

# Availability of Smoking Cessation Medications in Substance Abuse Treatment: National Data from the Public and Private Systems

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## ABSTRACT

**Research Objective.** More than 70% of individuals seeking substance abuse treatment are current smokers, making treatment centers a potentially important site for the delivery of smoking cessation services. Few data are available regarding the availability of pharmacological approaches to smoking cessation, such as nicotine replacement therapy and bupropion-SR, in these settings. Little is known about whether organizational characteristics are associated with pharmacotherapy availability. The objectives of this research are to identify the rates of availability of three pharmacotherapies (the nicotine patch, nicotine gum, and bupropion-SR) and to estimate the associations between organizational correlates and the availability of these medications. **Study Design.** Data were collected during late 2002 to early 2004 via face-to-face interviews with 763 administrators of specialty substance abuse treatment centers. Administrators provided information regarding clinical services and organizational measures. The present analyses focus on the availability of three pharmacotherapies: nicotine patch, nicotine gum, and bupropion-SR (e.g. Zyban®). Independent variables include: center type (government-owned, publicly funded non-profit, privately funded non-profit, and for-profit), accreditation status, center size, center age, levels of care offered (inpatient/residential-only, outpatient-only, mixture of OP and IP/residential services), and access to physicians (physicians on staff, physicians on contract, or no physician). **Population Studied.** This research draws upon nationally representative samples of 362 publicly funded and 401 privately funded substance abuse treatment centers. Eligible centers were required to be based in the community and offer at least a minimum level of care equivalent to structured outpatient. Response rates of 80% and 88% were achieved among eligible public and private centers. **Principal Findings.** Rates of adoption for the nicotine patch, nicotine gum, and bupropion-SR were 27.7%, 14.0%, and 21.5% among the public centers, and 47.7%, 27.5%, and 41.1% among private centers; these differences were statistically significant. Logistic regression analyses revealed these differences largely reflected variation within the non-profit treatment sector, specifically between publicly funded and privately funded non-profit organizations. For the two types of nicotine replacement therapy, accredited centers were significantly more likely than non-accredited centers to have adopted these medications. Levels of care were also associated with adoption, such that outpatient-only facilities were less likely to offer these medications. Finally, centers with at least one physician on staff were significantly more likely than centers without physicians to have adopted these medications. **Conclusions.** These national data suggest that considerable rates of adoption of smoking cessation-related medications in the private sector and less adoption in the public sector. The adoption of these medications is associated with organizational characteristics, including center accreditation, levels of care offered, and availability of staff physicians. **Implications for Policy, Delivery or Practice.** The differences in the availability of smoking cessation medications between public and private non-profit providers suggest that policymakers should consider how incentives to treatment centers may enhance adoption of smoking cessation services in the public sector. Supported by NIDA R01-DA-13110 and NIDA R01-DA-14482.

## INTRODUCTION

Rates of cigarette smoking among individuals seeking treatment for substance abuse (>70%) far exceed the smoking rate among American adults (22.5%).

- Treatment-seekers who smoke are at risk of negative health consequences due to their greater daily cigarette consumption.
- Tobacco-related illnesses are a major factor in the increased likelihood of premature death among individuals treated for substance use disorders.

Traditionally, smoking cessation has been viewed as outside the purview of substance abuse treatment providers.

- Despite fears of that smoking cessation increases risk of treatment dropout and relapse, recent research indicates that smoking cessation may improve outcomes and reduce the risk of relapse.

The clinical practice guideline issued by the Public Health Service advocates the delivery of smoking cessation services during treatment, including pharmacotherapies such as:

- Nicotine replacement therapies (NRT, such as nicotine gum and nicotine patch)
- Bupropion-SR (Zyban®)

To date, there are few data about the availability of smoking cessation medications in community-based substance abuse treatment centers.

TABLE 1: Measures and Descriptive Statistics

Variable	Mean (SD) or %
Availability of Nicotine Patch (1 = yes, 0 = no)	38.4%
Availability of Nicotine Gum (1 = yes, 0 = no)	21.2%
Availability of Bupropion-SR (1 = yes, 0 = no)	32.0%
Center Type	
Government-Owned	12.8%
Publicly Funded Non-Profit	34.9%
Privately Funded Non-Profit	36.9%
For-Profit	15.4%
Center Size (number of full-time equivalent employees)	32.46 (47.56)
Center Age in Years	23.74 (17.53)
Levels of Care Offered by the Center	
Inpatient/Residential-Only	16.7%
Outpatient-Only	47.0%
Mixed Inpatient/Residential and Outpatient	36.3%
Center is Accredited by JCAHO or CARF (1 = yes, 0 = no)	48.0%
Center Requires Attendance at 12-Step Meetings During Treatment (1 = yes, 0 = no)	65.1%
Access to Physicians	
Staff Physician(s)	41.1%
Physician(s) Available via Contract	29.8%
No Access to Physicians	29.1%

## RESEARCH QUESTIONS

- To what extent are pharmacotherapies for smoking cessation available in community-based addiction treatment centers?
- What organizational correlates are associated with the availability of these medications?

## METHODS

Data from the National Treatment Center Study:

- Samples of community-based addiction treatment centers
- To be eligible, centers must offer a minimum of outpatient care

Two nationally representative samples:

- Publicly funded centers (n = 363) that receive >50% of revenues from government block grants/contracts (80% response rate)
- Privately funded centers (n = 401) that receive <50% of revenues from government block grants/contracts (88% response rate)

Data collected via face-to-face interviews with administrators and/or clinical directors

- Complete data on all measures available from n = 688

Figure 1: Smoking Cessation Medication Availability in Public and Private Substance Abuse Treatment Centers

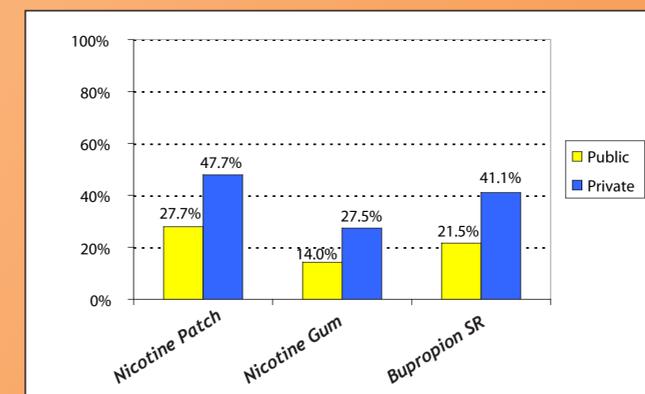


TABLE 2: Adoption of Smoking Cessation Medications on Center Type

	Nicotine Patch Odds Ratio	Nicotine Gum Odds Ratio	Bupropion-SR Odds Ratio
Government-Owned	1.518	.925	1.674
Publicly Funded Non-Profit	Reference	Reference	Reference
Privately Funded Non-Profit	3.076***	2.742***	3.120***
For-Profit	2.003**	1.198	2.660***

\*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed test)

## SUMMARY OF RESULTS

There were significant differences between the public center and private center samples in the adoption of smoking cessation medications. Logistic regression analyses (Table 2) revealed that the public-private differences in adoption are largely a function of greater adoption by privately funded non-profits, relative to publicly funded non-profit programs.

In addition to these differences by center type, multivariate logistic regression analyses (Table 3) indicated several organizational correlates were associated with the three smoking cessation medications:

- Centers offering outpatient-only services were least likely to have adopted these medications.
  - ▲ Greater adoption in inpatient/residential-only facilities and mixed IP/OP centers
- Accredited centers were more likely than non-accredited programs to have adopted all three medications.
- The presence of staff physicians increased the likelihood of NRT adoption.
  - ▲ Also associated with adoption of bupropion-SR (p = .05)

## CONCLUSIONS

Privately funded substance abuse treatment centers are more likely to have adopted smoking cessation medications than publicly funded treatment programs.

Organizational factors, including center accreditation, levels of care offered, and presence of staff physicians, are also associated with the availability of these medications.

These data suggest that patients may have unequal access to smoking cessation medications during substance abuse treatment depending on the characteristics of treatment center from which they are receiving care.

TABLE 3: Multivariate Logistic Regression Models of Adoption of Smoking Cessation Medications

	Nicotine Patch Odds Ratio	Nicotine Gum Odds Ratio	Bupropion-SR Odds Ratio
Center Type			
Government-Owned	1.510	.841	1.563
Publicly Funded Non-Profit	Reference	Reference	Reference
Privately Funded Non-Profit	2.358***	1.923*	2.269***
For-Profit	1.721	.890	2.235**
Center Size	1.002	.999	.999
Center Age	.999	1.001	.998
Levels of Care Offered			
Inpatient/Residential-Only	4.083***	1.849*	1.682*
Outpatient-Only	Reference	Reference	Reference
Mixed IP/Residential & OP	2.979***	1.825*	1.939**
Center is Accredited	1.951**	1.649*	1.560*
Center Requires 12-Step Meeting Attendance	1.203	1.258	.685*
Access to Physicians			
Staff Physician(s)	1.758*	1.814*	1.595
Physician(s) Available via Contract	1.979**	1.420	1.132
No Access to Physicians	Reference	Reference	Reference

\*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed test)