

# Recreational Drug Use Among Primary Care Patients: Implications of a Positive Self-Report

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Conflicts of interest: authors report none.

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## ABSTRACT

Should recreational drug use raise clinical concern? We examined the association between weekend-only recreational drug use at baseline (yes vs no) and any increase in recreational drug use frequency or severity over 6 months among primary care patients who screen positive for drug use. In the weekend-only recreational drug use group (52/483 [10.8%]), 54% (28/52) started using drugs on weekdays. Compared with use not limited to weekends, weekend-only use was associated with lower odds of increasing drug use frequency (AOR 0.48,  $P = 0.03$ ) and lower odds (non-significant) of increasing severity (AOR 0.56,  $P = 0.07$ ). Although weekend-only recreational drug use appears prognostically less severe, the findings nonetheless suggest that continued episodic monitoring may be clinically wise.

*Ann Fam Med* 2015;13:257-260. doi: 10.1370/afm.1750.

## INTRODUCTION

Illegal drug use among primary care patients is estimated at 5% to 8%<sup>1</sup> but often goes undetected.<sup>2</sup> The physical, emotional, and social risks of recreational drug use are not well understood, but any drug use, even occasional use, may have an impact on disease processes and the effectiveness of prescribed medications. For this reason, and given the potential for sporadic drug use to increase, primary care physicians have a "need to know" about all drug use.<sup>3</sup>

The aims of this study were to describe the pattern of use over 6 months for primary care patients who reported weekend-only drug use (ie, use only on Fridays, Saturdays, or Sundays) at enrollment compared with those whose use was not limited to weekends and to evaluate the association between weekend-only drug use at baseline and subsequent drug use and consequences. Clinicians need to know whether an initial report of recreational drug use is benign or has potential prognostic significance of clinical concern.

## METHODS

### Design

This study is a secondary analysis of data collected from adult patients ( $N = 529$ ) presenting for a primary care office visit at Boston Medical Center from 2009 to 2011 and enrolled in a trial of brief interventions for drug use (Assessing Screening Plus Brief Intervention's Resulting Efficacy to Stop Drug Use (ASPIRE)), which did not detect differences by intervention status.<sup>4</sup>

### Sample

We included in this analysis all enrollees in the main ASPIRE study who reported using drugs in the previous month and completed a follow-up visit at 6 months post enrollment. The ASPIRE study enrolled 60% of eligible patients and had a follow-up rate of 98% at 6 months.

## MEASUREMENT INSTRUMENTS

Data collected at baseline and 6 months included a global ASSIST (Alcohol, Smoking and Substance Involvement Screening Test) score<sup>5</sup> as a measure of severity and the self-reported number of days of use of the drug of most concern, using the Timeline Followback method.<sup>6</sup> Standardized clinical instruments (Table 1) were used to assess health status, unhealthy alcohol use, drug use consequences, anxiety, and depressive symptoms.<sup>4</sup>

## Statistical Analyses

Descriptive statistics were used to characterize subjects overall and stratified by *weekend-only use vs not-weekend-only use*. The primary analyses used separate logistic regression models for each dependent variable, controlling for age, race, Hispanic ethnicity, sex, education, alcohol use, employment, anxiety, health

status, randomization status, and baseline value of the outcome. All analyses were conducted using two-sided tests and a significance level of 0.05. Analysis was performed using SAS 9.3 (SAS Institute, Inc.).

## RESULTS

### Demographic Characteristics and Type of Drug Use Among Primary Care Patients

The study sample (Table 1) consisted of 483 patients who were primarily male and African American, with a mean age of 41.6 years, and English as their primary language. Only 11.6% identified as Hispanic. Drugs most commonly used included marijuana, cocaine, and opioids. The mean for drug severity, measured by a global ASSIST score, was below the cutoff for dependence, and the median number of days of use per month of the drug of most concern in the last 30 days

**Table 1. Baseline Characteristics, Health Status, and Drug Use by Weekend-Only vs Not-Weekend-Only Drug Use**

Variables	Total (n = 483)	Weekend-Only Use (n = 52)	Not-Weekend-Only Use (n = 431)	P Value
Age in years, mean (SD)	41.6 (12.4)	44.5 (12.8)	41.3 (12.3)	.07
Female, n (%)	151 (31.3%)	14 (26.9%)	137 (31.8%)	.47
Race, n (%)				
White	95 (19.7%)	9 (17.3%)	86 (20.0%)	.65
African American	316 (65.4%)	36 (69.2%)	280 (65.0%)	.54
Hispanic	56 (11.6%)	5 (9.6%)	51 (11.8%)	.64
Primary language English, n (%)	446 (92.3%)	48 (92.3%)	398 (92.3%)	>.99
Continental United States born, n (%)	419 (86.7%)	42 (80.8%)	377 (87.5%)	.18
High school graduation or more, n (%)	336 (69.6%)	33 (63.5%)	303 (70.3%)	.31
1+ nights past 3 months on street or in shelter, n (%)	72 (14.9%)	10 (19.2%)	62 (14.4%)	.35
Private health insurance, n (%)	65 (13.5%)	6 (11.5%)	59 (13.7%)	.15
Total monthly income, n (%)				
≤\$250	104 (21.9%)	13 (26.0%)	91 (21.4%)	.70
\$251-\$750	132 (27.8%)	12 (24.0%)	120 (28.2%)	.70
\$751-\$1500	143 (30.1%)	13 (26.0%)	130 (30.6%)	.70
>\$1500	96 (20.2%)	12 (24.0%)	84 (19.8%)	.70
Health status: EUROQOL <sup>7</sup> (0 to 100), mean (SD)	70.0 (20.3)	71.5 (21.4)	69.8 (20.1)	.58
Depressive symptoms (PHQ9 <sup>8</sup> total score), mean (SD)	7.9 (6.6)	7.4 (6.7)	7.9 (6.6)	.52
Anxiety symptoms (OASIS <sup>9</sup> score), mean (SD)	5.5 (5.4)	5.5 (5.2)	5.5 (5.5)	.78
Employed full-time or part-time, n (%)	139 (28.8%)	13 (25.0%)	126 (29.2%)	.76
Unemployed	340 (70.4%)	39 (75.0%)	301 (69.8%)	.76
Reported illegal income, n (%)	44 (9.1%)	4 (7.7%)	40 (9.3%)	>.99
Unhealthy alcohol use (AUDIT-C <sup>10</sup> positive), n (%)	304 (62.9%)	33 (63.5%)	271 (62.9%)	.93
Drug use consequences (SIP-D <sup>11</sup> score, 0-15), mean (SD)	11.2 (11.1)	9.5 (12.6)	11.4 (13.2)	.08
Drug use severity (Global ASSIST score), mean (SD)	21.3 (17.7)	19.3 (14.9)	21.5 (18.0)	.31
Number of days used in past 30 <sup>a</sup>	14 (4-28)	2 (2-4)	16 (6-29)	<.001
Drug of most concern, n (%)				
Marijuana	316 (65.4%)	25 (48.1%)	291 (67.5%)	<.001
Opioids	72 (14.9%)	7 (13.5%)	65 (15.1%)	.76
Cocaine	88 (18.2%)	20 (38.5%)	68 (15.8%)	<.001
Other	7 (1.4%)	0 (0.0%)	7 (1.6%)	>.99

<sup>a</sup>Expressed as median (IQR) with Wilcoxon signed rank test.

**Table 2. Patterns of Drug Use at 6 Months by Baseline Status**

Use Pattern for the Last 30 Days, 6 Months After Baseline, n (%)	Baseline Use Pattern		P Value
	Weekend Only (n = 52)	Not Weekend Only (n = 431)	
No use <sup>a</sup>	14 (26.9)	56 (13)	.001 <sup>b</sup>
Weekend-only use	10 (19.2)	22 (5.1)	
Not-weekend-only use	28 (53.9)	353 (81.9)	

<sup>a</sup> Among participants with drug use at baseline.

<sup>b</sup> Overall chi-square test of association. Subsequent post-hoc tests suggest significant differences for each category 6 months later.

was 14 (IQR 4-28). The mean score for drug use consequences was 11.2 (SD 11.1).

### Characteristics of Patients With Weekend-only Drug Use vs Those With Use Not Limited to Weekends

At baseline, 52 of the 483 patients in the sample (10.8%) used drugs on weekends only, while 431 (89.2%) used drugs at other times as well (Table 1). Demographic characteristics, health status, mental health symptom scores, and prevalence of unhealthy alcohol use of patients in these 2 groups were similar.

Patients with a weekend-only recreational drug use pattern were more than twice as likely to report cocaine and less likely to report marijuana as their drug of most concern. The median number of days of use of the drug of most concern in the last 30 was 2 for the weekend-use-only group, vs 16 for the comparison group. Global ASSIST scores representing drug use severity were not significantly different between the 2 groups at follow-up despite differences in frequency of use.

### Changes in Drug Use Over Time

Of those reporting weekend-only use at baseline (n = 52), only 10 (19.2%) retained the weekend-only pattern 6 months later, whereas 28 (53.9%) were now

using drugs on other days of the week, and 14 (26.9%) reported abstinence ( $P = .001$ ) (Table 2).

In unadjusted analyses, we found no significant differences between groups (Table 3). In adjusted analyses, the weekend-only pattern was associated with lower odds of any increase in days of use of the drug of most concern. The association between weekend-only drug use and any increase in severity, as measured by the global ASSIST score, was of similar magnitude, but results were not statistically significant. There was no significant association between weekend-only use and drug use consequences.

## DISCUSSION

The majority of primary care patients with weekend-only drug use at baseline reported weekday use 6 months later, while weekday users largely maintained their use pattern. These findings suggest the importance of periodic monitoring of "recreational" drug use. A single-question standardized screen can be used to elicit necessary information.<sup>12</sup> Primary care clinicians are in a position to support positive behavior change<sup>3</sup> as well as to address increases in drug use intensity as an integral part of their role.<sup>13</sup>

This study has some important limitations, including its small sample size and the limitation of data by the purposes of the original study. We would have liked, for example, to have information to correlate weekend-only use with employment patterns. Also, the participants enrolled in this study were typical of an inner-city population with recent drug use, and findings may not be generalizable to other settings. Despite these limitations, this analysis provides a window into changes in patterns of "less severe" recreational drug use over time.

**Table 3. Associations Between Weekend-Only and Not-Weekend-Only Drug Use and Any Increase in Severity, Days of Use of Drug of Most Concern, and Drug Use Consequences**

Outcomes	Proportions With Outcome		Odds Ratios, Weekend-Only vs Not-Weekend-Only			
	Weekend Only Use (n = 52)	Not Weekend Only Use (n = 431)	Unadjusted Odds Ratio, OR (95% CI)	P Value	Adjusted Odds Ratio, AOR (95% CI)	P Value
Increase in drug use severity <sup>b</sup>	44%	56%	0.62 (0.35-1.12)	0.11	0.56 (0.30-1.04)	0.07
Increase in number of days per month of use of drug of most concern <sup>c</sup>	37%	35%	1.09 (0.60-1.98)	0.78	0.48 (0.25-0.94)	0.03
Increase in drug use consequences <sup>d</sup>	26%	29%	0.84 (0.43-1.63)	0.60	0.81 (0.41-1.59)	0.54

<sup>a</sup>Adjusted for baseline age, gender, race, Hispanic, education, AUDIT-C score, employment, OASIS-score, EUROQOL-score, randomization status, and baseline value of outcome.

<sup>b</sup>As measured by ASSIST global score.

<sup>c</sup>As measured by Timeline Followback.

<sup>d</sup>As measured by SIP-D inventory score.

## CONCLUSIONS

Recreational users have lower odds of increasing drug use than weekday users, and potentially lower odds of increasing drug use severity. However only a fifth of those who initially reported weekend-only drug use retained that pattern at six-month follow-up; while some abstained, most shifted to include weekday drug use. These findings suggest caution in accepting recreational drug use as reassuring, and the importance of following patients in whom drug use is identified.

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**Funding support:** Supported in part by a grant from NIH/NIDA R01DA025068

**Key words:** recreational drug use; consequences of drug use; days of drug use; drug severity; primary care

Submitted June 22, 2014; submitted, revised, October 15, 2014; accepted October 23, 2014.

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