Changes in HIV Providers’ Management of Depression after Integration of Treatment Support into Clinical Care

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- SLAM DUNC Study Team:
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The “HIV Treatment Cascade”

Gardner et al. CID 2011;52:793-800.
Depression and the HIV treatment continuum

HIV Infection → HIV diagnosis → Engagement and retention in care → ART initiation → Adherence and virologic suppression

Depression inversely associated with...

Some evidence that depression treatment can improve ARV adherence and HIV clinical outcomes.

Pence et al. AIDS 2012;26(5):656-8
The depression treatment continuum

Prevalent depression → Clinical recognition → Initiation of treatment → Adequacy of treatment → Remission of depression

~50% of cases of depression go unrecognized in HIV clinical care

~50% of those recognized never start treatment

If adequate treatment is provided, response rates are high (~70%).

• Counseling requires a minimum contact intensity.
• Pharmacotherapy requires aggressive dose adjustment based on response.
• Perhaps one-third of those being treated are receiving adequate treatment.

Pence et al. AIDS 2012;26(5):656-8
The “Depression Treatment Cascade” for HIV Patients

Of prevalent cases... Recognized clinically Any treatment Adequate treatment Achieved remission

Screening Depression Care Manager support

Goal:

95% Bayesian Credible Interval

Pence et al. AIDS 2012;26(5):656-8
SLAM DUNC Study

- Strategies to Link Antidepressant and Antiretroviral Management at Duke, UAB, and UNC
- NIMH-funded R01, 2009-2014
- Randomized controlled trial to test the effect of depression treatment on ARV adherence
- Sites: HIV clinics at 3 academic medical centers

SLAM DUNC Study

- **Population:** HIV clinic attendees with current major depression
- **Intervention:** Measurement-Based Care depression treatment
  - Depression Care Managers provide decision support to HIV providers for antidepressant prescription and management
- **Comparison:** Usual care
- **Outcome:** ARV adherence

Does Depression Care Manager’s provision of decision support for intervention-arm study participants change HIV providers’ depression management practices for all patients?
Methods

- Semi-structured in-person interviews with HIV providers
  - Before study launch
  - One year after study launch
- Topics
  - Perception of prevalence of depression and depression treatment in caseload
  - Confidence treating depression
  - Specific depression treatment practices
Methods

- 9 “best-practices” principles of depression treatment defined from national guidelines
  - American Psychiatric Association* (for all patients)
  - NY State Dept of Health** (for HIV patients)
- Providers’ self-reported practices compared to best-practices principles and assigned a numeric score reflecting quality relative to each principle
- Summary best-practices score created using factor analysis from item-specific scores

Best-Practices Principles

Screening

1. Routine screening with standardized measure
2. Assess need for treatment based on severity
3. Base treatment choice on history and severity
4. Adjust antidepressant starting dose for ARV interaction

Initiation

5. Follow-up new antidepressant prescription in 4 weeks
6. Assess effectiveness with standardized symptom severity measure

Management

7. Increase dose based on symptom severity and drug tolerability
8. Utilize full FDA dosing range
9. Switch antidepressants based on formal assessment of response, tolerability, and adequacy of trial
Participants (n=41* with baseline and 1-year follow-up interviews)

<table>
<thead>
<tr>
<th>Baseline Characteristic</th>
<th>N (%) or Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical training</strong></td>
<td></td>
</tr>
<tr>
<td>MD-Attending</td>
<td>21 (51%)</td>
</tr>
<tr>
<td>MD-Fellow</td>
<td>13 (32%)</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>4 (10%)</td>
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<tr>
<td><strong>Clinical effort</strong></td>
<td></td>
</tr>
<tr>
<td>% clinical effort on HIV care</td>
<td>30% (20-50%)</td>
</tr>
<tr>
<td>80% (60-95%)</td>
<td></td>
</tr>
<tr>
<td><strong>Years providing HIV care</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;5 years providing HIV care</td>
<td>9 (3-20)</td>
</tr>
<tr>
<td>15 (37%)</td>
<td></td>
</tr>
<tr>
<td><strong>Very or extremely confident...</strong></td>
<td></td>
</tr>
<tr>
<td>Prescribing an initial antidepressant</td>
<td>25 (63%)</td>
</tr>
<tr>
<td>Switching or augmenting antidepressants</td>
<td>5 (13%)</td>
</tr>
<tr>
<td>Depression treatment is part of role</td>
<td>29 (71%)</td>
</tr>
</tbody>
</table>

* All providers were interviewed at baseline (n=48). At one year, 3 MD-fellows had left; 41 of 45 remaining providers completed the one-year interview.
Baseline indicators of depression treatment quality

- Assesses all patients for depression: 29%
- Bases need for treatment on severity: 68%
- Bases type of tx on history / presentation: 51%
- Adjusts AD dose for ART interactions: 37%
- Follow-up within 4 weeks: 46%
- Assesses effectiveness systematically: 12%
- Increases dose based on symptoms: 44%
- Doses AD up to full FDA range: 41%
- Adequate trial before switching AD: 13%

Bess et al. IAPAC 2011 abstract # 70029.
Change in self-reported depression treatment practices after 1 year

- Assesses all patients for depression: +37% *
- Bases need for treatment on severity: -4%
- Bases type of tx on history / presentation: -14%
- Adjusts AD dose for ART interactions: +16%
- Follow-up within 4 weeks: +2%
- Assesses effectiveness systematically: +13%
- Increases dose based on symptoms: -29% *
- Doses AD up to full FDA range: +22%
- Adequate trial before switching AD: -6%

* p < 0.05
Depression treatment best-practices summary score

More guideline-concordant practice

Baseline: 5.7 (95% CI: 4.9-6.4)
1 year: 5.9 (95% CI: 5.3-6.6)

p > 0.05
“How has your depression treatment practice changed in the past year?”

- Open-ended question
- Most common response: Provision of routine screening has raised awareness of depression
  - and likelihood of discussing depression during clinical encounter
- Next most common response: Practice has not changed
- Rare responses: Concrete practice changes
  - Follow up sooner after starting AD (n=1)
  - More likely to increase AD dose (n=3)
  - More likely to change AD (n=1)
“How has your depression treatment practice changed in the past year?”

- “[I am] more comfortable addressing [depression] and providing treatment with the care manager.”
- “I didn’t feel it was my role at all … as a physician assistant [and] in Infectious Diseases … I didn’t feel that the physicians really thought it was much within their scope either … but now there is more support, I have learned more about the drugs, [and] I’m feeling more able.”
- “I haven’t changed my practice, other than that I listen to you guys.”
Interpretation

- Providers have responded very positively to the provision of routine depression screening in clinic.
- After 1 year of Depression Care Manager decision support for intervention patients, providers report relatively little change in practices related to the initiation or management of antidepressant treatment in all patients (without DCM support).
- In contrast, adherence to guidelines in intervention patients with direct DCM support is very high.
Role of Depression Care Manager

- Assesses all patients for depression
- Bases need for treatment on severity
- Bases type of tx on history / presentation
- Adjusts AD dose for ART interactions
- Follow-up within 4 weeks
- Assesses effectiveness systematically
- Increases dose based on symptoms
- Doses AD up to full FDA range
- Adequate trial before switching AD

[Bar chart showing the percentage of each role]
Interpretation

- Presence of study has raised awareness but has not changed ongoing depression management practices
- Supports need for measurement-based depression treatment decision support for all patients
- No evidence of contamination (decision support around best-practices depression treatment appears not to have generalized beyond intervention patients)
Limitations

- Self-reported practices
- Providers may have “learned the right answer” after 1 year without having changed practice
- Caution should be used in interpreting numeric scores derived from qualitative data
- Sites are academic medical centers with research-oriented clinicians – practices may differ elsewhere
Strengths

- Response rate: >90% of HIV providers at 2 large academic medical centers
- Detailed qualitative assessment of provider practices
- Very little published data on depression treatment practices of HIV providers
Is this a fair expectation of HIV providers?

- High burden and negative consequences of depression
- Rise of “medical home” model of care
- Availability of evidence-based decision support models (Measurement-Based Care)
Depression treatment summary score, by clinical training

![Bar graph showing depression treatment summary scores by clinical training level. The graph compares MD-Fellows, MD-Attendings, and Midlevels. At baseline, MD-Fellows have a score of 7.2, MD-Attendings have a score of 5.6, and Midlevels have a score of 3.1.](image-url)
Depression treatment summary score, by clinical training

- **Baseline**
  - MD-Fellows: 7.2
  - MD-Attendings: 5.6
  - Midlevels: 3.1

- **1 year**
  - MD-Fellows: 5.8
  - MD-Attendings: 6.2
  - Midlevels: 5.3
Depression treatment summary score, by years of clinical experience

- 0-4 years: 7
- 5+ years: 4.9
Depression treatment summary score, by years of clinical experience

- **Baseline**
  - 0-4 years: 7
  - 5+ years: 4.9

- **1 year**
  - 0-4 years: 6.2
  - 5+ years: 5.8

Legend:
- Blue: 0-4 years
- Green: 5+ years