Assessing Balance in Baseline Characteristics Using Different Propensity-adjusted Methods for Bipolar I Mixed Disorder Patients Initiating Asenapine vs Other Oral Atypical Antipsychotics

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Introduction

Objective: To assess baseline characteristics in a large sample of patients prescribed asenapine, quetiapine, and risperidone (Aug 2009 to 2010) and determine if the pre-treatment characteristics are unbalanced and are associated with the study outcomes.

Methods

- **Target Population:** Adults with ≥1 prescriptions for atypical antipsychotics (asenapine, quetiapine, risperidone) or typical antipsychotics (olanzapine) with ≥1 prior bipolar episode (bipolar I or bipolar II) and no concomitant schizophrenia.
- **Key:** ICD-9-CM 296.6x, in any position, no prescription for a depot antipsychotic ±2 months if no claims for that AA were identified in the 6-month pre-index period. The first prescription fill for the index AA was the index enrollment window (August 1, 2009 to December 31, 2010). The first chronologically occurring AA was deemed the index AA and clinical characteristics among the cohorts were finally balanced.

**Statistical Analysis**

- The 6-month pre-index period was used to measure and evaluate the balance of baseline demographic and clinical characteristics among the cohorts.
- As the goal of the larger study was to compare treatment patterns and outcomes of bipolar I mixed patients prescribed either asenapine or quetiapine, different PS methods (IPW, PSM, and weighting) were used to correct for baseline characteristics differences and to provide a measure of the average treatment effect on the treated patient.

**Results**

- Baseline characteristics were balanced among the asenapine and quetiapine cohorts.
- Asenapine patients were <1.0 (1/[1-PS]). This resulted in weighted sample sizes of 1,457 for asenapine patients (rather than maximum sample size was important).

**Conclusion:** PSM and weighting were found to be effective methods to correct for baseline characteristic differences among the cohorts.

**Limitations**

- The study findings are dependent on the accuracy of ICD-9-CM coding in claims files.
- As the study was retrospective, it’s being compared.

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**References**