



# Effectiveness of Long-Acting Injectable (LAI) Antipsychotics to Reduce 90-day and Annual Psychiatric Readmissions



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## BACKGROUND

- About 74% of schizophrenia patients discontinue antipsychotics within 18 months of starting it leading to increased readmission, relapse and increased inpatient stay and costs.
- APA recommend use of long-acting injectable antipsychotics (LAI-a) for at-risk patients.
- LAI-a reduces relapse and maintains steady plasma concentrations. Despite the advantages of LAI-a they are underutilized

## OBJECTIVES

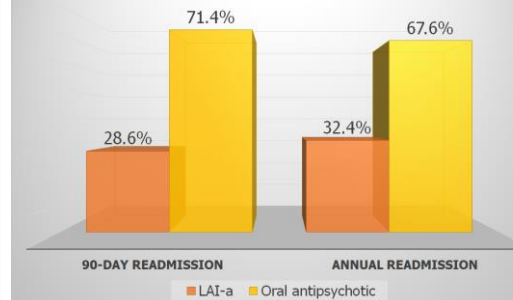
- To evaluate the effectiveness of LAI-a compared to oral antipsychotics in reducing 90-day and annual readmissions in schizophrenia.
- To delineate differences in readmissions between first-generation (FGA) and second-generation antipsychotics (SGA) LAIs.

## METHODS

- We included 180 schizophrenia patients discharged from GMH in 2018 and 2019.
- Primary outcome: readmission in 90 days and/ 1-year after index hospitalization.
- First step logistic regression was conducted to examine unadjusted odds ratio (OR) with readmission and in second step, only significant variables from first step were included in multivariate regression analysis.
- Independent sample T-test was used to measure differences in continuous variables.

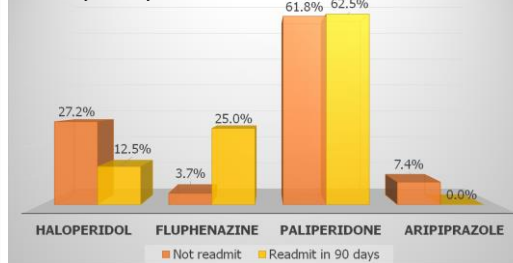
Variable	90-day readmit		Annual readmit		Total
	%	P value	%	P value	
<b>Readmit rate</b>	15.6	-	18.9	-	-
<b>Age at admission</b>					
18 – 35 years	46.4	0.622	47.1	0.504	38.9
36 – 50 years	35.7		35.3		37.8
+ 50 years	17.9		17.6		23.3
<b>Sex</b>					
Male	46.4	0.261	50.0	0.425	56.1
Female	53.6		50.0		43.9
<b>Race</b>					
White	75.0	0.774	70.6	0.919	69.4
American Indian	10.7		8.8		9.4
African American	14.3		36		20.0
<b>Past history of</b>					
Suicide attempt	54.2	0.682	62.1	0.159	50.3
Trauma	60.0	0.691	62.1	0.694	58.9
Family psychiatric	40.0	0.164	43.3	0.252	52.6
Legal	60.0	0.440	67.7	0.887	66.7
<b>Comorbidities</b>					
Depressive disorders	39.3	0.162	35.3	0.317	28.3
Bipolar disorders	32.1	0.169	35.3	0.042*	22.2
Anxiety disorders	17.9	0.645	14.7	0.957	15.0
Personality disorders	10.7	0.268	11.8	0.126	6.1
Current tobacco use	70.4	0.641	63.6	0.132	74.0
Alcohol use disorders	25.0	0.236	26.5	0.113	17.2
Cannabis use disorders	35.7	0.180	38.2	0.060	25.6
Stimulant use disorders	50.0	0.035*	47.1	0.049*	32.8
Opioid use disorders	14.3	0.717	14.7	0.623	12.2
Previous hospitalization >3	78.6	0.002*	76.5	0.001*	51.7
<b>Admission status</b>					
Voluntary	14.8	0.413	12.1	0.773	10.5
Involuntary	85.2		87.9		89.5
<b>Treatment</b>					
LAI antipsychotic	28.6	0.016*	32.4	0.027*	49.4
Oral antipsychotic	71.4		67.6		50.6
Antidepressants	75.0	0.009*	73.5	0.006*	52.2
Mood stabilizer	35.7	0.909	29.4	0.330	36.7
Anticholinergic	14.3	0.064	20.6	0.236	28.9
Medication non-compliance	73.9	0.376	82.1	0.045*	65.8
<b>Disposition</b>					
Home/rehabilitation	67.9	0.469	67.6	0.332	71.7
Group home/residential care	32.1		32.4		22.2

Readmission rate by antipsychotics

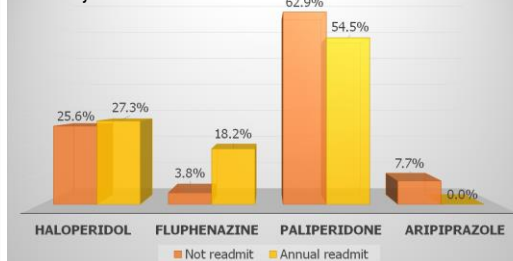


Treatment	OR	95% CI	P value
Oral antipsychotics	Reference		
<b>90-day readmission</b>			
LAI antipsychotics	0.36	0.139 – 0.921	<0.001
<b>Annual readmission</b>			
LAI antipsychotics	0.35	0.131 – 0.954	<0.001

LAI-a by 90-day readmission



LAI-a by annual readmission



## RESULTS

- Stimulant abuse was significantly associated with 90-day (OR 2.38) and annual (OR 2.1) readmissions; Nd comorbid bipolar disorder was associated with increased odds for annual readmission (OR 2.3).
- Medication non-compliance was associated with a significant increase in odds of annual readmission (OR 2.78). Patients with >3 past hospitalizations had higher odds for 90-day (OR 4.2) and annual (OR 3.8) readmissions.
- After controlling multivariable regression analyses for significant predictors, the association was significant for 90-day (OR 0.36) and annual (OR 0.35) readmissions.
- Lower proportion of inpatients on LAI paliperidone were readmitted in 1-year whereas those on fluphenazine were in a higher proportions.

## CLINICAL IMPLICATION

- Use of LAI-a in schizophrenia can decrease 90-day and annual readmissions by 64-65%.
- Physicians should prefer LAI-a to reduce readmission rate and improve the quality of life, and decrease the healthcare-related burden.
- Healthcare system should reduce constraint of usage/reimbursement of LAI-a in at-risk patients.

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