Initiation and engagement in addiction treatment integrated into primary care: the role of gender

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AHSR

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Background: Integration

• Integrating addiction treatment into primary care can improve substance use and medical outcomes
  • Friedmann et al. *J Gen Intern Med* 2003:18;1-8
  • Weisner et al. *JAMA* 2001:286; 1715-1723.
Background: Women and treatment engagement

- Women with SUDs are less likely to enter addiction treatment
- Gender does not predict retention, completion or outcome
  - Greenfield et al. DAD 2007 Review
- Women are more likely to utilize primary care in general
  - Scaife et al. Family Practice 2000
- The role of gender in initiating and engaging in primary-care based addiction treatment is not clear
Background: Washington Circle initiation and engagement

- WC measures of initiation and engagement have been adopted by the National Committee for Quality Assurance and the National Quality Forum as recommended process measures in addiction treatment.

- Rates for outpatient treatment in publicly funded MA programs are:
  - 42% initiation and 27% engagement
    - Garnick et al. JSAT 2009

- Rates in the AHEAD study:
  - 45% initiation and 23% engagement
  - Females: initiation OR 0.65 (0.38-1.10) and engagement OR 0.36 (0.17-0.75)
    - Kim et al. Drug Alc Dep 2011
FAST PATH

• Opened Feb, 2008 at Boston Medical Center
• Objective:
  – Integrate substance abuse treatment in primary care settings at Boston Medical Center and deliver longitudinal, coordinated care to HIV-infected and HIV-negative patients with risky behaviors
• Financing: 5-year SAMHSA targeted capacity expansion grant, about $350,000 per year

• FAST PATH
  – Facilitated Access to Substance abuse Treatment with Prevention And Treatment of HIV
FAST PATH Program Overview

**Referral sources**
- Providers, Self Referral, HIV Rapid Testing and Counseling Program, In-Patient, Residential Programs, Detox Centers, Local Shelters

**Screening**
- Eligibility Screening
  - Referred to team based on disclosed HIV status

**Program eligibility criteria**
- Active alcohol or drug dependence
- High risk for transmitting (HIV+) or contracting (HIV-) HIV due to risky drug or sex behaviors
- Willing to receive primary medical care at Boston Medical Center

**Integrated substance abuse services with medical care**

**HIV Care Team**
- FAST PATH comprehensive assessment
- Primary care
  - Individual/Group Counseling
- MAT
- MD RN AC
- Case Management

**Primary Care Team**
- FAST PATH comprehensive assessment
- Primary care
  - Individual/Group Counseling
- MAT
- Case Management

**Substance abuse care continuum**
- Inpatient detoxification
- Outpatient day treatment
- Residential treatment
- Methadone treatment
Clinical Team

• Internist with addiction treatment experience - one session/week/clinic
  – Evaluation and stabilization
  – Ongoing consultation
  – Primary care, if needed

• Addiction nurse – 16 hours/week/clinic
  – Medication (buprenorphine, naltrexone, opioids for pain) education, management and monitoring
  – Overdose education and prevention

• Addiction clinician – 40 hrs/week/clinic
  – One on one counseling
  – Group counseling
  – Case management/ Facilitated referral
Hypothesis

Gender is associated with initiation and engagement in substance abuse treatment in an integrated substance abuse/primary care setting
Methods

Population/ Design:
   Cohort study of 216 patients enrolled in a primary care-based addiction treatment program for patients with HIV infection and at high risk for HIV infection

Date Collection:
   All FAST PATH patients were surveyed using the standard SAMHSA Government Performance and Results Act (GPRA) instrument at program entry
   Program visits were entered into the study tracking database by clinical staff and confirmed by research staff
Methods

Outcomes:

• **Initiation**
  • 2 treatment sessions within the first 14 days

• **Engagement**
  • 2 additional treatment sessions within 30 days after initiation

WC performance measures for addiction treatment programs supported by private and public payors

• Garnick et al. JSAT 2009

*WC measure definition for outpatient and intensive outpatient has an exclusion: no other substance abuse services in the previous 60 days*
Methods

**Covariates** (all collected at baseline):
- Age, race/ethnicity, education, homelessness, HIV status, treatment with buprenorphine, 30 day alcohol, 30 day cocaine

**Analyses:**
- Multivariable logistic regression models for initiation and engagement
# Results - Demographics

<table>
<thead>
<tr>
<th></th>
<th>Female N=70</th>
<th>Male N=146</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, yrs</td>
<td>42 (32-47)</td>
<td>46 (39-52)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>21%</td>
<td>35%</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>27%</td>
<td>24%</td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>44%</td>
<td>33%</td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Completed 12th grade</td>
<td>65%</td>
<td>67%</td>
</tr>
<tr>
<td>Housed</td>
<td>80%</td>
<td>74%</td>
</tr>
<tr>
<td>Any employment</td>
<td>7%</td>
<td>12%</td>
</tr>
</tbody>
</table>
Results - Descriptives

<table>
<thead>
<tr>
<th></th>
<th>Female N=70</th>
<th>Male N=146</th>
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<tbody>
<tr>
<td>HIV infected</td>
<td>67%</td>
<td>55%</td>
</tr>
<tr>
<td>Treated with buprenorphine</td>
<td>64%</td>
<td>66%</td>
</tr>
<tr>
<td>Any alcohol, past 30 days</td>
<td>37%</td>
<td>46%</td>
</tr>
<tr>
<td>Alcohol intoxication, 30 days</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Any cocaine, past 30 days</td>
<td>41%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Results – Initiation and Engagement

<table>
<thead>
<tr>
<th></th>
<th>Initiation</th>
<th>Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>69%</td>
<td>54%</td>
</tr>
<tr>
<td>Male</td>
<td>77%</td>
<td>64%</td>
</tr>
</tbody>
</table>

**Initiation**
2 treatment sessions within the first 14 days

**Engagement**
2 additional treatment sessions within 30 days after initiation
## Results – Adjusted models

<table>
<thead>
<tr>
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<th>Initiation AOR (95% CI)</th>
<th>Engagement AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female vs Male</td>
<td>0.80 (0.39-1.65)</td>
<td>0.76 (0.39-1.50)</td>
</tr>
</tbody>
</table>

Adjusted for: Age, race/ethnicity, education, homelessness, HIV status, treatment with buprenorphine, 30 day alcohol, 30 day cocaine
## Results – Adjusted models

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</tr>
<tr>
<td>Bup treatment</td>
<td>3.72 (1.87-7.38)</td>
<td>4.97 (2.58-9.60)</td>
</tr>
</tbody>
</table>

Adjusted for: Age, race/ethnicity, education, homelessness, HIV status, 30 day alcohol, 30 day cocaine
Limitations

- Medium-sized sample in one clinic
- Washington Circle definitions were developed for addiction treatment settings, not primary care settings
Summary

• Initiation and engagement was common among women and men
• While the odds of initiation and engagement were lower for women, these findings were not statistically significant
• Buprenorphine treatment is strongly associated with initiation and engagement in the program
Implications

• Programs that integrate addiction treatment into primary care can engage both men and women who are treatment seeking
• Sex specific treatment in primary care warrants consideration and further study
• Agonist medication, like buprenorphine, is a powerful tool for engaging patients in primary care clinic-based addiction treatment
Results – Initiation

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Initiation AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female vs Male</td>
<td>0.80 (0.39-1.65)</td>
</tr>
<tr>
<td>Age, yrs</td>
<td>1.03 (0.99-1.07)</td>
</tr>
<tr>
<td>12&lt;sup&gt;th&lt;/sup&gt; grade or more</td>
<td>1.14 (0.54-2.40)</td>
</tr>
<tr>
<td>Housed</td>
<td>0.55 (0.23-1.32)</td>
</tr>
<tr>
<td>HIV infected</td>
<td>0.94 (0.44-2.01)</td>
</tr>
<tr>
<td>Bup treatment</td>
<td>3.72 (1.87-7.38)</td>
</tr>
<tr>
<td>Any alcohol</td>
<td>1.31 (0.64-2.69)</td>
</tr>
<tr>
<td>Any cocaine</td>
<td>0.82 (0.40-1.71)</td>
</tr>
</tbody>
</table>
## Results – Engagement

<table>
<thead>
<tr>
<th></th>
<th>Engagement AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female vs Male</td>
<td>0.76 (0.39-1.50)</td>
</tr>
<tr>
<td>Age, yrs</td>
<td>1.04 (1.00-1.07)</td>
</tr>
<tr>
<td>12\textsuperscript{th} grade or more</td>
<td>1.01 (0.50-2.01)</td>
</tr>
<tr>
<td>Housed</td>
<td>1.22 (0.58-2.54)</td>
</tr>
<tr>
<td>HIV infected</td>
<td>1.58 (0.79-3.15)</td>
</tr>
<tr>
<td>Bup treatment</td>
<td>4.97 (2.58-9.60)</td>
</tr>
<tr>
<td>Any alcohol</td>
<td>1.61 (0.83-3.15)</td>
</tr>
<tr>
<td>Any cocaine</td>
<td>0.89 (0.45–1.76)</td>
</tr>
</tbody>
</table>
Background

• Integrating addiction treatment into primary care likely improves substance use and medical outcomes
  – 12 months after entering SAT, patients with on-site primary care report improved addiction severity
    • Friedmann et al. *J Gen Intern Med* 2003:18;1-8
  – Kaiser RCT: sub-group with substance-related medical conditions showed increased abstinence and decreased hospitalization
    • Weisner et al. *JAMA* 2001:286; 1715-1723.
Receipt of care and utilization

• Large administrative data cohort study of drug users in New York State
  – 11,000 HIV+
  – 46,000 HIV -

• Examined hospitalization in 1996 by receipt of SAT, medical care, both or neither

Laine et al. *JAMA* 2001: 9; 2355-2362.
Receipt of SAT+PC – odds ratio for hospitalization

- *p<0.05 for all groups compared to neither

Laine et al. *JAMA* 2001: 9; 2355-2362.
National prospective cohort of patients entering SAT

- 4526 subjects from 72 SAT programs interviewed at 12 months
- On-site primary medical care associated with improved addiction severity, but no change in medical problems

Kaiser integrated care study

- RCT of 592 subjects seeking SAT with onsite PC or referral
- No statistical differences in substance abuse outcomes, utilization, or cost
- Sub group analyses focused on substance abuse-related medical conditions (SAMCs) – depression, overdose hx, anxiety disorders, HTN, asthma, psychoses, GERD, cirrhosis, HCV, pancreatic dz, ETOH neuropathy, ETOH cardiomyopathy, perinatal alcohol or drug dependence, tobacco dependence
  - HIV not included because <0.01% of the sample
  - 57% of sample had at least one condition

Kaiser integrated care study

- Among subjects with SAMCs, onsite PC care vs. referral...
  - Increased 6mo abstinence rates (69% vs. 55%)
  - Reduced hospitalization
  - Reduced inpatient days
  - Reduced ED visits
  - Reduced total medical costs per month (-$231 vs. -$58)

Weisner et al. *JAMA* 2001;286; 1715-1723.
Parthasarthy et al. *Med Care* 2003; 41; 357-367.
Kaiser integrated care study

• 5-year follow-up study, onsite care vs. referral..
  – Increased 5 yr abstinence for those with and without SAMCs

• Among those with SAMCs, increased number of PC visits were associated with increased abstinence

More research needed

- “[M]any questions about integration of care... remain unanswered.”
  - Improved adherence?
  - Survival/ disease outcomes?
  - Cost effectiveness?
  - What components are replicable vs. site-specific?
  - How to generalize/ implement?