Do Substance Use Disorder and Mental Health Services Reduce Medical Costs: What Does the Research Say?

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“Most new medical technologies cost more but lead to better outcomes. I would argue that mental health is probably the only place where people hold us to a higher standard, in the sense that if you provide better care and get better outcomes you still have to save money before anyone gets interested.”


Psychiatry Weekly

International Comparison of Spending on Health, 1980–2010

Average spending on health per capita ($US)

Total health expenditures as percent of GDP

Source: Commonwealth Fund, based on OECD Health Data 2012.
Health Care Costs Concentrated in Sick Few—
Sickest 10 Percent Account for 65 Percent of Expenses

Distribution of health expenditures for the U.S. population,
by magnitude of expenditure, 2009

Who are these high-cost patients?

Source: Agency for Healthcare Research and Quality analysis of 2009 Medical Expenditure Panel Survey.
What drives their health care costs?

- Patients with Substance Use Disorders (SUD) use the ER 3x as often as people without SUD (Parthasarathy 2001)
- SUD increases health costs among family members (Weisner et al., 2010)
- Depression contributes to the severity of heart disease, diabetes, and stroke (CDC, 2013)
Ok, it’s a problem. What impact does behavioral health treatment have on these costs?

Not necessarily a slam dunk: Example: Prop 36 increased SUD treatment for drug offenders but may have also contributed to higher initial health costs.

Longshore et al. (2006)
Different kinds of evidence

- Non-experimental, including pre-post studies and retrospective data analysis.
- Randomized Controlled Trial (RCT)

Examples of Non-Randomized Studies

- **The Lewin Group** evaluation of a County Medical Services Program Behavioral health pilot project
- Found “improving coordination between primary care and behavioral health, increasing use of appropriate services, and decreasing hospitalizations and emergency room use.”
- *Total costs remained about the same (actually rose slightly).*
- As a result, CMSP (administered by Anthem Blue Cross) decided to cover Behavioral Health services in all CMSP counties as of January 1, 2012.
- Limitation: Pre-post study (reimbursed pilot sites)
Colorado Medicaid Study

- Colorado: State invested $2.4 million in SUD services for Medicaid enrollees (Colorado State Auditor, 2010)
- Savings of $3.5 million in ER, hospital, outpatient, pharmacy, mental health, and dental expenses.
- Caveat: Pre-post, can’t determine causality.

Washington State Medicaid Study

- Washington State: Expanded SUD services for disabled Medicaid population (Wickizer 2012)
  - Expenses went up less for those who received SUD treatment than for those who didn’t.
  - “Treatment Expansion was “cost neutral.”
  - Weakness: People treated likely differed from those who weren’t, so it may not be a treatment effect.
What about Integrating Behavioral Health Treatment with Primary Care?

Depression (Dickinson et al., 2005)

- Integrated care reduced costs by $1,368 (compared to usual care) among patients with both physical and psychological complaints.

- …but it increased costs by $1,924 for patients who had only physical complaints while showing no clinical improvement.
Substance Use Disorders
Parthasarathy et al. (2003) examined Integrated SUD services at Kaiser Permanente

- NO cost differences between integrated, non-integrated treatment groups.
- However, among patients with substance abuse related medical conditions, Integrated Care decreased hospitalization rates, inpatient days, and ER use. Total medical costs per member-month declined from $431.12 to $200.03.

“(Non)findings for the full sample suggest that integrating substance abuse treatment with primary care, may not be necessary or appropriate for all patients. However, it may be beneficial to refer patients with substance abuse related medical conditions.”
Examples of Support for Individual Treatments

• Assertive Community Treatment for people with severe mental illness “the number of days in hospital is reduced, which means that in many cases this form of treatment pays for itself.” (Latimer, 2005)
• Brief physician advice on SUD for people who screened positive for at-risk alcohol consumption leads to $4.30 in savings for every dollar invested (Fleming et al., 2002) (RCT)
• Buprenorphine for opiate dependent patients reduces costs by 30%. Depot Naltrexone reduces inpatient services (case-mix adjusted claims analyses, Baser et al., 2011, 2011b)

Collaborative Care / Case Management for Depression

Gilbody, Bower, & Whitty (2006) Reviewed studies of enhanced primary care for depression and concluded:

“A near-uniform finding was that the interventions based upon collaborative care / case management resulted in improved outcomes but were also associated with greater costs.”

“In no study was cost-offset through reduced healthcare utilisation of an extent and magnitude to make the overall programme cost-saving and dominant.”
Still, this review, and an updated version (Jacob et al., 2012) concluded that collaborative care/case management is cost effective “based on the standard threshold of $50,000/quality-adjusted life year.”

You might be feeling a little uneasy.

(Good, that means you’re listening.)
But wait, there’s more to the story...


In years 1-2 total costs were higher in the IMPACT group,

In years 3-4 they were lower. After 4 years IMPACT patients had medical costs that were ~$3,300 less than patients receiving usual care.

All of the studies in the Gilbody review had follow-ups of only 6-24 months.

So yes, integration is good but:

• It’s best when targeted.
• It might take a while to see total medical cost savings.

Source: http://impact-uw.org/about/research.html
Ok, but this is making my head hurt.

We can’t spend 7.3 hours per patient implementing all of the USPSTF recommendations.

What should we be doing?

If only we just had some sort of ranking of services by clinical and cost effectiveness.

<table>
<thead>
<tr>
<th>Services Recommended by USPSTF</th>
<th>CPB</th>
<th>CE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss daily aspirin use—men 40+, women 50+</td>
<td>5</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Childhood immunizations</td>
<td>5</td>
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<tr>
<td>Smoking cessation advice and help to quit—adults</td>
<td>5</td>
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<tr>
<td>Alcohol screening and brief counseling—adults</td>
<td>4</td>
<td>5</td>
<td>9</td>
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<tr>
<td>Colorectal cancer screening—adults 50+</td>
<td>4</td>
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<tr>
<td>Hypertension screening and treatment—adults 18+</td>
<td>5</td>
<td>3</td>
<td>8</td>
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<tr>
<td>Influenza immunization—adults 50+</td>
<td>4</td>
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<tr>
<td>Vision screening—adults 65+</td>
<td>3</td>
<td>5</td>
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<tr>
<td>Cervical cancer screening—women</td>
<td>4</td>
<td>3</td>
<td>7</td>
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<td>Cholesterol screening and treatment—men 35+, women 45+</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Pneumococcal immunizations—adults 65+</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Breast cancer screening—women 40+</td>
<td>4</td>
<td>2</td>
<td>6</td>
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<tr>
<td>Chlamydia screening—sexually active women under 25</td>
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<td>4</td>
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<tr>
<td>Discuss calcium supplementation—women</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Vision screening—preschool children</td>
<td>2</td>
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<tr>
<td>Discuss folic acid use—women of childbearing age</td>
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<td>3</td>
<td>5</td>
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<tr>
<td>Obesity screening—adults</td>
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<tr>
<td>Depression screening—adults</td>
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<td>1</td>
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<td>Hearing screening—adults 65+</td>
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<td>Injury prevention counseling—parents of children ages 0-4</td>
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<td>3</td>
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<td>Osteoporosis screening—women 65+</td>
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<tr>
<td>Cholesterol screening—men &lt; 35, women &lt; 45 at high risk</td>
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<tr>
<td>Diabetes screening—adults at risk</td>
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<tr>
<td>Diet counseling—adults at risk</td>
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<tr>
<td>Tetanus-diphtheria booster—adults</td>
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What’s next?

Integration Challenges

• Break down the silos. Medi-Cal carve-outs for MH, SUD are inhibiting integration.
• Continue developing models of care, updating the cost studies and rankings. (like the PCBH model Dr. Reiter just discussed)
• Overcome Barriers
  – Culture, Workforce, Payment, Space, etc.
• What else?
Final Thoughts

• We’ve focused on medical costs here, but there are other savings, such as reductions in unemployment and incarceration, which generally favors behavioral health.
• Clinically, treatment works.
• Katon may be right that behavioral health is held to a higher cost standard, but we are often able to meet it.
• Ultimately behavioral health is part of most chronic health problems.

Questions?
Comments?
References


Center for Substance Abuse Treatment (CSAT) (2007). The Epidemiology of Co-Occurring Substance Use and Mental Disorders.


Substance Abuse and Mental Health Administration (SAMHSA) (2010). Results from the 2009 National Survey on Drug Use and Health.


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Substance Abuse and Mental Health Administration (SAMHSA) (2010). Results from the 2009 National Survey on Drug Use and Health.


Go get some funnel cake.

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