Cost, Effectiveness and Cost-effectiveness of a Collaborative Mental Health Care Program for Individuals Receiving Short-Term Disability Benefits for Psychiatric Disorders

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Reference

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Purpose

To examine the cost, effectiveness and cost-effectiveness of a collaborative mental health care pilot program for individuals on short-term disability for psychiatric disorders
Rationale

• It has been estimated that productivity loses related to mental illness are about (CAD) $17.7 billion annually (Lim et al. 2008)

• The large economic burden related to mental illness has made it a prime concern for Canada and many industrialized countries (Dewa, McDaid & Ettner 2007)
Rationale

• At the same time, there is evidence for the effectiveness and cost-effectiveness of interventions for workers with psychiatric disorders (e.g., see reviews of depression treatment by Marchand et al. 2005; Vezina et al. 2004; Simon et al. 2001)

• These estimates suggest attention to the mental health of the workforce may be warranted.
Rationale

• Part of the barrier to accessing effective treatment lies within the healthcare system in which often there is fragmentation between types of providers.

• The primary care setting occupies a strategic position in the management of depression and other mental disorders around the world (Gater et al. 1991; Goldberg et al. 1992)

• A large proportion of short-term disability cases associated with psychiatric disorders are treated by primary care physicians (Cherry et al. 2006)
Rationale

• A substantial body of literature that suggests many individuals receiving care in the primary care setting do not receive adequate treatment for mental disorders (Spitzer et al. 1999; Fifer et al. 1994; Lecrubier 2007)
Rationale

• The consultation-liaison collaborative mental health care model for primary and secondary care physicians has been proposed as a solution to improve the quality of mental health care by extending the availability of specialty mental health resources in primary care settings, enhancing communication and promoting continuity and follow-up care (Kates et al. 1997)
Challenges

• One of the challenges to ensuring workers on mental illness related disability leave receive treatment is the fact that the disability management and the healthcare systems are fragmented (Mortlemans et al. 2006)
Background

• A collaborative mental health care program was established between June 2006 and May 2007 in a large financial/insurance sector company.

• Company A has a nation-wide employee-base of 35,000 people

• Annually, 9% (n = 3,200) of employees receive short-term disability benefits
  – About 16.5% (n = 527) of short-term disability leaves are related to psychiatric disorders
Methods

Two groups of subjects who received short-term disability benefits for psychiatric disorders were compared:

1. Treatment group (n=75) was treated in a collaborative mental health care program during their disability episode.

2. Comparison group (n=51) received short-term disability benefits related to psychiatric disorders in the prior year but did not receive collaborative mental health care during their disability episode. Individuals in both groups met screening criteria for the collaborative mental health care program.
Selection Criteria

(1) multiple diagnoses on the disability claims form,
(2) a lack of an objective finding (i.e., a clear diagnosis was not provided)
(3) attending physician does not return case manager phone calls,
(4) return-to-work date is repeatedly postponed,
(5) previous claims,
(6) not under the care of a psychiatrist
Independent Medical Evaluation (IME)  
Usual Care

• Purpose: verify presence of objective medical evidence to support an absence

• Objective third party psychiatrist who has not had previous contact with either the employee or his/her attending physician
Collaborative Care

• IME + follow-up with specialty care

• Collaborative mental health care program used to adjudicate the claim and to enable the CMHC psychiatrist to consult with the attending primary care physician or to provide short-term specialty care to the worker
Outcomes

(1) length of short-term disability episode
(2) number of workers who returned-to-work,
(3) number of workers who transitioned to long-term disability
Costs

• From the employer’s perspective

• Major costs:
  – services paid for by the employer and provided by the collaborative mental health care program (e.g., consultations by the collaborative mental health care physician with the treating primary care provider) not covered under the public healthcare system.
  – IMEs conducted by third party psychiatrists
Analyses

• Group differences with respect to the continuous variables (costs and days absent from work) were tested using t-tests and confirmed using non-parametric Wilcoxon rank-sum tests.

• Group differences for the binary outcomes (return-to-work and transition to long-term disability) were tested using χ² tests.

• Cost-effectiveness analysis was conducted using the net benefit regression framework (Hoch et al. 2002).
# Results

<table>
<thead>
<tr>
<th></th>
<th>Usual Care (n= 51)</th>
<th>Collaborative Care (n = 73)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>82% (n = 42)</td>
<td>90% (n = 66)</td>
</tr>
<tr>
<td>Age(^a)</td>
<td>49 years (sd = 8.2)</td>
<td>44 years (sd = 8.7)</td>
</tr>
<tr>
<td>Primary diagnoses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment disorder</td>
<td>14% (n = 7)</td>
<td>15% (n = 11)</td>
</tr>
<tr>
<td>Major depressive disorder</td>
<td>71% (n = 36)</td>
<td>67% (n = 49)</td>
</tr>
<tr>
<td>Bipolar</td>
<td>4% (n = 2)</td>
<td>7% (n = 5)</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>10% (n = 5)</td>
<td>3% (n = 2)</td>
</tr>
<tr>
<td>PTSD</td>
<td>0% (n = 0)</td>
<td>4% (n = 3)</td>
</tr>
<tr>
<td>Stress</td>
<td>2% (n = 2)</td>
<td>4% (n = 3)</td>
</tr>
</tbody>
</table>
# Results

## Outcomes per 100 individuals
(derived from)

<table>
<thead>
<tr>
<th>Statistic by treatment assignment</th>
<th>Cost</th>
<th>Days lost per 100 individuals</th>
<th>Return-to-work per 100 individuals</th>
<th>Long term Transitions per 100 individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual Care (n=51)</td>
<td>$2,378</td>
<td>7,600 days lost per 100 individuals (76 days lost per individuals)</td>
<td>63 returns per 100 individuals (32 returns per 51 individuals)</td>
<td>31 transitions per 100 individuals (16 transitions per 51 individuals)</td>
</tr>
<tr>
<td>Collaborative Mental Health Care (n=73)</td>
<td>$2,023</td>
<td>6,200 days lost per 100 individuals (62 days lost per individuals)</td>
<td>85 returns per 100 individuals (62 returns per 73 individuals)</td>
<td>7 transitions per 100 individuals (5 transitions per 73 individuals)</td>
</tr>
</tbody>
</table>

## Differences

### Unadjusted <95% confidence interval>

- $355 less expensive
- $834 less, $124 more
- 15 less days lost per individuals
- $28 less, 1 less
- 22 more individuals return to work per 100 individuals
- $7 more, 37 more
- 25 less transitions per 100 individuals
- $37 less, 12 less

### Adjusted by age** <95% confidence interval>

- $503 less expensive
- $996 less, 11 less
- 16 less days lost per individuals
- $30 less, 2 less
- 23 more individuals return to work per 100 individuals
- $7 more, 39 more
- 24 less transitions per 100 individuals
- $37 less, 10 less
Disability Days

Before adjusting for age

After adjusting for age

Incremental Cost vs. Incremental Effectiveness

- 95% CI
- 50% CI
- 5% CI
- Point Estimate
Return-to-Work
Long-Term Disability
Summary of Results

• Results suggest that with collaborative mental health care, for every 100 individuals there could be an expected $50,000 in disability benefit savings ($503 per individual times 100 individuals)

• 23 more people returning to work

• 24 less people transitioning to long-term disability and 1,600 more work days (16 less short-term disability days times 100 individuals).

• Extra benefits of collaborative mental health care outweigh the extra costs in general.
Limitations

• CEA done from the employer’s perspective. However, there are other costs not incurred by the employer.

• CEA was of one type of collaborative mental health care model. A next step is to understand the generalizability of the results in other business sectors and other types of disability management models. In addition, a randomized trial could enhance understanding of the generalizability of the results.

• This study focused on the most severe group of individuals on disability. It would also be important to examine whether the same types of results could be expected for individuals with less severe cases who go on to disability.
Conclusions

Based on these Canadian data, collaborative mental health care models of disability management may be a worthwhile investment, helping individuals who are receiving short-term disability benefits for psychiatric disorders to receive adequate treatment.
This presentation was given at:

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