

DOES DIVERSION TO TREATMENT IMPROVE TREATMENT OUTCOMES: THE CASE OF MARIJUANA

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BACKGROUND

Motivation

Motivation: In recent years, marijuana-related admissions to publicly funded treatment facilities have been on the rise. Many have attributed this rise in marijuana-related treatment episodes to increased referrals from the criminal justice system. Indeed, national data from the Treatment Episode Data Set (TEDS) show that more than half of the persons admitted to publicly-funded treatment facilities for marijuana-related treatment were referred by the criminal justice system.

Research Questions

- Is the probability of referring an individual to treatment greater in a state whose laws mandate or allow for diversion to treatment for low-level marijuana offenders?
- Do criminal justice referrals bias evaluations of treatment outcomes because of the influx of individuals who are less in need of treatment or less dependent upon marijuana?

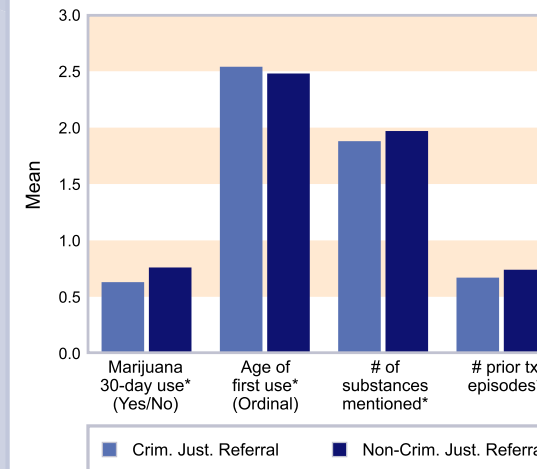
Data Sources

- **Treatment admissions data:** TEDS, 1997-2000 (SAMHSA, 2003). Data reflect only cases where marijuana was the primary substance of abuse at time of treatment admission.
- **Legislative data:** Original legislative data collected by The MayaTech Corporation as part of the Robert Wood Johnson Foundation (RWJF)-supported ImpacTeen initiative and as a subcontractor to the RAND Corporation for grants from RWJF and the National Institute on Drug Abuse.

RESULTS

Variable	N	Mean	Std. Dev	Min	Max
Descriptive Statistics, Individual Level Data Year = 1997-2000 N = 796,533 Treatment Episodes					
Dependent Variables:					
Any CJ referral	796,533	0.556	0.497	0	1
Age at first use (ordinal variable)	768,722	2.514	1.118	1	12
Marijuana use – past 30 days	796,533	0.685	0.465	0	1
State Legislative Penalty Variables:					
Penalty – divert to Tx	796,533	0.157	0.364	0	1
Conditional discharge – divert to Tx	796,533	0.549	0.498	0	1
Any diversion to treatment	796,533	0.598	0.490	0	1
Individual-Level Demographics and Controls					
Year	796,533	1998.574	1.112	1997	2000
Male	796,257	0.765	0.424	0	1
Black	796,533	0.266	0.442	0	1
White	796,533	0.612	0.487	0	1
Other race	796,533	0.122	0.327	0	1
Hispanic	796,533	0.103	0.304	0	1
Hispanic missing value dummy	796,533	0.054	0.225	0	1
Married	796,533	0.091	0.287	0	1
Separated or divorced	796,533	0.092	0.289	0	1
Reference group = Single	796,533	0.817	0.387	0	1
Juvenile (<18)	796,533	0.365	0.481	0	1
Reference group = Adult (18 and over)	796,533	0.635	0.481	0	1
Education	796,533	0.468	0.499	0	1
9-11 years	796,533	0.274	0.446	0	1
12 years	796,533	0.076	0.264	0	1
13-15 years	796,533	0.011	0.105	0	1
16 or more	796,533	0.171	0.376	0	1
Reference group = 8 years or less	796,533	0.171	0.376	0	1
Census region	796,533	0.233	0.423	0	1
Northeast	796,533	0.260	0.438	0	1
South	796,533	0.209	0.407	0	1
West	796,533	0.298	0.458	0	1
Reference group = Midwest	796,533	0.298	0.458	0	1
Treatment-Related Independent Variables					
Number of prior treatment episodes	713,226	0.705	1.131	0	5
Number of substances mentioned (at Tx entry)	796,533	1.919	0.726	1	3
Residential rehabilitation treatment	796,533	0.162	0.369	0	1
Ambulatory/outpatient treatment	796,533	0.802	0.399	0	1
Detoxification treatment	796,533	0.036	0.187	0	1

Differences in treatment need by source of referral

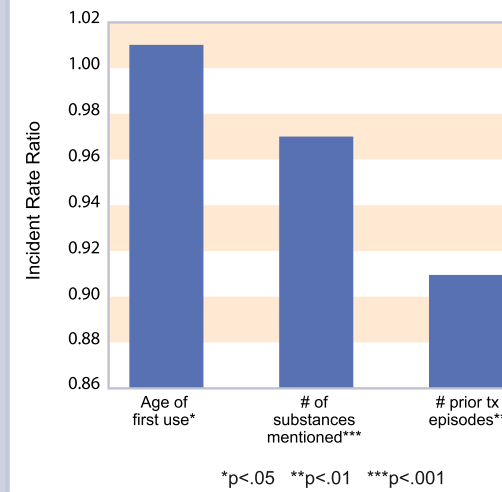


Highlights

- As compared to non-criminal justice referrals, criminal justice referred marijuana-related treatment admissions...
- Are less likely to have used marijuana in the past 30 days
 - Initiate marijuana use at a later age
 - Use fewer substances concurrently
 - Have fewer prior treatment episodes

*t-tests significant at the p<.001

Criminal-justice referrals are less in need of treatment than other admissions



Highlights

- As compared to non-criminal justice referrals, criminal justice referred marijuana-related treatment admissions...
- Are significantly less likely to initiate marijuana use at an early age
 - Are significantly less likely to use additional substances
 - Have significantly fewer prior treatment episodes

Notes

- All findings controlling for other factors
- Poisson regressions estimated with robust standard errors and adjusted for clustering on the state level

*p<.05 **p<.01 ***p<.001

Criminal justice referrals are less likely to report use of marijuana in the past 30 days than are non-criminal justice referred treatment admissions

Dependent Variable	Odds Ratio	Robust Std. Err.	Odds Ratio	Robust Std. Err.
Use of MJ in Past 30 Days				
Male	1.013	0.033	0.900 ***	0.024
Black	1.096 *	0.056	1.038	0.050
Other Race	1.029	0.071	1.021	0.075
Hispanic	0.875	0.088	0.841 *	0.088
Hispanic Missing	1.363 *	0.240	1.219	0.194
Juvenile (Age < 18)	1.363 ***	0.080	1.435 ***	0.082
Educ = 9-11 yrs	1.080 **	0.035	1.070 **	0.033
Educ = 12 yrs	0.952	0.037	0.957	0.037
Educ = 13-15 yrs	0.973	0.049	1.004	0.045
Educ = 16 yrs +	0.939	0.062	1.015	0.064
Married	0.907 *	0.051	0.943	0.053
Separated/ Divorced	0.926 *	0.041	0.959	0.042
Missing marital status	0.883	0.137	0.969	0.190
Year	0.964 **	0.016	0.960 ***	0.013
Detoxification	4.614 ***	0.745	5.113 ***	0.885
Rehab / Residential	1.910 ***	0.211	1.997 ***	0.213
Northeast	1.199	0.260	1.193	0.231
South	1.024	0.182	1.078	0.180
West	1.453	0.471	1.425	0.463
CJ Referral	0.578 ***	0.027		
Penalty – divert to Tx			0.995	0.153
Conditional discharge – divert to Tx			0.848	0.141

*p<.10 **p<.05 ***p<.001

All regressions estimated using robust standard errors adjusted for clustering on the state level

The odds of being referred to marijuana-related treatment through the criminal justice system are higher in states that allow for treatment as part of a penalty for first time offenders

Dependent Variable	Odds Ratio	Robust Std. Err.
Criminal Justice Referral		
Male	2.452 ***	0.134
Black	1.463 ***	0.142
Other Race	1.181 *	0.080
Hispanic	1.345 ***	0.073
Hispanic Missing	1.005	0.069
Juvenile (Age < 18)	0.687 ***	0.081
Educ = 9-11 yrs	1.082 *	0.039
Educ = 12 yrs	1.014	0.040
Educ = 13-15 yrs	0.775 ***	0.050
Educ = 16 yrs +	0.578 ***	0.069
Married	0.761 ***	0.029
Separated/Divorced	0.749 ***	0.029
Missing marital status	1.031	0.067
1998	1.010	0.010
1999	1.050 **	0.016
2000	1.041	0.023
Detoxification	0.370 ***	0.084
Rehab/Residential	0.732 ***	0.048
Penalty – divert to Tx	1.213 ***	0.058
Conditional discharge – divert to Tx	0.937	0.037
% criminal justice referral	39.506 ***	9.013

*p=.05 **p=.01 ***p=.001

Logistic regressions computed using robust standard errors adjusted for clustering at the state level.

CONCLUSIONS

- The odds of a low-level marijuana offender being referred to treatment through the criminal justice system are higher in states that allow for treatment as part of a first offense penalty.
- Criminal justice referred marijuana-related treatment admissions are less in need of treatment than are non-criminal justice cases (regardless of the state policy allowing for treatment as part of a penalty scheme).

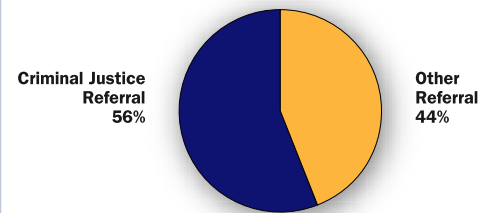
CONSIDERATIONS & LIMITATIONS

- Exploratory analysis
- Need to account for treatment facility variables in future analyses

Acknowledgments

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Primary Source of Referral for Marijuana-Related (Primary Substance) Treatment Admissions 1997-2000



Source: SAMHSA, Treatment Episode Data Set (TEDS), 2003
N=796,533 Treatment Episodes

States with Laws that Allow for Diversion to Treatment for a 1st Offense Penalty or Conditional Discharge (as of 1/1/01)

