Medicaid cutbacks and state mental hospital utilization by people with schizophrenia
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Presenter Disclosures

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Research question

What happens to Medicaid clients with schizophrenia who lose coverage for mental health services?
Agenda

• Medicaid history, present, future
• Medicaid experiments
• People with schizophrenia and Medicaid
• Oregon Medicaid cut-backs
• Study design
• Results
• Conclusions
• Limitations
Research answer

Increased use of state mental hospital
Medicaid definition

Joint federal-state health insurance program for the poor and-or disabled

Outpatient care (mental health, substance abuse, physical health)
Pharmacy
Inpatient general hospital psychiatric care
Often does not cover state mental hospital

Children’s Health Insurance Plan (CHIP) - some states
Long term care
Medicaid

Oregon Health Plan
Medicaid programs

- Badger-care
- Diamond State Health Plan
- Hoosier Healthcare
- Husky Healthcare
- Medallion
- Medi-Cal
- Mountain Health
- Passport to Health
- Rite-care
- Salud!
- Star Health
Medicaid perception

“Medicaid is a disease of denial -- we hate it and we don’t want to talk about it”

Pediatrician 1992
Medicaid

• History
• Present
• Who cares?
• Future
• Experiments
Medicaid history

Congressman: “Will the United States ever have a functioning health care system?”

God: “Yes, but not in my lifetime”

1965
Medicaid present

- 68 million people (at some time in 2010)
- $406 billion per year
- $40 billion for mental health (estimated)

Levit et al. Health Affairs 27:w513, 2008
Medicaid present

- Managed care
- Nursing homes
- Community long term
- Inpatient hospital
- Mental health
- Other
Medicaid present

25% of mental health spending

Levit et al. Health Affairs 27:w513, 2008
Medicaid

Who cares?
Patient Protection and Affordable Care Act

• Obama-care
• Medicaid expansion
• 16 million persons added to Medicaid
• 4 million people with severe mental illness

Medicaid and the states

- Overall state share fiscal year 2010: 33%
- 21% of state spending (2010)
- Overall state share fiscal year 2011: 43%
- Expenditures unpredictable
  - Medicaid expenses grow during recessions
  - State revenues shrink during recessions
- Eligibility determined (in part) by states

National Health Policy Forum, GWU, 2009
Fiscal Survey of States, National Governors Association, 2010
Medicaid future

“Health care is the major player at the heart of our fiscal crisis”

Peter G. Peterson Foundation, 2010
Medicaid and deficit

Entitlement
Not discretionary
Medicaid future

- House Budget plan
- Representative Ryan
- Medicaid as block grant
- Save $750 billion in ten years versus Medicaid under Affordable Care Act

Medicaid future
Two views

More Medicaid (Obama-care)
Less Medicaid (Ryan-care)
Policy question

What might be expected under Ryan-care?
Theory question

What is the effectiveness of treatment as usual?
Treatment as usual discontinuation

- Endogenous (e.g., worsening psychosis)
- Exogenous (e.g., Medicaid policy change)
Effectiveness of treatment as usual

“No causation without manipulation”

Holland J Am Statistical Assn 81:945,1986
Experiments

• Human subjects committee approval
  – Informed consent (autonomy)
  – Beneficent design
    • Usual care *versus* (perhaps) better treatment
    • Usual care *versus* usual care plus something

• Effectiveness of treatment as usual unknown
Medicaid discussion

Psychiatrist: “What would happen if mental health services were eliminated?”

Economist: “That question is ridiculous. Nobody would be so cruel.”

1992
Medicaid experiments

“A single courageous state may, if its citizens choose, serve as a laboratory”

Louis Brandeis, 1932

*New State Ice Company versus Liebmann* (285 U.S. 262, 311)
Reference

*Medicaid and treatment for people with substance abuse problems*

McFarland B, McCarty D, Kovas A
Nova Science Publishers 2010
www.novapublishers.com
Research question

What happens to Medicaid clients with schizophrenia who lose coverage for mental health services?
People with schizophrenia and Medicaid

- Many (perhaps most) individuals with schizophrenia depend heavily on Medicaid
- Medicaid finances numerous mental health services
- Medicaid pays for anti-psychotic medications

Campaign for Mental Health Reform. Whither Medicaid? A briefing paper on mental health issues in Medicaid restructuring. Washington, DC, 2005

Consequences of losing Medicaid

- Loss of coverage for Utah Medicaid clients with schizophrenia during the 1990’s
- Chance of hospitalization increased 35%
- Numbers of admissions increased 86%
- Psychiatric hospital days increased 61%

People with schizophrenia and anti-psychotic medication

- Treatment guidelines / evidence-based practices
- Many (perhaps most) people with schizophrenia use anti-psychotic medication


Cutbacks in coverage for medication

- New Hampshire Medicaid clients with schizophrenia in 1980’s (versus New Jersey Medicaid clients with schizophrenia)
- Reduced drug benefit (prescription numbers) in New Hampshire
- Increased psychiatric hospitalizations

Soumerai Journal of Clinical Psychiatry 64 (Supplement 17):19, 2003
Oregon Medicaid history

• Oregon Health Plan (“prioritization”) 1990’s
• Eligibility expansion (late 1990’s to early 2000’s)
  – Raised income limitations (e.g., to 100% federal poverty level)
  – Included virtually all people with disability payments
• Oregon Medicaid populations
  – Oregon Health Plan Plus (traditional Medicaid)
  – Oregon Health Plan Standard (expansion population)
• Cutbacks in 2003
Oregon Medicaid cutbacks
(Standard “expansion” population)

- Premiums
- Lock-outs
- Co-payments
- Behavioral health services discontinued then reinstated
- Eligibility (income limits) reduced
- Enrollment closures
- Judicial decisions
- Legislation
- Enrollment lottery
Oregon Medicaid cutbacks

Oregon Health Plan Standard (expansion) enrollees

- Enrollees: 150,000, 100,000, 50,000, 0
Research question

What happens to Oregon Medicaid clients with schizophrenia who lose coverage for mental health services in terms of involuntary hospitalization (especially at a state mental hospital)?
Psychiatric hospitalizations in Oregon 2004

<table>
<thead>
<tr>
<th>Type</th>
<th>Medicaid</th>
<th>non-Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary</td>
<td>1632</td>
<td>937</td>
</tr>
<tr>
<td>Involuntary civil</td>
<td>2423</td>
<td>3499</td>
</tr>
<tr>
<td>Involuntary criminal</td>
<td>236</td>
<td>1197</td>
</tr>
</tbody>
</table>
Study design

• Oregon Medicaid clients
  – Diagnosis of schizophrenia in 2002
  – Outpatient care and-or atypical anti-psychotic in 2002
  – Over age 18 and under age 65 in 2002 (exclude 5%)

• Medicaid greater than 90% in covered year (with less than 50% in non-covered years)
  – Cohort A: 2002 covered but neither 2003 nor 2004
  – Cohort B: 2002 and 2003 covered but not 2004
  – Cohort C: 2002, 2003, and 2004 covered

• Outcome = involuntary psychiatric hospitalization
# Medicaid cohorts

## Calendar Year

<table>
<thead>
<tr>
<th>Cohort Description</th>
<th>Year 2002</th>
<th>Year 2003</th>
<th>Year 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort A (one year coverage)</td>
<td>++</td>
<td>0000000000000000</td>
<td>0000000000000000</td>
</tr>
<tr>
<td>Cohort B (two years coverage)</td>
<td>++</td>
<td>++</td>
<td>0000000000000000</td>
</tr>
<tr>
<td>Cohort C (continuous coverage)</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>

+ = Covered by Oregon Medicaid more than 90% of year

0 = Covered by Oregon Medicaid less than 50% of year
## Demographics

<table>
<thead>
<tr>
<th>Cohort</th>
<th>N</th>
<th>Mean Age</th>
<th>% Women*</th>
<th>% White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort A (one year coverage)</td>
<td>435</td>
<td>43</td>
<td>30%</td>
<td>88%</td>
</tr>
<tr>
<td>Cohort B (two years coverage)</td>
<td>187</td>
<td>41</td>
<td>41%</td>
<td>90%</td>
</tr>
<tr>
<td>Cohort C (continuous coverage)</td>
<td>3,427</td>
<td>43</td>
<td>43%</td>
<td>88%</td>
</tr>
</tbody>
</table>

* p < .001 by chi-squared test
**Health insurance coverage**

<table>
<thead>
<tr>
<th>Medicaid type</th>
<th>Dual Medicare*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard (expansion)</strong>*</td>
<td></td>
</tr>
<tr>
<td>Cohort A (one year coverage):</td>
<td>22%</td>
</tr>
<tr>
<td>Cohort B (two years coverage):</td>
<td>28%</td>
</tr>
<tr>
<td>Cohort C (continuous coverage):</td>
<td>6%</td>
</tr>
</tbody>
</table>

* p < .0001 by chi-squared test
Involuntary psychiatric hospitalization during study period

<table>
<thead>
<tr>
<th>Cohort</th>
<th>General hospital</th>
<th>State hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort A (one year coverage)</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Cohort B (two years coverage)</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>Cohort C (continuous coverage)</td>
<td>18%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Medicaid loss within 30 days of hospitalization = 26%
Analyses - I

• Outcomes (involuntary admissions)
  – General hospital
    • Admissions
    • Days
  – State mental hospital
    • Admissions
    • Days
Involuntary psychiatric admissions

Total admissions per participant
Analyses - II

- Propensity scores matching
- Generalized estimating equations
  - Poisson regression
  - Negative binomial regression
- Two-part models
  - Logistic for admitted versus not admitted
  - Poisson or negative binomial for hospital days
- First year as baseline models

Interaction term: time by cohort by Medicaid type
Results
General hospital

General hospital admissions: not significant
General hospital psychiatric days: not significant

(adjusted for age, gender, race, ethnicity, Medicare)
State hospital days
(mean state mental hospital days per person per year)
Results

State mental hospital

- State hospital admissions \( p < .03 \)
- State hospital days \( p < .003 \)

(adjusted for age, gender, race, ethnicity, Medicare)
Conclusions

• Medicaid loss precedes involuntary psychiatric hospitalization

• Medicaid type (and cutbacks) related to
  – Increased state mental hospital admissions
  – More state mental hospital days

• Treatment as usual may be effective
Summary

Medicaid cutbacks led to increased use of state mental hospital by people with schizophrenia.
Limitations

- Not randomized
- Outpatient service use unknown
Ongoing research

Oregon Medicaid lottery
Contact

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