

Medication Adherence As a Predictor of Switching Oral Antipsychotic Users To Long-term Injectables

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OBJECTIVES

The objective of this study was to assess the association between poor adherence with oral antipsychotic (AP) medications and the likelihood physicians will switch patients to long-acting injectable APs.

METHODS

- A retrospective case-control study was conducted using Mississippi Medicaid administrative claims data from January 1, 2013 through June 30, 2015.
- Cases were identified as beneficiaries initiating therapy with oral APs and switching to long-acting injectable (LAI) APs after 6 months or more. Dual-eligible and long term care beneficiaries were excluded.
- The date of switching was considered the index date.
- Cases were matched with controls (beneficiaries initiating therapy with oral APs and not switching to injectables) based on the month they started oral therapy and duration of oral therapy. A 1:2 match was performed using the Mayo greedy match algorithm.
- Adherence to oral AP therapy was computed for the 6 month period before the index date.
- Multivariable logistic regression was used to assess the association between adherence and likelihood of switch to injectable therapy while controlling for other factors.

RESULTS

Table 1 Socio-demographic characteristics comparison between controls (oral APs only) and cases (AP users switching to long-acting injectables)

Characteristic	Total		Controls		Cases	
	N	(%)	(Oral AP users)	n (%)	(Switched from oral to LAIs)	n (%)
Age						
18-21	113	(8.66)	85	(9.77)	28	(6.44)
21-35	407	(31.19)	244	(28.05)	163	(37.47)
36-45	260	(19.92)	171	(19.66)	89	(20.46)
46-64	525	(40.23)	370	(42.53)	155	(35.63)
Gender						
Female	704	(53.95)	489	(56.21)	215	(49.43)
Male	601	(46.05)	381	(43.79)	220	(50.57)
Race*						
White	423	(32.41)	316	(36.32)	107	(24.60)
Black	702	(53.71)	433	(49.77)	269	(61.84)
Other	9	(0.69)	6	(0.69)	3	(0.69)
Unknown	171	(13.10)	115	(13.22)	56	(12.87)
Adherence*						
<80%	556	(42.61)	245	(28.16)	311	(71.49)
≥80%	749	(57.39)	625	(71.84)	124	(28.51)
Depression*						
No	411	(31.49)	308	(35.40)	103	(23.68)
Yes	894	(68.51)	562	(64.60)	332	(76.32)
Hepatitis C						
No	1262	(96.70)	840	(96.55)	422	(97.01)
Yes	43	(3.30)	30	(3.45)	13	(2.99)
Charlson Comorbidity Index (CCI) Mean (± SE)	1.49	(0.06)	1.40	(0.07)	1.66	(0.1)

*p < 0.001

Table 2 Multivariable logistic regression models for likelihood of switching from oral APs to long-acting injectable APs

Characteristic	Odds Ratio (95% confidence interval)
Adherence	
>80%	1.00
<80%	7.027 (5.326 – 9.272)
Age	
18 – 21	1.00
21 – 35	2.898 (1.704 – 4.929)
36 – 45	1.827 (1.036 – 3.223)
46 – 64	1.745 (1.007 – 3.023)
Gender	
Female	1.00
Male	1.589 (1.193 – 2.117)
Race	
White	1.00
Black	1.539 (1.128 - 2.101)
Other	1.014 (0.196 - 5.253)
Unknown	1.269 (0.811 - 1.985)
Oral AP use index date	0.998 (0.997 – 0.999)
Hepatitis C	
No	1.00
Yes	0.574 (0.255 – 1.292)
Depression	
No	1.00
Yes	2.094 (1.531 – 2.864)
Charlson Comorbidity Index (CCI) score	1.102 (1.026 – 1.184)

RESULTS

- The final sample consisted of 435 cases and 870 controls.
- 71% of cases had poor adherence as compared to only 28% of the matched controls.
- After adjusting for age, gender, race, and other comorbidities, beneficiaries with poor medication adherence were 7 times more likely to be switched to injectable therapy as those with good medication adherence (Odds Ratio = 7.027, 95% Confidence Interval 5.326 – 9.272).

CONCLUSIONS

- The results indicate that poor medication adherence may be a major factor in physicians deciding to switch patients on APs to long-acting injectable therapy.
- Considering the higher cost of injectable APs, it may be more cost-effective to address poor adherence through a patient management program.
- Managed care plans could use medication adherence measures to prospectively identify patients for enrollment in such programs or could make failure in a patient management program a prerequisite for switching to injectable APs.

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