Interventions and Adherence Effects

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Changes in HIV Outcomes Following Depression Care in a Resource-limited Setting: Results from a Pilot Study in Bamenda, Cameroon

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8th International Conference on HIV Treatment and Prevention, Miami, FL
June 3, 2013

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Disclosures

- I have no real or apparent conflicts of interest to report

Introduction

- Major Depressive Disorder (MDD) co-occurs frequently with HIV in sub-Saharan Africa: 11-38% (Breuer, Afr Jrnl Aids Research, 2011)

- Depressed HIV-infected patients are at greater risk of more advanced stages of disease, lower CD4 counts, and negative HIV-related behaviors (Collins, AIDS, 2006)

Untreated depression identified as a matter of public health import

- Blue ribbon panels underlined importance of integrating mental health management into routine HIV care in less wealthy countries (Freeman, BJP, 2005)

- World Health Organization (WHO) identifies mental health treatment as essential for those with HIV in resource-limited settings

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Limited access and expertise to support improved depression care

- In low-income countries, 3/4 of those needing mental health treatment lack access (WHO's Mental Health Gap Action Programme)

- In sub-Saharan Africa, the median number of psychiatrists trained/country in 2011 was zero

Measurement-based Care:
a resource efficient, scalable model

- In a sample of depressed HIV patients in Cameroon, we explored how implementing measurement-based antidepressant care (MBC) affected HIV outcomes at 4 month follow-up

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Methods

- The ADEPT study
  - NIMH-funded R34 3-year feasibility study to adapt MBC for use in HIV clinics in Cameroon (PIs Gaynes, Pence)
  - We employed a depression care manager (DCM) to provide an outpatient HIV clinician with evidence-based decision support for antidepressant treatment

- Eligibility
  - PHQ ≥ 10
  - MDD confirmed by clinical interview
  - 18-65 years of age
  - On, or about to begin, antiretroviral therapy
  - No current substance abuse requiring treatment prior to depression management

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- Depression management was provided for the first 12 weeks
  - Supervision of DCM by Skype every week
  - DCM contact with patient every 2 weeks
  - HIV clinician appointments every 4 weeks

Outcomes of interest at 4 months

- HIV clinical measures

- Psychiatric measures

Results

- We enrolled 55 depressed HIV participants, most of whom were female (80%), divorced or widowed (53%), and had attained a primary education only (56%)

- Patients were moderately depressed at baseline (mean Patient Health Questionnaire [PHQ] score=14.3)

Change in HIV outcomes

Outcome	Baseline	4 months
CD4 (cells/mm^3)	419 (246)	429 (199)
HIV RNA VL < 400 copies/mL	0% (0)	21% (9)*
Log$_{10}$ HIV RNA VL	4.1 (0.4)	3.1 (0.9)*
# HIV symptoms (range: 0-12)	6.8 (2.3)	3.1 (1.9)*

* $P < 0.05$. Statistics presented as Mean (SD) or % (n)

Change in HIV outcomes

Outcome	Baseline	4 months
Self-reported health good to excellent	18% (10)	68% (36)*
Adherence ≥ 95% (self report)	56% (31)	62% (33)
Missed any ARV doses past month (self report)	75% (41)	53% (28)*

* P<0.05. Statistics presented as Mean (SD) or % (n)

Change in psychiatric outcomes

Outcome	Baseline	4 months
PHQ-9 score (SD)	14.3 (3.7)	1.6 (2.4) *
MDD remission (PHQ<5)	0% (0)	87% (48)
Maladaptive coping style (SD)	1.7 (0.6)	1.5 (0.4)*
Self-efficacy scores (SD)	3.5 (0.5)	3.7 (0.4)*

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* P<0.05. Statistics presented as Mean (SD) or % (n)

Conclusion

- In this pilot study of depressed HIV patients in Cameroon receiving MBC, both depression and HIV outcomes improved at 4 months
  - Mean viral load decreased by one log
  - Virologic suppression improved from 0% to 21%
  - Self-reported HIV symptoms, overall health, and ARV adherence all improved by varying amounts.

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- At the same time, all psychiatric measures improved, with nearly 90% of patients achieving remission of their depressive illness

- These data are consistent with a model in which better depression care can lead to improved HIV outcomes

Limitations

- No comparison group

- Small sample size

- Not all patients were on stable ARV regimens

- Improvements in both depression and HIV outcomes may not be causally related

Summary

- This pilot study provides some of the first prospective evidence, if only suggestive, in sub-Saharan Africa that effective depression treatment may play an important role in optimizing HIV treatment benefits among depressed HIV-infected patients

- Subsequent large scale prospective trials can test whether these relationships hold true.

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Colleagues: ADEPT Team

- Julius Atashili, MD, PhD
- Joseph Vukugah
- Seema Parkash
- Brian Pence, MPH, PhD
- Shantal Asanji
- Irene Numfors

Not pictured: Mbu Tabenyang, MD
Alfred Njamnshi, MD, PhD
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Martha Mesenji
Julie O'Donnell, MPH
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A few facts about Cameroon

- Population: ~19,000,000
- Cell phones: ~7,000,000
- Psychiatrists: 3
- Psychiatric nurses: 33

The ADEPT Study: Aims and progress

- Adapted PHO9 for use with Cameroonian patients (focus groups)

- Completed validation study comparing PHQ-9 to reference standard diagnostic tool

- Adapted MBC to local setting (medications; supervision; suicidality response; referral options)

- Completed feasibility study of MBC with 55 depressed HIV patients

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ADEPT Study: Change in depressive symptoms over 12 weeks

Median PHQ9 score
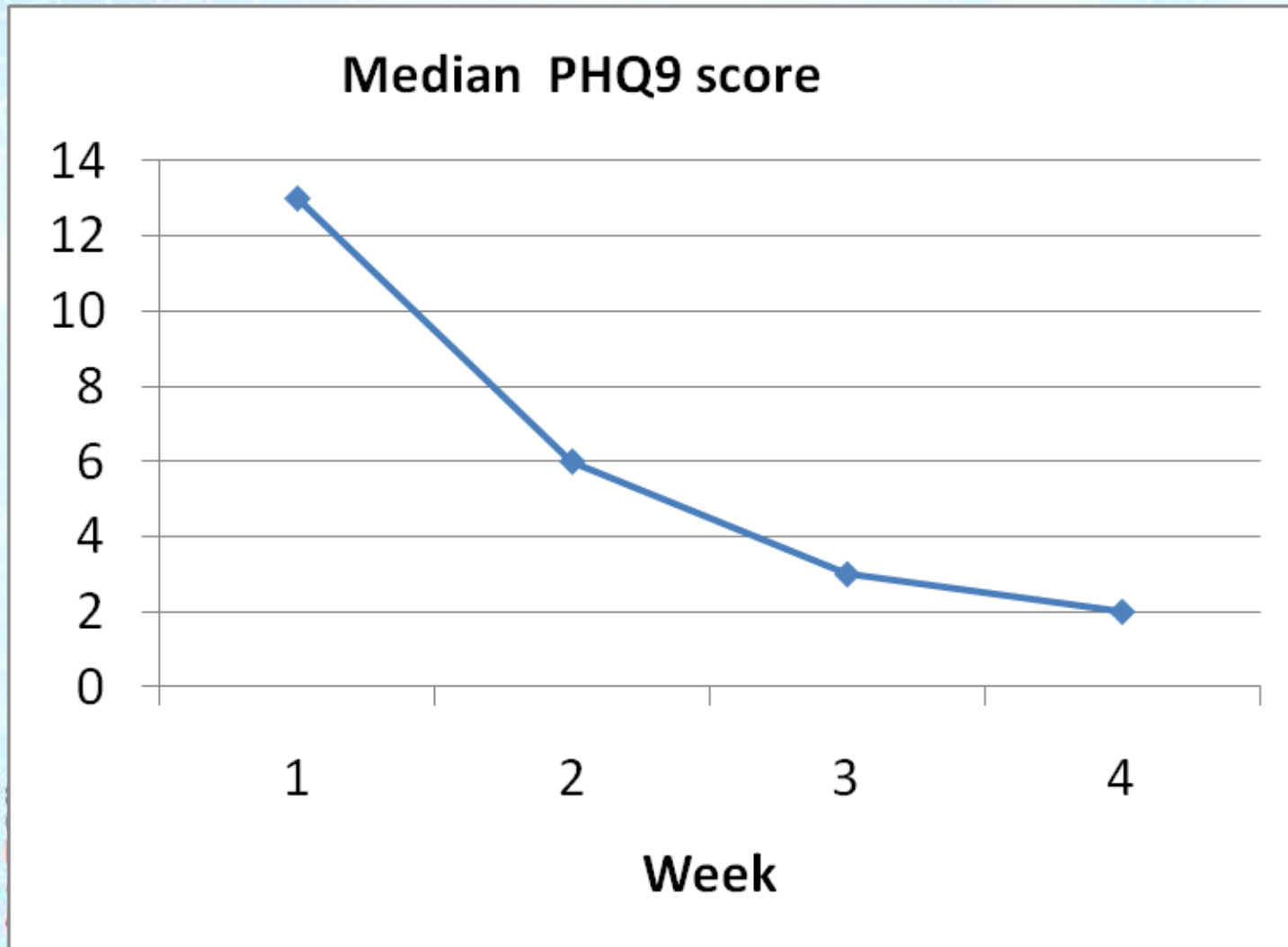
ADEPT Study: Depression remission over 12 weeks

Percent achieving remission (PHQ9<5)

Week