Economic Impact of Public Benefit Changes on Seriously Mentally Ill Patients in Southern Arizona

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United States Mental Health Costs

- Serious mental illness costs the United States $193 billion per year in lost earnings alone
- Over the past three years, states have cut $4.35 billion from their budgets for public mental health services

Arizona Public Mental Health

- In Arizona, the current state behavioral health system treats more than 150,000 individuals
- From 2009-2011, Arizona cut 23% of its overall state mental health general fund budget
  - Affected approximately 16,000 non-Medicaid patients classified as having a Serious Mental Illness (SMI)
  - Covered services following the budget cuts were limited
    - A generic medication formulary
    - Medication management appointments with prescribers
    - Laboratory services for medication monitoring
    - Crisis services

Disclosures & Acknowledgements

- The authors have no conflicts to disclose.
- The project described was conducted with the approval from The University of Arizona Institutional Review Board.
- The authors wish to acknowledge Sandy Gold, Project Manager, from the University of Arizona Health Network, ISS Department, for her invaluable assistance in data collection.

Study Objectives

- Assess the impact of public mental health benefit cuts on the following:
  - Number of hospitalizations
  - Number of emergency department (ED) visits
  - Total length of stay
  - Total costs
- Determine if patients with certain diagnoses were impacted differently by the benefit changes

Study Setting and Design

- The University of Arizona Medical Center – South Campus in Tucson, Arizona
  - Largest inpatient psychiatric center for adults in Southern Arizona
  - Three acute inpatient psychiatric units, total of 62 beds
- Retrospective record review of psychiatric admissions or ED visits for a psychiatric complaint
- Inclusion criteria
  - Qualifying SMI primary diagnosis
  - Ages 18-55
- Outcomes were analyzed per patient
Demographics

<table>
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<tr>
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<th>Pre</th>
<th>Post</th>
<th>Total</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1518</td>
<td>1314</td>
<td>2832</td>
<td>NS</td>
</tr>
<tr>
<td>Mean age, years (SD)</td>
<td>35.81(10.88)</td>
<td>35.29(10.93)</td>
<td>35.57(10.91)</td>
<td>NS</td>
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<tr>
<td>Women (%)</td>
<td>40.2</td>
<td>41.0</td>
<td>40.6</td>
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<tr>
<td>Mental health insurance benefit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public, Medicaid</td>
<td>24.4</td>
<td>35.8</td>
<td>29.7</td>
<td>&lt; 0.0001</td>
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<tr>
<td>Public, non-Medicaid</td>
<td>25.8</td>
<td>27.2</td>
<td>26.5</td>
<td>NS</td>
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<tr>
<td>Primary diagnosis at discharge (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Anxiety disorder</td>
<td>10.5</td>
<td>11.0</td>
<td>10.8</td>
<td>NS</td>
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<tr>
<td>Bipolar disorder</td>
<td>21.8</td>
<td>20.3</td>
<td>21.1</td>
<td>NS</td>
</tr>
<tr>
<td>Depressive disorder</td>
<td>26.2</td>
<td>24.4</td>
<td>25.4</td>
<td>NS</td>
</tr>
<tr>
<td>Psychotic disorder</td>
<td>32.7</td>
<td>36.1</td>
<td>34.3</td>
<td>NS</td>
</tr>
<tr>
<td>Other mood disorder</td>
<td>8.7</td>
<td>8.1</td>
<td>8.4</td>
<td>NS</td>
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</table>

Primary Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>P-Value</th>
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<tbody>
<tr>
<td>Total length of stay</td>
<td>7.72 ± 8.83</td>
<td>7.31 ± 9.35</td>
<td>.027</td>
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<tr>
<td>Total cost</td>
<td>$9,859 ± $10,935</td>
<td>$9,782 ± $11,562</td>
<td>.455</td>
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<tr>
<td>Number of hospitalizations</td>
<td>0.88 ± 5.74</td>
<td>0.81 ± 5.74</td>
<td>&lt; 0.0001</td>
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<tr>
<td>Number of ED visits</td>
<td>0.42 ± 9.67</td>
<td>0.51 ± 9.72</td>
<td>&lt; 0.0001</td>
</tr>
</tbody>
</table>

Self-Assessment Question

Which of the following patients is most likely to present to the emergency room with a psychiatric complaint?

A. A patient with psychosis
B. A patient experiencing an acute manic episode
C. A patient experiencing symptoms of anxiety
D. A patient with thoughts of harming him or herself
Number of ED Visits

Number of ED Visits for Medicaid Patients

Number of ED Visits for non-Medicaid, Public Benefit Patients

Total Length of Stay

Total Length of Stay (in days) for All Patients

Total Length of Stay (in days)

Total Length of Stay (in days) for Medicaid Patients

Total Length of Stay (in days) for non-Medicaid, Public Benefit Patients

Total Costs

Total Costs for All Patients

Total Costs for Medicaid Patients

Total Costs for non-Medicaid, Public Benefit Patients

Self-Assessment Question

Reducing public mental health benefits results in which of the following?

A. A clinically significant decrease in the number of hospital and ED visits for all patients
B. A non-significant difference in total costs for all patients
C. Decreased utilization of hospital and ED services by patients who maintain their benefits
D. Shorter lengths of stay for patients with psychotic disorders
Conclusions

- Although the decrease in number of hospitalizations, number of ED visits and length of stay was statistically significant, the clinical significance of this finding is questionable.
- Reducing public mental health benefits for patients does not result in significantly decreased total costs in terms of inpatient hospitalizations and emergency department visits.
  - Total costs for patients who maintained their current level of mental health benefits actually increased.