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# When Need Plus Supply Does Not Equal Demand: Challenges in Uptake of Depression Treatment in HIV Clinical Care

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## Abstract

**Background—**Depression is common among patients in HIV care and predicts worse HIV-related health behaviors and outcomes. Effective depression treatment is available, yet depression remains widely underdiagnosed and undertreated in HIV care.

**Methods—**As part of a multisite randomized trial of depression treatment in HIV clinical care (the SLAM DUNC Study), the proportion of positive depression screens that resulted in study enrollment and reasons for non-enrollment were examined.

**Results—**Over 33 months, patients completed 9,765 PHQ-9 depression screens; 1,852 (19%) screens were positive for depression (PHQ-9≥10) and 1,628 (88%) positive screens were assessed for study eligibility. Of assessed positive screens, 186 (11%) resulted in study enrollment. Some non-enrollments were due to study eligibility criteria, but many were related to potentially modifiable provider- or patient-level barriers.

**Conclusion—**Addressing patient- and provider-level barriers to engaging in depression treatment will be critical to maximize the reach of depression treatment services for HIV patients.

Depression is a highly prevalent comorbidity among patients engaged in HIV care, affecting 20-30% of such patients (1, 2). Depression is associated with a range of adverse behavioral and health outcomes for HIV-infected patients, ranging from reduced antiretroviral medication adherence(3) to poorer virologic outcomes(4) and higher mortality rates (5).

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Effective medication- and therapy-based treatments for depression, including for HIV patients, are well understood (6, 7). However, depression remains widely underdiagnosed and undertreated in this population due to factors such as stigma, health system fragmentation, and access barriers (8, 9).

One promising avenue for large-scale improvement of the diagnosis and treatment of depression among HIV-infected patients is the integration of decision support models for antidepressant management into HIV clinical care (10), also called collaborative care models (11). In such models, a clinic staff person – e.g. a social worker or nurse – is trained to regularly assess key patient metrics (depressive severity, medication side effects) and, guided by an evidence-based algorithm and supervised by a mental health specialist, provide decision support to the non-psychiatric provider for initiation and ongoing management of antidepressant treatment. Such models have a well-established evidence base in primary care (12) and have recently been adapted for HIV care (10).

While such decision support models have the potential to efficiently expand the availability of evidence-based antidepressant treatment in HIV care, their success depends on patients' and providers' willingness to take advantage of them. Here we describe the uptake of an evidence-based depression treatment intervention after integration of a decision support model into clinical care at 2 high-volume US HIV clinics.

## Methods

As part of a multi-site randomized controlled trial to test the effect of depression treatment on HIV outcomes (the SLAM DUNC Study (13)), we adapted the Measurement-Based Care depression treatment decision support model for HIV care (10) and integrated it into routine care at 4 HIV clinics (3 academic medical center-based, 1 community-based). Primary inclusion criteria for study enrollment included a positive screen (total score ≥10) on the Patient Health Questionnaire-9 (PHQ-9) (14), confirmed current major depressive disorder, and current or imminent antiretroviral treatment (because the study's primary endpoint was antiretroviral medication adherence). Primary exclusion criteria included past or current bipolar or psychotic disorder (13). Psychiatric diagnoses were assessed by trained staff members using the Mini International Neuropsychiatric Interview (MINI).

For patients with an eligible PHQ-9 score, study staff first consulted the HIV medical provider to ask whether the provider thought the patient was appropriate for the study. With the provider's approval, study staff then approached the patient to describe the study. Interested patients provided informed consent and completed additional eligibility assessments (primarily, diagnostic assessments to confirm major depressive disorder and rule out bipolar and psychotic disorders). Participants meeting all eligibility criteria were randomized to receive either usual care or Measurement-Based Care.

## Results

Two of the 4 clinics initiated routine depression screening of all patients and kept detailed records of screening, eligibility, and enrollment outcomes over a 33-month period. Since patient identifiers were not captured with screening outcome data, results are presented in

terms of number of screening events rather than number of patients. During this time, 9,765 PHQ-9 depression screens were completed at the two sites, including multiple screens for many patients. , 1,852 (19%) screens yielded a score ≥10 (Figure). Of the screens yielding high PHQ-9 scores, 1,628 (88%) were assessed for study eligibility.

Of positive screens that were assessed, 186 (11%) resulted in study enrollment. Of screens not resulting in enrollment, in 649 cases (40%) the HIV provider did not recommend enrollment, in 433 cases (27%) the patient declined to enroll, and in 360 cases (22%) the patient did not meet study inclusion criteria.

For cases in which the provider did not recommend enrollment (40%), the most common reason was that the patient's mental health was already being managed by a mental health provider outside the HIV clinic (14%). Other common reasons included that the provider preferred to follow up on the depression outside of the study (7%), the provider did not think the patient was depressed (5%), or the provider thought the patient's mental health picture was too complicated for the study's depression care management approach (5%).

For cases in which the patient declined to enroll (27%), the most common reason was that the patient was not interested in depression treatment generally (8%) or in medication specifically (5%), wanted more time to consider (6%), or faced transportation barriers to additional appointments (2%).

For cases in which the patient consented but was found ineligible (22%), the most common reason was past or current bipolar disorder (7%) or psychotic disorder (4%), followed by no current or planned ARV regimen (4%).

While the above results reflect multiple screens per patient, analyses restricted to successive 6-month intervals that would largely reflect unique patients yielded substantively similar results. While detailed screening outcomes were not recorded at the other two study sites, study staff at those sites reported enrollment experiences similar to those presented here.

## Discussion

This study identified a high need for depression treatment at the two study sites, with nearly one in five screens over three years identifying a level of depressive symptoms that indicate likely untreated or undertreated depression. Yet despite the availability (supply) of a free and relatively low-burden and accessible depression treatment intervention, demand was strikingly modest, with study enrollment resulting from only one in nine positive screens overall, and one in five positive screens that might be considered eligible for the depression treatment model (excluding cases in which the patient was not eligible, the provider believed the patient was not depressed, or the provider indicated mental health was already being managed elsewhere).

Some reasons for non-enrollment were study-specific, such as a requirement for current antiretroviral therapy, or likely unmodifiable, such as history of a bipolar or psychotic disorder that would require a different treatment approach. Other reasons, however, indicate potentially modifiable patient-, provider-, or intervention-level barriers to engagement. For

example, over half of cases where the patient declined enrollment were because the patient was not interested in treatment or wanted more time to consider. A pre-intervention outreach component that addressed patients' motivation for treatment, for example by using motivational interviewing to attempt to move patients along the Stages of Change (15) from pre-contemplation toward action, could increase the reach of the depression treatment model. Another quarter of cases where the patient declined were because the patient did not want to take another medication (antidepressant costs are generally not barriers for this population due to AIDS Drug Assistance Programs and low-cost generics); an intervention that offered patients a choice of counseling and medication management could address this barrier. An integrated counseling arm flexible enough to address common co-occurring anxiety, post-traumatic stress, or substance use disorders could address providers' expressed concerns about referring patients with more complex mental health pictures.

This study is in line with many others that have identified a high need for depression treatment among patients engaged in HIV care, but found very low uptake of such care among patients with high depressive symptoms even when study enrollment was free and the intervention was relatively low-burden for both patients and HIV providers. Addressing modifiable barriers to depression treatment engagement will be critical to maximize the reach of depression treatment services for HIV patients.

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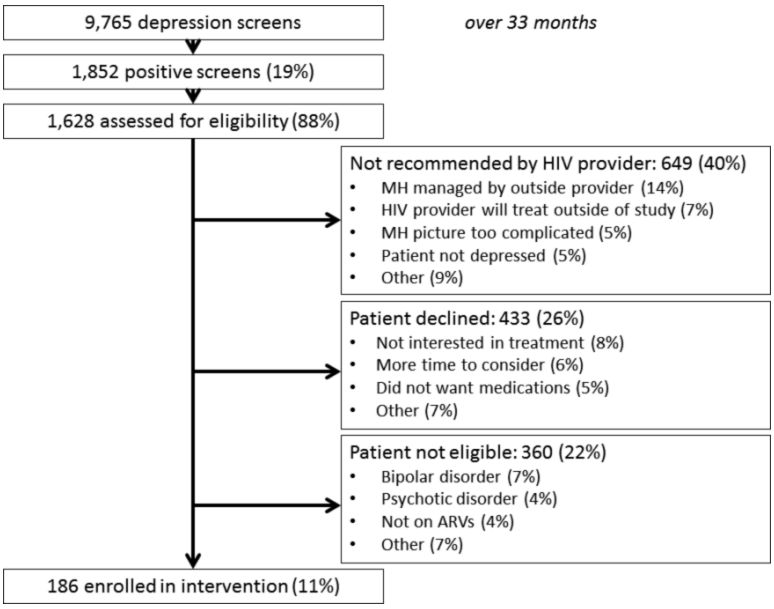


**Figure.**

Reasons for non-enrollment among patients assessed for eligibility for the SLAM DUNC Study.