them). The other disenrollees were allowed to remain in the demonstration even though they temporarily stopped receiving services. However, to stop the "churning" of participants in and out of the program, the state enacted a new policy in October 2008 that prohibits

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[16] Enrollees are sent two letters regarding their pending loss of eligibility by DMIE staff before closure. The WENs are also notified of enrollees whose eligibility is at risk. If any participants lose their job during the course of the demonstration, they will continue to receive health care services and employment supports up to six months while they seek new employment.

participants who withdraw voluntarily from reenrolling in the demonstration for intervention services.[17]

Table V.3. Reasons for Disenrollment from the Minnesota DMIE Program

	Treatment (n=1,493)		Control (n=300)		Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Moved out of state	14	0.9	0	0.0	14	7.9
Failed to pay initial premium	23	1.5	0	0.0	23	13.0
Failed to pay ongoing premium	49	3.3	0	0.0	49	27.7
Chose other mental health provider	19	1.3	0	0.0	19	10.7
Obtained other health insurance	6	0.4	0	0.0	6	3.4
Pursued disability	26	1.7	0	0.0	26	14.7
Not employed	20	1.3	0	0.0	20	11.3
Failed to complete renewal	2	0.1	0	0.0	2	1.1
Failed to complete assessment	11	0.7	0	0.0	11	6.2
Became incarcerated	2	0.1	0	0.0	2	1.1
Refused to participate	3	0.2	2	0.7	5	2.8
Total	175	11.7	2	0.7	177	100.0

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Percents shown in treatment and control columns are based on total DMIE enrollees in each group. Percent shown in total column is based on total disenrollees. The two treatment group participants who disenrolled because of incarceration and the two control group members who disenrolled were permanently withdrawn from the study. Minnesota enacted a policy on October 1, 2008, that prohibits DMIE participants who disenroll from reentering the demonstration, though the state continues to collect follow-up survey data on these disenrollees.

2. Baseline Characteristics

Demographic Characteristics

Table V.4 presents the baseline demographic characteristics of Minnesota DMIE participants overall and by group assignment. The mean age of program participants is 39 years, with more than 40 percent of all enrollees aged 34 years and younger, and more than 10 percent less than 25 years of age. Roughly 60 percent of all program participants are

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[17] DHS will continue to attempt to collect survey data from withdrawn participants, even though they no longer are eligible to receive intervention services.

Table V.4. Demographic Characteristics of Minnesota DMIE Participants

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Age (percent)			
Less than 25 years	11.6	12.3	11.7
25–34 years	29.2	33.0	29.8
35–44 years	23.0	22.7	23.0
45–54 years	26.9	23.3	26.3
55 years or older	9.3	8.7	9.2
Missing	0.0	0.0	0.0
Gender (percent)			
Female	60.7	62.0	60.9
Male	39.0	37.7	38.8
Missing	0.3	0.3	0.3
Race/Ethnicity (percent)			
White and non-Hispanic	59.3	71.3	61.3
Black or African American	5.9	9.0	6.4
Hispanic	2.3	3.3	2.5
Asian	0.5	0.7	0.6
Other race	1.5	2.9	1.7
More than one race	2.3	2.7	2.4
Missing	28.1	10.0	25.0
Marital Status (percent)			
Married	19.8	24.7	20.6
Widowed, divorced, separated	26.2	25.9	26.1
Never married	44.7	40.0	43.9
Refused	1.2	0.7	1.1
Missing or unknown	8.0	8.7	8.1
Education (percent)			
Less than high school	6.3	6.0	6.2
High school graduate or GED	24.0	25.0	24.2
Some college or two-year degree	42.4	42.3	42.4
Four-year college graduate	12.4	10.7	12.1
More than four-year college graduate	5.7	7.3	6.0
Refused	1.1	0.0	0.9
Missing or unknown	8.0	8.7	8.1

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Information on age, gender, and race/ethnicity obtained from application form. Figures include 146 enrollees with missing baseline survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Differences between treatment and control group members are not statistically significant at the five percent level.

female and approximately 40 percent have never been married. The majority of participants are white (61.3 percent); only 6 percent are black and less than 3 percent are Hispanic. Over 60 percent of all enrollees have some education beyond high school; 12 percent have a four-year college degree and 6 percent have post-graduate education. The demographic characteristics of DMIE enrollees are consistent with expectations of the target population. The observed differences in the demographic characteristics between the treatment and control groups are not statistically significant, attesting to the success of the randomization process.

Mental Health Diagnoses

Table V.5 shows the mental health diagnoses of the Minnesota DMIE population. The diagnostic conditions were obtained from a diagnostic assessment each client underwent to determine program eligibility. Given the target population of the Minnesota DMIE program, all participants suffer from a serious mental disorder. Roughly half of both treatment and control group participants have severe mental illness. Most of these have an affective psychosis, defined as manic disorder, major depressive disorder, or bipolar disorder. Only 1.7 percent of treatment group members and less than one percent of control group members suffer from schizophrenia. The other half of enrollees experience some other type of mental disorder including neurotic disorder (anxiety, obsessive-compulsive, phobic, and fatigue), adjustment disorder, personality disorder, alcohol- or drug-induced mental disorder, and attention deficit disorder. One-third of all program participants have been diagnosed with only one severe mental illness; two-thirds of the enrollees have multiple mental disorders. These characteristics are consistent with the expectations of the target population. Differences in type and number of mental disorder between treatment and control groups were not statistically significant.

Employment and Income Characteristics

Table V.6 presents baseline occupation, employment, and income characteristics of the Minnesota DMIE participants. The adult workers are employed in a variety of industries, but the majority work in education and health care (20.4 percent); trade, transportation, and utilities (18.5 percent); leisure and hospitality (18.6 percent); and professional services (10.5 percent). Roughly half of program participants reported being engaged in stable, full-time employment at the time of enrollment. However, almost 40 percent experienced at least one job change in the 12 months prior to enrollment and nearly half of these had two or more job changes. Most participants (87.4 percent) report working full time during the four weeks prior to enrollment in the demonstration. But almost 5 percent report not working at all during the four-week period before completing the baseline survey.[18] Despite near full-time

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[18] Employment was a condition of eligibility and all clients were verified as employed at the time of randomization. Those who report not working at the time of enrollment likely lost their job after joining the demonstration but before completing the baseline survey.

employment among program enrollees, information available from the state's unemployment insurance files (based on data submitted by employers), indicate that two-thirds of waged employees had less than $20,000 in personal earnings during the 12 months prior to enrollment.[19] Very few enrollees had earnings above $40,000. These characteristics are consistent with the target population. Differences in employment and income between treatment and control groups were not statistically significant.

Table V.5. Type and Number of Major Diagnostic Conditions of Minnesota DMIE Participants

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Type of Diagnostic Conditions (percent)			
Severe mental illness	49.6	50.0	49.7
Other mental disorders	46.5	47.0	46.6
All other conditions	4.0	3.0	3.8
Number of Conditions (percent)			
One condition	33.2	36.3	33.7
Two conditions	66.8	63.7	66.3
Missing	0.1	0.0	0.1

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Figures include 177 enrollees who subsequently withdrew from the demonstration. Severe mental illness includes schizophrenia and other psychotic disorders (based on ICD-9 codes between 295.0 and 295.9) and major affective disorders (based on ICD-9 codes between 296.0 and 296.9). Other mental disorders include depressive, anxiety, bipolar, adjustment, substance, and attention deficit disorders (based on ICD-9 codes 290.0-294.9, 297.0-302.9, 305.0-315.1, 315.4-316.9, and 319.5). If individual has multiple disorders, condition classification based on principal diagnosis only. Diagnostic counts indicate a person had at least 1 condition within a given category. Differences between treatment and control group members are not statistically significant at the five percent level.

Public Program Participation (in Past Two Calendar Years)

Given the state's recruitment strategy, most DMIE enrollees participated in a Minnesota public health care program (mainly MinnesotaCare or GAMC) before entering the demonstration (see Table V.7). Only 15 percent of enrollees had not participated in a Minnesota public health care program during the two years prior to enrollment in the DMIE. Relatively few participants had received other forms of public assistance prior to enrollment.

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[19] The federal poverty level in 2008 for a family of four in Minnesota was $21,200.

Table V.6. Employment and Income Characteristics of Minnesota DMIE Participants

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Employment Industry (percent)			
Natural resources and mining	0.5	0.0	0.4
Construction	3.3	2.0	3.1
Manufacturing	5.3	5.0	5.2
Trade, transportation, utilities	19.0	16.0	18.5
Information services	0.7	0.7	0.7
Financial services	3.6	3.7	3.6
Professional services	9.8	14.3	10.5
Education and health care	20.4	20.7	20.4
Leisure and hospitality	18.1	21.3	18.6
Other services	7.0	6.0	6.8
Public administration	0.8	0.0	0.7
Unclassified	0.9	0.7	0.8
Missing or unknown	10.8	9.7	10.6
Number of Job Changes (in past year) (percent)			
None	50.2	43.3	49.0
One job change	18.2	22.7	18.9
Two job changes	8.6	9.0	8.7
Three job changes	6.7	7.3	6.8
Four+ job changes	4.4	5.0	4.5
Missing or unknown	11.9	12.7	12.0
Hours Worked Monthly (percent)			
Less than 40 hours	5.2	7.3	5.6
40 to 79	0.7	0.7	0.7
80 to 119	0.9	0.7	0.9
120 to 159	1.0	1.3	1.1
160+ hours	87.6	86.3	87.4
Missing or unknown	4.6	3.7	4.4
Personal Earnings (in past year) (percent)			
Less than $10,000	32.4	34.7	32.8
$10,000 to $19,999	33.3	38.3	34.1
$20,000 to $29,999	16.5	14.0	16.1
$30,000 to $39,999	5.3	3.0	4.9
$40,000 to $74,999	1.2	1.0	1.2
$75,000 or more	0.1	0.0	0.1
Missing or unknown	11.3	9.0	10.9

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Figures include 146 enrollees with missing survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Differences between treatment and control group members are not statistically significant at the five percent level.

Table V.7. Public Program Participation of Minnesota DMIE Participants in the Past Two Years

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Minnesota Public Health Care Programs (percent)			
Yes	84.0	88.7	84.8
No	3.5	0.0	3.0
Missing	12.5	11.3	12.3
Food Stamps (percent)			
Yes	20.2	23.7	20.8
No	69.6	67.0	69.2
Missing	10.2	9.3	10.0
Section 8 or Subsidized Housing (percent)			
Yes	8.4	8.0	8.3
No	80.6	82.3	80.9
Missing	11.0	9.7	10.8
Vocational Rehabilitation (percent)			
Yes	6.6	5.0	6.4
No	82.5	85.0	82.9
Missing	10.9	10.0	10.8
Temporary Assistance for Needy Families (TANF) (percent)			
Yes	2.7	3.0	2.8
No	86.3	86.7	86.3
Missing	11.0	10.3	10.9

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Figures include 146 enrollees with missing baseline survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Minnesota public health care programs include MinnesotaCare, GAMC, and Medicaid. Participation in Minnesota public health care programs is based on a review of state enrollment files during the two years before enrollment in the Minnesota DMIE. Participation in TANF, food stamps, public housing, and vocational rehabilitation programs is based on the individual's recollection of participation during the two years before enrollment in the DMIE.

The difference in enrollment in a Minnesota public health care program was significant at the one percent level. All other differences in public assistance between treatment and control groups are not statistically significant at the five percent level.

Twenty percent had received food stamps, 8 percent had received Section 8 or subsidized public housing, 6 percent had received vocational training, and less than 3 percent had received temporary assistance for needy families. The difference in enrollment in a Minnesota public health care program between treatment and control groups was significant at the one percent level; all other differences in public program participation between the two groups were not statistically significant.

Self-Reported Health Care Service Use

Information on enrollees' access to mental, medical, dental, and vision services during the 12 months prior to enrollment in the Minnesota DMIE program is shown in Table V.8. Because the majority of DMIE participants were recruited directly from existing public health insurance programs, most report accessing health care services at least once during the preceding 12 months and many report having multiple visits, particularly for mental health care services. Nearly 70 percent of all enrollees report having at least one mental health care visit during the 12 months before entering the demonstration, and nearly one-third (31.6 percent) report seeing a mental health care provider five or more times. More than 60 percent of all enrollees report having at least one routine primary care visit during the 12-month period before the demonstration. Differences in prior service use between treatment and control groups were not significant.

E. PROGRAM SERVICE USE AND EXPENDITURES

This section presents program service use and expenditures by type of service for the first 21 months of the Minnesota DMIE (January 1, 2007 through September 30, 2008). Program service use and expenditures are limited to treatment group members only, and may underrepresent actual use and cost during this period due to lags in submission of encounter data from providers.

1. Program Health Care Services

Table V.9 shows the distribution of health care expenditures incurred under the demonstration by type of service from January 1, 2007 to September 30, 2008. The Minnesota DMIE has incurred nearly $2 million in total program-related health care service costs during the first 21 months of the demonstration. More than half (54.8 percent) of all health care-related program expenditures are attributable to prescription drugs—a large proportion for medications to treat mental illness. However, data on the types of prescriptions purchased are not available for this report. Hospital inpatient and dental services each accounts for an additional 10 percent of total health service expenditures under the demonstration. Physician, laboratory, and x-ray, and mental health services each consumed another 6 percent of total program health spending. The average treatment group member incurred a total of $750 in program-related health care costs during the third quarter of 2008.

Table V.8. Self-Reported Health Care Service Use of Minnesota DMIE Participants in the 12 Months Before Enrolling in the Demonstration

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Mental Health Visit (percent)			
0 visits	20.6	16.0	19.8
1-2 visits	27.0	29.3	27.4
3-4 visits	9.0	11.0	9.4
5-10 visits	14.9	15.3	14.9
11-20 visits	9.7	10.3	9.8
>20 visits	7.0	6.3	6.9
Unknown or Missing	11.8	11.7	11.8
Routine Primary Care Visits (percent)			
0 visits	25.7	23.7	25.4
1-2 visits	35.8	38.7	36.3
3-4 visits	11.3	13.0	11.5
5-10 visits	8.6	9.0	8.6
11-20 visits	4.0	2.3	3.7
>20 visits	1.1	2.0	1.2
Unknown or missing	13.5	11.3	13.2
Vision or Dental Visits (percent)			
0 visits	40.9	43.0	41.3
1-2 visits	38.6	36.3	38.3
3-4 visits	6.8	5.3	6.6
5-10 visits	3.2	3.7	3.3
11-20 visits	0.1	0.3	0.2
>20 visits	0.0	0.0	0.0
Unknown or missing	10.2	11.3	10.4

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: The number of visits is a self-reported measure based on the individual's own recollection of visits during the 12 months before enrollment in the Minnesota DMIE. Figures include 146 enrollees with missing baseline survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Differences between treatment and control group members are not statistically significant at the five percent level.

Table V.9 also shows the proportion of Minnesota DMIE treatment group participants who accessed each type of health care service during the third quarter of 2008. Because of the way in which the data are reported, unduplicated counts of users are only available on a quarterly basis. There were 1,392 adults actively enrolled in the treatment group and receiving services at the end of the third quarter of 2008. Of these individuals, 86 percent purchased prescription medications, nearly half (48.7 percent) had a physician visit, and nearly one-third (31.6 percent) had a lab test or x-ray. Although mental health services accounted for less than 6 percent, and substance abuse treatment accounted for less than one percent of expenditures, during the third quarter of 2008 more than one-quarter (28.3 percent) of treatment group participants had saw a mental health provider and 10 percent sought treatment for substance abuse. Similarly, while less than 10 percent of total health-related program expenditures were for dental services, over one quarter (26.9 percent) of treatment group members received dental care. Conversely, only 2 percent of treatment group participants received inpatient hospital care, but it accounted for more than 10 percent of total expenditures.

Table V.9. Minnesota DMIE Health Care Service Use and Expenditures, by Type of Service

	Total Expenditures[a]	Percent of Total Expenditures[a]	Percent of Treatment Group Members Using Services[b]
Prescription drugs	$1,095,243	54.8	85.9
Physician	122,673	6.1	48.7
Laboratory and x-ray	130,969	6.6	31.6
Mental health	116,957	5.8	28.3
Dental	180,128	9.0	26.9
Substance abuse treatment	15,339	0.8	10.1
Outpatient hospital	66,922	3.3	3.9
Outpatient clinic or center	16,690	0.8	1.1
Vision/hearing	6,586	0.3	5.2
Hospital emergency room	30,250	1.5	3.2
Hospital inpatient	207,666	10.4	2.0
Transportation	10,015	0.5	1.0
Total	$1,999,439	100.0	n/a

Source: Minnesota DMIE quarterly reports from January 1, 2007, through September 30, 2008.

[a] Data for prescription drug expenditures were provided by the pharmacy benefits management company of the managed care organization contracted by the state of Minnesota. Prescription drug expenditures do not include expenditures from pharmacy encounter claims. Expenditure figures include spending on health care services from the start of the program in January 2007 through September 30, 2008.

[b] Percent of treatment group participants using services based on 2008 third quarter only (July 1–September 30, 2008).

2. Program Employment Support Services

Table V.10 shows the number of treatment group participants accessing program-related employment support services by type of service and quarter. During the most recent quarter for which we have data (July 1–September 30, 2008), 51 of the 1,392 treatment group enrollees had telephone contact with an Optum counselor and 11 attended one of three in-person workshops sponsored by Optum under the demonstration. A total of 148 treatment group participants accessed employment support services offered through the EASE program at an average rate of nearly five encounters per quarter, and 6 enrollees participated in the peer-facilitated WRAP program. Part of the reason for the low utilization rate for employment-related services is late enrollment in the DMIE. According to the state's independent evaluators, those who enrolled during the first six months of 2008 had not yet had time to make full use of the employment supports at the time of data reporting.

Table V.10. Minnesota DMIE Enrollee Employment Support Service Use by Type of Service

	Number of Enrollees Using Service	Total Number of Visits	Average Number of Visits in Quarter
Optum			
Telephone contact	51	86	1.7
In-person workshops	11	12	1.0
EASE	148	692	4.7
WRAP	6	6	1
Total users or visits	216	796	3.7
Total number of enrollees	1,392	n/a	n/a
Percent of enrollees using services	15.5	n/a	n/a

Source: Minnesota DMIE quarterly reports from July 1, 2008, through September 30, 2008.

Notes: Figures based on individuals enrolled in treatment group only.
n/a = not applicable.

F. BASELINE MEASURES OF HEALTH, EARNINGS, AND SSA BENEFITS

In this section, we present baseline measures of outcomes, including health status, earnings and employment, and SSI or SSDI enrollment. Health outcomes based on self-reported data; earnings, employment, and SSI/SSDI outcomes are based on SSA administrative data. Baseline outcome characteristics are presented to further describe the target population and assess the validity of the randomization process.[20]

1. Health Status

As shown in Table V.11, relatively few participants characterized their physical and mental health as very good or excellent. Twenty-one percent said their physical health was

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[20] Observed differences that occur by chance between treatment and control groups will be controlled when estimating program effects in our final analysis.

very good or excellent, while only 11 percent describe their mental health that way. Nearly 30 percent of enrollees rate their physical health upon entering the demonstration as fair or poor and almost half (49.1 percent) use those terms to describe their mental health status at the time of enrollment.

Similar results are found when using the short form- (SF) 12 score.[21] As shown above in Table V.11, Minnesota DMIE enrollees are roughly equally divided on the physical health SF-12 score; 45 percent fall below 50 and 42 percent are above. However, over three-quarters (77.8 percent) of all enrollees have a mental health SF-12 score below 50, over half (58.0 percent) fall below 40, and more than one out of four enrollees (28.6 percent) fall below 30. Only 8 percent of the Minnesota DMIE participants have a mental health SF-12 score above 50. Most differences in health status between treatment and control groups are not significant, except for self-reported mental health status.

The number of limited activities of daily living (ADL) and instrumental activities of daily living (IADL) provides a measure of functional status.[22] The number of ADL and IADL limitations among treatment and control group members at baseline is presented in Table V.12. Slightly more than half (51.6 percent) of all DMIE enrollees reported having no ADL limitations, 17 percent had one, 9 percent had two, and 14 percent had three or more. Differences in the number of ADL limitations between treatment and control groups were not significant at the 10 percent level. Fewer DMIE participants (41.0 percent) reported having no IADL limitations, 18 percent had one, 12 percent had two, and 21 percent had three or more. Control group members were more likely to have three or more IADL limitations than treatment group members, and the differences were statistically significant at the one percent level.

2. Annual Earnings and Employment

In 2007, the year before most Minnesota DMIE enrollees entered the program, nearly all participants (99.9 percent) were employed with positive earnings. Only one participant (in the treatment group) had zero reported earnings and participants with positive incomes earned on average $14,762 in 2007 (71.5 percent of the FPL of $20,650) according to SSA earnings data. The top 10 percent had annual earnings equal to or above $27,424. The lowest income

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[21] The SF-12 is a self-reported measure of physical and mental health status based on a 12-item questionnaire. This score is norm-based at 50 for the general population; lower scores indicate worse functioning than the general population and every 10 points represents standard deviation from the mean.

[22] The seven ADLs are bathing, dressing, eating, getting in and out of bed or chairs, walking, getting outside, and toileting. The eight IADLs are meal preparation, grocery shopping, money management, using the telephone, heavy housework, light housework, getting to places outside walking distance, and managing medications.

Table V.11. Self-Reported Health Status of Minnesota DMIE Participants

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Physical Health Status (percent)			
Excellent	2.9	3.7	3.1
Very good	18.4	17.7	18.2
Good	41.9	38.7	41.3
Fair	25.6	26.3	25.7
Poor	2.9	4.7	3.2
Refused/unknown	0.3	0.3	0.3
Missing	8.0	8.7	8.1
Mental Health Status (percent)			
Excellent	2.0	1.7	2.0
Very good	9.2	10.0	9.3
Good	31.3	26.3	30.5
Fair	39.2	37.7	38.9
Poor	9.2	15.0	10.2
Refused/unknown	1.1	0.7	1.1
Missing	8.0	8.7	8.1
Physical Health SF-12 Score (percent)			
0 to less than 10	0.0	0.0	0.0
10 to less than 20	0.7	0.0	0.6
20 to less than 30	5.1	4.3	5.0
30 to less than 40	12.5	14.3	12.8
40 to less than 50	26.9	24.0	26.4
50 to less than 60	31.5	34.0	31.9
60 to less than 70	9.3	10.3	9.5
70 to less than 80	0.2	0.0	0.2
Missing	13.9	13.0	13.7
Mental Health SF-12 Score (percent)			
0 to less than 10	0.6	0.3	0.6
10 to less than 20	6.4	8.3	6.7
20 to less than 30	20.6	24.7	21.3
30 to less than 40	29.9	27.3	29.4
40 to less than 50	20.2	17.7	19.8
50 to less than 60	7.4	7.3	7.4
60 to less than 70	1.1	1.3	1.1
70 to less than 80	0.0	0.0	0.0
Missing	13.9	13.0	13.7

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Figures include 146 enrollees with missing baseline survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Differences between treatment and control group members are not statistically significant at the five percent level, with the exception of differences in self-reported mental health status.

Table V.12. Number of Limited Activities of Daily Living of Minnesota DMIE Participants

	Treatment (n=1,493)	Control (n=300)	Total (n=1,793)
Number of Limited Activities of Daily Living (percent)			
None	52.0	50.0	51.6
1 limited activity	17.1	14.0	16.6
2 limited activities	8.9	11.3	9.3
3 or more limited activities	13.6	15.0	13.8
Missing	8.4	9.7	8.6
Number of Limited Instrumental Activities of Daily Living (percent)			
None	41.1	40.7	41.0
1 limited activity	18.5	15.3	18.0
2 limited activities	12.4	9.0	11.8
3 or more limited activities	20.0	26.3	21.0
Missing	8.0	8.7	8.1

Source: Uniform Data Set submitted by Minnesota. Baseline (Round 1) survey data are for all Minnesota DMIE participants from January 2007–September 2008.

Notes: Figures include 146 enrollees with missing baseline survey data as of November 14, 2008, and 177 enrollees who subsequently withdrew from the demonstration. Differences in number of ADL limitations between treatment and control group members are not statistically significant at the five percent level. Differences in number of IADL limitations between treatment and control group members are statistically significant at the 1 percent level.

decile had annual earnings equal to or less than $3,457. The average annual earnings among Minnesota DMIE participants are consistent with the fact that most enrollees were recruited directly from the MinnesotaCare public health program.

3. Prior SSI/SSDI Enrollment

A total of 58 participants (3.2 percent) in the Minnesota DMIE received SSDI or SSI benefits at some point during the 10 years prior to the demonstration. Of these, the SSA data indicate that 13 participants had a primary disabling condition of severe mental illness, 2 had other mental illness, and 3 had mental retardation.[23] According to the SSA data, the primary disabling condition for the remaining 40 recipients of SSI/SSDI benefits was either unrelated to mental illness or unreported on the SSA data. The vast majority of DMIE enrollees had no prior experience with SSDI or SSI benefits.

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[23] We are unable to assess the validity of the information on disabling conditions. Program staff note that it is unlikely that people who received SSDI or SSI benefits with mental retardation as a primary diagnosis would improve sufficiently to no longer be certified disabled.

G. SUMMARY OF FINDINGS

The Minnesota DMIE illustrates the challenges of recruiting for initiatives that offer employment support services to working adults with potentially disabling conditions who already receive comprehensive health care coverage through an existing public health care program. Despite incentives for people to transfer into the demonstration from MinnesotaCare or GAMC (through a subsidy on premiums, enhanced health benefits, and employment support services), the state was unsuccessful in reaching its original enrollment goal. The state was forced to revise its enrollment target downward, and only reached that lower number after it expanded its eligibility criteria, intensified its recruitment efforts, and streamlined its screening and enrollment procedures.

However, linking the demonstration to existing public health programs offered the state several advantages. First, the state could target its recruitment efforts on a list of potentially eligible candidates already identified from an administrative database. Second, the state was able to work with one health plan for the delivery of health and employment support services. The plan already had a contract with the state to provide health care services to people enrolled in existing Minnesota public health care programs, and was able to use its provider network to serve the demonstration. By taking responsibility for employment services as well, the plan limited the administrative burden on the state and allowed the implementing agency to focus on broader tasks such as planning, management, recruitment and enrollment, spending, and evaluation. Finally, recruiting from existing public programs gives the state a financial investment in the outcomes of the demonstration. GAMC is a state-funded program with limited benefits; the DMIE offers a more comprehensive benefit package and entitles the state to federal matching dollars on members who shift into the demonstration.

In addition to these process-oriented findings, the Lewin Group presented findings from a preliminary analysis of program impacts based on a partial cohort of DMIE participants. The authors used a subgroup of 235 participants (roughly 13 percent of the full sample), including 178 treatment group members and 57 control group members, to examine functional status, job turnover, and disability status. Members in the partial cohort were enrolled for at least 12 months in the demonstration and completed both a baseline and 12-month follow-up survey.

These evaluators offered three preliminary findings. First, between the baseline and 12-month follow-up surveys, DMIE participants in the treatment group reported fewer ADL and IADL limitations. There were no significant changes in the number of reported ADL or IADL limitations between baseline and 12-month follow-up surveys among control group members. Second, participants in the treatment group who used employment supports were less likely to change jobs after participating in the demonstration. There were no changes in job turnover rates between baseline and follow-up surveys among control group members. Nor was there a change in job turnover rates among treatment group members who did not use employment supports. Finally, roughly 20 percent of the control group members applied for SSDI benefits within one year of DMIE enrollment compared with only 3 percent of the treatment group.

These results are based on very small sample sizes with only partial data. Firm conclusions about the impact of the Minnesota DMIE program on health, employment, and public assistance must wait until the final round of survey responses and administrative data are collected.

H. PHASE DOWN PLAN AND NEXT STEPS

The Minnesota DMIE program, like all state DMIE programs, is currently scheduled to terminate the delivery of health and employment support services to treatment group participants on September 30, 2009. By that date, the state will have completed baseline and 12-month follow-up surveys on all enrollees, and 24-month assessments on those who enrolled before October 2007. In its draft phase-down plan, DHS proposes to complete the administration of the 24-month follow-up survey to all remaining treatment and control group members who would otherwise not be in the demonstration long enough to complete all rounds of the survey (that is, those who entered the demonstration between October 1, 2007 and September 30, 2008).

As of December 2008, DHS estimates that over 80 percent of the treatment group participants may be eligible for MinnesotaCare or other state health care programs. To facilitate a successful transition to other programs, the Minnesota DMIE has an agreement with the state health care administration to collect information necessary to determine eligibility and automatically enroll individuals who qualify into a state health care program of their choice. For those clients who are not eligible or do not want other public health coverage, DMIE staff will provide a resource packet and assistance with questions regarding transition to private insurance options.

CHAPTER VI

TEXAS DMIE PROGRAM

This chapter describes the Texas DMIE program, beginning with an overview of the program's design, funding sources, and partnering organizations. We follow with a brief synopsis of early implementation practices and a description of the baseline characteristics of DMIE participants. We conclude with a summary of findings and next steps. Information presented in this chapter is drawn from a variety of sources, including site visit interviews with key informants conducted in March 2008; state-authored documents; monthly teleconference calls with program administrators; quarterly report data; Uniform Data Set (UDS) data submitted by Texas; and Social Security Administration (SSA) data.

A. PROGRAM DESIGN

The Texas DMIE program, known as the Working Well program, began in April 2007 and targets workers enrolled in Harris County Hospital District's (HCHD) Gold Card program, which provides discounted medical services to low-income, uninsured residents who are not enrolled in Medicaid. Established in 1966, HCHD is the largest publicly funded health care provider in the United States and the fourth largest hospital district in the United States (Begley et al 2008). HCHD serves uninsured residents of Harris County through an extensive health care delivery system composed of hospitals, community health centers, a dental center, school-based clinics, homeless shelter clinics, and mobile health units. The Gold Card program serves as a critical safety net provider for low-income uninsured residents in Houston who are not enrolled in Medicaid.[1]

Working Well participants were drawn from the Gold Card medical program and were identified using HCHD administrative data. Several eligibility criteria were used to screen potential candidates. Each participant in the demonstration must:

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[1] About 170,000 households are enrolled in the Gold Card program. In 2007, over 4.2 million working-age adults in Texas (about 30 percent) were uninsured, which is the highest statewide rate of uninsurance among working-age adults (Kaiser State Health Facts 2008).

- Have a diagnosis of either a serious mental illness (schizophrenia, bipolar disorder, or major depression), or a behavioral health diagnosis co-occurring with a physical diagnosis (such as a brain injury)[2]

- Have had a medical encounter with HCHD within the previous 12 months

- Have at least 40 hours work experience per month on average during the three previous months, or 40 hours per month on average over six consecutive months in the previous 12-month period

- Be between the ages of 21 and 60

- Be eligible for HCHD's Gold Card program, not be receiving any non-HCHD government assistance for HCHD services, and not be currently certified as eligible for or seeking Supplemental Security Income (SSI) or Social Security Disability Income (SSDI)

1. Demonstration Benefits

The intervention, administered by the Department of State Health Services (DSHS) of the Texas Health and Human Services Commission (HHSC), is designed to improve access to physical and behavioral health services for employed Gold Card members with serious mental illness or a behavioral health disorder accompanied by a physical impairment. Approximately 3.5 percent (134,205) of the Harris County population has a serious mental illness characterized by a primary diagnosis of schizophrenia, major depression, or bipolar disorder (Schnapp et al 2006, U.S. Census Bureau). Mental health services in Harris County are scarce and under-funded, and as a result Harris County residents with mental impairments have considerable unmet needs (Schnapp et al 2006).

The intervention augments services currently available through the standard Gold Card benefit package by providing the following additional benefits for treatment group members:

- Enhanced benefits, including chemical dependence treatment services, psychological and neuropsychological assessments, and prescription medications above the three per-month Medicaid limit[3]

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[2] Qualifying physical health diagnoses include diabetes, neurological diseases, stroke, brain injury, multiple sclerosis, Parkinson's disease, epilepsy, HIV/AIDS, Hepatitis C, respiratory diseases, chronic obstructive pulmonary disease, asthma, congestive heart failure, musculo-skeletal diseases, rheumatoid arthritis, cancers/neoplasms.

[3] This is not an exhaustive list of DMIE enhanced services. All enhanced services require pre-certification from a Shorman Solutions case manager. Control group members continue to receive standard medical services covered under the HCHD's Gold Card program.

- Elimination of co-payments for prescription drugs and outpatient visits
- Improved access to mental health services, including expedited office or outpatient visits to a psychiatrist, psychologist, or master's level professional
- Case management services, including the development of an individual employment plan, advocacy, direct services, service coordination, and assistance connecting to other community resources
- Employment support services, including vocational assessment and evaluation, collaboration with an employer or family and friends, vocational support groups, vocational treatment planning, and vocational counseling

The intervention addresses gaps in the Gold Card benefit coverage by expanding access to medical and mental health services. Existing outpatient services are limited under the Gold Card program; chemical dependency treatment services are not included in the standard benefit plan. Through the Working Well program, treatment group members have access to a broad array of enhanced services that wraparound the standard Gold Card benefit package. Enhanced services include chemical dependency treatment services; mental health services such as family therapy, biofeedback, and cognitive behavioral therapy; and physical health services such as durable medical equipment, chiropractic services, eye exams and eyeglasses, and preventative and restorative dental treatment.[4] By having access to these services, DMIE participants are expected to experience improvements in health status, quality of life, and sustained employment. Improving job retention among the study population is critical because employment rates for individuals with psychiatric disabilities are lower than for individuals with other types of disabilities (Bond et al 2007).

The elimination of co-payments is aimed at removing a structural barrier to accessing medical care and prescription drugs. Under the standard Gold Card benefit package, enrollees with income from 101 to 200 percent of the federal poverty level (FPL) pay a co-payment for all services, and enrollees with incomes from 201 to 250 percent of FPL are responsible for 50 percent of all charges (Morningside Research and Consulting, Inc. 2002). Elimination of all co-payments for treatment group members makes accessing care through the Working Well program more affordable.

The intervention also improves access by expanding the existing network of providers. HCHD secured contracts with providers outside and within the existing HCHD network to

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[4] Chemical dependency treatment services available through the Working Well program include 24-hour residential rehabilitation services, CD clinical assessment, medically monitored 24-hour residential and outpatient detoxification services, pharmacological maintenance, outpatient group counseling, outpatient individual counseling, specialized female residential services, and medical stabilization in inpatient general acute hospital.

provide treatment group members with expedited access to enhanced services.[5] Program staff report that contracting for new and enhanced DMIE services was challenging in several respects. First, attracting providers to serve a high-risk population with tremendous unmet needs required extensive negotiating. Second, building program identification among a broad network of providers was difficult. The "purple card," which is issued to DMIE treatment group members at enrollment, has been an effective way to ensure that participants can be easily identified throughout the network of providers.

Finally, the Working Well program offers case management and employment supports to help sustain participants' employment. As part of the intervention, treatment group members meet with a case manager who provides ongoing employment and vocational support. Assistance includes a vocational assessment; collaboration with an employer to help identify, resolve, or prevent conflicts; vocational support groups; collaboration with friends and family to address the employment experiences of the client; and vocational treatment planning and career development, which entails developing a written plan of action for finding or maintaining employment (University of Texas 2007). Through provision of enhanced health services and employment supports, it is expected that treatment group members will experience greater job satisfaction and higher rates of employment relative to the control group.

2. Demonstration Funding

Two sources of funds support the DMIE intervention administered by the Working Well program:

1. HCHD funds the state share of all DMIE Medicaid-like wraparound services through county tax revenues allocated to the district, which is a local taxing authority. HCHD is paid a fixed per member per month rate to cover all DMIE service costs for treatment group members.

2. Federal funds awarded by the Centers for Medicare and Medicaid (CMS) cover the federal share of Medicaid-like wraparound services and all DMIE administrative and operational costs.

Federal funds flow from CMS to the HHSC to the DSHS. DSHS pays the HCHD the federal share for administrative activities and also all DMIE services (Department of State

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[5] The majority of psychiatric and primary care physician services are subcontracted to Affiliated Medical Services (AMS) at Baylor College of Medicine, and the University of Texas, Health Sciences Center at Houston medical school-based Practice Association. Alcohol and other drug screening and referrals are subcontracted to the Council on Alcohol and Drugs Houston. Behavioral health, substance abuse, dental, and vision services are provided through community based provider networks. Inpatient acute care and outpatient services are provided through HCHD's network of inpatient facilities and community based clinics.

Health Services 2007). Out-of-network community-based providers are contracted to HCHD to enhance Harris County's service capacity. Most community based health care providers and Shorman Solutions (described below), a case management agency, are paid a fixed per member per month rate by HCHD for provision of out-of-network enhanced services that include enhanced health and behavioral health services, substance abuse treatment services, dental and vision services, and case management services.

B. ORGANIZATION AND ADMINISTRATION

The Texas HHSC, the single state Medicaid agency in Texas, has the delegated authority to operate the Working Well program. The DSHS operates the Working Well program and serves as a liaison with local and federal partners. The Working Well program is a state-local partnership that was established to accomplish three objectives:

1. Design a model of services and supports that operates as a state-local partnership.

2. Evaluate the effects of increased access to health care coverage and employment supports on working individuals with potentially disabling mental health or substance abuse conditions.

3. Provide data to state and federal policymakers on the characteristics of working individuals with potentially disabling mental health or substance abuse conditions who are at risk of dependence on SSI/SSDI benefits.

Several entities work together to administer the Working Well program. DSHS contracts with Harris County to administer the DMIE health benefits, including case management services for intervention group members, which are subcontracted by HCHD to Shorman Solutions. DSHS also contracts with the University of Texas at Austin, Addiction Research Institute (UT ARI) to conduct the independent evaluation of the demonstration. Descriptions of DSHS's partnering organizations that support the Working Well program are presented here.

1. HCHD

HCHD is responsible for administering the health benefits available through the Working Well program and for developing and managing the DMIE provider network. HCHD is also responsible for managing quality assurance, appeals, participant enrollment, and reporting administrative data to support the state and national evaluation of the demonstration (Department of State Health Services 2007).

HCHD administrators were motivated to partner with the DSHS in administering the DMIE program because they viewed the demonstration as an opportunity to expand existing mental health services. In 2004, Texas enacted sweeping legislative changes to the organization of state health and human services agencies as well as the delivery of state mental health services and medications. According to the Center for Public Policy Priorities, the Texas Legislature reduced state and federal health and human services funding for the 2004-2005 biennium by more than $1 billion compared to the previous biennium (Mental Health Association in Texas 2005). "Appropriations to the Texas Department of State Health Services for mental health services fell by approximately 3.5 percent, or about $50 million (Mental Health Association in Texas 2005)."

To date, mental health resources in Harris County have been underfunded. Until 2004, all Harris County behavioral health services were provided at one psychiatric outpatient clinic resulting in long waiting periods averaging six months for patients seeking new appointments (Begley et al 2008). To increase timely access to behavioral health services, HCHD launched a pilot program in July 2004 that placed a psychiatrist one half day per week in three Harris County community health clinics (Psychiatric Services 2007). In July 2005, the Community Behavioral Health Program was established and the program was expanded to all 12 community health clinics in Harris County. HCHD partnered with DSHS to administer the DMIE program to further meet the mental health service needs of individuals with serious mental illness in Harris County.

2. Shorman Solutions

Under contract to HCHD, Shorman Solutions (hereafter, Shorman) provides case management services for all treatment group members. Treatment group members continue to receive these services when they lose employment as long as they meet all other qualifying criteria for the study. Integrated case management and vocational supports are a key component of the intervention and include advocacy; coordination of medical, behavioral, and vocational services; and assistance developing an individualized plan to address life and health issues which in turn will improve individuals' employment status. A Shorman case manager described her role as helping treatment group members identify their needs, navigate the health care system, and connect them with needed resources in the community. The case manager also serves as a safety net for participants and helps them reach personal employment and educational goals.

Shorman also educates treatment group members about the DMIE benefit options and pre-certifies requests for enhanced services. A Shorman case manager must authorize all enhanced services ahead of time. Once an individual provider, case manager, or participant requests a pre-certification, case managers review participants' medical information in Harris County's electronic medical records system to assure appropriateness and medical necessity of enhanced services.[6] The system, known as EPIC, captures records of each provider contact with a participant and all updates in the individual's treatment. Case managers are required to

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[6] All Shorman Solutions case managers signed confidentiality agreements with Harris County Hospital District before accessing treatment group members' electronic medical information.

have, at a minimum, monthly contact with each treatment group member. Shorman case managers record their contacts with each treatment group member in EPIC. The data are transmitted monthly to UT ARI evaluation staff to support the state and national evaluations of the DMIE.

3. UT ARI

UT ARI is conducting the independent state evaluation of the Working Well program, and is tasked with managing the in-person recruitment process and the DMIE data systems that support the state and national evaluations. UT ARI oversees the Public Policy Research Institute (PPRI) (described below), which markets the Working Well program to potential participants and conducts recruitment and enrollment into the program. UT ARI also contracted with Westat to implement in-person recruitment in Harris County community health clinics.

UT ARI is conducting an outcome evaluation to examine group differences in work and disability status, service patterns that predict successful outcomes, and changes in health care costs and service utilization. UT ARI is also conducting a process evaluation to assess outreach, recruitment, enrollment processes, client service experiences, and such factors as regulatory, political, and economic changes that may affect program outcomes.

4. PPRI

Under subcontract to UT ARI, PPRI at Texas A&M University marketed the Working Well program to potential candidates, enrolled participants in the Working Well program, and administers the participant assessment surveys at enrollment and at 12-, 18-, and 24-month intervals thereafter.[7] All assessment surveys are administered via telephone using PPRI's 40-CATI station call-center that is staffed seven days a week.

At the start of the program, PPRI recruited potential study candidates into the Working Well program through direct mailings and telephone follow-ups with study candidates who did not respond to the mailings. This approach was successful in enrolling 515 participants by June 2008. In July 2008, enrollment was suspended for several months due to concerns about the informed consent form articulated by the HCHD research office. After UT ARI addressed the concerns, the Working Well program reinitiated telephone recruitment and implemented a new in-person recruitment strategy to ensure that recruitment targets would be achieved. Detailed descriptions of the recruitment processes are presented in the following section.

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[7] Assessment surveys were originally scheduled to be administered at 12-, 24,- and 36-month intervals from the date of enrollment into the program. The survey scheduled was later changed to 12-, 18-, and 24-month intervals to allow for three surveys to be completed by every participant by May 2010.

5. Westat

UT ARI subcontracted with a cadre of Westat recruiters who solicited potential study candidates from community health clinics in Harris County. Subcontracting with Westat allowed the in-person recruitment strategy to be deployed quickly. Westat recruiters were stationed at five clinics that had a high volume of study candidates. An effort was made to assign recruiters to one clinic so that a relationship with clinic physicians and administrative staff could be developed. Recruiters made face-to-face contact with potential study candidates, educated them about all aspects of the Working Well program, and enlisted their participation in the study while they were waiting for a medical appointment.

C. IMPLEMENTATION PRACTICES

In this section, we describe the implementation practices the Working Well program employed to identify, recruit, and enroll participants into the program, and the methods by which participants were randomized to treatment and control groups. We also present early lessons learned from program implementation.

1. Outreach and Recruitment Strategies

Early recruitment activities in 2007, which included direct mailings to HCHD Gold Card members with a qualifying diagnosis, follow-up calls with candidates who did not respond to the mailings, and public postings about the demonstration in HCHD clinics, fell short of reaching enrollment targets for several reasons. Although large volumes of mailings were sent to potential candidates, obtaining accurate contact information for individuals was challenging. Early recruitment efforts were also hindered by a suspension of recruitment activities for two and a half months due to concerns about the informed consent form. Project staff amended the consent form to address these concerns and submitted a revised form, which was approved by the Institutional Review Board (IRB). However, the suspension of recruitment activities delayed DMIE service provision. The state redirected less than 10 percent of total project funds from the services budget to the enrollment budget to cover expanded recruitment and enrollment activities.

To bolster enrollment into the Working Well program, the state implemented several strategies that required a high level of coordination and resources over a short period of time. In fall of 2007, the state implemented an in-person recruitment model through which potential candidates who had requested, but did not return, an application form were identified on the clinic appointment schedule and asked to complete the application while they were waiting for their appointment. Recruitment staff also expedited eligibility certification procedures by pre-verifying employment from HCHD administrative records, or by calling the applicant's employer, if permission to contact the employer was given. The recruitment strategies proved to be effective as the Working Well program reached its enrollment targets of 800 treatment group and 625 control group members in April 2008.

2. Recruitment and Enrollment Processes

Identifying, recruiting, and enrolling potential study candidates into the Working Well program required a high level of coordination between HCHD clinic directors or nursing leads and the partnering organizations that administer the Working Well program (UT ARI evaluation staff, PPRI staff, and Westat recruiters). HCHD identified from its administrative databases all Gold Card members who met the qualifying employment, age, and diagnostic criteria for the study. To identify potential candidates, UT ARI evaluation staff used HCHD administrative data to review up to 10 International Classification of Diseases (ICD-9) diagnoses per medical encounter during the prior 12-month period. UT ARI evaluation staff report that for each study candidate, diagnoses identified on any of the medical encounters for an individual that met the inclusion criteria qualified the individual as a potential study candidate. UT ARI transmitted data capturing potential study candidates and their contact information to PPRI where it was used to carry out their recruitment.

Recruitment Models

Two recruitment strategies were used to reach study candidates: a direct mail model and an in-person recruitment model. Under the direct mail model, PPRI mailed recruitment letters and postcards to study candidates. Study candidates who indicated their interest in participating were mailed an application packet. The packet included a description of the study, an informed consent form, an application form, and a request for evidence of employment status. Study candidates who completed the informed consent form and verified their employment status within two weeks received a $40 pre-paid VISA card. PPRI followed up by phone with study candidates who did not respond to the mailing or who did not return application packets. Completed application packets were returned to PPRI and assessed to determine eligibility for the study. Qualified individuals later completed the baseline assessment survey with PPRI via telephone.

Under the in-person recruitment model, study candidates were identified from the HCHD clinic appointment schedule to determine when each individual was scheduled to see a network provider. Clinic appointment information for each study candidate was given to a recruiter stationed at one of five clinics in Harris County. Recruiters attempted to initiate contact with study candidates before and/or after their scheduled appointment with their medical provider. The method of contacting study candidates varied across clinics, depending in part on the physical layout of the clinic and the extent to which clinic staff participated in the process. For example, at one clinic, staff informed the recruiter when a study candidate checked in for his/her scheduled appointment. At another clinic, the recruiter made repeated appearances in the waiting areas and identified study candidates by calling out their name.

Once a study candidate was identified, the recruiter described the study and enlisted the individual’s participation. Individuals that were interested in participating in the study signed the informed consent form and the employment authorization form, which allowed the recruiter to contact the individual’s employer to verify the minimum number of hours worked. The study candidate could also bring in a pay stub to establish the minimum number of hours worked. If the number of hours worked was not verified, contact with the individual ended and employment was verified at a later point in time. If the number of hours worked was established, the individual was given the opportunity to complete the baseline assessment survey before or after his or her medical appointment. In such instances, the recruiter loaned the individual a cellular telephone and provided the individual with a quiet place so he or she could conduct the baseline assessment through PPRI. If the individual was called to the appointment while the baseline assessment was occurring, completion of the baseline assessment survey was suspended and the individual worked with the Westat recruiter and PPRI to schedule a time to finalize the survey with PPRI.

When the in-person recruitment model was first implemented, only those study candidates who requested, but did not return, an application were identified from the clinic appointment schedule and asked to complete the application packet. In January 2008, the program expanded the in-person recruitment model to target all individuals who met the qualifying medical criteria. The in-person recruitment model proved to be very effective, as it raised the volume of potential study candidates and the number of DMIE participants, which grew substantially in 2008. In a March 2008 site visit, recruitment staff reported that about 60 new qualified participants were enrolling into the Working Well program each week.

Baseline Assessment

All qualified participants complete assessment surveys with PPRI via telephone. PPRI uses several techniques to ensure ongoing contact with study participants. First, PPRI’s call-center is open seven days a week and is staffed with 120 interviewers, many of whom are bilingual. PPRI’s call center capacity allows applicants to schedule an appointment or call-in to complete the baseline assessment survey at their convenience. Applicants who are recruited in-person at a clinic can complete the baseline assessment survey before or after their scheduled medical appointment. Second, PPRI encourages candidates to call in by providing a toll-free telephone number. Finally, when following-up with study candidates, PPRI contacts study individuals at different times of the day and different days of the week. Up to 20 attempts are made to contact study candidates who express interest in participating in the demonstration.

3. Randomization Procedures

UT ARI evaluation staff pre-randomized all participants into the study so the recruitment methods remain unbiased. UT ARI used HCHD administrative data to identify potential study candidates who appeared to meet the qualifying diagnostic, age, and employment criteria for the study. Before recruitment, study candidates were pre-randomized into treatment and control groups and stratified by age, gender, and diagnostic condition to ensure group composition is balanced. UT ARI created data files that identify study candidates and their contact information, which were transmitted to PPRI to be used in their recruitment activities.

Participants are considered to be officially enrolled in the study once the baseline assessment survey is completed. At that point, PPRI sent participants a letter notifying them of their group assignment and the benefits associated with participating in the study. Treatment group members receive the full array of health benefits and employment supports offered under the demonstration, as well as a purple card that they present to network providers to indicate their DMIE participation status. Treatment group members also receive a $50 pre-paid VISA card for completing the assessment surveys at baseline and 12 months after enrolling in the study. The amount of the incentive increases to $100 for completing surveys at 18 and 24 months after enrolling. Control group members receive a $100 pre-paid VISA card after completing the assessment survey at baseline and 12 months, and $200 for completing surveys at 18 and 24 months. Control group members who remain in the study for the duration of the demonstration receive a longevity bonus of $100 after completing the 24-month survey.

The same incentives apply to those who were recruited in-person. Recruiters dispensed a $40 pre-paid VISA card to those study candidates who completed the informed consent form and verified their employment status at the clinic. In the event that candidates completed the baseline assessment survey while at the clinic, recruiters gave the participant an acceptance letter that explained their group assignment as well as an incentive pre-paid VISA card, the amount of which varied depending on whether the individual was pre-randomized into the treatment or control group. To ensure recruitment and enrollment into the study remained unbiased, recruiters did not know the assignment status of the participant during the recruitment and enrollment process. Only after participants completed the baseline survey by telephone in the clinic did the recruiter identify the participant's assignment status by referencing group assignment information in a notebook they carried with them. Clinic appointment information for each study candidate was maintained in a separate notebook.

PPRI sent information on participants randomized to the treatment group to HCHD program administrators for enrollment into the Working Well program, at which point HCHD assigned them a unique identification number, case manager, and primary care provider. Treatment group members were contacted by their case manager soon after being enrolled in the study.

4. Early Lessons Learned from Program Implementation

Building the Working Well program around an existing public health insurance program had several notable advantages. For example, use of Harris County administrative databases made it easier to identify possible study candidates who met the qualifying criteria for the study. Also, building the Working Well program around an existing provider network facilitated quick deployment of DMIE benefits. Using an existing network of providers also made delivery of care transparent to providers and treatment group members.

Program and evaluation staff identified several early lessons learned from the implementation of the Working Well program. First, the original recruitment model, which consisted of direct mailings to HCHD Gold Card members with a qualifying diagnosis and telephone follow-ups with candidates who did not respond to the mailings, was not effective in reaching potential study candidates. To bolster enrollment into the program, a "high touch" in-person recruitment model was implemented and was successful in exceeding enrollment targets. Quarterly report data indicate that about 45 percent of all enrollments were initiated using the in-person recruitment method.

Second, streamlining enrollment processes facilitated enrollment into the program. For example, verifying employment by telephone (if the applicant permitted this method) expedited the enrollment process. This method was used if a study candidate did not supply a pay stub to establish the minimum number of hours worked. Also, pre-verifying employment eligibility using HCHD administrative records streamlined recruitment, eliminating one step that can hinder recruitment into the program. Implementing the above-mentioned strategies in a short period of time required rapid process modifications and high-levels of coordination among project partners.

Third, dispensing purple cards to treatment group members was an effective way to ensure those members could be easily identified throughout the network of providers. Establishing broad program identification throughout the DMIE network of providers was essential to ensure that treatment group members were granted seamless access to DMIE services and were not subject to co-payments for services and prescription drugs. Finally, educating providers about the DMIE program was a necessary ongoing process from the start of the program. Although the purple card has become a helpful symbol of DMIE participation among providers, high staff turnover among providers has been a persistent challenge, particularly in hospitals staffed by a large proportion of medical residents.

D. DMIE ENROLLMENT AND PARTICIPANT CHARACTERISTICS

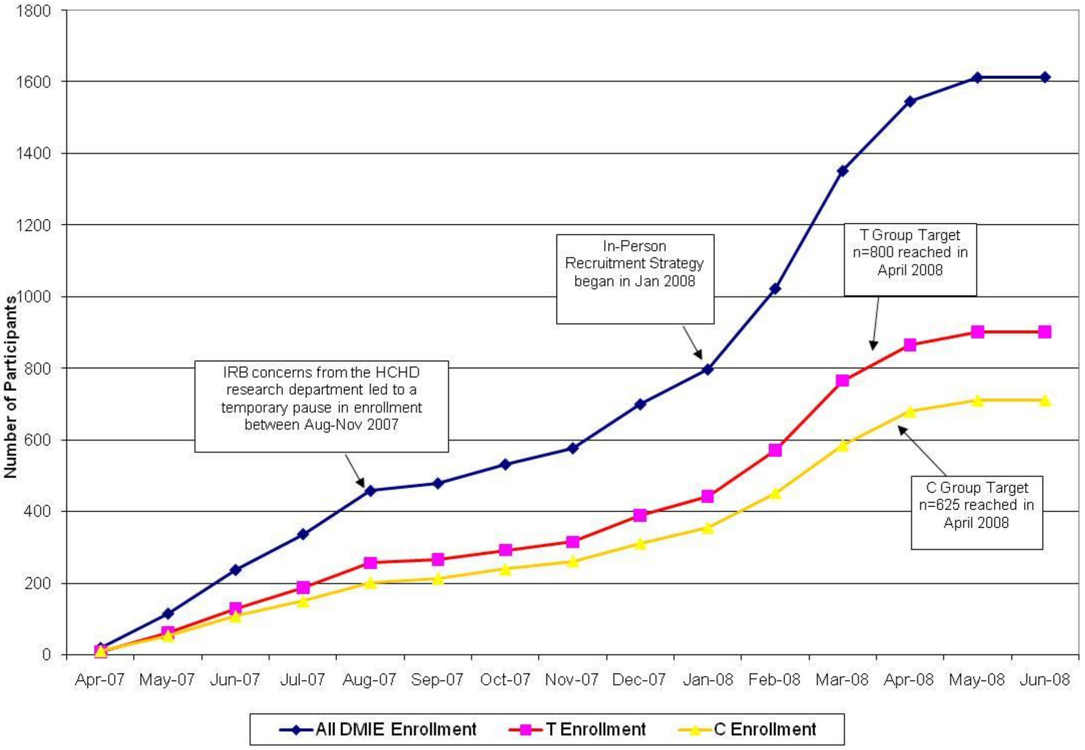
This section presents enrollment trends since the start of the program and reviews participant characteristics at baseline, including demographic characteristics, diagnostic conditions, employment and income characteristics, and public program participation in the past two calendar years. All data presented in this section are from the Uniform Data Set covering the period from April 2007, the start of the Working Well program, to July 2008 when enrollment into the program ended.

1. Enrollment Trends

The Working Well program's enrollment targets of 800 treatment group and 625 control group members were reached in April 2008. When it became clear that the DMIE enrollment targets would be surpassed and the program had ample funds to enroll more participants, CMS approved enrollment of a larger cohort of study participants. The enrollment ceiling was set at 904 treatment group members and 712 control group members, the current number of Working Well participants. In May 2008, the program reached its enrollment ceiling and all recruitment activities ended. To date, attrition from the program has been minimal. Only three participants have disenrolled from the program, due to death or movement out of Harris County.

Enrollment in the Working Well program began in April 2007. Enrollment was slower than expected at first because the original recruitment model was ineffective in reaching study candidates. As shown in Figure VI.1, enrollment steadily increased until August 2007, at which point recruitment activities were suspended for two and a half months because the HCHD research department raised concerns about the informed consent form. In November 2007, the in-person recruitment model described earlier in this chapter was implemented. At first, only those study candidates who requested, but did not return, an application were identified from the clinic appointment schedule and approached by a recruiter. In January 2008, the in-person recruitment model was expanded to target all individuals who met the qualifying medical criteria for the study. As shown in Figure VI.1, the "high touch" method of recruiting study candidates was very effective in enrolling large volumes of participants into the program. Recruitment staff reported in March 2008 that about 60 new qualified participants were enrolling into the program each week.

Figure VI.1. Texas DMIE Cumulative Monthly Enrollment Trend, April 2007–June 2008



Six hundred and fifty-two individuals who met the study criteria at the time that UT ARI evaluation staff identified the candidate pool reported seeking or obtaining federal disability benefits when they were contacted by recruiters. UT ARI analyzed demographic data for this population and compared it to baseline demographic data for DMIE program participants.

The populations were demographically similar. The disability benefits group experienced higher health care utilization than DMIE enrollees. These findings suggest that the Texas DMIE program may be effectively targeting people at risk for disability and enrolling individuals before they deteriorate to an extent which qualifies them for federal disability benefits.

2. Baseline Characteristics

Demographic Characteristics

Table VI.1 presents the baseline demographic characteristics of Working Well participants, which are distributed evenly across the treatment and control groups. Working Well participants are predominantly female (76.5 percent) and unmarried (74.8 percent). The proportion of females in the enrolled population is much higher than the corresponding proportion among the Harris County population (50 percent) (U.S. Census Bureau). Also, the relatively low rate of marriage (25.2 percent) suggests the enrolled population has lower chances of securing employer-based health coverage. Furthermore, the majority of program participants are older adults between the ages of 45 and 60 (68.1 percent). Nearly half (47.8 percent) are between the ages of 45 and 54, with an additional 20.3 percent aged 55 to 60. The enrolled population being weighted toward older adults is expected given that the Working Well program serves working adults with potentially disabling conditions, and the likelihood of developing a condition increases with age. The racial composition of the enrolled population is mixed: 41.2 percent are black, 32.7 percent are Hispanic, and 23.0 percent are Caucasian. Treatment group members are slightly more likely to be black or African-American (43.5 percent). However, the observed differences in demographic characteristics are not statistically significant.

Diagnostic Conditions

Table VI.2 shows the diagnostic conditions and co-morbidity prevalence of the Working Well enrolled population. Diagnostic data are based on diagnoses made by medical providers and were obtained from HCHD administrative data. To qualify for the demonstration, participants must have a diagnosis of a serious mental illness (schizophrenia, bipolar disorder, or major depression), or a behavioral health diagnosis accompanied by a physical diagnosis, which make SSI/SSDI eligibility more likely. UT ARI classified these qualifying diagnostic groupings into seven categories, which are shown in Table VI.2. Participants with a serious mental illness diagnosis include those with and without a co-occurring substance abuse diagnosis.

Table VI.1. Self-Reported Demographic Characteristics of Texas DMIE Participants

	Treatment (n=904)	Control (n=712)	Total (n=1,616)
Age (percent)			
Under 25 years	1.7	1.4	1.5
25-34 years	9.7	8.6	9.2
35-44 years	21.0	21.1	21.0
45-54 years	46.7	49.3	47.8
55 years or more	20.9	19.5	20.3
Missing	0.0	0.1	0.1
Gender (percent)			
Female	77.5	75.1	76.5
Male	22.5	24.9	23.5
Race/Ethnicity (percent)			
White and non-Hispanic	21.7	24.6	23.0
Black or African American	43.5	38.2	41.2
Hispanic	31.7	33.8	32.7
Asian	1.5	1.4	1.5
American Indian/Alaska Native	0.4	0.3	0.4
Native Hawaiian/Pacific Islander	0.0	0.1	0.1
Other race	1.0	1.3	1.1
Unknown	0.1	0.3	0.2
Education (percent)			
8th grade or less	11.7	13.3	12.4
Some high school	17.7	19.1	18.3
High school graduate or GED	31.4	31.2	31.3
Some college or 2-year degree	31.0	27.4	29.4
4-year college graduate	6.0	5.5	5.8
More than 4-year college graduate	2.1	3.4	2.7
Missing/don’t know	0.1	0.1	0.1
Marital Status (percent)			
Married	24.2	26.4	25.2
Widowed	6.9	7.2	7.0
Divorced	30.8	28.9	30.0
Separated	12.9	11.2	12.2
Never married	25.1	26.1	25.6
Missing/don’t know	0.1	0.1	0.1

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: Figures include three enrollees who subsequently withdrew from the demonstration.

Participants without a serious mental illness diagnosis represent the following five categories:

1. Mental health diagnosis (non-clinical depression, anxiety, ADHD, or reaction disorder) and also a substance abuse diagnosis
2. Mental health diagnosis only
3. Other behavioral health diagnosis and also a substance abuse diagnosis
4. Other behavioral health diagnosis only
5. Substance abuse diagnosis only

Participants in the above-mentioned categories also have a physical health diagnosis that puts them at-risk for developing a severe disability.

Among the enrolled population, a small percentage of participants (10.9 percent) have serious mental illness, 73.8 percent of participants have a mental health or other behavioral health diagnosis, and 15.2 percent of participants have a substance abuse only diagnosis. As shown in Table VI.2, the most prevalent diagnostic category is mental health only, which is comprised of over a third of participants with a diagnosis of non-clinical depression, anxiety, ADHD, or reaction disorder. The second most prevalent diagnostic category is other behavioral health only (22.6 percent), followed by substance abuse only (15.2 percent). Moreover, 35.1 percent of treatment group members have a substance abuse diagnosis, which suggests that chemical dependency treatment services made available through the Working Well program, and not offered under the standard Gold Card benefit package, are likely an important component of the intervention. Among Working Well participants, there is a high co-morbidity prevalence, which suggests participants may have high demand for medical services. In fact, over 90 percent of participants have five medical conditions, underscoring the importance of comprehensive health coverage and improved access to mental health services through the Working Well program. The type and number of diagnostic conditions are balanced across treatment and control groups; observed differences are not statistically significant.

Employment and Income Characteristics

Table VI.3 presents baseline employment and income characteristics of Working Well participants. Working Well participants are employed in a variety of occupations, and the distribution of industries is balanced across treatment and control groups. More than a quarter (28.2 percent) of participants are employed in the education and healthcare sectors. Among participants, health care support workers, which include personal care attendants, home health workers, nursing aids, and nursing facility workers, comprise the single largest occupation (Stoner et al n.d.). The Working Well program reports in a recent issue brief that among participants employed as health care support workers, 72 percent had a musculoskeletal disorder (such as backaches or neck pain), 50 percent had respiratory disorders, 29 percent had diabetes, and 25 percent had neurological disorders (Stoner et al n.d.). Understanding how to help health care support workers sustain their employment is vital given that they perform a key role assisting the aging segment of the population, which is expected to grow in size over the coming decades (Stoner et al n.d.).

Table VI.2. Type and Number of Diagnostic Conditions of Texas DMIE Participants

	Treatment (n=904)	Control (n=712)	Total (n=1,616)
Major Diagnostic Categories[a] (percent)			
Serious mental illness with substance abuse	3.4	3.4	3.4
Serious mental illness only	8.4	6.5	7.5
Mental health with substance abuse	9.0	10.8	9.8
Mental health only	35.4	33.8	34.7
Other behavioral health with substance abuse	6.0	7.7	6.7
Other behavioral health only	22.6	22.8	22.6
Substance abuse only	15.3	15.0	15.2
Number of Conditions (percent)			
1 condition	0.9	0.4	0.7
2 conditions	1.1	1.0	1.1
3 conditions	1.0	1.0	1.0
4 conditions	1.3	2.1	1.7
5 conditions	90.8	90.6	90.7
6 conditions	0.0	0.1	0.1
Missing/unknown	4.9	4.8	4.8

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: Figures include 3 enrollees who subsequently withdrew from the demonstration.

[a] Major diagnostic categories were based on Harris County Hospital District (HCHD) claims data and determined by the state's analysis of conditions from a maximum of 10 ICD-9 diagnostic codes per medical encounter over a 12 month period. This information is based on diagnoses made by providers and does not represent self-reported information.

Table VI.3. Employment and Income Characteristics of Texas DMIE Participants

	Treatment (n=904)	Control (n=712)	Total (n=1,616)
Employment Industry (percent)			
Education and health care	29.9	26.1	28.2
Other services	15.5	17.8	16.5
All other industries	9.2	11.4	10.1
Leisure and hospitality	9.6	10.4	10.0
Trade, transportation, utilities	9.7	10.1	9.9
Professional services	6.3	5.1	5.8
Construction	5.3	5.1	5.2
Manufacturing	4.1	4.2	4.1
Missing, unknown, or refused	2.3	2.5	2.4
Information services	2.3	2.4	2.4
Public administration	1.9	1.4	1.7
Financial services	1.8	1.4	1.6
Unclassified	1.5	1.0	1.3
Natural resources and mining	0.6	1.1	0.8
Hours Worked Monthly (percent)			
Less than 40 hours	9.4	9.1	9.3
40 to 79	12.8	16.0	14.2
80 to 119	18.0	14.9	16.6
120 to 159	25.1	25.0	25.1
160+ hours	30.9	31.0	30.9
Missing, unknown, or refused	3.7	3.9	3.9
Personal Earnings (in past year) (percent)			
Less than $10,000	55.4	53.9	54.8
$10,000 to $19,999	18.1	16.2	17.3
$20,000 to $29,999	6.5	7.4	6.9
$30,000 to $39,999	2.3	1.5	2.0
$40,000 to $74,999	0.7	0.8	0.7
Refused or missing	16.9	20.1	18.3

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: Figures include 3 enrollees who subsequently withdrew from the demonstration.

Aside from the education and health care sectors, the next highest employment category is other services (16.5 percent), which includes a broad range of activities such as personal care services, death care services, pet care services, maids, and gardeners (U.S. Department of Labor n.d.). In addition, 10 percent of participants are employed in each of the following industries: all other industries; leisure and hospitality; and trade, transportation, and utilities. The remaining 25 percent of enrollees are employed in all other employment sectors.

Personal earnings, which is shown in Table IV.3, comes from unemployment insurance (UI) earnings data that the state of Texas collects from employers. Personal earnings data do not portray a complete picture of Working Well participants' income because 18 percent of values shown include missing data. The majority of Working Well participants are low-income; over 70 percent earned less than $20,000 in personal earnings during the 12 months prior to enrollment. In fact, over half (54.8 percent) of Working Well participants reported less than $10,000 in personal earnings, which is below the federal poverty level (U.S. Department of Health and Human Services n.d.).[8] Despite their impairments, program participants have relatively high levels of functioning, which is reflected in over 30 percent of the study population working more than 160 hours during the four weeks prior to enrollment, with an additional 25 percent of participants reporting working between 120 and 159 hours during the same time period. Although slightly more (16.0 percent) control group members self-report working 40 to 79 hours in the four weeks prior to enrollment, observed differences in employment and income between treatment and control groups were not statistically significant.

Public Program Participation (In Past Two Calendar Years)

Table VI.4 shows public program participation of Working Well participants during the past two calendar years. Less than 1 percent of program participants (0.6 percent) participated in the Texas Medicaid Program before entering the demonstration. This low prevalence rate can be explained by the fact that the Working Well program targets Gold Card enrollees, who are uninsured Harris County residents who are not enrolled in Medicaid. Also, the Texas Medicaid Program imposes strict income eligibility limits. For example, the Medicaid income eligibility limit for families and children receiving temporary assistance for needy families (TANF) is up to $188 per month, and for the aged and disabled it is $623 per month in 2008 (Texas Health and Human Services Commission 2009). In addition, the Texas Medicaid Program covers a limited number of optional eligibility categories that states are allowed, but not required, to cover under their Medicaid program (Texas Health and Human Services Commission 2009).[9] Thirty-eight percent of participants had received food stamps, 8.8 percent had received Section 8 or subsidized public housing, and 6.4 percent had received vocational training in the two years prior to enrollment. Less than 3 percent of Working Well participants had received TANF. All differences in public program participation between the treatment and control groups were not statistically significant.

E. PROGRAM SERVICE USE AND EXPENDITURES

This section presents analyses of DMIE expenditures from October 1, 2007, to September 30, 2008, which is based on quarterly report data provided by the Working Well program. Analyses are stratified by type of service and show the distribution of health care service costs and changes in quarterly expenditures over time.

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[8] The 2009 federal poverty level is $10,830 for a single person (U.S. DHHS).

[9] The optional groups that Texas covers under Medicaid are the “medically needy” group, which consists of children and pregnant women whose income exceeds Medicaid eligibility limits but who do not have the resources required to meet their medical expenses, and also pregnant women and infants with income up to 185 percent of the FPL, instead of the federal requirement of 133 percent of the FPL.

Table VI.4. Self-Reported Public Program Participation of Texas DMIE Participants in the Past Two Calendar Years

	Treatment (n=904)	Control (n=712)	Total (n=1,616)
Texas Medicaid Program (percent)			
Yes	0.7	0.6	0.6
No	99.3	99.4	99.4
Missing	0.0	0.0	0.0
Food Stamps (percent)			
Yes	39.4	36.7	38.2
No	60.6	63.3	61.8
Missing	0.0	0.0	0.0
Section 8 or Subsidized Housing (percent)			
Yes	9.5	8.0	8.8
No	90.2	91.6	90.8
Missing	0.3	0.4	0.4
Vocational Rehabilitation (percent)			
Yes	6.6	5.0	6.4
No	82.5	85.0	82.9
Missing	10.9	10.0	10.8
Temporary Assistance for Needy Families (TANF) (percent)			
Yes	2.0	3.5	2.7
No	98.0	96.5	97.3
Missing	0.0	0.3	0.0

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: Figures include three enrollees who subsequently withdrew from the demonstration. Participation in Texas public health care programs is based on a review of state enrollment files during the two years before enrollment in the Texas DMIE. Participation in TANF, food stamps, public housing, and vocational rehabilitation programs is based on the individual’s recollection of participation during the two years before enrollment in the DMIE.

1. DMIE Health Care Service Expenditures

Table IV.5 presents the distribution of treatment group members’ health care service expenditures by type of service from October 1, 2007, to September 30, 2008. For each service category, service costs are based on a fixed per member per month rate. Expenditure data represent only program payments and include both state and federal shares. Case management services accounted for the largest share of total expenditures ($2,034,753 or 30.2 percent). Since all treatment group members have at least monthly contact with Shorman case managers, case management is predictably a top service category. Case management expenditures include case management employment supports.

Prescription drugs comprise the second highest share of total expenditures ($1,607,000 or 23.9 percent), which can be explained by the fact that over half (55.4 percent as shown in Table VI.2) of all program participants have a diagnosis of either schizophrenia, bipolar disorder, major depression (serious mental illness) or non-clinical depression, anxiety, ADHD, or reaction disorder (mental health). High demand for prescription drugs can also be explained by the high prevalence of comorbities among the enrolled population, with over 90 percent of participants having five medical conditions. All other service categories account for the remaining 45.9 percent of total expenditures.

Table VI.5 also shows treatment group members' quarterly expenditures stratified by type of service from October 1, 2007, to September 30, 2008. Average quarterly expenditures are also represented by payments per treatment group member per quarter, based on treatment group participants' enrollment at the end of each quarter. Because of the way in which the data are reported, unduplicated counts of users are only available on a quarterly basis. There were 899 treatment group members receiving services at the end of the third quarter of 2008.

As expected, quarterly expenditures increase over time across service categories, which correspond to growth in the number of treatment group members. Service categories include a wide variety of health care services, such as dental services, substance abuse treatment services, and prescription drugs, as well as case management services, chiropractic/podiatry services, and durable medical equipment, all of which are made available through the Working Well program.

Low utilization of substance abuse treatment services is somewhat unexpected since 35 percent of treatment group members (see Table VI.2) have a substance abuse diagnosis. One would expect that there would be pent-up demand for substance abuse treatment services since they are not made available through the standard Gold Card benefit package. Program staff are working to gain a better understanding of the factors for low utilization of substance abuse treatment services. Program staff report that low demand may be attributable to participants being in denial of their condition, and also participants not wanting to see a provider during business hours because they are reluctant to take time off from work.

Table IV.5. Texas DMIE Quarterly Health Care Service Expenditures, by Type of Service (October 1, 2007–September 30, 2008)

	Quarterly Expenditures					
	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Total Expenditures	Percent of Total Expenditures
Case management	$480,000	$480,000	$532,200	$542,553	$2,034,753	30.2
Prescription drugs	196,600	340,600	532,200	537,600	1,607,000	23.9
Hospital inpatient	163,660	283,543	443,046	447,541	1,337,790	19.9
Outpatient clinic or center	63,895	110,682	172,945	174,700	522,222	7.8
Laboratory and X Ray procedures	40,598	70,337	109,904	111,019	331,858	4.9
Hospital emergency room	30,296	52,471	81,989	82,820	247,576	3.7
Substance abuse treatment[a]	29,490	51,091	79,830	81,180	241,590	3.6
Mental health	29,431	50,988	79,670	81,018	241,107	3.6
Dental	7,373	12,773	51,837	44,911	116,894	1.7
Chiropractic/podiatry	2,212	3,826	5,979	6,039	18,056	0.3
Vision/hearing	1,406	2,435	6,046	4,952	14,839	0.2
Durable medical equipment	1,857	3,229	5,046	5,111	13,426	0.2
Physician[b]	0	0	0	0	0	0.0
Transportation	0	0	0	0	0	0.0
Outpatient hospital[c]	0	0	0	0	0	0.0
Total	$1,046,818	$1,461,975	$2,100,692	$2,119,444	$6,727,111	100.0
Treatment group participants[d]	384	758	901	899		
Average expenditures	$2,726	$1,929	$2,332	$2,358		

Source: Texas DMIE quarterly reports from October 1, 2007–September 30, 2008. Quarterly report data are for all Texas DMIE treatment group participants from October 2007–September 2008.

Note: All expenditures are based on PMPM. Case management contract is based on minimum PMPM.

[a] Substance abuse treatment service category includes psychiatric overflow.
[b] Physician costs are included in the outpatient clinic or center service category.
[c] Outpatient hospital expenditures are included in various other service categories.
[d] Enrollment based on the number of treatment group members at end of quarter.

2. Program Employment Support Service Use

Table VI.6 shows the number of treatment group members accessing employment support services from July 1, 2008, to September 31, 2008 (third quarter of 2008). Employment support use is stratified by type of service and includes counts of the number of treatment group members using each service and also the number of visits in the quarter. During the third quarter of 2008, 457 treatment group members (50.8 percent) received case management employment support. Case management employment support may include helping an individual create a resume or identify job leads. In addition, 97 treatment group enrollees (10.8 percent) were referred to the Texas Workforce Commission for employment supports, which may include provision of career development information, job search resources, training programs, and unemployment insurance benefits where appropriate.

Table VI.6. Texas DMIE Enrollee Employment Support Service Use by Type of Service (July 1, 2008–September 30, 2008)

	Number of Enrollees Using Service	Total Number of Visits	Average Number of Visits in Quarter
Case management employment support	457	1,450	3.2
Employment support from Department of Assistive and Rehabilitative Services	46	73	1.6
Employment support from Texas Workforce Commission	97	Unknown	Unknown
Total users or visits[a]	457	1,523+	
Total number of enrollees[b]	899	n/a	n/a
Percent of enrollees using services	50.8	n/a	n/a

Source: Texas DMIE quarterly reports from July 1, 2008 through September 30, 2008.

Note: Figures are based on individuals enrolled in treatment group only.

n/a = not applicable.

[a] Count is the total number of unique enrollees.

[b] Number of enrollees is the number of treatment group members at the end of the quarter.

F. BASELINE MEASURES OF HEALTH, EARNINGS, AND SSA BENEFITS

In this section, we present baseline measures for health status (including self-reported physical and mental health status and physical and mental 12-item short form (SF-12) scores), annual earnings, and prior SSI or SSDI enrollment. Baseline measures of health status are based on self-reported data. Earnings, employment, and prior SSI/SSDI enrollment are based on SSA administrative data.

1. Health Status

Table VI.7 presents the self-reported health status of the enrolled population. Over 16 percent of participants characterize their own physical health as either very good or excellent, while 34 percent characterize their mental health that way. The majority of participants (75.7 percent) describe their own physical health as good or fair. A smaller number (61.6 percent) of participants rate their mental health status as good or fair at the time of enrollment. Overall, treatment and control group members reported similar perceptions of their own physical and mental health at enrollment.

Table VI.7. Self-Reported Health Status of Texas DMIE Participants

	Treatment (n=904)	Control (n=712)	Total (n=1,616)
Physical Health Status (percent)			
Excellent	3.5	4.9	4.1
Very good	13.6	11.1	12.5
Good	37.6	39.3	38.4
Fair	37.6	36.8	37.3
Poor	7.5	7.4	7.5
Refused/unknown	0.1	0.4	0.3
Mental Health Status (percent)			
Excellent	16.3	15.2	15.8
Very good	18.8	17.4	18.2
Good	39.9	43.1	41.3
Fair	20.7	19.8	20.3
Poor	4.0	4.2	4.1
Refused/unknown	0.3	0.3	0.3

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: Figures include three enrollees who subsequently withdrew from the demonstration.

The SF-12 is a 12-item survey questionnaire that is part of the assessment survey administered to all DMIE participants at baseline and at 12-, 18-, and 24-month intervals thereafter. The SF-12 score is a self-reported measure of physical and mental health status and is norm based at 50 for the general population; lower scores indicate worse functioning than the general population. The mean, minimum, and maximum SF-12 mental and physical health scores are balanced across treatment and control groups (Table VI.8).

The average physical health score of 38 is lower than the average mental health score of 50. This difference suggests that participants reported having worse than average physical health. This may be associated with the older age of the study population (68 percent of participants are adults between the ages of 45 and 60 (Table VI.1) and the prevalence of multiple medical conditions (Table VI.2).

2. Annual Earnings and Employment

MPR obtained annual aggregate earnings data from SSA administrative data files, which are in addition to personal income data collected by states from UI wage records. The SSA earnings data are a measure of total annual earnings based on income reported to the IRS, and include self-employment income. Of the total enrolled population, 87.9 percent (n=1,421) of participants had positive earnings in 2006, the year before DMIE enrollment began. Among program participants the mean earnings are $13,709 in 2006, and the earnings are similarly distributed across treatment and control groups ($13,746 and $13,662, respectively). This figure is considerably higher than the average personal income earnings ($9,216) reported in Table VI.3 which comes from UI earnings data that the state of Texas collects from employers. The observed differences between the two sources of earnings data are likely attributable to SSA earnings data being more complete because they include self-reported income.

Table VI.8. SF-12 Baseline Health Status of Texas DMIE Participants

	Treatment (n=904)	Control (n=712)
SF-12 Physical Component Score (PCS)		
Mean	38.0	37.7
Minimum	7.6	9.4
Maximum	58.1	60.6
SF-12 Mental Component Score (MCS)		
Mean	49.5	49.6
Minimum	10.4	10.0
Maximum	74.2	71.3

Source: Uniform Data Set submitted by the independent evaluators at the University of Texas, Austin, Addiction Research Institute. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note (1): Figures include 3 enrollees who subsequently withdrew from the demonstration.

Note (2): SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the eight subscales of physical and mental health, since raw scores cannot be directly compared. The eight sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning.

To qualify for SSI/SSDI benefits, nonelderly individuals with potentially disabling conditions must meet the eligibility criteria, which include the inability to work at a level referred to as “substantial gainful activity” (SGA) because of a health condition that is expected to last at least 12 months or result in death (Gimm and Weathers 2007). In 2007, 53.5 percent of Working Well program participants’ earnings were at or above the annualized SGA level of $10,800 in earnings. This finding suggests that over half of Working Well participants would likely not have qualified for SSI/SSDI in 2007 because their earnings demonstrate their ability to work at or above the SGA level.

3. Prior SSI/SSDI Enrollment

Only 4.3 percent of the DMIE enrolled population had a history of receiving either SSI or SSDI benefits between 1996 and 2005. This low incidence of prior use of federal disability benefits is expected given the DMIE's eligibility requirement that excludes participants who currently receive federal disability benefits, or have a pending application for disability benefits. However, Working Well participants have either serious mental illness or a behavioral health diagnosis accompanied by a physical impairment, which makes SSI/SSDI eligibility more likely. Also, some individuals in the Working Well program are likely to apply for federal disability benefits because of the high prevalence of comorbities among DMIE participants, who are predominantly older women over the age of 45.

G. SUMMARY OF FINDINGS

1. Lessons Learned from Early Implementation

The Working Well program encountered several early challenges with recruitment because the original "direct mailing" model, by itself, was ineffective in reaching a large number of study candidates. Program and evaluation staff identified these challenges early and made mid-course corrections to reach their enrollment targets. To accomplish this, program and evaluation staff marshaled program resources to develop and deploy a new in-person recruitment model in five clinics in Harris County, requiring high levels of coordination and modifying processes over a short period of time. As described earlier in this chapter, the in-person recruitment model was highly effective as the Working Well program surpassed its enrollment targets of 800 treatment group and 625 control group members in April 2008. These early lessons suggest that a program's recruitment strategy needs to be flexible and responsive to challenges in order to be fully effective. Also, these early lessons indicate that in-person "high-touch" recruitment methods are effective in reaching and recruiting study candidates.

Building the Working Well program around an existing public program (Gold Card Program) created natural synergies that had several notable advantages. First, the Working Well program was able to identify study candidates from a "captive pool" of Gold Card members and conduct a targeted outreach effort, which helped to focus recruitment activities. Second, the Working Well program was able to rely upon an existing network of Harris County providers, which made the provision of services transparent to providers and treatment group members. Third, program administrators subcontracted with outside entities, such as Shorman Solutions, Westat, and out-of-network providers, to expand service capacity and allow the program to be implemented quickly. Finally, use of the purple card to identify DMIE treatment group members was an effective visual cue for facilitating program recognition among a broad network of providers.

2. Baseline Participant Characteristics

Self-reported data collected from Working Well participants at the time of enrollment capture the baseline characteristics of the enrolled population. As noted earlier in this chapter, the enrolled population is predominantly female (76.5 percent) and older adults ages 45 to 60 (68.1 percent), with a high co-morbidity prevalence, which suggests potential high demand for medical services and prescription drugs. The majority of participants are low-income, with over half (54.8 percent) earning less than $10,000 in personal income in the 12 months prior to enrollment, which is less than the federal poverty level. Despite their potentially disabling impairments, the majority (56.0 percent) of program participants worked over 120 hours in the four weeks prior to enrollment, which suggests relatively high levels of functioning. Individuals with disabilities experience poverty at much higher rates than individuals without disabilities; “annual poverty rates are two to five times higher among working-age people with disabilities compared to their counterparts without disabilities” (She and Livermore 2006). Understanding how to sustain employment among a population of working adults with potentially disabling conditions may help mitigate the prevalence of poverty.

H. PHASE-DOWN PLAN AND NEXT STEPS

Under current legislation, the DMIE is scheduled to end on September 30, 2009. Treatment group members in the Working Well program who remain Harris County residents will continue to receive Gold Card benefits through HCHD effective October 1, 2009. Depending on their income, treatment group members will assume responsibility for co-payments for standard Gold Card services. Before the end of the demonstration, Shorman case managers will prepare individual transition plans for each treatment group member. The transition plans will detail strategies for addressing each individual’s needs post demonstration.

Data collection and independent evaluation activities will continue through September 2010, and will culminate in a final report to CMS by September 30, 2010. Data collection activities will include completion of 18- and 24-month assessment surveys by June 2010. The UT ARI evaluation team will also continue to collect HCHD data on participants’ healthcare and pharmacy utilization, state data related to earnings, public assistance, and disability, as well as SSA data on SSI/SSDI status and IRS data on participants’ income. The analyses will focus on determining whether elements of the DMIE project can be sustained in Harris County and whether aspects of the project can be replicated in other localities. Mathematica Policy Research and CMS will conduct a site visit to Texas in the fall of 2009 to gather detailed information on program operations in the final year of the demonstration.

CHAPTER VII

HAWAII DMIE PROGRAM

This chapter describes the Hawaii DMIE program, baseline participant characteristics, and program implementation. We conclude with a discussion of early lessons learned and a description of Hawaii's DMIE phase-down plans. Because Hawaii fell short of its recruitment target, special attention is given to the unique challenges of working with private sector partners and implementing a community-based initiative. The information presented in this chapter relies on qualitative information obtained from quarterly reports, monthly conference calls, site visits, the state's evaluation reports, and quantitative data from the Uniform Data Set (UDS) (CDS 2008a; CDS 2008b).[1]

A. PROGRAM DESIGN

The purpose of the Hawaii demonstration is to determine whether a community-based work support and medication management program for individuals with diabetes can forestall or prevent the loss of employment and independence. The Hawaii DMIE program—known as "Live Healthy…Work Well"—targets working adults with diabetes who are at risk of becoming disabled. The intervention offers both preventive medication management and personal coaching services to help individuals identify and achieve life and workplace goals related to self-management of their disease. The Hawaii DMIE evaluation is designed to test the effect of medication therapy management (MTM), life coaching, and supportive secondary services on health and functional status, workforce performance and employment, and independence from public assistance programs such as SSDI and SSI.

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[1] See Hawaii Demonstration to Maintain Independence and Employment, Formative Evaluation Report for August 1, 2007–February 29, 2008, submitted by Hawaii DMIE Evaluation Team (Landry Fukunaga, Christy Nishita, Tammy Tom, and Denise Uehara), April 2, 2008a; and Hawaii Demonstration to Maintain Independence and Employment, Final Formative Evaluation Report, Submitted by Hawaii DMIE Evaluation Team (Landry Fukunaga, Christy Nishita, Tammy Tom, and Denise Uehara), December 4, 2008b.

1. Eligibility Requirements

The Hawaii DMIE program is limited to individuals who already have a diagnosis of diabetes (type 1 or 2) or, during a pre-screening assessment, are identified as having a hemoglobin (Hb) A1c level of 6.5 or greater. Type 1 diabetes results from the body's failure to produce insulin and is usually diagnosed in children and young adults. Type 2 diabetes results from insulin resistance or when the body fails to properly use insulin. The HbA1c test is a measure of blood sugar level; higher levels indicate greater risk of diabetes-related complications. In addition to having a diagnosis of diabetes at the time of enrollment in the study, participants must be (1) between 18 and 62 years of age, (2) employed at least 40 hours per month for four consecutive weeks at the federal minimum wage or higher, and (3) living in the city or county of Honolulu. In addition, participants must not be receiving SSI or SSDI benefits or have a pending application for these programs.

Originally, participation was limited to employees of organizations that were members of the Hawaii Business Health Council (HBHC) that had agreed to partner with the state.[2] Early in the planning phase, several businesses in the HBHC agreed to facilitate recruitment for the demonstration by giving permission to their health care insurers to provide HBHC with the names of workers identified with diabetes based on health plan claims. Targeted letters were sent to potential candidates encouraging them to apply. However, as described in greater detail below, the state faced major difficulties obtaining the target number of cases through this strategy, so a decision was made to expand eligibility to any community resident who met the diagnosis, age, work, and residency requirements.

2. Program Benefits

The Hawaii DMIE program provides a set of primary and secondary services to treatment group participants. The two primary services are (1) pharmacist counseling on medication therapy management (MTM) and (2) life and work coaching to support the achievement of personal goals related to diabetes self-management. All treatment group participants are expected to use these primary services. The Hawaii DMIE program also offers an array of secondary services to treatment group members on an as-requested basis, including diabetes education, nutrition counseling, and a three-month fitness membership. Finally, participation carries several benefits related to non-service activities such as the use of a personal computer, financial assistance for diabetes-related services, and Medicaid coverage for uninsured treatment group participants.

The intervention services available under Hawaii’s DMIE are summarized in Table VII.1 and described individually below.

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[2] HBHC, a non-profit collaborative representing a significant portion of the large private employers in Hawaii, focuses on improving the health of employees for its member companies and serves as a catalyst for addressing health care issues in the state.

Table VII.1. Intervention Services and Benefits Under the Hawaii DMIE

Type of Service	Description
Primary Services	
Life coaching	Eight life coaches help participants set and achieve work, wellness, and personal goals of their choice, and find the resources, tools, and information necessary to manage diabetes and maintain employment.
Medication therapy management	Five trained pharmacists provide ongoing review of patients' medication, medication adherence, biometrics, and goals; record progress; and provide physician referrals if needed.
Secondary Services	
Diabetes education	Two certified diabetes educators (CDEs) are available to provide support to treatment group participants.
Nutrition counseling	Three registered dieticians are available to provide support with nutrition assessment and education based on type of diabetes or chronic illness and help with goal setting.
Diabetes self-management classes	Group diabetes education classes are offered at participating pharmacies on a range of topics related to self-management.
Peer support group	Diabetes-related support groups are available to help participants manage their disease.
Fitness club membership	Three-month membership to the YMCA health club is available to treatment group participants.
Other Benefits	
Personal computer	Treatment group members receive a personal computer with internet access and training on how to use the online coaching tool.
Medicaid coverage	Treatment group participants are eligible for Medicaid-like services if they are uninsured or lose their employer-sponsored coverage.
Referral to employment services	Life coaches may refer clients to employment services beyond those offered by the Hawaii DMIE, such as career counseling.
Medical reimbursement	Treatment group participants receive copayment or full payment for all Medicaid-approved, diabetes-related physician visits, medications, and supplies.

Life Coach Services. Life coaching is a professional service intended to help adults implement, manage, and maximize the benefits of life changes. Their goal is to help people understand the current situation and develop strategies for achieving personal goals in the future. Typically, during their initial meeting, life coaches and clients create specific plans for actions that will lead to the specified goals (such as exercising three times a week to reduce weight). Development of a realistic and desirable action plan is facilitated by the coach, but implementation of the plan is the responsibility of the client. Coaches also provide feedback to help individuals measure their progress and make adjustments as necessary to achieve their desired outcomes.

The life coaches in the Hawaii DMIE are responsible for assisting treatment group members set and achieve work, wellness, and personal goals of their choice, and finding the resources, tools, and information necessary to manage their diabetes. Specific life coaching responsibilities under the demonstration include:

- Developing rapport and trust with clients
- Identifying priorities and purpose of life coaching
- Raising awareness of health issues
- Identifying and setting SMART goals[3]
- Developing positive action steps and managing obstacles and setbacks
- Providing feedback and accountability benchmarks
- Celebrating successes
- Sustaining behavioral changes
- Providing training and support with the online coaching tool
- Referring clients to other health and employment services
- Tracking and maintaining encounter records

The Hawaii DMIE employs eight life coaches and one lead coach. They must hold a bachelor's degree in social sciences and have professional experience working with people. After a participant is randomized into the treatment group, he or she is assigned a life coach, who then contacts the participant to schedule an initial appointment. Before the meeting, the coach mails the individual a packet of material that includes a participant handbook, description of life coaching, and participant information form. The first life coaching session is expected to last between 45 and 75 minutes. In addition to building a rapport with the client, the purpose of the initial session is to review the handbook and answer questions, explain the life coaching process, and review the participant information form. The coach also asks the client to complete a questionnaire on life goals before conducting the second meeting.

The next meeting is expected to occur within two weeks of the initial session and lasts between one and two hours. The purpose is to review the questionnaire, distribute the computer and provide instruction on how to use it, teach the client how to use the online coaching tool, introduce the goal-setting process, develop an action plan, and enter the client's goals into the online coaching tool.

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[3] A SMART goal is one that is specific, measurable, achievable, relevant and time-bound.

The third and subsequent meetings with the life coach are expected to occur every two to four weeks and last for approximately one hour and are defined as substantive exchanges of information either in person, by telephone, or via synchronous online exchange. Their focus is to provide feedback to help individuals measure their progress and make adjustments as necessary to achieve the desired outcomes. Participants may choose to opt out of coaching sessions and opt back in at anytime during their 12 months in the program. For those participants who opt out or are unresponsive, coaches continue to make monthly contacts to offer their services.

MTM Services. Provided by licensed pharmacists, MTM services are designed to optimize therapeutic outcomes for patients through improved management of their diabetes. MTM services encompass a broad range of professional activities and responsibilities within the pharmacist's scope of practice. These include but are not limited to the following:

- Performing or obtaining necessary assessments of patient's health status
- Formulating a medication treatment plan
- Selecting, initiating, modifying, or administering medication therapy
- Monitoring and evaluating the patient's response to therapy, including safety and effectiveness
- Performing a comprehensive medication review to identify, resolve, and prevent medication-related problems, including adverse drug events
- Documenting the care delivered and communicating essential information to the patient's other primary care providers
- Providing verbal education and training designed to enhance patient understanding and appropriate use of his/her medications
- Providing information, support services, and resources designed to enhance patient adherence with his/her therapeutic regimens
- Coordinating and integrating MTM services within the broader health care-management services being provided to the patient

To provide these MTM services to program participants, the Hawaii DMIE contracts with a pharmacist coordinator at HBHC who, in turn, subcontracts with two pharmacy chains that provide a total of five pharmacists at selected retail drug stores located on the island of Oahu.[4] One pharmacist travels to different sites to meet participants based on scheduled

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[4] The two retail chain pharmacies that subcontract for the delivery of MTM services under the Hawaii DMIE are Times Supermarket and Longs Drugs.

appointments. To participate in the Hawaii DMIE program, pharmacists must complete several training requirements including certification in *Pharmaceutical Care for Patients with Diabetes*,[5] a four-hour training in motivational interviewing techniques, a two-hour training in using the electronic prescription drug database tool, and two trainings on the Hawaii DMIE data collection requirements.[6] Pharmacists also had the option of attending voluntary monthly trainings covering a variety of topics related to diabetes, but these meetings were discontinued due to lack of participation.

Treatment group members are expected to meet with an MTM pharmacist monthly for the first three months after enrollment and quarterly thereafter. The first counseling session is conducted in person and typically lasts about one hour. Subsequent meetings can occur either in person or by telephone and last about 30 minutes. The purpose of these counseling sessions is to provide ongoing review of clients' medication, medication adherence, biometrics, and goals. They are also used to record progress and provide physician referrals if needed. Follow-up calls are made by pharmacy staff to ensure that patients attend their counseling sessions. While pharmacist meetings are optional, three scheduled but missed appointments are supposed to result in participants being disenrolled from the MTM component of the demonstration.

Secondary Services. In addition to the MTM and life coaching interventions, the Hawaii DMIE program offers participants a variety of secondary support services to help address issues related to diabetes management. These additional services are available on request and include the following:

- ***Certified Diabetes Educators (CDEs).*** Two CDEs are available to provide additional support to treatment group participants through diabetes education. Covered topics include, but are not limited to, biometrics monitoring, medication adherence, and foot self-examination; goal setting related to diet and exercise;

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[5] Pharmaceutical Care for Patients with Diabetes is a certificate training program for pharmacists developed jointly by the American Pharmaceutical Association (APhA) and the American Association of Diabetes Educators (AADE). The program is comprised of two components: a live seminar and a self-study component. The 10-hour live seminar covers diabetes, medication therapy management, medical nutrition therapy, self care, proper insulin injection techniques, blood pressure management, self-monitoring of blood glucose, and diabetic foot exams, among other issues, followed by an exam. The self-study component consists of three modules that cover the disease state and its complications, diabetes management and monitoring strategies, educational strategies, and psychosocial issues, followed by a self assessment.

[6] Pharmacists employed by Times Supermarket were initially required to complete training in the Quality Assessment Prescription (QARX) database tool developed for the American Pharmacists Association Foundation's Ten City Challenge project. The Digital Outcomes Communication System (DOCS) later replaced this tool. MTM encounter data are currently being recorded on paper charts until training in the new electronic system is complete. Pharmacists employed by Longs Drugs will continue to use the Remedy system already in use at its pharmacies.

physician referrals; and tracking, maintaining, and submitting reports to DMIE program staff.

- ***Registered Dieticians.*** Four registered dieticians are available to program participants to provide additional support with nutrition assessment and education related to diabetes and goal setting.

- ***Diabetes Education Classes.*** Group education classes are held periodically at participating pharmacies, community-based health fairs, employer-sponsored events, health care providers, and specialized conferences. Topics covered include (1) overview on diabetes and medication, (2) diet and self-monitoring of blood glucose, (3) basic nutrition and exercise, (4) long-term complications and self-management, and (5) absenteeism. Education classes that are scheduled by the pharmacies are based on demand and the availability of staff.

- ***Peer Support Groups.*** All participants are given a resource list of community and web-based, diabetes-related peer support groups. These public services, offered by the American Diabetes Association (ADA) and other health care organizations, are intended to help anyone with diabetes manage their disease according to their needs. Project staff will recommend these support groups to participants in the treatment group where appropriate. (Participation in peer support groups is not supported with DMIE funds and is open to anyone with diabetes, including control group members in the Hawaii demonstration.)

- ***Fitness Membership.*** A three-month membership to a YMCA health club is available to treatment group participants.

The treatment group also receives (1) reimbursements for all diabetes-related office visits with their primary care physician and/or endocrinologist that are not covered by their own insurance plan, (2) prescriptions for medications and supplies directly related to diabetes, and (3) lab fees in association with the completion of the baseline and follow-up health assessment forms. Participant’s life coach may also refer treatment group clients to public employment support services available through Oahu WorkLinks (OWL).

Finally, the Hawaii demonstration provides access to all of the health care services available under the Medicaid state plan related to diabetes, with the exception of long-term care and transplants. However, because of Hawaii’s prepaid health insurance mandate, all employers in the state are required to provide comprehensive medical insurance to employees working at least 20 hours per week for four consecutive weeks (that is, half-time employment). More than 90 percent of the Hawaii DMIE participants meet this work requirement and therefore had employer-sponsored private health insurance at the time of enrollment, limiting the need for Medicaid coverage among program enrollees and reducing the financial obligations of the state through Medicaid. Because most candidates already have private health insurance coverage, the employer mandate in Hawaii eliminates one of the major incentives for joining the demonstration.

All participants (treatment and control group members) were sent the Centers for Disease Control and Prevention (CDC) diabetes management manual at enrollment and, during the study, received an updated resource list of information related to employment issues, diabetes education, and access to Medicaid benefits and food stamps. In addition, for both treatment and control group members, the Hawaii DMIE project covers all fees associated with obtaining the health-related data needed biannually by the project, which include lab fees, costs for doctor visits, and other charges related to completion of the health assessment forms. Health assessment data will be used to evaluate the impact of the intervention services on disease progression. Participants assigned to the control group continue to receive any medical benefits already available through their employers, as well as those services that they purchase on their own. They are not eligible for receiving life coaching, medication management, and enhanced medical benefits available under the demonstration.

Treatment and control group members receive monetary compensation for participating in the study by completing ongoing assessments and surveys. The information will be used to evaluate the impact of the demonstration on health and employment outcomes. Participants in the treatment group are compensated $150 for the initial submission of materials, $150 after 6 months, and $150 upon exit at 12 months. This represents a total monetary compensation for treatment group members of $450. Control group participants are compensated $150 for the completion of the first health and employment protocols, $100 after the first three months, $200 at six months, $100 at 9 months, and $250 at end of 12 months for completing the exit survey. This represents a total compensation of $800.

3. Sources of Funding

Two sources of funds support the Hawaii DMIE program. First, state general funds, appropriated by the Hawaii legislature, cover 45 percent of the costs of services for treatment group participants enrolled in Medicaid. However, as noted earlier, because of the state's employer mandate and the work requirements for participation in the DMIE, very few program participants are ever enrolled in Medicaid. As a consequence, very few of the program costs will be paid for by the state. Second, federal grant funds, awarded by CMS, cover all DMIE administration and evaluation costs, 55 percent of the costs of covered health care services for treatment group participants enrolled in Medicaid, and 100 percent of the costs of all other health and employment support services, including MTM and life coaching, not covered under a participant's employer-sponsored plan. There are no enrollee cost-sharing requirements under the demonstration. However, those requirements under an enrollee's employer-sponsored health plan for services related to diabetes care will be paid for with demonstration (that is, federal) funds.

B. ORGANIZATION AND ADMINISTRATION

The Hawaii State Department of Human Services (DHS), the agency that administers the state's Medicaid program, is the recipient of the DMIE grant and is responsible for coordinating and monitoring all project resources related to Medicaid. This ensures that the information system and reimbursement procedures for the state's share of Medicaid benefits are operational. However, because the state faces limited financial exposure under the demonstration, DHS has had relatively little involvement with the program.[7]

The demonstration is being implemented under subcontract to the Center on Disability Studies (CDS) at the University of Hawaii at Manoa. CDS is responsible for all day-to-day operational aspects of the program, including outreach and recruitment, eligibility, and service delivery. Program staff are also responsible for ensuring that the biometric data (that is, HbA1c level, blood pressure, blood lipids, and height and weight) are collected for everyone enrolled in the demonstration. The staff include a principal investigator, project director, administrative and fiscal support specialists, two technology specialists, and a participant relations coordinator (PRC). The PRC is responsible for screening participants for eligibility in the demonstration, providing information to the life coach and pharmacist coordinators, providing follow-up contact to ensure that health assessment forms are submitted, maintaining contact information, and distributing incentive payments.

CDS staff is responsible for the delivery of primary services including life coaching and MTM. CDS employs the life coaches and subcontracts with HBHC who then subcontracts with the MTM pharmacists. CDS also subcontracts with secondary service providers, such as the CDEs, registered dieticians, and the fitness club. The life coaches are salaried, while the clinical providers are reimbursed on a fee-for-service basis using Medicaid payment rates.

CDS staff also is responsible for conducting the evaluation of the Hawaii demonstration.[8] This team includes an evaluation coordinator, data manager/specialist, and evaluation specialists and is responsible for monitoring recruitment, enrolling and randomizing participants, ensuring intervention fidelity, assessing whether participant concerns are addressed, collecting program and outcome data, and conducting both a process and impact evaluation. Data elements collected by the evaluation team include the assessment tool, daily hours worked calendar, work productivity assessment instrument,

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[7] Because the Hawaii DMIE was designed to recruit participants through HBHC, and most enrollees were expected to have employer-sponsored coverage, the state assumed that few participants would require Medicaid coverage and the use of state funds would be minimal. While recruitment was opened to all eligible community residents, most enrollees have employer-sponsored coverage and few have been enrolled in Medicaid.

[8] The evaluation was supposed to be subcontracted through the Research Corporation of the University of Hawaii (RCUH) but that subcontract was never implemented.

readiness to change form, health and work form, MTM pharmacy logs, and the life coaching program feedback survey. The evaluation team also conducts focus groups with participants.

Two advisory councils support the Hawaii DMIE program: one for the program and the other for evaluation purposes. The program advisory council is responsible for reviewing all operational procedures and providing input related to program operations on an ongoing basis. The purpose of the evaluation advisory council, which includes a staff member from the Hawaii Department of Health and a private sector research consultant with expertise in diabetes care, is to provide consultation and oversight to the evaluation team and ensure objective monitoring of all project goals. At the start of the project, the evaluation team also contracted for a senior evaluation consultant through the university, but this position was vacated soon after the program began. Subsequently, a consultant was hired from the University of Houston to provide technical assistance related to data analysis.

C. IMPLEMENTATION PRACTICES

In this section, we describe the outreach and recruitment strategies, screening and enrollment processes, and randomization procedures employed by the Hawaii DMIE. Recruitment activities began in March 2007 and ended in September 2008.The demonstration faced major challenges in recruitment and ultimately replaced its employer-based design with an open enrollment policy. In the end, CDS reached only 36 percent of its original enrollment target, and the low enrollment numbers may constrain the state’s ability to measure the effects of the intervention services.

1. Outreach and Recruitment Strategies

The Hawaii DMIE was designed to be a public-private partnership with the Honolulu business community, building on relationships already established with HBHC members through an independent ongoing project called the Diabetes Ten City Challenge. According to the operational protocol, CDS expected to work closely with at least seven businesses that were members of HBHC and had expressed interest in participating in the demonstration. The original plan was for HBHC to promote the project at their council meetings and meet individually with employers to finalize buy-in with the project. HBHC, in collaboration with the businesses, would then send targeted outreach and recruitment material (including a general announcement letter, postcard, and flier) to their employees, encouraging those who thought they might qualify for the project to contact CDS staff. Program staff would respond by mailing an enrollment packet to interested individuals. CDS also planned to publicize the demonstration to the general community through presentations at employer-sponsored health fairs, press releases, and employer newsletters.

Hawaii encountered major challenges with its original outreach and recruitment strategy. First, finding businesses that would commit to the demonstration turned out to be more difficult and time consuming than anticipated. According to the state’s formative evaluation, after more than six months of effort by program staff, only four HBHC employer groups had expressed interest in participating in the demonstration, and only one of these mailed letters to its employees. Two companies said they were ready to join, but withdrew due to other business priorities. Employers questioned whether improved health status and productivity of their workers would be sufficient to justify their involvement. In addition, employers expressed concerns about the sustainability of the project and whether they might be held responsible for continuing financial support after the demonstration was over. Companies also raised objections about the differential treatment of employees that would arise because of the randomized design. Also, HBHC's Diabetes Ten City Challenge program was supposed to end by December 2007 (during the recruitment phase of the Hawaii DMIE), leaving companies with no diabetes program for their members. However, HBHC secured supplemental funding from pharmaceutical companies and extended the challenge program; the demonstration became the less desirable of the two programs because of its randomized design. As a result of these and other concerns, the state had a difficult time obtaining buy-in and participation from their business partners. Nonetheless, CDS continued working with HBHC members and enrolled participants from two companies who entered during the open enrollment period.

Second, encouraging employees to respond to the promotional material was also challenging. One company mailed introductory letters to all 1,500 employees, with targeted follow-up letters sent to 54 employees who were known to be taking medication for diabetes. Letters were signed by the company director and personalized with his family history of diabetes. In addition, the company distributed marketing posters and brochures at the work site. Program staff also utilized testimonials, email blasts, and an enrollment card with a self-addressed stamped envelope. Despite the efforts of this employer, only a couple of its workers called to enquire about the program. According to the state's formative evaluation, employees may have been reluctant to participate in the demonstration because of the commitment of time it required outside of work and concerns about confidentiality. Because of the high medical costs associated with diabetes and the need for a special state-approved commercial driver's license, human resource staff noted that employees might have felt their jobs could be threatened by participation (CDS 2008a).[9]

About 12 months after the project was initiated, the state continued its employer-focused recruitment strategy with four HBHC businesses and added a community-based initiative in an effort to boost enrollment. Enrollment in the DMIE was opened to all community residents who met the age, work, residency, and clinical requirements, regardless of place of employment.[10] Community-based outreach and recruitment activities made use of multiple

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[9] Hawaii Demonstration to Maintain Independence and Employment, Formative Evaluation Report for August 1, 2007–February 29, 2008, Submitted by Hawaii DMIE Evaluation Team (Landry Fukunaga, Christy Nishita, Tammy Tom, and Denise Uehara), April 2, 2008.

[10] At the same time, the state increased the age limit from 60 to 62 years of age. Because the DMIE was then scheduled to terminate in 18 months, older enrollees were no longer at risk of aging out of the demonstration.

media, including newspapers, newsletters, brochures, posters, radio, television, email, and the Internet. Program staff also made presentations about the demonstration at health fairs and conferences, and recruited directly through physicians, pharmacies, CDEs, and other health care providers who directly serve the target population. According to data tracked by the participant relations coordinator (PRC), the most effective community-based recruitment activities were the newspaper, personal referrals, email blasts and newsletter announcements from employers and health plans, and presentations at health fairs.

2. Screening and Enrollment Processes

The enrollment process began when an individual contacted the PRC at CDS. The PRC worked with the individual to collect the necessary information to confirm eligibility for the program and, after the meeting, scheduled a meeting for the individual with an evaluation team member, and mailed the person an enrollment packet containing an informed consent form, physician/endocrinologist release forms, and a WH-1 University of Hawaii statement of citizenship and federal tax form. The evaluation team member discussed the study with the enrollee and answered questions he or she may have had. At this meeting, the enrollee was also asked to complete the baseline survey instruments and forms, randomly assigned to a treatment or control group, given an enrollment folder, and selected the pharmacy location for their MTM meetings. The PRC mailed a welcome letter to the participant, distributed referral information on individuals randomized to the treatment group to the life coach and pharmacist coordinators who then assigned participants a life coach and pharmacist. They were responsible for contacting the treatment group member to schedule a first meeting.

One challenge related to screening involved collection of biological markers of diabetes status (most importantly, the HbA1c level). Initial data for these measures (as well as height, weight, blood pressure, glucose, triglyceride, and cholesterol levels) was supposed to have been based on lab tests conducted within a two-month window around the date of enrollment and reported to CDS staff by the participant, their physician, or the lab that conducted the test. However, the project encountered substantial challenges in obtaining this information in a timely manner because either (1) participants did not obtain the appropriate blood work within the specified time period or (2) the provider or lab did not return the information to the project team, even though the participant had signed a release form.

After this problem was identified, the project team increased its outreach to physicians and private labs to increase the likelihood that data on biological markers would be obtained. It is too early to tell whether these efforts will result in more complete biological data at 6- and 12-month followup.

3. Randomization Procedures

The Hawaii DMIE was originally designed to randomize participants into treatment and control groups based on a 1:1 assignment ratio, stratified by place of employment and type of diabetes (type 1, type 2, and pre-diabetes). With an original enrollment goal of 534 people, the state expected to assign 267 people to the treatment group and 267 people to the control group. However, because of the switch to an open enrollment process and the likelihood of low enrollment numbers, the state eliminated the employment stratification procedure and implemented a 2:1 assignment ratio (that is, six participants were assigned to the treatment group for every three assigned to the control group). Assigning a greater proportion of demonstration participants to the treatment group increases the number of participants receiving intervention services and allows greater examination of program effects within the treatment group. By the end of the enrollment period (September 30, 2008), Hawaii enrolled 190 individuals, with 128 participants assigned to the treatment group and 62 assigned to the control group. All individuals were enrolled in the project between April and September 2008, after the adoption of open enrollment and the switch to the 2:1 assignment ratio.

After enrollment was closed, the Hawaii DMIE encountered an unanticipated problem that emerged for project participants assigned to the control group. Individuals in the control group who lose their job, and hence their insurance coverage, are identified during the 6- or 12-month follow-up interviews. The critical importance of health insurance to people with diabetes raises the question of whether program staff have an ethical responsibility to assist control group participants to obtain health insurance if they discover that a participant has lost his or her coverage.[11] In response to this dilemma, the state developed a protocol as a "standard level of care," which requires program staff to provide a comprehensive resource list to all participants about state agencies and websites that are instrumental in handling loss of insurance coverage and employment. While project staff cannot work directly with the control group, the distribution of materials providing access to information for treatment and control groups should address the ethic question. This would also minimize the downward bias on any treatment effects that might have occurred if CDS influenced the number of control group members who maintained their health insurance coverage during the demonstration.

4. Early Challenges

Having reviewed Hawaii's efforts to establish its DMIE project, we identified several challenges related to program implementation faced by the state. These challenges include:

- Working with the private sector to identify individuals who have potentially disabling conditions was more difficult than expected. HBHC had different priorities from the program. Businesses that might have participated were concerned that assigning employees to a control group would be unfair and potentially lead to resentment and that employees might expect the business to

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[11] As part of the intervention, program staff already help treatment group members who lose their job either find new employment or apply for Hawaii's Medicaid managed care program. Treatment group members who lose employer-sponsored coverage automatically qualify for Medicaid coverage for the duration of the demonstration.

support program services after the demonstration. It also appears that some employees did not want to risk disclosing their potentially disabling condition to their employer for fear of losing their job.

- Ensuring that there were enough trained pharmacists to implement the MTM component of the program was more difficult than anticipated. The lack of participation of MTM pharmacists was due in part to unforeseeable factors, including a workforce shortage stemming from a strike at one contracted pharmacy chain, a change of ownership at another, and the time commitment required of providers to participate in the demonstration. Many pharmacists interested in MTM services were already participating in the Diabetes Ten City Challenge, limiting the time they had available to participate in the DMIE. Another challenge is that some of the participating pharmacists are not completing the required documentation of contacts as systematically as project staff requested.

- The opposite problem arose with the life coaches. CDS hired and trained enough life coaches to serve a much larger enrolled population, leading to excess capacity with the smaller enrollment numbers. Uncertainty about enrollment, lack of information on the demand for life coaching services among working adults with diabetes, and lack of clarity about the number and intensity of coaching encounters per client served make it difficult to predict the number of life coaches required.

- The role of the life coach is quite broad and not yet fully understood by the program staff. Because this is part of an ongoing process, the Hawaii team was unable to develop a clearly articulated program manual at the start of the project. The Hawaii program should define the nature and extent of interactions between life coaches and their clients, and the amount of exposure to life coaches (and the combination of intervention services) needed to achieve the desired outcomes of the demonstration. Since implementing the program, CDS has made efforts to develop an operational protocol for the life coaches. Life coaches provide a great deal of information, encouragement, advice, feedback, and emotional support to assigned clients on an “as-needed” basis.

- The program incorporated several optional services such as nutrition counseling, diabetes education classes, and fitness club memberships, which were infrequently used. It is unclear whether participants do not make use of these services because they did not need them or because they did not have easy access to them.

- To participate actively in the program, participants must commit a substantial amount of time, especially in the early months. Some individuals who originally

> joined the project indicated that the time commitment was too great and subsequently withdrew from the program. Disenrollment from the treatment group because of a lack of need for life coaching services may bias the treatment effect upwards if people who remain in the program are more likely to use services. To obtain unbiased estimates of the program effect, all participants should be encouraged to remain in the project, even if they do not use life coaching or MTM services.

In light of these implementation challenges, the Hawaii DMIE staff have been (1) revising the operational protocol used by life coaches to ensure that current procedures are fully and clearly articulated, (2) recruiting additional pharmacists and CDEs to meet program demand, and (3) altering procedures to improve data collection from participating pharmacists. The program team is also working to develop a more comprehensive program theory that identifies possible mechanisms between program activities and intended effects, especially those related to health and functional status. Developing a comprehensive program theory will allow the program team to explain what intervention components are essential for replicating the intervention in other states. In addition, a clearly articulated program theory will guide the analysis of specific hypotheses about the relationships between exposure and effects.

D. DMIE ENROLLMENT AND PARTICIPANT CHARACTERISTICS

In this section, we present the baseline characteristics of the treatment and control group members. The purpose of this section is to describe the participants and examine the success of the randomization process. Because of the failure to meet its enrollment target, representation in both groups is relatively small. As a result, the state will face serious challenges detecting meaningful differences in outcomes.

1. Enrollment Trends

CDS was unsuccessful enrolling participants in the Hawaii DMIE through its original employer-based recruitment strategy. Only after enrollment was opened to the community in March 2008, was it able to enroll participants in the program. Between April and September 2008, when recruitment ended, the state enrolled a total of 190 participants, substantially less than the original target of 534 individuals. Of these, 128 people were assigned to the treatment group and 62 were assigned to the control group.

Since enrollment closed, 12 participants (11 from the treatment group and one from the control group) disenrolled from the study (see Table VII.2). An additional seven participants are at risk of withdrawal, either because of loss of contact or incarceration, but the state continues its efforts to keep them in the demonstration. Of the 12 disenrolled participants, 8 requested to withdraw, 3 moved to the mainland, and one was lost to followup. Because of the employer-sponsored health insurance mandate in Hawaii, most participants had health insurance at the time of enrollment; they joined the program for several reasons including being able to (1) receive life coaching and/or pharmacy management services, (2) improve their health, (3) contribute to diabetes research, and (4) get monetary incentive payments. The intervention services and the completion of forms require a significant commitment of time, particularly during the first few months. Four of the 8 persons who withdrew specifically stated that they did not have enough time to participate in the program.

Table VII.2. Reasons for Disenrollment from Hawaii DMIE

	Treatment (n=128)		Control (n=62)		Total (n=190)	
	N	Percent	N	Percent	N	Percent
Did not have time to participate	4	3.1	0	0.0	4	33.3
Moved out of state	2	1.6	1	1.6	3	25.0
Lost to followup	1	0.8	0	0.0	1	8.3
Did not want to obtain lab results	1	0.8	0	0.0	1	8.3
Experienced problems with insurer	1	0.8	0	0.0	1	8.3
Refused to participate	2	1.6	0	0.0	2	16.7
Total	11	8.6	1	1.6	12	100.0

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline survey data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Percents shown in treatment and control columns are based on total DMIE enrollees in each group. Percent shown in total column is based on total disenrollees. Seven other participants are at risk of withdrawal due to incarceration and loss of contact, but the state continues efforts to keep them in the program. Percentages may not sum to 100 due to rounding.

2. Baseline Characteristics

Demographic Characteristics

Table VII.3 provides information on demographic characteristics of participants in the Hawaii DMIE, in total and by group assignment. Program participants tend to be older, female, white and/or Asian, married, and educated. These characteristics are consistent with expectations for a program aimed at working adults with diabetes because employment is positively correlated with being married and educated, and diabetes prevalence increases with age. Between-group differences based on gender, race/ethnicity, and marital status are not statistically significant. However, differences based on age and education are statistically significant. Treatment group members are more likely than control group members to be between 45 and 54 years of age or have some college or a two-year degree. Given the small sample sizes, these differences are likely to occur by chance.

Table VII.3. Demographic Characteristics of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (n=190)
Age (percent)			
Less than 25 years	3.9	0.0	2.6
25–34 years	8.6	9.7	8.9
35–44 years	19.5	17.7	18.9
45–54 years	43.0	29.0	38.4
55 years or older	25.0	43.5	31.1
Gender (percent)			
Female	65.6	56.5	62.6
Male	34.4	43.5	37.4
Race/Ethnicity (percent)			
White and non-Hispanic	19.5	12.9	17.4
Black or African American	1.6	1.6	1.6
Hispanic	7.0	9.7	7.9
Asian	35.9	33.9	35.3
American Indian/Alaska Native	0.8	0.0	0.5
Native Hawaii/Pacific Islander	6.3	9.7	7.4
Some other race	0.0	1.6	0.5
Two or more races	28.9	30.6	29.5
Marital Status (percent)			
Currently married	53.1	51.6	52.6
Widowed	0.8	1.6	1.1
Divorced	16.4	24.2	18.9
Separated	0.8	0.0	0.5
Never married	28.9	22.6	26.8
Education (percent)			
Less than high school	0.0	0.0	0.0
High school graduate or equivalent	8.6	19.4	12.1
Some college or two-year degree	41.4	29.0	37.4
Four-year college graduate	21.1	27.4	23.2
Post-graduate study	28.9	24.2	27.4

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Information on age, gender, and race/ethnicity obtained from application form. Figures include 12 enrollees who withdrew from demonstration. Between-group differences based on gender, race/ethnicity, and marital status are not statistically significant. Between-group differences based on age and education are statistically significant at the 10 percent level.

Diabetes Diagnoses

Table VII.4 shows the distribution of program enrollment by type of diabetes. Twelve percent of program participants have type 1 diabetes and 86 percent have type 2. The proportion of enrollees with type 1 diabetes is slightly higher than the American Diabetes Association’s national estimate of between 5 and 10 percent. Another 2 percent of the enrollees have been diagnosed as pre-diabetic, a condition that occurs when a person's blood glucose levels are higher than normal but not high enough for a diagnosis of type 2 diabetes. The distribution of enrollees by type of diabetes between treatment and control groups is statistically equivalent.

Table VII.4. Type and Number of Major Diagnostic Conditions of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (N=190)
Diabetes Type (percent)			
Type 1 (diabetes insipidus)	12.5	11.3	12.1
Type 2 (diabetes mellitus)	85.2	87.1	85.8
Other (pre-diabetes)	2.3	1.6	2.1

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Figures include 12 enrollees who withdrew from demonstration. Between-group differences are not statistically significant.

Employment and Income Characteristics

Table VII.5 presents baseline employment and income characteristics for Hawaii DMIE enrollees. Over one-third of all participants work in either the education or health care sectors (38.4 percent). Most participants report having worked at least full time during the four weeks prior to enrollment (54.7 percent) and being engaged in only one job during the 12 months before joining the program (84.2 percent). Most enrollees reported a family income greater than $24,380, the 2008 federal poverty level for a family of four. The majority (83.2 percent) had over $30,000 per year in family income during the 12 months before enrollment, 69.5 percent had more than $40,000, and 33.2 percent had more than $75,000. Differences in employment and income between treatment and control groups are not statistically significant.

Public Program Participation

Table VII.6 shows the proportion of treatment and control group members who participated in various public assistance programs during the two years before joining the demonstration. According to self-reported responses, few individuals participated in public assistance programs prior to enrolling in the DMIE. Less than eight percent participated in the state's Medicaid program, one percent received financial support under the TANF program, five percent received food stamps, two percent benefited from public housing assistance, and three percent participated in vocational rehabilitation. These results should be consistent with a demonstration that has an employment requirement and based in a state with an employer health insurance mandate. Differences in the proportion of treatment and control group members receiving public assistance before joining the demonstration are not statistically significant.

Table VII.5. Employment and Income Characteristics of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (n=190)
Employment Industry (percent)			
Natural resources and mining	0.8	0.0	0.5
Construction	1.6	4.8	2.6
Manufacturing	0.8	1.6	1.1
Trade, transportation, utilities	14.1	19.4	15.8
Information services	0.0	1.6	0.5
Financial services	5.5	1.6	4.2
Professional services	13.3	12.9	13.2
Education and health care	39.8	35.5	38.4
Leisure and hospitality	6.3	3.2	5.3
Other services	15.6	19.4	16.8
Public administration	2.3	0.0	1.6
Hours Worked Monthly (percent)			
Less than 40 hours	1.6	6.4	3.2
40–79	2.3	3.2	2.6
80–119	8.6	11.3	9.5
120–159	29.7	30.6	30.0
160+ hours (full-time)	57.8	48.4	54.7
Number of Job Changes (in past year) (percent)			
None	83.6	85.5	84.2
1	11.7	11.3	11.6
2	1.6	1.6	1.6
3	1.6	1.6	1.6
4+	1.6	0.0	1.1
Family Income (in past year) (percent)			
Less than $10,000	2.3	1.6	2.1
$10,000–$19,999	3.1	1.6	2.6
$20,000–$29,999	10.9	14.5	12.1
$30,000–$39,999	12.5	16.1	13.7
$40,000–$74,999	35.2	38.7	36.3
$75,000 or more	35.9	27.4	33.2

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Figures include 12 enrollees who withdrew from the demonstration. Between-group differences are not statistically significant.

Table VII.6. Public Assistance Program Participation of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (n=190)
Medicaid (percent)			
Yes	8.6	6.5	7.9
No	91.4	93.5	92.1
TANF (percent)			
Yes	1.6	0.0	1.1
No	98.4	100.0	98.9
Food Stamps (percent)			
Yes	5.5	4.8	5.3
No	94.5	95.2	94.7
Public Housing (percent)			
Yes	2.3	1.6	2.1
No	97.7	98.4	97.9
Vocational Rehabilitation (percent)			
Yes	1.6	4.8	2.6
No	98.4	95.2	97.4

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Figures include 12 enrollees who withdrew from the demonstration. Information on participation in Medicaid, TANF, food stamps, public housing, and vocational rehabilitation programs is based on the individual's self-reported participation during the two years before enrollment in the DMIE. Between-group differences are not statistically significant.

Prior Health Care Service Use

Because of Hawaii's employer health insurance mandate, most demonstration participants had comprehensive health insurance coverage prior to enrolling the demonstration and faced few barriers to accessing services. As shown in Table VII.7, nearly all enrollees in Hawaii's demonstration (92.6 percent) saw their primary care physician at least once during the 12-month period, 63.2 percent had three or more primary care visits, and 39.0 percent visited their primary care physician at least five times during the year. More than 80 percent of enrollees had at least one vision or dental care visit, and 42.6 percent had one or more outpatient surgeries or visits for other procedures. Differences in the use of medical care prior to the demonstration between treatment and control group members are not statistically significant.

Table VII.7. Self-Reported Health Care Service Use of Hawaii DMIE Participants During the 12 Months Before Enrollment in the Demonstration

	Treatment (n=128)	Control (n=62)	Total (n=190)
Primary Care Visits (percent)			
None	7.8	6.5	7.4
1–2	28.9	30.6	29.5
3–4	24.2	24.2	24.2
5–10	28.9	30.6	29.5
11–20	8.6	8.1	8.4
More than 20	1.6	0.0	1.1
Vision or Dental Visits (percent)			
None	15.6	19.4	16.8
1–2	54.7	53.2	54.2
3–4	25.8	16.1	22.6
5–10	3.9	9.7	5.8
11–20	0.0	1.6	0.5
More than 20	0.0	0.0	0.0
Surgery or Procedure Visits (percent)			
None	60.9	50.0	57.4
1–2	23.4	25.8	24.2
3–4	8.6	8.1	8.4
5–10	4.7	12.9	7.4
11–20	0.8	1.6	1.1
More than 20	1.6	1.6	1.6

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: The number of visits is a self-reported measure based on the individual's own recollection of visits during the 12 months before enrollment in the Hawaii DMIE. Figures include 12 enrollees who withdrew from the demonstration. Between-group differences are not statistically significant.

E. BASELINE MEASURES OF HEALTH, EARNINGS, AND SSA BENEFITS

In this section we provide information on health status, earnings, and SSA program participation prior to enrollment in the Hawaii DMIE. Outcome measures include health status (measured by overall physical and mental health status, physical and mental SF-12 scores, and number of limited activities of daily living—ADLs—and instrumental activities of daily living—IADLs); annual earnings and number of hours worked; and prior SSI or SSDI enrollment. Health outcomes are based on self-reported data. Information on earnings, employment, and SSI/SSDI enrollment is obtained from SSA administrative data. Program effects will ultimately be measured by comparing differences in these outcome variables between treatment and control group members after participation in the demonstration.

1. Health Status

Not surprisingly, given the target population, many people in the Hawaii DMIE report poor physical health (see Table VII.8). More than half of all program participants (53.2 percent) characterized their physical health status as fair or poor and over 60 percent had an SF-12 physical health score below the national average at the time of enrollment. A substantial minority of participants also reported mental health problems, which may be related to their poor physical health. More than 20 percent of participants characterized their mental health as fair or poor and 55 percent had an SF-12 mental health score below the national average before enrolling in the DMIE. Differences in physical health status reports between treatment and control groups are statistically equivalent. While there are significant differences in mental health status between treatment and control groups, these differences may be occurring by chance, especially given the small sample sizes in the Hawaii demonstration.

The number of ADL and IADL limitations reflects a person’s ability to perform daily activities inside and outside the house.[12] People with ADL/IADL limitations are likely to face additional barriers to staying in work. The number of ADL and IADL limitations among treatment and control group members at baseline is presented in Table VII.9. Over half (56.3 percent) of all Hawaii DMIE enrollees reported having no ADL limitations, 15.3 percent had one, 15.8 percent had two, and 13 percent had three or more. Fewer DMIE participants (46.8 percent) reported having no IADL limitations, 17.9 percent had one, 14.2 percent had two, and 21.1 percent had three or more. Differences in the number of ADLs and IADLs between treatment and control groups are not statistically significant.

2. Annual Earnings and Employment

Outcomes based on SSA data are consistent with self-reported employment and income characteristics, and reflect the fact that most enrollees in the Hawaii DMIE are working full time or near full time. In 2007, the year before CDS began enrollment , nearly all participants (99 percent) were employed and had positive earnings. Only one participant (who was assigned to the treatment group) had zero earnings reported in the SSA data. Participants with positive incomes earned on average $46,337 in 2007. Average annual earnings were similar between treatment and control group members. The top 10 percent of all participants had annual earnings equal to or above $84,645. Individuals in the lowest income decile had annual earnings equal to or less than $13,767, almost half the federal poverty level for Hawaii.

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[12] The seven ADLs are bathing, dressing, eating, getting in and out of bed or chairs, walking, getting outside, and toileting. The eight IADLs are meal preparation, grocery shopping, money management, using the telephone, heavy housework, light housework, getting to places outside walking distance, and managing medications.

Table VII.8. Self-Reported Health Status of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (n=190)
Physical Health Status (percent)			
Excellent	3.1	1.6	2.6
Very good	11.7	12.9	12.1
Good	27.3	41.9	32.1
Fair	46.9	32.3	42.1
Poor	10.9	11.3	11.1
Mental Health Status (percent)			
Excellent	13.3	6.5	11.1
Very good	23.4	37.1	27.9
Good	44.5	27.4	38.9
Fair	17.2	24.2	19.5
Poor	1.6	4.8	2.6
Physical Health SF-12 Score (percent)			
0–less than 10	0.0	0.0	0.0
10–less than 20	0.0	0.0	0.0
20–than 30	6.3	8.1	6.8
30–less than 40	15.6	17.7	16.3
40–less than 50	36.7	38.7	37.4
50–less than 60	39.8	29.0	36.3
60–less than 70	1.6	6.5	3.2
Mental Health SF-12 Score (percent)			
0–less than 10	0.0	0.0	0.0
10–less than 20	0.0	1.6	0.5
20–less than 30	3.1	9.7	5.3
30–less than 40	19.5	12.9	17.4
40–less than 50	35.9	24.2	32.1
50–less than 60	33.6	41.9	36.3
60–less than 70	7.8	9.7	8.4

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline survey data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Figures include 12 enrollees who withdrew from the demonstration. Between-group differences in physical health are not statistically significant. Between-group differences in mental health are statistically significant at the 10 percent level.

Table VII.9. Number of Limited Activities of Daily Living of Hawaii DMIE Participants

	Treatment (n=128)	Control (n=62)	Total (n=190)
Number of Limited Activities of Daily Living (percent)			
None	57.8	53.2	56.3
1	13.3	19.4	15.3
2	17.2	12.9	15.8
3 or more	11.8	14.5	12.7
Number of Limited Instrumental Activities of Daily Living (percent)			
None	47.7	45.2	46.8
1	18.0	17.7	17.9
2	13.3	16.1	14.2
3 or more	21.1	20.9	21.0

Source: Uniform Data Set submitted by Center for Disability Studies, University of Hawaii at Manoa. Baseline data are for all Hawaii DMIE participants enrolled between April and September 2008.

Notes: Figures include 12 enrollees who withdrew from the demonstration. Between-group differences are not statistically significant.

3. Prior SSI/SSDI Enrollment

According to SSA data, only three treatment group participants (1.6 percent) ever received SSDI or SSI benefits prior to joining the demonstration, a result that is consistent with self-reported participation in public assistance programs and with a pre-disabled working population. Their primary disabling condition for SSA assistance was unrelated to diabetes.

F. SUMMARY OF FINDINGS

The Hawaii DMIE represents an innovative attempt to identify adults with a pre-disabling diabetes diagnosis who are working at least half-time and, therefore, have private health insurance through their employers. Because employer-sponsored insurance generally covers the medical services required by adults with diabetes, the Hawaii DMIE focuses on providing participants with life coaching and pharmacy management services rather than extending wrap-around or supplemental medical services. The limited focus of intervention services reduces the benefits of joining the program. Hawaii also faced the additional challenge of asking adults to identify themselves as having diabetes and persuading those who qualify to enroll in the program. For many working adults with diabetes, life coaching and pharmacy management services might not be perceived as useful or needed, especially if they require a substantial commitment of time outside of work.

Recruiting participants in the demonstration was a major challenge and the Hawaii DMIE fell short of its recruitment goals. Hawaii's initial attempt to identify participants for its program involved working with an association representing private businesses. Recognizing the value of reducing poor health outcomes linked to diabetes as a means for promoting employee productivity and reducing turnover, these businesses initially signaled their willingness to work with the leadership of the Hawaii DMIE and facilitate the identification and enrollment of participants into the program. Several unanticipated obstacles arose, however, and only 21 individuals were enrolled under the original plan. These obstacles included a perception among business owners that a randomized design was unfair to employees, concern that they might have to assume future costs for demonstration services, and employee worries about the consequences of disclosing their medical condition.

Despite switching to open enrollment, Hawaii enrolled only 36 percent of its original target of 534 participants before having to close enrollment in order to meet the congressionally mandated deadline for completing the project. The low number of enrollees threatens the state's ability to detect meaningful differences in outcomes between treatment and control groups. Because of the low sample sizes in each group, the life coaching and MTM intervention services will need to have very large effects on health, employment, and independence from public program participation in order for the evaluation to detect the impacts.

In addition to relying on a partnership with private employers to recruit participants, the Hawaii DMIE experienced other unanticipated implementation challenges. First, Hawaii has not been able to recruit enough pharmacists to fully staff the MTM component of the intervention. Many interested pharmacists are already participating in an alternative MTM program and others appear unwilling to commit the time needed to provide Hawaii DMIE pharmacy services to their patients. Second, because the state hired and trained enough life coaches to serve the target sample size, lack of enrollment has created excess capacity of this position. Third, the number, type, and intensity of intervention services remain uncertain. The experience of the Hawaii demonstration should help shed light on demand for life coaching, pharmacy management, nutrition counseling, diabetes classes, and fitness membership among pre-disabled working adults with diabetes.

Finally, the Hawaii DMIE faced a question of whether, and to what extent, to help control group members who become unemployed and, consequently, lose their health insurance during the demonstration, find alternative sources of coverage. The state recently developed a protocol for handling this among control group members, while trying to minimize any downward bias in the estimated treatment effects caused by influencing the number of people who would otherwise lose their health insurance coverage in the absence of the intervention.

G. PHASE-DOWN PLAN AND NEXT STEPS

The Hawaii DMIE is scheduled to end on September 30, 2009, having provided treatment group members with intervention services for 12 months. At that time, treatment group participants who are eligible for Hawaii Medicaid will be enrolled in the program and those who are unemployed will be referred to OWL for employment support services. During the last three months of participation, life coaches and pharmacists will work with their clients to develop individualized transition plans. The state of Hawaii is ineligible for federal reimbursement for intervention services delivered after September 30, 2009, but will receive a no-cost extension of existing federal funds for administrative and evaluation activities related to the demonstration for an additional 12-month period.

According to Hawaii's draft phase-down plan for the demonstration, CDS will conduct one final round of post-exposure data collection 18 months after enrollment. The purpose this is to evaluate the longer-term effects of intervention services and the sustainability of program benefits after the return to "business as usual." Because the last participants were enrolled in September 2008, data collection will continue through March 2010. Additional focus groups may also be conducted during the post-program period to collect qualitative information and provide greater context for interpreting the survey results. A final evaluation report that incorporates information collected during this post-exposure period will be submitted to CMS by December 2010.

CHAPTER VIII

DISTRICT OF COLUMBIA DMIE PROGRAM

This chapter describes the early implementation experiences and characteristics of participants who enrolled in the District of Columbia's DMIE program, which began in 2002 and ended in December 2008.[1] Unlike the other DMIE states, the District's program did not use random assignment. After a brief overview of the design, organizational structure, and implementation of the DC DMIE program, this chapter describes the characteristics of DMIE program enrollees and their Medicaid claim expenditures in 2007. We conclude with a summary of findings. This chapter relies extensively on qualitative information from a final report prepared by RTI, which conducted an independent evaluation of the DC DMIE Program (Haber et al. 2007).

A. PROGRAM DESIGN

The DC DMIE, also known as the "Ticket" program, began in September 2002 and targets working adults with HIV It was one of the earliest DMIE programs (along with that of Mississippi).[2] The District viewed the Ticket program as a way to expand health care coverage for people with HIV and augment existing programs under the Ryan White CARE Act, which provides medical and social support services for people with HIV/AIDS. At the time, the District already had several public programs to improve access to health care for individuals with HIV/AIDS. First, Ryan White funding supports the AIDS Drug Assistance Program (ADAP), which provides prescription drugs for treating HIV and AIDS to people

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[1] The DC DMIE was originally scheduled to end on December 31, 2007; however, CMS granted a no-cost extension to continue providing services through December 31, 2008. The DC DMIE was initiated before the 2006 solicitation, under which the demonstrations in Kansas, Minnesota, Texas, and Hawaii were approved.

[2] The Mississippi DMIE, which also targeted individuals with HIV, began in April 2002 and operated through September 2007. However, the program fell far short of its enrollment target and by the end of the demonstration had enrolled only 10 percent of its initial recruitment target of 500 participants.

with incomes under 500 percent of the federal poverty level (FPL) who do not have private insurance or who have met the prescription drug limit under their existing insurance. ADAP also covers copayments, deductibles, and premiums for individuals who have private insurance. Before implementing the Ticket program, the District was concerned that enrollment in ADAP would reach capacity and they would have to institute a waiting list. Thus, while the main goal of the Ticket program was to expand medical services to an underserved population, another aim was to relieve pressure on the demand for antiretroviral drug therapies funded under ADAP (Haber et al. 2007).

Second, the District also facilitated primary care coverage for HIV-related conditions through direct funding of providers under the Ryan White CARE Act. Third, the DC Healthcare Alliance provides medical coverage through a limited provider network to individuals with incomes below 200 percent FPL who can access primary care services. Established in 2001, the DC Healthcare Alliance is a program for uninsured residents that provides inpatient hospital care, outpatient medical care, emergency services, urgent care services, prescription drugs, rehabilitative services, home health care, dental services, specialty care, and wellness programs.[3]

Ticket program participants were eligible for the full range of benefits offered by the District's Medicaid program on a fee-for-service basis, including both antiretroviral and non-antiretroviral prescription drugs. Eligibility was limited to people who:

- Are HIV-infected
- Are working at least 40 hours per month (or 120 hours over a three-month period)
- Have incomes at or below 300 percent FPL and assets below the Medicare Buy-In resource limit[4]
- Do not have any other source of health insurance; and do not reside in a long-term care, mental health, or penal institution
- Are otherwise ineligible for Medicaid

The Ticket program was initially limited to two areas of the District that were identified as having the greatest need (Wards 7 and 8), but was subsequently expanded to all areas of the city in June 2003 because of low initial enrollment during the first several months of

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[3] See http://www.dc.gov/mayor/health_care/index.shtm.

[4] The Medicare Buy-In resource limit is $4,000 for individuals or $6,000 for married couples.

operation. The Ticket program has a point-in-time enrollment cap of 420 individuals (Haber et al. 2007).

The DMIE grant was originally scheduled to end in December 2007; however, the District received a no-cost extension through December 2008 in order to spend surplus grant funds that resulted from low enrollment early in the program. The District began phasing down the demonstration in July 2008 by discontinuing new enrollment and gradually transitioning participants to other programs. All participants were phased out of the program by December 31, 2008.

In February 2003, the District implemented a Medicaid eligibility expansion program (Section 1115 Waiver for HIV) that offered a similar array of services as the DMIE, but had different eligibility requirements. On the one hand, the financial requirement is more restrictive: 1115 waiver participants living with HIV must have incomes at or below 100 percent FPL, have assets below DC's categorically needy resource limits for Medicaid, and be otherwise ineligible for Medicaid. On the other hand, the work requirement is less restrictive because 1115 waiver participants do not have to be employed.

The main purpose of the DC DMIE was to expand Medicaid coverage to an underinsured population. Enrollees in the DMIE were eligible for the full range of benefits offered by the District's Medicaid program, on a fee-for-service basis. This includes inpatient and outpatient medical services, prescription drugs, and emergency services. Like other Medicaid beneficiaries in the District, enrollees in the DMIE were asked to make nominal, voluntary co-payments for certain services. However, the District did not provide any enhanced case management services to participants in the DMIE.

Enrollees in need of employment support were referred to the District's vocational rehabilitation department, but those services were not a demonstration benefit. The District indicated it was not feasible to provide enhanced case management services because of shortages and high turnover in case manager staffing, and the low level of training. Case managers function primarily as intake specialists. One clinic described the lack of coverage for comprehensive case manager services as the biggest gap in the DMIE program. The District had planned to incorporate case manager services through a Medicaid 1915c waiver, but this was not submitted because of limited availability of the required local matching funds (Haber et al. 2007).

B. ORGANIZATION AND ADMINISTRATION

The DC DMIE was jointly administered through the Office of Disabilities and Aging, (ODA) the HIV/AIDS Administration (HAA), and the Income Maintenance Administration (IMA). ODA is located within the Department of Health Care Finance (DHCF), the HIV/AIDS Administration (HAA) is located within the Department of Health, and the

Income Maintenance Administration (IMA) is located within the Department of Human Services.[5]

DHCF is the District's single state Medicaid agency and is responsible for claims processing and payment of Medicaid-covered services under the DMIE. In addition, this agency helps with the administration of procedures for grievances and appeals. Although IMA usually makes determinations of Medicaid eligibility, this authority was delegated to HAA in order to coordinate the multiple programs that provide services for people with HIV/AIDS in a single agency (Haber et al. 2007).

One advantage of the program is that participants provide their information to HAA, which protects the confidentiality of their health condition. Because the application process is administered by HAA instead of IMA, individuals do not have to reveal their HIV-positive status outside the HIV community. This was especially important for this population, as it encouraged participation by removing concerns about potential stigma associated with revealing an applicant's HIV status. Because HAA administers ADAP and supports other programs run by community based organizations that are geared toward the delivery of medical services (case management services for the Ryan White Parts A and B programs as well as the District's HIV/AIDS testing and prevention programs), it was uniquely positioned to run the DMIE and its case managers were able to facilitate enrollment between programs and thus achieve a single point of entry for HIV services.

The single point of entry (SPE) is a key feature of the DC DMIE program that greatly facilitated the recruitment and identification of potential candidates from existing programs. It allowed HAA to enroll individuals in programs with the broadest benefits possible. In some cases, however, it appears that participants who were directed to the DMIE on the recommendation of a case manager were not fully aware of their involvement in the DC DMIE. This may have impacted the failure of some participants to recertify.

C. IMPLEMENTATION PRACTICES

1. Outreach and Recruitment Strategies

HAA coordinated the outreach and recruitment efforts for the DC DMIE, relying mainly on case managers to inform current clients of their potential eligibility for the demonstration and to facilitate the application process. HAA decided against using other outreach strategies, such as a media campaign or flyer distribution, believing the narrow eligibility requirements for the DMIE and the stigma surrounding HIV would make such strategies ineffective. The use of the SPE application for multiple HIV/AIDS services (discussed further in the next

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[5] In October 2008 the mayor elevated the Medical Assistance Administration to the cabinet-level Department of Health Care Finance, which will continue to be the District's single state Medicaid agency. The agency's function in the operation and oversight of the DMIE remain the same.

section) enabled HAA to capitalize on community awareness of other programs, particularly ADAP, and enroll participants who were previously unaware of the DMIE.

HAA funds approximately 100 case managers at various community-based organizations throughout the District. In the early stages of the demonstration, case managers reported having a limited understanding of the eligibility requirements and services available under the DMIE. Awareness increased over time as experience with the program grew; however, a high turnover rate among case managers impeded full understanding of the program benefits.

2. Enrollment Processes

HAA developed an SPE application that initiates access to the programs it coordinates, including the DMIE, HIV 1115 waiver, ADAP, assistance with Medicare Part D and private insurance co-payments and premiums, and a program that covers COBRA premiums for people with incomes under 500 percent FPL. In addition, the SPE facilitates referrals to traditional Medicaid and the DC Healthcare Alliance, a program that provides care for uninsured people with incomes under 200 percent FPL. An automated system screens for applicant eligibility and identifies the most comprehensive program for which an individual qualifies. HAA then sends information on individuals eligible for the DMIE to IMA, where enrollment takes place. HAA also sends a letter to beneficiaries informing them of their enrollment in the DMIE. IMA sends the beneficiary a Medicaid card and sends the Medicaid number to HAA.

The enrollment cap for the DMIE was 420 people. When the DMIE was operating at full capacity, HAA instituted a waiting list; the number of those on the list generally ranged from 50 to 80. Those individuals were enrolled in ADAP until space opened up in the program.

The DMIE program had an annual recertification requirement.[6] HAA notified DMIE participants by mail 15 days and 45 days prior to the end of their eligibility period and allowed a one-month grace period before disenrolling them. The high attrition rate in the DMIE was attributable mainly to failure of participants to recertify. Case managers noted that clients often did not understand the recertification process or the need to recertify. As a result, there was a steady drop-off in enrollment during the annual recertification cycle. By December 2006, while most beneficiaries had been enrolled in the program for at least 12 months, only 52 percent had maintained enrollment for 18 months. While some beneficiaries dropped out because they no longer met the program’s eligibility requirements at redetermination, the vast majority of disenrolled participants simply did not reapply. However, the reasons why these participants failed to reapply are unclear. Some may have acquired health insurance through their employers, while others may have known they no

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[6] The 1115 waiver program also has an annual recertification requirement, while ADAP requires beneficiaries to recertify every six months.

longer met the eligibility criteria and did not attempt to reapply. Loss of employment was not a significant reason for disenrollment.

3. Phase-Down Processes

The District began phasing down the DMIE on July 1, 2008, and ceased new enrollment. Participants with incomes under 100 percent FPL were eligible for coverage under the 1115 waiver and participants with income under 200 percent FPL were eligible for coverage through the DC Healthcare Alliance. Those individuals were transitioned to the 1115 waiver and Alliance during recertification. The Alliance program does not cover antiretroviral medications, so participants who transitioned to that program were also enrolled in ADAP. Participants who could not transition to the 1115 waiver or Alliance groups because they had incomes greater than 200 percent FPL remained in the DMIE as long as possible to allow them to maintain continuous access to medical services and additional time to find alternative coverage options. Those participants were enrolled in ADAP for antiretroviral medications and were encouraged to seek medical coverage through their employers or to seek care at a Ryan White-funded provider. In the absence of the DMIE, working adults living with HIV/AIDS who do not have access to health insurance would go to a Ryan White provider for care.

HAA notified case managers at a District-wide HIV case manager training and notified clients by mail of the DMIE's termination and their eligibility status for the 1115 waiver or Alliance groups. During the transition process, HAA staff fielded telephone calls from clients to answer specific questions about the process and address concerns. For clients transitioning to the Alliance, HAA staff helped them to identify a specific Alliance managed care plan that would allow them to continue seeing their current provider.

On July 1, 2008, there were a total of 383 participants enrolled in the DMIE. All participants were transferred to an alternative program by December 31, 2008. Approximately 20 percent of DMIE participants were transitioned to the 1115 waiver, 50 percent were enrolled in the DC Healthcare Alliance and ADAP, and the remaining 30 percent were transferred to ADAP alone and directed to seek care at Ryan White-funded clinics.

4. Lessons Learned from Program Implementation

The DC DMIE provided several lessons on program implementation that may be applicable to other states designing programs to provide health care to adults with potentially disabling conditions, such as HIV/AIDS. First, the District was able to capitalize on awareness of other programs in the District that serve people with HIV/AIDS (particularly ADAP), and merge the recruitment and enrollment processes of several different programs. Their single point of entry application strategy enabled the District to streamline the recruitment process and maintain high enrollment without expending too many resources in marketing the program and identifying potential participants. As a result, the DC DMIE was successful in attaining its enrollment cap of 420 participants (after expanding enrollment to all regions or wards within the District in June 2003).

Second, the implementation of a new program may have unintended consequences for existing programs. The DC DMIE removed some financial burden from other programs in the District that serve people with HIV/AIDS. While there was early concern that the demonstration would divert participants from existing programs, resulting in reductions in funding to those programs due to lower enrollment, HAA staff indicated there has been no reduction in ADAP or Ryan White funding because of strong demand for services and enrollment, which decreased slightly but remained relatively high. In fact, as DMIE participants were transitioning to other programs, ADAP was able to continue coverage of antiretroviral medications for participants who were not eligible for the 1115 waiver or the DC Healthcare Alliance programs. However, while the District did not experience a reduction of funding in other programs, other states pursuing a program like the DMIE should consider the unintended impact of diverting participants from existing programs when designing recruitment and enrollment strategies.

Third, participants' understanding of program benefits may have implications for enrollment. HAA staff indicated that health benefits literacy was a great challenge of the program, though it is not a challenge unique to the DMIE. Many clients did not understand the specific benefits that accompany their program, and may not have even been aware of which program they were enrolled in because case managers played a key role in guiding participants to the DMIE. For example, many people dropped out of the program simply because they did not understand or were not aware of the recertification requirements and process. Case managers were often unaware of recertification timelines for their clients. HAA staff reflected that more patient education and training for case managers in terms of understanding benefits and requirements of the program would have been beneficial.

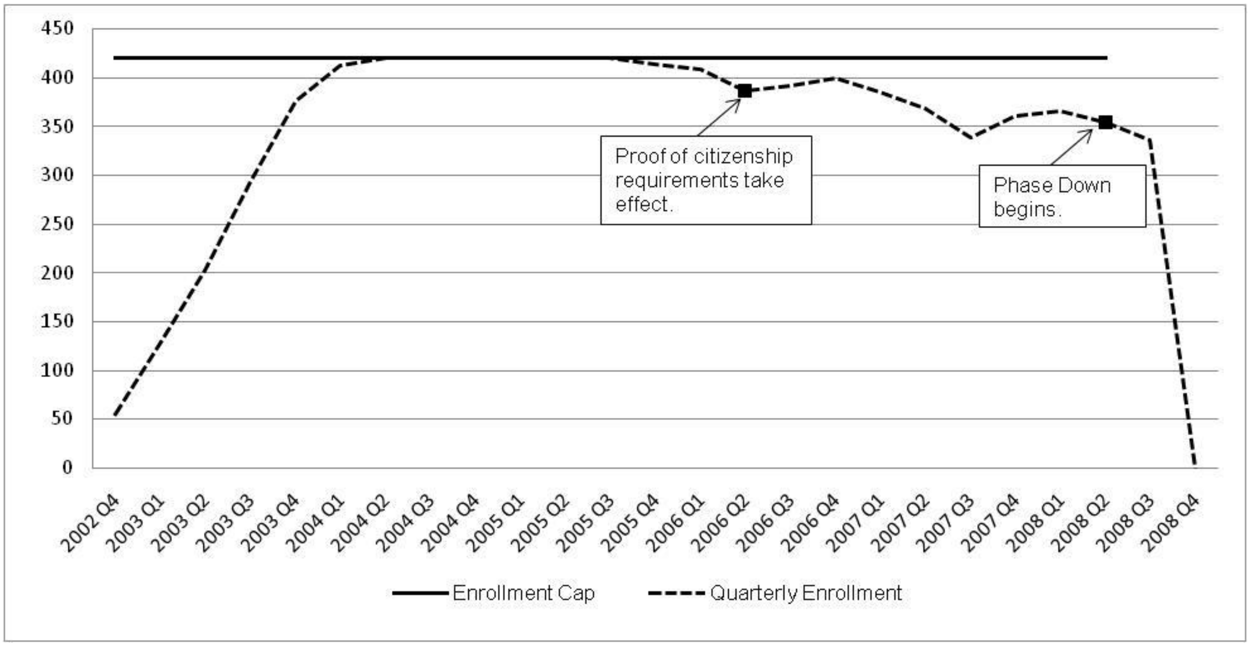
D. DMIE ENROLLMENT AND PARTICIPANT CHARACTERISTICS

1. Data Sources and Limitations

Unlike the other DMIE states that provide a standard set of data variables (UDS), the District of Columbia was not required to submit a UDS, but instead provided two data files that were used in this report. One, a master eligibility file of all DMIE participants included the birth date, gender, and race of individual participants. Secondly, the District submitted quarterly Medicaid claims data from September 2002 through the end of June 2008 with the type, date, and amount paid for each service rendered under the DMIE program. To examine the characteristics and service utilization rates of DMIE participants, we excluded 69 people who switched between the DMIE and the 1115 waiver at least once between September 2002 and June 2008. Our final sample includes 913 participants who had ever enrolled in the DMIE only.

One limitation of the data on service use and expenditures is that some services such as physician visits may be incomplete due to underbilling by providers. HAA reimburses Ryan White providers at a higher rate than Medicaid, and HAA staff expressed concern that some providers were serving DMIE participants but submitting claims through Ryan White. The Ryan White programs were designed as a payer of last resort for those without any other form of health coverage, therefore, providers were supposed to submit Medicaid claims for visits under the DMIE. However, some physician visits do not appear as Medicaid claims. In some cases, a prescribing physician is listed on the prescription drug claim, but there is no corresponding claim for a physician visit to that prescriber. This underbilling to Medicaid is consistent with reports that find that claims from providers under Medicaid are reimbursed at a lower rate than Ryan White program claims for similar services. The Ryan White program also has a less burdensome reporting procedure (Gilman et al. 2008). Therefore, providers may have preferred to file claims under the Ryan White program rather than Medicaid.

Figure VIII.1. Quarterly Enrollment in the DMIE



Source: Haber et al., 2007 and Quarterly Enrollment Reports. Data are for all DC DMIE participants ever enrolled between September 2002 to December 2008.

2. Enrollment Trends and Attrition

Enrollment in the DMIE grew slowly over the first year of the demonstration (2002-2003) due to difficulty in recruiting participants who met the employment requirement. The program was initially limited to two wards identified as having the greatest need because of their high rates of HIV infection and low income levels relative to the rest of the District; however, to increase enrollment the DMIE expanded to all areas within the District in June 2003. The DMIE reached its enrollment cap within a year and a half of implementation.

However, the Deficit Reduction Act of 2005 required people enrolling in Medicaid programs on or after July 1, 2006, to provide proof of citizenship. This led to a decrease in new enrollment in the DMIE. The new requirement presented a challenge when enrolling people from the waiting list, as they were not required to provide citizenship documentation when they first applied to the DMIE.

The annual recertification requirement also posed a challenge in terms of DMIE attrition. According to RTI's 2007 evaluation of the DC DMIE, the majority of participants who disenrolled from the DMIE by the end of 2006 failed to recertify (54 percent). Another 12 percent became eligible for Medicaid, and 11 percent were disenrolled because they no longer met the income eligibility requirements; however, less than 1 percent of participants were disenrolled because they no longer met the employment requirement (Haber et al. 2007). Despite attrition, the DMIE was able to continue operating at or near its enrollment cap due to new enrollment.

3. Demographic Characteristics

Table VIII.1 presents the demographic characteristics of DMIE participants who ever enrolled between September 2002 and June 2008. Roughly three-fourths of DMIE participants were African-American males. More than 88 percent of DMIE participants were between the ages of 21 and 50, which is similar to the proportion of the total DC HIV/AIDS population in the same age range.

Table VIII.1. Demographic Characteristics of DMIE Enrollees

	DMIE Enrollees (n=913)
Age at Enrollment (percent)	
Under 21 years	0.4
21-30 years	17.1
31-40 years	32.6
41-50 years	38.4
51-64 years	10.8
Unknown	0.5
Gender (percent)	
Female	23.7
Male	76.3
Race/Ethnicity (percent)	
Black or African American	72.1
White and non-Hispanic	6.0
Hispanic	7.2
Asian	0.3
Unknown	14.3

Source: Master Eligibility File. Data are for all DC DMIE and 1115 waiver participants ever enrolled between September 2002 to August 2008.

E. PROGRAM SERVICE USE AND EXPENDITURES

This section examines total service use and expenditures for the DMIE, focusing on claims from January 2007 through December 2007. Table VIII.2 shows the distribution of expenditures for DMIE participants in 2007. Prescription drugs accounted for the vast majority of total expenditures in the DMIE (74 percent). Inpatient services accounted for the next largest portion (12 percent).

Given the high use of prescription drug services in the DMIE (94 percent of participants in 2007 received a prescription through the DMIE), we examine the use of this benefit by subgroups. Table VIII.3 shows rates of prescription drug utilization by gender and race. Female participants accessed prescription drugs at a slightly lower rate than male participants. African-American participants were somewhat less likely to receive prescription drugs through the DMIE than participants of other races; however, African-American participants who did access prescription medications through the DMIE received a similar average number of prescription drug claims as participants of other races.

Table VIII.2. Distribution of DMIE Enrollee Expenditures by Type of Service (January 1, 2007–December 31, 2007)

	DMIE Enrollees (n=468)		
Service	Total Expenditures	Percent of Total	Expenditures per Participant
Prescription drugs	$3,622,669	74.4	$7,741
Inpatient services	567,705	11.7	1,213
Laboratory and x-ray procedures	154,646	3.2	330
Federally qualified health centers	135,041	2.8	289
Physician visits	117,504	2.4	251
Outpatient hospital	91,167	1.9	195
Skilled nursing facility	38,722	0.8	83
Home health	25,245	0.5	54
Transportation	22,159	0.5	47
Mental health	18,004	0.4	38
Durable medical equipment	16,627	0.3	36
Dental	14,890	0.3	32
Clinic/center services	12,565	0.3	27
Emergency ambulance	10,070	0.2	22
Other services	19,056	0.4	41
Total	$4,866,069	100.0	$10,398

Source: 2007 quarterly Medicaid claims data.

Table VIII.3. Prescription Drug Utilization for DMIE Enrollees (January 1, 2007–December 31, 2007)

	DMIE Enrolles (n=468)	
	Average Number of Claims per Person	Percent of Participants Using Services
Gender		
Female	49	93.6
Male	51	97.5
Race/Ethnicity		
Black or African American	50	93.3
White and non-Hispanic	41	97.2
Hispanic	48	97.8
Unknown	50	98.3
Total	47	94.7

Source: 2007 quarterly Medicaid claims data.

Nearly 67 percent of all prescription drug claims in 2007 were for antiretroviral medications, which would have been available to participants through ADAP before enrolling in the DMIE. However, since ADAP only covers prescription medications related to the treatment of HIV/AIDS, the 33 percent of claims for non-antiretroviral prescription medications represent a benefit to which DMIE participants may not have had access prior to enrolling in the program.

Table VIII.4 shows the types of primary care providers DMIE enrollees visited in 2007. Hispanic participants in the DMIE access clinic services at higher rates than any other population in the program (42.2 percent). La Clínica del Pueblo, a well-known clinic in the Hispanic community, accounts for 100 percent of all clinic claims for Hispanic participants. This pattern is likely due in part to a difference in languages spoken by different providers (all staff at La Clínica are Spanish speaking).

F. EARNINGS AND SSA BENEFITS

DMIE participants had average annual earnings of approximately $24,000 in 2007. Average inflation-adjusted earnings in 2002 for participants who only received DMIE services were $19,900 and increased steadily over time. Historically, employment for this group has been high; over 99 percent of people ever enrolled in the demonstration had positive earnings between 2002 and 2007. As expected, nearly one-sixth (16.9 percent) of participants in the DMIE program had a history of receiving SSDI or SSI benefits between 1996 and 2005.

Table VIII.4. Percent of DMIE Enrollees Using Primary Care by Type (January 1, 2007–December 31, 2007)

	Types of Primary Care Providers				
Enrollees' Race/Ethnicity	Physician Visits	Clinic/Center Services	Federally Qualified Health Centers	Nurse Practitioners	Other Practitioners
Black or African American	59.8	2.1	52.1	1.5	4.9
White and non-Hispanic	66.7	5.6	55.6	8.3	2.8
Hispanic	48.9	42.2	35.6	0.0	8.9
Unknown	61.0	6.8	45.8	1.7	1.7
All Participants	59.6	7.1	49.8	1.9	4.7

Source: 2007 quarterly Medicaid claims data.

G. SUMMARY OF FINDINGS

1. Lessons Learned from Implementation

The District's SPE application greatly facilitated recruitment and identification of potential candidates from existing programs. Coordinating the enrollment process through HAA relieved participant concerns about revealing their HIV-positive status outside of the HIV community. It also allowed HAA to utilize case managers.

However, the heavy reliance on case managers led to significant challenges in terms of participants' health benefits literacy. Because case managers facilitated the SPE enrollment process, many participants did not understand the specific benefits that accompanied their program and may not have even been aware of which program they were enrolled in. As a result, many participants did not understand or were unaware of the recertification requirement and dropped out of the program.

2. Participants' Characteristics

The DC DMIE provided access to a wider range of medical services than would have otherwise been available to most participants. Inpatient services, which account for nearly 12 percent of all DMIE service expenditures, are not available through Ryan White funding, and thus will not be available to roughly one-third of participants who were transitioned out of the DMIE in the final six months of the program, unless these clients are able to obtain private insurance through their employer. In the absence of the DMIE, all participants would have access to antiretroviral medications and other HIV-related prescriptions through ADAP, but some would not have access to medications needed to manage other potentially disabling conditions and maintain health.

The majority of DMIE participants are young African-American males between 21 and 50 years of age. Participants in the District tend to use different providers based on language or cultural preferences. Based on the DMIE, we observed a higher proportion of Hispanic participants utilizing services at Spanish-speaking neighborhood clinics rather than other providers. This tendency to prefer certain providers based on cultural or language characteristics is an important lesson for other states that may implement a similar program. It may be important for states to consider cultural factors in ensuring an accessible provider network will meet the needs of subgroups within a target population.

3. Phase-Down

The District began phasing down on July 1, 2008, and was completely closed out by December 31, 2008. Roughly 20 percent of people in the program during the phase-down period had incomes under 100 percent FPL and were transitioned to the 1115 waiver. Another 50 percent had incomes under 200 percent FPL and were enrolled in the DC Healthcare Alliance for primary care and ADAP for antiretroviral medications. The remaining 30 percent of participants did not meet the eligibility requirements of the waiver or the Alliance; they were enrolled solely in ADAP and directed to seek care at Ryan White-funded clinics.

CHAPTER IX

SUMMARY AND IMPLICATIONS

The DMIE national evaluation is beginning to provide CMS, the Congress, and other stakeholders with information on the extent to which the DMIE program is achieving its goals of promoting the economic independence of working adults with disabilities. This interim report examines the early stages of the demonstration and addresses two key questions: (1) Who enrolled in the state DMIE programs, and (2) what early lessons were learned from program implementation? The next report, to be completed in mid-2010, will provide information on the extent to which the DMIE program had significant effects on improving employment of participants and reducing their dependence on federal disability programs.

Based on the state-specific information we presented in previous chapters, we draw several general conclusions about the DMIE from a national perspective, on three topics:

- The diversity of DMIE participants across states
- Early lessons learned from the implementation of the state demonstrations
- The extent to which initial work has built a strong foundation for a rigorous national evaluation

The remainder of this section provides a summary of findings across DMIE programs for these three areas. We begin by showing the diversity of baseline participant characteristics, with a focus on the four states that used random assignment.[1] We then provide a summary of lessons learned from program implementation, discuss how well random assignment worked in the four states, and compare baseline measures of SSA earnings and the prior receipt of benefits among DMIE participants. These two long-term outcomes will be tracked and analyzed for the national evaluation.

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[1] The District of Columbia, which closed its demonstration at the end of 2008, did not have a control group and therefore is not included in the analysis.

A. DIVERSITY OF PARTICIPANTS ACROSS STATES

1. Demographic Characteristics

As described in the previous chapters, the target populations of each state's DMIE program vary widely, which led to substantial differences in the demographic, health, and employment characteristics of participants. Kansas's DMIE program is providing services to workers who have a variety of diagnostic conditions and are enrolled in the state's high-risk insurance pool; Minnesota and Texas DMIE programs are targeting services to participants with mental illness from state or county public health programs; Hawaii conducted outreach activities to recruit workers with diabetes using an open media campaign; and the District of Columbia focused its program on workers with HIV/AIDS who came from existing programs. The specific mix of participant characteristics within each state reflects differences in target populations and recruitment strategies.

From a national perspective, the group of DMIE participants is broad and diverse with respect to age, race, education, marital status, and self-reported physical and mental health, as indicated by the distribution of key characteristics in four states (Table IX.1).

- The majority of participants in the DMIE programs are between 35 and 54 years old, though there is a greater concentration of older workers (above age 55) in Kansas and younger workers (under age 35) in Minnesota**.** These age differences across states suggest that future impacts on earnings are likely to vary between younger and older workers. Also, long-term impacts may be greater over time among younger workers.

- Most participants in the Kansas and Minnesota programs were white, while the majority of participants in the Texas and Hawaii programs were non-white. Specifically, 41 percent of participants in Texas were black or African American and 35 percent of participants in Hawaii were Asian. These variations in the racial and ethnic composition of target populations by state may have implications for future health status and the progression of disabling conditions.

- The educational attainment of DMIE participants is generally high across all programs, though Kansas and Hawaii have a higher share of college graduates than Minnesota and Texas. Other things being equal, annual earnings will be higher for individuals who have graduated from high school or college, because they are able to obtain jobs with higher wages. Therefore, we are likely to observe variation in earnings by state in a given year due to differences in the educational attainment of participants.

Table IX.1. Selected Demographic and Health Characteristics of DMIE Enrollees

	Kansas (n=500)	Minnesota (n=1,793)	Texas (n=1,616)	Hawaii (n=190)	Total (n=4,099)
Age (percent)					
Under 35 years	6.4	41.5	10.7	11.5	23.7
35-54 years	50.0	49.3	68.8	57.3	57.4
55+ years	43.6	9.2	20.3	31.1	18.8
Missing	0.0	0.0	0.1	0.0	0.0
Race/Ethnicity (percent)					
White and non-Hispanic	75.2	61.3	23.0	17.4	45.9
Black or African American	0.4	6.4	41.2	1.6	19.2
Hispanic	1.0	2.5	32.7	7.9	14.4
Asian	0.2	0.6	1.5	35.3	2.5
Other/multiple races	0.6	4.1	1.6	37.9	4.2
Missing	22.6[a]	25.0	0.2	0.0	13.8
Education (percent)					
Less than high school	1.8	6.2	30.7	0.0	15.1
High school graduate/GED	18.0	24.2	31.3	12.1	25.7
Some college/2-year degree	35.6	42.4	29.4	37.4	36.2
4-year college graduate	44.4	18.1	8.5	50.6	19.0
Missing	0.2	9.0	0.1	0.0	4.0
Marital Status (percent)					
Married	54.6	20.6	25.2	52.6	28.0
Divorced/separated/widowed	25.2	26.1	49.2	20.5	34.9
Never married	19.4	43.9	25.6	26.8	32.9
Missing	1.0	17.3	0.3	0.0	7.8
Physical Health Status (percent)					
Excellent or very good	33.6	21.3	16.6	14.7	20.7
Good	47.2	41.3	38.4	32.1	40.4
Fair or poor	19.0	28.9	44.8	53.2	35.1
Missing	0.2	8.4	0.3	0.0	3.8
Mental Health Status (percent)					
Excellent or very good	60.4	11.3	34.0	39.0	27.5
Good	31.4	30.5	41.3	38.9	35.3
Fair or poor	8.0	49.1	24.4	22.1	33.1
Missing	0.2	9.2	0.3	0.0	4.2

Source: Uniform Data Sets submitted by Kansas, Minnesota, Texas, and Hawaii. Figures are based on the total number of DMIE participants and include those individuals who disenrolled since the start of the demonstration.

[a] Due to a software error, the race/ethnicity questions were excluded in the cohort 3 baseline assessment survey for people who first enrolled in 2008; however, based on preliminary data for cohort 1 and 2, we expect that more than 97 percent of Kansas DMIE participants will be non-Hispanic whites.

- Approximately half of DMIE participants in the Kansas and Hawaii programs were married at the time of enrollment, while most participants in the Minnesota and Texas programs were not married. This difference suggests that participants in Kansas and Hawaii may be more likely to have additional supports for health insurance coverage and employment. The availability of alternative options may influence the use of health care services, attrition from the program, and employment outcomes.

2. Health and Employment Characteristics

By definition, DMIE participants have "potentially disabling conditions." This term covers physical and mental health conditions with varying levels of impairment at any particular time. Measures of health status are based on self-reported information at the time of enrollment (Table IX.1). Potential response categories to survey questions were excellent, very good, good, fair, or poor. In addition, we show the distribution of a select number of employment characteristics, which varied widely across the DMIE programs.

- At the time of enrollment, DMIE participants had a wide range of self-reported physical and mental health status levels, though Texas and Hawaii had many people reporting fair or poor physical health. Minnesota had a high number of participants indicating fair or poor mental health. These differences in health status are expected because they reflect variations in each state's target population. For example, Minnesota focused its program on workers with mental illness. Texas included some participants with mental illness but had a greater number of persons with physical impairments, which helps to explain the prevalence of fair or poor physical health responses. Nonetheless, all programs have a substantial number of participants who are in fair or poor physical and mental health.

- DMIE participants were employed in a wide range of industries at enrollment; however, most were working in the education and health sectors (Table IX.2). Examples of such jobs would include teachers or teacher aides, nurses or nursing aids, and lab technicians. Other major industries where participants are employed include trade, transportation and utilities as well as leisure and hospitality. Within each state, the prevalence of workers in these industries may be attributed to job availability and local market conditions.

- Many DMIE participants are working full time and a majority are working at least half time in each program. In Minnesota and Hawaii, more than half of participants are working full time. This overall finding suggests that all DMIE participants are actively involved in the labor force and, based on their interest in the program, are seeking the health and employment-related supports that will allow them to continue working in the future.

- DMIE participants had a wide range of personal earnings in the year before their enrollment. Texas and Minnesota had a majority of participants with earnings less than $20,000 and Hawaii had mostly earnings greater than $30,000. These figures are based on wage data provided by the states through their unemployment insurance (UI) program. However, UI earnings data exclude self-employment income (which is why Kansas reports many missing data values). In future reports that analyze participant earnings, we plan to use annual earnings data from SSA administrative sources, which are generally more complete than UI earnings data.

Table IX.2. Selected Employment Characteristics of DMIE Enrollees

	Kansas (n=500)	Minnesota (n=1,793)	Texas (n=1,616)	Hawaii (n=190)	Total (n=4,099)
Employment Industry (percent)					
Education and health care	19.6	20.4	28.2	38.4	24.2
Trade, transportation, utilities	16.0	18.5	9.9	15.8	14.7
Leisure and hospitality	7.2	18.6	10.0	5.3	13.2
Miscellaneous services	7.6	6.8	16.5	16.8	11.2
Professional services	19.8	10.5	5.8	13.2	9.9
Manufacturing, construction	7.0	8.3	9.3	3.7	8.4
All other industries	22.8	6.2	17.9	6.8	12.9
Missing	0.0	10.6	2.4	0.0	5.6
Personal Earnings (past year) (percent)					
Less than $10,000	15.6	32.8	54.8	6.3	38.1
$10,000 to $19,999	8.0	34.1	17.3	7.4	23.1
$20,000 to $29,999	5.8	16.1	6.9	13.7	11.1
$30,000 or more	13.0	6.2	2.7	57.4	8.0
Missing [a]	57.6	10.9	18.3	15.3	19.7
Monthly Hours Worked (percent)					
Less than half time (<80)	17.8	6.3	23.5	5.8	14.5
Between half and full time	33.2	2.0	41.7	39.5	23.2
Full time (160+)	49.0	87.4	30.9	54.7	58.9
Missing	0.0	4.4	3.9	0.0	3.4

Source: Uniform Data Sets submitted by Kansas, Minnesota, Texas, and Hawaii. Figures are based on DMIE participants and include those individuals who disenrolled since the start of the demonstration.

Note: Personal earnings based on UI data summed across four quarters. UI quarterly earnings are based on wage data submitted by employers to the state for the calculation of unemployment taxes. Self-employment income and the salaries of federal government employees (including military personnel) are excluded from the reporting requirement.

[a] For Kansas, many values are missing because of self-employment income, which is not reported in unemployment insurance earnings data.

Overall, the DMIE program model can be applied to a wide variety of settings and for different target populations. The diversity of baseline participant characteristics strengthens the national evaluation because we will be able to evaluate the impact of program interventions in different settings. In addition, the flexibility of allowing states to design and customize benefits to meet the needs of different target populations is an important feature of the DMIE. Some of the key lessons learned from adapting and implementing the model in different settings are discussed below.

B. EARLY LESSONS LEARNED FROM PROGRAM IMPLEMENTATION

Demonstrations take a long time to implement because of recruitment challenges and the time needed to plan, develop, and adapt outreach strategies to increase and achieve enrollment targets. One major challenge for the DMIE was identifying study candidates. In this section, we describe some of the early lessons learned across the states that addressed these recruitment challenges. We also provide a brief summary of lessons learned from the implementation of the programs.

1. Recruitment Challenges

By the end of 2008, three of the four DMIE states using random assignment had surpassed their enrollment targets. Kansas recruited a total of 500 participants, which exceeded the program's target of 400 working adults from the state's high-risk insurance pool. Minnesota had a total of 1,793 participants, which surpassed its enrollment target of 1,500 workers with mental illness from existing public insurance programs. Texas had a total of 1,616 participants, which exceeded its enrollment target of 1,425 participants who were existing members of the Harris County Hospital District and had a severe mental illness or a behavioral health diagnosis occurring with a physical impairment. Hawaii had recruited 190 participants, but had not met its enrollment target of 534 working adults with diabetes.

Building the DMIE around an existing program makes it easier to identify candidates from a "captive pool" and obtain information from existing data sources. This model offers several advantages such as (1) focusing resources on a well-defined target population, (2) designing an intervention that offers additional benefits beyond what is available in an existing program, and (3) using an existing network of providers to facilitate the rapid deployment of services. Kansas targeted members in the statewide high-risk insurance pool; Texas focused recruitment on Gold Card members in the Harris County Hospital District (HCHD); Minnesota contracted with one managed care organization (Medica) that used its existing provider network to deliver services and identify participants. Hawaii did not use an existing program, but asked employees to self-identify and participate voluntarily before changing to an open media campaign.

Recruitment in each DMIE state required more than 12 months to complete because of various challenges that hindered rapid enrollment. All four states using random assignment did not reach their enrollment targets within the first year of recruitment and had to make modifications in their recruitment strategies. Some key challenges that hindered rapid enrollment included: (1) identifying study candidates (2) poor contact information for study candidates, (3) nonresponse to direct mail outreach efforts, (4) obtaining IRB approval for protocols and participant consent forms, and (5) screening applicants as well as verifying information. Each step required considerable time and effort, such as followup with candidates who did not respond to initial mailings, and lengthy approval processes.

Some target populations may be more difficult to recruit than others because of stakeholder resistance or employee reluctance to disclose medical conditions. For example, Hawaii struggled to recruit candidates in its first year because private employers were concerned some employees would not receive the intervention. Other employers were hesitant to bear any increased costs for participants who wished to continue intervention services after the demonstration ended. Furthermore, workers were reluctant to disclose their medical condition to employers because of concerns it would jeopardize their future employment. The District of Columbia's DMIE program anticipated that persons with HIV/AIDS would be reluctant to disclose their condition and designed its "single point of entry" enrollment process to maintain strict confidentiality and avoid disclosing this information to employers.

Flexibility and a willingness to change recruitment strategies were important factors in states that reached their enrollment targets. Texas implemented an in-person recruitment strategy in addition to the existing direct-mailing method that was very effective in contributing to a surge in enrollment during 2008. Because the new strategy involved meeting candidates while they were waiting for an appointment, it improved the response rate. Kansas decided to recruit three cohorts of participants at different points in time between 2006 and 2008 to reach its enrollment target. Minnesota increased the maximum age for eligibility, greatly expanded its outreach effort and mailings in the second year of recruitment, and expanded the program by adding two counties to increase the pool of study candidates.

Using a streamlined process for obtaining and verifying information also facilitated enrollment into the program. The time needed to obtain and verify the accuracy of each candidate's employment and health information was a major source of delay in implementation. Some states modified their eligibility certification processes to bolster enrollment into the program. For example, Texas pre-verified study candidates' employment eligibility using HCHD administrative records to eliminate one step that can hinder recruitment. Minnesota streamlined the application process by asking applicants to supply verifying documents upfront.

2. Program Design and Implementation

The design and benefit structure of a program intervention may have unintended and far-reaching consequences for the sustainability of the demonstration. For example, Kansas provides a generous premium subsidy for treatment group members. However, increased use of DMIE services among KHIA members may indirectly increase the amount insurers in Kansas pay in member assessments, because member assessments fund a large proportion of high-risk pool operating costs.. Minnesota's use of a sliding scale monthly premium was difficult to calculate; the state later moved to a uniform $10 monthly premium for most participants.

Prescription drug coverage is a vital component in the design of interventions and represented the largest category of service expenditures used by DMIE participants during the third quarter of 2008. Health care service expenditure information submitted by three states totaled $3.1 million in the third quarter of 2008 (results not shown). Of this amount, 42 percent of expenditures were allocated to treatment group members for filling prescriptions, followed by hospital inpatient care (25 percent), and x-ray procedures (7 percent). The coverage of prescription drugs was especially important as a benefit in Minnesota, which has a target population of individuals with mental illness.

Providing employment assistance through a personal navigator or case manager is another key component in the design of interventions. For example, Texas and Kansas provide case management services to treatment group members through Shorman Solutions. The case manager identifies the needs of participants, helps them navigate the system, connects participants with resources in the community, and helps to develop an individualized plan to set and attain employment and educational goals. Minnesota assigns a personal navigator who conducts an initial meeting with each treatment group member to identify and develop health and employment goals for the coming year. Hawaii offers life coaches to treatment group members for the purpose of setting and working toward personal goals.

Strong and consistent leadership in managing stakeholders is essential in the design and implementation of DMIE programs. With the multiple challenges of recruitment and designing an intervention with providers, strong leadership from state DMIE program directors plays a key role in providing resources and support to operations and evaluation activities, identifying and resolving issues quickly, communicating between stakeholders, advocating for the DMIE program at the state and federal level, and disseminating key findings to policymakers and legislators.

C. STRONG FOUNDATION FOR NATIONAL EVALUATION

The successful implementation of random assignment across the four states is a promising start for the next phase of the evaluation because it greatly strengthens our ability to rigorously estimate program impacts. Also, having multiple DMIE interventions provides the opportunity to test and replicate a variety of models within different target populations. The adaptation of the DMIE model to different settings can therefore be a great strength for the national evaluation.

1. Random Assignment

Random assignment worked well in all four DMIE states to generate a similar distribution of baseline characteristics between the treatment group and control group. Table IX.3 shows the mean values of select characteristics and confirms a similar age at enrollment, self-reported mental health score, and percent working in the education or health care sectors across the treatment and control groups within each state. This key finding reflects the successful application of methods to generate two groups with similar characteristics and is a promising first step for conducting a rigorous national evaluation of program impacts on health status, employment, and use of federal disability benefits. We will continue to monitor attrition in all four states. Kansas experienced some control group attrition (likely due to rising KHIA premiums) since 2006. In response, the state conducted a third wave of DMIE recruitment in 2008 to allow for oversampling of control group members.

Table IX.3. Mean Value of Selected Characteristics in Treatment and Control Groups, by State

State	Mean Age at Enrollment (years)	Mean SF-12 Mental Health Score	Working in Education or Health Care (percent)
Kansas - T only	51.5	49.9	18.7
Kansas - C only	50.5	50.7	20.4
Minnesota - T only	38.7	35.2	20.4
Minnesota - C only	37.8	34.2	20.7
Texas - T only	46.8	49.5	29.9
Texas - C only	47.0	49.6	26.1
Hawaii - T only	47.6	47.5	39.8
Hawaii - C only	50.3	47.1	35.5

Source: Uniform Data Sets submitted by Kansas, Minnesota, Texas, and Hawaii. Figures are based on DMIE participants and include those individuals who disenrolled since the start of the demonstration.

Note: SF-12 scores are norm-based, with 50 representing the national average. Lower scores indicate worse mental health status. For example, Minnesota's mean SF-12 scores are below the national average.

2. Baseline Measures of SSA Earnings and Prior Receipt of Benefits

Individual earnings using SSA administrative data show no significant differences between the treatment and control groups. In 2006, the average inflation-adjusted earnings of DMIE participants nationwide were $17,488, which rose slightly to $17,821 in 2007. Across each of the four states, the mean earnings between the treatment and control groups are similar (Table IX.4). Minnesota and Texas had average earnings below the national average, which is expected given that these states identified candidates from public health insurance programs and a safety net provider for the uninsured. Kansas had mean annual earnings above the national average, which is consistent with a target population that is well-educated and drawn from high-risk insurance pool members whose incomes may have been too high to qualify for Medicaid. Hawaii's target population is also well-educated compared with Minnesota and Texas.

Table IX.4. Average Annual Earnings of DMIE Enrollees with Positive Earnings, by State, Group Code, and Year, 2006–2007

State	2006	2007
Kansas - T only	$32,603	$29,340
Kansas - C only	32,349	30,529
Minnesota - T only	14,089	14,865
Minnesota - C only	13,025	14,266
Texas - T only	13,746	14,342
Texas - C only	13,662	13,879
Hawaii - T only	43,459	46,498
Hawaii - C only	45,794	46,011
National Average	$17,488	$17,821

Source: DMIE National Finder File and SSA 2007 Master Earnings File. Figures are based on the total number of DMIE participants and include those individuals who disenrolled since the start of the demonstration.

Note: 2006 earnings are inflation-adjusted to 2007 dollars

The historical use of SSDI and SSI benefits was low (3 percent) among DMIE participants nationwide during the 10-year period before the demonstration. This low incidence is expected, given the program's eligibility requirement that excludes participants who currently receive or have a pending application for federal disability benefits (Table IX.5). However, DMIE participants have a wide range of potentially disabling conditions, some of which could become an SSA-certified disability if they worsen over time. Therefore, the DMIE population is potentially at risk for becoming dependent on federal disability benefits in the future. We will monitor changes in the receipt of federal disability benefits after participants receive the DMIE intervention.

Table IX.5. Number and Percent of DMIE Enrollees With a History of SSDI or SSI Benefit Payments, 1996–2005

State	Number Received SSI/SSDI Benefits	Percent Received SSI/SSDI Benefits
Kansas - T only	5	2.2
Kansas - C only	6	2.2
Minnesota - T only	52	3.5
Minnesota - C only	6	2.0
Texas - T only	45	5.0
Texas - C only	23	3.2
Hawaii - T only	3	2.3
Hawaii - C only	0	0.0
National Count	140	3.4

Source: DMIE National Finder File 2007 and Ticket Research File 2007. Figures are based on the total number of DMIE participants and include those individuals who disenrolled since the start of the demonstration.

CHAPTER X

CONCLUSIONS AND NEXT STEPS

The Demonstration to Maintain Independence and Employment (DMIE) was authorized by Congress under the Ticket to Work and Work Incentives Improvement Act of 1999, and awards funds to states to develop, implement, and evaluate interventions for working adults with potentially disabling conditions. This chapter provides a summary of the recruitment status of the DMIE programs in four states and the District of Columbia, draws several conclusions from key findings on the baseline characteristics of participants, and describes early lessons learned from program implementation in the four DMIE states. Each DMIE program includes two broad components: health-related services and employment assistance. However, each state designed its DMIE program to serve different target populations. We conclude with a discussion of next steps.

A. STATUS OF THE DMIE PROGRAM IN 2008

Recruitment of DMIE program participants in Kansas, Minnesota, Texas, and Hawaii was completed on or before September 30, 2008. This enrollment cutoff date allowed time for at least one follow-up survey to be conducted with all participants before September 30, 2009, when the DMIE interventions will be required to stop in the absence of a Congressional extension. DMIE services will continue to be provided to treatment group members until September 30, 2009.

Overall, DMIE states were successful in recruiting individuals to the DMIE program. Total baseline enrollment in the DMIE as of September 2008 was 4,099 participants across the four states with random assignment, which exceeded the projected enrollment target of 3,859 people. Three of the four states that used random assignment surpassed their enrollment targets. Hawaii, which did not reach its enrollment target, will conduct additional analyses to determine how frequently the intervention is being used by treatment group members. The District of Columbia reached its enrollment cap of 420 participants.

- Kansas started enrollment in April 2006 with a target population of workers already enrolled in the state's high-risk insurance pool (KHIA), and reported an enrollment of 500 participants at baseline. Participants were recruited from across the entire state.

- Minnesota began enrollment in January 2007 with a focus on workers with mental illness who were previously enrolled in two public insurance programs (MinnesotaCare and GAMC). Minnesota had an enrollment of 1,793 participants at baseline. Participants were recruited from counties in the Twin Cities area and the northeast region of the state.

- Texas started enrollment in April 2007 with a target population of workers with severe mental illness or behavioral health conditions co-occurring with a physical condition who were enrolled in the Harris County Hospital District (HCHD), a safety net provider in the Houston area. Texas had an enrollment of 1,616 baseline participants.

- Hawaii started enrollment in April 2008 with a focus on workers with diabetes in the city and county of Honolulu. The state reported an enrollment of 190 participants at baseline but did not reach its enrollment target.

- The District of Columbia started enrollment in September 2002 with a target population of residents with HIV/AIDS and completed its phase-down on December 31, 2008. The program did not use random assignment and had an enrollment ceiling of 420 participants, with 336 participants on the last day of the program.

B. CONCLUSIONS

The DMIE program can be implemented in a wide range of settings to serve different target populations. One important feature of the program is the flexibility of allowing states to design and customize benefits to meet the needs of different target populations with a variety of potentially disabling conditions. For example, Minnesota targeted its program and services for persons with mental illness and required that each treatment group member conduct an initial assessment with a wellness navigator. Kansas offered enhanced benefits and premium subsidies to address unmet needs of enrollees in the state’s high-risk insurance pool. Texas offered health care services, employment assistance, and case management to uninsured members of the Harris County Hospital District. Hawaii provided life coaching and pharmacist counseling as part of its intervention to help with the management of diabetes. The diversity in state programs strengthens the evaluation, because we will be able to evaluate the impact of program interventions across different settings and for different groups.

Throughout the four states, DMIE participants had a wide and diverse range of baseline participant characteristics with respect to demographics, health status, and employment. This finding is expected in part because of differences in each state’s target population. Variations in the age of participants, educational attainment, and marital status are likely to have an effect on differences in the annual earnings and likelihood of employment among participants. Although a wide range of physical and mental health status was reported, all four states had a substantial number of persons who reported having fair or poor health status.

Building a demonstration around an existing program makes it easier to identify candidates from a "captive pool" and obtain information from existing data sources. This model offers several advantages such as focusing resources on a well-defined target population, designing an intervention that offers additional benefits beyond what is available in an existing program, and using an existing network of providers to facilitate the rapid deployment of services as part of an intervention. One major challenge for the DMIE was identifying study candidates. States that focused on an existing program were able to obtain administrative data and contact information to initiate a search for candidates.

Recruitment in each DMIE state required more than 12 months to complete because of various challenges that hindered rapid enrollment. All four states using random assignment did not reach their enrollment targets within the first year of recruitment and had to make modifications in their recruitment strategies. Some key challenges that hindered rapid enrollment included: (1) identifying study candidates (2) poor contact information for study candidates, (3) nonresponse to direct mail outreach efforts, (4) obtaining IRB approval for protocols and participant consent forms, and (5) screening applicants as well as verifying information. Each step required considerable time and effort, such as following up with candidates who do not respond to initial mailings, and lengthy approval processes.

During early implementation, all four states changed or adapted their recruitment strategy to increase the enrollment of DMIE participants. Texas implemented an in-person recruitment strategy in addition to the existing direct-mailing method, which was very effective in contributing to a surge in enrollment during 2008. Kansas decided to recruit three cohorts of participants at different points in time between 2006 and 2008 to reach its enrollment target. Minnesota increased the maximum age for eligibility, greatly expanded its outreach effort and mailings in the second year of recruitment, and expanded the program to two additional counties to increase the pool of study candidates. Hawaii decided to abandon its employer recruitment strategy in April 2008 and moved to a community-based open recruitment model, which led to a rapid increase of participants by September 2008.

Random assignment worked well in all four DMIE states to generate a similar distribution of baseline characteristics between the treatment group and control group. This key finding reflects the successful application of methods to generate two groups with similar characteristics and is a promising start for conducting a rigorous national evaluation of program impacts on health status, employment, and use of federal disability benefits. Having multiple DMIE interventions provides the opportunity to test and replicate different models across different target populations.

C. NEXT STEPS

In the spring of 2010, MPR will prepare and submit to CMS a final report with estimates of DMIE program impacts on health, earnings, and use of federal disability benefits. The report will examine whether the DMIE intervention led to an improvement in outcomes in the four states with random assignment. By September 2009, all four DMIE program interventions will end. We will also include a detailed assessment of phase-down activities based on a final site visit to be conducted with each state by fall of 2009.

In 2009, the DMIE states will prepare additional rounds of UDS data with updated quantitative information on participant characteristics, self-reported health status, hours worked, and other variables that will allow us to understand changes between the baseline survey period and follow-up periods. As part of the final report, MPR will analyze participant earnings and employment in 2008 and compare outcomes with previous years using SSA administrative data. MPR will also monitor the use of SSDI or SSI benefits in 2008 to see if the likelihood of dependence on federal disability benefits is altered as a result of the DMIE intervention. Over the next year, MPR will continue to work closely with the state evaluators to provide the most accurate findings possible for the final report and national evaluation of the DMIE.

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APPENDIX A

KANSAS UDS TABLES

TABLE A.1

DEMOGRAPHIC CHARACTERISTICS

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Age at Enrollment						
Less than 25 years	2	0.9	8	2.9	10	2.0
25-34 years	9	4.0	13	4.7	22	4.4
35-44 years	31	13.8	30	10.9	61	12.2
45-54 years	85	37.8	104	37.8	189	37.8
55 years or older	98	43.6	120	43.6	218	43.6
Chi-square test	*p = 0.48*					
Gender						
Female	108	48.0	145	52.7	253	50.6
Male	117	52.0	130	47.3	247	49.4
Chi-square test	*p = 0.29*					
Race/Ethnicity *						
White and Non-Hispanic	190	84.4	186	67.6	376	75.2
Black or African American	2	0.9	0	0.0	2	0.4
Hispanic	3	1.3	2	0.7	5	1.0
Asian	0	0.0	1	0.4	1	0.2
American Indian or Alaska Native	2	0.9	0	0.0	2	0.4
Some other race	0	0.0	1	0.4	1	0.2
Unknown	28	12.4	85	30.9	113	22.6
Chi-square test	*p = 0.29*					
Education						
8th grade or less	0	0.0	2	0.7	2	0.4
Some high school	4	1.8	3	1.1	7	1.4
High school graduate or GED	44	19.6	46	16.7	90	18.0
Some college or 2 year degree	88	39.1	90	32.7	178	35.6
4-year college graduate	40	17.8	65	23.6	105	21.0
More than 4-year college graduate	49	21.8	68	24.7	117	23.4
Missing or unknown	0	0.0	1	0.4	1	0.2
Chi-square test	*p = 0.26*					
Marital Status						
Married	130	57.8	143	52.0	273	54.6
Widowed	5	2.2	11	4.0	16	3.2
Divorced	44	19.6	64	23.3	108	21.6
Separated	2	0.9	0	0.0	2	0.4
Never married	44	19.6	53	19.3	97	19.4
Other response	0	0.0	3	1.1	3	0.6
Missing or unknown	0	0.0	1	0.4	1	0.2
Chi-square test	*p = 0.18*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

*Due to a software error, the race/ethnicity questions were excluded in the cohort 3 baseline assessment survey for people who first enrolled in 2008; however, based on preliminary data for cohort 1 and 2, we expect that more than 97 percent of DMIE participants will be non-Hispanic whites.

TABLE A.2

SELF-REPORTED HEALTH STATUS

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Physical Health Status						
Excellent	16	7.1	17	6.2	33	6.6
Very good	52	23.1	83	30.2	135	27.0
Good	108	48.0	128	46.5	236	47.2
Fair	44	19.6	43	15.6	87	17.4
Poor	5	2.2	3	1.1	8	1.6
Missing	0	0.0	1	0.4	1	0.2
Chi-square test	*p = 0.33*					
Mental Health Status						
Excellent	52	23.1	61	22.2	113	22.6
Very good	73	32.4	116	42.2	189	37.8
Good	81	36.0	76	27.6	157	31.4
Fair	14	6.2	22	8.0	36	7.2
Poor	4	1.8	0	0.0	4	0.8
Missing	1	0.4	0	0.0	1	0.2
Chi-square test	*p = 0.02*					
Physical Health SF-12 Score*						
0 to less than 10	1	0.4	0	0.0	1	0.2
10 to less than 20	6	2.7	6	2.2	12	2.4
20 to less than 30	28	12.4	25	9.1	53	10.6
30 to less than 40	49	21.8	41	14.9	90	18.0
40 to less than 50	58	25.8	90	32.7	148	29.6
50 to less than 60	76	33.8	101	36.7	177	35.4
60 to less than 70	7	3.1	12	4.4	19	3.8
70 to less than 80	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.19*					
Mental Health SF-12 Score						
0 to less than 10	1	0.4	0	0.0	1	0.2
10 to less than 20	2	0.9	0	0.0	2	0.4
20 to less than 30	8	3.6	7	2.5	15	3.0
30 to less than 40	20	8.9	28	10.2	48	9.6
40 to less than 50	61	27.1	78	28.4	139	27.8
50 to less than 60	102	45.3	129	46.9	231	46.2
60 to less than 70	31	13.8	33	12.0	64	12.8
70 to less than 80	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.58*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

*SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the eight subscales of physical and mental health, since raw scores cannot be directly compared. (e.g., a raw score of 60 would be above the norm for vitality but far below the norm for "role emotional".) The eight sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning.

TABLE A.3

DIAGNOSTIC CONDITIONS AND FUNCTIONAL STATUS

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Major Diagnostic Categories*						
Blood disorders	6	2.7	7	2.5	13	2.6
Cancer	36	16.0	40	14.5	76	15.2
Cardiovascular	51	22.7	71	25.8	122	24.4
Diabetes	60	26.7	67	24.4	127	25.4
Endocrine other than diabetes	1	0.4	1	0.4	2	0.4
Gastrointestinal	14	6.2	26	9.5	40	8.0
HIV	3	1.3	2	0.7	5	1.0
Immune disorders	18	8.0	22	8.0	40	8.0
Mental illness	76	33.8	106	38.5	182	36.4
Musculoskeletal conditions	81	36.0	86	31.3	167	33.4
Neurological conditions	25	11.1	21	7.6	46	9.2
Renal conditions	3	1.3	4	1.5	7	1.4
Respiratory conditions	41	18.2	51	18.5	92	18.4
Sensory disorders	11	4.9	7	2.5	18	3.6
Stroke and TIA	2	0.9	5	1.8	7	1.4
Chi-square test	*not applicable*					
Number of Conditions (per person)						
1 condition	29	12.9	28	10.2	57	11.4
2 conditions	40	17.8	53	19.3	93	18.6
3 conditions	46	20.4	65	23.6	111	22.2
4 conditions	43	19.1	47	17.1	90	18.0
5 conditions	32	14.2	39	14.2	71	14.2
6 conditions	14	6.2	20	7.3	34	6.8
7 conditions	12	5.3	12	4.4	24	4.8
8 conditions	6	2.7	4	1.5	10	2.0
9 conditions	2	0.9	5	1.8	7	1.4
10 conditions	1	0.4	2	0.7	3	0.6
Chi-square test	*p = 0.91*					
Number of Limited Activities of Daily Living (per person) **						
No limited activities	123	54.7	167	60.7	290	58.0
1 limited activity	40	17.8	47	17.1	87	17.4
2 limited activities	29	12.9	23	8.4	52	10.4
3 limited activities	11	4.9	15	5.5	26	5.2
4 limited activities	11	4.9	14	5.1	25	5.0
5 limited activities	6	2.7	3	1.1	9	1.8
6 limited activities	4	1.8	4	1.5	8	1.6
7 limited activities	1	0.4	2	0.7	3	0.6
Chi-square test	*p = 0.62*					
Number of Limited Instrumental Activities of Daily Living (per person)						
No limited activities	121	53.5	162	59.1	283	56.6
1 limited activity	45	19.9	68	24.8	113	22.6
2 limited activities	31	13.7	22	8.0	53	10.6

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
3 limited activities	15	6.6	14	5.1	29	5.8
4 limited activities	6	2.7	5	1.8	11	2.2
5 limited activities	3	1.3	1	0.4	4	0.8
6 limited activities	2	0.9	1	0.4	3	0.6
7 limited activities	1	0.4	0	0.0	1	0.2
8 limited activities	2	0.9	1	0.4	3	0.6
Chi-square test	*p = 0.26*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

*Diagnostic categories determined by University of Kansas staff; participants may have multiple conditions; counts above indicate a person had at least 1 condition within a specific category. Therefore, the summed counts are not equivalent to the number of participants.

** Activities of daily living (ADL) include (1) bathing, (2) dressing, (3) eating, (4) getting out of bed, (5) walking, (6) going outside, and (7) using the toilet. Instrumental activities of daily living (IADL) include (1) preparing meals, (2) shopping, (3) paying bills, (4) using the telephone, (5) heavy housework, (6) light housework, (7) getting to places outside of walking distance, and (8) managing medications.

TABLE A.4

EMPLOYMENT CHARACTERISTICS

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Industry (first response)						
Natural resources, mining, agriculture	36	16.0	32	11.6	68	13.6
Construction	8	3.6	11	4.0	19	3.8
Manufacturing	4	1.8	12	4.4	16	3.2
Trade, transportation, utilities	37	16.4	43	15.6	80	16.0
Information services	3	1.3	3	1.1	6	1.2
Financial services	17	7.6	16	5.8	33	6.6
Professional services	48	21.3	51	18.5	99	19.8
Education and health care	42	18.7	56	20.4	98	19.6
Leisure and hospitality	11	4.9	25	9.1	36	7.2
Other services	17	7.6	21	7.6	38	7.6
Public administration	2	0.9	5	1.8	7	1.4
Chi-square test	*p = 0.48*					
Number of industries (per person)						
1 industry	206	91.6	234	85.1	440	88.0
2 industries	18	8.0	34	12.4	52	10.4
3+ industries	1	0.4	6	2.2	7	1.4
Missing, unknown, or refused	0	0.0	1	0.4	1	0.2
Chi-square test	*p = 0.10*					
Job Type (first response)						
Architects, engineers, scientists, educators	12	5.3	8	2.9	20	4.0
Professional, technical, or managerial jobs	87	38.7	107	38.9	194	38.8
Clerical and sales occupations	47	20.9	59	21.5	106	21.2
Service occupations	28	12.4	47	17.1	75	15.0
Agriculture, fishery, or forestry	32	14.2	30	10.9	62	12.4
Machine trades occupations	3	1.3	3	1.1	6	1.2
Benchwork occupations	8	3.6	6	2.2	14	2.8
Structural work occupations	2	0.9	5	1.8	7	1.4
Miscellaneous occupations	6	2.7	10	3.6	16	3.2
Chi-square test	*p = 0.57*					
Number of Job Types						
1 job type	217	96.4	264	96.0	481	96.2
2 job types	8	3.6	11	4.0	19	3.8
3+ job types	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.80*					
Job Change Frequency						
No job changes	206	91.6	242	88.0	448	89.6
1 job change	14	6.2	25	9.1	39	7.8
2 job changes	3	1.3	3	1.1	6	1.2
3 Job Changes	2	0.9	4	1.5	6	1.2
4 or More Job Changes	0	0.0	1	0.4	1	0.2
Chi-square test	*p = 0.61*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

TABLE A.5

SELF-REPORTED USE OF HEALTH CARE SERVICES

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Routine Primary Care Visits						
0 visits	51	22.7	60	21.8	111	22.2
1-2 visits	106	47.1	161	58.5	267	53.4
3-4 visits	45	20.0	36	13.1	81	16.2
5-10 visits	16	7.1	14	5.1	30	6.0
11-20 visits	7	3.1	4	1.5	11	2.2
Chi-square test	$p = 0.06$					
Vision or Dental Visits						
0 visits	59	26.2	62	22.5	121	24.2
1-2 visits	107	47.6	165	60.0	272	54.4
3-4 visits	48	21.3	41	14.9	89	17.8
5-10 visits	8	3.6	7	2.5	15	3.0
11-20 visits	3	1.3	0	0.0	3	0.6
>20 visits	0	0.0	0	0.0	0	0.0
Chi-square test	$p = 0.02$					
Surgery or Treatments						
0 visits	138	61.3	140	50.9	278	55.6
1-2 visits	56	24.9	75	27.3	131	26.2
3-4 visits	6	2.7	23	8.4	29	5.8
5-10 visits	13	5.8	26	9.5	39	7.8
11-20 visits	6	2.7	4	1.5	10	2.0
>20 visits	6	2.7	7	2.5	13	2.6
Chi-square test	$p = 0.03$					
Mental Health Visits						
0 visits	190	84.4	211	76.7	401	80.2
1-2 visits	10	4.4	15	5.5	25	5.0
3-4 visits	7	3.1	12	4.4	19	3.8
5-10 visits	5	2.2	15	5.5	20	4.0
11-20 visits	5	2.2	9	3.3	14	2.8
>20 visits	8	3.6	13	4.7	21	4.2
Chi-square test	$p = 0.33$					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

Note: The number of visits is a self-reported measure based on the participant's own recollection of visits in the past year. This information is not based on the actual number of visits based on claims data.

TABLE A.6

SELF-REPORTED INCOME AND HOURS WORKED

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Family Income (in past year)						
Less than $10,000	12	5.2	18	6.5	30	6.0
$10,000 to $19,999	26	11.6	21	7.6	47	9.4
$20,000 to $29,999	23	10.2	33	12.0	56	11.2
$30,000 to $39,999	24	10.7	38	13.8	62	12.4
$40,000 to $74,999	65	28.9	81	29.5	146	29.2
$75,000 or more	68	30.2	80	29.1	148	29.6
Missing	7	3.1	4	1.5	11	2.2
Chi-square test	*p = 0.67*					
Personal Earnings (in past year) *						
Less than $10,000	38	16.9	40	14.5	78	15.6
$10,000 to $19,999	17	7.6	23	8.4	40	8.0
$20,000 to $29,999	11	4.9	18	6.5	29	5.8
$30,000 to $39,999	10	4.4	16	5.8	26	5.2
$40,000 to $74,999	11	4.9	12	4.4	23	4.6
$75,000 or more	7	3.1	9	3.3	16	3.2
Missing	131	58.2	157	57.1	288	57.6
Chi-square test	*p = 0.90*					
Hours Worked Monthly						
Less than 40 hours	17	7.6	22	8.0	39	7.8
40 to 79	20	8.9	30	10.9	50	10.0
80 to 119	41	18.2	33	12.0	74	14.8
120 to 159	48	21.3	44	16.0	92	18.4
160+ hours	99	44.0	146	53.1	245	49.0
Chi-square test	*p = 0.16*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

*Many values were missing because of self-employment income, which is not reported in UI earnings data.

TABLE A.7

PUBLIC PROGRAM PARTICIPATION (IN PAST TWO YEARS)

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
TANF						
Yes	0	0.0	0	0.0	0	0.0
No	225	100.0	275	100.0	500	100.0
Chi-square test	*not applicable*					
Food Stamps						
Yes	3	1.3	2	0.7	5	1.0
No	222	98.7	273	99.3	495	99.0
Chi-square test	$p = 0.50$					
Public Housing						
Yes	0	0.0	0	0.0	0	0.0
No	0	0.0	0	0.0	0	0.0
Missing	225	100.0	275	100.0	50	100.0
Chi-square test	*not applicable*					
Medicaid						
Yes	3	1.3	1	0.4	4	0.8
No	222	98.7	274	99.6	496	99.2
Chi-square test	$p = 0.23$					
Vocational Rehabilitation						
Yes	0	0.0	0	0.0	0	0.0
No	0	0.0	0	0.0	0	0.0
Missing	225	100.0	275	100.0	50	100.0
Chi-square test	*not applicable*					

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

TABLE A.8

DMIE WITHDRAWALS (AS OF SEPTEMBER 2008)

	Treatment Group (n=225)		Control Group (n=275)		Kansas Total (n=500)	
	N	Percent	N	Percent	N	Percent
Moved out of area	3	1.3	4	1.5	7	1.4
Died	5	2.2	0	0.0	5	1.0
Other						
Incarcerated	0	0.0	1	0.4	1	0.2
Unable to contact in LTC facility	0	0.0	1	0.4	1	0.2
Terminated KHIA	12	5.3	49	17.8	61	12.2
Too ill to take survey	0	0.0	1	0.4	1	0.2
Transitioned to Medicaid Buy-In	0	0.0	1	0.4	1	0.2
Transitioned to Medicare (re-entry)	0	0.0	1	0.4	1	0.2
Transitioned to Medi-Kan	0	0.0	1	0.4	1	0.2
Missing (did not stop)	205	91.1	216	78.5	421	84.2

Source: Uniform Data Set (UDS) submitted by Kansas in September 2008. Baseline survey data are for all Kansas DMIE participants who first enrolled between April 2006 and July 2008.

APPENDIX B

MINNESOTA UDS TABLES

TABLE B.1

DEMOGRAPHIC CHARACTERISTICS

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Age at Enrollment						
Less than 25 years	173	11.6	37	12.3	210	11.7
25-34 years	436	29.2	99	33.0	535	29.8
35-44 years	344	23.0	68	22.7	412	23.0
45-54 years	401	26.9	70	23.3	471	26.3
55 years or older	139	9.3	26	8.7	165	9.2
Chi-square test	*p = 0.62*					
Gender						
Female	906	60.7	186	62.0	1092	60.9
Male	583	39.0	113	37.7	696	38.8
Missing or unknown	4	0.3	1	0.3	5	0.3
Chi-square test	*p = 0.89*					
Race/Ethnicity						
White and on-Hispanic	886	59.3	214	71.3	1,100	61.3
Black or African American	88	5.9	27	9.0	115	6.4
Hispanic	35	2.3	10	3.3	45	2.5
Asian	8	0.5	2	0.7	10	0.6
Native Hawaiian or Pacific Islander	1	0.1	1	0.3	2	0.1
American Indian or Alaska Native	8	0.5	7	2.3	15	0.8
Some other race	13	0.9	1	0.3	14	0.8
More than one race	35	2.3	8	2.7	43	2.4
Missing or unknown	419	28.1	30	10.0	449	25.0
Chi-square test	*p = 0.16*					
Education						
8th grade or less	9	0.6	0	0.0	9	0.5
Some high school	85	5.7	18	6.0	103	5.7
High school graduate or GED	359	24.0	75	25.0	434	24.2
Some college or 2 year degree	633	42.4	127	42.3	760	42.4
4-year college graduate	185	12.4	32	10.7	217	12.1
More than 4-year college graduate	85	5.7	22	7.3	107	6.0
Refused	17	1.1	0	0.0	17	0.9
Missing or unknown	120	8.0	26	8.7	146	8.1
Chi-square test	*p = 0.60*					
Marital Status						
Married	295	19.8	74	24.7	369	20.6
Widowed	60	4.0	16	5.3	76	4.2
Divorced	314	21.0	58	19.3	372	20.7
Separated	18	1.2	4	1.3	22	1.2
Never married	668	44.7	120	40.0	788	43.9
Refused	18	1.2	2	0.7	20	1.1
Missing or unknown	120	8.0	26	8.7	146	8.1
Chi-square test	*p = 0.23*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

TABLE B.2

SELF-REPORTED HEALTH STATUS

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Physical Health Status						
Excellent	44	2.9	11	3.7	55	3.1
Very good	274	18.4	53	17.7	327	18.2
Good	625	41.9	116	38.7	741	41.3
Fair	382	25.6	79	26.3	461	25.7
Poor	43	2.9	14	4.7	57	3.2
Refused	5	0.3	1	0.3	6	0.3
Missing	120	8.0	26	8.7	146	8.1
Chi-square test	*p = 0.45*					
Mental Health Status						
Excellent	30	2.0	5	1.7	35	2.0
Very good	137	9.2	30	10.0	167	9.3
Good	467	31.3	79	26.3	546	30.5
Fair	585	39.2	113	37.7	698	38.9
Poor	137	9.2	45	15.0	182	10.2
Refused	17	1.1	2	0.7	19	1.1
Missing	120	8.0	26	8.7	146	8.1
Chi-square test	*p = 0.03*					
Physical Health SF-12 Score *						
0 to less than 10	0	0.0	0	0.0	0	0.0
10 to less than 20	10	0.7	0	0.0	10	0.6
20 to less than 30	76	5.1	13	4.3	89	5.0
30 to less than 40	186	12.5	43	14.3	229	12.8
40 to less than 50	402	26.9	72	24.0	474	26.4
50 to less than 60	470	31.5	102	34.0	572	31.9
60 to less than 70	139	9.3	31	10.3	170	9.5
70 to less than 80	3	0.2	0	0.0	3	0.2
Missing	207	13.9	39	13.0	246	13.7
Chi-square test	*p = 0.53*					
Mental Health SF-12 Score						
0 to less than 10	9	0.6	1	0.3	10	0.6
10 to less than 20	95	6.4	25	8.3	120	6.7
20 to less than 30	308	20.6	74	24.7	382	21.3
30 to less than 40	446	29.9	82	27.3	528	29.4
40 to less than 50	302	20.2	53	17.7	355	19.8
50 to less than 60	110	7.4	22	7.3	132	7.4
60 to less than 70	16	1.1	4	1.3	20	1.1
70 to less than 80	0	0.0	0	0.0	0	0.0
Missing	207	13.9	39	13.0	246	13.7
Chi-square test	*p = 0.52*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

*SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the eight subscales of physical and mental health, since raw scores cannot be directly compared. (e.g., a raw score of 60 would be above the norm for vitality but far below the norm for "role emotional".) The eight sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning.

TABLE B.3

DIAGNOSTIC CONDITIONS AND FUNCTIONAL STATUS

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Major Diagnostic Categories* (first response)						
Severe mental illness	740	49.6	150	50.0	890	49.6
Other mental disorders	694	46.5	141	47.0	835	46.6
All other conditions	59	4.0	9	3.0	68	3.8
Chi-square test	*p = 0.64*					
Number of Conditions (per person)						
1 Condition	495	33.2	109	36.3	604	33.7
2 Conditions	997	66.8	191	63.7	1,188	66.3
Missing	1	0.1	0	0.0	1	0.1
Chi-square test	*p = 0.28*					
Number of Limited Activities of Daily Living (per person)						
No limited activities	776	52.0	150	50.0	926	51.6
1 limited activity	255	17.1	42	14.0	297	16.6
2 limited activities	133	8.9	34	11.3	167	9.3
3 limited activities	91	6.1	21	7.0	112	6.2
4 limited activities	55	3.7	9	3.0	64	3.6
5 limited activities	29	1.9	9	3.0	38	2.1
6 limited activities	19	1.3	3	1.0	22	1.2
7 limited activities	9	0.6	3	1.0	12	0.7
Missing	126	8.4	29	9.7	155	8.6
Chi-square test	p = 0.55					
Number of Limited Instrumental Activities of Daily Living (per person)						
No limited activities	614	41.1	122	40.7	736	41.0
1 limited activity	276	18.5	46	15.3	322	18.0
2 limited activities	185	12.4	27	9.0	212	11.8
3 limited activities	116	7.8	33	11.0	149	8.3
4 limited activities	93	6.2	18	6.0	111	6.2
5 limited activities	41	2.7	12	4.0	53	3.0
6 limited activities	32	2.1	6	2.0	38	2.1
7 limited activities	13	0.9	5	1.7	18	1.0
8 limited activities	3	0.2	5	1.7	8	0.4
Missing	120	8.0	26	8.7	146	8.1
Chi-square test	p = 0.005					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

*Participants may have more than one condition; counts above refer to the first response among diagnostic codes reported. Severe mental illness conditions include schizophrenia, bipolar disorder, and major depression. Other mental disorders include anxiety and minor depression.

TABLE B.4

EMPLOYMENT CHARACTERISTICS

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Industry (first response)						
Natural resources and mining	7	0.5	0	0.0	7	0.4
Construction	50	3.3	6	2.0	56	3.1
Manufacturing	79	5.3	15	5.0	94	5.2
Trade, transportation, utilities	283	19.0	48	16.0	331	18.5
Information services	10	0.7	2	0.7	12	0.7
Financial services	54	3.6	11	3.7	65	3.6
Professional services	146	9.8	43	14.3	189	10.5
Education and health care	304	20.4	62	20.7	366	20.4
Leisure and hospitality	270	18.1	64	21.3	334	18.6
Other services	104	7.0	18	6.0	122	6.8
Public administration	12	0.8	0	0.0	12	0.7
Unclassified	13	0.9	2	0.7	15	0.8
Missing, unknown, or refused	161	10.8	29	9.7	190	10.6
Chi-square test	*p = 0.28*					
Number of Industries (per person)						
1 Industry	1,332	89.2	271	90.3	1,603	89.4
Missing, unknown, or refused	161	10.8	29	9.7	190	10.6
Chi-square test	*p = 0.07*					
Job Type (first response)						
Architects, engineers, scientists, educators	0	0.0	0	0.0	0	0.0
Professional, technical, or managerial jobs	216	14.5	68	22.7	284	15.8
Clerical and sales occupations	437	29.3	78	26.0	515	28.7
Service occupations	451	30.2	86	28.7	537	29.9
Agriculture, fishery, or forestry	10	0.7	1	0.3	11	0.6
Processing occupations	11	0.7	1	0.3	12	0.7
Machine trades occupations	33	2.2	7	2.3	40	2.2
Benchwork occupations	34	2.3	6	2.0	40	2.2
Structural work occupations	22	1.5	2	0.7	24	1.3
Miscellaneous occupations	110	7.4	19	6.3	129	7.2
Missing	169	11.3	32	10.7	201	11.2
Chi-square test	*p = 0.57*					
Number of Job Types						
1 Job Type	1,324	88.7	268	89.3	1,592	88.8
Missing, unknown, or refused	169	11.3	32	10.7	201	11.2
Chi-square test	*not applicable*					
Job Change Frequency						
No Job changes	749	50.2	130	43.3	879	49.0
1 Job changes	271	18.2	68	22.7	339	18.9
2 Job changes	129	8.6	27	9.0	156	8.7
3 Job changes	100	6.7	22	7.3	122	6.8
4 or more job changes	66	4.4	15	5.0	81	4.5
Missing	178	11.9	38	12.7	216	12.0

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Chi-square test	*p = 0.57*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

TABLE B.5

SELF-REPORTED USE OF HEALTH CARE SERVICES

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Routine Primary Care Visits						
0 visits	384	25.7	71	23.7	455	25.4
1-2 visits	535	35.8	116	38.7	651	36.3
3-4 visits	168	11.3	39	13.0	207	11.5
5-10 visits	128	8.6	27	9.0	155	8.6
11-20 visits	60	4.0	7	2.3	67	3.7
>20 visits	16	1.1	6	2.0	22	1.2
Unknown or missing	202	13.5	34	11.3	236	13.2
Chi-square test	*p = 0.40*					
Vision or Dental Visits						
0 visits	611	40.9	129	43.0	740	41.3
1-2 visits	577	38.6	109	36.3	686	38.3
3-4 visits	102	6.8	16	5.3	118	6.6
5-10 visits	48	3.2	11	3.7	59	3.3
11-20 visits	2	0.1	1	0.3	3	0.2
Unknown or missing	153	10.2	34	11.3	187	10.4
Chi-square test	*p = 0.70*					
Surgery or Treatments						
0 visits	913	61.2	177	59.0	1,090	60.8
1-2 visits	226	15.1	48	16.0	274	15.3
3-4 visits	67	4.5	18	6.0	85	4.7
5-10 visits	72	4.8	16	5.3	88	4.9
11-20 visits	30	2.0	2	0.7	32	1.8
>20 visits	7	0.5	3	1.0	10	0.6
Unknown or missing	178	11.9	36	12.0	214	11.9
Chi-square test	*p = 0.36*					
Mental Health Visits						
0 visits	307	20.6	48	16.0	355	19.8
1-2 visits	403	27.0	88	29.3	491	27.4
3-4 visits	135	9.0	33	11.0	168	9.4
5-10 visits	222	14.9	46	15.3	268	14.9
11-20 visits	145	9.7	31	10.3	176	9.8
>20 visits	105	7.0	19	6.3	124	6.9
Unknown or missing	176	11.8	35	11.7	211	11.8
Chi-square test	*p = 0.49*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

Note: The number of visits is a self-reported measure based on the participant's own recollection of visits in the past year. This information is not based on the actual number of visits based on claims data.

TABLE B.6

SELF-REPORTED INCOME AND HOURS WORKED

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
Family Income (in past year)						
Less than $10,000	396	26.6	57	19.0	453	25.3
$10,000 to $19,999	392	26.3	81	27.0	473	26.4
$20,000 to $29,999	278	18.6	64	21.3	342	19.1
$30,000 to $39,999	142	9.5	21	7.0	163	9.1
$40,000 to $74,999	124	8.3	31	10.3	155	8.6
$75,000 or more	24	1.6	9	3.0	33	1.8
Missing	137	9.2	37	12.3	174	9.7
Chi-square test	*p = <0.01*					
Personal Earnings (in past year)						
Less than $10,000	483	32.4	104	34.7	587	32.8
$10,000 to $19,999	497	33.3	115	38.3	612	34.1
$20,000 to $29,999	247	16.5	42	14.0	289	16.1
$30,000 to $39,999	79	5.3	9	3.0	88	4.9
$40,000 to $74,999	18	1.2	3	1.0	21	1.2
$75,000 or more	1	0.1	0	0.0	1	0.1
Refused or missing	168	11.3	27	9.0	195	10.9
Chi-square test	*p = 0.40*					
Hours Worked Monthly						
Less than 40 hours	77	5.2	22	7.3	99	5.6
40 to 79	11	0.7	2	0.7	13	0.7
80 to 119	14	0.9	2	0.7	16	0.9
120 to 159	15	1.0	4	1.3	19	1.1
160+ hours	1,308	87.6	259	86.3	1,567	87.4
Refused or missing	68	4.6	11	3.7	79	4.4
Chi-square test	*p = 0.52*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

TABLE B.7

PUBLIC PROGRAM PARTICIPATION (IN PAST TWO YEARS)

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
TANF						
Yes	41	2.7	9	3.0	50	2.8
No	1,288	86.3	260	86.7	1,548	86.3
Missing	164	11.0	31	10.3	195	10.9
Chi-square test	*p = 0.83*					
Food Stamps						
Yes	302	20.2	71	23.7	373	20.8
No	1,039	69.6	201	67.0	1,240	69.2
Missing	152	10.2	28	9.3	180	10.0
Chi-square test	*p = 0.20*					
Public Housing						
Yes	125	8.4	24	8.0	149	8.3
No	1,204	80.6	247	82.3	1,451	80.9
Missing	164	11.0	29	9.7	193	10.8
Chi-square test	*p = 0.78*					
Medicaid						
Yes	1,254	84.0	266	88.7	1,520	84.8
No	53	3.5	0	0.0	53	3.0
Missing	186	12.5	34	11.3	220	12.3
Chi-square test	*p = <0.01*					
Vocational Rehabilitation						
Yes	99	6.6	15	5.0	114	6.4
No	1,231	82.5	255	85.0	1,486	82.9
Missing	163	10.9	30	10.0	193	10.8
Chi-square test	*p = 0.27*					

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

TABLE B.8

DMIE WITHDRAWALS (AS OF NOVEMBER 2008)

	Treatment Group (n=1,493)		Control Group (n=300)		Minnesota Total (n=1,793)	
	N	Percent	N	Percent	N	Percent
DMIE Withdrawals						
Withdrew from DMIE permanently	2	0.1	2	0.7	4	0.2
Did not withdraw permanently	1,491	99.9	298	99.3	1,789	99.8
Intervention Stopped among Treatment Group Members *						
Moved out of area/out of state	14	0.9				
Died	0	0.0				
Refuses to participate	3	0.2				
Other						
Incarcerated *	2	0.1				
Failure to pay initial premium	23	1.5				
Failure to pay ongoing premium	49	3.3				
Mental health care provider	19	1.3				
Health insurance available	6	0.4				
Pursuing disability	26	1.7				
Not employed	20	1.3				
Failure to complete renewal	2	0.1				
Failure to complete initial assessment	11	0.7				
Missing (did not stop intervention)	1,318	88.3				

Source: Uniform Data Set (UDS) submitted by Minnesota in November 2008. Baseline survey data are for all Minnesota DMIE participants who first enrolled between January 2007 and August 2008.

Note: Minnesota enacted a new policy as of October 1, 2008 that does not allow participants to "restart" the DMIE. If a participant exits the demonstration, he/she will be permanently withdrawn from the demo.

*Two incarcerated participants were permanently withdrawn from the DMIE.

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APPENDIX C

TEXAS UDS TABLES

TABLE C.1

DEMOGRAPHIC CHARACTERISTICS

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Age at Enrollment						
Less than 25 years	15	1.7	10	1.4	25	1.5
25-34 years	88	9.7	61	8.6	149	9.2
35-44 years	190	21.0	150	21.1	340	21.0
45-54 years	422	46.7	351	49.3	773	47.8
55 years or older	189	20.9	139	19.5	328	20.3
Missing	0	0.0	1	0.1	1	0.1
Chi-square test	*p = 0.79*					
Gender						
Female	701	77.5	535	75.1	1236	76.5
Male	203	22.5	177	24.9	380	23.5
Chi-square test	*p = 0.26*					
Race/Ethnicity						
White and non-Hispanic	196	21.7	175	24.6	371	23.0
Black or African American	393	43.5	272	38.2	665	41.2
Hispanic	287	31.7	241	33.8	528	32.7
Asian	14	1.5	10	1.4	24	1.5
Native Hawaiian or Pacific Islander	0	0.0	1	0.1	1	0.1
American Indian or Alaska Native	4	0.4	2	0.3	6	0.4
Some other race	9	1.0	9	1.3	18	1.1
Unknown	1	0.1	2	0.3	3	0.2
Chi-square test	*p = 0.36*					
Education						
8th grade or less	106	11.7	95	13.3	201	12.4
Some high school	160	17.7	136	19.1	296	18.3
High school graduate or GED	284	31.4	222	31.2	506	31.3
Some college or 2 year degree	280	31.0	195	27.4	475	29.4
4-year college graduate	54	6.0	39	5.5	93	5.8
More than 4-year college graduate	19	2.1	24	3.4	43	2.7
Missing or unknown	1	0.1	1	0.1	2	0.1
Chi-square test	*p = 0.35*					
Marital Status						
Married	219	24.2	188	26.4	407	25.2
Widowed	62	6.9	51	7.2	113	7.0
Divorced	278	30.8	206	28.9	484	30.0
Separated	117	12.9	80	11.2	197	12.2
Never married	227	25.1	186	26.1	413	25.6
Missing or unknown	1	0.1	1	0.1	2	0.1
Chi-square test	*p = 0.67*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

TABLE C.2

SELF-REPORTED HEALTH STATUS

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Physical Health Status						
Excellent	32	3.5	35	4.9	67	4.1
Very good	123	13.6	79	11.1	202	12.5
Good	340	37.6	280	39.3	620	38.4
Fair	340	37.6	262	36.8	602	37.3
Poor	68	7.5	53	7.4	121	7.5
Don't Know	0	0.0	3	0.4	3	0.2
Refused	1	0.1	0	0.0	1	0.1
Chi-square test	*p = 0.38*					
Mental Health Status						
Excellent	147	16.3	108	15.2	255	15.8
Very good	170	18.8	124	17.4	294	18.2
Good	361	39.9	307	43.1	668	41.3
Fair	187	20.7	141	19.8	328	20.3
Poor	36	4.0	30	4.2	66	4.1
Don't know	3	0.3	2	0.3	5	0.3
Chi-square test	*p = 0.75*					
Physical Health SF-12 Score*						
0 to less than 10	2	0.2	1	0.1	3	0.2
10 to less than 20	25	2.8	20	2.8	45	2.8
20 to less than 30	144	15.9	127	17.8	271	16.8
30 to less than 40	311	34.4	250	35.1	561	34.7
40 to less than 50	368	40.7	265	37.2	633	39.2
50 to less than 60	52	5.8	46	6.5	98	6.1
60 to less than 70	0	0.0	2	0.3	2	0.1
70 to less than 80	0	0.0	0	0.0	0	0.0
Missing	2	0.2	1	0.1	3	0.2
Chi-square test	*p = 0.52*					
Mental Health SF-12 Score						
0 to less than 10	0	0.0	0	0.0	0	0.0
10 to less than 20	16	1.8	13	1.8	29	1.8
20 to less than 30	49	5.4	52	7.3	101	6.3
30 to less than 40	139	15.4	85	11.9	224	13.9
40 to less than 50	231	25.6	172	24.2	403	24.9
50 to less than 60	254	28.1	221	31.0	475	29.4
60 to less than 70	208	23.0	164	23.0	372	23.0
70 to less than 80	6	0.7	5	0.7	11	0.7
Missing	1	0.1	0	0.0	1	0.1
Chi-square test	*p = 0.31*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

*SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the 8 subscales of physical and mental health, since raw scores cannot be directly compared (e.g., a raw score of 60 would be above the norm for vitality but far below the norm for "role emotional".) The 8 sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning.

TABLE C.3

DIAGNOSTIC CONDITIONS AND FUNCTIONAL STATUS

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Major Diagnostic Categories*						
Serious mental illness with substance abuse	31	3.4	24	3.4	55	3.4
Serious mental illness only	76	8.4	46	6.5	122	6.5
Mental health with substance abuse	81	9.0	77	10.8	158	10.8
Mental health only	320	35.4	241	33.8	561	33.8
Other behavioral with substance abuse	54	6.0	55	7.7	109	7.7
Other behavioral only	204	22.6	162	22.8	366	22.8
Substance abuse only	138	15.3	107	15.0	245	15.0
Chi-square test	*p = 0.48*					
Number of Conditions (per person)						
1 condition	8	0.9	3	0.4	11	0.4
2 conditions	10	1.1	7	1.0	17	1.0
3 conditions	9	1.0	7	1.0	16	1.0
4 conditions	12	1.3	15	2.1	27	2.1
5 conditions	821	90.8	645	90.6	1,466	90.6
6 conditions	0	0.0	1	0.1	1	0.1
Missing or Unknown	44	4.9	34	4.8	78	4.8
Chi-square test	*p = 0.54*					
Number of Limited Activites of Daily Living (per person) **						
No limited activities	539	59.6	409	57.4	948	58.7
1 limited activity	169	18.7	135	19.0	304	18.8
2 limited activities	97	10.7	78	11.0	175	10.8
3 limited activities	46	5.1	45	6.3	91	5.6
4 limited activities	20	2.2	18	2.5	38	2.4
5 limited activities	16	1.8	18	2.5	34	2.1
6 limited activities	12	1.3	8	1.1	20	1.2
7 limited activities	4	0.4	1	0.1	5	0.3
Missing	1	0.1	0	0.0	1	0.1
Chi-square test	*p = 0.78*					
Number of Limited Instrumental Activities of Daily Living (per person)						
No limited activities	460	50.9	356	50.0	816	50.5
1 limited activity	195	21.6	136	19.1	331	20.5
2 limited activities	99	11.0	88	12.4	187	11.6
3 limited activities	67	7.4	58	8.1	125	7.7
4 limited activities	37	4.1	38	5.3	75	4.6
5 limited activities	23	2.5	16	2.2	39	2.4
6 limited activities	14	1.5	9	1.3	23	1.4
7 limited activities	5	0.6	7	1.0	12	0.7
8 limited activities	3	0.3	4	0.6	7	0.4
Missing	1	0.1	0	0.0	1	0.1
Chi-square test	*p = 0.74*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE

*Major diagnostic categories were based on HCHD claims data and determined by the state's analysis of conditions from a maximum of 10 ICD-9 diagnostic codes per medical encounter over a 12 month period. This information is based on diagnoses made by providers and does not represent self-reported information

**Activities of daily living (ADL) include (1) bathing, (2) dressing, (3) eating, (4) getting out of bed, (5) walking, (6) going outside, and (7) using the toilet. Instrumental activities of daily living (IADL) include (1) preparing meals, (2) shopping, (3) paying bills, (4) using the telephone, (5) heavy housework, (6) light housework, (7) getting to places outside of walking distance, and (8) managing medications.

TABLE C.4

EMPLOYMENT CHARACTERISTICS

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Industry (first response)						
Natural resources and mining	5	0.6	8	1.1	13	0.8
Construction	48	5.3	36	5.1	84	5.2
Manufacturing	37	4.1	30	4.2	67	4.1
Trade, transportation, utilities	88	9.7	72	10.1	160	9.9
Information services	21	2.3	17	2.4	38	2.4
Financial services	16	1.8	10	1.4	26	1.6
Professional services	57	6.3	36	5.1	93	5.8
Education and health care	270	29.9	186	26.1	456	28.2
Leisure and hospitality	87	9.6	74	10.4	161	10.0
Other services	140	15.5	127	17.8	267	16.5
Public administration	17	1.9	10	1.4	27	1.7
All other industries	83	9.2	81	11.4	164	10.1
Unclassified	14	1.5	7	1.0	21	1.3
Missing, unknown, or Refused	21	2.3	18	2.5	39	2.4
Chi-square test	$p = 0.61$					
Number of Industries (per person)						
1 Industry	756	83.6	602	84.6	1,358	84.0
2 Industries	116	12.8	79	11.1	195	12.1
3+ Industries	13	1.4	15	2.1	28	1.7
Missing, unknown, or refused	19	2.1	16	2.2	35	2.2
Chi-square test	$p = 0.33$					
Job Type* (first response)						
Executive, management, administration	45	5.0	31	4.4	76	4.7
Professional	78	8.6	51	7.2	129	8.0
Technical support	28	3.1	16	2.2	44	2.7
Sales	94	10.4	76	10.7	170	10.5
Clerical and administration support	90	10.0	71	10.0	161	10.0
Service occupation	324	35.8	263	36.9	587	36.3
Technical production and crafts	34	3.8	36	5.1	70	4.3
Operator or laborer	154	17.0	123	17.3	277	17.1
Missing, unknown, or refused	57	6.3	45	6.3	102	6.3
Chi-square test	$p = 0.76$					
Number of Job Types						
1 job type	754	83.4	598	84.0	1,352	83.7
2 job types	90	10.0	62	8.7	152	9.4
3 or more job types	10	1.1	11	1.5	21	1.3
Missing, unknown, or refused	50	5.5	41	5.8	91	5.6
Chi-square test	$p = 0.49$					
Job Change Frequency						
No job changes	671	74.2	515	72.3	1186	73.4
1 job change	125	13.8	92	12.9	217	13.4
2 job changes	63	7.0	65	9.1	128	7.9

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
3 job changes	22	2.4	26	3.7	48	3.0
4 or more job changes	20	2.2	10	1.4	30	1.9
Missing, unknown, or refused	3	0.3	4	0.6	7	0.4
Chi-square test	*p = 0.44*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

*Texas did not use the same classification system for job type categories as Kansas, Hawaii, and Minnesota. However, the industry response categories are the same across all four states.

TABLE C.5

SELF-REPORTED USE OF HEALTH CARE SERVICES

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Routine Primary Care Visits						
0 visits	90	10.0	78	11.0	168	23.6
1-2 visits	288	31.9	216	30.3	504	70.8
3-4 visits	271	30.0	213	29.9	484	68.0
5-10 visits	170	18.8	157	22.1	327	45.9
11-20 visits	47	5.2	24	3.4	71	10.0
>20 visits	22	2.4	12	1.7	34	4.8
Unknown or missing	16	1.8	12	1.7	28	3.9
Chi-square test	*p = 0.23*					
Vision or Dental Visits						
0 visits	431	47.7	325	45.6	756	46.8
1-2 visits	362	40.0	291	40.9	653	40.4
3-4 visits	71	7.9	72	10.1	143	8.8
5-10 visits	31	3.4	20	2.8	51	3.2
11-20 visits	4	0.4	4	0.6	8	0.5
>20 visits	1	0.1	0	0.0	1	0.1
Unknown or missing	4	0.4	0	0.0	4	0.2
Chi-square test	*p = 0.54*					
Surgery or Treatments						
0 visits	634	70.1	492	69.1	1,126	69.7
1-2 visits	162	17.9	132	18.5	294	18.2
3-4 visits	57	6.3	40	5.6	97	6.0
5-10 visits	37	4.1	32	4.5	69	4.3
11-20 visits	9	1.0	10	1.4	19	1.2
>20 visits	4	0.4	3	0.4	7	0.4
Unknown or missing	1	0.1	3	0.4	4	0.2
Chi-square test	*p = 0.95*					
Mental Health Visits						
0 visits	711	78.7	558	78.4	1,269	78.5
1-2 visits	88	9.7	66	9.3	154	9.5
3-4 visits	41	4.5	36	5.1	77	4.8
5-10 visits	42	4.6	31	4.4	73	4.5
11-20 visits	11	1.2	9	1.3	20	1.2
>20 visits	10	1.1	9	1.3	19	1.2
Unknown or missing	1	0.1	3	0.4	4	0.2
Chi-square test	*p = 0.99*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

Note: The number of visits is a self-reported measure based on the participant's own recollection of visits in the past year. This information is not based on the actual number of visits based on claims data.

TABLE C.6

SELF-REPORTED INCOME AND HOURS WORKED

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
Family Income (in past year)						
Less than $10,000	152	16.8	134	18.8	286	17.7
$10,000 to $19,999	346	38.3	253	35.5	599	37.1
$20,000 to $29,999	147	16.3	120	16.9	267	16.5
$30,000 to $39,999	53	5.9	48	6.7	101	6.3
$40,000 to $74,999	27	3.0	19	2.7	46	2.8
$75,000 or more	4	0.4	5	0.7	9	0.6
Unknown	157	17.4	125	17.6	282	17.5
Refused or missing	18	2.0	8	1.1	26	1.6
Chi-square test	*p = 0.72*					
Personal Earnings (in past year)						
Less than $10,000	501	55.4	384	53.9	885	54.8
$10,000 to $19,999	164	18.1	115	16.2	279	17.3
$20,000 to $29,999	59	6.5	53	7.4	112	6.9
$30,000 to $39,999	21	2.3	11	1.5	32	2.0
$40,000 to $74,999	6	0.7	6	0.8	12	0.7
$75,000 or more	0	0.0	0	0.0	0	0.0
Refused or missing	153	16.9	143	20.1	296	18.3
Chi-square test	*p = 0.65*					
Hours Worked Monthly						
Less than 40 hours	85	9.4	65	9.1	150	9.3
40 to 79	116	12.8	114	16.0	230	14.2
80 to 119	163	18.0	106	14.9	269	16.6
120 to 159	227	25.1	178	25.0	405	25.1
160+ hours	279	30.9	221	31.0	500	30.9
Unknown	32	3.5	27	3.8	59	3.7
Refused or missing	2	0.2	1	0.1	3	0.2
Chi-square test	*p = 0.38*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

TABLE C.7

PUBLIC PROGRAM PARTICIPATION (IN PAST TWO YEARS)

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
TANF						
Yes	2	0.2	2	0.3	4	0.2
No	902	99.8	710	99.7	1,612	99.8
Chi-square test	*p = 0.81*					
Food Stamps						
Yes	356	39.4	261	36.7	617	38.2
No	548	60.6	451	63.3	999	61.8
Chi-square test	*p = 0.26*					
Public Housing						
Yes	86	9.5	57	8.0	143	8.8
No	815	90.2	652	91.6	1,467	90.8
Missing	3	0.3	3	0.3	6	0.4
Chi-square test	*p = 0.29*					
Medicaid						
Yes	6	0.7	4	0.6	10	0.6
No	898	99.3	708	99.4	1,606	99.4
Chi-square test	*p = 0.80*					
Vocational Rehabilitation						
Yes	18	2.0	25	3.5	43	2.7
No	886	98.0	687	96.5	1,573	97.3
Chi-square test	*p = 0.06*					

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008.

TABLE C.8

DMIE WITHDRAWALS (AS OF JULY 2008)

	Treatment Group (n=904)		Control Group (n=712)		Texas Total (n=1,616)	
	N	Percent	N	Percent	N	Percent
DMIE Withdrawals						
Stopped	3	0.3	0	0.0	3	0.2
Did not stop	901	99.7	712	100.0	1,613	99.8

Source: Uniform Data Set (UDS) submitted by Texas in July 2008. Baseline survey data are for all Texas DMIE participants who first enrolled between April 2007 and June 2008

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APPENDIX D

HAWAII UDS TABLES

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APPENDIX D

HAWAII UDS TABLES

TABLE D.1

DEMOGRAPHIC CHARACTERISTICS

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Age at Enrollment						
Less than 25 years	5	3.9	0	0.0	5	2.6
25-34 years	11	8.6	6	9.7	17	8.9
35-44 years	25	19.5	11	17.7	36	18.9
45-54 years	55	43.0	18	29.0	93	38.4
55 years or older	32	25.0	27	43.5	59	31.1
Chi-square test	*p = 0.04*					
Gender						
Female	84	65.6	35	56.5	119	62.6
Male	44	34.4	27	43.5	71	37.4
Chi-square test	*p = 0.22*					
Race/Ethnicity						
White and non-Hispanic	25	19.5	8	12.9	33	17.4
Black or African American	2	1.6	1	1.6	3	1.6
Hispanic or Latino	9	7.0	6	9.7	15	7.9
Asian	46	35.9	21	33.9	67	35.3
American Indian or Alaska Native	1	0.8	0	0.0	1	0.5
Native Hawaiian or Pacific Islander	8	6.3	6	9.7	14	7.4
Some other race	0	0.0	1	1.6	1	0.5
More than one race	37	28.9	19	30.6	56	29.5
Chi-square test	*p = 0.69*					
Education						
8th grade or less	0	0.0	0	0.0	0	0.0
Some high school	0	0.0	0	0.0	0	0.0
High school graduate or GED	11	8.6	12	19.4	23	12.1
Some college or 2 year degree	53	41.4	18	29.0	71	37.4
4-year college graduate	27	21.1	17	27.4	44	23.2
More than 4-year college graduate	37	28.9	15	24.2	52	27.4
Chi-square test	*p = 0.08*					
Marital Status						
Married	68	53.1	32	51.6	100	52.6
Widowed	1	0.8	1	1.6	2	1.1
Divorced	21	16.4	15	24.2	36	18.9
Separated	1	0.8	0	0.0	1	0.5
Never married	37	28.9	14	22.6	51	26.8
Other response	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.60*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

TABLE D.2

SELF-REPORTED HEALTH STATUS

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Physical Health Status						
Excellent	4	3.1	1	1.6	5	2.6
Very good	15	11.7	8	12.9	23	12.1
Good	35	27.3	26	41.9	61	32.1
Fair	60	46.9	20	32.3	80	42.1
Poor	14	10.9	7	11.3	21	11.1
Chi-square test	*p = 0.26*					
Mental Health Status						
Excellent	17	13.3	4	6.5	21	11.1
Very good	30	23.4	23	37.1	53	27.9
Good	57	44.5	17	27.4	74	38.9
Fair	22	17.2	15	24.2	37	19.5
Poor	2	1.6	3	4.8	5	2.6
Chi-square test	*p = 0.03*					
Physical Health SF-12 Score*						
0 to less than 10	0	0.0	0	0.0	0	0.0
10 to less than 20	0	0.0	0	0.0	0	0.0
20 to less than 30	8	6.3	5	8.1	13	6.8
30 to less than 40	20	15.6	11	17.7	31	16.3
40 to less than 50	47	36.7	24	38.7	71	37.4
50 to less than 60	51	39.8	18	29.0	69	36.3
60 to less than 70	2	1.6	4	6.5	6	3.2
70 to less than 80	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.30*					
Mental Health SF-12 Score						
0 to less than 10	0	0.0	0	0.0	0	0.0
10 to less than 20	0	0.0	1	1.6	1	0.5
20 to less than 30	4	3.1	6	9.7	10	5.3
30 to less than 40	25	19.5	8	12.9	33	17.4
40 to less than 50	46	35.9	15	24.2	61	32.1
50 to less than 60	43	33.6	26	41.9	69	36.3
60 to less than 70	10	7.8	6	9.7	16	8.4
70 to less than 80	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.10*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

*SF-12 scores are population norm-based at 50 (nationwide average). Every 10 points is a standard deviation. Lower scores indicate worse functioning or status. Norm-based scores make it possible to cross-calibrate raw scores for the 8 subscales of physical and mental health, since raw scores cannot be directly compared (e.g., a raw score of 60 would be above the norm for vitality but far below the norm for "role emotional".) The 8 sub-scales are: (1) physical functioning, (2) role physical, (3) bodily pain, (4) role emotional, (5) mental health, (6) general health, (7) vitality, and (8) social functioning.

TABLE D.3

DIAGNOSTIC CONDITIONS AND FUNCTIONAL STATUS

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Diabetes Type						
Type 1 (diabetes insipidus)	16	12.5	7	11.3	23	12.1
Type 2 (diabetes mellitus)	109	85.2	54	87.1	163	85.8
Other (pre-diabetes)	3	2.3	1	1.6	4	2.1
Chi-square test	*p = 0.92*					
Number of Conditions (per person)						
1 condition	128	100.0	62	100.0	190	100.0
Chi-square test	*Not applicable*					
Number of Limited Activities of Daily Living (per person)						
No limited activities	74	57.8	33	53.2	107	56.3
1 limited activity	17	13.3	12	19.4	29	15.3
2 limited activities	22	17.2	8	12.9	30	15.8
3 limited activities	0	0.0	4	6.5	4	2.1
4 limited activities	8	6.3	2	3.2	10	5.3
5 limited activities	2	1.6	1	1.6	3	1.6
6 limited activities	3	2.3	1	1.6	4	2.1
7 limited activities	2	1.6	1	1.6	3	1.6
Chi-square test	*p = 0.15*					
Number of Limited Instrumental Activities of Daily Living (per person)						
No limited activities	61	47.7	28	45.2	89	46.8
1 limited activity	23	18.0	11	17.7	34	17.9
2 limited activities	17	13.3	10	16.1	27	14.2
3 limited activities	14	10.9	8	12.9	22	11.6
4 limited activities	6	4.7	2	3.2	8	4.2
5 limited activities	4	3.1	0	0.0	4	2.1
6 limited activities	1	0.8	2	3.2	3	1.6
7 limited activities	0	0.0	1	1.6	1	0.5
8 limited activities	2	1.6	0	0.0	2	1.1
Chi-square test	*p = 0.52*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

TABLE D.4

EMPLOYMENT CHARACTERISTICS

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Industry (first response)						
Natural resources and mining	1	0.8	0	0.0	1	0.5
Construction	2	1.6	3	4.8	5	2.6
Manufacturing	1	0.8	1	1.6	2	1.1
Trade, transportation, utilities	18	14.1	12	19.4	30	15.8
Information services	0	0.0	1	1.6	1	0.5
Financial services	7	5.5	1	1.6	8	4.2
Professional services	17	13.3	8	12.9	25	13.2
Education and health care	51	39.8	22	35.5	73	38.4
Leisure and hospitality	8	6.3	2	3.2	10	5.3
Other services	20	15.6	12	19.4	32	16.8
Public administration	3	2.3	0	0.0	3	1.6
Chi-square test	*p = 0.49*					
Number of Industries (per person)						
1 industry	118	92.2	55	88.7	173	91.1
2 industries	9	7.0	7	11.3	16	8.4
3+ industries	1	0.8	0	0.0	1	0.5
Chi-square test	*p = 0.49*					
Job Type (first response)						
Architects, engineers, scientists, educators	0	0.0	0	0.0	0	0.0
Professional, technical, or managerial jobs	65	50.8	31	50.0	96	50.5
Clerical and sales occupations	25	19.5	14	22.6	39	20.5
Service occupations	16	12.5	7	11.3	23	12.1
Agriculture, fishery, or forestry	0	0.0	0	0.0	0	0.0
Processing occupations	2	1.6	0	0.0	2	1.1
Machine trades occupations	1	0.8	0	0.0	1	0.5
Benchwork occupations	1	0.8	0	0.0	1	0.5
Structural work occupations	0	0.0	1	1.6	1	0.5
Miscellaneous occupations	18	14.1	9	14.5	27	14.2
Chi-square test	*p = 0.75*					
Number of Job Types						
1 job type	124	96.9	60	96.8	184	96.8
2 job types	4	3.1	2	3.2	6	3.2
Chi-square test	*p = 0.97*					
Job Change Frequency						
No job changes	107	83.6	53	85.5	160	84.2
1 job change	15	11.7	7	11.3	22	11.6
2 job changes	2	1.6	1	1.6	3	1.6
3 job changes	2	1.6	1	1.6	3	1.6
4 or more job changes	2	1.6	0	0.0	2	1.1
Chi-square test	*p = 0.96*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

TABLE D.5

SELF-REPORTED USE OF HEALTH CARE SERVICES

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Routine Primary Care Visits						
0 visits	10	7.8	4	6.5	14	7.4
1-2 visits	37	28.9	19	30.6	56	29.5
3-4 visits	31	24.2	15	24.2	46	24.2
5-10 visits	37	28.9	19	30.6	56	29.5
11-20 visits	11	8.6	5	8.1	16	8.4
>20 visits	2	1.6	0	0.0	2	1.1
Chi-square test	*p = 0.95*					
Vision or Dental Visits						
0 visits	20	15.6	12	19.4	32	16.8
1-2 visits	70	54.7	33	53.2	103	54.2
3-4 visits	33	25.8	10	16.1	43	22.6
5-10 visits	5	3.9	6	9.7	11	5.8
11-20 visits	0	0.0	1	1.6	1	0.5
>20 visits	0	0.0	0	0.0	0	0.0
Chi-square test	*p = 0.16*					
Surgery or Treatments						
0 visits	78	60.9	31	50.0	109	57.4
1-2 visits	30	23.4	16	25.8	46	24.2
3-4 visits	11	8.6	5	8.1	16	8.4
5-10 visits	6	4.7	8	12.9	14	7.4
11-20 visits	1	0.8	1	1.6	2	1.1
>20 visits	2	1.6	1	1.6	3	1.6
Chi-square test	*p = 0.41*					
Mental Health Visits						
0 visits	113	88.3	50	80.6	163	85.8
1-2 visits	3	2.3	2	3.2	5	2.6
3-4 visits	2	1.6	1	1.6	3	1.6
5-10 visits	7	5.5	4	6.5	11	5.8
11-20 visits	2	1.6	3	4.8	5	2.6
>20 visits	1	0.8	2	3.2	3	1.6
Chi-square test	*p = 0.58*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

Note: The number of visits is a self-reported measure based on the participant's own recollection of visits in the past year. This information is NOT based on the actual number of visits based on claims data.

TABLE D.6

SELF-REPORTED INCOME AND HOURS WORKED

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
Family Income (in past year)						
$0 only	0	0.0	0	0.0	0	0.0
$1 to $9,999	3	2.3	1	1.6	4	2.1
$10,000 to $19,999	4	3.1	1	1.6	5	2.6
$20,000 to $29,999	14	10.9	9	14.5	23	12.1
$30,000 to $39,999	16	12.5	10	16.1	26	13.7
$40,000 to $74,999	45	35.2	24	38.7	69	36.3
$75,000 or more	46	35.9	17	27.4	63	33.2
Chi-square test	*p = 0.80*					
Personal Earnings (in past year) *						
Less than $10,000	9	7.0	3	4.8	12	6.3
$10,000 to $19,999	11	8.6	3	4.8	14	7.4
$20,000 to $29,999	16	12.5	10	16.1	26	13.7
$30,000 to $39,999	18	14.1	12	19.4	30	15.8
$40,000 to $74,999	43	33.6	15	24.2	58	30.5
$75,000 or more	11	8.6	10	16.1	21	11.1
Refused or missing	20	15.6	9	14.5	29	15.3
Chi-square test	*p = 0.35*					
Hours Worked Monthly						
Less than 40 hours	2	1.6	4	6.4	6	3.2
40 to 79	3	2.3	2	3.2	5	2.6
80 to 119	11	8.6	7	11.3	18	9.5
120 to 159	38	29.7	19	30.6	57	30.0
160+ hours (full-time)	74	57.8	30	48.4	104	54.7
Chi-square test	*p = 0.46*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

*Personal income based on unemployment insurance (UI) earnings data summed across four quarters. UI data are based on wage data submitted by employers to the state for the calculation of unemployment taxes. Self-employment income and the salaries of federal government employees (including miliary personnel) are excluded from the reporting requirement.

TABLE D.7

PUBLIC PROGRAM PARTICIPATION (IN PAST 2 YEARS)

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
TANF						
Yes	2	1.6	0	0.0	2	1.1
No	126	98.4	62	100.0	188	98.9
Chi-square test	*p = 0.32*					
Food Stamps						
Yes	7	5.5	3	4.8	10	5.3
No	121	94.5	59	95.2	180	94.7
Chi-square test	*p = 0.86*					
Public Housing						
Yes	3	2.3	1	1.6	4	2.1
No	125	97.7	61	98.4	186	97.9
Chi-square test	*p = 0.74*					
Medicaid						
Yes	11	8.6	4	6.5	15	7.9
No	117	91.4	58	93.5	175	92.1
Chi-square test	*p = 0.61*					
Vocational Rehabilitation						
Yes	2	1.6	3	4.8	5	2.6
No	126	98.4	59	95.2	185	97.4
Chi-square test	*p = 0.19*					

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

Note: All public program participation variables are based on self-reported information from DMIE participants at the time of enrollment. This information is not based on state administrative records.

TABLE D.8

DMIE WITHDRAWALS (AS OF OCTOBER 2008)

	Treatment Group (n=128)		Control Group (n=62)		Hawaii Total (n=190)	
	N	Percent	N	Percent	N	Percent
DMIE Withdrawals						
Moved out of area/out of state	2	1.6	0	0.0	2	1.1
Died	0	0.0	0	0.0	0	0.0
Refuses to participate in DMIE	1	0.8	0	0.0	1	0.5
Other *	4	3.1	0	0.0	4	2.1
Missing (did not stop)	121	94.5	62	100.0	183	96.3

Source: Uniform Data Set (UDS) submitted Hawaii in October 2008. Baseline survey data are for all Hawaii DMIE participants who first enrolled between April and September 2008.

* Other reasons included (1) asked to quit, (2) not enough time, and (3) too busy.

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