

Author: Robert A. Applebaum  
Randall S. Brown  
Peter Kemper

EVALUATION OF THE NATIONAL  
LONG TERM CARE DEMONSTRATION:  
AN ANALYSIS OF SITE-SPECIFIC RESULTS

Channeling Evaluation  
Supplementary Report 86-05

November 1985

Revised May 1986

Prepared by:  
Mathematica Policy Research, Inc.  
P. O. Box 2393  
Princeton, New Jersey 08540

Project Director: George J. Carcagno  
Deputy Project Director: Judith Wooldridge  
Co-Principal Investigators: Randall S. Brown  
Peter Kemper

This report was prepared for the Department of Health and Human Services under contract no. HHS-100-80-0157. The DHHS project officer is Ms. Mary Harahan, Office of the Secretary, Department of Health and Human Services, Room 447F, Hubert H. Humphrey Building, Washington, DC 20201.



## CONTENTS

<u>Chapter</u>	<u>Page</u>
TABLES .....	ii
PREFACE .....	iv
ACKNOWLEDGMENTS .....	v
INTRODUCTION .....	1
A. FACTORS AFFECTING SITE IMPACTS .....	1
1. The Case Management Intervention .....	2
2. Environmental Factors .....	5
3. Implementation of Research Design .....	11
4. Implications for Differences in Site Impacts ...	12
B. METHODOLOGY .....	13
C. RESULTS .....	17
1. The Extent of Differences in Impacts Across Sites .....	21
2. Examination of Individual Site Impacts .....	25
D. CONCLUSION .....	29
REFERENCES .....	31
LIST OF REPORTS .....	32
APPENDIX A .....	38



## TABLES

<u>Table</u>		<u>Page</u>
1	CHANNELING IMPLEMENTATION EXPERIENCE, BY SITE .....	3
2	SERVICE ENVIRONMENT, BY SITE .....	7
3	STATE LEVEL MEDICARE/MEDICAID EXPENDITURE DATA .....	10
4a	TREATMENT/CONTROL DIFFERENCES, BY SITE BASIC CASE MANAGEMENT MODEL .....	18
4b	TREATMENT/CONTROL DIFFERENCES, BY SITE FINANCIAL CONTROL MODEL .....	19
A.1	MAXIMUM SAMPLE SIZE, BY SITE .....	A.2
A.2	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS RECEIVING COMPREHENSIVE CASE MANAGEMENT .....	A.3
A.3	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING FORMAL SERVICES .....	A.4
A.4	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING MEDICAL/PERSONAL CARE .....	A.5
A.5	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY HOUSEKEEPING .....	A.6
A.6	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY HOME-DELIVERED MEALS .....	A.7
A.7	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY TRANSPORTATION .....	A.8
A.8	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY INFORMAL CARE .....	A.9
A.9	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL MEDICAL/PERSONAL CARE .....	A.10
A.10	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL HOUSEKEEPING .....	A.11
A.11	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL TRANSPORTATION .....	A.12

TABLES (continued)

<u>Table</u>		<u>Page</u>
A.12	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL HOME-DELIVERED MEALS .....	A.13
A.13	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS DECEASED ON 6- AND 12-MONTH ANNIVERSARIES, SCREEN SAMPLE .....	A.14
A.14	SITE IMPACTS ON NUMBER OF SURVIVAL DAYS AS OF 6- AND 12-MONTH ANNIVERSARIES, SCREEN SAMPLE .....	A.15
A.15	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS DECEASED ON 6- AND 12-MONTH ANNIVERSARIES .....	A.16
A.16	SITE IMPACTS ON CUMULATIVE SURVIVAL DAYS AFTER 6 AND 12 MONTHS .....	A.17
A.17	SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS ADMITTED TO NURSING HOME .....	A.18
A.18	SITE IMPACTS ON NUMBER OF NURSING HOME DAYS .....	A.19
A.19	SITE IMPACTS ON TOTAL NURSING HOME EXPENDITURES .....	A.20
A.20	SITE IMPACTS ON NUMBER OF HOSPITAL DAYS .....	A.21
A.21	SITE IMPACTS ON TOTAL HOSPITAL EXPENDITURES .....	A.22
A.22	SITE IMPACTS ON TOTAL REIMBURSEMENTS FOR PHYSICIAN AND OTHER MEDICAL SERVICES .....	A.23
A.23	SITE IMPACTS ON NUMBER OF UNMET NEEDS .....	A.24
A.24	SITE IMPACTS ON GLOBAL LIFE SATISFACTION .....	A.25
A.25	SITE IMPACTS ON CONFIDENCE ABOUT RECEIPT OF CARE .....	A.26
A.26	SITE IMPACTS ON CONTENTMENT INDEX .....	A.27
A.27	SITE IMPACTS ON IMPAIRMENT OF ABILITY TO PERFORM ACTIVITIES OF DAILY LIVING .....	A.28
A.28	SITE IMPACTS ON IMPAIRMENT OF ABILITY TO PERFORM INSTRUMENTAL ACTIVITIES OF DAILY LIVING .....	A.29

## PREFACE

This report serves as a supplement to the channeling evaluation technical reports. These reports examine overall channeling impacts across a series of outcome measures based on sample member interview data collected at 6-, 12-, and 18-month intervals, primary informal caregiver interview data collected at 6- and 12-month intervals, Medicaid and Medicare records, a review of state death records, and an extract of provider service and cost records. (A full listing of technical reports appears at the end of this report.) This supplementary report, which is based on data from the same sources, focuses specifically on channeling's impacts in the 10 individual channeling sites. We assume that the reader is familiar with the research methodology and overall impact results presented in the other reports, so limit our discussion here to the site-specific results.





## ACKNOWLEDGMENTS

The evaluation of the National Long Term Care Demonstration represents the work of a number of persons and organizations. The demonstration administration, housed in the Assistant Secretary's Office of Planning and Evaluation (ASPE) within the Department of Health and Human Services, was a joint effort involving ASPE, the Health Care Financing Administration, and the Administration on Aging. The channeling staff in participating states and sites were responsible for implementing the demonstration, and it was their hard work which made the demonstration happen. Technical assistance to project staff was provided by Temple University's Institute on Aging. Without the support and input from demonstration participants from all these organizations the research could not have been successfully completed.

At Mathematica Policy Research many individuals (survey personnel, researchers, and programmers) contributed to the overall evaluation. This cross-site report truly represents the work of a multitude of persons. In particular we draw on the technical project reports which have been produced by George Carcagno, Jon Christianson, Walter Corson, Tom Grannemann, Nancy Holden, Barbara Phillips, Jennifer Schore, and Judith Wooldridge. Additionally, Felicity Skidmore provided valuable editorial assistance, and Mary Lou Condon produced the report and its many appendix tables.

Our thanks also go to the older persons and their families who participated in this study. Despite chronic impairments, these individuals contributed their time and energy as research participants. We hope that

this research will provide additional information in the effort to provide long term care to these and other individuals with similar life circumstances.

## INTRODUCTION

The major objective of the research was to evaluate the two models of channeling implemented in the demonstration. Results have been reported at the model level in a series of technical reports on channeling's impacts on nursing home use, hospital use and mortality, formal service use, case management, quality of life, and informal care. In this report we examine the site-specific impacts across these measures in an effort to determine whether any one site or group of sites was more successful than others in achieving the objectives initially set for the channeling project, and if so, what factors might be responsible for their greater success.<sup>1</sup> Summary tables in the report provide an overview of site impacts, the appendix contains detailed site-specific impact estimates for key outcome measures used in the evaluation.

### A. FACTORS AFFECTING SITE IMPACTS

Although the demonstration was designed to be operationalized in a uniform manner across the five sites implementing each model, at least three factors could cause demonstration impacts to differ by site: differences in the nature of the channeling case management intervention (including the types of clients served), environmental differences, and differences in the implementation of the research methodology.

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<sup>1</sup> Differences in impacts by site have been examined in the separate technical reports to aid in the interpretation of results for specific outcomes; that is, to determine whether impacts at the model level are due to large treatment/control differences in only one or two sites, or are present in most or all sites or, alternatively, whether a lack of impacts at the model level is due to treatment/control differences at individual sites that are large in absolute magnitude but of opposite signs.

# 1. The Case Management Intervention

Planning strategies designed to standardize the channeling intervention included the use of a national technical assistance contractor to help standardize channeling components, use of uniform program entrance criteria and instrumentation, and formal contractual requirements mandated by the federal monitoring agency. In addition, program implementation was monitored by state project staff, national technical assistance staff, federal project officials, and evaluation staff. An analysis of both qualitative process information and statistical program data (see Carcagno et al. 1985) indicate that a high degree of standardization was achieved. An overview of the implementation experience broken down into two categories--client characteristics (the types of individuals enrolled and their referral source) and core case management functions (the type, quantity, and timing of services provided by the program)--is presented in Table 1.

With respect to the entrance criteria and eligibility determination process, review of the characteristics of clients accepted into the demonstration indicates that a vast majority were reported to have met the eligibility criteria. Only slight variations in the percent meeting the eligibility criteria and in the level of disability as measured by the number of disabilities in the activities of daily living (ADL) tasks were reported among sites. The percent without any ADL disability varies somewhat more--with a range of 8.9 percent reporting no disability in Philadelphia compared to almost 25 percent in Eastern Kentucky (these individuals qualified on the IADL eligibility criteria). The source of referrals by site shows variation as well. For example, Eastern Kentucky

TABLE 1

## CHANNELING IMPLEMENTATION EXPERIENCE, BY SITE

Site	Client Characteristics					Core Case Management Characteristics			
	Percent Meeting Eligibility Criteria	Type of Referral Source		ADL Disability		Standardized Assessment/ Care Planning	Caseload per Case Manager	Elapsed Time to	Monthly Service
				Number of ADL Disabilities	Percent with no ADL Disability <sup>a</sup>			Initiate Services	Expenditures per Client
		Hospital	Nursing Home					(days) <sup>b</sup>	(dollars)
Basic Case Management Model									
Baltimore	94.9	24.4	2.9	2.5	19.5	Yes	36.1	46.6	45
Eastern Kentucky	97.1	4.8	1.9	2.5	24.8	Yes	42.3	32.6	60
Houston	98.2	20.2	1.2	2.6	16.8	Yes	54.0	28.4	21
Middlesex County	99.8	25.5	0.1	2.9	11.3	Yes	48.7	62.5	47
Southern Maine	96.3	16.6	7.0	2.9	12.1	Yes	42.7	27.8	17
Model Average	97.4	19.4	2.4	2.7	16.6	Yes	44.8	42.8	38
Financial Control Model									
Cleveland	99.0	29.9	0.5	3.0	15.6	Yes	48.0	37.9	469
Greater Lynn	96.1	24.3	2.2	2.5	18.9	Yes	49.5	58.9	612
Miami	93.9	16.9	4.0	2.3	22.0	Yes	45.8	34.5	472
Philadelphia	95.9	28.2	0.3	3.2	8.9	Yes	52.3	27.0	398
Rensselaer County	96.9	35.9	0.2	2.8	17.8	Yes	49.8	14.2	477
Model Average	96.2	26.0	1.6	2.8	15.8	Yes	49.1	35.3	471

SOURCES: Data on percent meeting entrance criteria, type of referral source, and client level of disability come from the National Long Term Care Screening Instrument. Data on the use of standardized case management process comes from the on-site interviews with channeling staff. Data on elapsed time and caseload size come from the National Long Term Care Client Tracking forms. Data on monthly service expenditures come from the National Long Term Care Schedule B cost reporting forms.

<sup>a</sup>Demonstration entrance criteria allowed individuals with no ADL disabilities to qualify on the basis of IADL impairments.

<sup>b</sup>Measures days from client acceptance into the program to the receipt of first formal service, where case management (assessment and care planning) is not counted as a separate service.

reported that less than 5 percent of its referrals came from hospitals. This was a site with relatively few hospital beds per capita. Rensselaer County, in contrast--a site which worked extensively with hospital referrals--reported that almost 36 percent came from this source. Southern Maine--a site which initially experienced difficulty gaining access to hospital referrals and which instead emphasized nursing home referrals--received 7 percent of its referrals from nursing homes, compared to 4 percent or less for the other nine sites. The size of these referral rate differences should not be overemphasized, however. The relative differences in the rate of referrals from nursing homes and hospitals were rather consistent across the 10 sites, with about 20-30 percent being referred by a hospital and 0-4 percent by a nursing home.

Review of the implementation of the core case management functions, also in Table 1, shows somewhat greater cross-site variation than the client characteristics. Here we see that although overall the core functions appear to have been consistently implemented across projects, as documented in two project reports (Carcagno et al. 1986, Schneider et al. 1985), specific case management components do vary somewhat. For example, although all sites reported implementing the same core functions in similar ways, caseload size ranged from 36 per assessor/case manager in Baltimore to 54 in Houston. The amount of time to initiate services also varied by site, with a low of 14 days in Rensselaer County between acceptance into the program and receipt of initial services to just over 62 days in Middlesex County. Service expenditures also showed variation within the two types of models. In the basic case management model (with only limited gap-filling service dollars), monthly per-client expenditures ranged from

\$17 in Southern Maine to \$60 in Eastern Kentucky. The financial control model expenditures (which used the much more extensive pooled funding source of Medicare and Medicaid and state funds) ranged from just under \$400 in Philadelphia to \$612 in Greater Lynn.

Despite some variation across sites on particular facets of the intervention, however, no overall site-specific patterns are obvious. For example, it does not appear that sites with lower caseload had lower elapsed time to initiate services. Thus, although site variation in implementation might be large enough to result in some differential impacts, the fact that the various measures do not show any site to be consistently low or high makes it difficult to identify any site or group of sites as being especially likely to experience differential channeling effects.

## 2. Environmental Factors

Demonstration planners wanted to test channeling in diverse types of environments. Thus, unlike the intervention, in which great care was taken to maximize standardization, environmental characteristics were expected to vary by sites as part of the plan.

The channeling sites were not selected systematically to achieve geographic or environmental representativeness (six of the sites were on the eastern seaboard). However, the sites do represent a variety of environments, ranging from rural Eastern Kentucky to Philadelphia, one of the largest cities in the United States. Differences in site characteristics included size of the population in the area served, the extent of the area covered by the program, and income and demographic characteristics of the catchment areas. Site personnel reported that these

differences did affect channeling practice. For example, the rural sites of Southern Maine and Eastern Kentucky had a lower caseload per case manager, which was reported to be the result of having to serve a large sparsely populated area. The size of the aging population was reported as a factor affecting the caseload buildup, with the projects with larger populations building caseload more rapidly.

Differences also existed in the nature of the service delivery system, a potentially important factor in interpreting impacts. Service delivery system characteristics include such factors as availability of nursing homes and community-based services. For example, a community which had a rich community-based service environment (high amount of community-based services available to elderly residents of the area) might be less likely to show differences between treatment and control group members.

The availability of nursing home and hospital beds is of major importance, because the demonstration sought to test community-based alternatives to institutionalization. Although it was often difficult to identify bed supply information for the precise catchment area served by each channeling project, the data we acquired indicated a wide variation in the number of beds per 1,000 elderly individuals, ranging from 22 in Miami to 70 in Baltimore and 67 in Greater Lynn (see Table 2).<sup>1</sup> A second measure of nursing home availability was information on waiting time for entry, based on our on-site process interviews, which classified sites into three

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<sup>1</sup>The measure of nursing home bed supply in Greater Lynn is somewhat misleading because the nursing homes for the Boston area are included in the Greater Lynn measure. Since Greater Lynn service providers indicate that residents typically would not use nursing homes which were located in or on the other side of Boston, we regard this a substantial overestimate of the effective bed supply for the Greater Lynn site.



TABLE 2

## SERVICE ENVIRONMENT, BY SITE

	Nursing Home Wait Times for an ICF Bed		Nursing Home Bed Supply Per 1,000 Over 65	Hospital Bed Supply Per 1,000 Population	Percent Controls Receiving Case Management (during months 1-6)	Percent Controls Receiving In-Home Services (at six months)	
	Medicaid	Private Pay				Semi-Skilled	Skilled
Basic Case Management Model							
Baltimore	Low	Low	70	10.7	18.0	54.3	21.8
Eastern Kentucky	Medium	Medium	34	2.9	18.3	38.5	20.4
Houston	Low	Low	57	5.3	27.9	45.3	19.0
Middlesex County	High	Medium	35	3.3	11.8	48.2	17.0
Southern Maine	High	Medium	53	3.8	23.9	52.1	20.6
Model Overall	--	--	50 <sup>a</sup>	5.7	20.5	47.3	19.9
Financial Control Model							
Cleveland	Medium	Low	45	7.3	24.1	49.4	18.4
Greater Lynn	High	Low	67	4.5	36.6	75.9	29.9
Miami	Low	Low	22	6.2	27.5	55.8	18.0
Philadelphia	Low	Low	32	7.4	27.1	61.0	14.3
Rensselaer County	Medium	Low	51	4.2	7.6	50.4	40.7
Model Overall	--	--	43 <sup>a</sup>	6.6	25.6	59.7	22.1
U.S. Totals	--	--	57	4.8	--	--	--

SOURCE: Nursing home bed supply as reported in Carcagno et al. "The Evaluation of the National Long Term Care Demonstration: The Planning and Operational Experience of the Channeling Projects." Princeton, NJ: Mathematica Policy Research, May, 1986. Hospital bed supply as reported in American Hospital Association Hospital Statistics, 1983 Edition. Chicago, IL: American Hospital Association, 1983. Case management and service use data came from the National Long Term Care Followup Survey.

NOTE: Low nursing home waits are those up to 2 weeks.  
Medium nursing home waits are those up to 3 months.  
High nursing home waits are those up to 3 months.

<sup>a</sup> Unweighted averages of sites in model.

categories depending on average waiting time to enter a nursing home. We believe that the waiting period classification as reported by a consensus of local providers is a more accurate representation of local market conditions than the bed supply statistics. However, both measures will be examined in interpreting site-specific impacts. Hospital bed supply also varied across sites, with a low of 2.9 beds per 1,000 (of general population) in Eastern Kentucky, a rural site, to a high of 10.7 in Baltimore, a major urban center for health care.

The availability of nondemonstration community-based long term care is also an important factor which could affect site impacts. To the extent that availability was already adequate, the potential for channeling to have an effect would have been reduced. Since channeling was expected to achieve its impact through case management and expanded community-based services, it was expected that large differences among sites in service availability could result in differential channeling impacts. In this comparison we rely on two data sources: the experience of the control group in each of the sites and statewide data on Medicare and Medicaid program expenditures (not available at the site level).

The experience of the control groups is shown in Table 2. Comparison across sites of control group use of case management during the first six months after randomization (regression-adjusted for client disability level and other baseline characteristics) indicates a range of control group use from just over 36 percent getting case management in Greater Lynn to less than 8 and 12 percent in Rensselaer and Middlesex counties, respectively. Variation in the semi-skilled in-home services (homemaker/personal care, housekeeping) at six months (39 percent in

Eastern Kentucky to 76 percent in Greater Lynn) was also considerable, especially among the financial control sites. Use of skilled in-home services was not expected to vary as much as case management and semi-skilled care because these services are paid for primarily by the federally funded Medicare program, and receipt was quite consistent across basic sites, ranging from 17 to 22 percent. Variation among the financial control sites was wider, however, ranging from 14 percent in Philadelphia to 30 percent in Greater Lynn and 40 percent in Rensselaer County. Despite these differences among sites, consistent patterns of use existed in only three sites (Greater Lynn, high use across the three measures; Cleveland moderate use; Middlesex County, low use).

State data on Medicare and Medicaid expenditures are shown in Table 3. Medicare expenditures per aged resident in 1980 ranged from \$86 (Kentucky) to \$134 (Massachusetts). Medicare expenditures on skilled home health services are between 1.6 percent (Kentucky) and 3.3 percent (New Jersey) of the total amount of Medicare reimbursements. Variation in monthly Medicaid expenditures per aged resident is quite substantial, particularly across the financial control states (ranging from \$8 per resident in Miami to \$80 in Rensselaer County). When Medicaid home health expenditures are broken out from the total we also see more variation than for Medicare. New York state has a considerably higher proportion of Medicaid expenditures for home health than the remaining states. (Rensselaer County also had the highest control group use of skilled in-home services.)

Differences across sites are in general scattered and manifest no strong patterns across characteristics which would be expected to affect

TABLE 3

## STATE LEVEL MEDICARE/MEDICAID EXPENDITURE DATA

	Average Monthly Medicare Expenditures Per Aged Resident 1981 (dollars)	Percent of Medicare Expenditures on Home Health Services	Average Monthly Medicaid Expenditures Per Aged Resident 1980 (dollars)	Percent of Medicaid Expenditures on Home Health Care for All Age Groups 1980
Basic Case Management Model				
Baltimore	121	2.2	24	0.3
Eastern Kentucky	86	1.6	19	1.4
Houston	89	2.2	30	0.1
Middlesex County	112	3.3	27	1.2
Southern Maine	103	1.8	10	0.8
Model Average <sup>a</sup>	100	2.2	22	0.8
Financial Control Model				
Cleveland	109	1.7	19	0.1
Greater Lynn	134	2.5	56	2.0
Miami	111	3.0	8	0.2
Philadelphia	117	3.0	20	0.2
Rensselaer County	123	2.3	80	5.6
Model Average <sup>a</sup>	118	2.5	37	1.6
U.S. Average	109	2.2	28	1.4

SOURCES: Medicare and Medicaid Data Book 1983, U.S. Department of Health and Human Services, Health Care Financing Administration, December, 1983. Annual Medicare Program Statistics, U.S. Department of Health and Human Services. Health Care Financing Administration, August 1983; 1980 Census of Population. Volume 1, Chapters B and C. United States Bureau of the Census.

<sup>a</sup> Model averages are unweighted averages of state data.

channeling impacts. Thus, we are unable to rank the sites a priori by the expected size (or likelihood) of channeling impacts on key outcomes. One exception to the lack of differences is that three sites did show a reasonably consistent pattern across measures of availability of services, with Greater Lynn exhibiting high and Middlesex County and Eastern Kentucky low availability. We will keep these patterns in mind in interpreting the tests for site-specific differences in impacts contained in section B.

### 3. Implementation of Research Design

A key research implementation issue was the integrity of the random assignment process. If random assignment was not implemented properly in any site, the resulting treatment/control comparisons would not in fact reflect channeling's impacts. The method of randomly assigning applicants, as documented in Carcagno et al., 1986, was in fact implemented with integrity across the 10 sites.

Two additional aspects of the research design may affect the interpretation of the site-specific results. First, because sample sizes at the site level are considerably smaller than those available at the model level, the likelihood that analysis based on conventional statistical tests will detect true channeling impacts of a given size is much lower for the site-specific analysis. The implication of this is that the true impact at a given site would have to be much larger than the same impact at the model level (i.e., combining the five sites) in order for it to be equally likely that the available sample would exhibit a statistically significant treatment/control difference. The statistical power of our test also varies across sites, since the sample sizes range (for the 12-month followup sample) from a high of 493 in Philadelphia to a low of 215

in Rensselaer County (see Appendix Table A.1). These smaller samples also mean that estimated differences may differ widely across sites, but still not represent true differences across sites.

The second factor to bear in mind is that although a series of methodological analyses have been conducted for the demonstration overall (attrition bias, alternative estimation procedures, etc.), these analyses have not been performed for each site individually. One area of methodological concern is whether the pooling of sites, that is, using a single regression equation to estimate the impact of channeling at the site level (our standard procedure) yields reliable estimates. Tests performed showed that the relationship between sample members' baseline characteristics and the key outcomes did differ significantly across sites. However, when separate regression models were used to estimate channeling's impact at each site, the estimated treatment/control differences were very similar to the estimates obtained from a single regression equation. Hence, pooling does not affect the conclusions of this analysis. Although we have no reason to believe that any methodological problem is likely to be a bigger problem in any one site than in another, it is important to note that methodological issues have not been addressed at this level of disaggregation.

#### 4. Implications for Differences in Site Impacts

A review of the factors which could cause differences in channeling's impacts across sites presents a somewhat mixed picture. The review of the programs at each site suggests that a standardized intervention was implemented across sites. Projects used the same eligibility criteria and entry process, and client characteristics were

similar across projects. Also, case management functions were generally implemented consistently across projects, although some variation did occur across components. In addition, although sample sizes differ across sites, random assignment and other aspects of the evaluation design do not seem to have varied in ways that will confound the analysis. Environmental differences across sites do occur, however. These include both the size of the population and differences in service availability. The service availability differences in particular could affect site impacts and will be explored as we interpret individual site results in the following section.

#### B. METHODOLOGY

To analyze whether any site or group of sites was more or less effective in achieving channeling goals than the others, we have selected key outcome measures and examined channeling impacts on these measures for each site for the 6- and 12-month followup periods.<sup>1</sup> The estimates of channeling's impacts at each site are obtained by estimating an expanded version of the regression model that we used in the separate technical reports to estimate channeling impacts at the model level. The standard model used in the overall analysis is:

$$Y = X\beta + S\gamma + T_B\delta_B + T_F\delta_F + \epsilon,$$

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<sup>1</sup>The 18-month followup is omitted from this analysis because the sample sizes are too small for site-specific impact estimates to be very meaningful.

where  $Y$  is the outcome variable of interest;  $X$  is a vector of screen and baseline characteristics of the individual;  $S$  is a set of binary variables representing site;  $T_B$  and  $T_F$  are binary variables equal to one for sample members in the treatment group in the basic and financial control models, respectively;  $\epsilon$  is an unobserved, random disturbance term; and  $\beta$ ,  $\gamma$ , and  $\delta$  are parameters to be estimated by regression. The coefficients  $\delta_B$  and  $\delta_F$  on treatment status represent the estimated overall impact of channeling at basic and financial control sites, respectively.

Site-specific estimates of channeling impacts can be obtained by replacing the two treatment status terms in this regression by a set of site/treatment-status interaction terms--a set of variables each of which is equal to one only for sample members who were in the treatment group and reside in the site represented by that variable, i.e.,

$$\delta_1 S_1 * T + \delta_2 S_2 * T + \dots + \delta_{10} S_{10} * T.$$

The coefficients on these new terms are the estimated treatment/control differences at the particular site represented by the variable. Thus, the channeling model impacts  $\delta_B$  and  $\delta_F$  are each broken down into five individual impacts, one for each site.

One problem with this approach is that if one site achieved larger impacts than another, it would not be possible to determine whether this differential arose because that site enrolled a higher proportion of clients for whom channeling is most effective, or because of the unique characteristics of either the program as implemented at that particular site or the local environment in which the program operated. In order to



be able to make such distinctions, we modify the model to include interactions between treatment status and those sample member characteristics with which channeling's impacts are most likely to vary. Since the way impacts vary with characteristics may differ by separate model, these characteristics must either be interacted with both  $T_B$  and  $T_F$ , or separate equations containing these interactions must be estimated for each model.<sup>1</sup> Choosing the latter approach we have:

$$Y = X\beta + S\gamma + \delta_1 S_1 * T + \delta_2 S_2 * T + . . . + \delta_5 S_5 * T + X_1 * T\theta + \epsilon,$$

where  $X_1$  is that subset of the variables  $X$  which were felt to be most likely to influence channeling's impacts,<sup>2</sup> and  $\theta$  is a vector of parameters to be estimated. The effect of specific sample member characteristics on channeling's impacts will now be reflected in the coefficients  $\theta$ , and the  $\delta_1, . . . , \delta_5$  terms will now reflect the effects of channeling impacts at the 5 sites in each model, controlling for differences between sites on these sample member characteristics ( $X_1$ ).

Estimated impacts on a given outcome for a given site are obtained from the regression model by subtracting the predicted value for a control group member from the predicted value for a treatment group member with

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<sup>1</sup>Use of separate equations does not constrain coefficients on control variables to be equal for the two models. It also reduces the number of variables in the regression to a more manageable level, and simplifies the calculation of standard errors of estimated impacts.

<sup>2</sup>These characteristics include sample members' disability on activities of daily living, living arrangement/availability of informal support, incontinence, unmet needs, Medicaid eligibility, and prior nursing home and health care system contact.

identical characteristics (say  $\bar{X}_1$ ). This operation results in the disappearances of all terms except those interacted with treatment status, leaving the following expression:

$$\text{impact at site } i = \delta_i + \bar{X}_1 \theta.$$

Setting the  $X_1$  characteristics at their overall sample means ( $\bar{X}_1$ ) for these calculations ensures that any differences between sites in channeling impacts that are due to differences in the types of clients enrolled are netted out. These estimated impacts then can be subjected to statistical tests to determine whether they are significantly different from zero, or significantly different from one another.

In the next section we discuss the site-specific impact estimates obtained from this model. The purpose of this analysis is to determine whether some sites were more effective than others in achieving channeling goals, and if so, which ones and why. We examine this question from two perspectives, using two different types of tests. We will look first at statistical tests across sites to determine whether channeling's impacts on key outcome measures differed across sites. This analysis relies primarily on an overall test of equivalence of impacts across sites. Specifically, we examine the probability that differences across sites in treatment/control differences as large as those observed in this sample could occur by chance even if there were actually no difference across sites in channeling impacts. This analysis will provide us with an indication of whether site impacts on each of these outcomes differ from the overall results of the relevant channeling model.

The second perspective taken is to examine the pattern of results across outcome measures for each site and ask the question: If the demonstration had been implemented in only this site, what would the evaluation conclude? In this analysis, because of the low power of the tests (due to the small sample sizes at any given site), we will focus on patterns of results across outcomes, rather than relying solely on the statistical significance of these estimates. To help identify patterns we note statistical significance at the .10 level, a lower level than is noted in the tables of other channeling reports.

### C. RESULTS

The outcomes examined for evidence of channeling impacts in this report include:

- o Measures of the intervention (whether received case management; whether received formal care of various types)
- o Informal care (whether received informal care of various types)
- o Mortality (percent deceased)
- o Nursing home use (whether admitted, number of days, expenditures)
- o Hospital use (number of days and expenditures)
- o Life quality (number of unmet needs; global life satisfaction, contentment, and confidence about receipt of care indicators; functioning as measured by ADL and IADL tasks).

Impacts are estimated for both the first and second 6-month intervals after randomization (see Tables 4a and 4b). Regression estimates of treatment/control differences are presented for each site, grouped in

TABLE 4a

TREATMENT/CONTROL DIFFERENCES, BY SITE  
BASIC CASE MANAGEMENT MODEL

Outcome Measure	Cross-Site Equivalence		All Sites		Baltimore		Eastern Kentucky		Houston		Middlesex County		Southern Maine	
	p-values <sup>a</sup>													
	6	12	6	12	6	12	6	12	6	12	6	12	6	12
<u>Case Management and Formal Care</u>														
Case Management	.11	.05#	52.0**	43.7**	51.1**	50.2**	51.9**	36.0**	41.7**	34.4**	57.3**	44.8**	61.4**	53.9**
Any Formal Care	.12	.36	12.8**	13.3**	2.6	4.9	18.0**	7.3	12.0**	17.6**	21.1**	20.6**	10.8*	13.1*
Medical/Personal Care	.10	.16	9.4**	13.2**	7.0	18.6**	2.1	-0.6	4.3	16.3**	23.2**	18.2**	4.7	4.2
Housekeeping	.08	.47	15.4**	13.8**	4.0	6.0	17.4**	9.8	14.8**	13.4*	27.3**	22.2**	12.3*	16.6**
Home-Delivered Meals	.33	.37	3.9*	3.0	9.0**	7.5	4.3	8.4	6.4	4.4	2.0	-0.5	-5.2	-5.5
Transportation	.89	.61	-1.8	0.6	-3.1	-1.7	-1.6	-0.9	-3.3	6.8	-0.9	-1.2	1.1	-1.5
<u>Informal Care</u>														
Any Informal Care	.61	.10	-2.3	0.8	0.5	6.0	-5.6	-9.1**	-6.6	6.0	-0.5	-2.9	0.1	0.3
Medical/Personal Care	.56	.33	0.4	-0.4	-3.1	7.2	-6.8	-6.2	3.4	-0.4	4.2	-6.6	1.7	4.1
Housekeeping	.64	.13	-3.3*	1.9	-2.0	8.5**	-7.0	-7.5	-7.3*	4.1	-0.7	-1.2	0.0	2.2
Home-Delivered Meals	.60	.98	-1.2	1.8	4.1	3.7	-1.4	0.5	-2.6	0.2	-3.4	2.9	-3.0	1.0
Transportation	.54	.94	4.7**	1.7	3.7	-0.6	0.2	3.2	6.6	1.3	10.4*	0.6	-2.3	6.5
<u>Hospital and Nursing Home Use</u>														
Nursing Home Admission (percent)	.19	.20	-0.4	-1.5	2.4	0.2	-3.0	-3.2	-2.5	-3.4	4.2	2.7	-6.7*	-6.5**
Number of Nursing Home Days	.02#	.03#	-1.6	-0.9	1.0	4.8	-2.0	6.2	-0.9	-6.8	2.1	1.8	-13.1**	-12.1**
Nursing Home Costs	.27	.08	-123	-49	46	263	-197	263	-117	-423	-14	72	-525**	-466*
Number of Hospital Days	.69	.83	-0.3	-0.1	-0.2	-0.8	-0.6	0.2	-2.4	1.5	1.6	-1.0	-0.3	-0.4
Hospital Costs	.38	.98	-201	99	-112	-22	-130	74	-1151**	339	448	-20	-2	133
Physician/Other Medical Costs	.16	.67	-24	113*	-126	156	79	99	-252	-26	258*	258*	-84	24
<u>Mortality and Life Quality</u>														
Percent Deceased	.32	.50	-1.1	-2.4	-0.73	-2.84	-0.07	-0.33	-5.20*	-6.97**	-2.14	-2.51	3.88	1.74
Number of Unmet Needs (0-8)	.24	.96	-0.15	-0.42**	-0.15	-0.20	-0.06	-0.21	-0.10	-0.70**	-0.30	-0.65**	-0.07	-0.09
Global Life Satisfaction (0-2)	.10	.69	0.11**	0.02	0.02	-0.03	0.26**	0.13	0.17**	0.04	0.11	0.00	-0.01	0.02
Confidence about Care (0-2)	.28	.12	0.14**	0.14**	0.16*	0.08	0.00	0.00	0.10	0.40**	0.30**	0.05	0.03	0.12
Contentment Index (0-10)	.02#	.70	0.04	0.08	-0.21	-0.13	0.35	0.09	0.67**	0.36	0.00	0.23	-0.84**	-0.31
Impairment in ADL (0-5)	.28	.35	0.03	0.06	0.17	0.19	-0.04	0.04	-0.28	-0.21	0.20	0.09	0.10	0.22
Impairment in IADL (0-7)	.15	.10	0.05	0.08	0.28*	-0.08	0.02	0.05	-0.30*	-0.24	0.12	0.49**	0.19	0.18

TABLE 4b

TREATMENT/CONTROL DIFFERENCES, BY SITE  
FINANCIAL CONTROL MODEL

Outcome Measure	Cross-Site Equivalence p-values <sup>a</sup>		All Sites		Cleveland		Greater Lynn		Miami		Philadelphia		Rensselaer County	
	6	12	6	12	6	12	6	12	6	12	6	12	6	12
<u>Case Management and Formal Care</u>														
Case Management	.01#	.01#	57.8**	49.1**	51.9**	45.9**	46.3**	30.9**	61.9**	53.9**	60.3**	52.0**	71.3**	64.1**
Any Formal Care	.03#	.13	23.7**	19.5**	29.3**	24.6**	11.0**	10.0**	23.7**	14.1**	27.7**	23.4**	20.5**	25.1**
Medical/Personal Care	.06	.06	27.8**	24.2**	36.8**	31.4**	14.7**	7.3	28.2**	25.8**	30.1**	26.4**	22.8**	25.6**
Housekeeping	.18	.31	26.4**	24.2**	33.0**	30.0**	15.0**	14.6**	27.5**	21.7**	27.3**	25.1**	25.4**	30.0**
Home-Delivered Meals	.31	.48	12.4**	10.3**	22.1**	16.4**	6.1	3.1	15.3**	13.9**	8.1	10.0*	9.5	2.5
Transportation	.02#	.01#	6.7**	4.2**	-7.2	-11.9**	12.8**	11.2**	9.5**	13.4**	10.2**	3.2	9.1*	8.5
<u>Informal Care</u>														
Any Informal Care	.63	.66	-4.8**	-5.4**	-7.0*	-5.6	-3.5	-10.3**	-8.7**	-7.7*	-2.7	-2.6	-0.2	-0.7
Medical/Personal Care	.14	.80	-4.9**	-2.3	-11.6**	-1.5	-9.7**	-8.4	-2.0	-1.4	-3.7	0.5	5.9	-4.7
Housekeeping	.65	.56	-5.9**	-4.8**	-7.2*	-4.4	-3.9	-10.3**	-10.6**	-8.0*	-3.6	-1.2	-2.4	-0.8
Home-Delivered Meals	.18	.73	-3.3*	-3.8*	4.2	-6.5	-8.7**	-1.0	-7.3*	-7.9*	-3.7	-1.4	0.5	-0.5
Transportation	.12	.23	-5.1*	-0.3	-12.3*	1.5	-1.1	-2.0	-10.3**	-1.4	3.3	4.8	-10.2*	-13.4**
<u>Hospital and Nursing Home Use</u>														
Nursing Home Admission (percent)	.54	.75	-0.4	0.4	-1.1	0.7	4.9	-2.2	-2.3	0.3	-1.9	0.6	1.3	4.0
Number of Nursing Home Days	.38	.81	-1.0	-2.5	-1.2	0.4	3.8	-0.9	0.0	-4.3	-4.0	-5.2	-1.7	1.1
Nursing Home Costs	.02#	.53	-33	-128	-141	108	592**	119	-84	-258	-242	-367	-64	5
Number of Hospital Days	.27	.32	-0.2	-0.4	3.2	1.9	-2.8	0.6	-2.8	-1.0	0.5	-0.8	0.6	-4.2*
Hospital Costs	.26	.50	31	-90	1404*	767	-548	-167	-708	-498	-146	-197	346	-454
Physician/Other Medical Costs	.69	.93	44	8	198	137	-16	22	-141	-45	75	-50	149	14
<u>Mortality and Life Quality</u>														
Percent Deceased	.68	.02#	-0.08	0.08	-0.84	1.33	-2.89	-7.25**	-0.58	0.59	1.22	-1.01	3.73	11.21**
Number of Unmet Needs (0-8)	.60	.83	-0.36**	-0.32**	-0.45*	-0.10	-0.34	-0.30	-0.43**	-0.18	-0.35*	-0.61**	-0.08	-0.30
Global Life Satisfaction (0-2)	.01#	.04#	0.07*	0.06	-0.05	-0.08	0.26**	0.22**	0.18**	0.14*	0.01	0.04	-0.08	-0.06
Confidence about Care (0-2)	.36	.06	0.12**	0.15**	-0.02	0.16	0.10	0.02	0.24**	0.40*	0.16*	0.09	0.05	-0.03
Contentment Index (0-10)	.18	.13	0.06	0.00	-0.11	-0.32	0.68**	0.76**	0.30	0.15	-0.24	-0.21	-0.25	-0.28
Impairment in ADL (0-5)	.34	.12	0.23**	0.24**	0.04	0.09	0.00	-0.13	0.30*	0.39**	0.36**	0.37**	0.39**	0.44**
Impairment in IADL (0-7)	.01#	.08	0.04	-0.01	-0.27	0.01	-0.19	-0.45**	-0.03	-0.06	0.24	0.20	0.64**	0.17

#### NOTES TO TABLE 4

NOTE: The data for this summary table are included in Appendix tables A2 through A30, which include both treatment and control group means, treatment/control differences, t-statistics, and tests of equivalence across sites. See text for a discussion of the estimation methodology.

<sup>a</sup>The p-value is the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level.

\*Different from zero statistically at the 10 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

the tables by model. Tests of whether each of these differences is significantly different from zero are performed using two-tailed t-tests at the .05 and .10 levels of statistical significance. The .10 level is included in addition to the more typical (and more stringent) .05 level to facilitate identification of potential patterns of results across measures.

We also perform a test of whether impacts were equal in the five sites implementing each model. The p-values of this test are shown for the two followup periods in the first two columns of each table. The lower the p-value, the lower the probability that the differences across sites could have occurred by chance, and thus the more likely that the estimated treatment/control differences are due to the effects of the channeling program. Our discussion will focus on p-values of .05 and below, with reference to how a focus on .10 and below would alter our conclusions. (Full detail on regression-adjusted treatment and control group means and t-statistics for estimated site-specific impacts appear in Appendix A.)

#### 1. The Extent of Differences in Impacts Across Sites

We begin by examining whether there appear to be differences in impacts across sites. First, we examine differences in impacts on the receipt of case management and formal community-based services because they provide evidence concerning differences in the nature of the intervention implemented at the 10 sites. Then we examine differences in impacts on the key outcomes of interest.

Receipt of Case Management and Formal Community-Based Care. Data on the receipt of case management and formal care are presented in the first panel of Tables 4a and 4b for the basic and financial control models, respectively. At both the 6- and 12-month followups, treatments in all

sites reported receiving significantly more case management than controls. Our cross-site equivalence tests (as measured by p-values) indicate that, although all sites exhibit these impacts, there are statistically significant differences among sites in the size of these differences in receipt of case management. As reported earlier, the availability of case management for controls did vary by site and, combined with differential rates of participation in the program by treatment group members, this resulted in some variation by site (significant at 12 months for both models, and at 6 months for the financial control model).

The basic case management intervention, combined with expanded funding for community services, was expected to result in an increase in the receipt of formal services. Results for receipt of any formal care and individual service categories (medical/personal care, housekeeping, meals, transportation) also appear in the top panel of Tables 4a and 4b. Under both models a higher proportion of the treatment group (compared to controls) reported receiving some type of formal care, with the medical/personal care and housekeeping services categories showing consistently higher use by treatments. There was some variation across basic sites on these measures, but in no case did the site equivalence test reject the hypothesis that the impacts were equal across sites in this model at the .05 level, although two service categories (medical/personal care and housekeeping) differed significantly at the .10 level.

Under the financial control model, the site equivalence tests for the formal care measures do indicate significant variation by site for the receipt of any formal care and medical/personal care. This appears to be driven by the smaller impact in the Greater Lynn site--and is consistent



with the service availability analysis presented earlier, which suggested that Greater Lynn had a relatively service-rich environment. The site equivalence tests also suggest a reduction in receipt of transportation in Cleveland. Although direct service expenditures (see Thornton, Will, and Davies 1985) on transportation by the Cleveland channeling project were very low--and thus small impacts would not have been surprising--a reduction is contrary to expectations.

This review of the receipt of case management and formal community-based services indicates that in general treatments consistently received significantly more care than controls. Some variation in treatment/control differences did occur in the financial control model, although this seemed to be driven by differences in one site--Greater Lynn which had smaller increases probably due to the greater availability of services to controls. Whether these differences affect impacts in the key outcome areas will be examined in the following section.

Impacts on Informal Care, Hospital and Nursing Home Use, Mortality, and Life Quality. In looking at site impacts on the key outcomes (see last three panels of Tables 4a and 4b), we see that treatment/control differences on these measures show some variations, but that the tests of equivalence across sites indicate that the differences are generally not statistically significant. Under the basic model, of the 18 measures presented for both time periods we see significant differences across sites (as measured by p-values of .05 or less) at both 6 and 12 months for only one measure (the number of nursing home days). In only one other instance, the contentment index at six months, do differences vary significantly across sites. Using a p-value of .05, we would expect two apparently

significant differences to occur by chance alone, even if there were in fact no differences. The number of outcome measures for which p-values are .10 or below is higher than the number that would be expected to occur solely due to chance, but only slightly. Thus, overall there do not appear to be major differences in impacts across sites under the basic model. However, because nursing home use is perhaps the most important outcome measure of the study, and significant cross-site differences occur in both time periods, this result will be examined in more detail below.

For the financial control model we see a similar pattern of results. For the informal care, hospitalization and nursing home use measures the lone significant difference across sites in channeling impacts is the 6-month nursing home expenditure result. For the mortality and quality of life measures a significant difference across sites occurs for the mortality measure at 12 months and for global life satisfaction and IADL (at 6 months only) measures. As in the basic model, only five of the 36 tests of equivalence are significant, a proportion only slightly higher than we would expect to occur by chance.

Given that neither model exhibited overall treatment/control differences that were significantly different from zero across the key hospital, nursing home, and mortality outcome measures, and that tests of equality of impacts across sites were so rarely rejected, there is little statistical evidence that any one site or group of sites, in either model, was more successful in achieving the primary goals of channeling. Thus, we cannot be confident that any observed differences across sites are not simply chance differences.

## 2. Examination of Individual Site Impacts

Although there is relatively little evidence of differences in impacts across sites based on the statistical evidence, it is nonetheless possible that individual sites may have been successful in achieving channeling's impacts, but that relying solely on the tests of equivalence does not allow us to identify these potential patterns of results because of small samples. Therefore, in this section we ask whether channeling had its intended impacts in any individual site if that site is evaluated in isolation across the key outcome measures. In this analysis, we focus on patterns of treatment/control differences across measures for each site as well as statistical significance because, as indicated, small samples reduce the likelihood of detecting impacts at the site level.

Basic Case Management Model. Nursing home impacts in Southern Maine stand out as noteworthy: nursing home days, admissions, and expenditures were all significantly reduced at the 10 percent level in both time periods. Although the reduction in nursing home days was large relative to the control group mean (a 46 percent reduction), the associated cost savings are not very large (\$525 per sample member over the first six months). (For comparison, the Maine project's costs for assessment and case management, exclusive of increased direct service costs, amounted to approximately \$600 per treatment group member for the same period.) Nor was the reduction in nursing home use associated with the hypothesized favorable outcomes in other areas. There is no evidence that quality of life was favorably affected (indeed, the only significant impact was a reduction in contentment at six months). Thus, although noteworthy in that it reduced nursing home use, there is no evidence that the Southern Maine

project succeeded in achieving the ultimate objectives of reduced overall cost or improved life quality. That the only significant nursing home reduction was observed in the site with the highest nursing home use among controls,<sup>1</sup> does suggest, however, that a program's approach to targeting may be an important factor in reducing nursing home use.

The Houston site results suggest an overall pattern of treatment/control differences partially consistent with channeling's objectives. There were small differences in nursing home days and expenditures at 12 months (treatments had lower use, not significant); small differences in hospital days (treatments had lower use, not significant) and expenditures (significant) at 6 months, but a small increase in both hospital days and expenditures at 12 months (not significant); differences in mortality rates (treatments had lower rates of mortality, significant at 6 and 12 months); and favorable effects on all measures of life quality at both 6 and 12 months, several of them statistically significant: global life satisfaction, contentment, and IADL functioning at 6 months, and unmet needs and confidence in receiving care at 12 months. The lack of consistency across time periods and the small size of the impacts for the hospital and nursing home use measures suggest that channeling impacts in Houston were concentrated on the life quality components and were not brought about by reduced institutionalization.

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<sup>1</sup>As discussed further in Wooldridge and Schore (1985), Southern Maine enrolled more clients who were in a nursing home at screen than the other basic sites and moderate waiting times for nursing home admission for private pay patients. Whether for these or other reasons, control group use of nursing homes was higher in Maine than in other sites (28 days versus 6-10 days at the other basic sites during months 1-6).

In the remaining basic case management sites--Baltimore, Middlesex County, and Eastern Kentucky--no noteworthy patterns of results are apparent, and there are few significant treatment/control differences across any of the groups of measures. None of the hospital, nursing home, or mortality measures differ significantly in either time period. In isolated cases (never in both followup time periods) an individual life quality measure is significant. The lack of any consistent pattern among significant results plus their small number (we would expect more significant differences due to chance) make it unlikely that channeling did have effects in these sites.

Financial Control Model. Of the five financial control sites, the patterns of results in Philadelphia, Miami, and Greater Lynn sites suggest that projects there may have partially achieved channeling's objectives. In Philadelphia, we see a small difference in nursing home use and expenditures at both periods (less use for treatments, not significant), a significant reduction in unmet needs at both time periods, and a significant increase in confidence in care received at six months. However, the treatment group members reported performing significantly fewer ADL tasks without assistance (significant), and received slightly less informal care (not significant).

In Miami, we see slight differences in nursing home days and expenditures at 12 months (lower for treatments, not significant), and small differences in hospital days and expenditures at 6 and 12 months (lower for treatments, not significant). There are also differences on several of the life quality measures. Treatment group members report fewer unmet needs (significant at six months) and greater life satisfaction and

confidence in receiving care (significant at 6 and 12 months). In contrast to these results, we observe significantly lower reported levels of ADL functioning for treatments than controls. We also observe a significant reduction in the receipt of informal care.

The Greater Lynn site also shows mixed results. On one hand we observe a significant decrease in the proportion receiving informal care, a small difference in nursing home use (higher use for treatments, not significant), and a significant increase in nursing home expenditures--all unintended outcomes. On the other hand, we see slight differences in hospital use and expenditures (lower use for treatments, not significant), differences in the rates of mortality (treatments had lower rates, significant at 12 months), and a consistent pattern of improved quality of life. Treatment group members reported higher global life quality, greater contentment, better IADL functioning, and reduced unmet needs (all but one significant in both time periods). Thus, although hospital use and nursing home use apparently were not affected by channeling in Greater Lynn, some beneficial effects on life quality did occur.

The Rensselaer County results show no general patterns of impacts across outcome measures. At 12 months the site does show the treatment group to have significantly less hospital use; however, treatments also have a higher mortality rate than controls (significant). The separate technical analysis of mortality (Wooldridge and Schore 1985) examined a series of methodological and program factors which could explain the treatment/control difference in mortality at Rensselaer County and concluded that it was probably due to chance rather than to the effects of channeling. Finally, differences in receipt of informal care and in the

quality of life measures are generally small and insignificant, except informal transportation which is reduced and reported functioning where treatments appear more disabled. We conclude that there was no pattern of treatment/control differences in this site.

The Cleveland site also exhibits no pattern of results across the measures. There were significant reductions in receipt of informal care and in the number of unmet needs, and an increase in hospital expenditures (significant at only the 10 percent level at six months), but on none of the other measures were treatment/control differences substantial or statistically significant.

#### D. CONCLUSION

Our analysis of site-specific impacts indicates that for the set of key outcome measures there were few instances of significant differences in impacts across sites. Furthermore, in examining each site independently we found little evidence that any site or group of sites was markedly more (or less) effective than the others in achieving the objectives of the channeling demonstration.

Results of the analysis in which we emphasized patterns of differences for each individual site rather than the more stringent test of equivalence indicated that in four sites (Houston, Philadelphia, Miami, Greater Lynn), although major differences did not exist on the hospital use and nursing home use measures, we did observe favorable patterns of results for the life quality measures. Of the remaining sites, only Southern Maine had a noteworthy result: a significant reduction in the use of nursing homes in both time periods. However, the associated cost reduction was not large, and there was no evidence of improved life quality.

Thus, we find in these results no strong message about what types of sites or aspects of implementation are most likely to be effective in achieving channeling goals. The fact that impacts on nursing home use were larger in Maine than elsewhere might suggest that it is necessary to target the program on clients who are truly at risk of institutionalization and in areas where nursing home beds are not in such short supply that entry is difficult. However, other sites that had a bed supply comparable to that in Maine, or that served a comparably at-risk clientele (as measured by control group use of nursing homes at followup) do not show comparable nursing home impacts. Hence, we cannot conclude that these factors are sufficient for a channeling site to achieve the intended reductions in nursing home use.



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- TR-84B-02 Initial Research Design of the National Long Term Care Demonstration. Peter Kemper et al. November 15, 1982, 230 pages, \$16.10.
- TR-84B-03 Informal Care to the Impaired Elderly: Report of the National Long Term Care Demonstration Survey of Informal Caregivers. Jon B. Christianson and Susan A. Stephens. June 6, 1984, 187 pages, \$13.10.
- TR-84B-04 The Comparability of Treatment and Control Groups at Randomization. Randall S. Brown and Margaret Harrigan. October 27, 1983, 38 pages, \$2.65.
- TR-84B-05 Examination of the Equivalence of Treatment and Control Groups and the Comparability of Baseline Data. Randall S. Brown and Peter A. Mossel. October 1984, 151 pages, \$11.30.
- TR-86B-01 Methodological Issues in the Evaluation of the National Long Term Care Demonstration. Randall S. Brown. 1986.
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- TR-86B-04 The Evaluation of the National Long Term Care Demonstration: Analysis of Channeling Project Costs. Craig Thornton, Joanna Will and Mark Davies. 1986.
- TR-86B-05 The Evaluation of the National Long Term Care Demonstration: The Planning and Operational Experience of the Channeling Projects, Volume 1 and 2. George Carcagno, Robert Applebaum, Jon Christianson, Barbara Phillips, Craig Thornton and Joanna Will. 1986.

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- TR-86B-06 The Evaluation of the National Long Term Care Demonstration: The Effects of Sample Attrition on Estimates of Channeling's Impacts. Peter A. Mossel and Randall S. Brown. 1986.
- TR-86B-07 Channeling Effects on Informal Care. Jon B. Christianson. May 1986, 310 pages, \$21.70.
- TR-86B-08 Channeling Effects on Informal Care: Appendixes. Jon B. Christianson. May 1986, 230 pages, \$16.10.
- TR-86B-09 Channeling Effects on Hospital, Nursing Home, and Other Medical Services. Judith Wooldridge and Jennifer Schore. 1986.
- TR-86B-10 Channeling Effects on Formal Community Based Services and Housing. Walter Corson, Thomas Grannemann, Nancy Holden and Craig Thornton. 1986.
- TR-86B-11 Channeling Effects on the Quality of Clients' Lives. Robert A. Applebaum and Margaret Harrigan. April 1986, 137 pages, \$9.60.
- TR-86B-12 The Evaluation of the National Long Term Care Demonstration: Analysis of the Benefits and Costs of Channeling. Craig Thornton and Shari Miller Dunstan. 1986.
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- TR-86B-14 "Data Base Documentation, National Long Term Care Channeling Evaluation, Part I: Background." Judith Wooldridge, Shari Miller Dunstan, and Nancy Holden. May 1986.
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- TR-86B-16 "Data Base Documentation, National Long Term Care Channeling Evaluation, Part II: Individual Public Use File Documentation, Report #2: Baseline File." Judith Wooldridge and Daniel J. Buckley. May 1986.
- TR-86B-17 "Data Base Documentation, National Long Term Care Channeling Evaluation, Part II: Individual Public Use File Documentation, Report #3: Client Tracking/Status Change File." Judith Wooldridge, Nancy Holden and Margaret Harrigan. May 1986.
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- TR-86B-19 "Data Base Documentation, National Long Term Care Channeling Evaluation, Part II: Individual Public Use File Documentation, Report #5: Status File." Judith Wooldridge, Nancy Holden and Margaret Harrigan. May 1986.
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#### SUPPLEMENTARY REPORTS

- 86-02 The Evaluation of the National Long Term Care Demonstration: Tables Comparing Channeling to Other Community Care Demonstrations. Robert A. Applebaum, Margaret Harrigan, and Peter Kemper. 1986.
- 86-04 Differential Impacts Among Subgroups of Channeling Enrollees. Thomas W. Grannemann and Jean Baldwin Grossman. 1986.
- 86-05 The Evaluation of the National Long Term Care Demonstration: An Analysis of Site-Specific Results. Robert A. Applebaum, Randall S. Brown, and Peter Kemper. 1986.

#### PRELIMINARY REPORTS

- 83-15 The Planning and Implementation of Channeling: Early Experiences of the National Long Term Care Demonstration. Raymond J. Baxter et al. April 15, 1983, 259 pages.<sup>a</sup>
- 83-21 Implementation of Early Operation of the National Long Term Care Demonstration: Overview. Raymond J. Baxter et al. December 1983, 36 pages, \$2.55
- 85-01 Channeling Effects for an Early Sample at 6-Month Followup. Peter Kemper et al. May 1985, 184 pages, \$13.50.
- 85-05 Channeling Effects for an Early Sample at 6-Month Followup: Executive Summary. Peter Kemper et al. May 1985, 12 pages, no charge.

#### DATA COLLECTION INSTRUMENTS

- 82-08 National Long Term Care Demonstration Applicant Screen. March 1982, 20 pages, \$2.00.
- 82-09 National Long Term Care Demonstration Clinical Assessment and Research Baseline Instrument: Community Version.<sup>b</sup> March 1982, 108 pages, \$6.30.
- 82-10 National Long Term Care Demonstration Clinical Assessment and Research Baseline Instrument: Institutional Version.<sup>b</sup> March 1982, 112 pages, \$7.85.
- 82-11 National Long Term Care Demonstration Followup Instrument. November 1982, 78 pages, \$5.45.
- 82-12 National Long Term Care Demonstration Client Tracking/Status Change Form. March 1982, 3 pages, no charge.
- 82-13 National Long Term Care Channeling Evaluation: Channeling Demonstration Project Instructions Manual for Reporting Financial Status, September 1982, 79 pages, \$5.55.
- 83-22 National Long Term Care Demonstration Informal Caregiver Survey Baseline. January 1983, 44 pages, \$3.10.
- 83-23 National Long Term Care Demonstration Informal Caregiver Followup Instrument. August 1983, 102 pages, \$7.15.
- 84-13 National Long Term Care Demonstration Institutional Provider Discussion Guide. January 1984, 22 pages, \$2.00.
- 84-14 National Long Term Care Demonstration Community-Based Provider Discussion Guide. February 1984, 68 pages, \$4.75.
- 84-15 National Long Term Care Demonstration Provider Characteristics Instrument. January 1984, 26 pages, \$2.00.

<sup>a</sup>This report is available free of charge from from the Office of the Assistant Secretary for Planning and Evaluation, Division of Disability Aging and Long Term Care Policy, Department of Health and Human Services, HHH Building, 200 Independence Avenue, S.W., Washington, D.C. 20201.

<sup>b</sup>These instruments were used for both research and clinical purposes. After the research sample intake was completed, a clinical version of the instrument was subsequently developed by Temple University's Institute on Aging and is available from it.

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## CHANNELING TECHNICAL ASSISTANCE REPORTS

A Guide to Memorandum of Understanding Negotiation and Development - M. Johnson and L. Sterthous, October 1981

Liability: Issues of Negligence and Liability, prepared for the National Channeling Demonstration Projects - E. Cohen and L. Staroscik, October 1982

Channeling Case Management Manual - B. Schneider, L. Gottesman, P. Kohn, B. Morrell, L. Staroscik, L. Sterthous, January 1983

Care Plan Study Final Report (1986)

Trainer's Manual for Client Assessment Training (1986)

Trainer's Manual for Screening Training (1986)

Trainer's Manual for Case Management Training (1986)

Program Product: Clinical Baseline Assessment Instrument and Instruction Manual (1986)

Program Product: Care Plan Forms and Instructions (1986)

TECHNICAL ASSISTANCE REPORTS ARE AVAILABLE FROM:

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## APPENDIX A

### DETAILED SITE-SPECIFIC RESULTS FOR KEY EVALUATION OUTCOMES



In the following Appendix A we present site-specific impacts for key evaluation outcome measures. Each measure is presented separately, with each table including treatment and control group means, treatment/control differences, t-statistics, and statistical tests of equivalence across sites. As in the final summary report, in order to use the maximum sample available for our major measures there is some variation in the samples used. Four major samples are used in the analysis. (See Table A.1 for site-by-site breakdown.)

- o Screen Sample (mortality)
- o Medicare Sample (hospital days and expenditures)
- o Nursing Home Sample (nursing home days and expenditures)
- o Followup Sample (formal and informal care, quality of life)

TABLE A.1  
MAXIMUM SAMPLE SIZE, BY SITE

Site	Screen Sample	Medicare Sample	12-Month Nursing Home Sample	12-Month Followup Sample
Basic Case Management Model				
Baltimore	688	602	509	389
Eastern Kentucky	488	437	407	324
Houston	674	614	518	408
Middlesex County	750	622	484	350
Southern Maine	524	437	376	282
Total	3124	2712	2294	1753
Financial Control Model				
Cleveland	579	518	441	344
Greater Lynn	617	534	485	387
Miami	747	653	552	431
Philadelphia	869	775	673	493
Rensselaer County	391	362	307	215
Total	3202	2842	2458	1870

TABLE A.2

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS RECEIVING COMPREHENSIVE CASE MANAGEMENT

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.11]			[.05]#
Baltimore	69.2	18.0	51.1**(11.91)	58.5	8.3	50.2**(10.80)
Eastern Kentucky	70.2	18.3	51.9**(10.22)	50.8	14.9	36.0** (6.57)
Houston	69.6	27.9	41.7** (8.13)	60.2	25.8	34.4** (6.02)
Middlesex County	69.1	11.8	57.3**(11.09)	50.4	5.6	44.8** (7.96)
Southern Maine	85.3	23.9	61.4**(11.70)	69.8	15.9	53.9** (9.49)
Model Overall	72.5	20.5	52.0**(23.62)	58.3	14.7	43.7**(18.07)
Sample Size	1149	810	1959	1027	682	1709
Financial Control Model						
			[.01]#			[.01]#
Cleveland	76.0	24.1	51.9**(10.89)	64.7	18.9	45.9** (7.91)
Greater Lynn	82.9	36.6	46.3**(10.76)	56.2	25.3	30.9** (6.01)
Miami	89.4	27.5	61.9**(14.39)	78.0	24.1	53.9**(10.66)
Philadelphia	87.4	27.1	60.3**(14.28)	66.3	14.3	52.0**(10.26)
Rensselaer County	78.8	7.6	71.3**(14.01)	70.7	6.6	64.1** (9.97)
Model Overall	83.5	25.6	57.8**(29.29)	67.7	18.6	49.1**(20.60)
Sample Size	1372	741	2113	1189	639	1828

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.3

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING FORMAL SERVICES

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.12]			[.36]
Baltimore	69.5	66.9	2.6 (0.51)	70.2	65.4	4.9 (0.86)
Eastern Kentucky	69.9	51.9	18.0** (3.10)	54.1	46.9	7.3 (1.14)
Houston	68.2	56.2	12.0* (2.01)	77.1	59.5	17.6* (2.52)
Middlesex County	78.1	57.0	21.1** (3.57)	82.6	62.0	20.6** (3.01)
Southern Maine	78.3	67.5	10.8 (1.73)	75.3	62.1	13.1 (1.90)
Model Overall	72.4	59.6	12.8** (4.89)	71.7	58.4	13.3** (4.45)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.03]#			[.13]
Cleveland	87.8	58.4	29.3** (6.27)	84.9	60.3	24.6** (4.55)
Greater Lynn	92.7	81.8	11.0* (2.49)	92.8	82.9	10.0* (1.97)
Miami	86.2	62.5	23.7** (5.85)	82.5	68.4	14.1** (3.03)
Philadelphia	95.1	67.4	27.7** (6.63)	94.2	70.8	23.4** (4.93)
Rensselaer County	93.3	72.8	20.5** (4.02)	96.8	71.8	25.1** (4.06)
Model Overall	92.9	69.2	23.7** (12.11)	91.1	71.5	19.5** (8.66)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.4

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING MEDICAL/PERSONAL CARE

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.10]			[.16]
Baltimore	58.1	51.1	7.0 (1.35)	62.9	44.2	18.6** (3.20)
Eastern Kentucky	36.6	34.4	2.1 (0.36)	30.7	31.2	-0.6 (-0.09)
Houston	52.9	48.6	4.3 (0.69)	65.9	49.6	16.3* (2.27)
Middlesex County	76.5	53.3	23.2** (3.79)	76.4	58.2	18.2** (2.60)
Southern Maine	54.3	49.6	4.7 (0.72)	53.7	49.5	4.2 (0.60)
Model Overall	56.2	46.8	9.4** (3.47)	58.5	45.4	13.2** (4.31)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.06]			[.06]
Cleveland	78.4	41.6	36.8** (6.58)	79.3	47.9	31.4** (4.90)
Greater Lynn	78.2	63.5	14.7** (2.80)	71.3	64.0	7.3 (1.22)
Miami	75.2	47.1	28.2** (5.81)	77.1	51.3	25.8** (4.70)
Philadelphia	90.9	60.7	30.1** (6.02)	86.6	60.2	26.4** (4.70)
Rensselaer County	83.7	61.2	22.8** (3.70)	85.6	60.0	25.6** (3.51)
Model Overall	83.3	55.5	27.8** (11.88)	81.3	57.1	24.2** (9.05)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.5

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY HOUSEKEEPING

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.08]			[.47]
Baltimore	57.2	53.2	4.0 (0.75)	57.0	51.0	6.0 (1.01)
Eastern Kentucky	57.0	39.6	17.4** (2.81)	47.3	37.5	9.8 (1.46)
Houston	61.4	46.6	14.8* (2.32)	69.6	56.2	13.4 (1.82)
Middlesex County	73.1	45.8	27.3** (4.33)	71.6	49.4	22.2** (3.09)
Southern Maine	64.5	52.1	12.3 (1.85)	69.2	52.6	16.6* (2.28)
Model Overall	62.7	47.2	15.4** (5.54)	62.8	49.0	13.8** (4.42)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.18]			[.31]
Cleveland	82.5	49.4	33.0** (6.11)	82.1	52.1	30.0** (5.00)
Greater Lynn	88.0	73.0	15.0** (2.95)	85.7	71.2	14.6** (2.59)
Miami	79.7	52.2	27.5** (5.87)	81.6	59.8	21.7** (4.21)
Philadelphia	88.0	60.7	27.3** (5.65)	88.8	63.7	25.1** (4.75)
Rensselaer County	80.0	54.4	25.4** (4.35)	86.4	56.5	30.0** (4.38)
Model Overall	85.2	58.8	26.4** (11.67)	85.7	61.5	24.2** (9.63)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.6

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY HOME-DELIVERED MEALS

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.33]			[.37]
Baltimore	16.9	7.9	9.0* (2.12)	15.2	7.7	7.5 (1.53)
Eastern Kentucky	41.3	37.0	4.3 (0.86)	49.8	41.4	8.4 (1.52)
Houston	20.8	14.4	6.4 (1.26)	22.5	18.2	4.4 (0.72)
Middlesex County	7.6	5.6	2.0 (0.40)	9.6	10.1	-0.5 (-0.09)
Southern Maine	17.0	22.2	-5.2 (-0.97)	17.6	23.2	-5.5 (-0.92)
Model Overall	22.2	18.3	3.9 (1.77)	24.5	21.4	3.0 (1.17)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.31]			[.48]
Cleveland	38.9	16.9	22.1** (3.89)	34.2	17.8	16.4* (2.55)
Greater Lynn	22.9	16.8	6.1 (1.14)	24.7	21.6	3.1 (0.52)
Miami	41.0	25.7	15.3** (3.11)	41.2	27.4	13.9* (2.52)
Philadelphia	25.1	17.0	8.1 (1.60)	30.3	20.4	10.0 (1.77)
Rensselaer County	26.9	17.5	9.5 (1.53)	21.4	18.8	2.5 (0.35)
Model Overall	31.4	19.0	12.4** (5.24)	31.9	21.6	10.3** (3.85)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.7

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY TRANSPORTATION

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.89]			[.61]
Baltimore	9.9	12.9	-3.1 (-1.10)	9.9	11.5	-1.7 (-0.46)
Eastern Kentucky	4.2	5.8	-1.6 (-0.50)	3.0	3.9	-0.9 (-0.22)
Houston	-0.5	2.7	-3.3 (-0.99)	12.6	5.8	6.8 (1.55)
Middlesex County	5.7	6.5	-0.9 (-0.26)	7.7	8.9	-1.2 (-0.27)
Southern Maine	9.7	8.5	1.1 (0.33)	9.0	10.5	-1.5 (-0.35)
Model Overall	5.5	7.2	-1.8 (-1.21)	8.4	7.8	0.6 (0.31)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.02]#			[.01]#
Cleveland	8.5	15.7	-7.2 (-1.58)	5.9	17.8	-11.9* (-2.32)
Greater Lynn	19.4	6.6	12.8** (2.99)	20.2	9.0	11.2* (2.32)
Miami	21.2	11.8	9.5* (2.40)	22.8	9.4	13.4** (3.02)
Philadelphia	19.0	8.9	10.2* (2.49)	18.2	15.0	3.2 (0.70)
Rensselaer County	12.9	3.9	9.1 (1.82)	10.9	2.4	8.5 (1.45)
Model Overall	15.9	9.2	6.7** (3.53)	14.9	10.6	4.2* (1.97)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.



TABLE A.8

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING ANY INFORMAL CARE

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.61]			[.10]
Baltimore	86.9	86.3	0.5 (0.15)	88.7	82.7	6.0 (1.49)
Eastern Kentucky	76.2	81.8	-5.6 (-1.36)	75.3	84.4	-9.1* (-2.00)
Houston	82.4	89.0	-6.6 (-1.54)	90.3	84.3	6.0 (1.20)
Middlesex County	86.4	86.9	-0.5 (-0.12)	87.0	89.9	-2.9 (-0.59)
Southern Maine	89.8	89.7	0.1 (0.02)	86.6	86.3	0.3 (0.06)
Model Overall	84.3	86.6	-2.3 (-1.24)	86.0	85.2	0.8 (0.38)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.63]			[.66]
Cleveland	86.2	93.3	-7.0 (-1.71)	82.0	87.7	-5.6 (-1.16)
Greater Lynn	81.9	85.4	-3.5 (-0.90)	80.7	91.0	-10.3* (-2.26)
Miami	70.0	78.7	-8.7* (-2.44)	67.5	75.2	-7.7 (-1.85)
Philadelphia	87.0	89.6	-2.7 (-0.72)	83.2	85.8	-2.6 (-0.62)
Rensselaer County	92.0	92.2	-0.2 (-0.05)	89.9	90.6	-0.7 (-0.13)
Model Overall	82.3	87.2	-4.8**(-2.80)	80.1	85.6	-5.4**(-2.68)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.9

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL MEDICAL/PERSONAL CARE

	At 6 Months			At 12 Months		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.56]			[.33]
Baltimore	56.6	59.7	-3.1 (-0.67)	56.3	49.0	7.2 (1.37)
Eastern Kentucky	51.0	57.8	-6.8 (-1.25)	50.9	57.0	-6.2 (-1.04)
Houston	52.7	49.3	3.4 (0.61)	43.4	43.8	-0.4 (-0.07)
Middlesex County	68.7	64.5	4.2 (0.76)	54.1	60.8	-6.6 (-1.04)
Southern Maine	55.5	53.8	1.7 (0.28)	57.8	53.7	4.1 (0.64)
Model Overall	57.1	56.7	0.4 (0.17)	52.0	52.4	-0.4 (-0.13)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.14]			[.80]
Cleveland	59.2	70.8	-11.6* (-2.28)	58.8	60.3	-1.5 (-0.25)
Greater Lynn	44.3	54.0	-9.7* (-2.04)	49.3	57.7	-8.4 (-1.54)
Miami	50.2	52.2	-2.0 (-0.45)	43.0	44.4	-1.4 (-0.29)
Philadelphia	63.0	66.7	-3.7 (-0.81)	59.8	59.3	0.5 (0.10)
Rensselaer County	49.6	43.7	5.9 (1.06)	40.0	44.7	-4.7 (-0.71)
Model Overall	52.3	57.2	-4.9* (-2.30)	50.8	53.1	-2.3 (-0.95)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.10

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL HOUSEKEEPING

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.64]			[.13]
Baltimore	84.4	86.3	-2.0 (-0.54)	88.3	79.8	8.5* (2.04)
Eastern Kentucky	71.6	78.6	-7.0 (-1.64)	74.5	82.0	-7.5 (-1.60)
Houston	81.8	89.0	-7.3 (-1.66)	88.3	84.3	4.1 (0.79)
Middlesex County	86.3	86.9	-0.7 (-0.15)	86.2	87.3	-1.2 (-0.23)
Southern Maine	89.8	89.7	0.0 (0.01)	86.4	84.2	2.2 (0.44)
Model Overall	82.5	85.8	-3.3 (-1.73)	85.2	83.3	1.9 (0.85)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.65]			[.56]
Cleveland	86.1	93.3	-7.2 (-1.67)	81.9	86.3	-4.4 (0.90)
Greater Lynn	80.8	84.7	-3.9 (-0.95)	78.9	89.2	-10.3* (-2.23)
Miami	65.2	75.7	-10.6** (-2.83)	64.6	72.6	-8.0 (-1.89)
Philadelphia	86.1	89.6	-3.6 (-0.93)	83.8	85.0	-1.2 (-0.28)
Rensselaer County	88.9	91.3	-2.4 (-0.51)	88.6	89.4	-0.8 (-0.14)
Model Overall	80.3	86.2	-5.9** (-3.24)	79.1	84.0	-4.8* (-2.35)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.11

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL TRANSPORTATION

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.54]			[.94]
Baltimore	18.0	14.4	3.7 (0.81)	18.7	19.2	-0.6 (-0.11)
Eastern Kentucky	25.5	25.3	0.2 (0.03)	23.5	20.3	3.2 (0.54)
Houston	29.2	22.6	6.6 (1.22)	36.0	34.7	1.3 (0.20)
Middlesex County	20.7	10.3	10.4 (1.93)	19.6	19.0	0.6 (0.10)
Southern Maine	25.1	27.4	-2.3 (-0.40)	29.7	23.2	6.5 (1.02)
Model Overall	25.0	20.4	4.7* (1.97)	25.4	23.7	1.7 (0.62)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.12]			[.23]
Cleveland	25.9	38.2	-12.3* (-2.32)	19.3	17.8	1.5 (0.26)
Greater Lynn	22.2	23.4	-1.1 (-0.23)	25.0	27.0	-2.0 (-0.37)
Miami	11.8	22.1	-10.3* (-2.24)	13.1	14.5	-1.4 (-0.30)
Philadelphia	14.4	11.1	3.3 (0.71)	16.3	11.5	4.8 (0.96)
Rensselaer County	22.8	33.0	-10.2 (-1.78)	8.9	22.4	-13.4* (-2.08)
Model Overall	19.0	24.2	-5.1* (-2.32)	18.1	18.4	-0.3 (-0.13)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.12

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS IN THE COMMUNITY RECEIVING INFORMAL HOME-DELIVERED MEALS

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.60]			[.98]
Baltimore	11.3	7.2	4.1 (1.14)	12.4	8.7	3.7 (0.94)
Eastern Kentucky	14.8	16.2	-1.4 (-0.34)	12.2	11.7	0.5 (0.10)
Houston	19.3	21.9	-2.6 (-0.61)	22.5	22.3	0.2 (0.04)
Middlesex County	9.7	13.1	-3.4 (-0.79)	11.8	8.9	2.9 (0.61)
Southern Maine	5.5	8.5	-3.0 (-0.66)	8.4	7.4	1.0 (0.21)
Model Overall	12.6	13.7	-1.2 (-0.61)	14.2	12.3	1.8 (0.88)
Sample Size	914	661	1575	527	795	1322
Financial Control Model						
			[.18]			[.73]
Cleveland	21.1	16.9	4.2 (0.93)	14.0	20.5	-6.5 (-1.34)
Greater Lynn	13.2	21.9	-8.7* (-2.05)	16.2	17.1	-1.0 (-0.21)
Miami	5.2	12.5	-7.3 (-1.86)	5.0	12.8	-7.9 (-1.89)
Philadelphia	8.1	11.9	-3.7 (-0.92)	10.1	11.5	-1.4 (-0.33)
Rensselaer County	17.0	16.5	0.5 (0.10)	11.3	11.8	-0.5 (-0.09)
Model Overall	12.6	15.8	-3.3 (-1.73)	10.7	14.4	-3.8 (-1.86)
Sample Size	1140	599	1739	938	499	1437

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.13

SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS DECEASED ON 6- AND 12-MONTH ANNIVERSARIES, SCREEN SAMPLE

	6 Months			12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.32]			[.50]
Baltimore	17.72	18.45	-0.73 (-0.02)	27.42	30.26	-2.84 (-0.85)
Eastern Kentucky	13.57	13.64	-0.07 (-0.02)	21.16	21.49	-0.33 (-0.09)
Houston	12.38	17.58	-5.20 (-1.81)	22.70	29.67	6.97* (-2.07)
Middlesex County	20.27	22.41	-2.14 (-0.79)	31.27	33.78	-2.51 (-0.78)
Southern Maine	25.42	21.54	3.88 (1.22)	30.18	31.92	1.74 (0.46)
Model Overall	17.77	18.89	-1.11 (-0.84)	27.23	29.67	-2.44 (-1.57)
Sample Size	1779	1345	3124	1779	1345	3124
Financial Control Model						
			[.68]			[.02]#
Cleveland	17.48	18.32	-0.84 (-0.26)	28.56	27.23	1.33 (0.35)
Greater Lynn	13.99	16.88	-2.89 (-0.98)	21.65	28.90	-7.25* (-2.10)
Miami	13.22	13.80	-0.58 (-0.21)	23.15	22.56	0.59 (0.18)
Philadelphia	19.28	18.06	1.22 (0.46)	30.93	31.94	-1.01 (-0.33)
Rensselaer County	21.17	17.44	3.73 (1.01)	36.85	25.64	11.21** (2.58)
Model Overall	16.66	16.73	-0.08 (-0.06)	27.45	27.37	0.08 (0.05)
Sample Size	1923	1279	3202	1923	1279	3202

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual screen characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. A p value which is placed in parentheses next to the sign represents the actual probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 10 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

TABLE A.14

SITE IMPACTS ON NUMBER OF SURVIVAL DAYS AS OF 6- AND 12-MONTH ANNIVERSARIES, SCREEN SAMPLE

	6 Months			12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.11]			[.33]
Baltimore	163.99	165.18	-1.19 (-0.35)	304.62	303.32	1.30 (0.16)
Eastern Kentucky	166.99	170.71	-3.72 (-0.94)	317.66	321.87	-4.21 (-0.44)
Houston	170.21	164.68	5.53 (1.62)	320.18	303.38	16.80* (2.00)
Middlesex County	161.64	155.13	6.51 (2.00)	296.03	287.42	8.61 (1.08)
Southern Maine	153.51	156.60	-3.09 (-0.81)	281.65	287.50	-5.85 (-0.63)
Model Overall	163.54	162.18	1.36 (0.84)	304.29	300.08	4.21 (1.08)
Sample Size	1779	1345	3124	1779	1345	3124
Financial Control Model						
			[.72]			[.20]
Cleveland	165.39	163.18	2.21 (0.57)	304.46	303.99	0.47 (0.05)
Greater Lynn	167.26	166.04	1.22 (0.35)	316.78	304.62	12.16 (1.41)
Miami	169.40	169.80	-0.40 (-0.12)	317.50	318.57	-1.07 (-0.13)
Philadelphia	163.84	165.40	-1.56 (-0.50)	310.45	305.24	5.21 (-0.68)
Rensselaer County	157.22	162.60	-5.38 (-1.22)	283.61	304.70	-21.09 (-1.95)
Model Overall	165.26	165.82	-0.36 (-0.36)	306.16	307.92	-1.76 (-0.45)
Sample Size	1923	1279	3202	1923	1279	3202

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual screen characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. A p value which is placed in parentheses next to the sign represents the actual probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 10 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

TABLE A.15

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS DECEASED ON 6- AND 12-MONTH ANNIVERSARIES

	Months 1-6			Months 7-12		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.28]			[.30]
Baltimore	17.04	17.37	-0.33 (-0.11)	27.36	29.66	-2.30 (-0.65)
Eastern Kentucky	11.79	11.00	0.79 (0.21)	16.73	19.14	-2.41 (-0.55)
Houston	11.42	14.52	-3.11 (-0.88)	20.05	26.14	-6.09 (-1.44)
Middlesex County	20.13	19.27	0.86 (0.26)	33.69	31.65	2.04 (0.51)
Southern Maine	22.86	14.55	8.30* (2.30)	32.89	26.29	6.60 (1.53)
Model Overall	16.11	15.40	0.72 (0.48)	25.84	26.68	-0.84 (-0.47)
Sample Size	1632	1117	2749	1632	1117	2749
Financial Control Model						
			[.68]			[.02]#
Cleveland	18.07	16.78	1.29 (0.36)	28.28	24.83	3.45 (0.79)
Greater Lynn	15.39	14.92	0.47 (0.14)	21.04	25.81	-4.77 (-1.18)
Miami	11.92	11.20	0.71 (0.23)	20.60	19.09	1.51 (0.41)
Philadelphia	16.16	17.23	-1.06 (-0.34)	30.25	31.51	-1.26 (-0.33)
Rensselaer County	21.57	15.52	6.05 (1.55)	38.58	23.56	15.02** (3.17)
Model Overall	15.77	14.95	0.81 (0.55)	26.52	25.05	1.47 (0.82)
Sample Size	1808	1050	2858	1808	1050	2858

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.



TABLE A.16

## SITE IMPACTS ON CUMULATIVE SURVIVAL DAYS AFTER 6 AND 12 MONTHS

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.23]			[.33]
Baltimore	166.77	167.90	-1.14 (-0.35)	307.81	306.69	1.12 (0.13)
Eastern Kentucky	168.33	174.61	-6.27 (-1.56)	324.31	330.15	-5.85 (-0.56)
Houston	172.26	168.36	3.90 (1.01)	325.91	313.67	12.24 (1.22)
Middlesex County	163.08	162.79	0.29 (0.08)	295.84	299.74	-3.91 (-0.41)
Southern Maine	159.53	167.56	-8.03*(-2.02)	290.25	309.26	-19.01 (-1.85)
Model Overall	166.87	168.19	-1.33 (-0.81)	310.30	311.72	-1.42 (-0.34)
Sample Size	1632	1117	2749	1632	1117	2749
Financial Control Model						
			[.34]			[.22]
Cleveland	166.71	166.17	0.54 (0.14)	307.50	311.21	-3.71 (-0.36)
Greater Lynn	165.39	170.54	-5.15 (-1.46)	314.38	314.48	-0.09 (-0.01)
Miami	171.96	174.46	-2.50 (-0.77)	323.87	328.76	-4.90 (-0.56)
Philadelphia	167.94	166.48	1.46 (0.44)	305.93	308.42	-2.49 (-0.28)
Rensselaer County	158.38	166.12	-7.74 (-1.87)	281.79	312.34	-30.55**(-2.76)
Model Overall	167.52	169.17	-1.65 (-1.05)	309.74	315.57	-5.83 (-1.39)
Sample Size	1808	1050	2858	1808	1050	2858

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.17

## SITE IMPACTS ON PERCENT OF SAMPLE MEMBERS ADMITTED TO NURSING HOME

	Months 1-6			Months 7-12		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.19]			[.20]
Baltimore	12.9	10.5	2.4 (0.78)	8.7	8.5	0.2 (0.06)
Eastern Kentucky	6.1	9.1	-3.0 (-0.82)	5.8	9.0	-3.2 (-1.05)
Houston	8.0	10.5	-2.5 (-0.70)	5.4	8.8	-3.4 (-1.12)
Middlesex County	14.3	10.1	4.2 (1.18)	10.6	7.9	2.7 (0.93)
Southern Maine	18.1	24.7	-6.7 (-1.80)	5.3	11.8	-6.5* (-2.13)
Model Overall	12.6	13.0	-0.4 (-0.24)	7.7	9.2	-1.5 (-1.15)
Sample Size	1281	903	2184	1359	935	2294
Financial Control Model						
			[.54]			[.75]
Cleveland	16.9	18.0	-1.1 (-0.31)	10.1	9.4	0.7 (0.21)
Greater Lynn	21.0	16.1	4.9 (1.46)	12.6	14.7	-2.2 (-0.76)
Miami	10.1	12.4	-2.3 (-0.73)	7.0	6.8	0.3 (0.10)
Philadelphia	8.3	10.2	-1.9 (-0.60)	9.3	8.7	0.6 (0.21)
Rensselaer County	7.9	6.6	1.3 (0.35)	6.7	2.7	4.0 (1.15)
Model Overall	12.1	12.5	-0.4 (-0.27)	9.3	8.9	0.4 (0.33)
Sample Size	1548	861	2409	1577	881	2458

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.18

## SITE IMPACTS ON NUMBER OF NURSING HOME DAYS

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.02]#			[.03]#
Baltimore	10.55	9.53	1.02 (0.35)	18.35	13.56	4.79 (1.13)
Eastern Kentucky	4.69	6.72	-2.03 (-0.59)	17.26	11.05	6.21 (1.23)
Houston	6.84	7.69	-0.86 (-0.25)	5.00	11.81	-6.81 (-1.35)
Middlesex County	11.09	9.03	2.05 (0.60)	16.79	14.94	1.85 (0.38)
Southern Maine	15.19	28.27	-13.08**(-3.69)	19.37	31.47	-12.11*(-2.35)
Model Overall	10.54	12.15	-1.61 (-1.09)	15.45	16.32	-0.88 (-0.41)
Sample Size	1281	903	2184	1359	935	2294
Financial Control Model						
			[.38]			[.81]
Cleveland	11.29	12.51	-1.22 (-0.39)	17.56	17.13	0.42 (0.09)
Greater Lynn	19.38	15.63	3.75 (1.32)	26.88	27.75	-0.87 (-0.20)
Miami	7.27	7.23	0.04 (0.01)	7.75	12.05	-4.30 (-1.02)
Philadelphia	2.51	6.55	-4.03 (-1.50)	8.83	14.08	-5.25 (-1.23)
Rensselaer County	4.32	6.02	-1.70 (-0.52)	10.44	9.38	1.06 (0.20)
Model Overall	8.58	9.61	-1.03 (-0.81)	14.14	16.65	-2.50 (-1.24)
Sample Size	1548	861	2409	1577	881	2458

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.19

## SITE IMPACTS ON TOTAL NURSING HOME EXPENDITURES

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.27]			[.08]
Baltimore	533	487	46 (0.27)	978	715	263 (1.18)
Eastern Kentucky	163	360	-197 (-0.98)	786	523	263 (1.00)
Houston	289	406	-117 (-0.59)	151	574	-423 (-1.60)
Middlesex County	550	564	-14 (-0.07)	819	747	72 (0.28)
Southern Maine	1031	1556	-525*(-2.56)	1132	1597	-466 (-1.73)
Model Overall	543	666	-123 (-1.44)	770	819	-49 (-0.44)
Sample Size	1281	903	2184	1359	935	2294
Financial Control Model						
			[.02]#			[.53]
Cleveland	577	717	-141 (-0.68)	877	769	108 (0.39)
Greater Lynn	1536	944	592**(3.13)	1702	1583	119 (0.47)
Miami	334	418	-84 (-0.47)	352	610	-258 (-1.08)
Philadelphia	145	387	-242 (-1.35)	428	794	-367 (-1.52)
Rensselaer County	251	314	-64 (-0.29)	500	495	5 (0.02)
Model Overall	528	560	-33 (-0.38)	767	894	-128 (-1.11)
Sample Size	1548	861	2409	1577	881	2458

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.20

## SITE IMPACTS ON NUMBER OF HOSPITAL DAYS

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.69]			[.83]
Baltimore	12.97	13.12	-0.16 (-0.10)	7.23	8.03	-0.80 (-0.56)
Eastern Kentucky	5.98	6.59	-0.61 (-0.30)	4.15	3.93	0.22 (0.12)
Houston	9.82	12.21	-2.39 (-1.21)	8.46	6.94	1.52 (0.90)
Middlesex County	16.20	14.58	1.62 (0.87)	9.69	10.67	-0.98 (-0.61)
Southern Maine	10.10	10.37	-0.27 (-0.13)	4.87	5.28	-0.41 (-0.23)
Model Overall	11.14	11.46	-0.32 (-0.38)	6.92	7.02	-0.10 (-0.14)
Sample Size	1608	1104	2712	1608	1104	2712
Financial Control Model						
			[.27]			[.32]
Cleveland	15.00	11.76	3.25 (1.32)	6.18	4.31	1.87 (0.92)
Greater Lynn	15.19	17.96	-2.77 (-1.22)	8.43	7.78	0.65 (0.35)
Miami	9.70	12.46	-2.76 (-1.33)	7.67	8.62	-0.95 (-0.55)
Philadelphia	17.19	16.69	0.50 (0.23)	7.96	8.72	-0.76 (-0.43)
Rensselaer County	22.30	21.73	0.57 (0.22)	11.27	15.44	-4.18 (-1.91)
Model Overall	15.96	16.16	-0.20 (-0.20)	8.58	8.97	-0.39 (-0.47)
Sample Size	1795	1047	2842	1795	1047	2842

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

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\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.21

## SITE IMPACTS ON TOTAL HOSPITAL EXPENDITURES

	Months 1-6			Months 7-12		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.38]			[.98]
Baltimore	4250	4362	-112 (-0.23)	2615	2637	-22 (-0.06)
Eastern Kentucky	1379	1509	-130 (-0.22)	954	880	74 (0.15)
Houston	3321	4472	-1151*(-1.99)	2983	2644	339 (0.72)
Middlesex County	3968	3520	448 (0.82)	2471	2491	-20 (-0.04)
Southern Maine	2926	2929	-2 (-0.00)	1377	1245	133 (0.27)
Model Overall	3211	3412	-201 (-0.83)	2114	2015	99 (0.49)
Sample Size	1608	1104	2712	1608	1104	2712
Financial Control Model						
			[.26]			[.50]
Cleveland	5504	4100	1404 (1.77)	2243	1476	767 (1.32)
Greater Lynn	3751	4299	-548 (-0.75)	2063	2229	-167 (-0.31)
Miami	3993	4701	-708 (-1.06)	2912	3411	-498 (-1.01)
Philadelphia	6777	6923	-146 (-0.21)	3423	3621	-197 (-0.39)
Rensselaer County	4296	3949	346 (0.41)	1762	2215	-454 (-0.72)
Model Overall	4930	4899	31 (0.09)	2617	2706	-90 (-0.37)
Sample Size	1795	1047	2842	1795	1047	2842

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

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\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.22

## SITE IMPACTS ON TOTAL REIMBURSEMENTS FOR PHYSICIAN AND OTHER MEDICAL SERVICES

	Months 1-6			Months 7-12		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.16]			[.67]
Baltimore	1174	1299	-126 (-0.91)	936	780	156 (1.20)
Eastern Kentucky	437	358	79 (0.46)	418	319	99 (0.62)
Houston	1044	1296	-252 (-1.53)	898	924	-26 (-0.17)
Middlesex County	1197	940	258 (1.66)	977	719	258 (1.78)
Southern Maine	565	649	-84 (-0.50)	384	360	24 (0.15)
Model Overall	903	928	-24 (-0.35)	745	633	113 (1.73)
Sample Size	1608	1104	2712	1608	1104	2712
Financial Control Model						
			[.69]			[.93]
Cleveland	1159	961	198 (0.99)	717	580	137 (0.80)
Greater Lynn	961	977	-16 (-0.09)	575	553	22 (0.14)
Miami	1669	1810	-141 (-0.83)	1277	1322	-45 (-0.31)
Philadelphia	1588	1514	75 (0.42)	1172	1222	-50 (-0.33)
Rensselaer County	996	847	149 (0.69)	567	553	14 (0.07)
Model Overall	1309	1266	44 (0.53)	892	884	8 (0.11)
Sample Size	1795	1047	2842	1795	1047	2842

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.23

## SITE IMPACTS ON NUMBER OF UNMET NEEDS

	At 6 Months			At 12 Months		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.24]			[.96]
Baltimore	1.16	1.32	-0.15 (-0.77)	0.89	1.09	-0.20 (-1.02)
Eastern Kentucky	2.45	2.51	-0.06 (-0.25)	2.10	2.31	-0.21 (-0.90)
Houston	2.26	2.37	-0.10 (-0.43)	1.46	2.17	-0.70**(-2.92)
Middlesex County	1.97	2.27	-0.30 (-1.24)	1.10	1.75	-0.65**(-2.83)
Southern Maine	0.75	0.82	-0.07 (-0.30)	0.57	0.66	-0.09 (-0.37)
Model Overall	1.68	1.83	-0.15 (-1.49)	1.22	1.63	-0.42**(-4.12)
Sample Size	1072	767	1839	959	628	1587
Financial Control Model						
			[.60]			[.83]
Cleveland	2.42	2.87	-0.45 (-1.91)	1.96	2.06	-0.10 (-0.40)
Greater Lynn	0.66	1.00	-0.34 (-1.64)	0.73	1.03	-0.30 (-1.41)
Miami	1.99	2.42	-0.43* (-2.13)	1.76	1.94	-0.18 (-0.86)
Philadelphia	1.41	1.76	-0.35 (-1.71)	1.09	1.70	-0.61**(-2.80)
Rensselaer County	0.81	0.88	-0.08 (-0.31)	0.87	1.17	-0.30 (-1.15)
Model Overall	1.35	1.71	-0.36**(-3.75)	1.21	1.54	-0.32**(-3.25)
Sample Size	1278	697	1975	1114	603	1717

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

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\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.



TABLE A.24

## SITE IMPACTS ON GLOBAL LIFE SATISFACTION

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.10]			[.69]
Baltimore	0.85	0.83	0.02 (0.29)	0.84	0.87	-0.03 (-0.41)
Eastern Kentucky	0.99	0.74	0.26** (3.26)	0.93	0.80	0.13 (1.55)
Houston	0.89	0.72	0.17* (2.06)	0.76	0.72	0.04 (0.41)
Middlesex County	0.63	0.52	0.11 (1.40)	0.56	0.56	-0.00 (-0.00)
Southern Maine	0.78	0.79	-0.01 (-0.12)	0.84	0.82	0.02 (0.18)
Model Overall	0.83	0.73	0.11** (3.10)	0.79	0.76	0.02 (0.59)
Sample Size	1127	810	1937	1009	662	1671
Financial Control Model						
			[.01]#			[.04]#
Cleveland	0.61	0.66	-0.05 (-0.64)	0.67	0.75	-0.08 (-0.92)
Greater Lynn	0.93	0.67	0.26** (3.41)	0.91	0.69	0.22** (2.88)
Miami	0.75	0.57	0.18* (2.45)	0.70	0.57	0.14 (1.79)
Philadelphia	0.72	0.71	0.01 (0.14)	0.72	0.68	0.04 (0.48)
Rensselaer County	0.77	0.84	-0.08 (-0.86)	0.74	0.80	-0.06 (-0.63)
Model Overall	0.75	0.69	0.07 (1.92)	0.74	0.69	0.06 (1.53)
Sample Size	1340	721	2061	1125	620	1745

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

\*Different from zero statistically at the 5 percent significance level, using a two-tailed test.

\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.25

## SITE IMPACTS ON CONFIDENCE ABOUT RECEIPT OF CARE

	At 6 Months			At 12 Months		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.28]			[.12]
Baltimore	1.49	1.33	0.16 (1.86)	1.49	1.41	0.08 (0.84)
Eastern Kentucky	1.14	1.14	0.00 (0.01)	1.11	1.11	-0.00 (-0.04)
Houston	1.08	0.98	0.10 (0.88)	1.35	0.95	0.40** (3.35)
Middlesex County	1.23	0.93	0.30** (2.79)	1.25	1.20	0.05 (0.39)
Southern Maine	1.25	1.22	0.03 (0.25)	1.31	1.19	0.12 (0.98)
Model Overall	1.27	1.13	0.14** (3.01)	1.30	1.16	0.14** (2.67)
Sample Size	1021	720	1741	839	540	1379
Financial Control Model						
			[.36]			[.06]
Cleveland	1.11	1.13	-0.02 (-0.20)	1.19	1.03	0.16 (1.25)
Greater Lynn	1.56	1.46	0.10 (1.01)	1.39	1.38	0.02 (0.15)
Miami	1.21	0.97	0.24** (2.64)	1.24	0.84	0.40** (3.97)
Philadelphia	1.33	1.17	0.16 (1.77)	1.26	1.18	0.09 (0.87)
Rensselaer County	1.49	1.45	0.05 (0.41)	1.15	1.17	-0.03 (-0.21)
Model Overall	1.36	1.24	0.12** (2.72)	1.28	1.13	0.15** (3.02)
Sample Size	1179	637	1816	949	495	1444

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

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\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.26

## SITE IMPACTS ON CONTENTMENT INDEX

	At 6 Months			At 12 Months		
	Treatment	Control	Treatment/	Treatment	Control	Treatment/
	Group	Group	Control	Group	Group	Control
	Mean	Mean	Difference	Mean	Mean	Difference
Basic Case Management Model						
			[.02]#			[.70]
Baltimore	5.73	5.95	-0.21 (-0.82)	5.96	6.09	-0.13 (-0.44)
Eastern Kentucky	5.05	4.70	0.35 (1.15)	4.87	4.78	0.09 (0.28)
Houston	6.18	5.51	0.67* (2.11)	6.03	5.68	0.36 (0.98)
Middlesex County	4.49	4.49	0.00 (0.01)	4.55	4.32	0.23 (0.63)
Southern Maine	5.18	6.02	-0.84**(-2.66)	5.95	6.26	-0.31 (-0.84)
Model Overall	5.41	5.37	0.04 (0.28)	5.54	5.46	0.08 (0.50)
Sample Size	1021	720	1741	839	540	1379
Financial Control Model						
			[.18]			[.13]
Cleveland	4.57	4.68	-0.11 (-0.34)	4.38	4.70	-0.32 (-0.82)
Greater Lynn	5.86	5.17	0.68* (2.35)	5.82	5.06	0.76* (2.33)
Miami	4.62	4.32	0.30 (1.06)	4.49	4.34	0.15 (0.47)
Philadelphia	4.99	5.23	-0.24 (-0.87)	4.98	5.19	-0.21 (-0.66)
Rensselaer County	5.30	5.55	-0.25 (-0.74)	5.21	5.49	-0.28 (-0.68)
Model Overall	5.06	5.01	0.06 (0.41)	4.96	4.96	-0.00 (-0.01)
Sample Size	1179	637	1816	949	495	1444

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

#Treatment/control differences differ statistically across sites in this model at the 5 percent significance level. The number (p-value) in brackets represents the probability of observing by chance differences across sites of the size actually observed if the true effects of channeling were the same in all sites.

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\*\*Different from zero statistically at the 1 percent significance level, using a two-tailed test.

TABLE A.27

## SITE IMPACTS ON IMPAIRMENT OF ABILITY TO PERFORM ACTIVITIES OF DAILY LIVING

	At 6 Months			At 12 Months		
	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference	Treatment Group Mean	Control Group Mean	Treatment/ Control Difference
Basic Case Management Model						
			[.28]			[.35]
Baltimore	2.59	2.42	0.17 (1.14)	2.49	2.30	0.19 (1.16)
Eastern Kentucky	1.92	1.96	-0.04 (-0.22)	1.77	1.73	0.04 (0.18)
Houston	1.86	2.14	-0.28 (-1.58)	2.02	2.23	-0.21 (-1.02)
Middlesex County	2.80	2.60	0.20 (1.13)	2.75	2.66	0.09 (0.46)
Southern Maine	2.50	2.40	0.10 (0.56)	2.53	2.31	0.22 (1.05)
Model Overall	2.32	2.28	0.03 (0.44)	2.28	2.23	0.06 (0.64)
Sample Size	1079	782	1861	976	653	1629
Financial Control Model						
			[.34]			[.12]
Cleveland	2.68	2.64	0.04 (0.20)	2.63	2.53	0.09 (0.48)
Greater Lynn	2.50	2.50	0.00 (0.01)	2.42	2.56	-0.13 (-0.76)
Miami	2.26	1.96	0.30 (1.90)	2.33	1.94	0.39* (2.33)
Philadelphia	3.28	2.92	0.36* (2.30)	3.08	2.71	0.37* (2.13)
Rensselaer County	2.32	1.94	0.39* (2.04)	2.19	1.75	0.44* (2.07)
Model Overall	2.62	2.40	0.23** (3.05)	2.55	2.31	0.24** (3.05)
Sample Size	1303	710	2013	1108	605	1713

NOTE: Treatment/control differences are estimated using multiple regression to control for site and individual baseline characteristics. T-statistics on the treatment/control differences are in parentheses. The total sample size is in the treatment/control difference column.

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