Work-Focused Intervention for Value-Based Care Around Depression

Debra Lerner, MS, PhD
The Program on Health, Work and Productivity, Tufts Medical Center

Francisca Azocar, PhD
Behavioral Health Sciences, Optum

Confidential
Do Not Distribute Without Written Permission of Debra Lerner, PhD
dlerner@tuftsmedicalcenter.org
Be Well at Work
What’s Innovative?

• It is employee-centered, short-term care for depression focusing on restoring ability to function

• Care is easy-to-access, brief, telephonic intervention from specially-trained counselors with EAP experience

• Counselors receive ongoing supervision from a multidisciplinary team of experts in psychiatry, clinical psychology and workplace heal

• Care is supported by an electronic screening and care management information system

• The system includes high quality assessment tools and analytics

• Be Well at Work is effective and efficient
The Business Case for Addressing Employee Depression

• Between 10-20% of the population is stricken at least once during their lifetime

• One of the top five leading sources of health-related productivity loss

• The average depressed worker misses from 0.5 to 4 workdays per month

• The average depressed worker is limited in his or her ability to work 35% of the time
The Workplace Burden of Depression
Productivity Loss Due to Presenteeism: Top Ten Most Expensive Conditions Based on Health Risk Assessment Data

- Depression ($109)*
- Low Back Pain ($46)
- Obesity ($36)
- Arthritis ($32)
- Headaches ($22)
- Allergy ($18)
- Diabetes ($9)
- Asthma ($7)
- Hypertension ($6)
- High Cholesterol ($6)
- All Others ($6)

*Percent of Total and Cost Per Employee Based on $50,000 Per Year Salary
Number of HRA Data Sources=7, N=3,464,424
*Per Employee Cost for Employees with or without Health Problem
Debra Lerner, MS, PhD
Common Work Difficulties

- Easily distracted
- Difficulty thinking deeply or maintaining concentration
- Poor problem-solving
- Disorganized
- Tired, sleep-deprived
- Experiencing interpersonal conflicts
- Feeling isolated and disconnected
- Feeling unfairly treated
- Feeling disinterested or unmotivated by the work itself, and/or the mission and goals of the organization
- Feeling voiceless or unimportant
- Feeling effort and work is meaningless
Four Typical Presentations

• Difficulty performing one or more specific work tasks

• Pervasive difficulties coupled with ineffective problem-solving approaches

• Disengaging (sometimes coupled with perception that job performance is fine and no one notices)

• Work as a respite from troubles (a positive)
Be Well at Work’s Structure

➢ Web-based, privacy-protected health screening
  • Advertised in the workplace
  • All participants receive immediate, personalized results and recommendations

➢ Telephone-based intervention
  • Eight biweekly sessions (four months), 50 minutes per session
  • Each participant has a dedicated counselor
  • Counselors are EAP-experienced, Master’s-level clinicians

➢ Electronic Medical Record

➢ Analytic and reporting tools
Why Is Be Well at Work Different from Other Approaches?

- Employees with depression are vulnerable to a downward spiral of symptoms leading to functional limitations and losses in ability to work.
- This spiral threatens quality of life, future health and economic security.
- However, depression care is symptom-focused and stresses adherence to prescribed treatment — it uses the biomedical approach.
- Be Well at Work is employee-centered care, which addresses medical, psychological and work barriers to effective functioning.
Be Well at Work Care Components
I. Care Coordination Component

- Employee psycho-education
  - About depression and its work impact
  - About treatment options for depression

- Three-way communication to align employee, counselor and physician treatment goals
  - With permission, the counselor faxes reports to the treating physician
  - Each report provides results of ongoing progress on functional and symptom assessments (WLQ and PHQ-9)
Be Well at Work Components
II. Cognitive-Behavioral Strategies Component

➢ Promoting acquisition of self-care strategies
  • Teach employee ability to identify, monitor and change thoughts, feelings and/or behaviors that interfere with functioning effectively and feeling better

➢ Supporting the change process
  • Using the manual *Creating a Balance*, adapted for work issues, employees engage in homework assignments and practice new techniques
Be Well at Work Components

III. Work Coaching/Modification Component

- Identifies work limitations and barriers to effective functioning
- Recommends appropriate changes to the work process and/or work environment
- When appropriate, promotes use of compensatory skills and strategies
Change Targets

Effective work interventions are implemented by the worker and can involve one or more adjustments to:

- The structure and/or content of the job role and/or environment:
  - The tasks and responsibilities
  - The timing
  - The techniques
  - The team
  - The turf

- The capabilities, resources and supports available to the person:
  - Coping skills, resources, supports and behaviors

- The cognitive appraisal processes occurring in the work context:
  - Patterns of thinking, feeling and acting
Be Well at Work
State-of-the-Art Web-Based Information System
Supports Engagement, Care Delivery and Management

Screening
- HIPAA-compliant E-screener provides feedback and determines eligibility based on depression and work functioning

Care Documentation and Management
- E-assessment
- Guided multi-modal intervention
- Structured documentation
- Supervision review

Outcomes and Cost Analytics
- Presenteeism
- Absenteeism
- Symptoms
- Aggregate Reports
- Costs
The Be Well at Work National RCT

Aims

• Third in a series of federally-sponsored research studies
• Testing effectiveness versus usual care for improving functioning at work and work productivity
• Testing effectiveness versus usual care for reducing depression symptom severity
• Assessing benefit-to-cost ratio

Scope

• National study of employed adults age 45+ from 19 employers and five organizations serving employed populations

Time Frame

• September 2010 to August 2013

Sponsor

• National Institute on Aging (R01AG033125-01A1)
National RCT Results
Earlier Studies’ Findings Confirmed

• Be Well at Work is superior to usual care in restoring work performance and productivity
• It improves mental health to levels obtained with antidepressants
National Study: Be Well at Work Significantly Improved Work Performance and Was Superior to Usual Care-Mean WLQ Scores
National Study: Be Well at Work Significantly Reduced Productivity Loss Due to Presenteeism and Absenteeism and Depression Symptom Severity—Mean WLQ and PHQ-9 Scores

Debra Lerner, MS, PhD

Tufts Medical Center
### Pre/Post Change in Employment and Depression Characteristics Comparing Adults with Depression in Be Well at Work vs. Usual Care

<table>
<thead>
<tr>
<th></th>
<th>Be Well at Work (N=190)</th>
<th>Usual Care (N=190)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>186</td>
<td>98</td>
<td>183</td>
</tr>
<tr>
<td>Not employed, not retired</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Retired</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td><strong>Change in weekly work hours (Mean (SD))</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.0 (8.0)</td>
<td>-0.1 (9.2)</td>
<td>.96</td>
</tr>
<tr>
<td><strong>Changed jobs</strong></td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Change in major depression</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>N=112</td>
<td>N=118</td>
<td></td>
</tr>
<tr>
<td>Remitted</td>
<td>41</td>
<td>37</td>
<td>12</td>
</tr>
<tr>
<td>Responded</td>
<td>24</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>No change</td>
<td>40</td>
<td>36</td>
<td>64</td>
</tr>
<tr>
<td>Worse</td>
<td>6</td>
<td>5</td>
<td>13</td>
</tr>
</tbody>
</table>

---

<sup>a</sup> Subjects classified at baseline as having persistent depressive disorder (PDD) are excluded from this analysis because symptom remission cannot be determined for PDD for two years.

<sup>b</sup> Including four subjects (one in the work-focused intervention group and three in usual care) who could not be assessed at follow-up for change in major depression due to missing values.
National Study Savings Are Accrued in Presenteeism and Absenteeism

- Estimated annualized savings in at-work productivity = $1,890/participant*

- Estimated annualized savings in absence costs = $3,213/participant

- Estimated annualized in total productivity savings = $5,103/participant

- In a 10,000-person company with 3% of depressed in the new program, productivity savings will exceed $1.53 million/year (using the median participants’ salary) or $822K/year (using the median US salary)

* Calculated using the participants’ median salary of $63,000
** Median US salary = $33,841
The Be Well at Work Program

Francisca Azocar, PhD
Vice President Research and Evaluation, Behavioral Health Sciences
Optum is part of UnitedHealth Group

UnitedHealth Group®

- **OPTUM™**
  - Information- and technology-enabled health services
  - Helping to make the health care system work better for everyone.

- **UnitedHealthcare®**
  - Health care coverage and benefits
  - Helping people live healthier lives.
1. Study recruitment
2. Study participant
Involving employers in innovative research projects

- Integrated Medical Behavioral Services Research
- Adverse Selection
- Use and Discontinuity of SSRIs
- Guideline-concordant Depression Treatment
- JAMA Published:
  Telephone Screening, Outreach, and Care Management for Depressed Workers and Impact on Clinical and Work Productivity Outcomes: A Randomized Controlled Trial
- Medical and Psychiatric Short-term Disability
- Impact of Mental Health Parity on Employer Costs
- Interpersonal Violence in the Workplace
## Recruitment methods

### Timing
- Ensured timing did not interfere

### Resource constraints
- Provided turnkey approach
  - WebEx presentations
  - Presentation decks and FAQs
  - Web postings
  - Email blasts
  - Health fairs
  - Flyers in breakrooms
  - Newsletter articles

### Competing demands
- Align with company goals/ priorities
  - Demonstrate impact of depression
  - Employee engagement

### Address concerns
- Minimize perceived and actual risk
  - Privacy and confidentiality
  - Increased utilization
Distinct recruitment paths

Companies Approached N = 98

DIRECT Initial Pitch/ Contact to Company N = 48
- Company Agrees N = 4
  - Company Agrees N = 15
    - No Decision N = 4
  - Declined N = 2
- Company Declines N = 10
  - Defers for More Information N = 21
- No Decision from Company N = 13

INDIRECT Initial Pitch/ Contact to SAE N = 50
- SAE Agrees for Company N = 1
- SAE Agrees to Company Pitch N = 34
  - SAE Receives Full Web Presentation from Researchers N = 16
  - No Decision from SAE N = 7
- SAE Declines N = 8
  - Researchers Make Web Presentation to Company N = 16
  - No Decision N = 4
  - No Response N = 11
    - Company Agrees N = 5
    - Declined N = 7

Company Agrees Direct N = 19
Indirect N = 8
Total N = 27

SAE: Strategic Account Executive
Why did employers decline?

<table>
<thead>
<tr>
<th>Reason(s) for Decline</th>
<th>Companies Endorsing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>48.5 (16)</td>
</tr>
<tr>
<td>Internal Resource Constraints</td>
<td>33.3 (11)</td>
</tr>
<tr>
<td>Competing Health and Human Capital Initiatives</td>
<td>30.3 (10)</td>
</tr>
<tr>
<td>Unable to Conform to Study Protocol</td>
<td>21.2 (7)</td>
</tr>
<tr>
<td>Legal/Regulatory Concerns</td>
<td>9.1 (3)</td>
</tr>
</tbody>
</table>
Challenges

• Slow recruitment process
  – Recruitment stalled with implementation of MHPAEA
  – Difficulty presenting directly to the decision maker in the organization
  – 39.8% of companies we outreached to never made a decision
  – Among companies that made a decision (N = 59):
    • Average time to a decision: 120 days
    • Average time to launch: 85 days
## Recruitment efficiency

<table>
<thead>
<tr>
<th>Employee Recruitment</th>
<th>Optum Indirect (N=8)</th>
<th>Tufts Direct (N=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hits to Website</td>
<td>17,436</td>
<td>20,546</td>
</tr>
<tr>
<td>Screened, N (%)</td>
<td>7,777 (44.6)</td>
<td>10,382 (50.5)</td>
</tr>
<tr>
<td>Eligible, N (%)</td>
<td>578 (7.4)</td>
<td>660 (6.4)</td>
</tr>
<tr>
<td>Enrolled, N (%)</td>
<td>222 (2.9)</td>
<td>216 (2.1)</td>
</tr>
<tr>
<td>Randomized to Usual Care, N</td>
<td>117</td>
<td>99</td>
</tr>
<tr>
<td>Randomized to WHI Treatment, N</td>
<td>104</td>
<td>115</td>
</tr>
</tbody>
</table>

Greater efficiency with less employers
Lessons learned

• Direct path recruitment was significantly faster: 80 days vs. 158 days, p < .05

• Among all companies, certain characteristics made it more likely the company would make a decision:
  – Not the employer (e.g., a benefits administrator)
  – Prior relationship with researchers
  – Approached directly
  – Service industry

• Indirect recruitment was more efficient: less employers yielded similar number of hits to the website, screenings and enrollment in the study
  – Larger employers/benefit groups
  – Greater proportion of employees with depression who met criteria
  – Coupled multiple sources like email blasts, articles and ads to mental health awareness dates (Mental Health Awareness Month and Depression Screening Day)
Dual purpose to being a study participant:

1. Demonstrate to our customers our commitment to improving wellness, functioning and productivity in the workplace by conducting research testing evidence-based practices

2. “Practice what we preach” by being a study participant
Study recruitment and communications strategy

• Posted on the enterprise-wide intranet portal
  – Web banner that rotated through
  – Ad and article about depression and BWAW study
  – Article about Behavioral Health Sciences academic partnership research, study description and link

• Posted on Live and Work Well (LWW), Optum’s behavioral benefits portal
  – Ad and article about depression and BWAW study
  – Two locations: welcome page and benefits and programs page

• Drove enrollment by posting study information during
  – Mental Health Awareness Month
  – National Depression Screening Day

• Employee Health Newsletter
  – Article on workplace wellness and safety
## Comparative participation

<table>
<thead>
<tr>
<th></th>
<th>LWW</th>
<th>UHG portal</th>
<th>All Other WHI Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Hits to Website</strong></td>
<td>286</td>
<td>1,963</td>
<td>35,734</td>
</tr>
<tr>
<td><strong>Screened, N (%)</strong></td>
<td>198 (69.2)</td>
<td>1,288 (65.6)</td>
<td>16,673 (46.7)</td>
</tr>
<tr>
<td><strong>Eligible, N (%)</strong></td>
<td>22 (11.1)</td>
<td>113 (8.8)</td>
<td>1,103 (6.6)</td>
</tr>
<tr>
<td><strong>Enrolled, N (%)</strong></td>
<td>9 (4.5)</td>
<td>39 (3.0)</td>
<td>390 (2.3)</td>
</tr>
<tr>
<td><strong>Randomized to Usual Care, N</strong></td>
<td>5</td>
<td>22</td>
<td>189</td>
</tr>
<tr>
<td><strong>Randomized to WHI Treatment, N</strong></td>
<td>4</td>
<td>17</td>
<td>198</td>
</tr>
</tbody>
</table>

Total pre-assessment findings:
- 2,249 hits, 1,486 screened, 135 eligible, 48 enrolled in study
- Among those screened:
  - 13.2% male
  - 87.2% white
  - Mean age of 43.1 (SD = 10.3)
## Screening sample characteristics

<table>
<thead>
<tr>
<th>Health and Depression</th>
<th>Depression (N=537)¹</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Work Impaired²</td>
<td>89.9</td>
<td>483</td>
</tr>
<tr>
<td>Depressed, Work Impaired, and Age 45+</td>
<td>36.7</td>
<td>197</td>
</tr>
<tr>
<td>Dysthymia (low level chronic)</td>
<td>34.3</td>
<td>184</td>
</tr>
<tr>
<td>Major Depressive Disorder (MDD)</td>
<td>27.9</td>
<td>150</td>
</tr>
<tr>
<td>Double Depression (Dysthymia + MDD)</td>
<td>37.8</td>
<td>203</td>
</tr>
<tr>
<td>PHQ-9 Severity (Mean, SD)³</td>
<td>15.2</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Almost 90% of those with depression had a moderate to severe level of work impairment compared to 45% of those without depression

---

¹ Depression (N=537) – among the 1,486 screened, anyone meeting criteria for depression, dysthymia or both. DSM-IV current major depression (≥5 symptoms for ≥2 weeks as measured by the PHQ-9 and/or dysthymia (≥2 symptoms lasting ≥2 years, as measured by the PC-SAD)

² Work Impaired – At-Work Productivity Loss ≥ 5%, as measured by the Work Limitations Questionnaire (WLQ)

³ PHQ-9 Score Ranges: <5= minimal, 5-10= mild, 10-15= moderate, 15-20= moderately severe, >20= severe
# Depression and medical comorbidities

<table>
<thead>
<tr>
<th>Comorbidities</th>
<th>Depressed</th>
<th></th>
<th>Non-depressed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Alcohol, Problems With</td>
<td>8.2</td>
<td>44</td>
<td>4.6</td>
<td>44</td>
</tr>
<tr>
<td>Allergies</td>
<td>54.1</td>
<td>290</td>
<td>54.9</td>
<td>521</td>
</tr>
<tr>
<td>Cancer</td>
<td>0.9</td>
<td>5</td>
<td>0.6</td>
<td>6</td>
</tr>
<tr>
<td>Carpal Tunnel Syndrome/Hand or Wrist Discomfort</td>
<td>31.7</td>
<td>170</td>
<td>24.7</td>
<td>235</td>
</tr>
<tr>
<td>COPD/Emphysema/Bronchitis</td>
<td>2.6</td>
<td>14</td>
<td>1.4</td>
<td>13</td>
</tr>
<tr>
<td>Chronic Headaches</td>
<td>49.0</td>
<td>263</td>
<td>25.9</td>
<td>246</td>
</tr>
<tr>
<td>Chronic Joint Pain</td>
<td>43.2</td>
<td>232</td>
<td>31.3</td>
<td>297</td>
</tr>
<tr>
<td>Chronic Low Back Pain</td>
<td>43.7</td>
<td>234</td>
<td>27.1</td>
<td>257</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>23.5</td>
<td>126</td>
<td>17.2</td>
<td>163</td>
</tr>
<tr>
<td>Diabetes Requiring Insulin</td>
<td>1.3</td>
<td>7</td>
<td>1.9</td>
<td>18</td>
</tr>
<tr>
<td>GERD</td>
<td>18.2</td>
<td>98</td>
<td>14.6</td>
<td>139</td>
</tr>
<tr>
<td>Hypertension</td>
<td>22.0</td>
<td>118</td>
<td>21.4</td>
<td>203</td>
</tr>
</tbody>
</table>
### Impact of depression on work performance

<table>
<thead>
<tr>
<th>Mean WLQ Scores±</th>
<th>Depressed</th>
<th>Non-depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Time Management</td>
<td>52.7</td>
<td>22.7</td>
</tr>
<tr>
<td>Physical Tasks</td>
<td>25.8</td>
<td>22.4</td>
</tr>
<tr>
<td>Mental-Interpersonal Tasks</td>
<td>51.5</td>
<td>21.1</td>
</tr>
<tr>
<td>Output Tasks</td>
<td>39.3</td>
<td>27.2</td>
</tr>
<tr>
<td>Percentage At-Work Productivity Loss</td>
<td>12.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Days Missed Per Two Weeks (past two weeks)</td>
<td>1.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>

± Mean percentage of time in the prior two weeks health problems limited ability to perform tasks listed in scale
Advantages

• Employers learned about areas of health affecting employee population
• Employees learned about their level of depression and related impairment through a personalized report
• Allows for channeling of employees to EAP and health and wellness programs
• High fidelity to evidence-based intervention
• Employee and public recognition of the company as innovative and cutting edge
• Improve employee engagement
• Good citizen — greater good of contributing to science