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# Comparison of New Start Antipsychotic LAI Members and Members Nonadherent to an Oral Regimen

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# Background

- Schizophrenia is a behavioral health condition characterized by disruptions in thought process, perception, emotional responsiveness, and social interactions. It is estimated that schizophrenia affects less than one percent of the U.S. population. However, its health, social and economic burden are significant, and it is ranked as one of the top 15 leading causes of disability worldwide.<sup>1</sup>
- Medication nonadherence is a prevalent concern among patients with schizophrenia and is associated with suboptimal clinical outcomes as well as an increased demand on the healthcare system. An estimated \$100 billion annually in direct and indirect costs are attributed to medication nonadherence; more specifically, hospitalization costs due to antipsychotic nonadherence have been estimated at \$1.5 billion annually.<sup>2,3</sup> The risk of relapse is high in this patient population; therefore, long-term pharmacotherapy treatment is essential. Poor adherence to oral antipsychotics led to the development of long acting injectable (LAIs) antipsychotic formulations that can assure stable blood levels and have shown improved patient outcomes by removing adherence barriers.

# Objective

 To compare the change in adherence and medical costs between members that are new starts to a LAI antipsychotic regimen and members that are nonadherent to an oral regimen

# Methods

- The eligible sample consisted of members from a managed Medicaid population that were continuously enrolled for two years, had two or more claims for an antipsychotic medication each year, and were between the ages of 18 and 65. Adherence to antipsychotics was calculated using the Utilization Review Accreditation Committee's (URAC) proportion of days covered (PDC) methodology. The members identified as new starts (NS-LAI) were members with no claims for a LAI during the baseline year and two or more LAIs during the subsequent year. The oral only subset (OR) had no LAI claims and were non-adherent (PDC < 80%) to their antipsychotic regimen during both years.
- Baseline characteristics of age, gender and comorbid burden, measured by the Chronic Disease Score were assessed between the two subsets of members using a t-test for continuous traits and a chi-square test of association for categorical traits. Change in medical cost and adherence were also compared using an adjusted Difference-in-Difference (D-I-D) analysis. A statistical significance threshold of 0.05 was employed to assess the level of association between the new starts and nonadherent oral only subsets of members.

Members identified as being new starts to a long-acting injectable regimen experienced improved medication adherence.

#### Results

• The eligible sample consisted of 631 members (NS-LAI n = 90, OR n = 541). The OR subset was significantly older (p = 0.01), predominately female (p < 0.01), with no difference in co-morbid burden when compared to the NS-LAI members (p = 0.56) (table 1.1).

# Table 1.1. Comparison of Baseline Characteristics Between LAI New Starts and Non-adherence Oral Only Members

Baseline Characteristics	LAI New Starts	Oral Only	df	Test Statistic	p-value
n	90	541			
Age	37.12	40.65	629	-2.48	0.013
% Female	38.89%	56.19%	1	9.29	0.002
Chronic Disease Score	4.00	4.17	629	-0.58	0.560
Charleson Comorbidity Index	0.36	0.28	629	1.03	0.302

#### Medication Adherence to Antipsychotics

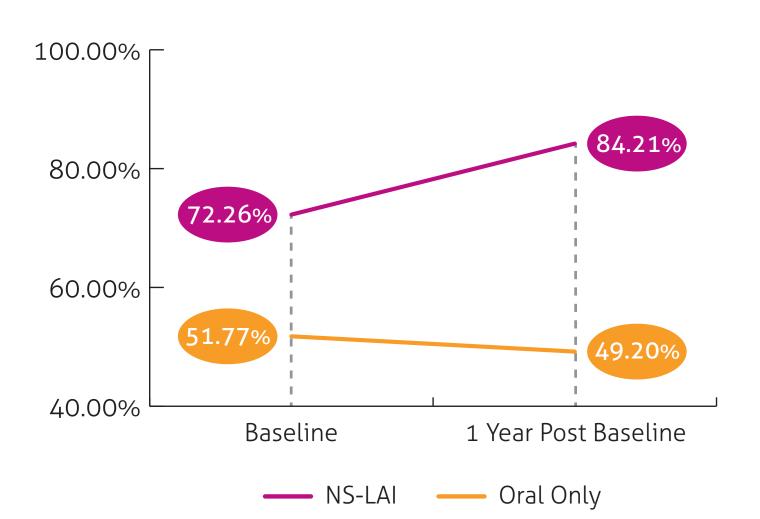
Adherence improved by 17% in the NS-LAI subset where the average baseline PDC increased from 72% to 84% at year two. The average adherence declined in the OR subset by 5% from 51% at baseline to 49% at year two (D-I-D, p < 0.01).</li>

### Results cont.

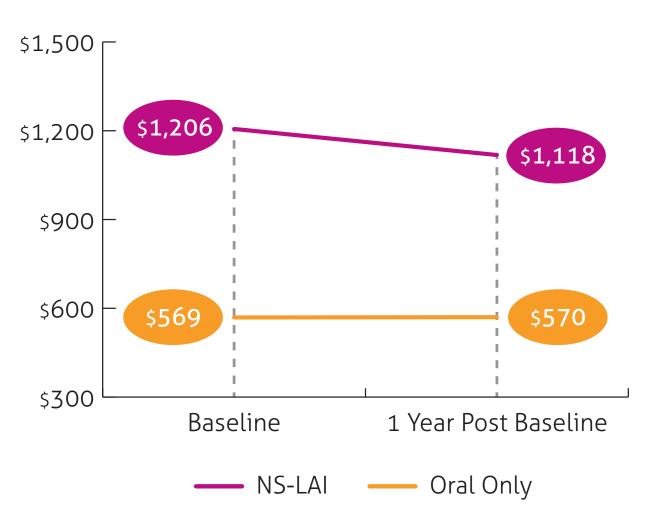
#### **Medical Cost of Care**

• Baseline medical cost was higher in the NS-LAI subset when compared to the OR members. However, medical cost decreased by 7% in the NS-LAI and increased by 0.2% in the OR subset between baseline and year two. This observed rate of change, however, did not achieve the predefined significance threshold. The observed decline in medical spend in the NS-LAI members was an artifact of a 4% decrease in medical spend associated with medical claims with an Inpatient Hospital Place of Service Code with a Schizophrenia diagnosis, where the per eligible member per month medical spend decreased from \$376 during the baseline period to \$336 during the post baseline period. The medical spend associated with an Inpatient Hospital Place of Service Code and a Schizophrenia diagnosis increased by 4% from \$69 per eligible member per month to \$71.





Graph 2. Change in Medical Spend Over Time of New Start LAI and Nonadherent Oral Members



## Conclusion

• When compared to members that were nonadherent to an oral regimen, members identified as being new starts to an LAI regimen experienced a statistically significant improvement in their medication adherence. These members also demonstrated a reduction in their medical cost, although not statistically significant. LAIs remain an important option in the treatment arsenal for this patient population.

#### Limitations

• Indications of antipsychotic medications include schizophrenia as well as bipolar disorder (mania), hyperactivity, Tourette syndrome and other severe behavioral conditions. This analysis included all members prescribed antipsychotic medications without regard to each member's indication. Additional research is warranted to stratify the eligible sample based on indication. This method will allow us to assess differences in medication adherence and medical cost between indications as well as regimen.

#### References

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