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EXECUTIVE SUMMARY

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# Working toward Wellness:

## Early Results from a Telephone Care Management Program for Medicaid Recipients with Depression

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Although low-income individuals are disproportionately likely to suffer from depression, few receive treatment, and even fewer persist with their treatment. Untreated depression can negatively affect employment, job performance, and worker productivity. This report presents six-month interim results of a one-year program that provided telephonic care management to depressed parents receiving Medicaid in Rhode Island to encourage them to seek treatment from a mental health professional. The study, called "Working toward Wellness" (WtW), was conducted in one of four sites in the Enhanced Services for the Hard-to-Employ Demonstration and Evaluation, which is studying strategies to improve employment and other outcomes for low-income parents and others who face serious barriers to employment. The project is sponsored by the Administration for Children and Families and the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services (HHS), with additional funding from the Department of Labor. WtW is being evaluated by MDRC in partnership with United Behavioral Health (UBH) and Group Health Cooperative (GHC). UBH delivered the care management services, and GHC designed the intervention and provided technical assistance and training to UBH staff.

The key findings presented in this report are

- WtW care managers used the telephone to effectively engage people with depression.
- WtW increased the use of mental health services and increased the filling of psychotherapeutic prescriptions.
- The program's early effects on depression severity are mixed. Although WtW did not significantly reduce the average depression level, it did significantly change the distribution of depression severity, particularly reducing the number of people who were very severely or mildly depressed while increasing the number who were moderately depressed.

- Consistent with prior studies, the impacts of WtW are concentrated among Hispanic sample members, but this finding should be interpreted with caution because this research subgroup is small.

## Background on the Working toward Wellness Program

Although there is considerable evidence that individuals with depression benefit from psychotherapy and medications, only about one-fifth of depressed individuals currently are in treatment.[1] In low-income communities, there may be less knowledge about depression treatment and lower quality of care than in higher-income communities, and individuals are more likely to be depressed but less likely to receive treatment.

One promising way to help people receive effective depression treatment is through care management. In WtW, master's-level clinicians — "care managers" — call individuals who are suffering from depression to encourage them to seek treatment, help them find and make appointments with mental health professionals, make sure that they are keeping appointments and taking prescribed medications, educate them about how depression will affect them and how treatment can help them, and provide support and counseling by telephone to individuals who are reluctant to seek treatment in the community. It was hoped that encouraging people to seek treatment and alleviate their depression would help more of them return to work or become more productive at jobs they already held. Although telephonic care management has been shown to be effective in treating depression with some populations,[2] this is the first study of the approach with low-income Medicaid recipients who have children. Moreover, because WtW is provided telephonically, it could represent a relatively inexpensive way for social service agencies to aid individuals with depression. It was also hoped that the program might improve work productivity and increase employment if short-term improvements in depression subsequently lead to a greater interest and capacity to seek and retain employment. However, effects on employment were expected to be small at the six-month point.

[1]Kessler, Berglund, Demler, Jin, Koretz, Merikangas, Rush, Walters, and Wang, "The Epidemiology of Major Depressive Disorder: Results from the National Comorbidity Survey Replication (NCS-R)," *Journal of American Medical Association* 289, 23: 3095-3105 (2003).

[2]Wang, Simon, Avorn, Azocar, Ludman, McCulloch, Petukhova, and Kessler, "Telephone Screening, Outreach, and Care Management for Depressed Workers and Impact on Clinical and Work Productivity Outcomes: A Randomized Controlled Trial," *Journal of American Medical Association* 298, 12: 1401-1411 (2007).

## The Working toward Wellness Evaluation

To study Working toward Wellness, individuals who had children and who were receiving Medicaid in Rhode Island and were eligible for mental health services through United Behavioral Health were screened by telephone for depression. Those who were found to have major depression as defined by a clinical assessment using the Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR) questionnaire and who agreed to be in the study were randomly assigned to the program group or to the control group. Individuals scoring 6 or higher on the QIDS-SR questionnaire, which is defined as a mild or higher level of depression, were included in the study. Participants in the program group were eligible to receive telephonic care management from master's-level clinicians employed by UBH. The control group received usual care that included referrals to mental health treatment providers in the community. Random assignment ensures that all characteristics are similar for the two groups at baseline so that any substantial differences that later emerge can be attributed to the program with some confidence.

Of the 499 individuals in the study, 245 were randomly assigned to the program group, and 254 were assigned to the control group. The average age of the participants at baseline was 35, and 90 percent are women. About half the participants had a General Educational Development (GED) certificate or a high school diploma, and a quarter had some education beyond high school. A little less than half the participants are white; approximately one-third are Hispanic; and 12 percent are African-American. The study includes individuals who are comparable demographically to previous studies of care management for people suffering from depression. However, the participants in the current study were more severely depressed than studies that have focused on employed populations.[3] In this study, less than half the participants (44 percent) were employed at the time of random assignment.

The random assignment of study participants occurred from November 17, 2004, to October 20, 2006. This report presents results through six months following random assignment, or from May 2005 (for the first clients assigned) to April 2007 (for the last clients assigned). At this early point, the two main purposes of the study are to determine (1) whether a telephone care management model that is focused on low-income parents can successfully get participants into treatment and, if so, (2) whether the model is effective at alleviating depression and increasing employment and earnings.

[3]Wang et al. (2007).

## Key Findings on Program Implementation

The first question addressed by the study is whether care managers were able to engage members of the program group and what challenges they faced in helping individuals seek treatment. To address these issues, data were drawn from multiple sources, including routine staff meetings, a management information system (MIS) that created a record of all care manager-client "contacts," and an in-person site visit with program staff in Rhode island. Key findings on the implementation of the program are presented below.

- **Care managers effectively engaged people with depression via telephone.**

Care managers successfully contacted 94 percent of those assigned to the program group. In addition, they maintained nearly monthly contact with the average client. This high level of contact suggests that care managers have at least begun building telephone relationships with their clients. In doing so, they may ultimately apply their clinical expertise and training to engage, assess, refer, and monitor individuals, as appropriate. Achieving this level of contact, however, required persistence, as evidenced by a very large number of attempted contacts for each successful one. To a large degree, the program appears to have been implemented as planned.

- **The "phone program" played a larger role in WtW than originally expected.**

Individuals in the target population faced many obstacles to entering in-person psychotherapy or seeking antidepressants from a clinician. Their barriers to treatment typically stemmed from personal issues regarding parenting responsibilities and other types of caregiving, their own health, and work-related stressors (such as seeking employment or maintaining a job). Consequently, the "phone program" became a useful tool for engaging those who were not yet willing or able to begin in-person treatment. The phone program was a structured psycho-educational program based on a workbook entitled *Creating a Balance,* which clients worked through under a care manager's telephone guidance. The workbook was designed to help people who are experiencing stress and depression to better recognize and manage their symptoms. The phone program was initially envisioned only as a temporary or "fallback" alternative to in-person treatment, but over time it also was seen as a valuable way to capture a client's attention early on. Therefore, it became standard practice to mail the workbook to all individuals who were assigned to the program group as they began WtW in September 2005, at which point about 40 percent of the study sample had been recruited. With clients in the phone program, the care managers continued to encourage in-person care for those who remained depressed, although for some the phone program became an end in itself.

- **The care managers were rarely able to function as liaisons between clients and clinicians in the community.**

It was originally expected that the care managers would provide feedback to clinicians in the community regarding WtW clients as they progressed in treatment. Such a collaborative approach — whereby care managers and clinicians work together — has been shown to have benefits for depression patients in settings where both care managers and clinicians work for a single organization (such as the U.S. Department of Veterans Affairs [VA] and staff model Health Maintenance Organizations, which employ the clinical staff who serve their memberships). This type of collaboration was difficult in the case of WtW, however, because the care managers worked for UBH and the community clinicians worked in a variety of settings outside UBH, contracting to offer care not only with UBH but also with a number of other health organizations. To be sensitive to any client concerns about contact between the care managers and the clinicians, it was a requirement that the care managers obtain written permission from both the clients and the providers before performing the liaison function. Unfortunately, this requirement also became an administrative barrier, and consequently the care managers did not perform this role. Instead, they demonstrated ingenuity by acting as coaches, advising or guiding clients on ways to better navigate care and to advocate for themselves. In short, they worked to empower clients to be more proactive in accessing and managing their care.

## Key Findings on Program Impacts

This report presents results through the six months following random assignment, using information from Medicaid claims data and a survey conducted with about 74 percent of study participants. At this early follow-up point, the focus of the study is on whether WtW increased treatment in mental health services and whether it alleviated depression. In addition, the report presents an early look at the program's effects on employment and earnings. The key impact findings are presented below.

- **More program group members than control group members received treatment for depression.**

As shown in Table ES.1, at the six-month point, WtW increased the use of any mental health service by about 10 percentage points. About 32 percent of the program group received a mental health service during the six months following random assignment, compared with 22 percent of the control group. Program group members were more likely than control group members to see a psychologist, psychiatrist, or clinical social worker/counselor about a mental health issue. For example, participants in the program group had, on average, about two times more mental health visits than those in the control group. In addition, program group members were more likely to fill prescriptions for psychotherapeutic medications, especially antianxiety

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## Table ES.1

## Estimated Impacts on Use of Mental Health Services, Prescription Medications Filled, and Depression Outcomes in Six Months Following Random Assignment

## Rhode Island: Working toward Wellness

| Outcome | Program Group | Control Group | Difference (Impact) | P-Value |
|---|---|---|---|---|
| **Use of mental health services, by type (%)** | | | | |
| Received mental health services | 32.2 | 21.7 | 10.5 *** | 0.007 |
| Psychiatrist | 12.5 | 7.2 | 5.3 * | 0.053 |
| Primary care physician | 10.3 | 8.1 | 2.2 | 0.401 |
| Psychologist | 4.1 | 0.3 | 3.8 *** | 0.005 |
| Clinical social worker/counselor[a] | 20.1 | 11.7 | 8.3 ** | 0.011 |
| Visited emergency department for mental health services | 1.4 | 0.2 | 1.3 | 0.126 |
| Hospitalized for mental health services | 4.1 | 0.0 | 4.0 *** | 0.002 |
| Received chemical dependency services | 5.2 | 5.6 | -0.4 | 0.841 |
| **Prescriptions filled, by type (%)** | | | | |
| Filled a prescription for psychotherapeutic drugs | 44.9 | 38.2 | 6.7 * | 0.087 |
| Antidepressant drugs | 38.5 | 34.5 | 4.0 | 0.299 |
| Other psychotherapeutic drugs | 21.0 | 14.4 | 6.6 * | 0.051 |
| Filled a prescription for adequate therapeutic dosage of antidepressant medication | 21.9 | 21.8 | 0.2 | 0.961 |
| Filled a prescription for nonpsychotherapeutic drugs | 81.4 | 80.5 | 0.9 | 0.810 |
| Sample size (total = 499) | 245 | 254 | | |
| **Depression outcomes: QIDS-SR[b] depression scale[c]** | | | | |
| Mean depression score at 6 months | 12.5 | 12.8 | -0.4 | 0.509 |
| Depression level 6 months following random assignment (%) | | | | |
| Out of depression | 12.3 | 9.9 | 2.4 | 0.463 |
| Mildly depressed | 22.3 | 29.7 | -7.4 | 0.115 |
| Moderately depressed | 32.8 | 24.4 | 8.4 * | 0.081 |
| Severely depressed | 26.5 | 24.8 | 1.7 | 0.715 |
| Very severely depressed | 6.1 | 11.2 | -5.1 * | 0.072 |
| Shift in depression, by category[d] (%) | | | | |
| Depression worsened by 2 categories | 2.4 | 5.8 | -3.4 * | 0.099 |
| Depression worsened by 1 category | 14.5 | 17.4 | -3.0 | 0.443 |
| No categorical shift in depression | 37.9 | 31.8 | 6.2 | 0.235 |
| Depression improved by 1 category | 27.9 | 25.0 | 2.9 | 0.546 |
| Depression improved by 2 or more categories | 17.3 | 20.0 | -2.7 | 0.505 |
| Sample size (total = 370) | 187 | 183 | | |

(continued)

**Table ES.1 (continued)**

SOURCES: Measures of health service utilization are based on MDRC calculations using United Behavioral Health medical and prescription claims data. Measures of depression are based on MDRC calculations using data from respondents to the six-month survey.

NOTES: Results in this table are adjusted for pre-random assignment characteristics.

Two-tailed t-tests were conducted to determine statistical significance. Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent. The significance level indicates the probability that the impact estimated would be this large if the program had zero true effect.

[a]This item includes claims for one program group member who received services at a behavioral health clinic.

[b]Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR), which determines whether the person meets criteria for being diagnosed with major depression over the past seven days.

[c]A chi-square test was used to test the difference in distribution between the program and control groups (p-value = 0.096).

[d]Scores on the QIDS-SR depression scale fall into the following categories: very severe depression, severe depression, moderate depression, mild depression, no depression.

medications, which are often prescribed along with antidepressants for people suffering from depression. While this impact on the use of mental health services is slightly higher than that found in a study of a similar intervention serving a non-Medicaid population,[4] it is smaller than the impacts found in studies that were conducted in health care systems where care managers had direct access to health care providers, facilitating easier communication with the providers.[5]

- **After six months, the program did not significantly reduce depression, on average, but it did significantly change the distribution of depression severity, reducing the number of people who suffered from very severe or mild depression.**

Program and control group members had similar average depression scores six months following random assignment, but there were shifts in the distribution of depression severity. In particular, individuals in the program group were less likely than those in the control group to be very severely depressed, and the program group members were more likely to be moderately depressed at the six-month follow-up. This increase in the share of program group members who were moderately depressed probably reflects movement from both ends of the spectrum — an increase from mild to moderate depression and a decrease from severe to moderate depression.

[4]Wang et al. (2007).

[5]Wells, Sherbourne, Schoenbaum, Duan, Meredith, Unützer, Miranda, Carney, and Rubenstein, "Impact of Disseminating Quality Improvement Programs for Depression in Managed Primary Care: A Randomized Controlled Trial," *Journal of American Medical Association* 283, 2: 212-220 (2000); Simon, Ludman, Tutty, Operskalski, and Von Korff, "Telephone Psychotherapy and Telephone Care Management for Primary Care Patients Starting Antidepressant Treatment: A Randomized Controlled Trial," *Journal of American Medical Association* 292, 8: 935-942 (2004).

- **Impacts on treatment are concentrated among Hispanic sample members, for whom the program reduced average depression.**

As indicated in Table ES.2, WtW increased the filling of antidepressant prescriptions for Hispanic sample members significantly more than for other sample members. In addition, the program increased the percentage of Hispanic participants receiving mental health services by 18 percentage points, but it did not significantly increase the use of mental health services for non-Hispanic participants. There are too few African-American participants in the study sample to examine that subgroup separately.

Perhaps because of these differences in impacts on treatment, WtW reduced average depression for Hispanics but not for other sample members. In particular, for Hispanic sample members, the mean depression score of the program group was about 2 percentage points lower than that of the control group at six months. Although these results are consistent with other research that has found stronger treatment effects among minority groups, they should be interpreted with caution because of the small size of the Hispanic subgroup.

- **There was no difference in employment between the program and the control groups, including those who were employed.**

There were also no differences in the number of days of missed work or in hourly wages between the two research groups (not shown). Since there was minimal impact on depression at the six-month follow-up, it is not surprising that there were no differences in employment outcomes.

## Implications

High rates of depression combined with low rates of treatment among public assistance recipients present a compelling picture of unmet need. These facts also present a vexing problem for state administrators seeking to help recipients become self-sufficient, because individuals suffering from depression are less likely to work. Early results from the Working toward Wellness study provide some reasons for both optimism and caution. Results indicate that telephonic care management can increase the use of mental health services, but the impacts on treatment were modest, and the effects on depression severity were mixed. Results also suggest some ways in which programs like this could be strengthened.

The modest effects of WtW do not reflect a failure of care managers to reach participants. Indeed, almost everyo`ne talked with a care manager at least once, and care managers talked with each person once a month, on average. Rather, many participants faced barriers to seeking treatment, including their own health, having to care for other family members, and work. Thus, programs like this might be strengthened by having care managers devote additional resources

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## Table ES.2

## Selected Estimated Impacts in Six Months Following Random Assignment, by Ethnicity

## Rhode Island: Working toward Wellness

| Subgroup and Outcome | Program Group | Control Group | Difference (Impact) | P-Value | |
|---|---|---|---|---|---|
| **Hispanic subgroup** | | | | | |
| Use of mental health services during the 6 months following random assignment | | | | | |
| Received mental health services (%) | 39.2 | 21.6 | 17.6 ** | 0.019 | |
| Number of visits for mental health services | 2.7 | 0.9 | 1.8 ** | 0.012 | |
| Prescription medications filled during 6 months following random assignment | | | | | |
| Filled a prescription for an antidepressant (%) | 43.7 | 29.3 | 14.3 * | 0.055 | † |
| Filled a prescription for adequate therapeutic dosage of antidepressant medication (%) | 25.9 | 18.4 | 7.4 | 0.263 | |
| Sample size (total = 166) | 86 | 80 | | | |
| Mean depression score at 6 months following random assignment | 12.6 | 14.9 | -2.3 ** | 0.049 | †† |
| Depression level at 6 months following random assignment (%) | | | | | |
| Out of depression | 11.7 | -2.0 | 13.7 *** | 0.005 | ††† |
| Mildly depressed | 29.1 | 27.1 | 2.0 | 0.839 | |
| Moderately depressed | 25.4 | 25.5 | -0.1 | 0.990 | |
| Severely depressed | 24.5 | 30.6 | -6.0 | 0.538 | |
| Very severely depressed | 9.3 | 18.8 | -9.5 | 0.206 | |
| Sample size (total = 110) | 60 | 50 | | | |
| **Non-Hispanic subgroup** | | | | | |
| Use of mental health services during 6 months following random assignment | | | | | |
| Received mental health services (%) | 27.7 | 22.4 | 5.4 | 0.268 | |
| Number of visits for mental health services | 1.7 | 1.0 | 0.7 * | 0.092 | |
| Prescription medications filled during 6 months following random assignment | | | | | |
| Filled a prescription for antidepressant (%) | 36.2 | 36.5 | -0.3 | 0.956 | † |
| Filled a prescription for adequate therapeutic dosage of antidepressant medication (%) | 19.9 | 23.2 | -3.3 | 0.455 | |
| Sample size (total = 333) | 159.0 | 174.0 | | | |

(continued)

**Table ES.2 (continued)**

| Subgroup and Outcome | Program Group | Control Group | Difference (Impact) | P-Value | |
|---|---|---|---|---|---|
| Mean depression score 6 months following random assignment | 12.4 | 12.0 | 0.4 | 0.531 | †† |
| Depression level 6 months following random assignment (%) | | | | | |
| Out of depression | 11.8 | 15.1 | -3.3 | 0.458 | ††† |
| Mildly depressed | 20.2 | 29.5 | -9.3 | 0.104 | |
| Moderately depressed | 36.3 | 24.0 | 12.2 ** | 0.043 | |
| Severely depressed | 27.1 | 23.0 | 4.0 | 0.461 | |
| Very severely depressed | 4.6 | 8.4 | -3.7 | 0.218 | |
| Sample size (total = 260) | 127 | 133 | | | |

SOURCES: Measures of health service utilization are based on MDRC calculations using United Behavioral Health medical and prescription claims data. Measures of depression are based on MDRC calculations using data from respondents to the six-month survey.

NOTES: Results are adjusted for pre-random assignment characteristics.

Two-tailed t-tests were conducted to determine statistical significance. Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent. The significance level indicates the probability that the impact estimated would be this large if the program had zero true effect.

An f-test was applied to differences between the subgroups for each characteristic. Statistical significance levels are indicated as: † = 10 percent; †† = 5 percent; and ††† = 1 percent.

to helping parents overcome these barriers. Although care managers used more telephone counseling than expected, even earlier and greater reliance on telephone counseling might also have produced larger effects on depression symptoms because it would have provided a form of treatment that did not require individuals to leave their homes.

Results for the Hispanic population highlight the importance of anticipating and addressing language barriers when using interventions based on telephonic care management. To overcome language difficulties that might have discouraged Spanish-speaking individuals from engaging with a care manager and seeking treatment, WtW employed one care manager who was fluent in both English and Spanish and who could refer clients as needed to a small number of clinics in the community that serve many Spanish-speaking clients. Perhaps as a result, the program had substantially larger effects on treatment and depression for this group.

Finally, it should be noted that many participants were still in early stages of treatment during the six-month follow-up period covered in this report and that the program's effects on depression and employment might grow over time.