Medicaid Integrated Care Management and ROI

AcademyHealth Research Meeting

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- Dave Wagner
Morbidity and Substance Abuse in PPMCO

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Project goals for Medicaid Plan

- Facilitate access of enrollees with high risk medical and history of substance abuse into SA treatment and promote retention in program

- Enroll the participants in appropriate Disease Management (DM) or Case Management (CM) program

- Track start-up and operational expenses of care management initiative
Challenges to reaching goal

- **Case-finding challenge:** Given limited care management and outreach resources, which substance abusing members should be targeted? 400 maximum with no new hires.

- **Culture of silos:**
  - Behavioral
  - Medical

- **Tracking operational expenses:** IS + entries
Intervention Group

- N = 400, => 21yrs, living in Baltimore City, Baltimore Co. or Prince Georges Co.

- Substance abuse disorder history

- ACG-PM score => 0.39. Selected highest 16% of possible 2,485.

- Excluded: HIV/AIDS, Pregnancy, End Stage Renal Disease, End of Life because already in specialized DM program and did not want to disrupt current program.
Comparison Group

- N = 203, => 21yrs, living in 12 MD counties excluding Intervention and Eastern Shore counties

- Substance abuse disorder history

- ACG-PM risk score cut-point was the same (=> 0.39) as the Intervention group

- Excluded: same disease management programs as Intervention
# Comparison of Groups

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<thead>
<tr>
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<th><strong>Intervention Group (N=400)</strong></th>
<th><strong>Comparison Group (N=203)</strong></th>
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<tbody>
<tr>
<td>Age</td>
<td>46 (45,47)</td>
<td>46 (45,47)</td>
</tr>
<tr>
<td>Gender Female</td>
<td>65% (60,70)</td>
<td>71 (65,77)</td>
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<tr>
<td>ACG score</td>
<td>0.56 (.54,.58)</td>
<td>0.56 (.52,.59)</td>
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Targeted population, now what...?
Methods: Quality Enhancement Initiative

- **Training program** for both medical and substance care managers
- **Unitary point of outreach** and triage for the care management of members
- **Integrated** case/disease management and substance abuse services
- Development of **information systems** to allow read/write access to a patient database shared by all care managers.
Results?
Percent of Patients Receiving Disease / Case Management and Substance Abuse Treatment

Control Group: ▲ DM △ SAtx
Intervention Group: ● DM Δ SAtx
ED Visits Per Thousand by Study Month

ED Visits Per Thousand

<table>
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<tr>
<th>Study Month</th>
<th>Intervention Group</th>
<th>Control Group</th>
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Study Month
Admissions Per Thousand by Study Month

Admits Per Thousand

Study Month

Admits / Thou:
0.00 500.00 1,000.00 1,500.00 2,000.00 2,500.00

Intervention Group
Control Group
Pharmacy Costs PMPM by Study Month

Pharmacy PMPM

Study Month

- Intervention Group
- Control Group
Is there a return on investment?
Project expenses

MCO Expenses

Project start-up expenses $40,276
24 month operational expenses $237,318

TOTAL PROJECT EXPENSES $277,594
Average Costs by Study Group over time (FFS+ Rx+ Enc)

Baseline Period: 7/1/03 – 6/30/04 (12 months)

Intervention Period: 7/1/04 – 6/30/06 (24 months)

Intervention Group:
- Baseline: $2340
- Intervention: $2373

Control Group:
- Baseline: $1752
- Intervention: $1815
Pre-post ROI

- **Healthcare Expenses**
  - PMPM expenses pre intervention: $2340
  - PMPM expenses intervention (24 mos): $2373
    - $ -33

- **Member months** in intervention period: 7,444

- **Estimated Loss**: Estimated monthly loss x months
  - $ -33 x 7,444 = ($245,652)

- **ROI**:
Adjusted Pre-post ROI

- Healthcare expenses change:
  - Intervention group: Increased $32
  - Comparison group: Increased $64
  - Difference $32

- Member months in intervention year: 7,444

- Estimated Savings: Estimated monthly savings x months $32 x 7444 = $238,208

- ROI: Estimated savings / Total Expenses
  $238,208 / 277,594 = 0.86
Marginal ROI, really?

Let’s ask the statistician…. 
Baseline Period: 7/1/03 – 6/30/04 (12 months)
First Year Intervention Period: 7/1/04 – 6/30/05 (12 months)
Second Year Intervention Period: 7/1/05 – 6/30/06 (12 months)

Intervention Group
$2340
$2223
$1939
$2557

Control Group
$1752
$2223
$1939
$1659

Study Month
Average Costs by Study Group over time (FFS+Rx+Enc)

**Intervention Group**
- $2340

**Control Group**
- $1752
- $1815

**DIFFS**
- $2373
Conclusions

- Similar QEIs can be undertaken with expectation of minimal cost risk
- Trend analysis should complement ROI report
- Case management can engage similar population in DM/CM; SA Tx remains a challenge
- Further research need of identifying and implementing care management team core competencies in serving this population
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