

Long-Acting Injectable Antipsychotic Adherence Among Texas Medicaid Enrollees with Schizophrenia

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Background & Objective

- It is estimated that 1.6% of the US population was diagnosed with schizophrenia in 2010.¹
- Total schizophrenia costs more than doubled between 2013 (~\$150 billion) and 2019 (\$340 billion).²
- Schizophrenia is associated with increased mortality compared to the general population primarily due to suicide and comorbidities such as cardiovascular diseases.³
- Long-acting injectable (LAI) antipsychotics (APs) have advantages over oral APs, including higher adherence rates and lower healthcare resource utilization.⁴
- However, comparisons among individual LAI second generation antipsychotics (SGAs) have resulted in inconclusive findings since many studies did not adjust for confounders.⁵⁻⁷
- Study Objectives:** (1) Compare adherence among patients with schizophrenia initiating SGA LAIs and (2) Determine factors associated with adherence after controlling for covariates.

Methods

- Study Design:** Retrospective cohort study
- Database:** Texas Medicaid claims data (eligibility, pharmacy, medical)
- Study Population:** Continuously enrolled adults (18-63 years) diagnosed with schizophrenia and with ≥1 SGA LAI prescription claim
- Index date:** Date of the first SGA LAI prescription claim
- Outcome:** Adherence - Proportion of days covered (PDC):

$$PDC = \frac{\text{number of days with medication available}}{\text{follow-up period (365 days)}}$$
 Proportion Adherent: PDC ≥ 0.80 → Adherent
- Study Period:**
- Data Analysis:** Inverse probability of treatment weighting (IPTW) was conducted to balance baseline characteristics among the six SGA LAI groups. **Covariates** included: clinical characteristics (comorbidities, psychotropic medications, baseline adherence, baseline healthcare utilization) and demographics (age, gender).

Outcomes	Multivariable analysis
Mean PDC	Linear regression
Proportion Adherent (PDC ≥ 0.80)	Logistic regression

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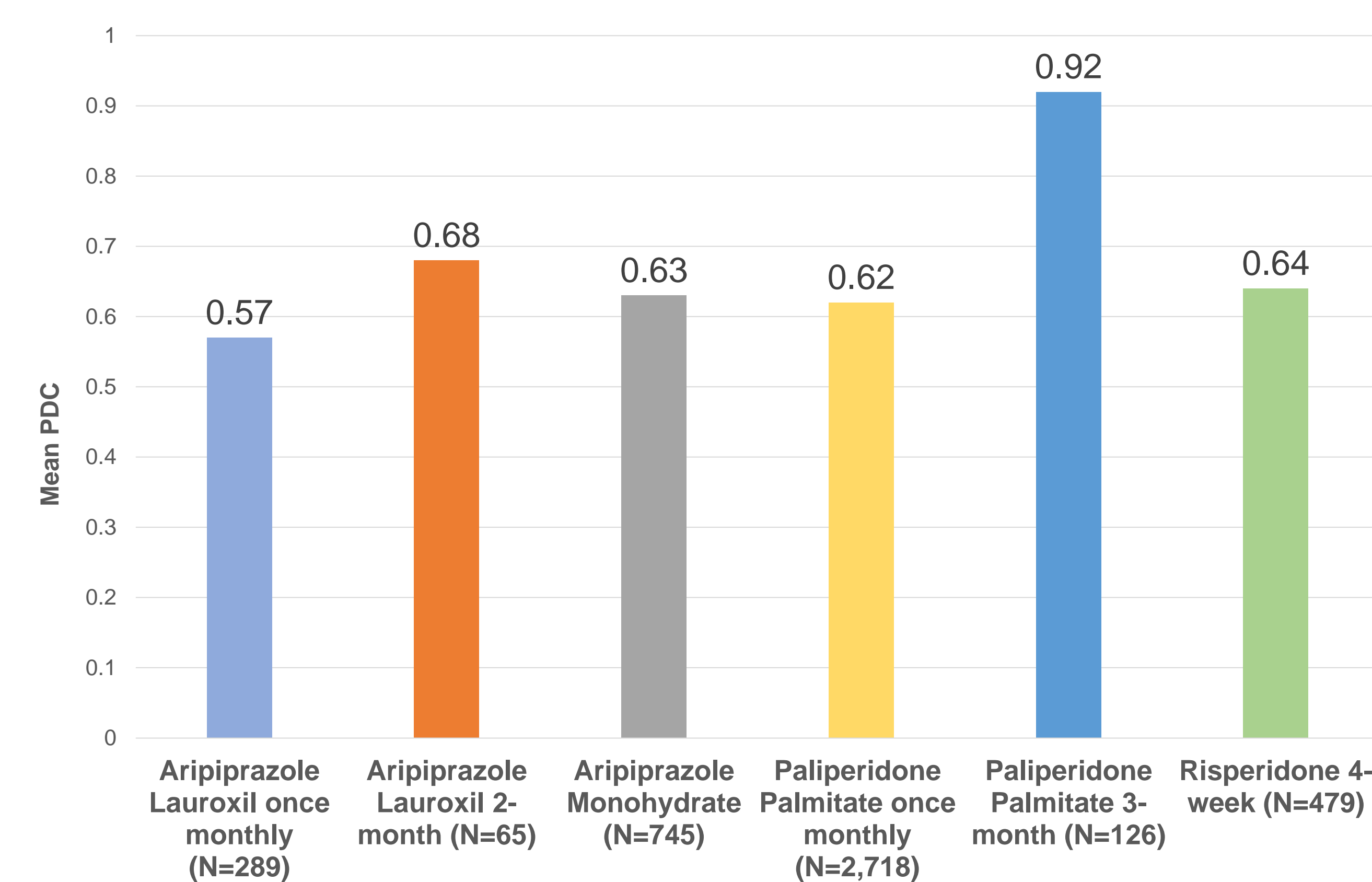
More information about the project



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Results

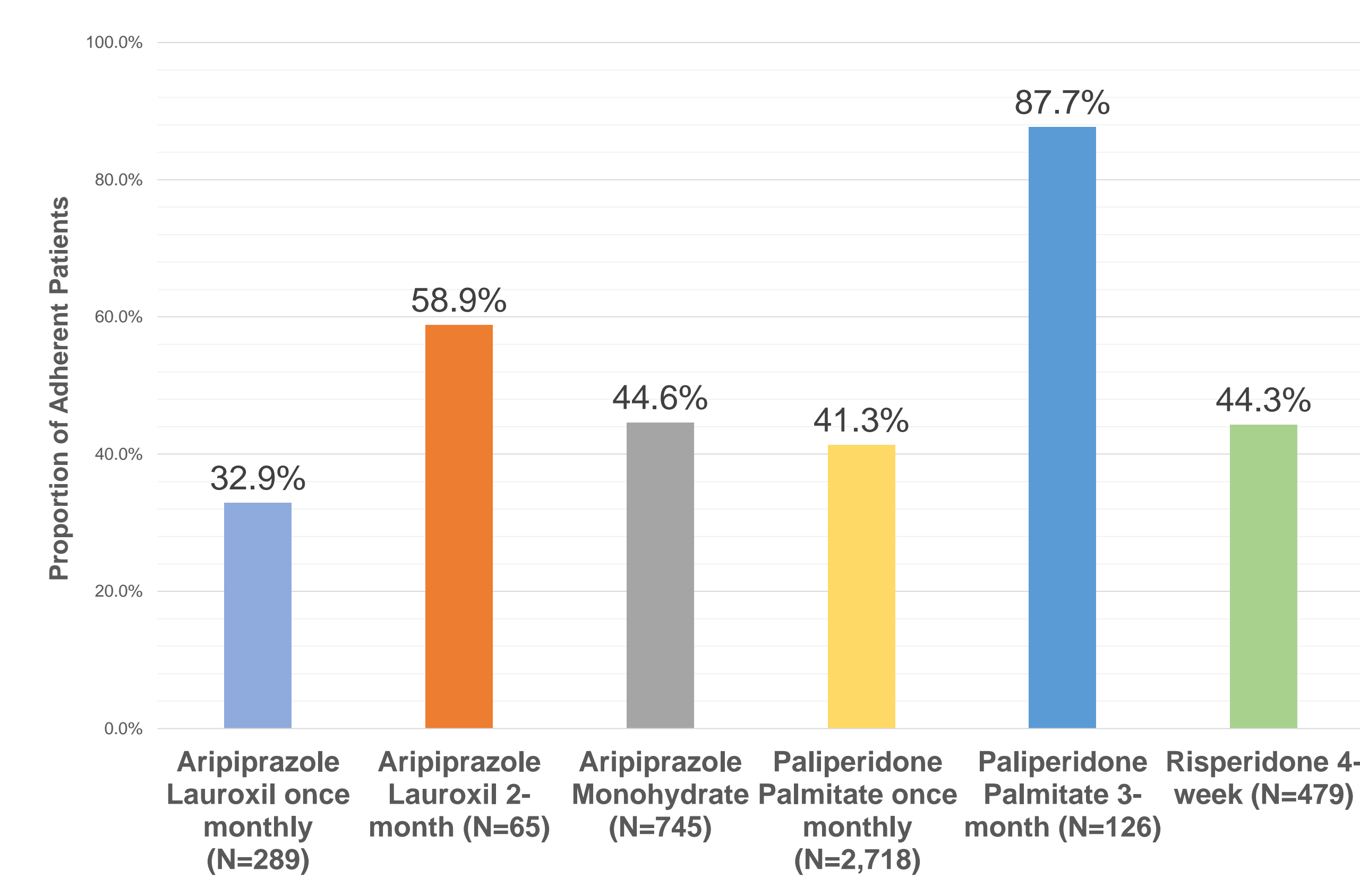
Mean Proportion of Days Covered among SGA LAIs (N=4,422)



Multivariable Linear Regression of Factors Associated With Adherence (Mean PDC)

	Estimate	Standard Error	P-value
SGA LAI (Reference: Paliperidone Palmitate once-monthly, PP1M)			
Aripiprazole lauroxil once monthly	-4.93	1.97	0.0121
Aripiprazole lauroxil 2-month (1064 mg)	4.83	3.93	0.2196
Aripiprazole monohydrate	1.84	1.28	0.1511
Paliperidone palmitate 3-month	30.44	2.80	<.0001
Risperidone 4-week	1.64	1.55	0.2896
Comorbid Psychiatric Condition at Baseline			
Bipolar disorder	-1.57	1.15	0.1702
Depression	-1.50	1.15	0.1947
Anxiety	0.41	1.15	0.7233
Substance use disorder	-8.08	1.86	<.0001
Other mental health disorders	-1.66	2.25	0.4602
Comorbid Psychiatric Condition in Follow-up Period			
Bipolar disorder	-3.84	1.13	0.0007
Depression	-5.85	1.12	<.0001
Anxiety	-3.63	1.14	0.0015
Substance use disorder	-10.13	1.72	<.0001
Other mental health disorders	6.75	3.78	0.0740
Psychotropic Medications at Baseline			
Anxiolytics	2.30	1.20	0.0546
Antidepressants	1.85	1.25	0.1380
Hypnotics/sedatives/sleep disorder agents	0.62	1.55	0.6905
Psychotropic Medications in the Follow-up Period			
Anxiolytics	-2.62	1.18	0.0264
Antidepressants	-1.13	1.32	0.3925
Hypnotics/sedatives/sleep disorder agents	-1.85	1.45	0.2017
Baseline Adherence and Comorbidity			
Adherence to oral antipsychotics (PDC)	0.19	0.03	<.0001
Charlson Comorbidity Index (CCI)	-0.24	0.49	0.6213
Baseline Hospitalizations and Outpatient Visits			
Schizophrenia-related hospitalizations	4.52	2.49	0.0691
All-cause outpatient visits	-0.23	0.21	0.2752
Demographics			
Age	-0.05	0.04	0.2387
Male	1.27	1.00	0.2047

Proportion of Adherent (PDC ≥ .80) Patients among SGA LAIs (N=4,422)



Multivariable Logistic Regression of Factors Associated with Adherence (PDC≥0.80)

	Odds Ratio	95% CI	P-value
SGA LAI (Reference: PP1M)			
Aripiprazole lauroxil once monthly	0.69	0.52 0.90	0.0064
Aripiprazole lauroxil 2-month (1064 mg)	1.93	1.14 3.29	0.0153
Aripiprazole monohydrate	1.15	0.97 1.37	0.0990
Paliperidone palmitate 3-month	11.30	6.59 19.39	<.0001
Risperidone 4-week	1.11	0.90 1.36	0.3254
Comorbid Psychiatric Condition at Baseline			
Bipolar disorder	0.97	0.83 1.13	0.7006
Depression	0.90	0.77 1.05	0.1796
Anxiety	1.07	0.92 1.25	0.3894
Substance use disorder	0.55	0.41 0.73	<.0001
Other mental health disorders	0.89	0.66 1.19	0.4368
Comorbid Psychiatric Condition in Follow-up Period			
Bipolar disorder	0.75	0.65 0.87	0.0002
Depression	0.69	0.59 0.80	<.0001
Anxiety	0.78	0.67 0.91	0.0017
Substance use disorder	0.55	0.43 0.72	<.0001
Other mental health disorders	1.06	0.65 1.74	0.8119
Psychotropic Medications at Baseline			
Anxiolytics	1.12	0.95 1.31	0.1777
Antidepressants	1.16	0.98 1.37	0.0845
Hypnotics/sedatives/sleep disorder agents	0.996	0.81 1.23	0.9722
Psychotropic Medications in the Follow-up Period			
Anxiolytics	0.90	0.77 1.06	0.2119
Antidepressants	0.85	0.71 1.01	0.0688
Hypnotics/sedatives/sleep disorder agents	0.87	0.71 1.06	0.1541
Baseline Adherence and Comorbidity			
Adherence to oral antipsychotics (PDC)	1.02	1.01 1.02	<.0001
CCI	0.99	0.93 1.06	0.3179
Baseline Hospitalizations and Outpatient Visits			
Schizophrenia-related hospitalizations	1.44	1.00 1.96	0.0509
All-cause outpatient visits	0.99	0.96 1.02	0.3844
Demographics			
Age	0.999	0.994 1.005	0.7850
Male	1.09	0.96 1.25	0.1982

Conclusions & Discussion

- This large observational real-world study showed that 3-month administration frequency was superior regarding SGA LAI adherence.
- Compared to PP1M, *aripiprazole lauroxil once monthly was associated with suboptimal adherence* regarding the expected mean PDC and the likelihood of being adherent.
- Aripiprazole lauroxil 2-month was associated with higher odds of being adherent*, but not with mean PDC.
- No difference was observed between PP1M and risperidone 4-week or PP1M and aripiprazole monohydrate.
- Unique contribution:** There is limited evidence comparing SGA LAIs; previous studies primarily focused on comparing PP1M with risperidone, as well as PP1M with PP3M.
- This is the first multiple group comparison among six different SGA LAIs.*
- This comparative research will provide evidence for payers, policymakers, and practitioners when making decisions about treatment options.
- Limitations:** (1) Diagnosis in medical claims may not represent the purpose for SGA LAI prescriptions; (2) Hospitalizations may have resulted in underestimating adherence; (3) PP3M patients transitioned from PP1M, so patients were exhibiting prior high adherence behaviors; (4) Results may not be generalizable outside of Texas Medicaid.
- Future studies** could explore safety profile comparisons among SGA LAIs, and how patient experience influences treatment decisions and adherence in real-world settings.

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