

# University of Illinois Hospital & Health Sciences System Efficacy and safety of an efavirenz-containing regimen in the management of Human Immunodeficiency Virus (HIV) in a psychiatric prison population

Mahesh Patel, MD<sup>1</sup>; Melissa Badowski, PharmD<sup>2</sup>; Louis Shicker, MD<sup>3</sup>; Pyrai Vaughn, MA<sup>4</sup>; Jeremy Young, MD, MPH<sup>1</sup>;

1. University of Illinois at Chicago, College of Medicine – Division of Infectious Diseases, Immunology and International Medicine, Chicago, IL, 2. University of Illinois at Chicago, College of Pharmacy, Department of Pharmacy Practice – Section of Infectious Diseases Pharmacotherapy, Chicago, IL, 3. Illinois Department of Corrections, Health Services, Chicago, IL, 4. University of Illinois at Chicago, Department of Medicine, Chicago, IL.

### **BACKGROUND**

- As many as 37% of individuals with HIV also have a diagnosis of a mood disorder or schizophrenia.<sup>1,2</sup>
- It is unclear whether efavirenz (EFV)-based antiretroviral therapy (ART) should be initiated in patients with an underlying mood disorder due to the potential worsening of symptoms or suicidality.
- Conflicting data exist regarding the association of worsening of psychiatric symptoms and suicidality in those with mood disorders and receiving EFV-based ART.<sup>3,4</sup>
- A recent analysis concluded that initial treatment with EFV-containing ART was associated with a 2fold increased hazard of suicidality in those with a documented psychiatric illness.4
- For individuals incarcerated in a predominantly psychiatric correctional institution, a controlled environment allows for close follow-up and monitoring of patients on EFV with an underlying mood disorder.

# **PRIMARY OBJECTIVE**

Evaluate whether an EFV-containing regimen is safe to continue in patients with underlying mood disorders or schizophrenia compared to patients without these disorders.

# **SECONDARY OBJECTIVES**

- Compare CD4 count and viral suppression at baseline and 12 months.
- Identify the number of patients required to switch from an EFV-containing regimen due to concern for worsening psychiatric effects.

## **RESEARCH DESIGN AND METHODS**

- Single-center, non-randomized study at the University of Illinois Hospital and Health Sciences System.
- Retrospective, electronic chart review of HIV-positive detainees incarcerated at a known psychiatric prison in the Illinois Department of Corrections (IDOC) between January 1, 2011, and December 31, 2012.

#### Inclusion Criteria:

- Adults males (≥ 18 years of age)
- Managed and treated at our interdisciplinary HIV telemedicine clinic in IDOC
- Received an EFV-containing regimen

## **Exclusion Criteria:**

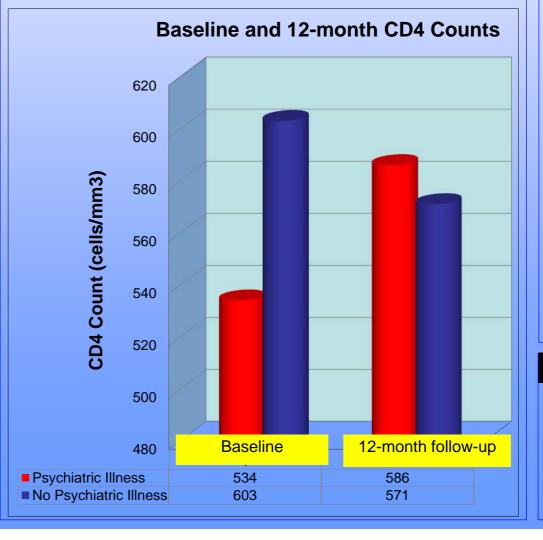
- Children <18 years of age</li>
- Antiretroviral regimens that did not contain EFV

#### **RESULTS**

• 31 individuals receiving an EFV-containing regimen were included in the analysis.

BASELINE DEMOGRAPHICS				
Race/Ethnicity	Psychiatric Disorder	No Psychiatric Disorder		
Black	13 (42%)	11 (35%)		
White	3 (10%)	3 (10%)		
Hispanic	0	1 (3%)		
Age (years)	41 (Range: 29-53)	42 (Range: 19-61)		
CD4 Count (cells/mm³)	534 (Range: 158-925)	586 (Range: 215-1186)		
Viral Load (copies/mL)	19,497 (range: <75-283,763)	9,133 (range: <75 -136,517)		
Psychiatric Illness				
Mood Disorder	7 (23%)			
Schizophrenia	7 (23%)			
Mood Disorder + Schizophrenia	2 (6%)			
None	15 (48%)			

RESULTS				
Number of Virologically Suppressed Patients at 12 months				
Mood Disorder and/or Schizophrenia (%)		No Mood Disorder or Schizophrenia (%)		
16 (100)		13 (87)		
Number of Patients Experiencing a CNS Side Effect Requiring Discontinuation of EFV				
Mood Disorder and/or Schizophrenia	No Mood Disorder or Schizophrenia		p-value	
1	2		p=0.51	



#### **CONCLUSIONS**

- Our small study showed no differences in CNS/psychiatric side effects between those with and those without underlying mood disorders/schizophrenia.
- Efavirenz-containing regimens appear safe and efficacious in patients with underlying mood disorders and/or schizophrenia in a predominantly psychiatric correctional setting under close supervision and follow-up.

#### REFERENCES

- 1. Asch SM, Kilbourne AM, Gifford AL, et al. Underdiagnosis of depression in HIV: who are we missing? J Gen Intern Med. 2003 Jun;18(6):450-60.
- 2. Pence B, Reif S, Whetten K et al.: Minorities, the poor and survivors of abuse: HIV-infected patients in the US deep South. South Med J. 2007;100:1114-22.
- 3. Journot V, Chene G, De Castro N, et al. Use of efavirenz is not associated with a higher risk of depressive disorders: a substudy of the randomized clinical trial ALIZE-ANRS 099. Clin Infect Dis. 2006 Jun;42(12):1790-9.
- 4. Mollan KR, Smurzynski M, Eron JJ, et al. Association between efavirenz as initial therapy for HIV-1 infection and increased risk of suicidal ideation or attempted or completed suicide: an analysis of trial data. Ann Intern Med. 2014 Jul;161(1):1-10.

#### **DISCLOSURES**

The authors of this presentation have no disclosures concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.