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by Barbara A. Smith and Kenneth A. Couch

In 1995, the Social Security Administration (SSA) began mailing annual earnings and benefit statements to workers aged 60 or older. By 2000, SSA was sending these statements to all workers aged 25 or older. It was the largest customized mailing ever undertaken by a federal agency. This article describes the development and implementation of the *Social Security Statement*; the changes in its distribution, content, and appearance over time; its relationship to SSA's strategic plans; and the surveys SSA commissioned to measure public awareness and knowledge of Social Security.

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by David S. Salkever, Brent Gibbons, William D. Frey, Roline Milfort, Julie Bollmer, Thomas W. Hale, Robert E. Drake, and Howard H. Goldman

The recent development of evidence-based behavioral health and vocational rehabilitation interventions for persons with serious psychiatric impairments created the impetus for exploring the efficacy of those interventions if they were widely available to Social Security Disability Insurance beneficiaries. As a first step in this endeavor—a multisite randomized trial for providing interventions to beneficiaries with psychiatric impairments—the Mental Health Treatment Study was implemented. The authors report on the subject recruitment patterns for the study, including assessment of take-up rates, and on the statistical analysis of the relationships between beneficiaries' characteristics and the probability of enrollment. Results indicated that take-up rates among potential MHTS subjects with confirmed telephone contacts met or exceeded rates for previous Social Security Administration randomized trials, and beneficiaries with administrative records of recent vocational or labor-market activity were most likely to enroll. The authors discuss implications of their analyses on recruitment in similar interventions in the future.

THE SOCIAL SECURITY STATEMENT: BACKGROUND, IMPLEMENTATION, AND RECENT DEVELOPMENTS

by Barbara A. Smith and Kenneth A. Couch*

This article provides the first comprehensive description of the substantial effort and resources involved in developing and implementing the annual earnings and benefit statement that the Social Security Administration (SSA) began mailing in 2000 to all workers aged 25 or older. Details about the statement's background and implementation should be useful to researchers studying the statement's effect on workers' retirement decisions and knowledge of the program. The article also describes the suspension of the printed version of the statement in March 2011 to conserve agency funds, the launch of the online statement in May 2012, various efforts to reinstate statement mailings, and the decision to resume mailings to workers of selected ages beginning in September 2014. The article concludes by describing changes in the statement's appearance and content, the statement's relationship to SSA's strategic plans, and the surveys SSA commissioned to measure public awareness and knowledge of Social Security.

Introduction

In 1995, the Social Security Administration (SSA) began mailing annual earnings and benefit statements to workers in selected age groups. The purpose of these statements is threefold: to inform workers about their Social Security benefits, to help workers plan for their financial future, and to ensure that workers' earnings records are accurate. Initially, the statement was known as the *Personal Earnings and Benefit Estimate Statement (PEBES)* and was sent only to workers nearing retirement. By 2000, it was renamed the *Social Security Statement* (or, simply, the *Statement*) and sent to all workers aged 25 or older.¹ It was the largest customized mailing ever undertaken by a federal agency (SSA n.d. a).

Although the statement represented a historic effort and required substantial resources and manpower, no comprehensive description of its development and implementation exists. This article provides such a description (along with the statement's implementation schedule), which may be useful to researchers studying the statement's effect on workers' retirement decisions and knowledge of the program.

The article first describes SSA's initiatives to inform individuals about their earnings and benefits before Congress mandated an automatically issued statement. It then presents the statement's implementation schedule, as included in the authorizing legislation and as modified by SSA. It describes how the agency phased in automatic mailings and how it responded to budgetary constraints by suspending the mailing of the printed version of the statement in 2011 and launching an online version in 2012.² It also discusses the agency's decision to resume mailing the *Statement* to workers of selected ages in 2014. The article next describes how the statement's content and appearance have changed, and how the statement relates to SSA's strategic plans. It concludes

Selected Abbreviations

OBRA	Omnibus Budget Reconciliation Act
PEBES	<i>Personal Earnings and Benefit Estimate Statement</i>
SSA	Social Security Administration

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by highlighting findings of the surveys SSA commissioned to measure public knowledge and understanding of Social Security and of the *Statement* itself. Appendices present a chronology summarizing the statement's history along with samples of the *Statement* and accompanying inserts.

Background

Although the statement brought earnings and benefits information directly to workers, access to earnings records had been available to workers since soon after the program began in 1935. The Social Security Act Amendments of 1939 stated that the Social Security Board (precursor to SSA) “shall establish and maintain records of the amounts of wages paid to each individual...and, upon request, shall inform any individual...of the amounts of wages of such individual and the periods of payments shown by such records at the time of such request.”³ On October 8, 1940, the Social Security Board established regulations governing, among other things, the revision of wage records by individuals (SSA n.d. c).⁴

As a result, individuals were able to review and, where necessary, initiate corrections to their earnings records. Individuals desiring to review their earnings records would visit a local field office and fill out the postcard-sized Wage Statement Request form, providing information including Social Security number and date of birth. Upon receiving the form, SSA would mail a copy of the worker's earnings history to the address listed on the postcard. If there were any discrepancies between the SSA earnings record and the worker's personal records, the worker could visit the local SSA field office with the appropriate information—such as W-2 forms, old pay stubs, or other documentation from an employer—to correct the errors (SSAB 2009).

From the 1960s to the early 1980s, SSA considered, and in some cases implemented, programs to provide more information to workers about their benefits. In May 1962, SSA initiated the “leads” program, which involved sending letters to older insured workers who had not yet claimed benefits, to inform them of their entitlement to benefits (SSA n.d. d). Throughout the 1970s and into the early 1980s, SSA considered initiatives that would—individually or in various combinations—provide benefit estimates as well as earnings statements, provide statements to all workers instead of only those approaching retirement age, and send statements automatically instead of

only upon request (SSA 1994). However, the agency was concerned about the feasibility of such initiatives, which would break with the SSA tradition of providing benefit estimates only to those approaching benefit eligibility, and of doing so in the individualized setting of a Social Security office visit. Additionally, estimated future benefit amounts for younger workers could vary significantly from the actual amounts they would eventually receive. Finally, at that time, SSA did not have addresses for workers currently contributing payroll or self-employment taxes, making automatic mailings impossible. In the early 1980s, SSA sent benefit estimates to workers who requested them. However, because this service was not widely publicized, less than 2 percent of payroll taxpaying workers requested a benefit statement (SSAB 2009).

Meanwhile, interest grew outside the agency in having SSA provide workers with information about their Social Security benefits. For example, the National Commission on Social Security, appointed by President Carter pursuant to the 1977 Social Security Amendments, recommended in its 1981 final report that SSA provide Social Security benefit “illustrations” to workers requesting them.⁵ The report added that distributing these benefit illustrations automatically to all covered workers would be desirable (SSA 1994).⁶ On Capitol Hill, Senator Daniel Patrick Moynihan (D-NY) began suggesting in the 1980s that SSA send workers information on the Social Security benefits they could expect to receive.⁷

In 1988, interest converged from both inside and outside SSA in providing workers with information on their benefits. On August 4th, Senator Moynihan introduced S. 2684, a bill mandating that SSA issue earnings and benefit statements. That same day, Commissioner Dorcas R. Hardy announced that SSA would begin providing the *PEBES* on request.⁸ The *PEBES* provided workers with their earnings history; the amount of Social Security taxes they paid; estimates of the benefits they would receive at the early retirement age (62), the full retirement age, and age 70; estimates of disability and survivors benefits; and descriptions of maximum earnings subject to Social Security taxes, Social Security tax rates, Social Security credits, credits for military and railroad service, and how benefit estimates were calculated.

No further action was taken on S. 2684. In January and June of 1989, Senator Moynihan again introduced bills mandating that SSA issue earnings and benefit

statements to workers. Although no action was taken on these bills, language from the June bill was inserted into the Omnibus Budget and Reconciliation Act (OBRA) of 1989, presumably by Senator Moynihan.⁹

Senator Moynihan expressed the rationale for this mandate when he introduced S. 212 in January 1989: “All of us pay into Social Security but rarely, until we become beneficiaries, do we ever hear from Social Security...every month, in every paycheck, we see money withheld for Social Security, but we hear nary a word from the Social Security Administration. Let us take this simple step [sending statements] to reassure Americans that Social Security will be there for them” (U.S. Congress 1989, S620). Inserting language from Senator Moynihan’s bill into OBRA 1989 ensured that workers would receive regular information on their Social Security benefits.

OBRA 1989 amended the Social Security Act to require SSA to issue what the legislation referred to as Social Security account statements according to the following schedule:

- Phase 1. Beginning no later than October 1, 1990, statements would be sent on request to eligible individuals.¹⁰
- Phase 2. No later than September 30, 1995, statements would be sent automatically to each eligible individual who had attained age 60 by October 1, 1994, who was not receiving benefits under Title II, and for whom a current mailing address could be determined.¹¹ In fiscal years 1995 through 1999, statements would be sent to each individual meeting those criteria and attaining age 60 during the year.
- Phase 3. Beginning no later than October 1, 1999, biennial statements would be sent automatically to eligible individuals who were not receiving benefits under Title II and for whom a mailing address could be determined. For individuals younger than age 50, a general description of benefits, but no actual benefit estimates, would be required.¹²

OBRA 1989 also specified that these statements contain the same information provided in the on-request *PEBES*: the worker’s earnings history; estimated Social Security and Medicare taxes paid; estimates of potential retirement, disability, survivors, and auxiliary benefits payable; plus a description of benefits payable under Medicare. In addition, the legislation required SSA to take “such steps as are necessary to assure that eligible individuals are informed of the availability of the statement.”

Statement Phase-in

When OBRA 1989 was passed, SSA was already implementing Phase 1. As noted earlier, SSA had begun providing *PEBES*, on request, in August 1988. Implementing Phases 2 and 3, however, required more planning and preparation.

Based on the language in the legislation, SSA estimated that the following number of statements would be mailed out during Phases 2 and 3 (Enoff n.d.):

Fiscal year	Number to be issued	Recipient ages
1995	6.7 million	60 or older
1996	1.6 million	60
1997	1.7 million	60
1998	1.8 million	60
1999	1.8 million	60
2000	123.0 million	25 or older
2001 and later	123+ million each year	25 or older

According to the legislation, mailings in fiscal year 1995 would be sent to all individuals aged 60 or older and not yet receiving benefits. In each fiscal year 1996 through 1999, mailings would be sent only to those individuals attaining age 60. In fiscal year 2000, mailings would include initial statements to individuals between ages 25 and 60 and second (or first annual) statements to those individuals older than 60 who had received initial statements in fiscal years 1995 through 1999. In fiscal year 2001 and subsequent years, mailings would include annual statements to individuals older than 25 and initial statements to individuals reaching age 25 in that year. SSA estimated that for several years after fiscal year 2001, the number of new 25-year-olds would exceed the number of older individuals becoming beneficiaries and no longer requiring statements. Thus, SSA projected the number of *PEBES* recipients would increase during those years (Enoff n.d.).

After reviewing OBRA 1989, SSA modified several specifications, going beyond the legislative requirements. For example, SSA decided to provide projected benefit estimates to all eligible workers and not just to those aged 50 or older (SSAB 2009). SSA also decided to modify the mailing schedule so that statements would be sent to increasingly younger age groups during fiscal years 1996–1999.¹³ Thus, the number of annual *PEBES* mailings increased gradually rather than

jumping from approximately 1.8 million for fiscal year 1999 to 123 million in fiscal year 2000 (SSA n.d. a).

Sending out more than 123 million statements is an enormous undertaking. Understandably, SSA was concerned about the resources required to send the statements automatically. In addition to the mechanisms involved with the actual mailing, SSA needed to estimate the number of requests for information or for corrections to earnings errors that might result from these mailings so that it could set up procedures to handle them. SSA also needed to arrange with the Internal Revenue Service and other agencies to get the required mailing addresses.

After many internal discussions, SSA decided to phase in the annual automatic *PEBES* by expanding and enhancing the existing procedure for producing the on-request *PEBES*. SSA would identify those individuals eligible to receive an automatic statement using its Social Security number database. The agency would procure addresses for these eligible individuals through reimbursable agreements with the Internal Revenue Service and the taxation agencies in Puerto Rico, Guam, and the U.S. Virgin Islands. SSA, using in-house system processing, would then produce information on individuals' earnings and calculate both the credits of coverage and the full range of benefit estimates. These data would be provided to a commercial vendor, who would print and mail the statements (Enoff n.d.).

A major concern for SSA was the potentially large number of general inquiries and earnings-record correction requests once *PEBES* was sent annually to all eligible recipients aged 25 or older. Responding to these inquiries and requests is very labor-intensive. Based on a preliminary survey, SSA estimated that for initial *PEBES* mailings in fiscal year 1995, the agency could expect 174,870 inquiries (2.6 percent of recipients) and 150,750 earnings-correction requests (2.3 percent). SSA estimated that handling this number of contacts would take about 900 work-years (Enoff n.d.).¹⁴

In 1994, SSA test-mailed about 600,000 *PEBESs* nationwide in order to analyze the number and types of inquiries received and plan for future *PEBES*-related workloads (Chater 1994). About 16,000 recipients also received a questionnaire asking for their reaction to receiving the *PEBES* form, and to its language and design. SSA also commissioned a series of focus groups for additional public input on *PEBES* language and design.

The transition from on-demand to automatic annual earnings and benefit statements required reorganization within SSA. When *PEBES* was sent only on request, the Office of Earnings Operations (OEO) corrected all earnings errors. With the move to automatically issued statements, error-correction capability expanded to other SSA components, including field offices, program service centers, and teleservice centers (SSA n.d. a). Similarly, when *PEBES* was only sent on request, inquiries were handled through the OEO toll-free number. However, OEO did not have the capacity to handle the volume of inquiries expected once the *PEBES* was issued automatically. Thus, SSA decided to use its National 800 Number Network to handle *PEBES* inquiries.¹⁵

SSA began automatic issuance of earnings and benefit statements in 1995, using the *PEBES* format.¹⁶ SSA redesigned the form and renamed it the *Social Security Statement* in October 1999. Shown below is the final implementation schedule.

Fiscal year	Number issued ^a	Recipient ages
1995	7.0 million	60 or older
1996	5.5 million	58–60
1997	12.4 million	53–58
1998	20.7 million	47–53
1999	26.6 million	40–47
2000	134.7 million	25 or older
2001	135.6 million	25 or older
2002	137.9 million	25 or older

a. For fiscal years 1989 through 1995, *PEBESs* were only sent on request, and SSA received about 3.5 million requests per year. This request volume continued through fiscal year 2000, when SSA began sending the *Social Security Statement* to all workers aged 25 or older. Requests declined to 1 million in fiscal year 2001 and to 780,000 in fiscal year 2002.

SSA staggered the *Social Security Statement* mailings throughout the year. In fiscal year 2010, SSA sent over 151 million *Statements*, which equates to over 12.5 million mailed every month, or about 415,000 each day.¹⁷ Workers received their *Statements* about 3 months before their birthday (SSA n.d. a).

SSA also sent special age-targeted inserts with the *Statements*. Beginning in October 2000, the first such insert, *Thinking of retiring?*, was sent to individuals aged 55 or older. It contained information about the effects of claiming Social Security benefits at age 62, at full retirement age, or at age 70, and the effects of

working after claiming benefits—and the implications of each option for the beneficiary and for the beneficiary’s survivors. The insert also contained information on applying for Medicare, and listed websites and phone numbers providing more information about Social Security benefits, retirement planning, investment options, and housing and health issues. Appendix B presents a facsimile insert.

In February 2009, SSA began sending an insert to workers aged 25 to 35, *What young workers should know about Social Security and saving* (see Appendix C). This insert described the future finances of Social Security, the nonretirement benefits provided by Social Security (such as disability and survivor benefits), and the importance of saving to supplement Social Security benefits. It also listed websites providing information about saving and investing.

Recent Developments

On March 29, 2011, after several years of increasing budget constraints, SSA suspended *Statement* mailings in order to conserve funds.¹⁸ Shortly thereafter, the agency established an internal workgroup to develop an online version of the *Statement* that would be easily and securely accessible to the public.

The Online Statement Workgroup included representatives from each of the relevant offices in SSA. Operating under a tight deadline, the workgroup developed the online *Statement*, created a robust authentication process to prevent unauthorized access to workers’ personal information, and tested and validated both the *Statement* and the authentication process. For the authentication process, the agency reached out to privacy experts and advocacy groups for input on the best available methods to protect personal information in an electronic environment.

On May 1, 2012, SSA launched a secure and easy-to-use online version of the *Statement* to provide workers with immediate access to their earnings records, estimated benefits, and related information. Whereas the print version was mailed only to eligible workers aged 25 or older, the online *Statement* was and continues to be available to all individuals aged 18 or older.¹⁹ The online *Statement* includes links to important information, such as an insert for workers aged 55 or older, and to other online services and tools. In the first week after its launch, more than 130,000 individuals visited the SSA website and viewed their online *Statements* (SSA 2012d). Online *Statements* had been viewed by 1 million visitors in less than two

months (SSA 2012a) and by nearly 3 million visitors as of the end of September 2012.²⁰ In fiscal year 2013, online *Statements* were viewed 16.9 million times, of which 7.1 million were unique visits—meaning that, on average, each visitor viewed his or her *Statement* about 2.4 times during the year. In October 2013, 1.7 million visitors viewed their online *Statements*; assuming similar usage throughout fiscal year 2014, SSA projects that online *Statements* will total more than 20 million visitors.

The status of the printed *Statement* also changed several times during 2012. SSA resumed targeted mailings on February 15, 2012, sending printed *Statements* to approximately 11.4 million eligible workers aged 60 or older (SSA 2012b). Then, on July 23, SSA resumed first-time mailings to eligible workers aged 25, sending about 1 million *Statements* to such recipients. However, on October 1, 2012, in response to an increasingly difficult budget situation, the agency suspended all *Statement* mailings, including on-request mailings.²¹

A Joint Explanatory Statement to the Consolidated Appropriations Act of 2014 directed SSA to “develop a plan to significantly increase the number of individuals receiving *Social Security Statements* annually, either electronically or by mail” (U.S. Congress 2014). The agency responded by establishing a workgroup to determine which workers would receive printed *Statements*, how often they would be sent, and the most effective printing and mailing procedures. In April 2014, SSA announced that it would begin mailing printed *Statements* in September to workers aged 25, 30, 35, 40, 45, 50, 55, and 60 or older who have not by then created a **my Social Security** account to access the *Statement* online. This partial restoration of mailed *Statements* was made possible by an improved budget situation.

Statement Content and Appearance

This section describes the statement’s substance and layout, and traces how it has changed since the initial *PEBES* release. Appendix D presents a sample of the *Statement* as it appeared in 2012, when SSA last suspended automatic mailings. The 2012 *Statement* retained the basic format that had been used since 2000. Changes introduced for the 2014 *Statement* appear in Appendices E, F, and G.

Content

Legislation determines the basic content of the earnings and benefit statements. As noted earlier, OBRA 1989 specified that statements contain the worker’s

earnings history; the Social Security and Medicare taxes paid by the worker; an estimate of potential retirement benefits at the early retirement age of 62, at the full retirement age, and at age 70; estimates of disability, survivor, and auxiliary benefits potentially payable on the worker's account; and a description of benefits payable under Medicare.

Originally, *PEBES'* first page contained a message from the SSA commissioner. The second page provided information on the worker's earnings and on Social Security and Medicare taxes paid. The third page contained the worker's estimated retirement, disability, and survivor benefits, as well as a description of Medicare benefits. The fourth, fifth, and sixth pages provided additional information on the worker's earnings record, Social Security taxes paid, Social Security and Medicare credits, estimation of benefits, types of benefits, and the effect of working while receiving benefits.

SSA added content to the statements in 1999 and in 2006. On October 1, 1999, when SSA began sending statements to all eligible workers aged 25 or older, a new paragraph encouraged the recipient to think about the advantages and disadvantages of retiring early. A list of publications on topics related to retirement benefits also appeared. Estimated retirement, disability, and survivor benefits (and related information) now appeared before the worker's earnings history. Finally, the commissioner's message, presenting introductory information on the first page of the statement, began to appear under the title "What Social Security Means To You."

The Social Security Protection Act of 2004 mandated the addition of sections on the Windfall Elimination Provision (WEP) and the Government Pension Offset (GPO) to the *Statement* beginning in 2007.²² Other changes to the *Statement* included adding the agency's website address to the first page and expanding the discussion of how benefits are calculated.

The commissioner's introductory message varies in length, language, and content from year to year. As might be expected, the message changes to reflect the environment Social Security faces. In 1988, Commissioner Hardy noted that Social Security provided more than retirement benefits, but those retirement benefits needed supplementation with savings, private pensions, other insurance, and investments. Commissioner Hardy concluded her message by saying that Social Security was financially sound.

In her 1996 message, Commissioner Shirley S. Chater expressed some concern about Social Security's future financial condition. Like Commissioner Hardy, she pointed out that Social Security provides benefits besides those for retirees, and encouraged individuals to establish other retirement savings to supplement Social Security benefits. Commissioner Chater noted that the Social Security Board of Trustees projected that trust fund resources would be adequate to pay benefits in full for more than 30 years. She added that Congress had time to make necessary changes to ensure Social Security's financial future.

Commissioner Kenneth Apfel focused more pointedly on Social Security's financial future. In his October 1, 1998 message, he wrote, "Some people are concerned that Social Security will not be there in the future," and added "we are working to resolve long-run financing issues." Commissioner Apfel's message in the October 1, 1999 *Statement*, the first annual statement, contained subsections titled "Social Security is for People of All Ages," "Work to Build a Secure Future," and "About Social Security's Future." This last subsection noted that concern for the future of Social Security stemmed from longer life expectancies, increasing numbers of retirees, and fewer workers supporting each retiree.

In 2000, Commissioner Apfel added statistics to his discussion of Social Security's future. He noted that 76 million baby boomers would begin retiring around 2010; in the next 30 years, the number of older Americans would double; in 2014, Social Security benefits paid would exceed taxes collected; and by 2034, the trust funds would be exhausted and payroll tax collections would be able to pay for only about 71 percent of benefits owed. Commissioner Apfel also recommended that *Statement* recipients ask for a copy of SSA's booklet, *The Future of Social Security*.

In 2001, Acting Commissioner Larry G. Massanari added a fourth subsection, "Social Security on the Net," to his message. It described how readers could use the agency's website (<http://www.socialsecurity.gov>) to estimate their future benefits and plan their financial future, apply for retirement benefits, subscribe to *eNews* for program and benefit updates, correct or change their name on their Social Security card, or get a replacement card.²³

In 2003, Commissioner Jo Anne B. Barnhart observed that the number of Americans aged 65 or older was expected to double by the time the Social

Security Trust Fund was projected to be exhausted. Commissioner Barnhart also noted that current Social Security benefits were paid by current workers, but that in the future there would not be enough younger workers to pay all of the benefits owed to retirees. Language from previous messages was changed in small but significant ways. To sentences addressing the trust fund's future, the 2003 message added phrases such as "unless action is taken soon to strengthen Social Security." To an existing passage reading "we'll need to resolve long-range financial issues" the 2003 message added "soon." Commissioner Barnhart also noted for the first time that trust fund solvency estimates came from SSA's actuaries.

Although Commissioner Michael J. Astrue shortened the overall message in 2007, he added information on saving and investing to the "Work to Build a Secure Future" section. "About Social Security's Future" was condensed: It now provided information about Social Security being a compact between generations, the dates when benefit payments would first be drawn from the trust fund and when the trust fund would be exhausted, and the percentage of scheduled benefits that would be paid after trust fund exhaustion. The phrases introduced by Commissioner Barnhart, noted above, were dropped.

For the September 2014 reintroduction of *Statement* mailings to workers of selected ages, different versions of the first page were created to incorporate current Acting Commissioner Carolyn W. Colvin's messages for younger workers, midcareer workers, and workers nearing retirement. Although their messages differ in order to focus on issues relevant to a particular age group, the new first pages also include common elements, including remarks promoting the online *Statement* and highlighting the agency's presence on Facebook, Twitter, and YouTube. In addition, an estimate of the recipient's full retirement benefit appears prominently in all versions of the new first page. These changes will also migrate to the online *Statement*. Appendices E, F, and G provide examples of the new first pages for younger, midcareer, and older workers, respectively. Further changes to the *Statement* are planned for fiscal year 2015.

Appearance

The style, design, and layout of the first *PEBES*, issued in 1988, were created by what was then known as the Office of Information, part of SSA's Office of Governmental Affairs.²⁴ *PEBES* was six pages long. The

second page contained seven columns of numbers. The first column listed each year in the individual's work history; it was followed by three columns each for Social Security and Medicare, showing maximum taxable earnings, the individual's reported earnings, and estimated taxes paid. All other pages contained single-column text.

The first *Social Security Statement*, issued October 1, 1999, reflected significant, focus group-tested design changes. The *Statement* was shortened from six to four pages, and the order of presentation changed so that information on benefits preceded information on earnings. Only two columns of numbers, representing taxed Social Security earnings and taxed Medicare earnings, were shown for each year in a worker's earnings history. The numbers now filled only one-half page, instead of one entire page as before. The *Statement* eliminated information on taxes paid in each earnings year, and now only provided cumulative lifetime Social Security and Medicare taxes paid. Most pages now had two columns of text rather than one. More white space, and greater use of different font sizes and styles, made the *Statement* easier to read.

The appearance of the *Statement* changed again with its online incarnation. Although the online *Statement's* primary features—the Commissioner's message about Social Security and the worker's estimated benefits and earnings record—are presented in the same order as on the print *Statement*, related content is accessible through links. For example, the online *Statement's* estimated benefits section provides links to information on Social Security and Medicare, things to consider before deciding to retire, and SSA publications and contacts—content that appears on the last page of the print *Statement* under "Some Facts about Social Security." Additionally, for workers in the 25–35 and 55 or older age groups, the estimated benefits section includes a link to the appropriate *Statement* insert.²⁵ While logged into his or her password-protected *my Social Security* account, any individual can also opt to view (and print) the *Statement*.

The September 2014 resumption of *Statement* mailings brings design changes to the first page of both the print and online versions. The new first page incorporates design features such as graphics, more white space, and larger print. Initially, the *Statement* will be printed in black and white only. These new design features will appear first in the print version and then in the online *Statement*.

The Statement's Relationship with SSA's Strategic Plans

SSA's strategic plans not only acknowledge the importance of informing the public about Social Security benefits, they specifically mention the statement.

1991 Plan

The *Social Security Strategic Plan: A Framework for the Future*, issued in September 1991, noted the significance of legislation mandating SSA to begin, in fiscal year 1995, sending personal earnings and estimated benefit statements automatically.²⁶ One of the three fundamental goals of the 1991 plan was to “instill public confidence in Social Security programs” through the provision of information to “workers and their families to make them aware of their protections under the Social Security programs and the role of Social Security in their financial future.” The 1991 strategic plan underscored the importance of a well-informed public:

Public understanding of the Social Security programs and their importance to society is basic to ensuring that the programs continue to address the social needs they were designed to address. Understanding the types of circumstances in which benefits are payable and having a general sense of benefit levels provide a context for people to plan for retirement financing and other insurance and income-supplement needs...A critical function of SSA is to make every effort to see that people are informed of their eligibility for the benefits we administer (HHS 1991).

1997 Plan

The importance of public understanding of Social Security programs was also a theme of SSA's *Strategic Plan 1997–2002: Keeping the Promise*, issued in September 1997. One of the five goals of this strategic plan was “to strengthen public understanding of the Social Security programs.” The plan discussed the importance of this goal:

One of SSA's basic responsibilities to the public is to ensure that they understand the benefits available under the Social Security programs to them individually and to the population as a whole. This enables people to make reasonable and responsible choices as they plan for their own future and as they

help the nation's leaders make decisions about the future of society (SSA 1997).

The plan stated that SSA would attain this goal if “by 2005, 9 out of 10 Americans will be knowledgeable about the Social Security programs in five important areas: basic program facts, financial value of programs to individuals, economic and social impact of the programs, how the programs are financed today, and financing issues and options.” The plan acknowledged the need for better ways to assess meeting this goal than merely counting the number of *PEBES* mailings or the percentage of individuals believing they are well informed about Social Security. SSA intended “to create a measure of the percent of individuals who are knowledgeable in each of the five subject areas as demonstrated by responses to an objective test.” To be measured, “knowledgeable” would need to be defined for each of the subject areas. Further, a testing instrument would be needed to establish a baseline knowledge level (SSA 1997).

Meeting this goal would involve developing an overall public education strategy using the media, SSA publications, schools, other public and private organizations, employers and employees, and celebrity spokespersons. *PEBES* would also play an important role: “*PEBES* issuance will remain a central strategy for helping SSA maintain the accuracy of earnings records, keeping wage earners up-to-date on their protection under Social Security, and helping wage earners, through an estimate of their future benefits, plan their financial future” (SSA 1997).

In 1998, SSA established the Public Understanding and Management System, an initiative under which six surveys were conducted between 1998 and 2004 to measure public understanding of the Social Security program and benefits. These surveys were designed to measure the effect of the broad public education strategy that included the statement. The next section discusses the surveys and their findings.

2000 Plan

Just as in the 1997 strategic plan, one of the five goals in *Mastering the Challenge: Strategic Plan FY2000–2005* was “to strengthen the public understanding of Social Security programs.” The objective remained the same—that by 2005, 9 out of 10 American adults would be knowledgeable about Social Security. However, now the agency focused on improving public knowledge in three areas it deemed especially

important: basic program facts, value of Social Security programs, and financing of Social Security programs. This was to be achieved by promoting awareness of the *Statement* and how it could be used to plan a secure financial future. Performance indicators mentioned in the plan included the percentage of the public who were knowledgeable about Social Security programs and the percentage of individuals to whom *Statements* were issued, as required by law (SSA 2000).

2008 Plan

The importance of public understanding of Social Security programs remained a theme in SSA's *Strategic Plan Fiscal Years 2008–2013*. That plan acknowledged that SSA faced “limited public understanding of the role of Social Security benefits” and included an objective to “provide individuals with accurate, clear, up-to-date information.” It also noted that 147 million *Statements* were issued in fiscal year 2007. The plan contained a special initiative to encourage saving and mentioned the *Statement* as an important way to provide age-specific information useful for retirement planning. This initiative cited research showing the importance of information and awareness in improving attitudes toward saving and expanding participation in retirement savings plans, and showing that many individuals lack this information and awareness. According to that special initiative, “the agency has a responsibility to help individuals understand the role of Social Security benefits and the need for them to save as they plan for the future” (SSA 2008).

2014 Plan

In *Always Serving / Forward Looking: Strategic Plan Fiscal Years 2014–2018*, the agency's focus for the *Social Security Statement* shifted. In this strategic plan, the agency mentions the online *Statement* as part of its suite of online services and encourages the public to review the *Statement* to ensure that their earnings are accurate (SSA 2014).

The Statement's Effect on Public Awareness

This section highlights the findings of surveys commissioned by SSA to assess both the public's understanding of Social Security programs and the *Statement's* effect on that understanding. In response to the 1997 strategic plan's public awareness objective (noted above), SSA commissioned the Gallup

Organization to conduct six surveys between 1998 and 2004. SSA also commissioned Abt SRBI to conduct surveys specifically on the *Social Security Statement* each year 2008–2010. With these surveys, SSA sought to monitor and improve public understanding of the *Statement* messages.

Gallup Surveys

The first survey, in 1998, was a baseline study to determine what the public knew about Social Security. It found Americans relatively well informed about basic program facts. Respondents recognized the three primary benefit programs (retirement, disability, and survivor insurance); they understood the tax used to support Social Security; they knew how these taxes were being used and how benefits are calculated; and they understood the challenges to long-term program finances posed by an aging population. However, they were less informed about specific program facts: Only 38 percent knew that the full retirement age in 1998 was 65, and only 46 percent knew that the early retirement age was 62. Those who stated they had received a *PEBES* were better informed than those who did not recall receiving a statement.²⁷

The 2001 Gallup survey found a significant increase in the number of respondents who knew about the relationship between Social Security benefits and earnings, how benefits are paid for, that benefits increase automatically as the cost of living rises, and that the full retirement age was increasing.²⁸ Slightly more than half of the respondents reported receiving a *Statement*. Respondents who reported receiving the *Statement* were more knowledgeable than those who did not.

Abt SRBI Surveys

In 2008, SSA commissioned Abt SRBI to survey the public about the *Social Security Statement* and how well it provided information about SSA programs, aided financial planning, and verified earnings. A baseline survey was conducted in 2008 with follow-up surveys in 2009 and 2010. The 2010 survey found that 62 percent of respondents recalled seeing their benefit information and 45 percent recalled seeing their earnings history. Twenty-two percent of those aged 55 or older reported reading the *Thinking of Retiring?* insert. Thirty percent of all respondents and 42 percent of respondents aged 55 or older reported using the *Statement* for financial planning. Seventy percent of respondents thought the information in

the *Statement* was useful for retirement planning. Fifty-four percent expressed overall satisfaction with the *Statement's* information about savings and investment. The surveys found that the *Statement* was most effective in the verification of earnings, with about 95 percent of respondents reporting that their personal information was correct.

Conclusion

This article provides an overview of the *Social Security Statement*—the background behind its implementation, the phase-in process, its relationship to SSA's strategic plans, its content and appearance, and the surveys commissioned by SSA to measure the public's understanding of Social Security and of the *Statement*. This information, along with the implementation schedule, will be useful to researchers studying the *Statement's* effects on public knowledge and retirement planning.

In recent years, funding constraints and technological developments have brought major changes to the *Statement*. In February 2012, SSA resumed mailing printed *Statements* to workers aged 60 or older, following a suspension that began in March 2011 to conserve agency funds. Then, in May 2012, SSA introduced an online version of the *Statement*. The agency also made a one-time mailing of the *Statement* in July to workers aged 25 in 2012. In October 2012, SSA again suspended *Statement* mailings for budgetary reasons, and relied on the online version to provide workers with immediate access to their earnings records, estimated benefits, and other information. In September 2014, the agency resumes mailing a revised and redesigned version of the printed *Statement* to workers of selected ages.

Appendix A

Social Security Statement Chronology

Date	Development
1939	The Social Security Act Amendments of 1939 require the Social Security Board to maintain records of wages paid to individuals and, on request, to provide individuals with information on their wages.
1940	The Social Security Board establishes regulations governing the revision of wage records by individuals.
1962	SSA initiates the “leads” program, under which it sends information on benefit entitlements to older insured workers who have not yet claimed benefits.
1970s–early 1980s	Internal discussions at SSA on providing workers of all ages with benefit as well as earnings statements, and doing so automatically as well as on request.
Early 1980s	SSA sends benefit estimates to workers on request, under a little-publicized program.
1981	The National Commission on Social Security, appointed by President Carter, issues its final report recommending that SSA provide information on Social Security benefits to workers: at a minimum, to those who request it; ideally, to all workers automatically.
August 1988	Senator Daniel Patrick Moynihan introduces a bill mandating that SSA issue earnings and benefit statements. The same day, Commissioner Dorcas R. Hardy announces that SSA will begin providing the <i>PEBES</i> on request.
1989	OBRA 1989 amends the Social Security Act to require SSA to issue “Social Security account statements” and to begin sending them automatically according to a set schedule. OBRA also specifies the information to be included in these statements. SSA makes several important modifications to these specifications, going beyond legislative requirements.
1994	SSA begins test mailings of <i>PEBES</i> to plan for future workloads. Questionnaires and focus groups gather input and feedback on the language and design of <i>PEBES</i> .
Fiscal year 1995	SSA begins phasing in automatic mailing of earnings and benefit statements. This phase-in will continue through fiscal year 1999.
1996	SSA pretests its online <i>PEBES</i> .
1997	SSA begins national testing of online <i>PEBES</i> . Concerns raised by the media and Congress about the privacy of earnings records cause SSA to suspend online <i>PEBES</i> .
Fiscal year 2000	SSA sends 134.7 million <i>PEBESs</i> to workers aged 25 or older. In October 1999, <i>PEBES</i> is redesigned and renamed the <i>Social Security Statement</i> . Beginning in fiscal year 2000, the <i>Statement</i> is mailed to all eligible workers aged 25 or older.
October 2000	SSA begins mailing a special insert, <i>Thinking of retiring?</i> , to workers aged 55 or older.
2007	SSA adds sections to the <i>Statement</i> on the Windfall Elimination Provision (WEP) and on the Government Pension Offset (GPO) as mandated by the Social Security Protection Act of 2004.
February 2009	SSA begins mailing special inserts, <i>What young workers should know about Social Security and saving</i> , to workers aged 25 to 35.
March 2011	SSA Commissioner Astrue testifies before Congress that to conserve funds, the agency will temporarily suspend mailing the <i>Statement</i> . Work begins on developing an online <i>Statement</i> .
2012	SSA resumes annual mailings of printed <i>Statements</i> to all workers aged 60 or older in February, launches an online version of the <i>Statement</i> accessible to workers of all ages in May, conducts a one-time mailing of <i>Statements</i> to workers aged 25 in July, and suspends <i>Statement</i> mailings in October.
September 2014	SSA resumes annual mailings of printed <i>Statements</i> to workers aged 25, 30, 35, 40, 45, 50, 55, and 60 or older who have not yet established a <i>my Social Security</i> account to access their <i>Statements</i> online.



Thinking of retiring?

www.socialsecurity.gov

Some things to consider

Retirement can have more than one meaning these days. It can mean that you have applied for Social Security retirement benefits or that you are no longer working. Or it can mean that you have chosen to receive Social Security while still working, either full or part-time. All of these choices are available to you. Your retirement decisions can have very real effects on your ability to maintain a comfortable retirement.

If you retire early, you may not have enough income to enjoy the years ahead of you. Likewise, if you retire late, you'll have a larger income, but fewer years to enjoy it. Everyone needs to try to find the right balance, based on his or her own circumstances.

We hope the following information will help you as you plan for your future retirement and consider your retirement options.

It's so easy to apply online for benefits

The easiest way to apply for Social Security retirement benefits is to go online at www.socialsecurity.gov/applyforbenefits. If you do not have access to the Internet, you can call **1-800-772-1213** (TTY number, **1-800-325-0778**) between 7 a.m. and 7 p.m., Monday through Friday, to apply by phone. You also can apply at any Social Security office. To avoid having to wait, call first to make an appointment.

What is the best option for you?

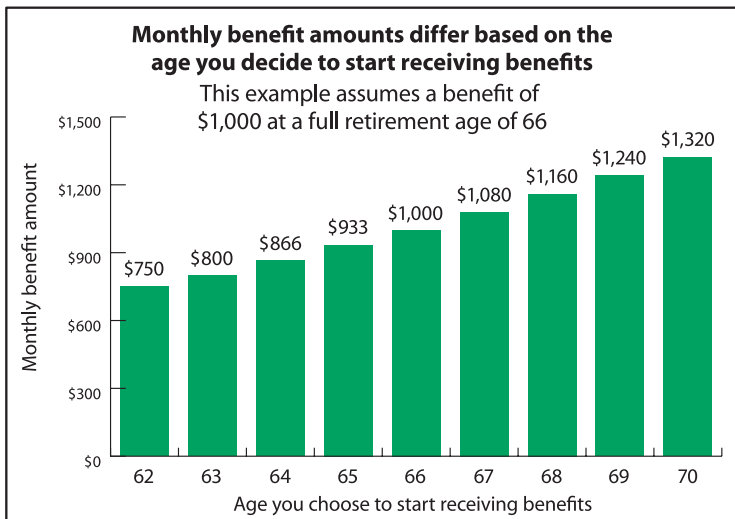
Everyone's situation is different. That is why Social Security has created several retirement planners to help you decide what would be best for you and your family. Social Security has an online calculator that can provide immediate and accurate retirement benefit estimates to help you plan for your retirement.

The online Retirement Estimator is a convenient, secure, and quick financial planning tool. It uses your own earnings record information, thereby eliminating any need to manually key in years of earnings information. The estimator also will let you create "what if" scenarios. You can, for example, change your "stop work" date or expected future earnings to create and compare different retirement options. To use the Retirement Estimator, go to our website at www.socialsecurity.gov/estimator.

There is one more thing you should remember as you crunch the numbers for your retirement. You may need your income to be sufficient for a long time, because people are living longer than ever before, and generally, women tend to live longer than men. For example:

- The typical 65-year-old today will live to age 83;
- One in four 65-year-olds will live to age 90; and
- One in 10 65-year-olds will live to age 95.

Once you decide on the best age for you to actually retire, remember to complete your application *three months before* the month in which you want retirement benefits to begin.



Don't forget Medicare

Even if you don't plan to receive monthly benefits, you should sign up for Medicare *three months before* reaching age 65. Otherwise, your Medicare medical insurance, as well as prescription drug coverage, could be delayed and you could be charged higher premiums. You even can apply online. Visit www.socialsecurity.gov/medicareonly for more information about Medicare eligibility and filing online. Also ask for *Apply Online For Medicare—Even If You Are Not Ready To Retire* (Publication No. 05-10530).

Receiving benefits while you work

When you reach your full retirement age, you can work and earn as much as you want and still receive your full Social Security benefit payment. If you are younger than full retirement age and if your earnings exceed certain dollar amounts, some of your benefit payments during the year will be withheld.

This does not mean you must try to limit your earnings. If we withhold some of your benefits because you continue to work, we will pay you a higher monthly benefit amount when you reach your full retirement age. In other words, if you would like to work and earn more than the exempt amount, you should know that it will not, on average, reduce the total value of lifetime benefits you receive from Social Security—and may actually increase them.

Here is how this works: after you reach full retirement age, we will recalculate your benefit amount to give you credit for any months in which you did not receive some benefit because of your earnings. In addition, as long as you continue to work, we will check your record every year to see whether the additional earnings will increase your monthly benefit.

Many people can continue to work and still receive retirement benefits. If you want more information on how earnings affect your retirement benefits, ask for *How Work Affects Your Benefits* (Publication No. 05-10069), which has current annual and monthly earnings limits, and is available on our website.

Retirement age considerations

Full retirement age

For persons born during the years 1943-1954, the full retirement age is 66. If you were not born in this period, you can find your full retirement age on page 2 of your *Social Security Statement*.

Retiring early

If you've earned 40 credits (credits are explained on page 2 of your *Statement*), you can start receiving Social Security benefits at 62 or at any month between 62 and full retirement age. However, your benefits will be reduced based on the number of months you receive benefits before you reach full retirement age.

If your full retirement age is 66, benefits will be reduced:
25 percent at age 62;
20 percent at age 63;
13½ percent at age 64; or
6⅔ percent at age 65.

Delaying retirement

You may decide to wait beyond your full retirement age before

choosing to receive benefits. If so, your benefit will be increased by a certain percentage for each month you don't receive benefits between your full retirement age and age 70. This table shows the rate your benefits increase if you delay retiring.

Year of birth	Yearly increase rate
1941 - 1942	7.5%
1943 or later	8.0%

Rules that may affect your survivor

If you are married and die before your spouse, he or she may be eligible for a benefit based on your work record. If you start benefits before your full retirement age, we cannot pay your surviving spouse a full benefit from your record. Also, if you wait until after your full retirement age to begin benefits, the surviving spouse benefits based on your record will be higher.

Need more information?

You can find answers to frequently asked questions about Social Security, learn about factors that could affect your benefits, and much more by visiting Social Security online at www.socialsecurity.gov.

If you do not have access to the Internet, you can get information about Social Security by calling **1-800-772-1213** (1-800-325-0778 for the deaf or hard of hearing) or by visiting a local Social Security office.

Other useful websites

www.mymoney.gov

This website contains calculators for financial planning and information on money-related matters, such as retirement planning and starting a small business.

www.dol.gov/ebsa/pdf/nearretirement.pdf

Have you determined how much money you will need in retirement? There are many tools available to help you, such as the *Taking the Mystery Out of Retirement Planning Workbook* available at this link.

www.sec.gov/investor/seniors.shtml

Are you looking for information about the investment options available to you as you enter retirement? The Securities and Exchange Commission has a wealth of information on different investment products and topics available at this website.

www.usa.gov/topics/seniors.shtml

This website has a variety of resources for seniors on topics including retirement planning, housing, and health.



Social Security Administration
SSA Publication No. 05-10054
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What young workers should know about Social Security and saving

www.socialsecurity.gov

Saving for the future is important for multiple reasons. Education, buying your own home, taking a special vacation and even planning for your retirement are all good reasons to start saving early. Today's young workers can expect to spend 20 or more years in retirement, so it is important to begin your financial planning as early as possible. Here are some basic facts about Social Security and saving that can help you prepare for the future.

Why this *Statement* is important for your financial planning

You have probably been paying into the nation's Social Security and Medicare systems since you first began working. The enclosed *Statement* is a report of what you have paid into these programs and an estimate of how much you can expect to eventually get in benefits.



You will receive a *Statement* each year about three months before your birthday. As you read through your *Statement*, you should pay close attention to a few items.



Check your earnings information. This will be the basis for determining how much you will receive in Social Security benefit payments.



If you change jobs or marital status, make sure your name and Social Security number are reported correctly on your employer's records.

Will Social Security still be around when I retire?

Yes. The Social Security taxes you now pay go into the Social Security Trust Funds and are used to pay benefits to current beneficiaries. The Social Security Board of Trustees now estimates that based on current law, in 2041, the Trust Funds will be depleted. Because people are living longer and the birth rate is low, the ratio of workers to beneficiaries is falling. Therefore, the taxes that are paid by workers will not be enough to pay the full benefit amounts scheduled.

However, this does not mean that Social Security benefit payments would disappear. Even if modifications to the program are not made, there would still be enough funds in 2041 from taxes paid by workers to pay about \$780 for every \$1,000 in benefits scheduled.

Social Security: more than retirement

Social Security reaches almost every family, and at some point will touch the lives of nearly all Americans. This year, more than 50 million Americans will collect nearly \$614 billion in Social Security benefits. Currently, nine out of 10 individuals age 65 and over receive benefits, and for two-thirds of the elderly, Social Security represents at least half of their income.

Like most, you probably think of Social Security as just a retirement program. However, depending on your circumstances, you may need the protection of Social Security well before retirement.

Social Security protects you if you become disabled ...

Studies show that a 20-year-old worker has a 3-in-10 chance of qualifying for disability benefits before reaching retirement age.

Social Security protects your family in the event of death ...

More than two million children and surviving spouses caring for children now receive survivor benefits from a deceased worker.

Page 2 of your *Statement* contains an estimate of your monthly disability benefit should you become disabled and of monthly benefits for your children and surviving spouse caring for children should you die.

(Over)

Social Security is a financial foundation

- Social Security helps replace earnings during retirement. Financial planners generally agree retirees will need about 70-80 percent of preretirement earnings to enjoy a comfortable retirement. For an average worker, Social Security replaces about 40 percent of annual preretirement earnings.

But you also should save and invest

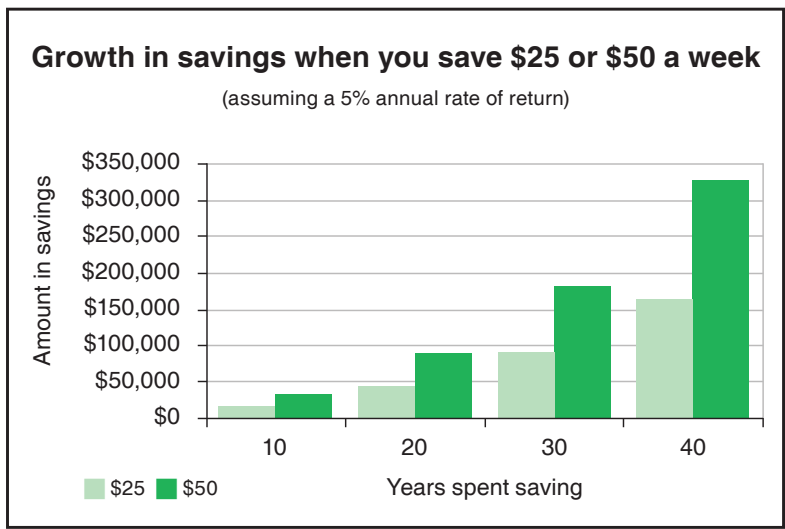
- Since Social Security will only replace part of your lost earnings, your savings and investments play an important role in ensuring adequate income for you and your family.

So start saving today

- The sooner you start, the more time you will have to save for retirement.

- Even setting aside a small portion of each paycheck will pay off in big dollars later: just \$25 a week invested at 5 percent interest for 40 years will grow to about \$165,000.
- Any amount you can save, even as little as \$5 a week, will add up over time.
- The easiest way to save is through your job. Ask your employer if you can participate in a retirement savings plan at work. Your employer might even match your contributions to the plan.
- If your employer does not offer a savings plan, check with a bank or other financial institution for ways to save and invest on your own.

To help determine how much you should save for retirement, go to www.choosetosave.org and click on the Ballpark E\$timate link. You can use the retirement benefit information from page 2 of your *Statement* when using this online calculator.



Interested in other useful financial information?

Visit these websites

www.mymoney.gov

This site contains information on getting credit, paying for education, buying a home, creating a budget and starting a small business. It also contains calculators for your financial planning needs.

www.federalreserve.gov

In the Personal Finance section under Consumer Information, you can find worksheets that will help you establish goals, create a budget and find tips on how to stick to a budget.

www.sec.gov/investor/oiea_podcasts.htm

The Securities and Exchange Commission offers podcasts that cover a broad range of savings and investing topics.

www.ncua.gov/publications

At the National Credit Union Administration site, you can learn how to create an emergency financial first aid kit to help you maintain financial stability in an emergency and serve as a reference file for all of your financial documents.



www.socialsecurity.gov



Prevent identity theft—protect your Social Security number

Your Social Security Statement

www.socialsecurity.gov

Prepared especially for Wanda Worker

May 1, 2012

See inside for your personal information

WANDA WORKER
456 ANYWHERE AVENUE
MAINTOWN, USA 11111-1111

What's inside...

Your Estimated Benefits	2
Your Earnings Record	3
Some Facts About Social Security	4
If You Need More Information	4

What Social Security Means To You

This *Social Security Statement* can help you plan for your financial future. It provides estimates of your Social Security benefits under current law and updates your latest reported earnings.

Please read this *Statement* carefully. If you see a mistake, please let us know. That's important because your benefits will be based on our record of your lifetime earnings. We recommend you keep a copy of your *Statement* with your financial records.

Social Security is for people of all ages...

We're more than a retirement program. Social Security also can provide benefits if you become disabled and help support your family after you die.

Work to build a secure future...

Social Security is the largest source of income for most elderly Americans today, but Social Security was never intended to be your only source of income when you retire. You also will need other savings, investments, pensions or retirement accounts to make sure you have enough money to live comfortably when you retire.

Saving and investing wisely are important not only for you and your family, but for the entire country. If you want to learn more about how and why to save, you should visit www.mymoney.gov, a federal government website dedicated to teaching all Americans the basics of financial management.

About Social Security's future...

Social Security is a compact between generations. Since 1935, America has kept the promise of

security for its workers and their families. Now, however, the Social Security system is facing serious financial problems, and action is needed soon to make sure the system will be sound when today's younger workers are ready for retirement.

Without changes, in 2033 the Social Security Trust Fund will be able to pay only about 75 cents for each dollar of scheduled benefits.* We need to resolve these issues soon to make sure Social Security continues to provide a foundation of protection for future generations.

Social Security on the Net...

Visit www.socialsecurity.gov on the Internet to learn more about Social Security. You can read publications, including *When To Start Receiving Retirement Benefits*; use our Retirement Estimator to obtain immediate and personalized estimates of future benefits; and when you're ready to apply for benefits, use our improved online application—It's so easy!

Michael J. Astrue
Commissioner

* These estimates are based on the intermediate assumptions from the Social Security Trustees' Annual Report to the Congress.

Your Estimated Benefits

*Retirement	You have earned enough credits to qualify for benefits. At your current earnings rate, if you continue working until... your full retirement age (67 years), your payment would be about.....\$ 1,619 a month age 70, your payment would be about\$ 2,023 a month age 62, your payment would be about\$ 1,113 a month
*Disability	You have earned enough credits to qualify for benefits. If you became disabled right now, your payment would be about.....\$ 1,441 a month
*Family	If you get retirement or disability benefits, your spouse and children also may qualify for benefits.
*Survivors	You have earned enough credits for your family to receive survivors benefits. If you die this year, certain members of your family may qualify for the following benefits: Your child.....\$ 1,131 a month Your spouse who is caring for your child.....\$ 1,131 a month Your spouse, if benefits start at full retirement age.....\$ 1,508 a month Total family benefits cannot be more than\$ 2,778 a month Your spouse or minor child may be eligible for a special one-time death benefit of \$255.
Medicare	You have enough credits to qualify for Medicare at age 65. Even if you do not retire at age 65, be sure to contact Social Security three months before your 65th birthday to enroll in Medicare.

*** Your estimated benefits are based on current law. Congress has made changes to the law in the past and can do so at any time. The law governing benefit amounts may change because, by 2033, the payroll taxes collected will be enough to pay only about 77 percent of scheduled benefits.**

We based your benefit estimates on these facts:

Your date of birth (please verify your name on page 1 and this date of birth).....	April 5, 1973
Your estimated taxable earnings per year after 2013	\$44,833
Your Social Security number (only the last four digits are shown to help prevent identity theft).....	XXX-XX-1234

How Your Benefits Are Estimated

To qualify for benefits, you earn “credits” through your work — up to four each year. This year, for example, you earn one credit for each \$1,160 of wages or self-employment income. When you’ve earned \$4,640, you’ve earned your four credits for the year. Most people need 40 credits, earned over their working lifetime, to receive retirement benefits. For disability and survivors benefits, young people need fewer credits to be eligible.

We checked your records to see whether you have earned enough credits to qualify for benefits. If you haven’t earned enough yet to qualify for any type of benefit, we can’t give you a benefit estimate now. If you continue to work, we’ll give you an estimate when you do qualify.

What we assumed — If you have enough work credits, we estimated your benefit amounts using your average earnings over your working lifetime. For 2013 and later (up to retirement age), we assumed you’ll continue to work and make about the same as you did in 2011 or 2012. We also included credits we assumed you earned last year and this year.

Generally, the older you are and the closer you are to retirement, the more accurate the retirement estimates will be because they are based on a longer work history with fewer uncertainties such as earnings fluctuations and future law changes. We encourage you to use our online Retirement Estimator at www.socialsecurity.gov/estimator to obtain immediate and personalized benefit estimates.

We can’t provide your actual benefit amount until you apply for benefits. **And that amount may differ from the estimates stated above because:**

- (1) Your earnings may increase or decrease in the future.
- (2) After you start receiving benefits, they will be adjusted for cost-of-living increases.

(3) Your estimated benefits are based on current law. **The law governing benefit amounts may change.**

(4) Your benefit amount may be affected by **military service, railroad employment or pensions earned through work on which you did not pay Social Security tax.** Visit www.socialsecurity.gov to learn more.

Windfall Elimination Provision (WEP) — In the future, if you receive a pension from employment in which you do not pay Social Security taxes, such as some federal, state or local government work, some nonprofit organizations or foreign employment, and you also qualify for your own Social Security retirement or disability benefit, your Social Security benefit may be reduced, but not eliminated, by WEP. The amount of the reduction, if any, depends on your earnings and number of years in jobs in which you paid Social Security taxes, and the year you are age 62 or become disabled. For more information, please see *Windfall Elimination Provision* (Publication No. 05-10045) at www.socialsecurity.gov/WEP.

Government Pension Offset (GPO) — If you receive a pension based on federal, state or local government work in which you did not pay Social Security taxes and you qualify, now or in the future, for Social Security benefits as a current or former spouse, widow or widower, you are likely to be affected by GPO. If GPO applies, your Social Security benefit will be reduced by an amount equal to two-thirds of your government pension, and could be reduced to zero. Even if your benefit is reduced to zero, you will be eligible for Medicare at age 65 on your spouse’s record. To learn more, please see *Government Pension Offset* (Publication No. 05-10007) at www.socialsecurity.gov/GPO.

Your Earnings Record

Years You Worked	Your Taxed Social Security Earnings	Your Taxed Medicare Earnings
1989	1,489	1,489
1990	2,663	2,663
1991	4,483	4,483
1992	6,221	6,221
1993	7,491	7,491
1994	9,224	9,224
1995	11,897	11,897
1996	14,677	14,677
1997	17,434	17,434
1998	20,071	20,071
1999	22,827	22,827
2000	25,588	25,588
2001	27,576	27,576
2002	29,004	29,004
2003	30,772	30,772
2004	33,097	33,097
2005	35,102	35,102
2006	37,501	37,501
2007	39,927	39,927
2008	41,487	41,487
2009	41,446	41,446
2010	42,973	42,973
2011	44,833	44,833
2012		Not yet recorded

You and your family may be eligible for valuable benefits:

When you die, your family may be eligible to receive survivors benefits.

Social Security may help you if you become disabled—even at a young age.

A young person who has worked and paid Social Security taxes in as few as two years can be eligible for disability benefits.

Social Security credits you earn move with you from job to job throughout your career.

Total Social Security and Medicare taxes paid over your working career through the last year reported on the chart above:

Estimated taxes paid for Social Security:

You paid: \$32,239
Your employers paid: \$33,994

Estimated taxes paid for Medicare:

You paid: \$7,955
Your employers paid: \$7,955

Note: In 2012, you paid 4.2 percent in Social Security taxes on your salary (up to \$110,100) and 1.45 percent in Medicare taxes on your entire salary. Your employer paid 6.2 percent in Social Security taxes and 1.45 percent in Medicare taxes for you. If you are self-employed, you paid the combined employee and employer amount of 10.4 percent in Social Security taxes on your net earnings (up to \$110,100) and 2.9 percent in Medicare taxes on your entire net earnings.

Help Us Keep Your Earnings Record Accurate

You, your employer and Social Security share responsibility for the accuracy of your earnings record. Since you began working, we recorded your reported earnings under your name and Social Security number. We have updated your record each time your employer (or you, if you're self-employed) reported your earnings.

Remember, it's your earnings, not the amount of taxes you paid or the number of credits you've earned, that determine your benefit amount. When we figure that amount, we base it on your average earnings over your lifetime. If our records are wrong, you may not receive all the benefits to which you're entitled.

Review this chart carefully using your own records to make sure our information is correct and that we've recorded each year you worked. You're the only person who can look at the earnings chart and know whether it is complete and correct.

Some or all of your earnings from **last year** may not be shown on your *Statement*. It could be that we still were

processing last year's earnings reports when your *Statement* was prepared. Your complete earnings for last year will be shown on next year's *Statement*. **Note:** If you worked for more than one employer during any year, or if you had both earnings and self-employment income, we combined your earnings for the year.

There's a limit on the amount of earnings on which you pay Social Security taxes each year. The limit increases yearly. Earnings above the limit will not appear on your earnings chart as Social Security earnings. (For Medicare taxes, the maximum earnings amount began rising in 1991. Since 1994, **all** of your earnings are taxed for Medicare.)

Call us right away at 1-800-772-1213 (7 a.m.–7 p.m. your local time) if any earnings for years **before last year** are shown incorrectly. Please have your W-2 or tax return for those years available. (If you live outside the U.S., follow the directions at the bottom of page 4.)

Some Facts About Social Security

About Social Security and Medicare...

Social Security pays retirement, disability, family and survivors benefits. Medicare, a separate program run by the Centers for Medicare & Medicaid Services, helps pay for inpatient hospital care, nursing care, doctors' fees, drugs, and other medical services and supplies to people age 65 and older, as well as to people who have been receiving Social Security disability benefits for two years or more. Medicare does not pay for long-term care, so you may want to consider options for private insurance. Your Social Security covered earnings qualify you for both programs. For more information about Medicare, visit www.medicare.gov or call **1-800-633-4227** (TTY **1-877-486-2048** if you are deaf or hard of hearing).

Retirement — If you were born before 1938, your full retirement age is 65. Because of a 1983 change in the law, the full retirement age will increase gradually to 67 for people born in 1960 and later.

Some people retire before their full retirement age. You can retire as early as 62 and take benefits at a reduced rate. If you work after your full retirement age, you can receive higher benefits because of additional earnings and credits for delayed retirement.

Disability — If you become disabled before full retirement age, you can receive disability benefits after six months if you have:

- enough credits from earnings (depending on your age, you must have earned six to 20 of your credits in the three to 10 years before you became disabled); and
- a physical or mental impairment that's expected to prevent you from doing "substantial" work for a year or more *or* result in death.

If you are filing for disability benefits, please let us know if you are on active military duty or are a recently discharged veteran, so that we can handle your claim more quickly.

Family — If you're eligible for disability or retirement benefits, your current or divorced spouse, minor children or adult children disabled before age 22 also may receive benefits. Each may qualify for up to about 50 percent of your benefit amount.

Survivors — When you die, certain members of your family may be eligible for benefits:

- your spouse age 60 or older (50 or older if disabled, or any age if caring for your children younger than age 16); and
- your children if unmarried and younger than age 18, still in school and younger than 19 years old, or adult children disabled before age 22.

If you are divorced, your ex-spouse could be eligible for a widow's or widower's benefit on your record when you die.

Extra Help with Medicare — If you know someone who is on Medicare and has limited income and resources, extra help is available for prescription drug costs. The extra help can help pay the monthly premiums, annual deductibles and prescription co-payments. To learn more or to apply, visit www.socialsecurity.gov or call **1-800-772-1213** (TTY **1-800-325-0778**).

Receive benefits and still work...

You can work and still get retirement or survivors benefits. If you're younger than your full retirement age, there are limits on how much you can earn without affecting your benefit amount. When you apply for benefits, we'll tell you what the limits are and whether work would affect your monthly benefits. When you reach full retirement age, the earnings limits no longer apply.

Before you decide to retire...

Carefully consider the advantages and disadvantages of early retirement. If you choose to receive benefits before you reach full retirement age, your monthly benefits will be reduced.

To help you decide the best time to retire, we offer a free publication, *When To Start Receiving Retirement Benefits* (Publication No. 05-10147), that identifies the many factors you should consider before applying. Most people can receive an estimate of their benefit based on their actual Social Security earnings record by going to www.socialsecurity.gov/estimator. You also can calculate future retirement benefits by using the Social Security Benefit Calculators at www.socialsecurity.gov.

Other helpful free publications include:

- *Retirement Benefits* (No. 05-10035)
- *Understanding The Benefits* (No. 05-10024)
- *Your Retirement Benefit: How It Is Figured* (No. 05-10070)
- *Windfall Elimination Provision* (No. 05-10045)
- *Government Pension Offset* (No. 05-10007)
- *Identity Theft And Your Social Security Number* (No. 05-10064)

We also have other leaflets and fact sheets with information about specific topics such as military service, self-employment or foreign employment. You can request Social Security publications at our website, www.socialsecurity.gov, or by calling us at **1-800-772-1213**. Our website has a list of frequently asked questions that may answer questions you have. We have easy-to-use online applications for benefits that can save you a telephone call or a trip to a field office.

You may also qualify for government benefits outside of Social Security. For more information on these benefits, visit www.govbenefits.gov.

If you need more information—Contact any Social Security office, or call us toll-free at **1-800-772-1213**. (If you are deaf or hard of hearing, you may call our TTY number, **1-800-325-0778**.) If you have questions about your personal information, you must provide your complete Social Security number. If you are in the United States, you also may write to the Social Security Administration, Office of Earnings Operations, P.O. Box 33026, Baltimore, MD 21290-3026. If you are outside the United States, please write to the Office of International Operations, P.O. Box 17769, Baltimore, MD 21235-7769, USA.



Your payment would be about
\$X,XXX a month
at full retirement age

WANDA WORKER
456 ANYWHERE AVENUE
MAINTOWN, USA 11111-1111

April 7, 2014

Your Social Security Statement

Your *Social Security Statement* shows how much you have paid in Social Security and Medicare taxes. It explains about **how much you would get** in Social Security benefits when you reach full retirement age. If you become disabled and unable to work, you may be eligible for disability benefits. In addition, if the family members who depend on you outlive you, they may be eligible for survivor benefits.

Take a look at your earnings. Your earnings determine how much you get in benefits. **If you find an error**, please **let us know right away**.

Social Security benefits are **not intended to be your only income source when you retire**. On average, Social Security will replace about 40 percent of your annual pre-retirement earnings. You will need other savings, investments, pensions, or retirement accounts to live comfortably. Use this *Statement* as a tool for planning your financial future.

To see your *Statement* online anytime, create a **my Social Security account** at socialsecurity.gov/myaccount.

Handwritten signature of Carolyn W. Colvin in cursive.

Carolyn W. Colvin
Acting Commissioner

To view your *Social Security Statement* online anytime create a **my Social Security** account today!



my Social Security
socialsecurity.gov/myaccount

Follow the Social Security Administration at these social media sites.





Your payment would be about
\$X,XXX a month
at full retirement age

WANDA WORKER
456 ANYWHERE AVENUE
MAINTOWN, USA 11111-1111

April 7, 2014

Your Social Security Statement

Your *Social Security Statement* tells you about **how much you or your family would receive** in disability, survivor, or retirement benefits. It also includes our record of your lifetime earnings. Check out your earnings history, and **let us know right away if you find an error**. This is important because we base your benefits on our record of your lifetime earnings.

Social Security benefits are not **intended to be your only source of income when you retire**. On average, Social Security will replace about 40 percent of your annual pre-retirement earnings. You will need other savings, investments, pensions, or retirement accounts to make sure you have enough money to live comfortably when you retire.

To view your *Statement* online anytime, create a **my Social Security account** at socialsecurity.gov/myaccount.

A handwritten signature in cursive script that reads "Carolyn W. Colvin".

Carolyn W. Colvin
Acting Commissioner

To view your *Social Security Statement* online anytime create a **my Social Security** account today!



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socialsecurity.gov/myaccount

Follow the Social Security Administration at these social media sites.





Your payment would be about
\$X,XXX a month
at full retirement age

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MAINTOWN, USA 11111-1111

April 7, 2014

Your Social Security Statement

Are you thinking about retirement? Are you ready for retirement?

We have tools that can help you!

- Estimate your future retirement benefits at www.socialsecurity.gov/estimator
- Apply for retirement, spouse's, Medicare, or disability benefits at www.socialsecurity.gov/applyforbenefits
- And once you receive benefits, manage your benefits at www.socialsecurity.gov/myaccount

Your *Social Security Statement* tells you about **how much you or your family would receive** in disability, survivor, or retirement benefits. It also includes our record of your lifetime earnings. Check out your earnings history, and **let us know right away if you find an error**. This is important because we base your benefits on our record of your lifetime earnings.

Social Security benefits are **not intended to be your only source of income when you retire**. On average, Social Security will replace about

To view your *Social Security Statement* online anytime create a **my Social Security** account today!



my Social Security
www.socialsecurity.gov/myaccount

40 percent of your annual pre-retirement earnings. You will need other savings, investments, pensions, or retirement accounts to live comfortably when you retire.

To view your *Statement* online anytime, create a **my Social Security** account at www.socialsecurity.gov/myaccount.

Carolyn W. Colvin
Acting Commissioner

Follow the Social Security Administration at these social media sites.



Notes

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¹ In this article, the capitalized term “*Statement*” refers exclusively to the *Social Security Statement*, while “statement” refers generically to both the *PEBES* and the *Social Security Statement*.

² To access his or her online *Statement*, an individual must create a [my Social Security](http://www.socialsecurity.gov/mystatement/) account. Information on creating this account is available at <http://www.socialsecurity.gov/mystatement/>.

³ The original Social Security Act of 1935 contained no reference to earnings records.

⁴ The Social Security Board was established by the Social Security Act of 1935 and was composed of three members appointed by the President. In 1946, the SSA, with a single Commissioner, replaced the Board (SSA n.d. b).

⁵ The National Commission on Social Security is not to be confused with the National Commission on Social Security Reform (informally known as the Greenspan Commission after its Chairman). The latter was appointed by Congress and President Reagan in 1981 and delivered its report in 1983. For additional information on the National Commission on Social Security, see <http://www.socialsecurity.gov/history/reports/80commission.html>. For additional information on the National Commission on Social Security Reform, see <http://www.socialsecurity.gov/history/reports/gspan.html>.

⁶ The report noted that private pension plans were required by the Employee Retirement Income Security Act to provide annual information to all covered employees on their accrued pension benefits, including projected Social Security benefits for those plans closely coordinated with Social Security. Thus, the National Commission on Social Security stated that it was “only reasonable” for SSA to provide similar information.

⁷ SSA historian Larry DeWitt, e-mail response to third-party query, March 11, 2003.

⁸ There is disagreement between the *Congressional Record*, in which Moynihan states that both these events took place on August 4th, and the 2009 Social Security Advisory Board report, which states that SSA began providing statements on August 8th.

⁹ SSA historian Larry DeWitt, e-mail response to third-party query, March 11, 2003.

¹⁰ Eligible individuals were defined as those having a Social Security number, aged 25 or older, and having wages or net earnings from self-employment.

¹¹ Title II of the Social Security Act pertains to Federal Old-Age, Survivors, and Disability Insurance (OASDI) benefits. These are benefits paid to retired or disabled workers and their families, and to the families of deceased workers.

¹² OBRA 1990 included a superseding requirement that SSA send the statement annually rather than biennially. It also directed the Internal Revenue Service, upon written request of the SSA commissioner, to provide taxpayer addresses to SSA for use in statement mailings.

¹³ SSA also considered other options to deal with the large number of mailings that would be required in fiscal year 2000. These options included extending the implementation schedule beyond fiscal year 2000 or sending out statements every 2 or 3 years rather than annually. Because both of these options would have required supporting legislation, SSA instead chose to mail statements to increasingly younger groups of workers in fiscal years 1996–1999 (Enoff n.d.).

¹⁴ However, surveys commissioned by SSA in 2008–2010 would find that only 5 percent of statement recipients had ever found an error in the amount of earnings reported.

¹⁵ Over the years the 800 number menu has expanded to allow callers to select recorded messages on frequently requested topics—for example, why did I get this statement, where did you get my address, how do I request a new statement, and how do I correct a Social Security card. The SSA website also answers frequently asked questions (SSA n.d. a).

¹⁶ As SSA phased in automatic mailing of earnings and benefit statements, it began investigating ways to put *PEBES* online. Because it was concerned about the privacy risks of using the Internet to transmit personal data, the agency instituted procedures to mitigate these risks. In fall 1996, SSA pretested the online *PEBES* with a small number of users, who reacted very positively to having online access to their earnings and benefits information. In March 1997, SSA began national testing of its online *PEBES*. Within days, news media and members of Congress expressed concerns about privacy risks. On April 9, 1997, SSA announced that it was suspending its online *PEBES* to get advice on how to provide this service while protecting the privacy of personal data. Acting Commissioner John Callahan stated that a more modest and secure version of the online *PEBES* would be rolled out by the end of the year. This new version would enable individuals to get online estimates of their retirement benefits; however, the underlying information on earnings and tax histories would only be sent by regular mail (Tumin 1998).

¹⁷ Preparing and mailing the *Statements* costs about \$70 million a year.

¹⁸ The agency based its decision to suspend *Statement* mailings on determinations by the Department of Justice’s Office of Legal Counsel and the Government Accountability Office’s Comptroller General that agencies reasonably anticipating a shortfall in their appropriations have both “the authority and duty to curtail or discontinue programs

and activities, including activities required by statute” (SSA 2012c).

¹⁹ In order to view their online *Statements*, individuals must provide personal information that matches information already on file with SSA. The agency also uses Experian, an external authentication service provider, for additional verification that includes answering security questions about financial transactions and accounts that Experian has on file. Individuals who, for any reason, cannot complete the verification process may request that SSA mail them a printed *Statement* or may visit a local Social Security office for help in creating an account and viewing the online *Statement*.

²⁰ However, these are not necessarily unique visits. Some individuals may have viewed their online *Statements* multiple times.

²¹ In July 2013, the agency resumed on-request mailings to those individuals who failed electronic authentication to [my Social Security](#).

²² The act also required SSA to send a modified *Statement* to noncovered employees describing the potential reduction of Social Security benefits resulting from receipt of a pension from noncovered employment. WEP and GPO, complex and not easily understood provisions, apply to less than 3 percent of Social Security beneficiaries. In 2007, more than 49 million individuals received Social Security benefits, of whom only about 440,000 individuals were affected by GPO and just over 880,000 were affected by WEP (SSAB 2009).

²³ Three surveys commissioned by SSA in 2008–2009 showed that between 30 percent and 38 percent of *Statement* recipients first learned of online claim filing by reading the *Statement*.

²⁴ Larry DeWitt, e-mail response to third-party query, November 1, 2004. The Office of Information is now the Office of Communications. The Office of Governmental Affairs is now the Office of Legislation and Congressional Affairs. In SSA’s current organizational structure, these are two separate and distinct offices.

²⁵ The online *Statement* also includes links to SSA’s online tools for estimating and applying for retirement benefits.

²⁶ This was SSA’s second strategic plan. The first was issued in 1988, before legislation mandated *PEBES*.

²⁷ However, at that time, many recipients would have received their *PEBES* on request, meaning that they were motivated enough to ask for this information. Individuals aged 47 or older would have received at least one automatically mailed *PEBES*. Thus, *PEBES*’ true effect is difficult to determine.

²⁸ The questions asked in Gallup’s 2003 and 2004 surveys were so different from those in the previous surveys that their results are not comparable to the earlier ones.

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RECRUITMENT IN THE MENTAL HEALTH TREATMENT STUDY: A BEHAVIORAL HEALTH/EMPLOYMENT INTERVENTION FOR SOCIAL SECURITY DISABLED-WORKER BENEFICIARIES

by David S. Salkever, Brent Gibbons, William D. Frey, Roline Milfort, Julie Bollmer,
Thomas W. Hale, Robert E. Drake, and Howard H. Goldman*

This article analyzes subject recruitment for the Mental Health Treatment Study (MHTS)—a national 23-site randomized trial that provided access to effective treatment and rehabilitation interventions for Social Security Disability Insurance (DI) beneficiaries with psychiatric impairments. We use regression analyses to better understand the likely take-up rate for MHTS replications and/or expansions and to identify characteristics of DI beneficiaries most likely to enroll. Results indicate that among potential MHTS subjects with confirmed telephone contacts, the take-up rate was 14.0 percent—well above rates for previous Social Security Administration randomized trials. Regression results suggest, as an upper bound, that take-up rates in the 18.0–25.0 percent range could be obtained by targeting recruitment to the group of beneficiaries that has administrative records of recent vocational or labor-market activity. Future interventions with large, heterogeneous target populations should consider the implications here for generalizing intervention impacts and modifying recruitment strategies.

Introduction

Although promoting the return to work of Social Security Disability Insurance (DI) beneficiaries has long been an objective of the Social Security Administration's (SSA's) policy initiatives, several factors argue for a special focus on beneficiaries with psychiatric impairments. Those beneficiaries are a large proportion of all DI beneficiaries; in 2011, they accounted for 29.1 percent of all Social Security disabled-worker beneficiaries younger than age 50.¹ Moreover, disabled workers with psychiatric impairments tend to go on the DI rolls at younger ages than other beneficiaries.

Access to effective behavioral health treatment and vocational rehabilitation for DI beneficiaries with psychiatric impairments is also a relevant concern for

SSA and other federal agencies. A number of behavioral health treatment and rehabilitation interventions for persons with severe and persistent mental disorders (SPMDs) have demonstrated evidence-based effectiveness.² However, Medicare coverage for these interventions (as well as Medicaid coverage for individuals receiving concurrent Supplemental Security Income (SSI) payments and DI benefits) has important gaps. Thus, large numbers of beneficiaries with SPMDs do not benefit from these effective interventions, and, as a result, do not achieve attainable improvements in their functioning.³

In response to available intervention concerns, SSA implemented the Mental Health Treatment Study (MHTS)—a national randomized trial that provided

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Selected Abbreviations

DI	Disability Insurance
IPS	individual placement and support
MBR	Master Beneficiary Record
MHTS	Mental Health Treatment Study
RIG	research information group
SE	supported employment
SPMD	severe and persistent mental disorder
SSA	Social Security Administration
SSI	Supplemental Security Income
TTW	Ticket to Work
TWP	trial work period

access to effective treatment and rehabilitation interventions for DI beneficiaries with psychiatric impairments. Those beneficiaries randomized to the MHTS treatment group received (1) supported employment (SE) services following the evidence-based individual placement and support (IPS) template, (2) systematic medication management services to monitor and manage their pharmacological treatments, (3) enhanced insurance coverage for behavioral health care, and (4) reimbursement of out-of-pocket behavioral health or work-related expenses (transportation, copays, and so forth). In addition, SSA's requirement for continuing disability reviews was waived for a 3-year period for the treatment group.

Item 1, IPS-SE services, was directed specifically at helping beneficiaries return to work and was thus provided to all persons in the treatment group. Those services were provided by a local supported employment agency in each of the 23 study sites. The IPS template for SE services includes the following critical elements:

- Consumer choice through the provision of services to all consumers interested in employment.
- Integration of vocational services with the overall mental health treatment program.
- Placement in regular competitive job settings, with no mandatory requirements for preemployment training or prior placement in segregated/sheltered work.
- Rapid job search, with an employment specialist and the client beginning job searches shortly after enrollment in IPS.
- On-going follow-up services by the employment specialist, once the client is placed, for as long as services are needed.

- Service priorities and content based primarily on consumer preferences.
- Benefits counseling for all consumers.

Items 2, 3, and 4 were provided to treatment group beneficiaries on an as needed basis; IPS-SE services were provided to all persons in the treatment group.⁴

MHTS control group beneficiaries received a comprehensive manual of available community resources and services and a total payment of \$100 for completing a baseline interview and eight follow-up quarterly interviews. These beneficiaries' access to and use of treatment and rehabilitation services were presumed to reflect "treatment as usual."

Because access to evidence-based IPS-SE services was a critical component of the MHTS intervention, recruitment of beneficiaries to the trial was restricted to the geographic catchment areas of 23 sites around the country where agencies providing IPS-SE services were already in existence. Those sites were selected to provide geographic and demographic diversity; at least one site was located in each of the four census regions of the country, but there was a preponderance of sites in the eastern and midwestern states because of the concentration of agencies providing IPS-SE services in those areas of the country.

The MHTS trial was undertaken to assess the potential effectiveness of a program that makes this intervention package available on a national basis to DI beneficiaries with SPMDs. An important step in this assessment was to examine the MHTS recruitment experience to better understand the likely take-up rate for such a program and the characteristics of the DI beneficiaries most likely to enroll. Because the potential target population for such a program is large and heterogeneous, understanding the differences between study participants and nonparticipants is important for generalizing any results about intervention impacts to other groups of beneficiaries. Moreover, maximizing the cost effectiveness of actual future implementations will depend on efficient targeting of recruitment efforts to those groups of beneficiaries expected to have the highest take-up rates *and* to show the highest average benefit from the program.

The overall analysis in this article addresses the enrollment component of the MHTS. We begin with a brief description of the MHTS recruitment and enrollment procedures and follow with an overview of our analytic approach. We then discuss data sources and variables, followed by the results of our statistical

analyses. The study results and implications for future policy and research, in addition to our conclusion, are taken up in the Discussion section.

Recruitment and Enrollment Processes in the MHTS

This section provides a brief description of our recruitment and enrollment procedures. We discuss the target population, the sampling process and selection of beneficiaries, and the recruitment process and its outcomes.

Target Population

The MHTS recruited DI beneficiaries who were (1) aged 18 to 55, (2) adjudicated as a disabled worker based on a diagnosis of schizophrenia or a mood disorder, and (3) within the primary or backup catchment areas of one of the selected study sites. The catchment areas for each site were determined via in-person meetings of MHTS staff with each of the SE provider agencies. The areas were defined based on five-digit zip codes, with consideration of distances from the sites as well as political jurisdiction boundaries. Primary catchment areas generally included formally specified service area boundaries for sites (when they existed) and/or zip codes within a radius of about 30 miles from each site. Back-up areas included persons residing near to but outside of the primary catchment areas.

SSA provided study investigators with a data file on 61,530 DI beneficiaries from the Master Beneficiary Record (MBR) files who met the three primary inclusion criteria. Application of additional exclusion criteria based on MBR data—for persons with a legal guardian and/or residing in a nursing home or custodial institution—eliminated 1,499 of those beneficiaries from the target population.

Sampling Process and Selection of Beneficiaries to Contact

Names and contact information on beneficiaries eligible for the study were released (in blocks of 25 persons at a time) to the study sites for recruitment efforts. Random sampling was used to select beneficiaries for release, with the initial samples for each site coming from their primary catchment areas. The target enrollment was initially set at 3,000 persons distributed evenly across all sites.

The process of recruiting the selected beneficiaries began in October 2006. Initially, beneficiaries not enrolled in SSI but who were on the DI rolls for less

than 24 months were excluded because of concerns about their lack of health insurance coverage and possible expense to the MHTS for covering them for behavioral health services. However, near the end of the first 12 months of recruitment, that group was subsequently sampled at the same rate as other beneficiaries (so their underrepresentation was limited to those initial months of the recruiting process.)

Because recruitment proceeded at a slower pace than originally projected, beneficiaries from the back-up catchment areas were released to the sites for recruitment, and the overall target was reduced from 3,000 to 2,200 persons. July 31, 2008, was set as the date for terminating recruitment outreach for all sites; with the completion of recruitment activities already in process by that date, the final number of enrollees was 2,238.

Recruitment Process

The process for recruiting each beneficiary involved five steps. First, a letter was printed and mailed—along with a brochure about the study and a return response card—to the contact name and address of the beneficiary as provided by SSA. The letter explained the study and invited the beneficiary to attend a research information group (RIG) meeting. Second, 3 to 5 days after mailing the letter, the research assistant (RA) at each site made one or more follow-up telephone calls to the beneficiary to confirm receipt of the introductory mailing, update or add to the beneficiary's contact information, provide further explanation of the study if needed, invite the beneficiary to attend an RIG meeting, and to confirm that the beneficiary met the three primary inclusion criteria.

Third, beneficiaries who were interested in enrollment attended in-person RIG meetings where RAs explained additional eligibility criteria, study randomization and procedures for treatment and control groups, and the content and schedule of study interviews. (The additional eligibility criteria were (1) no life-threatening physical conditions that would prevent study completion, (2) no competitive job within the month prior to study enrollment, and (3) no receipt of SE services from the study site within the 6 months prior to enrollment.) Interested beneficiaries were usually required to attend two RIG meetings, though some of them requested and received individual meetings with the same content. All beneficiaries who enrolled were required to attend at least two RIG or individual meetings on separate days to ensure their understanding of and commitment to the study.

Fourth, beneficiaries who wished to proceed with enrollment completed a brief in-person competency and health-screening interview conducted by the RA. This was used to verify that beneficiaries were competent to give consent and understood the nature of the study, to ensure that beneficiaries did not report a life-threatening physical condition, and to obtain signed enrollment consent forms. Fifth, beneficiaries completed a baseline interview and were then randomized to one of the two study groups (treatment or control).

As the foregoing description suggests, the recruitment process for each beneficiary involved multiple steps (including numerous follow-up contacts after the initial mailing of recruitment letters) and considerable time and effort on the part of RAs at the study sites. Given the demands on the RAs' time and a slower-than-projected rate of enrollment, Westat study staff began in November 2007 to assist the RAs at the sites by mailing initial recruitment letters and by making some of the initial follow-up calls. Finally, RAs were expected to document in Westat's Survey Management System every telephone contact or attempted contact with the beneficiaries being recruited; however, given the demands on their time, it is not surprising that this documentation process was incomplete.

Recruitment Outcomes

The flowchart in this article describes the outcomes of the recruitment process. Of the 61,530 beneficiaries in our target population, 31,785 were identified as not potential enrollees for one of the following reasons:

- 5,274 did not meet all study inclusion criteria;
- 14,397 could not be located;
- 4,166 were not mailed the initial recruitment letter; and
- 7,948 never received a follow-up call.

Some beneficiaries in the last two groups were not actively recruited because their sites ended recruitment efforts before letters could be printed and/or mailed or before follow-up calls could be made.

Of the remaining beneficiaries, 15,982 were identified as *potential enrollees* if (1) there was a study record of an RA telephone contact with that beneficiary and (2) the beneficiary met study eligibility requirements. Of those 15,982 potential enrollees, there were 3,971 who attended at least one RIG meeting (group or one-on-one), and of that group of beneficiaries, 2,238 were ultimately enrolled in the study. Finally, for an additional 13,763 beneficiaries

who did not enroll, no records showed that a study RA had spoken with them. Because we could not ascertain whether those beneficiaries were potential enrollees who were never made aware of the study (and therefore could not possibly have enrolled), we classified them as *possibly potential enrollees*.

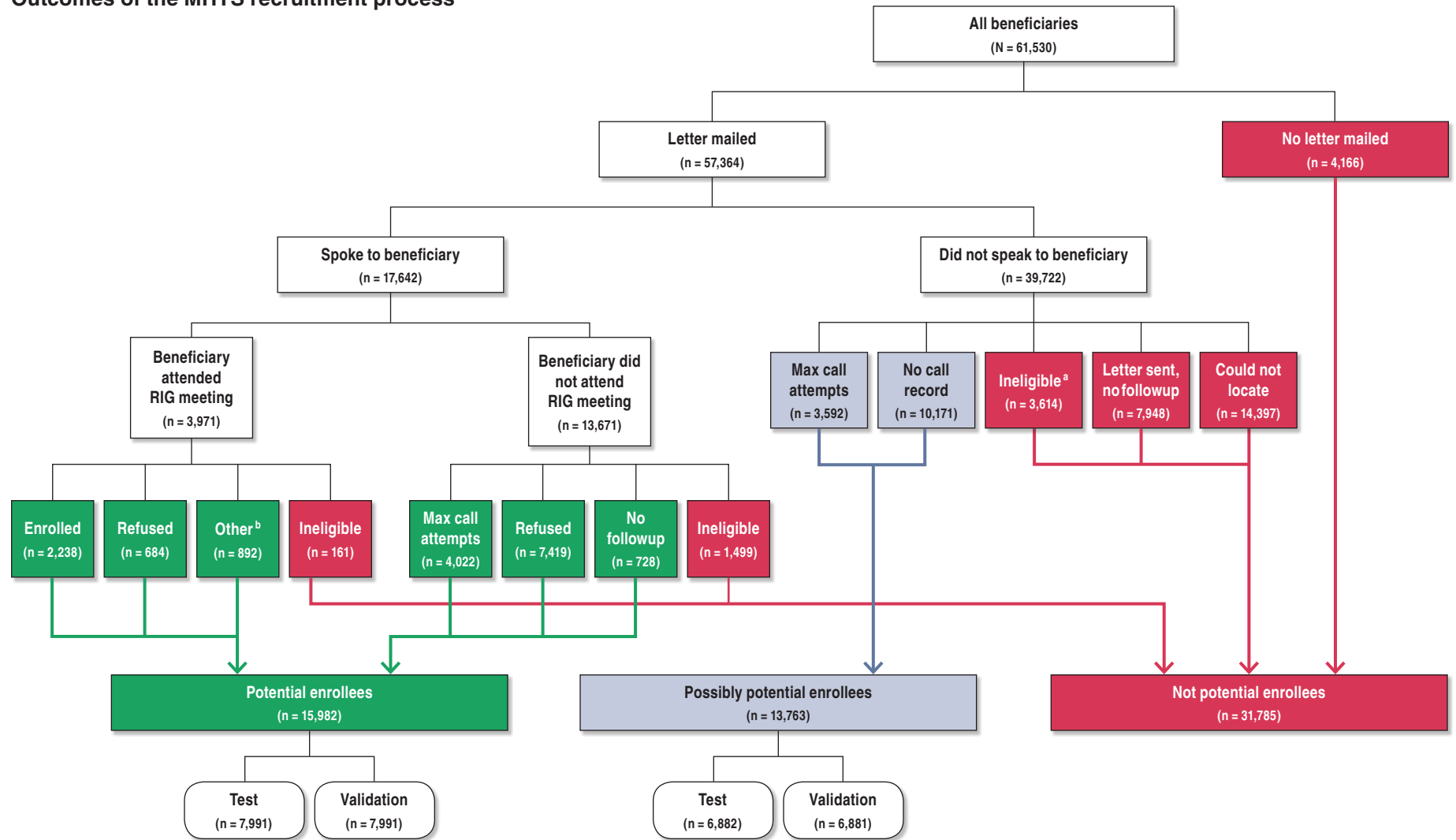
In this article, we examined the determinants of enrollment for both the 15,982 potential enrollees and for the combined set of 29,745 beneficiaries we classified as either *potential enrollees* or *possibly potential enrollees*. Thus, when focusing only on the potential enrollees, we observed a successful recruitment rate of 14.0 percent (2,238 out of 15,982); when including the possibly potential enrollees, that rate dropped to 7.5 percent.

Overall Approach to the Analyses

We used individual-level data on the 15,982 potential enrollees in the MHTS and on the 13,763 possibly potential enrollees to estimate reduced-form models of the MHTS enrollment outcomes. Logistic regression was used to predict enrollment outcomes by regressing a 0-1 enrollment outcome dummy on a variety of personal characteristics of beneficiaries that are routinely available from Social Security administrative data files, as well as characteristics of the location of residence of the beneficiary that are publicly available from other data sources. A principal objective of this analysis was to provide information on enrollment in the MHTS that allowed comparisons of beneficiaries who enrolled with the larger group of beneficiaries who did not enroll. Such comparisons are important for considering the universe of beneficiaries to which one might appropriately generalize the outcome results from the MHTS.

Two different reduced-form models were estimated separately: one for potential enrollees and another for potential *plus* possibly potential enrollees. The two different models are based on two opposing assumptions about the source of differences between the two groups of beneficiaries. Combining the two groups assumes no effects of unobserved differences in the enrollment process between beneficiaries in each of the two groups. Estimation of a separate model for potential enrollees assumes that the unobserved factors that precluded possibly potential enrollees from speaking with MHTS personnel were not correlated with the unobserved factors that influenced potential enrollees' enrollment decisions. A third possible assumption is that these two sets of unobserved factors were correlated, resulting in a selection bias in estimates from the reduced-form models

Flowchart.
Outcomes of the MHTS recruitment process



SOURCE: Westat (2011).

a. Deemed ineligible for various reasons based on study-site records: The beneficiary was receiving supported employment services at the site, a proxy answered the recruitment call and indicated that the beneficiary had a legal guardian, and so forth.

b. Includes beneficiaries who fell into one of three result codes: No longer locatable (n = 74), Max calls (n = 731), and Unknown (n = 87).

for potential enrollees. To explore that possibility, we also reestimated those models using a Heckman selectivity-correction approach and a probit enrollment regression. However, results of that analysis (available from the authors) failed to reject the null hypothesis of no selection bias.

Finally, although we focus on reduced-form models, we also present estimates (in the Appendix table) of a structural model that breaks the recruitment process down into the following three outcomes: a 0-1 dummy for being potential enrollees, a 0-1 dummy for potential enrollees attending the RIG meeting, and a 0-1 dummy for RIG meeting attendees enrolling as participants in the study. This analysis parallels the approach used in a recent study of enrollment in an SSA-sponsored randomized trial to promote work among SSI recipients—the New York WORKS Demonstration Project (Ruiz-Quintanilla and others 2005/2006).

Statistical Methods

To arrive at final regression estimates for our reduced-form enrollment models, we undertook a substantial effort in specification searching via exploratory regression analyses. This effort was necessitated by several factors. First, data on a large number of potentially relevant explanatory variables were available for our analyses, including a number of variables that were closely related in meaning to one another (for example, measures of recent preenrollment labor-market activity). Second, the dearth of existing literature directly relevant to our analyses meant that we had little in the way of prior empirical or conceptual guidance in distinguishing between relevant and irrelevant explanatory variables. Similarly, we had little prior evidence to guide us in terms of choosing the functional form for those continuous explanatory variables under observation.

An important consequence of using a substantial specification search with exploratory regressions is the problematic use of data from exploratory analyses to conduct valid hypothesis tests on the final models chosen in the specification search. Overfitting will result in p-values that are biased downward and an elevated risk of a type-I error.⁵ A widely used approach to resolve that difficulty and obtain valid statistical tests is to hold out a portion of data from the exploratory analyses and use that portion to validate the final models selected from the specification search (Studenmund 2011, 185–186; Kennedy 2008, chap. 5; Hilbe 2009, 286–290). We followed that approach in our analysis, using a two-step split-sample replication process in

testing hypotheses and obtaining parameter estimates for the reduced-form models. We randomly divided our data into two halves, designating one half to serve as the “test” sample for our exploratory regressions and the other half as the “validation” sample.

Exploratory regressions estimated on the test-sample data included regressions restricted to potential enrollees as well as regressions including both potential and possibly potential enrollees. A large number of regressor variables were included in the initial exploratory regressions. Subsequent exploratory regressions included only selected regressors from the initial regressions, based on the signs, significance, and magnitudes of their coefficients in the initial regressions. This “testing-down” process continued until the final set of regressors was obtained. We discuss the results of those exploratory regressions and report the two “final” regression models (one for potential enrollees, and one for possibly potential *plus* potential enrollees) selected from this process. Then we report the results of reestimating these final regression models using only the data from the validation sample.

Several alternative logistic regression methods were used to obtain coefficient estimates: (1) regressions with separate site intercepts treated as regression parameters, (2) conditional logit regressions (with fixed site effects as incidental parameters), (3) regressions without site intercepts or fixed effects, (4) random effects regressions with random intercepts for each site, and (5) random effects regressions with random intercepts for each site and for each of 63 counties where study beneficiaries resided. All analyses were performed using the pseudo-maximum-likelihood algorithm in Stata (version 11), and all p-values for our coefficient and marginal effect estimates were robust (that is, they allowed for clustering by site). Coefficient estimates and two-tailed p-values for our regressors were very stable across all these methods. Results reported below are those obtained using method 1.^{6,7}

Explanatory Variables

This section provides a discussion on variable selection, definitions, and data sources.

Conceptual and Practical Considerations in Explanatory Variable Selection

Because the MHTS intervention focused on IPS-SE services, our selection of potentially relevant regressors was based primarily on the view that a decision to enroll is positively related to a desire to increase work opportunities and earnings. That selection implied

that factors identified in previous research as potential predictors (positive or negative) of labor supply and earnings would be related (positively or negatively) to the probability of enrollment in the MHTS. In addition, because the MHTS intervention also provided improved access to behavioral health treatment services, factors predictive of a demand (higher or lower) for this improved access should be related (positively or negatively) to enrollment probability. In some cases, both of these perspectives have similar implications for the expected positive or negative sign of an explanatory variable. For example, a DI beneficiary who is also receiving SSI payments presumably has less to gain from increased labor supply (because of a weaker work history and because of the reduction in SSI payments as his or her earnings increase). An individual receiving concurrent SSI/DI benefits also has greater access to behavioral health services because of Medicaid coverage; thus, one might expect receipt of SSI payments to negatively impact the probability of enrolling in the MHTS. By contrast, a variable such as “severity of mental disorder symptoms” might be expected to negatively impact expected earnings gains from the MHTS, but positively impact the demand for increased access to behavioral health treatments.⁸

Although these two perspectives suggest a large number of possible explanatory variables, available data on the target population of beneficiaries are restricted to the variables in both the Social Security administrative data sets and the linked data on the geographic area in which each beneficiary resides. Thus, our selection of beneficiary-level explanatory variables is confined primarily to demographic and diagnostic characteristics, information on benefit history, and only selected indicators of previous labor market-related activity that are captured in Social Security’s administrative data.⁹

Variable Definitions and Data Sources

Data definitions and sources for selected explanatory variables used in our regression analyses are given in Table 1. (Brief descriptions of additional regressors in the exploratory regressions are given in the following section.) The principal data sources for our explanatory variables are two Social Security administrative databases: the Master Beneficiary Record file (MBR) and the Disability Control File (DCF). SSA maintains these files on all DI beneficiaries. The MBR was the principal source for variables describing individual beneficiary characteristics. Data from the DCF were used to define variables relating to beneficiaries’ pre-recruitment work activities.

Many of the variables that used DCF or MBR data also incorporated information on the recruitment date that we assigned to each beneficiary. The assigned recruitment date was the date on which the recruitment letter was printed for the 55,097 beneficiaries (among the total 61,530 beneficiaries in the target population) for whom this date was available. For the remaining cases missing a recruitment letter date, we substituted the first available date from Westat’s Study Management System in the following sequence: initial contact date (144 cases), follow-up contact date (27 cases), spoke to beneficiary date (1 case), and attempted contact date (2,095 cases). For the remaining 4,166 cases, we assumed that no recruitment letters were generated because they had no other dates in the system.¹⁰

MBR and DCF data did not contain information on two socioeconomic characteristics of beneficiaries—household income and education—missing for a substantial minority of beneficiaries. Therefore, we used the year-2000 version of the Census Summary Files (CSFs) to construct proxies for those variables.^{11,12} In addition, to test for the possible influences of local labor-market conditions, we used as explanatory variables county-level data—on unemployment and on employment (both as of the recruitment date and the 6 months that lagged)—from the Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics (LAUS) program. The beneficiary’s address from the MBR was used to match CSF and BLS/LAUS variables with corresponding counties or census tracts. The address from the MBR was also combined with demonstration site address information from Westat’s Survey Management System to compute a variable for driving distance to the demonstration site; this was done to test the hypothesis that distance (as a proxy for travel time and costs) would be negatively related to the probability of enrolling in the MHTS.

Values for the means and standard deviations for the explanatory variables are shown in Table 2 for potential enrollees and possibly potential enrollees.¹³ (Note that 234 potential enrollees and 361 possibly potential enrollees were excluded from the table¹⁴ because of (1) missing values for at least one of the variables in the table, (2) MBR data indicating a date of death prior to either October 2006 or the beneficiary’s recruitment date, or (3) coded values that were clearly in error; examples of this were negative values for the time-to-recruit variable and values outside the 0-1 interval for the census-tract fraction of persons with at least some college education.)

Table 1.
Explanatory variable names, definitions, and sources

Variable name	Definition	Source
Beneficiary characteristic		
Age/100	Age in hundreds of days	MBR; RD
Age/100^2	Age/100 * Age/100	MBR; RD
Gender	= 1 for male; 0 for female	MBR
Race	= 1 if black; 0 otherwise	MBR
Mooodisdum	= 1 for beneficiary with an affective mood disorder; 0 otherwise	MBR; RD
SPMD_primary	= 1 if primary diagnosis is for a severe and persistent mental disorder (SPMD); 0 otherwise	MBR; RD
SPMD_second	= 1 if secondary diagnosis is for an SPMD; 0 otherwise	MBR; RD
SPMD_either	= 1 if either a primary or secondary diagnosis is for an SPMD; 0 otherwise	MBR; RD
Recruitment period		
Yr2006	= 1 if recruited in calendar year (CY) 2006; 0 otherwise	SMS
Yr2007	= 1 if recruited in CY2007; 0 otherwise	SMS
Yr2008	= 1 if recruited in CY2008; 0 otherwise	SMS
Exposure	# of days between contact date and site recruitment end date	SMS; RD
Exposure^2	Exposure × Exposure	SMS; RD
Tract/block group sociodemographic		
Edu_bach	% in tract with more than a high school degree, by age and gender	CSF
Edu_hs	% in tract with high school equivalent education, by age and gender, no bachelor's	CSF
Edu_nohs	% in tract with less than a high school equivalent, by age and gender	CSF
InMedEarnings	Log of median 1999 earnings of all persons in block group aged 16 or older, by gender	CSF
Residence type		
RepPayee	= 1 if address on file is for the representative payee; 0 otherwise	MBR
POBox	= 1 if address is a PO Box; 0 otherwise	MBR
InDrivingdist	Log of driving distance to site (in miles)	MBR; SMS
Reciency history		
Monthsonrolls	Months on Disability Insurance (DI) rolls, based on recruitment date and MBR date of entitlement	MBR; RD
Ssidum	= 1 if recipient of Supplemental Security Income (SSI); 0 otherwise	MBR
Mrolls24nossi	= 1 if months on DI are < 24 and <i>not</i> a recipient of SSI; 0 otherwise	MBR; RD
PIA	primary insurance amount	MBR; RD
NHISstart	= 1 if <i>not</i> covered by Medicare at recruitment date; 0 otherwise	MBR; RD
Prerecruitment date work-related activity		
ActiveT90dayspre	= 1 if had an active Ticket in the last 90 days before recruitment; 0 otherwise	DCF; RD
ActiveTeverpre	= 1 if ever had an active Ticket before recruitment date; 0 otherwise	DCF; RD
TWP10+pre	= 1 if beneficiary had trial work period (TWP) end date 10+ years before recruitment date; 0 otherwise	DCF; RD
TWP5-10pre	= 1 if beneficiary had TWP end date 5–10 years before recruitment date; 0 otherwise	DCF; RD
TWP0-5pre	= 1 if beneficiary had TWP end date 0–5 years before recruitment date; 0 otherwise	DCF; RD
TWP0-3post	Beneficiary had a TWP end date 0–3 years after recruitment date; 0 otherwise ^a	DCF; RD
Sqrt_Earn1_6pre	Square root of sum of beneficiary's self-reported earnings and self-employment net income 1–6 months before recruitment date; 0 if no report	DCF; RD
Sqrt_Earn7_23pre	Square root of sum of beneficiary's self-reported earnings and self-employment net income 7–23 months before recruitment date; 0 if no report	DCF; RD
NoEarnRpt1_6pre	No self-report of earnings or self-employment net income in 6 months before recruitment date = 1; 0 otherwise	DCF; RD
Labor-market variable		
Unempcurrent	Unemployment rate in the county where the beneficiary lives, as of the month of the recruitment date	LAUS; RD
Unempdelta	Unemployment rate in the county where the beneficiary lives 6 months before recruitment date	LAUS; RD

SOURCE: Westat (2011).

NOTES: CSF = Census Summary File (2000); DCF = Disability Control File; LAUS = Local Area Unemployment Statistics (Bureau of Labor Statistics); MBR = Master Beneficiary Record; RD = recruitment date; SMS = Survey Management System (Westat).

a. A trial work period can extend over a period of 5 years; thus, an end date 3 years after the recruitment date implies a start date 2 years before the recruitment date.

Table 2.
Characteristics of potential and possibly potential MHTS enrollees (test and validation samples combined): Means and standard deviations for the explanatory variables

Variable name	Potential enrollees only (n = 15,748)		Possibly potential enrollees only (n = 13,402)	
	Mean	Standard deviation	Mean	Standard deviation
Beneficiary characteristic				
Age/100 x (100/365) (= age in years)	45.9	7.4	44.3	8.2
Gender (= 1 if male)	0.449	0.497	0.490	0.500
Race (= 1 if black)	0.243	0.429	0.273	0.446
Mooddisdum	0.684	0.465	0.678	0.467
SPMD_primary	0.727	0.446	0.660	0.474
SPMD_second	0.276	0.447	0.251	0.433
SPMD_either	0.729	0.444	0.661	0.473
Recruitment period				
Yr2006	0.088	0.283	0.042	0.200
Yr2007	0.504	0.500	0.301	0.459
Yr2008	0.408	0.491	0.657	0.475
Exposure	279.2	168.7	202.8	148.8
Tract/block group sociodemographic				
Edu_bach	0.264	0.192	0.262	0.201
Edu_hs	0.548	0.151	0.532	0.158
Edu_nohs	0.188	0.153	0.206	0.168
Median earnings (anti log of lnMedEarnings)	25,706	9,179	25,051	9,366
Residence type				
RepPayee	0.161	0.367	0.267	0.442
POBox	0.037	0.190	0.062	0.241
Driving distance (antilog of lnDrivingdist)	11.42	12.42	12.12	20.61
Reciency history				
Monthsonrolls	118.7	78.0	110.9	77.1
Ssidum	0.191	0.393	0.223	0.416
Mrolls24nossi	0.036	0.186	0.052	0.223
PIA	8,501	3,563	8,169	3,468
NHISstart	0.050	0.218	0.063	0.243
Prerecruitment date work-related activity				
ActiveT90dayspre	0.046	0.210	0.044	0.205
ActiveTeverpre	0.070	0.255	0.059	0.235
TWP10+pre	0.063	0.242	0.058	0.233
TWP5-10pre	0.054	0.225	0.052	0.222
TWP0-5pre	0.049	0.217	0.071	0.258
TWP0-3post	0.009	0.096	0.009	0.096
Sqrt_Earn1_6pre	236	1,465	455	2,241
Sqrt_Earn7_23pre	885	4,047	1,464	6,281
NoEarnRpt1_6pre	0.929	0.256	0.897	0.304
Labor-market variable				
Unempcurrent	4.59	1.13	4.83	1.32
Unempdelta	4.40	1.06	4.43	0.99

SOURCE: Westat (2011).

NOTES: Only data for persons included in the logit regressions are included in this table.

PIA = primary insurance amount; SPMD = severe and persistent mental disorder; SSI = Supplemental Security Income; TWP = trail work period.

Possibly potential enrollees show smaller values (than potential enrollees) for the time-to-recruit variable, and relatively more of them had recruitment dates in 2008; thus, it is likely that recruitment activities were terminated more rapidly for that group than they were for the potential enrollees. Possibly potential enrollees also reported slightly higher mean earnings to SSA in the prerecruitment period (though some of that differential was due to the influence of a few very large earnings figures), a much higher rate of representative payees (26.7 percent versus 16.1 percent), and a larger right tail for the distribution of distance values.

Reduced-Form Enrollment Regression Results

In this section, we discuss in detail our exploratory regressions in addition to our validation-sample regressions.

Exploratory Regressions

We began our empirical investigations by estimating a large number of exploratory logistic regressions on two samples: (1) a test sample composed of a 50.0 percent random sample of potential enrollees and possibly potential enrollees and (2) a subset of this test sample that only included the potential enrollees. The exploratory regressions included all of the explanatory variables (shown in Table 1) that were used in at least some of our analyses, with almost all of those variables included in the initial exploratory regressions.¹⁵

Coefficients and standard errors for the exploratory regressions using our test-sample data were estimated using a variety of methods including maximum likelihood with separate site intercepts, conditional (fixed effects) maximum likelihood, maximum likelihood with clustering of errors (by site), and random-effects logistic regressions (with random intercepts for each site). Variables were retained in the final exploratory regressions based on their p-values and (in select cases) the consistency of the regression results with prior expectations, evidence, or theory.¹⁶

Because some qualitative results (that is, coefficient signs and significance) for individual explanatory variables varied between the exploratory regressions for potential enrollees and those for potential *plus* possibly potential enrollees, our general approach was to retain variables that met our criteria. Variables with estimated coefficients having a two-tailed p-value of approximately 0.10 or less in at least one of the two test-sample regressions were included in the validation-sample regressions.

Table 3 provides results from the final versions of the exploratory regressions on the test sample: Potential enrollees are shown in model 1 and potential *plus* possibly potential enrollees are shown in model 2. All other variables noted earlier in this section that did not meet our inclusion criteria were dropped; several variables were dropped because of stronger results for other variables that were close substitutes (for example, per capita income was dropped in favor of median earnings, and *Edu_hs* and *Edu_nohs* were dropped in favor of *Edu_bach*). The results reported in Table 3 for each variable show the average marginal effects (that is, the change in predicted probability of enrollment in response to a marginal change in the value of each variable).¹⁷ All regressions in the table were estimated with site-specific dummy variables, and standard errors allowed for clustering by site.

The results of the exploratory regressions generally conform to prior expectations based on the enhancing-earnings view of the MHTS, articulated earlier in the Explanatory Variables section. The negative marginal effect of age (-0.0008) is consistent with the thesis that the enrollees' expected payoff period from efforts to increase their work opportunities declines with age (because of the approach of retirement and the increasing risk of further declines in health). Demographic variables relating to gender and race show directions of marginal effects (positive for males and for blacks) that are consistent with prior findings from the labor economics literature about the determinants of labor supply (Altonji and Blank 1999; Pencavel 1986; Killingsworth and Heckman 1986). The negative effects of area median earnings and education levels are more difficult to interpret because those variables could be predictive of both positive market-opportunity wage effects and negative income effects on enrollees' efforts to increase their work opportunities.

A number of other indicator variables from Social Security's administrative data also showed effects on enrollment probabilities consistent with this enhancing-earnings perspective. The negative coefficients for enrollees' SSI receipt and for having a representative payee may reflect poorer future earnings prospects because of more limited work experience and lower expected market wages for those enrollees. Dummy variables relating to prior work (trial work period, or TWP) activities and prior use of Ticket to Work (TTW) opportunities all have positive marginal effects. The pattern of results indicates that persons with the most recent involvement in trial work or return-to-work efforts have the highest probability

Table 3.
Reduced-form enrollment regressions

Variable name	Test sample				Validation sample			
	Potential enrollees only (n = 7,815): model 1		Potential + possibly potential enrollees (n = 14,513): model 2		Potential enrollees only (n = 7,933): model 3		Potential + possibly potential enrollees (n = 14,637): model 4	
	dy/dx	P > z	dy/dx	P > z	dy/dx	P > z	dy/dx	P > z
Age/100 ^a	-0.0008	<0.001	-0.0003	0.006	-0.0003	0.112	7.7E-07	0.994
Gender (male = 1)	0.0256	0.002	0.0084	0.066	0.0150	0.052	0.0059	0.199
Race (black = 1)	0.0331	<0.001	0.0151	0.008	0.0301	<0.001	0.0188	<0.001
Yr2006	0.0277	0.076	0.0088	0.312	0.0264	0.040	0.0080	0.229
Exposure ^a	0.0001	0.001	0.0001	<0.001	0.0001	0.045	0.0001	<0.001
Monthsonrolls	-0.0002	0.001	-0.0001	0.002	-0.0002	<0.001	-0.0001	<0.001
Ssidum	-0.0226	0.083	-0.0123	0.073	-0.0212	0.033	-0.0138	0.023
RepPayee	-0.0559	<0.001	-0.0514	<0.001	-0.0634	<0.001	-0.0519	<0.001
lnDrivingdist	-0.0130	0.015	-0.0095	0.001	-0.0123	0.019	-0.0077	0.044
Edu_bach	0.0628	0.091	0.0304	0.141	-0.0142	0.491	-0.0068	0.560
lnMedEarnings	-0.0431	0.017	-0.0192	0.031	-0.0069	0.553	0.0015	0.832
ActiveT90dayspre	0.0332	0.059	0.0147	0.114	0.0162	0.468	0.0079	0.515
ActiveTeverpre	0.0975	<0.001	0.0581	<0.001	0.0796	<0.001	0.0539	<0.001
TWP10+pre	0.0460	0.030	0.0249	0.028	0.0577	<0.001	0.0333	<0.001
TWP5-10pre	0.0391	0.002	0.0201	0.004	0.0145	0.349	0.0081	0.381
TWP0-5pre	0.0360	0.114	0.0227	0.069	0.0362	0.020	0.0148	0.116
TWP0-3post	0.1363	<0.001	0.0732	<0.001	0.0807	<0.001	0.0541	<0.001
Sqrt_Earn1_6pre	-0.0017	<0.001	-0.0013	<0.001	-0.0022	<0.001	-0.0014	<0.001
Sqrt_Earn7_23pre	0.0004	0.107	0.0002	0.137	0.0001	0.459	9.6E-06	0.920
NoEarnRpt1_6pre	-0.0771	0.002	-0.0445	0.002	-0.1018	<0.001	-0.0601	<0.001

SOURCE: Westat (2011).

NOTES: All regressions include site-specific dummy variables. All p-values allow for clustering of errors by site.

SSI = Supplemental Security Income; TWP = trial work period.

a. Marginal effects are based on a combination of regression coefficients for linear and squared terms.

of enrollment. For example, based on the figures in model 1, a person with an active TTW within 90 days of the recruitment date has a predicted enrollment probability that is roughly 13.1 percent higher (= 3.3 + 9.8) than that for a person with no prior active TTW. Similarly, a person with a TWP whose end date was less than 3 years after the recruitment date has a predicted enrollment probability that is roughly 13.6 percent higher than that for a person without such a TWP. Results for prerecruitment self-reported earnings show an interesting pattern, in that the presence of earnings in the 6 months or less prior to the recruitment date tends to reduce the probability of enrollment, while the presence of earnings in more than 6 months prior to recruitment tends to increase the probability of enrollment; this suggests that persons with very recent self-reported earnings may feel less need to increase their opportunities for earnings. On

the other hand, persons who did not file an earnings report with SSA covering any of the 6 months prior to recruitment were also less likely to enroll. Most of those individuals presumably had virtually no earnings in the recent past; therefore, they had not received any requests from SSA to verify their earnings history. (Others may have had nonreported “under-the-table” earnings and preferred not moving into “regular” jobs with reported income.)

The estimated negative marginal effect for months on the rolls indicates that on average, each additional month reduces the probability of enrollment by 0.02 percent. This finding is consistent with the presumption that as beneficiaries remain on the DI rolls for longer periods, they are less likely to pursue opportunities to increase their earnings and perhaps leave the rolls (Mashaw and Reno 1996).

The negative marginal effect of distance to the site is expected, based on the assumption that the time and money cost to the enrollees of participating in treatment is positively related to distance. The positive effect of the time-to-recruit variable is as expected; persons with a longer time window for completing the recruitment process are more likely to complete the process. This may also explain the positive year-2006 effect, although it may also be related to the correlation between earlier recruitment efforts and beneficiaries' residence in the initial catchment areas for the sites.

Validation-Sample Regressions

Corresponding estimates for marginal effects from the validation-sample regressions are reported in Table 3: in model 3 for potential enrollees and in model 4 for potential *plus* possibly potential enrollees. (Coefficient estimates are available from the authors upon request.) The p-values for a number of variables substantially exceeded those for the test samples, as would be expected when looking at the large number of regressions run on the test samples, which imparts an upward bias to the z-scores of the marginal-effect estimates. On the whole, however, these results generally parallel—in both sign and magnitude—the test-sample

results, and the p-values for the marginal effects are generally quite significant. The main exceptions are the two year-2000 Census Summary File variables, the dummy for an active Ticket within 90 days of the recruitment date, the dummy for a TWP ending 5 to 10 years prior to recruitment, and the effect of prior earnings self-reported to SSA more than 6 months before the recruitment date.

Following Hilbe (2009), we assessed the goodness of fit of our logistic regressions using the Hosmer-Lemeshow test procedure. In particular, we placed our observations in ascending order of predicted enrollment probability, divided the observations into deciles, and compared the mean predicted enrollment probability for each decile with the actual fraction enrolled within that decile. The test statistic is an χ^2 with (10,2) degrees of freedom; higher p-values indicate a better model fit (and failure to reject the null hypothesis that the columns of probabilities were drawn from the same distribution).

Test results from our goodness-of-fit analysis are reported in Table 4 for each of the four regression models shown in Table 3. For both the exploratory regressions with the test samples and the regressions with the validation samples, the mean predicted

Table 4.
Goodness-of-fit analysis

Deciles ^a of ordered groups of observa- tions	Final test-sample exploratory regressions				Validation-sample regressions			
	Potential enrollees only		Potential + possibly potential enrollees		Potential enrollees only		Potential + possibly potential enrollees	
	Mean prediction of enrollment probability	Actual enrollment fraction	Mean prediction of enrollment probability	Actual enrollment fraction	Mean prediction of enrollment probability	Actual enrollment fraction	Mean prediction of enrollment probability	Actual enrollment fraction
1	0.051	0.049	0.020	0.021	0.049	0.052	0.018	0.014
2	0.071	0.070	0.030	0.028	0.069	0.053	0.029	0.028
3	0.086	0.090	0.038	0.039	0.082	0.093	0.037	0.038
4	0.100	0.085	0.046	0.043	0.095	0.088	0.044	0.038
5	0.114	0.119	0.055	0.052	0.109	0.102	0.051	0.050
6	0.129	0.119	0.065	0.066	0.125	0.141	0.060	0.064
7	0.147	0.148	0.077	0.078	0.142	0.141	0.072	0.072
8	0.173	0.174	0.094	0.091	0.165	0.160	0.089	0.099
9	0.216	0.251	0.122	0.130	0.201	0.209	0.118	0.128
10	0.364	0.347	0.233	0.234	0.318	0.315	0.216	0.204
p(5) ^b	0.703	...	0.866	...	0.570	...	0.568	...
p(10) ^b	0.299	...	0.982	...	0.438	...	0.489	...
p(20) ^b	0.448	...	0.977	...	0.558	...	0.772	...

SOURCE: Westat (2011).

NOTE: ... = not applicable.

a. Deciles are based on the predicted probability for each model.

b. p(n) is the p-value for the Hosmer-Lemeshow χ^2 test with n groups.

enrollment probabilities within each decile is fairly close to the actual fraction enrolled. Thus, the p-values based on the deciles (p(10)) are clearly not significant, suggesting that the regression models are a good fit to the actual data. Because the results of the Hosmer-Lemeshow test may vary with the number of groups used, we also reported the results of the test using quintiles (p(5)) and using 20 ordered groups of observations (p(20)). In all cases, the p-values are consistently far above any level that would indicate rejection of the null hypothesis of a significant fit of the model to the data.

Discussion

In this section, we compare the recruitment results of the Mental Health Treatment Study with those of other work-incentive programs. We also discuss the implications of our findings and then present concluding comments.

Comparisons with Results from Previous Programs

As noted in the Recruitment and Enrollment Processes section, the MHTS recruited 2,238 enrollees; that represents 14.0 percent of the 15,982 potential enrollees and 7.5 percent of the 29,745 possibly potential *and* potential enrollees (combined), but only 5.9 percent of 37,693 beneficiaries who were not excluded because of ineligibility or Westat's Survey Management System codes of "no letter mailed" or "could not locate" (see the flowchart discussed and presented in the Recruitment Outcomes section). These percentages are substantially better than enrollment rates from previous SSA recruitment efforts toward randomized trial interventions, such as Project NetWork (4.5 percent) and the New York WORKS project (2.4 percent for members of the two treatment groups with valid addresses).¹⁸ The MHTS recruitment rate is also well above the enrollment rate observed for the TTW program (1.8 percent as of December 2005) for the 13 phase-1 states participating in the initial implementation (for further details, see Stapleton and others (2008, Executive Summary)).¹⁹ Because those programs defined their target groups differently from the MHTS, had varying time constraints on the recruitment process, and varying approaches to recruiting participants, such differences in enrollment rates are not entirely unexpected.²⁰

Qualitative findings about several significant predictors of enrollment in those earlier interventions, however, show similarities to the results of this study. Evaluations of Project NetWork (Burstein, Roberts, and

Wood 1999) and New York WORKS (Ruiz-Quintanilla and others 2005/2006) both found strong positive effects of recent work experience and earnings. The univariate analysis in the TTW evaluation reported that DI beneficiaries who entered an extended period of eligibility (EPE) were much more likely to participate by 2005, and that the enrollment rate was highest for those who most recently entered an EPE (Stapleton and others 2008, chap. 3). This parallels our finding that beneficiaries who had any TWP were more likely to enroll in the MHTS, and that enrollment rates were highest among those who entered a TWP most recently.²¹

These previous studies also examined enrollment rates by months on the disability rolls, with varying results. The TTW evaluation found a positive relationship over months 0 to 60 and then some evidence of a gradual enrollment decline as the number of months increased (Stapleton and others 2008, chap. 3). The Project NetWork study found the highest enrollment rates among persons receiving disability benefits from 2 to 5 years (Burstein, Roberts, and Wood 1999). New York WORKS found higher enrollment rates for persons on SSI for either less than 24 months or more than 96 months. This contrasts with the monotonically negative relationship we reported earlier. Similarly, Project NetWork reported evidence that individuals receiving concurrent SSI/DI benefits had the highest enrollment rates, and SSI recipients had the lowest. Similarly, and in contrast to our results reported earlier, the TTW evaluation also found in univariate analyses that recipients of concurrent benefits had higher enrollment rates than DI-only beneficiaries. However, that result was not confirmed in multivariate analyses on a more limited sample of beneficiaries.²²

Qualitative results of the three previous studies also did not always correspond closely with our findings on demographic and socioeconomic characteristics. Age showed more consistently negative effects on enrollment rates in the Ticket to Work and New York WORKS studies, but the rate was highest for the group aged 31–40 in the Project NetWork study. None of the studies reported strong evidence of gender or race differences in enrollment. Only the Ticket to Work and Project NetWork studies reported evidence of effects of educational attainment on enrollment; both studies found those effects to be positive. Only Project NetWork reported a comparison of rates by household income, which did not show differences.

Given the differences in the target populations and recruitment methods of other studies relative to the MHTS, some differences in the results of other

work-incentive efforts compared with our own findings are to be expected. In addition, differences based on multiple regression results in the New York WORKS and Ticket to Work studies may also reflect differences in the sets of included explanatory variables compared with the present study.

Study Implications

A number of our explanatory variables drawn from Social Security administrative data files are strong predictors of enrollment. Thus, in considering the results of the MHTS intervention, it is important to recognize that the MHTS participants differed from the overall target population of beneficiaries recruited for the study. In particular, relative to the overall target population, MHTS participants were more likely to be beneficiaries with histories of recent earnings (as indicated by preenrollment earnings reports and/or recent TWPs) or an active Ticket. Conversely, MHTS participants were less likely to be beneficiaries who were nonwhite, on SSI, and/or on the DI rolls for a longer period of time.

Our results may be of interest to SSA for possible targeting of subsequent efforts by the agency either to replicate the MHTS experiment or to proceed with

actually implementing the MHTS intervention (that is, providing the package of MHTS treatment services to additional beneficiaries with schizophrenia or affective disorders). Specific targeting strategies would, of course, depend on the objectives of that targeting. For example, to reach a given enrollment target number, SSA could target its subject recruitment efforts to specific beneficiary groups with higher probabilities of enrollment in order to reduce recruitment costs. There may be a cost trade-off, however, between using targeting variables that produce very high enrollment rates but small numbers of enrollees (because they exclude a large fraction of all beneficiaries), versus targeting variables that yield lower enrollment rates but exclude fewer beneficiaries.

Information that could be used to assess alternative targeting strategies—aimed at increasing the enrollment rates for our validation samples—is presented in Table 5. Results are presented in descending order of predicted enrollment rates. As indicated in the first row of the table, among all the indicators that we tested, targeting recruitment to potential enrollees who had an active Ticket at any time prior to enrollment yields the highest mean predicted enrollment probability of 25.3 percent, but yields only 152 predicted

Table 5.
Mean predicted probability of enrollment for selected beneficiaries: Validation sample

Selection criterion	Potential enrollees only			Potential + possibly potential enrollees		
	Predicted enrollees (%)	Number in sample	Predicted enrollees (n)	Predicted enrollees (%)	Number in sample	Predicted enrollees (n)
Ever had an active Ticket to Work	25.3	601	152	15.4	986	152
Ever had active Ticket or trial work period end date 5 years before to 3 years after enrollment	22.2	975	216	11.8	1,830	216
Had trial work period end date 5 years before to 3 years after enrollment	20.0	449	90	9.1	990	90
Any earnings report filed (1–6 months before enrollment)	19.2	583	112	8.9	1,264	112
Reported possible earnings (1–6 months before enrollment)	19.0	579	110	8.8	1,255	110
Ever had active Ticket or any trial work period	18.8	1,758	331	10.1	3,277	333
Reported possible earnings (1–23 months before enrollment)	18.3	1,078	197	8.6	2,279	197
Reported possible earnings (7–23 months before enrollment)	18.1	1,004	181	8.5	2,135	181
Ever had a trial work period	17.6	1,377	242	9.1	2,655	242

Continued

Table 5.
Mean predicted probability of enrollment for selected beneficiaries: Validation sample—Continued

Selection criterion	Potential enrollees only			Potential + possibly potential enrollees		
	Predicted enrollees (%)	Number in sample	Predicted enrollees (n)	Predicted enrollees (%)	Number in sample	Predicted enrollees (n)
Had trial work period ending date 5 years or more before enrollment	16.4	928	152	9.1	1,665	152
Ever had active Ticket or months on rolls < median	15.7	4,302	674	8.2	7,838	645
Ever had active Ticket or InDrivingdist < median	15.3	4,292	655	8.6	7,852	676
Reported possible earnings (1–23 months before enrollment) or months on rolls < median	15.2	4,390	668	7.8	8,178	639
Months on rolls < median or had any trial work period	15.2	4,855	738	7.9	8,950	709
Any earnings report filed (1–6 months before enrollment) or months on rolls < median	15.2	4,202	638	7.8	7,795	608
Months on rolls < median or trial work period ending date 5 years before to 3 years after enrollment	15.1	4,088	618	7.8	7,554	587
Months on rolls < median ^a	15.0	3,965	595	7.7	7,281	561
Reported possible earnings (1–23 months before enrollment) or InDrivingdist < median	14.9	4,541	678	8.1	8,542	696
InDrivingdist < median or trial work period ending date 5 years before to 3 years after enrollment	14.8	4,212	625	8.2	7,859	647
Any earnings report file (1–6 months before enrollment) or InDrivingdist < median	14.8	4,264	631	8.2	7,988	654
InDrivingdist < median ^b	14.6	3,966	579	8.3	7,318	605
Does not have a RepPayee	14.4	6,661	961	8.3	11,604	961
Is not a dual beneficiary	13.9	6,452	898	7.7	11,697	898
Total validation-sample mean	13.6	7,933	1,075	7.3	14,637	11

SOURCE: Westat (2011).

a. The median months on the rolls for potential enrollees is 98; for potential + possibly potential enrollees, it is 92.

b. The median log for potential enrollees is 2.278907; for potential + possibly potential enrollees, it is 2.353563.

enrollees because the number of potential enrollees with an active Ticket is relatively small. Strategies based on the presence of either one of two characteristics can increase the number of predicted enrollees with only modest drops in the enrollment rate. Thus, the second row of the table shows that using either the Ticket criterion or the criterion for the most recent trial work period yields almost the same predicted enrollment probability of 22.2 percent, while increasing the predicted enrollment number to 216. As noted in the sixth row of the table, using the same Ticket criterion or any trial work period yields a predicted

enrollment probability of 18.8 percent, while increasing the predicted enrollment number to 331. Similar results emerge when we consider potential *plus* possibly potential enrollees (see the last three columns of Table 5).

Other targeting strategies could be devised based on other objectives. For example, our results suggest that additional recruitment efforts would be needed to compensate for lower enrollment rates among nonwhites, women, and/or SSI recipients. Implementation in target geographic areas defined by proximity to intervention sites, as done in the MHTS, might suggest using

our results to identify potential target sites within geographic areas with large numbers of potential enrollees. Finally, if information were also available on the characteristics of beneficiaries most likely to be positively impacted by the intervention (for example, in terms of returning to work), it could be combined with results presented here to design a recruitment strategy that accounts for these differential intervention impacts as well as differential recruitment costs.

Concluding Comments

In summary, as a result of the MHTS recruitment efforts, we observed participation rates of 5.9, 7.5, and 14.0 percent, depending on whether or how much a beneficiary had an opportunity to know about the study. The most conservative interpretation suggests an enrollment rate between 5.9 and 7.5 percent. However, it is reasonable to assume that some portion of the possibly potential enrollees were never informed about the study, and, therefore, do not belong in the denominator, which then suggests a less conservative estimate between 7.5 and 14.0 percent. Regardless of which estimate is the most accurate, they are all above the rate that might be expected based on previous experience. Moreover, we found that further targeting of beneficiary groups (based on routinely available administrative data) could increase this rate even further. (Our results suggest an upper bound approaching 25.0 percent.)

It could be argued that enrollment rates for a randomized trial such as the MHTS may in fact be lower than enrollment rates for a comparable service provided without randomization. If beneficiaries are influenced to enroll or not enroll, based at least in part on subjective calculations of expected costs and benefits of participation, one might expect randomization per se to have a negative impact on the enrollment rate because the enrolling beneficiaries would not be able to count on receiving the potential benefits that the intervention offered. This seems a relevant concern in the case of the MHTS because the preenrollment requirement of attending an RIG meeting meant that the costs of participation were nonnegligible.

Finally, the success of our enrollment efforts could have been enhanced even further by using data on a number of other individual characteristics of beneficiaries that were not available in the current study. These data include more detailed information on prior employment status and earnings as well as additional information on medical comorbidities beyond what is available in the MBR.

Appendix: Structural Equation Estimates

Structural equation models of a multistage recruitment process can provide potentially useful information—at a more detailed level than reduced-form models—about the influence of a variety of factors on the enrollment process. This analytical approach is particularly interesting when it provides evidence that the patterns of influence vary considerably across the recruitment stages. Ruiz-Quintanilla and others (2005/2006) presented an interesting analysis of the multistage recruitment process for the New York WORKS project using a set of structural logit regressions. In that case, four steps in the process were modeled: (1) having a valid address for receiving the recruitment letter, (2) returning a response card, (3) indicating an interest in participating in the project, and (4) enrolling in the project. Each step was modeled as a separate logit regression, and independence of unobservables across the four regressions was assumed.

We applied the same general approach in our analysis, modeling a sequence of three outcomes: (1) having a contact with the MHTS recruiter (and thus being classified as a potential enrollee), (2) attending at least one RIG meeting, and (3) enrolling in the MHTS. The corresponding three logit regressions were estimated on all study beneficiaries (that is, with test and validation samples combined). Explanatory variables were the same as those shown in Table 1.

Results of these regressions are reported in the Appendix table. In examining those results, bear in mind that the rate at which each recruitment stage included beneficiaries for the following stage varied considerably. Thus, of the 29,150 potential and possibly potential enrollees in this analysis, 54.0 percent (15,748) were contacted by recruiters, but of that group only 23.8 percent (3,753) actually attended an RIG meeting. Finally, of those 3,753 cases, more than half (2,206, or 58.8 percent) enrolled in the MHTS. Thus, the problem of attracting potential enrollees to an RIG meeting appears to have been a particular challenge for the recruiters.

Thus, it is interesting that the logit results in the table show a somewhat different pattern in model 2 compared with model 1 and a very different pattern in model 2 compared with model 3. When looking at the differences between model 1 and model 2, we see a much larger number of highly significant coefficients in the latter model. On the other hand, comparing model 2 with model 3, we see far fewer significant coefficients in model 3. This pattern of results has interesting implications for future MHTS-like efforts.

Appendix table.
Structural logit coefficients: Combined test and validation samples

Variable name	Possibly potential enrollees (n = 29,150): model 1— potential enrollee dummy		Potential enrollees (n = 15,748): model 2— RIG meeting dummy		Attended RIG meeting (n = 3,753): model 3— enrolled dummy	
	Coefficient	P > z	Coefficient	P > z	Coefficient	P > z
Age/100	0.0108	0.056	0.0188	0.033	-0.0077	0.555
Age/100^2	-1.7E-05	0.360	-0.0001	0.010	1.9E-05	0.659
Gender (male = 1)	-0.1421	<0.001	0.1853	<0.001	0.0549	0.544
Race (black = 1)	-0.0344	0.386	0.4309	<0.001	-0.1875	0.042
Yr2006	-0.2850	0.080	0.2322	0.083	0.0927	0.571
Yr2008	-0.1847	0.438	...	...	...	...
Exposure	0.0018	0.418	0.0033	0.001	-0.0002	0.887
Exposure^2	3.5E-07	0.899	-4.0E-06	0.011	3.1E-07	0.850
Monthsonrolls	0.0003	0.268	-0.0021	<0.001	-0.0008	0.108
Ssidum	-0.0614	0.156	-0.0904	0.085	-0.1888	0.027
RepPayee	-0.6353	<0.001	-0.4044	<0.001	-0.3381	0.002
Mooddisdum	-0.0764	0.006	...	...	...	...
lnDrivingdist	-0.0890	0.115	-0.1154	0.001	-0.0267	0.502
Edu_bach	-0.1438	0.373	0.1218	0.425	0.2038	0.478
Unempcurrent	0.0381	0.686	...	...	...	...
Unempdelta	-0.1884	0.099	...	...	...	...
lnMedEarnings	0.1735	0.199	-0.1759	0.017	-0.1385	0.392
ActiveT90dayspre	-0.0507	0.610	0.0879	0.456	0.3290	0.003
ActiveTeverpre	0.3299	<0.001	0.7858	<0.001	0.1892	0.150
TWP10+pre	0.0107	0.850	0.3754	<0.001	0.2525	0.228
TWP5-10pre	-0.0435	0.550	0.2761	<0.001	-0.0188	0.921
TWP0-5pre	-0.0492	0.605	0.2565	0.015	0.2791	0.175
TWP0-3post	0.1282	0.286	0.7775	<0.001	0.7366	0.003
Sqrt_Earn1_6pre	-0.0076	<0.001	-0.0151	<0.001	-0.0090	0.028
Sqrt_Earn7_23pre	-0.0014	0.015	0.0032	0.003	-0.0004	0.868
NoEarnRpt1_6pre	-0.0706	0.458	-0.6580	<0.001	-0.5306	0.004

SOURCE: Westat (2011).

NOTES: All regressions include site-specific dummy variables. All p-values allow for clustering of errors by site.

SSI = Supplemental Security Income; TWP = trial work period; ... = not applicable.

For example, the much stronger negative coefficient for the distance variable in model 2 suggests that outreach efforts such as holding RIG meetings at multiple locations within each site's catchment area may increase recruiting success.

In considering this or other strategies for increasing recruitment success, it is also important to note that the potential enrollees who did not attend an RIG meeting were almost as numerous as the beneficiaries who did not make contact with the recruiter (that is, possibly potential enrollees who did not become potential enrollees). This fact also argues for focusing on the results of model 2 in assessing implications of our analysis for improving recruitment outcomes.²³

Notes

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¹ The figures cited here are from SSA (2012, Table 24).

² See, for example, Bond, Drake, and Becker (2008); Campbell, Bond, and Drake (2009); and Burns and others (2009).

³ See Drake and others (2013); Hall and others (2003); Wang, Berglund, and Kessler (2000); Lehman, Steinwachs, and the co-investigators of the PORT Project (1998).

⁴ See Frey and others (2008) and Westat (2011, chaps. 1–3) for further details on the design and implementation of the MHTS. Intervention results are presented in Westat (2011) and in Drake and others (2013).

⁵ As Studenmund (2011, 185) explains, “our typical statistical tests have little meaning if the new hypothesis is tested on the data set that was used to generate it.”

⁶ When unobserved site-specific errors are correlated with regressors, coefficient estimates for the regressors are consistent in method 1 only as T_i (= the number of observations in the “ith” site) goes to infinity (Cameron and Trivedi 2010, 627). However, several studies (Greene 2004; Wright and Douglas 1975) indicate that small-sample bias in our estimates should be negligible because the T_i s in our data are in the range of 61 to 853, with a median of 320 cases for our smallest study sample (potential beneficiaries in the validation sample). Estimates from method 2 are consistent regardless of the value of T_i (Cameron and Trivedi 2010, 627).

⁷ We preferred methods 1 and 2 because they are relatively more robust to possible omitted variable bias problems. Method 1 was preferred over method 2 because calculation of marginal effects and associated p-values, taking into account site-specific effects, was feasible using the “margins” command in Stata with that method. We emphasize, however, that the results on the coefficients that we obtained for *all* methods were very similar, so our conclusions are in fact robust to the choice of method.

⁸ For a clear exposition of these two perspectives, in the context of SSA’s Project NetWork randomized trial, see Rupp, Bell, and McManus (1994).

⁹ See Ruiz-Quintanilla and others (2005/2006) for a study on enrollment of SSI recipients with psychiatric disabilities who were in an employment program that faced similar constraints on data and selection of explanatory variables.

¹⁰ The most likely explanation for missing letter dates was that the beneficiary had not been recruited because the relevant site had already reached its enrollment target and thus terminated recruitment.

¹¹ The three variables in Table 1 relating to educational attainment (*Edu_bach*, *Edu_hs*, and *Edu_nohs*) were created using the census tract in which the beneficiary’s residence address (from the MBR) was located, using the age/gender group within the block group or tract corresponding to the beneficiary. The age ranges we used for this purpose were 18–24, 25–34, 35–44, and 45–64.

¹² Reported median earnings are for the census block group in which the beneficiary’s residence address (from the MBR) is located. (In a minority of cases, only tract-level data were available.)

¹³ Variables defined in Table 1 with arithmetic transformations (for example, age and median earnings) are shown in Table 2 without such transformations.

¹⁴ Only 29,150 persons were included in Table 2 and in all our other analyses because some individuals had missing data. (Note that in the flowchart, although there are 29,745 potential *plus* possibly potential enrollees, 595 of those persons were dropped from our analyses because they did not have complete data for all variables used in the study. Thus, only 2.0 percent of these persons were dropped from the study—with this exclusion having virtually no impact on the results.)

¹⁵ Specific information on all other explanatory variables included in the exploratory regressions is available from the authors upon request.

¹⁶ Further detailed information on sensitivity tests and results for our initial exploratory regressions is available from the authors upon request.

¹⁷ Coefficients and corresponding standard error estimates for all regressions shown in Table 3 are available from the authors upon request.

¹⁸ In the New York WORKS project, randomization occurred before contacting the eligible beneficiaries; there was no final enrollment stage for the control group (Ruiz-Quintanilla and others 2005/2006).

¹⁹ In the case of TTW, while we refer to “enrollment” rates, note that *all* DI beneficiaries and SSI recipients received Tickets and had the opportunity to use them.

²⁰ The TTW program began mailing Tickets to beneficiaries in the phase-1 states in early 2002, almost 3 years before December 2005. The fact that the TTW recruitment activities consisted of initial mail contacts with essentially no follow-up or substantial outreach efforts thereafter presumably contributed to a low enrollment rate (Stapleton and others 2008).

The New York WORKS study targeted only SSI recipients (of whom about 25.0 percent received concurrent SSI/DI benefits) with psychiatric disabilities who were residing in either Erie County or New York City. In its 30-month recruitment period, initial outreach was conducted by mail, and follow-up occurred only if a beneficiary returned the mailed response card with expression of interest (Ruiz-Quintanilla and others 2005/2006).

Project NetWork targeted SSI, DI, and concurrent beneficiaries with all types of disabilities who were residing in one of eight areas around the country. It used both mailings and in-person outreach efforts. Although there was a 15-month recruiting phase, sites that reached their enrollment targets discontinued enrollment in a shorter time period (Burstein, Roberts, and Wood 1999).

Both the New York WORKS project and Project NetWork differed from the MHTS by including persons older than age 55; in the New York WORKS project, those persons comprised more than 30.0 percent of the study subjects.

²¹ Note that a large majority of beneficiaries entering a TWP complete it and enter an EPE following the TWP completion (Stapleton and others 2008).

²² Differences between the findings of our study and those of others could also arise from differences in functional form. In particular, time on rolls and age (which may be correlated with time on rolls) were tested as continuous variables (including squared terms in exploratory regressions) in our models. The Project NetWork and New York WORKS studies treated those variables as categorical (that is, as step functions).

²³ One should also bear in mind that the analyses reported in this Appendix combined both test and validation cases. Thus, a caveat to our findings is that all reported p-statistics in the accompanying Appendix table are potentially biased downward because of the large number of exploratory regressions on the test-sample data, as described in the Reduced-Form Enrollment Regression Results section.

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