Predicting well-being and housing loss in supportive housing programs: Lessons learned from a longitudinal evaluation

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538 housed

272 Disenrolled
75 Return to Emergency Shelter

46 Deceased

22 Evicted
8 Return to Shelter

266 remain housed

Still Housed through Directions Home by Program Year

80
70
60
50
40
30
20
10
0

PYI
PYII
PYIII
PYIV
PYV
PYVI
PYVII

50
26
13
3

78
59

13 Health Issue/Transfer
2 Return to Shelter

43 Self-Sufficient

26 Moved in with Family
8 Return to Shelter

23 Other/Unknown
7 Return to Shelter

36 Non-Compliant
17 Return to Shelter

36 Disappeared
15 Return to Shelter
Housing Retention Rate (Unadjusted) by Year Housed

Retention rate %

<table>
<thead>
<tr>
<th>Year</th>
<th>Retention Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>N=179, 28%</td>
</tr>
<tr>
<td>Year 2</td>
<td>N=67, 39%</td>
</tr>
<tr>
<td>Year 3</td>
<td>N=38, 34%</td>
</tr>
<tr>
<td>Year 4</td>
<td>N=85, 44%</td>
</tr>
<tr>
<td>Year 5</td>
<td>N=92, 75%</td>
</tr>
<tr>
<td>Year 6</td>
<td>N=59, 85%</td>
</tr>
<tr>
<td>Year 7</td>
<td>N=59, 100%</td>
</tr>
</tbody>
</table>
What have we measured?

- Case management time, home visits, general service utilization
- Self-sufficiency Matrix (Years 1-3)
- Mental health, quality of life, substance abuse and medication adherence screening (Years 4-7)
- Year one cost study: therapeutic alliance
- Vulnerability assessments (VI, FWVAS, VI-SPDAT)
- HUD Assessment
- Case notes, tenant tracking sheets
Program Year One

- 88% Retention Rate
- Self-sufficiency improved by 43%

Average home visit rate: 2.6 home visits per month
Program Year Two

- Self-sufficiency matrix increased 40% from baseline to 18 months
- Home visit rate lower among the disenrolled

### Adjusted Retention Rate:
- 79%

### Average Home visits:
- 2.95 per month

### Factors associated with Disenrollment

Simple tests of association (i.e., measuring if two factors are related to each other) showed that those disenrolling generally have fewer home visits. Catholic Charities has a higher than average retention rate and Texas ReEntry Services has a lower than average retention rate. No other agency or client factors were statistically associated with disenrollment, including mental health status, substance abuse, co-occurring disorders, criminal history, client satisfaction, income, employment, self-sufficiency, or other agency assignment. When placed in a multivariate model (used to predict disenrollment), these factors seem to cancel each other out and none are predictive, which is perhaps an indication that the key difference between the two organizations is in fact the number of home visits.

When home visits alone are used in a predictive model, they correctly predict 90% of disenrollments and indicate that each home visit unit per week decreases the likelihood of disenrollment by 82%. At the start of Program Year III, Texas ReEntry Services began increasing their home visits to a minimum of one per week.

Qualitative feedback from staff indicates that this has been very well received by clients and appears to be promoting more progress towards their goals, particularly those relating to life skill development.

### Table 3: Factors associated with disenrollment

<table>
<thead>
<tr>
<th>Category</th>
<th>Still enrolled, positive or neutral disenrollment</th>
<th>Negative Disenrollment</th>
<th>Statistical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean home visits per week during PYII enrollment</td>
<td>.69 (N=197)</td>
<td>.54 (N=22)</td>
<td>YES ( t=2.186, df=217, p=.03)</td>
</tr>
</tbody>
</table>
A final analysis included a logistic regression predicting negative housing loss (due to arrest, non-compliance, disappearance, eviction). Again, mean home visits was the only predictive variable and this test indicated that for each one unit increase in mean home visits, the likelihood of a negative disenrollment decreased by 94% ($B=-2.7$, SE=.93, $p=.003$, $Exp(B)=.063$).
Program Year Four

3.38 Home visits per month, Home visits no longer predicted disenrollment

Retention rate= 58% unadjusted 73% adjusted

**THE MAGNITUDE OF DIFFERENCES (PERCENT CHANGE) BETWEEN INITIAL AND FOLLOW-UP SCREENINGS FOR TBSS CLIENTS**

- Mental Health Symptoms
- Substance Abuse Symptoms
- Poor Medication Management
- Quality of Life Satisfaction

**Percent Improved**

1. 25
2. 24
3. 35
4. 11

**Paired t-tests indicated that all changes were statistically significant at probability levels less than or equal to .01.**
Program Year Five

• Performance Based Contracting

Substance abuse at intake predicts negative disenrollment

Gains in quality of life, mental health and substance use are cancelled out by declines in these areas. No significant changes over time, but those in housing longer show more gains.
Program Year Six

<table>
<thead>
<tr>
<th>Service factors averaged for months housed during PYV and PYVI (mean values)</th>
<th>Negative Housing Loss (n=36)</th>
<th>Housing Retained, Positive or Neutral Disenrollment (n=280)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home visits per month</td>
<td>.97</td>
<td>1.4</td>
</tr>
<tr>
<td>Case management minutes per month*</td>
<td>84</td>
<td>140</td>
</tr>
<tr>
<td>TSS individual sessions per month*</td>
<td>.01</td>
<td>.10</td>
</tr>
<tr>
<td>TSS groups per month*</td>
<td>.00</td>
<td>.20</td>
</tr>
</tbody>
</table>

*T-test indicates difference is statistically significant, p<.05

Logistic regressions showed that only case management minutes predicted retention, and substance abuse scores predicted negative disenrollment.
Program Year Seven

Mental Health: 45% of tenants improved
Quality of Life: 43% of tenants improved
Substance Abuse: 24% of tenants improved
Medication Adherence: 25% of tenants improved

<table>
<thead>
<tr>
<th>Time in Housing</th>
<th>Average home visits per month in PYVII</th>
<th>Average total minutes of case management per month in PYVII</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year or less (N=56)</td>
<td>.98</td>
<td>194</td>
</tr>
<tr>
<td>Less than three years, more than one year (N=87)</td>
<td>1.1</td>
<td>111</td>
</tr>
<tr>
<td>Three or more years (N=143)</td>
<td>1.3</td>
<td>128</td>
</tr>
</tbody>
</table>

Average 1 home visit per month
Program-to-Date Disenrollment Categories as a percent of annual tenant counts

<table>
<thead>
<tr>
<th>Program Year</th>
<th>Negative Disenrollment</th>
<th>Became Self-Sufficient</th>
<th>Neutral Disenrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PYI</td>
<td>9</td>
<td>0.4</td>
<td>5</td>
</tr>
<tr>
<td>PYII</td>
<td>13</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PYIII</td>
<td>11</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>PYIV</td>
<td>11</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>PYV</td>
<td>10</td>
<td>1.5</td>
<td>4.5</td>
</tr>
<tr>
<td>PYVI</td>
<td>3</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>PYVII</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Occupancy and Housing Program to Date

- Contracted Housing Capacity
- Housed Tenants
- Housed Program-to-Date
Mixed Method Analysis

• Inconsistencies in tenant experiences
• Visits and services were predictive, but the engagement experience may be more important
• Conflict is challenging, and may be internalized
• Housing First is viewed as “no consequences”
Local housing policies: Enforce the rules

Tenants: Unmet Needs

Evaluation: Concerns with outcomes and time

Empathizing with the case manager “squeeze”

Landlords: Make sure tenants behave well
What are we missing?

• Is there a keystone measure?
• Impact on retention with coordinated entry?
• Is this all just funny math? No controls, data inconsistency