Leveling the Playing Field: Using Risk Adjustment to Enhance Performance Based Contracting in Residential Treatment

A Presentation for the 17th National Conference on Child Abuse and Neglect
April 1, 2009
What is performance based contracting?
Measuring for meaning – what do you want to measure and how do you develop performance indicators?
Leveling the playing field for providers – what is risk adjustment?
How do you set performance benchmarks?
Carrots and sticks – what type of fiscal foundation do you need?
System reform – what supports do you need to be successful?
What is Performance Based Contracting (PBC)?

- Emphasizes *results* related to output, quality and outcomes rather than how the work is performed.
- Has *clearly defined objectives* and timeframes.
- Uses *measurable performance standards* and quality assurance plans.
- Provides *performance incentives and penalties* and ties payment to outcomes.
Expectations and Benefits of Performance Based Contracting

- Encourages innovation and competition
- Results in both lower costs and improved performance
- Shifts some risk to contractors so they are responsible for achieving outcomes
- Encourages governmental entities and contractors to work together to provide the best services to clients
- Documents results for fiscal accountability
Why are Public Child Welfare Agencies Interested in PBC?

- Promotes achievement of specific departmental outcomes
- Identifies priority areas and invests resources to maximize client outcomes
- Sets groundwork to evaluate programs and services
- Documents results for fiscal accountability
- Transfers risks (or at least shares it) with the contractor!
Why are Private Agencies Interested in PBC?

- Increased opportunity for innovation and creativity
- Ability to engage in full partnership with government
- Reinvestment of savings into improved services for clients
- Potential for less frequent, but more meaningful contract monitoring
Challenges of PBC

What outcomes are you measuring?
What baseline data are you relying on?
How reliable is the data?
How do you define your outcomes?
Should the public agency “punish” contractors for legitimate effort that falls short of the goals set?
How do you manage other systems impacting your performance?
Striving for Excellence
Can PBC Make a Difference In Residential Care?

- Expands Illinois’ PBC to residential treatment, Independent Living and Transitional Living Programs

- Grant from the National Quality Improvement Center on the Privatization of Child Welfare Services to document and evaluate how it is done
Residential Treatment:
An Illinois Perspective
Child Welfare Challenges/Trends -- Serving Youth with More Complex Needs

- Placement change rate high and steadily increasing
- Behavior problems, prior institutionalization and runaway incidents increase subsequent placement instability
- Youth with multiple placement disruptions, longer stays in out-of-home care and the lack of a permanent home before entering foster care

Chapin Hall Center for Children
Youth in Residential Treatment
Illinois Trends
Implications of Reforms

Fewer youth, but greater proportion referred to residential care with histories reflecting severe psychiatric and behavioral problems.

High concentration of extraordinarily challenging youth.
Average Number of Adverse Events at Entry to Residential Care

Year of Entry to Residential Treatment

- Runaway
- Psych hospitalization
- Juvenile detention

Average Number of Adverse Events:
- 0.2
- 0.5
- 0.6
- 1.8 (364%)
- 2.9 (452%)
- 0.8 (404%)

[Graph showing the increase in average adverse events from 1997 to 2007 for different categories of entry to residential care.]
Challenges of Serving Youth with More Complex Needs

Discharge Outcomes

- Children discharged from residential care are less likely than those not placed in residential care to remain in their new placement post-discharge.

- Very high percentage of youth discharged from their first residential care setting to a less restrictive setting during the years 1995-2003 were eventually returned to higher levels of care.
Illinois Residential Discharge Rates
FY 04 – FY 06

Total Discharges: 3,448

“Negative” Discharges: 2,069 - 60%

“Positive” Discharges: 1,379 - 40%

Sustained Progress:
Of all youth positively discharged, 854 or 60% (25% of all discharges) were in the same less restrictive placement 6 months post-discharge.
The PBC Challenge

Director’s mandate
- emphasis on quality and outcomes rather than capacity and cost
- broad discretion around indicators & process

First steps
- How??
- Who??
Striving for Excellence
Organizational Structure
Data Test Workgroup

Critical PBC Functions

- Provide input regarding methodology & approach
- Regularly “vet” & review data with critical eye – i.e., test for face validity
- Serve as rudder & gyroscope

...and

Collaboration between DCFS, residential providers and universities – an essential component
Step 1: Developing PBC Goals for Residential Treatment
Developing PBC Goals for Residential Treatment

Goal 1: Improve safety/stability during residential treatment

Goal 2: Reduce severity of symptoms and increase functional skills *effectively* and *efficiently*

Goal 3: Improve outcomes at and following discharge from treatment

Derived Performance Indicators from Goals
Step 2: Identifying Measurable Performance Indicators

Criteria

- Meaningfully address each goal
- Utilize currently available data
- Utilize reasonably reliable data
  - Unusual Incident v. Payment Data
  - Use of standardized outcome measure
Goal 1: Improve Safety/Stability During Treatment

Goal 2: Effectively and Efficiently Reduce Symptoms/Increase Functionality

Goal 3: Improve Outcomes At And Following Discharge

Indicator:
* Treatment Opportunity Days Rate

(Original) Indicators:
Immediate Discharge Disposition
Sustained Positive Discharge
Length of Stay

Indicator:
* Sustained Favorable Discharge Rate
Residential Performance Indicators

- Treatment Opportunities Days Rate (TODR)
- Sustained Favorable Discharge Rate (SFDR)
Performance Indicators

Treatment Opportunity Days Rate

Percentage of time in treatment during residential stay, i.e.
- at the facility
- not on runaway, in detention, or psychiatric hospital

Calculation is # of days at facility / total # days in residential stay

Treatment Opportunity Days Rate: 3285 / 3650 = 90%
Performance Indicators

Sustained Favorable Discharge Rate

Discharge Definitions

“Favorable” Discharge
- Positive - stepdown to less restrictive setting, including residential or group home settings by program classification (within or between agencies)
- Neutral - placement in chronic MI setting
- “Sustained”
  - Remain in discharge placement 180 days

“Unfavorable” Discharge
- Negative - lateral residential/group home move, step up to more restrictive setting, disruption from placement via runaway, hospital, detention/DOC
Performance Indicators

Sustained Favorable Discharge Rate

Percentage of total annual residential spells resulting in sustained favorable discharges

"Sustained Favorable Discharge" = 180 days

"favorable" discharges

Residential Spells

"unfavorable" discharges

1 yr evaluation period

Ex: 10 residential spells, 2 favorable discharges sustained 180 days
SFDR = 2/10 or 20%
Step 3: Leveling the Playing Field for PBC
Why Risk Adjust Performance?

Each provider serves youth with a different mix of characteristics/risk factors that are related to residential treatment outcomes.

Accounting for these differences allows us to fairly measure performance on outcomes across all providers.
Leveling the Playing Field

Considered alternative methods
  – individual improvement benchmarks
  - benchmarks by classification

Scarce literature regarding RA for mental health outcomes

Decision to try – ambitious, but most promising approach
What is Risk Adjustment?

A statistical procedure to determine the significance and relative weights of identified risk factors related to performance outcomes.

- Risk factors = mostly child and some placement characteristics (e.g. geography)

RA results are then used to calculate each provider’s expected performance based on the severity of their case mix, relative to the statewide residential treatment population.
1. Identified child and placement characteristics that appear to impact performance outcomes

2. Tested these via univariate and multivariate regression analysis on DCFS population of youth placed in residential treatment for 3-year period

3. Reassessed impact of risk factors in aggregate for consistency with generally accepted clinical profiles of residential programs
Specific Risk Factors Included

- Historical child systems involvement
  - Juvenile detention or corrections
  - Runaway
  - Prior placement in residential care
  - Aggressive symptoms and antipsychotic use
  - Medicaid-paid psychiatric hospitalization
Specific Risk Factors Included

- Demographic characteristics
  - Age
  - Gender
  - Child’s geographic origin upon entering state custody (Cook, North, Central, South)
Specific Risk Factors Included

Other placement characteristics related to “spell”
- Length of spell (< 1 yr.)
- Severity level and/or specialty population served
  - Levels = severe, moderate, mild
  - Institutions and group homes
  - Specialties = BD, DD, PP, SBP, YC
- Program’s geographic location (Chicago-city, suburban Chicago, exurban Chicago, downstate town, downstate rural)
### Risk Factor Examples – Direction of Effect on Outcomes

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>TODR</th>
<th>SFDR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Historical child systems involvement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile detention or corrections</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Runaway</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Prior placement in residential care</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Antipsychotic Rx with aggression</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Psychiatric hospitalization</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Demographic characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Age</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td><strong>Other placement characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of spell &lt; 365 days</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Downstate town (vs. Chicago city)</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
Risk Adjustment: Calculating Expected Performance

- Calculate expected value of TODR and probability of SFD for each child
  - Input each child’s risk characteristics to the RA model

- These expected values are then averaged at the agency level
Limitations of Risk Adjustment

- Absence of clinical variables as risk factors
- Confounding child variables with provider performance
- Imperfect nature of data
- Performance thresholds more fair on average, but, there will be winners and losers
Strengths of Risk Adjustment

- **Levels playing field**
  - Makes PBC feasible where youth are not randomly / systematically assigned to agencies
  - Reduces *incentive* to avoid serving difficult youth

- **Allows for modification as better data become available or as populations change**

- **Supports continued performance improvement**
  - Current year’s thresholds based on (adjusted) average performance
  - As PBC incentives increase performance, risk-adjusted performance thresholds will also increase – continuously raising the bar
Step 4: Setting Performance Benchmarks

FY09 Performance benchmarks are based on

- Characteristics of agencies’ client population in FY06 and FY07
- Agencies’ expected outcomes, given characteristics of resident population, and
- The average of expected outcomes for the 2 years weighted by population size for each year
## Setting Performance Benchmarks

<table>
<thead>
<tr>
<th>Treatment Opportunity Days Rate</th>
<th>FY06</th>
<th>FY07</th>
<th>FY09 Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>agency</td>
<td>contract</td>
<td>classification</td>
<td>program</td>
</tr>
<tr>
<td>Agency A</td>
<td>999999999</td>
<td>severe</td>
<td>severe</td>
</tr>
<tr>
<td>Agency A</td>
<td>999999999</td>
<td>severe</td>
<td>severe</td>
</tr>
</tbody>
</table>

| Agency A | 999999999 | severe | severe | 25 | 89.71 | 94.64 | -4.93 |

### FY09 Benchmark

<table>
<thead>
<tr>
<th>avg. TOD rate (%)</th>
<th>avg. risk adjusted TOD rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>89.71</td>
<td>94.64</td>
</tr>
</tbody>
</table>

### FY07

- **Agency A**
  - Contract: 999999999
  - Classification: severe
  - # Spells: 25
  - Actual TOD Rate (%): 91.73
  - Risk Adjusted TOD Rate (%): 94.88
  - Actual minus RA Rate: 3.15

### FY06

- **Agency A**
  - Contract: 999999999
  - Classification: severe
  - # Spells: 24
  - Actual TOD Rate (%): 87.98
  - Risk Adjusted TOD Rate (%): 94.43
  - Actual minus RA Rate: 6.45
## Setting Performance Benchmarks

### Sustained Favorable Discharge Rate

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contract</th>
<th>Program Classification</th>
<th># Spells</th>
<th>Actual SFD Rate (%)</th>
<th># SFDs</th>
<th>Risk Adjusted SFD Rate (%)</th>
<th># SFDs</th>
<th>Actual Minus RA Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency A</td>
<td>99999999</td>
<td>Severe</td>
<td>24</td>
<td>16.67</td>
<td>4</td>
<td>23.22</td>
<td>6</td>
<td>-6.55</td>
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</table>

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contract</th>
<th>Program Classification</th>
<th># Spells</th>
<th>Actual SFD Rate (%)</th>
<th># SFDs</th>
<th>Risk Adjusted SFD Rate (%)</th>
<th># SFDs</th>
<th>Actual Minus RA Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency A</td>
<td>99999999</td>
<td>Severe</td>
<td>25</td>
<td>20.00</td>
<td>5</td>
<td>21.85</td>
<td>5</td>
<td>-1.85</td>
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</table>

### FY09 Benchmark

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contract</th>
<th>Program Classification</th>
<th>Avg. # Spells</th>
<th>Avg. SFD Rate (%)</th>
<th># SFDs</th>
<th>Avg. Risk Adjusted SFD Rate (%)</th>
<th># SFDs</th>
<th>Avg. SFD Minus Avg. RA Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency A</td>
<td>99999999</td>
<td>Severe</td>
<td>25</td>
<td>18.37</td>
<td>5</td>
<td>22.52</td>
<td>6</td>
<td>-4.15</td>
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</tbody>
</table>

*Estimated; this number is dependent on the actual number of spells accrued during the fiscal year.*
### FY09 Performance Benchmarks: All Agencies

#### Treatment Opportunity Days Rate

<table>
<thead>
<tr>
<th></th>
<th>avg. actual performance</th>
<th>avg. risk adjusted performance</th>
<th>difference: actual - risk adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum</td>
<td>76.42</td>
<td>88.94</td>
<td>-16.98</td>
</tr>
<tr>
<td>median</td>
<td><strong>93.25</strong></td>
<td><strong>94.76</strong></td>
<td><strong>-2.21</strong></td>
</tr>
<tr>
<td>maximum</td>
<td>100.00</td>
<td>98.00</td>
<td>6.08</td>
</tr>
</tbody>
</table>

#### Sustained Favorable Discharge Rate

<table>
<thead>
<tr>
<th></th>
<th>avg. actual performance</th>
<th>avg. risk adjusted performance</th>
<th>difference: actual - risk adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum</td>
<td>0</td>
<td>4.08</td>
<td>-32.74</td>
</tr>
<tr>
<td>median</td>
<td><strong>12.50</strong></td>
<td><strong>15.49</strong></td>
<td><strong>-2.06</strong></td>
</tr>
<tr>
<td>maximum</td>
<td>31.82</td>
<td>38.59</td>
<td>14.50</td>
</tr>
</tbody>
</table>
Step 5: Connecting Payment to Performance

Penalties & Rewards
Calculating the Penalty

If TODR risk adjusted benchmark is 95%:
95% of 3650 = 3468 days
3468 – 3285 = 183 days below benchmark
Agency is penalized 25% of per diem payment for 183 days.

Example:
If per diem is $300, penalty is $75 x 183 = $13,725.
Performance Benchmarks

Sustained Favorable Discharge Rate Example

Calculating the Bonus

If SFDR benchmark = 20%
(2 favorable discharges / 10 residential spells)
Agency receives bonus for sustained favorable discharges above benchmark.

Example:
If actual SFDR performance = 40%
the # of SFDs is 4, or 2 over the benchmark.

Ex: 10 residential spells,
2 favorable discharges sustained 180 days
SFDR = 2/10 or 20%
Performance Benchmarks

Sustained Favorable Discharge Rate Example

Calculating the Bonus

Bonus = difference between avg. res’l per diem and avg. stepdown per diem

- applied to average # of days for all SFDs up to 270 days (x 2 in this example).

Example: $300 - $150 = $150.

- for each youth $150 x 270 days = $40,500.

- agency total for two youth = $81,000.
Other PBC Fundamentals

- Model rates by program classification
- 100% guarantee for beds purchased
- “No decline” referrals, enhanced matching process, and performance exempt youth
Controversies? Some examples….

- Including psych hospitalization rates as part of performance measure
- Holding providers responsible for post-discharge outcomes
- No decline clause in contract
- Underused capacity/empty beds
Systemic Changes to Support PBC

- “Drilling” down into the PBC data continues in the Data Test Workgroup
- Centralized matching process for admissions
- Transition & Discharge Protocol implemented
- Runaway Assessment & Treatment Planning Process pilot
- Residential-Hospital Networks pilot based on UIC CARTS model
- Residential Treatment Outcomes System (RTOS) reports available to providers to track their outcomes
Lessons Learned from Implementation

- Communicate, communicate, communicate!
- Establish a formal structure for public/private partnership
- Engage university based researchers in your efforts
- Frequently review and refine your data
- “Nothing is written in stone….“
Why Should We Care About Measuring Performance?

- What gets measured gets done.
- If you don’t measure results, you can’t tell success from failure.
- If you can’t see success, you can’t reward it.
- If you can’t reward success, you’re probably rewarding failure.
- If you can’t see success, you can’t learn from it.
- If you can’t recognize failure, you can’t correct it.
- If you can demonstrate results, you can win public support.

From Reinventing Government
Questions & Comments?

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