Safety and Tolerability of Efavirenz-based Therapy in a Veteran Population
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Background
- Efavirenz is a non-nucleoside reverse transcriptase inhibitor (NNRTI) used in the treatment of human immunodeficiency virus (HIV).
- In 2006, efavirenz was approved for combination use with 2 nucleoside reverse transcriptase inhibitors (NRTIs), emtricitabine and tenofovir, as the first one-pill, once-a-day product to treat HIV-1 infection.1
- Prior to April 2015, The Department of Health and Human Services (DHHS) guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents listed efavirenz as part of a recommended regimen for initial treatment.
- Despite its clear efficacy, efavirenz has been reported to cause a wide range of serious neuropsychiatric adverse effects, including aggressive behavior, severe depression, suicidal ideation, nonfatal suicide attempts, paranoia, nightmares, and mania.1,2
- Approximately 50% of patients receiving efavirenz experience neuropsychiatric adverse effects, which generally subside within the first month of use, but may persist thereafter.1,3
- Veterans may be at an increased risk of these adverse effects due to a high incidence of diagnosed or undiagnosed posttraumatic stress disorder (PTSD).

Patient Demographics
- Gender: 95% Male, 5% Female
- Race: 75% African American, 12% Caucasian, 2% Native American, 1% Hispanic, 10% Unspecified
- Baseline mental health diagnosis prior to initiating efavirenz: 46%

Results

Reason for Discontinuation Efavirenz-Based Therapy

<table>
<thead>
<tr>
<th>Neuropsychiatric</th>
<th>Death</th>
<th>Dermatitis</th>
<th>Resistance</th>
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<tbody>
<tr>
<td>22%</td>
<td>2%</td>
<td>1%</td>
<td>13%</td>
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<tr>
<th>Dyslipidemia</th>
<th>Unspecified</th>
<th>Hepatic or Renal Dysfunction</th>
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<tbody>
<tr>
<td>1%</td>
<td>5%</td>
<td>8%</td>
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Results (continued)
- A total of 52% of patients discontinued the efavirenz based regimen for any reason.
- 41% of all patients reported experiencing some form of neuropsychiatric disturbance while on the efavirenz-based regimen.
- Of those who discontinued the efavirenz-based regimen due to neuropsychiatric effects, 60% had a baseline mental health diagnosis prior to initiating efavirenz.

Conclusions
- In this veteran population, more than half of the patients had to discontinue use of the efavirenz-based treatment regimen for any reason.
- The primary reason for discontinuation was neuropsychiatric adverse effects. This is consistent with what other studies have reported in the general population.
- Due to the high incidence of these neuropsychiatric adverse effects, as well as the overall high discontinuation rate from all adverse effects, efavirenz containing treatment regimens should be used with caution in the veteran population.

Implications
- Based on the results of this study, efforts are currently underway at the study site to restrict the use of efavirenz-based regimens.
- For veterans currently on efavirenz-based therapy, increased screening for neuropsychiatric side effects is warranted.

References
1. Atripla (efavirenz/emtricitabine/tenofovir) [prescribing information]. Foster City, CA: Bristol-Myers Squibb & Gilead Sciences; January 2015.

Disclosures
Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.
Elise Aucoin: Nothing to disclose.
Spencer H. Durham: Nothing to disclose.
Kelly Mooney: Nothing to disclose.
Phillip IM. Nothing to disclose.

Methods
- This retrospective chart review was approved by the Institutional Review Board.
- All veterans who received at least one outpatient prescription for efavirenz/emtricitabine/tenofovir between January 1, 2006, and December 31, 2014 were included.
- Because the combination product is the preferred formulary agent in the veterans health system, only the combination product was included in this study.
- A total of 105 patients were assessed; 6 patients were lost to follow up and were not included in the final analysis.
- The primary outcome was the percentage of patients who experienced neuropsychiatric adverse effects of efavirenz that resulted in discontinuation of the drug.
- Frequency of discontinuation due to other causes, such as non-psychiatric adverse effects or viral resistance, was also assessed.