

Tobacco Dependence Clinic at UMDNJ-School of Public Health
Annual Report: 2001-2002

Introduction

This report summarizes the work carried out at the Tobacco Dependence Clinic at UMDNJ-School of Public Health during the year 2001-2002. It focuses on the year 2001 as that is the period for which 6-month follow-ups have been completed at the time of writing (July 2002), but it also includes some data from the first 6 months of 2002 for comparison.

During this time a number of staff have been involved in clinic work, with the regular staff including Donna Richardson LCSW (Clinic Coordinator), Michael Steinberg MD MPH, Michael Burke EdD LPC, Jill Williams MD and Jonathan Foulds PhD. The Clinic has also benefited from input from other staff and faculty at the Tobacco Dependence Program including John Slade MD and Doug Ziedonis MD MPH, and from psychiatry residents receiving specialist training in addiction psychiatry. The Clinic therefore has a multidisciplinary approach to tobacco dependence treatment, based on the evidence-based assessment and treatment procedures outlined in the US Public Health Service Clinical Practice Guideline on Treating Tobacco Use and Dependence and the New Jersey Guidelines for Tobacco Dependence Treatment. The Clinic is funded by New Jersey DHSS (via Master Settlement Agreement funds) to provide a specialist tobacco dependence treatment service to the local community and also to provide a referral and consultation service to health professionals throughout New Jersey.

The Clinic staff is part of the Tobacco Dependence Program at UMDNJ-School of Public Health, and is also involved in training and consulting to the network of tobacco dependence treatment clinics throughout New Jersey known as New Jersey Quitcenters.

The Clinic first started seeing patients in January 2001, and then changed premises in April of that year to its present location at 317 George Street in New Brunswick. Patients are seen via self as well as health professional referral, with assessment appointments typically being scheduled within a week of first telephone contact (ph: **732-235-8222**).

Number and characteristics of Patients Seen

230 patients attended the Clinic for an assessment appointment in 2001. The patient characteristics are shown in the following tables. Almost two thirds of the patients were women and three quarters lived in Middlesex county. More than 30% of the patients had children under 19 years of age. Only 50% of these patients are in full-time employment. Over a third heard about the Clinic from their health care provider, and around a quarter heard about the clinic from a friend or family member.

The vast majority of our patients (92 %) attend the Clinic for help to stop smoking, with 6% attending for help to stay stopped after a recent quit attempt and 2% seeking help to reduce their tobacco use.

Table 1. Demographic characteristics of patients assessed at the Tobacco Dependence Clinic at UMDNJ-School of Public Health during 2001 (N=230).

<u>Age</u>	<u>Mean (range)</u>	
Years	43.2 (15-75)	
<u>Gender</u>	<u>Percent</u>	<u>Number</u>
Male	36.1%	83
Female	63.9%	147
<u>Children</u>		
Number of patients who have children	41.0%	93
Patients with children under 19 yrs of age	30.8%	71
<u>Race</u>		
Caucasian/White	72.54%	166
African American	19.7%	45
Asian or Asian Indian	2.6%	6
Hispanic/Latino	2.6%	6
American Native	0.4%	1
Other, or declined to answer	2.2	5
<u>Education</u>		
Did not complete High School	8.7%	20
HS degree or GED	25.3%	52
Some College or Technical School	35.4%	81
College Degree	21.8%	50
Graduate Degree	8.7%	20
<u>Employment</u>		
Full-time employment	50.2%	115
Sick or disabled	16.2%	37
Part-time employment	10.5%	25
Unemployed	8.7%	20
Retired	5.7%	13
Homemaker	4.8%	11
Student full or part-time	3.9%	9
<u>Insurance (some have more than one)</u>		
Have Health Insurance	89.8%	203
Private Insurance	75.7%	156
Medicare	15.5%	32
Medicaid	8.3%	17

Table 2. Referral Source of Patients seen in 2001

<u>Referred By</u>	<u>Percent</u>	<u>Number</u>
Health Care Provider*	38.1%	85
Family/friend/colleagues	27.8%	62
Newspapers/magazines	11.7%	26
Brochure/pamphlet/poster	4.5%	10
Volunteer/self-help organizations+	4.0%	9
Quitline	3.6%	8
Health fairs	3.1%	7
Media or general info line**	2.2%	5
QuitNet	1.8%	4
Other	3.1%	7
Missing	3.1%	7

* Mostly physician offices but included nurses, mental health counselors, and dentists

+ ACS, ALA, NicA, Church group

** Hospital helpline and radio

Table 3. Place of Residence of Patients seen in 2001.

<u>Residence</u>			
<u>County</u>	<u>Percent (n)</u>	<u>Municipality</u>	<u>(n)</u>
Middlesex County	75.4% (172)	New Brunswick	28
		Edison	21
		North Brunswick	17
		East Brunswick	14
		Highland Park	12
		34 other towns or cities represented by at least 1	
Somerset County	12.3% (28)	Somerset	13
		Somerville	3
		8 other towns or cities represented by 1 or 2	
Union County	3.9% (9)	6 different cities or towns	
6 other counties	8.4% (21)		

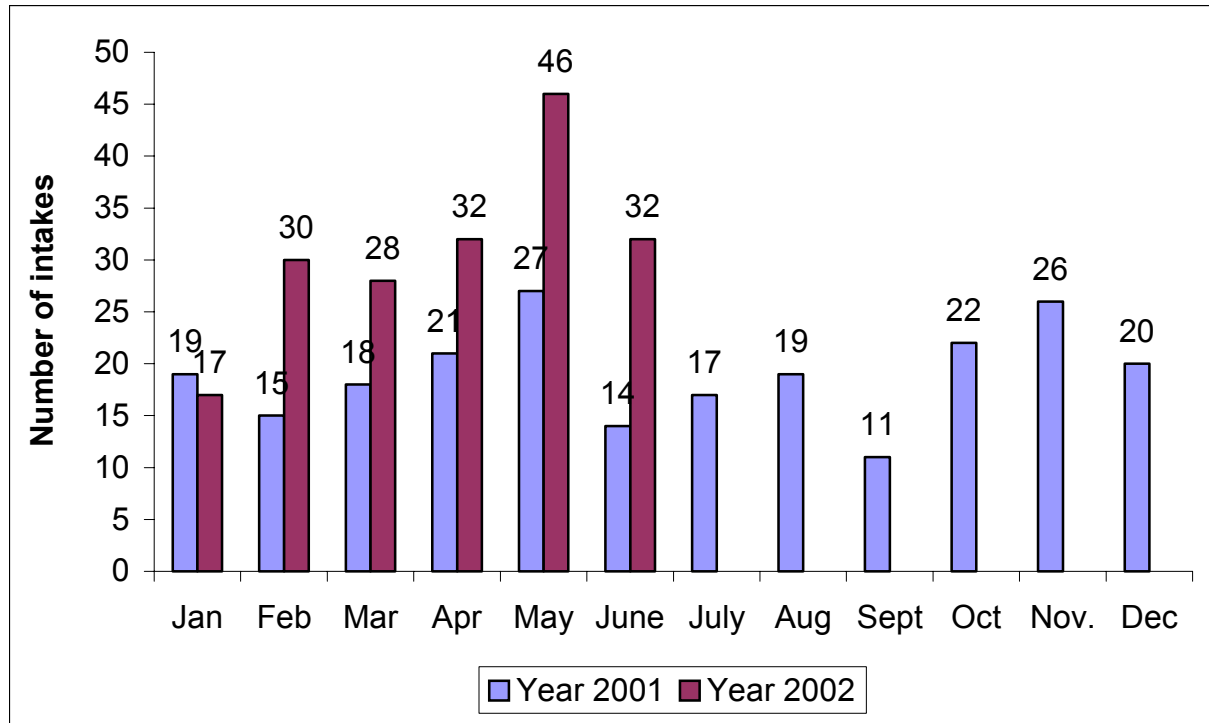
Table 4. Tobacco use characteristics and clinical indicators of patients assessed at the Tobacco Dependence Clinic of the UMDNJ School of Public Health during the year 2001 (n = 230).

<u>Characteristics of tobacco use among patients</u>	<u>Mean</u>	<u>Median</u>	<u>Range</u>
How long used tobacco (years)	28.53	28	1-64
Cigarettes per day	23.34	20	0-90
Minutes before first use in morning	26.52	10	0-500
Previous Quit attempts	8.5	4	0-100
Expired Carbon Monoxide (ppm)	18.76	17	0-131
	<u>Percent</u>	<u>Number</u>	
Patients who report smoking pack per day or more	66.2%	151	
Patients who report smoking within ½ hour of waking	84.2%	185	
Patients who report waking at night to smoke	47.3%	106	
Patients who have a smoking-caused health problem	64 %	144	
Patients who have had previous mental health treatment	59.1%	133	
Patients who have had previous addiction treatment	27.3%	62	
Patients who smoke light/low tar cigarettes	58.8%	133	
Patients who smoke menthol brand cigarettes	37.7%	86	
Reason for coming to the Quitcenter			
Help to stop smoking	91.7%	210	
Help to stay stopped	6.1%	14	
Help to cut down	2.2%	5	

The typical Clinic patient in 2001 had already tried to quit smoking on at least 4 previous occasions (average = 8.5 times), smoked over a pack of cigarettes per day for over 28 years, and lit up within 10 minutes of waking each morning. Almost two-thirds already had symptoms or an illness they believed was caused by smoking, over a half had previously received treatment for a mental health or emotional problem and over a quarter had previously received treatment for an alcohol or drug problem.

Figure 1, below, shows the number of new patients assessed each month during 2001 and the first 6 months of 2002. This shows some seasonal variation, and possibly an effect of the September 11th tragedy (September having fewest intakes). However, the most striking pattern is the increase in 2002, with the Clinic seeing over 60% more new patients in the first six months of 2002 compared with the same period in 2001. By the end of June 2002, the Clinic had assessed 416 patients.

Figure 1. Number of patient intakes by month for year 2001 compared with number in first six months of 2002.



Treatment Provided and Outcome

Of the 230 patients assessed in 2001, 201 (87.4%) chose a Quit Date and planned an attempt to stop smoking at the clinic (some had already quit and some chose to try to quit another time). Of these 201, 159 (79%) were followed up one month after their Quit Date and 143 (71%) were followed-up six months after their Quit Date. Abstinence is defined as a report of not a puff of tobacco smoked during the previous seven days, verified by an expired carbon-monoxide measurement of less than 10 parts per million in those followed up at the clinic (rather than by phone). Significant reduction is defined as smoking half or less than half of the number of cigarettes being smoked per day prior to treatment. *Any patient who had set a quit date and was not reached for follow-up was counted as continuing to smoke at least the same amount of cigarettes as at intake.*

Outcome One Month After Quit Date

As shown in the table below, 98 patients (48.8% of those having tried to quit) were abstinent at one month, and an additional 35 (17.4%) reported cutting their cigarette

consumption down by at least half. All patients reporting abstinence at a follow-up appointment had an expired carbon monoxide reading of less than 10 (typically around 1 or 2 p.p.m.) compared with an average of 19 p.p.m. at assessment.

92 patients were asked to complete a Client Satisfaction Questionnaire at the one month follow-up. Of these, 62 (67.4%) rated the service as “excellent”, 27 (29.3%) rated the service as “good” and 3 (3.3%) rated the service as “satisfactory”.

Table 5. Four week and Six month follow-up data among patients seen for intake in 2001 and who set a quit date at the Clinic (n =201).

	<u>Number of patients</u>	<u>Percentage</u>
4 Weeks		
Total follow-ups	159	79.1%
Smoking at least the same amount as at intake*	59	40.2%
Smoking less but not significantly less.	9	4.5%
Patients smoking sig. less (<51%)	35	17.4%
Patients quit	98	48.8%
* Includes 42 (20.9%) not contactable at follow-up		
6 Months		
Total number of follow-ups	143	71.1%
Smoking at least the same amount as at intake*	87	60.8%
Smoking less, but not significantly less	21	10.4%
Patients smoking sig. less (<51%)	31	15.4%
Patients quit	62	30.8%
* Includes 58 (28.9%) not contactable at follow-up		

Outcome Six Months After Quit Date

62 patients (30.8%) remained abstinent six months after their Quit Date, and 31 (15.4%) continued to smoke but with reported cigarette consumption reduced by at least 50%. Of 109 clients completing the “Satisfaction” question at 6 months, over 95% rated the service as “excellent” or “good”.

Of the 62 patients who were abstinent at six month follow-up, 54 (87%) reported that they had been abstinent since their Quit Date, six months previously. The other 8 had all been abstinent for at least three weeks, with the average time since last cigarette in this subgroup being 85 days.

A more detailed breakdown of outcomes is included in appendix 1.

Types of Treatment Provided

All patients at the Clinic receive a comprehensive assessment, usually consisting of at least a one-hour appointment. Most patients are then treated with a combination of individual or group counseling, plus pharmacotherapy. Among those patients followed up at least six months after their initial appointment the average number of appointments

attended was 5.4, with an average of 2.2 additional telephone contacts with the clinic. However, the range of appointments attended stretches from only one, to over 20.

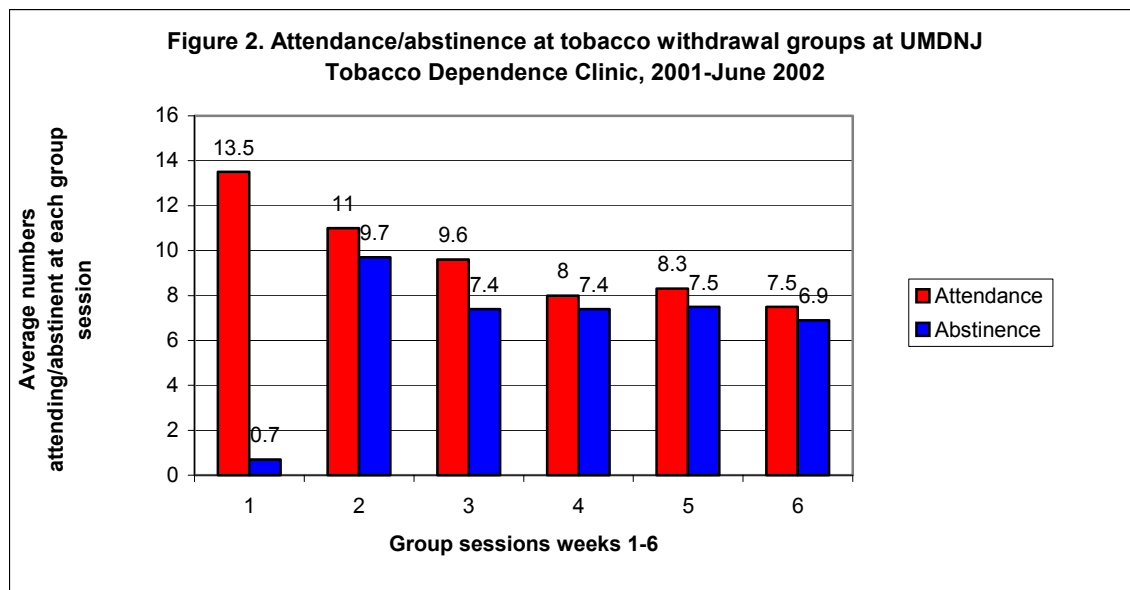
In order to provide some indication of typical treatment content, two aspects of treatment provided at the Clinic are described in more detail: Withdrawal-Oriented Group Therapy and Pharmacotherapy.

Withdrawal-Oriented Group Therapy

Withdrawal-Oriented Group Therapy is a particular type of group format that focuses on helping patients to manage nicotine withdrawal symptoms using pharmacotherapy and group support. It aims to enable patients to maintain abstinence from tobacco during the first month after their Quit date, when withdrawal symptoms are at their worst and when most relapses take place. In the 18 month period from January 2001 to June 2002 the Clinic conducted 11 regular 6-week group treatments for smokers, each group taking place from 7 to 8-30 p.m. for six consecutive Tuesday evenings.

A total of 180 patients were scheduled to attend these groups, with 149 (82.8%) actually attending the first group meetings – i.e. an average of 16.4 patients scheduled with 13.5 actually attending a typical first group meeting. This first group meeting is set up as an information and preparation group, with the second group meeting (the following Tuesday) being on the planned Quit Day for the group. For the purposes of calculating abstinence outcomes following this type of treatment, we consider those who attend the second (Quit Day) group or one thereafter to have formally entered group treatment.

In this cohort 138 attended the Quit Day group or one thereafter. 76 (55.1%) were abstinent four weeks after their Quit Date. As shown in the figure below, attendance at group typically drops off slightly as the weeks progress, from around 11 at group 2 to around 8 at group 6, with the majority of participants at each group session being abstinent.



Six Month Follow-Up of Patients Treated In Group In 2001

The first 8 groups consisted of patients who first attended the Clinic in 2001. Of these 111 patients (55% of patients treated in 2001 cohort) 17 dropped out after the first (Information) group and 94 (84.7%) attended on the Quit Date and/or subsequent meetings. Of these 94 patients, 36 (38.3%) remained abstinent at 6 month follow-up.

Pharmacotherapy

Of 169 patients completing a one-month follow-up questionnaire, 138 (81.7%) reported that they had used at least one type of tobacco dependence treatment medication (nicotine gum, patch, inhaler, nasal spray or bupropion SR). A detailed breakdown of the medications patients had used in the first month after the Quit Date is provided in the table below. 47 (34%) used one of the five “first-line” tobacco dependence treatment medications and 89 (64%) used two or more medications (sometimes, but not necessarily in combination). 31 (22%) used three or more tobacco dependence treatment medications during the first month. Of those who started use of medication 104 (75%) were still using at least one medication at the one-month follow-up point.

Table 6. Tobacco Dependence Medication used by patients in first month

Medication	4-week (n=138)
Gum only	1
Inhaler only	12
Patch only	20
Spray only	1
Zyban only	13
Gum+Patch	1
Gum + Zyban	1
Gum+Inhaler+Patch	3
Gum+Inhaler+Zyban	2
Gum+Patch+Zyban	3
Gum+Inhaler+Patch+Zyban	3
Gum+Patch+Spray+Zyban	1
All five	2
Inhaler+Patch	26
Inhaler+Zyban	17
Inhaler+Patch+Spray	-
Inhaler+Patch+Zyban	17
Patch+Spray	1
Patch+Zyban	12
Other*	2

As shown above, the Clinic makes full use of the effective tobacco dependence treatment medications and individualizes the pharmacological support to suit the needs of each patient- including those who prefer not to use medication. Most of the patients attending the Clinic have used at least one of these medications before, but frequently the dose of nicotine being absorbed was insufficient and the medication was stopped too soon.

Summary and Targets for 2002-3.

The Clinic has made a promising start in its first year, treating over 200 patients, most of whom are highly addicted to tobacco, and achieving very respectable short and long term outcomes (49% and 31% abstinence at one and six month follow-ups). For comparison, the U.S. Public Health Service Guideline reports an average long term abstinence rate of 22% from 55 trials involving “high intensity counseling”.

Within the Clinic we also observe signs that the more of the effective treatment components our patients are exposed to the better are their outcomes. For example, among patients attending Withdrawal-Oriented Group Therapy, of those attending 1-3 group sessions, 23% are abstinent at one-month follow-up, whereas of those attending 4-6 group sessions, 84% are abstinent at one month follow-up. Similarly, among our patients who choose not to use pharmacotherapy, 20% are abstinent at 6 month follow-up, whereas 37% of patients who use tobacco dependence treatment medications remain abstinent at 6 month follow-up. This type of data from within the Clinic reinforces the evidence in the scientific literature suggesting that structured group support and pharmacotherapy are effective components of tobacco dependence treatment and should continue to be aggressively encouraged within the Clinic.

There are also positive signs of increased demand for the Clinic’s services from 2001 to 2002. A significant proportion of that increased demand is fuelled by “word-of-mouth” referrals from ex-patients, with over 95% of patients who complete our follow-up questionnaire stating that they would recommend the Clinic to friends and family who want to stop smoking.

The main aims for 2002 are therefore to maintain a high standard of patient care while increasing the volume of patients seen and improving the follow-up and documentation.

Clinic targets for 2002 are as follows:

- Assess at least 50% more new patients in 2002 than in 2001.
- Increase the proportion of patients who identify themselves as Hispanic/latino and Asian to at least 10%.
- Increase to at least 10% the proportion of patients who are college students.
- Arrange a Quit Date in at least 90% of assessed patients.
- Achieve follow-up rates of at least 80% at both the 4 week and 6-month follow-up points.
- Achieve four week and six month abstinence rates above 50% and 30%.

This report was prepared by Jonathan Foulds PhD (jonathan.foulds@umdnj.edu), Michael Burke EdD, and Emily Perry BSc, with assistance from staff and faculty at the Tobacco Dependence Program at UMDNJ-School of Public Health. The Tobacco Dependence Program is funded by the New Jersey State Department of Health & Senior Services as part of New Jersey’s Comprehensive Tobacco Control Program.

Date: July 31, 2002

Appendix 1. Summary of patients' follow-up and smoking outcomes at 4 week and 6 month post quit date for patients assessed during 2001.

	Number	% Followed up	% of those with Quit Date	% of those assessed
<u>4 weeks</u>				
Total followed up	159	100	79.1	69.1
Patients smoking at least as much per day	17	10.7	8.5	7.4
Patients smoking less but not significantly less	9	5.7	4.5	3.9
Patients smoking < 50% of cigarettes at intake	35	22.0	17.4	15.2
Patients Quit	98	61.6	<u>48.8</u>	42.6
Patients assessed but no quit date selected	29			12.6
Patient w/ quit date and no follow-up	42		20.9	18.3
<u>6 months</u>				
Total followed up	143	100	71.1	62.2
Patients smoking at least as much per day	29	20.3	14.4	12.6
Patients smoking less but not significantly less	21	14.7	10.4	9.6
Patients smoking < 50% of cigarettes at intake	31	21.7	15.4	13.5
Patients Quit	62	43.4	<u>30.8</u>	27.0
Patients assessed but no quit date selected	29			12.6
Patient w/ quit date and no follow-up	58		28.9	25.2