

Nicotine Use and Patient Directed Discharge Rate in Psychiatric Inpatients



INTRODUCTION

- Tobacco dependence interventions are mandated in psychiatric facilities by the Joint Commission
- Psychiatric patients who smoke are twice as likely to initiate patient directed discharge (PDD) leading to worse therapeutic outcomes
- Previous work suggested that nicotine replacement therapy (NRT) may normalize PDD rates in patients that smoke but sample sizes were limited
- The comparative effect of individual smoking cessation treatments has never been investigated
- The purpose of this study was to determine the association between individual pharmacotherapies and PDD rates in psychiatric inpatients

METHODS

- This is a Retrospective analysis of a random sample of 30,000 adult patients admitted to inpatient psychiatry enterprise wide from 2017-21
- Exclusionary criteria: medical discharge, administration of electroconvulsive therapy, hospital stay > 29 days, and patients with indeterminant demographics and smoking status
- Binary logistic regression with a Firth correction was use to determine the association between PDD and smoking status, cessation treatments, demographic variables, comorbidities, and use patterns

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RESULTS

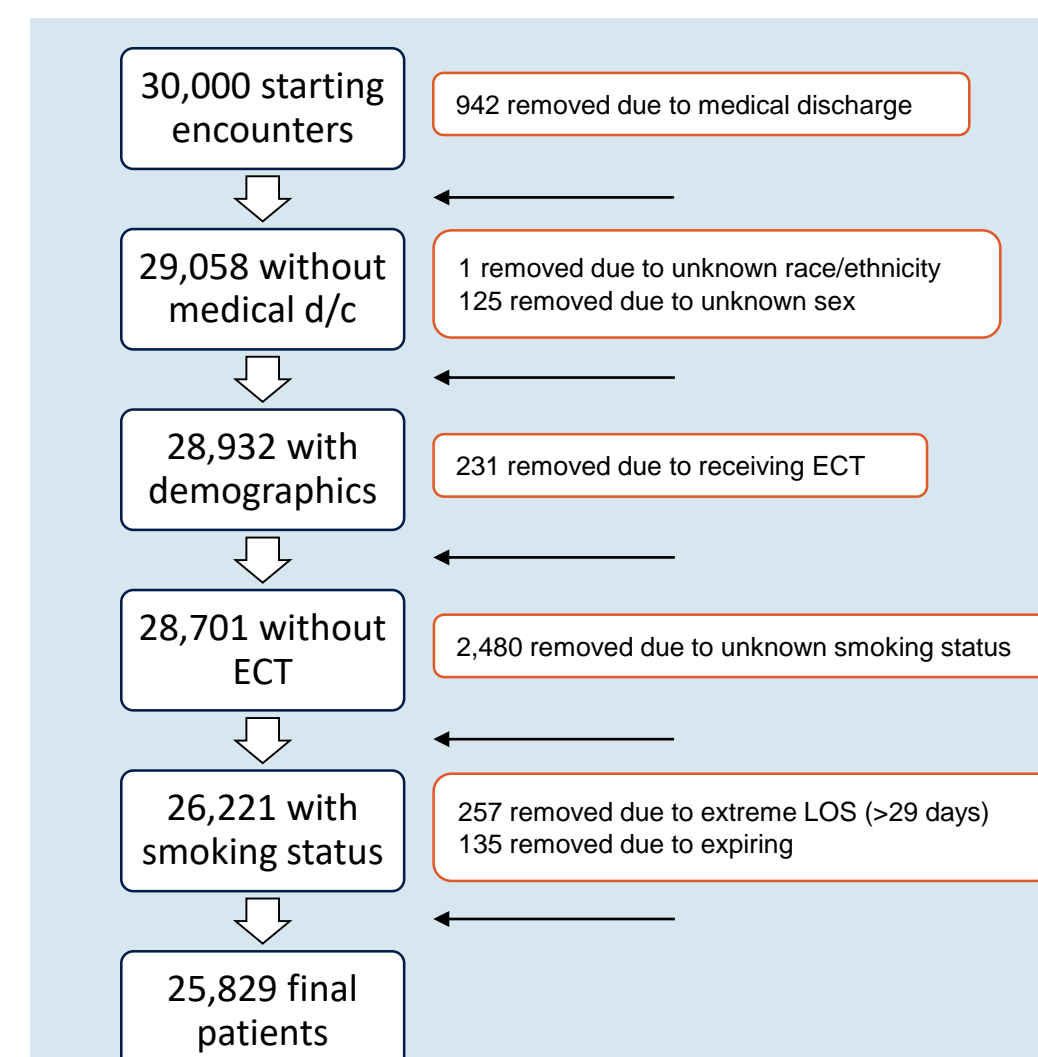


Figure 1: Patient population selection process following random selection of 30,000 patients for the database

Demographic	Odds Ratio
Age *	0.984
Female *	0.796
African American	0.86
Hispanic *	0.671
Other Race	0.748
Charity	0.816
Commercial Insurance	1.186
Medicaid *	1.496
Medicare	1.008
Other Insurance	0.357
Depression *	0.619
Psychosis *	0.357
Substance Use Disorder *	1.622
Bipolar Disorder *	0.52
GAD*	0.657

Table 2: Odds ratio of PDD by demographic
* p > 0.05

Likelihood of PDD	χ^2	p-value	OR
Current Smokers Raw	49.42	< 0.0001	2.155
Current Smokers Controlled	21.5	< 0.0001	1.741
Smoking Intervention	4.43	< 0.05	0.78
NRT*	8.16	< 0.01	0.71
Bupropion		> 0.05	
Varenicline		> 0.05	

Table 1: Statistical analysis showing association between PDD and treatment status among patients that smoke. Bupropion and varenicline were not significantly associated with likelihood of PDD
* Patients received at least 1 nicotine patch

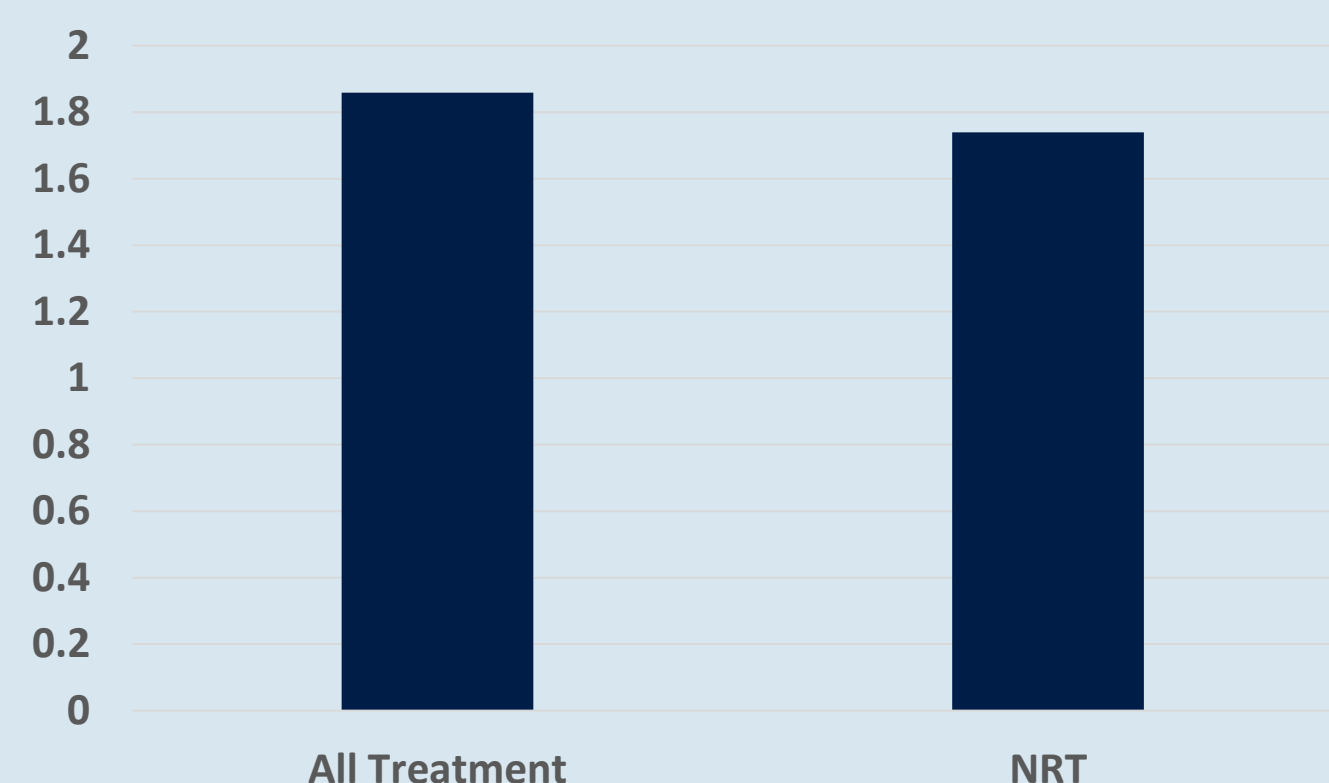


Figure 2: Odds ratio of PDD for patients who smoke by treatment relative to patients who do not smoke

CONCLUSION

- 54.5% of patients smoked with an average use of 1.18 packs per day (SD=1.5)
- Smoking status is significantly associated with PDD (OR = 2.15)
- NRT alone was associated with decreased likelihood of PDD
- Likelihood of PDD remained elevated following treatment relative to patients who did not smoke ($\chi^2 = 22.02$, $p < 0.0001$, OR = 1.86)
- Proactive cessation strategies may be underutilized in this population

AUTHORS & DISCLOSURES

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1: Authors have nothing to disclose

REFERENCES

1. Garakani A, Appel JM, Aloysi AS, Martinez JM, Larkin K, Buono FD. Patient Requests for Discharge from Voluntary Psychiatric Hospitalization: a Chart Review. *Psychiatr Q.* 2019;90(4):849-859. doi:10.1007/s11126-019-09671-y
2. Kagabo R, Kim J, Zubieta JK, Kleinschmit K, Okuyemi K. Association between smoking, and hospital readmission among inpatients with psychiatric illness at an academic inpatient psychiatric facility, 2000-2015. *Addict Behav Rep.* 2019;9:100181. doi:10.1016/j.abrep.2019.100181
3. Kagabo R, Gordon AJ, Okuyemi K. Smoking cessation in inpatient psychiatry treatment facilities: A review. *Addict Behav Rep.* 2020;11:100255. doi:10.1016/j.abrep.2020.100255
4. Prochaska JJ, Gill P, Hall SM. Treatment of Tobacco Use in an Inpatient Psychiatric Setting. *PS.* 2004;55(11):1265-1270. doi:10.1176/appi.ps.55.11.1265

