



SCHOOL OF  
PUBLIC HEALTH

University of Medicine & Dentistry of New Jersey

**UMDNJ – School of Public Health**

**Tobacco Dependence Clinic**

**Annual Report: 2003**

January 1, 2003 – December 31, 2003



## Tobacco Dependence Clinic at UMDNJ-School of Public Health:

### Summary Report 2001-2003

#### **Introduction**

The Tobacco Dependence Clinic at UMDNJ-School of Public Health (732-235-8222) is funded by New Jersey Department of Health and Senior Services 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 is part of the Tobacco Dependence Program at UMDNJ-SPH which has a wider role in training, research and advocacy on tobacco dependence treatment. The Clinic first started seeing patients in January 2001, and by July 15, 2004 has seen 1,500 patients.

#### **Characteristics of Patients Seen**

The ratio of male to female patients attending the clinic continued to increase in 2003, but the majority of patients (56%) continue to be women. More patients are hearing about the clinic through family and friends and with 1/3 of new patients being referred to the clinic through this source during 2003. Health care providers continue to refer a significant number of patients (119 or 22% during 2003) and slightly more patients were referred by their school or employers (9% of referrals in 2003). Only 3% of the clinic's patients were referred from NJ Quitnet or NJ Quitline in 2003. Almost 56% have symptoms or an illness they believe is caused by smoking, half have previously received treatment for a mental health or emotional problem and 30% have previously received treatment for an alcohol or drug problem. The typical Clinic patient is heavily nicotine dependent, having already tried to quit smoking on average 7 times, smoked over a pack of cigarettes per day for over 20 years, and lit up within 30 minutes of waking each morning, prior to treatment.

#### **Types of Treatment Provided**

All patients receive a comprehensive assessment, including measurement of expired carbon monoxide. Most are then treated with a combination of counseling and pharmacotherapy, with input from a multidisciplinary team. Over 50% attend group treatment and over 80% use medication, with combination pharmacotherapy (i.e. more than one treatment medication used at the same time) being the norm. The average patient attends five or more appointments at the clinic.

#### **Treatment Outcome**

511 (94%) of the patients seen in 2003 made an attempt to quit. 211 patients (41%) were abstinent at one-month follow-up, and an additional 87 (17%) reported cutting their cigarette consumption down by at least half. 125 patients (25%) remained abstinent six months after their Quit Date, and 68 (15%) reduced by at least 50%. These rates assume that those not contacted for six-month follow-up (37%) continue smoking. Of over one thousand patients who have tried to quit smoking at the clinic 2001-3, 28% remained abstinent six months later.

#### **Summary**

The Clinic has grown substantially, treating 50% more patients in 2003 than in 2002. Most of the patients are highly addicted to tobacco and have multiple other health problems. The clinic achieves very respectable short and long-term outcomes (28% at six months). For comparison, the U.S. Public Health Service Guideline reports an average long-term abstinence rate of 11% without treatment and 22% from "high intensity counseling". The Clinic's main aims for 2004-5 are to maintain a high standard of patient care while continuing to increase the volume of patients seen.

## **Tobacco Dependence Clinic at UMDNJ-School of Public Health**

### **Annual Report: 2003**

#### **Introduction**

This report summarizes the direct clinical work carried out at the Tobacco Dependence Clinic at UMDNJ-School of Public Health between its launch in January 2001 through to December 31, 2003. The report includes descriptions of our patients, all available six-month outcomes, and an account of how patients fared depending upon participation and particular treatments for tobacco dependence. We also provide a summary of the number of patients seen for counseling through to June, 30 2004.

The Tobacco Dependence Program at UMDNJ-School of Public Health provides education, treatment, research, and advocacy to reduce the harm to health caused by tobacco. The Clinic is the treatment component of the Tobacco Dependence Program at UMDNJ-School of Public Health. The Clinic is funded by New Jersey DHSS (initially via Master Settlement Agreement funds, and since July 1, 2002 from the NJ State Tax on Tobacco) 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 clinical staff is also involved in training and consulting to the network of tobacco dependence treatment clinics throughout New Jersey known as New Jersey Quitcenters and to other providers of tobacco treatment.

A number of professional specialists in tobacco dependence treatment have provided clinical services, including Donna Richardson LCSW (Clinic Coordinator), Anitha Varughese LCSW, Michael Steinberg MD MPH (Clinic Medical Director), Michael Burke EdD MHS, Jill Williams MD, and Jonathan Foulds PhD (Director, Tobacco Dependence Program). The Clinic has also benefited from input from other staff and faculty at the Tobacco Dependence Program including Doug Ziedonis MD MPH, psychiatry residents from Robert Wood Johnson Medical School receiving specialist training in addiction psychiatry, and social work trainees from Rutgers Graduate School of Social Work. The Clinic provides 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.

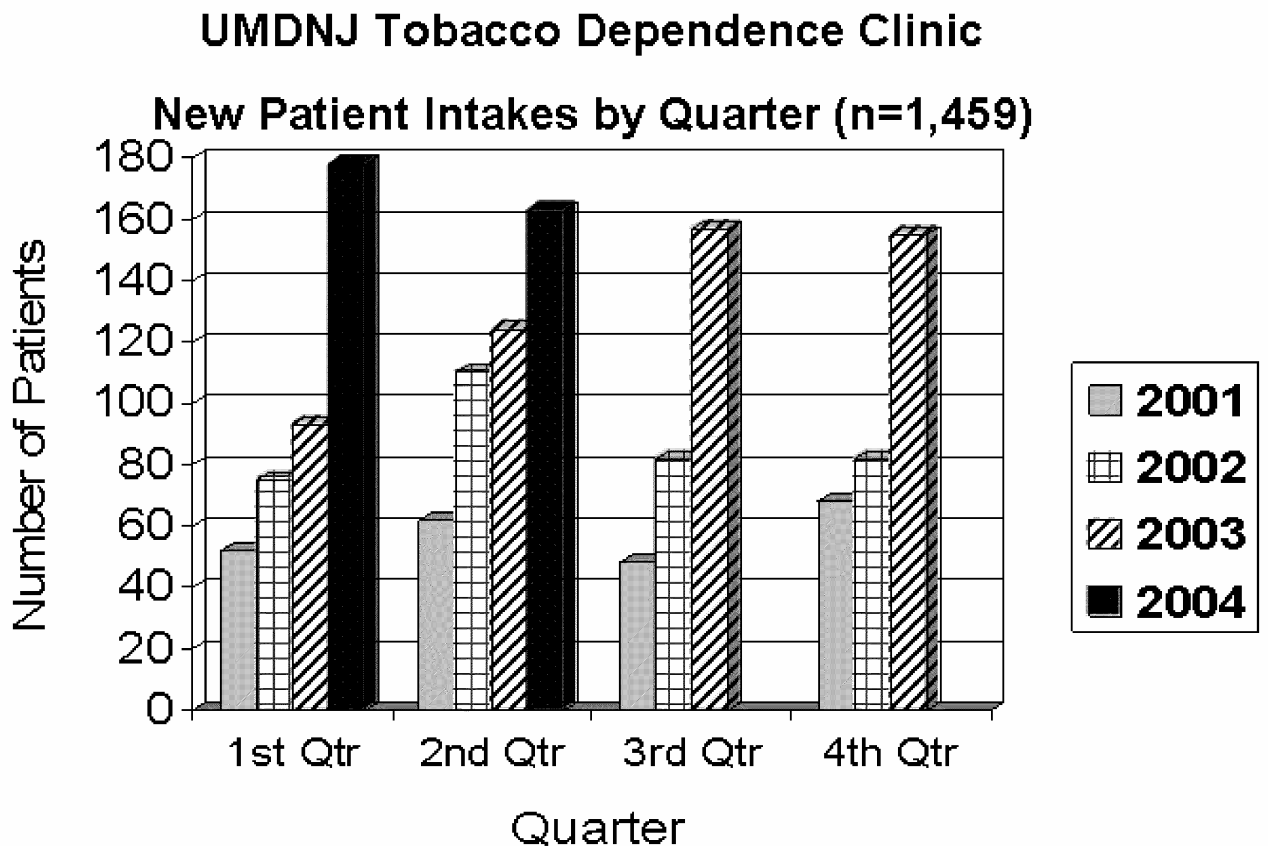
Patients contact the clinic through referral from their health-care provider, or via self-referral. The clinic is centrally located in New Brunswick at 317 George St. (Suite 210). Parking is available and the clinic is easily accessible via public transportation. Patients typically call to set up an appointment and this is usually scheduled within a week of first telephone contact (ph: **732-235-8222**). Efforts are also made to see patients who may walk into the clinic without a scheduled appointment.

## Number and characteristics of Patients Seen

### Patient Intake Assessments

Between January 1, 2001 and December 31, 2003, 1,126 patients received an initial assessment for tobacco dependence treatment at the Clinic. The numbers of new patients seen at the clinic has continued to increase through the three years in which the clinic has been open. The rate of increase has also continued through the beginning of 2004 with an additional 333 new patients seen for an initial intake through June 30, 2004 (Figure 1 below).

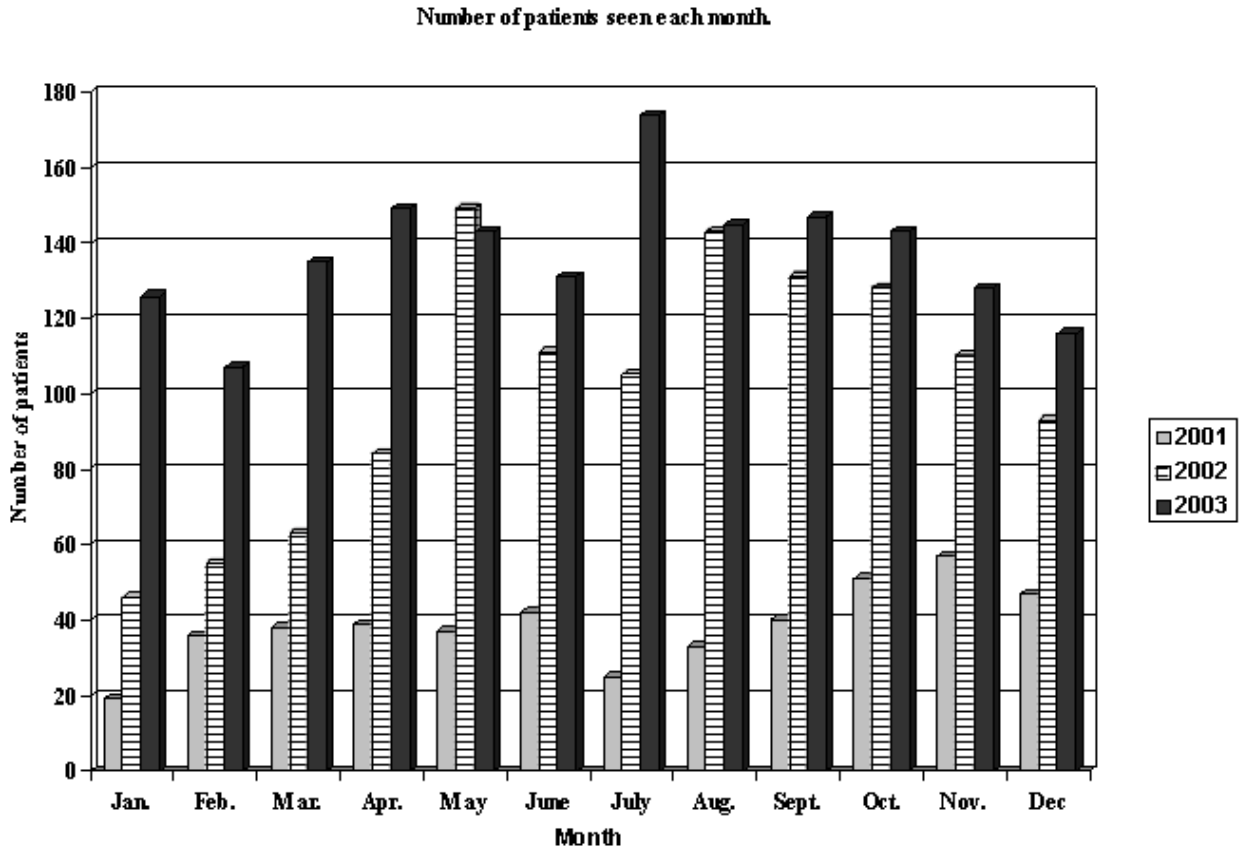
**Figure 1. Number of new patient intake assessments seen each quarter from January 1, 2001 to June 30, 2004.**



Total patient visits

There were 2,780 patient visits to the clinic between January 2001 and December 2003. Of these 541 were intake assessments, 1,162 were group visits, and 1,067 were post-intake individual counseling sessions. After an individual intake session 52% of patient visits were for group session and 48% for individual counseling.

**Figure 2. Number of patient visits each month from January 1, 2001 to December 31, 2003.**



### Demographic characteristics

The demographic characteristics of our patients are shown in the tables on the following pages.

Table 1 provides a basic demographic description of the patients receiving treatment. Almost 60% of the patients treated at the clinic are women but the ratio of men to women has increased significantly in the past two years. 29% of the patients have children less than 19 years of age. Over the past three years, parents of more than 1,000 children under the age of 19 have sought treatment for smoking at the clinic. The majority of the patients are Caucasian, but the clinic has increased service to traditionally underserved groups. 23% of the patients treated in 2003 are African American and about 10% are Hispanic. The proportion of our patients who are unemployed and less educated continues to increase, with 14% of our patients being unemployed in 2003 and 43% having a high-school education or less (compared with 9% and 34% respectively in 2001). 83% of our patients have health insurance, with about 30% having either Medicaid or Medicare.

Referral sources information indicates that grassroots advertising of the clinic is having an impact. There are a steady number of referrals from health care providers and an increase in referrals from family and friends, local schools and employers. More people are coming in after seeing our brochure or pamphlet (see Table 2). Surprisingly, few patients are referred by NJ Quitline, with only 6 such referral in 2003. Most of our patients live locally with 70% from Middlesex County and almost 1/3 of those patients living in New Brunswick.

### Nicotine Dependence and Co-morbidity

As shown in Table 3, the clinic patients present with significant indicators of addiction. Over 65% smoke a pack per day or more, and clinic patients have typically smoked for over 20 years. More than 80% have their first cigarette of the day within ½ hour of waking. Most of our patients have had at least three prior unsuccessful quit attempts (average = 7). Over half smoke cigarettes marketed as “Lights”, often in the mistaken belief that these cigarettes are less harmful or addictive than “full flavor” cigarettes. Fifty-six percent have symptoms of a health problem caused by tobacco use. About half of the clinic patients have had prior mental health treatment and about 30% have had prior treatment for other addictions

**Table 1. Demographic characteristics of patients assessed at the Tobacco Dependence Clinic at UMDNJ-School of Public Health during 2001-2003 (n=1126).**

	2001 N = 230		2002 n = 355		2003 n = 541		Total n = 1126	
<b>Age</b>	<b>Mean</b>	<b>Range</b>	<b>Mean</b>	<b>Range</b>	<b>Mean</b>	<b>Range</b>	<b>Mean</b>	<b>Range</b>
	43.2	15-75	45.8	15-80	40.7	15-75	42.5	15-80
<b>Gender</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>
Male	36.1	83	39.3	140	43.5	235	40.6	457
Female	63.1	147	60.7	216	56.5	305	59.4	669
<b>Children</b>								
Number who have children	57.8%	135	59.8%	213	54.2	293	56.9	641
Patients with children under 19	30.8%	71	25.3	90	30.5	165	29.0	326
<b>Race</b>								
Caucasian/White	72.5	166	67.1	239	61.8	334	65.6	739
African American	19.7	45	20.5	73	22.9	124	21.5	242
Asian	2.6	6	2.0	7	2.5	13	2.3	26
Hispanic	2.6	6	8.1	29	9.6	52	7.8	87
American Native	.4	1	.3	1	.8	4	.1	6
Other or no ans.	2.2	6	2.0	7	2.5	13	2.3	26
<b>Employment</b>								
Full time	50.2	115	48.9	174	42.0	227	45.8	516
Part time	10.5	25	8.4	30	7.4	40	8.4	95
Homemaker	4.8	11	2.8	10	1.1	7	2.4	28
Unemployed	8.7	20	11.0	42	13.5	73	12.0	135
Sick/disabled	16.2	37	12.4	44	16.1	87	14.9	168
Retired	5.7	13	7.3	26	4.6	25	5.7	64
Student ft or pt	3.9	9	7.5	27	14.0	80	10.3	116
Missing data			.2	3	.1	1		4

**Table 2. Health Insurance status, education, and referral source of Patients seen 2001-2003 at the Tobacco Dependence Clinic, UMDNJ-School of Public Health.**

Patient Characteristic	2001 N = 230		2002 n = 355		2003 n = 541		Total n = 1126	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
<b>Insurance</b>								
Have Health Ins	89.8	203	86.5	308	82.6	447	85.1	958
Private Ins	67.8	156	64.6	230	54.2	293	60.3	679
Medicare	13.9	32	14.6	52	11.3	61	12.9	145
Medicaid	7.4	17	8.1	29	17.6	95	12.5	141
<b>Education</b>								
Not complete HS	8.7	20	11.2	40	15.5	84	12.7	143
HS or GED	25.3	58	20.8	74	27.9	151	25.1	283
Some college or tech school	35.4	81	39.9	142	34.4	186	36.3	409
College Degree	21.8	50	18.3	65	13.5	73	16.7	188
Graduate Degree	5.7	20	9.8	35	8.5	46	9.0	101
No response		1	-			1		2
<b>Referred by</b>								
Health care prov.	38.1	85	31.2	111	22.0	119	25.9	291
Family/friend	27.8	62	30.1	107	32.5	176	28.4	319
Newspaper/mag.	11.7	26	5.6	20	0.7	4	4.4	50
Brochure/pamph.	4.5	10	7.8	28	8.3	40	5.5	62
Vol. Organization	4.0	9	2.0	7	0.4	2	1.8	20
Quitline	3.6	9	0.3	1	1.1	6	1.4	16
Quitnet	1.8	4	4.2	15	2.0	11	2.7	30
Employer/school	7.3	26	4.4	26	8.9	48	8.9	100
Media	2.2	5	0.8	3	1.1	6	1.2	14
Other	3.1	7	6.5	23	22.8	123	13.6	153
Missing	3.1	7	2.5	9	0.9	5	1.9	21



**Table 3. Tobacco use characteristics and clinical indicators of patients assessed at the Tobacco Dependence Clinic at UMDNJ School of Public Health 2001-3 .**

	2001 N = 230		2002 n = 355		2003 n = 541		Total n = 1126	
<b>Tobacco use pattern</b>	<b>Mean</b>		<b>Mean</b>		<b>Mean</b>		<b>Mean</b>	<b>Range</b>
How long used (yrs)	23.0		26.2		22.4		23.7	1-64
Cigs per day	23.3		22.2		21.1		21.9	0-100
Min. before first	26.5		27.0		28.8		27.8	0-500
Prior Quit attempts	8.6		7.5		6.5		7.2	
Expired CO (ppm)	18.7		18.8		15.8		17.3	0-131
	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>
Pack per day or more	65.6	151	75.8	270	65.8	356	69.1	777
Smoke within ½ hr of waking	80.4	185	85.7	305	80.2	434	82.1	924
Waking at night to smoke	46.3	106	46.9	167	47.1	255	46.9	528
Smoking caused health problem	62.4	143	57.9	206	55.8	302	57.8	651
Prior MH treatment	57.2	131	51.1	182	49.9	270	51.8	583
Prior addiction trtmnt.	27.1	62	23.6	84	30.1	163	27.4	309
Smoke light cigs	58.1	133	58.4	208	49.5	268	54.1	609
Smoke menthol cigs	37.6	86	32.5	116	47.5	257	40.8	459

## Treatment Outcomes

Of the 541 patients assessed in 2003, 511 (94.5%) 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). Abstinence or quit rate 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 Four Weeks After Quit Date

As shown in table 4 below, 211 patients assessed during 2003 (41% of those having tried to quit) were abstinent at four weeks follow-up, and an additional 87 (17%) reported cutting their cigarette consumption down by at least half. All patients who claimed to be abstinent and had their expired carbon-monoxide measured at the 4 week follow-up were verified as abstinent with carbon monoxide reading of less than 10 (typically around 1 or 2 p.p.m.) compared with an average of 18 p.p.m. at assessment.

### Outcome Six Months After Quit Date

129 (25%) of the patients who set quit dates during 2003 remained abstinent six months after their Quit Date, and 68 (13%) continued to smoke but with reported cigarette consumption reduced by at least 50%. This quit rate is less than in previous years and this may be due to us reaching a smaller proportion of patients for follow-up (63%) this year – those not reached are counted as continuing smokers. We expect that as we reach more patients for follow-up our quit rate would tend toward the 30% rate achieved in prior years.

**Table 4. Four week and six month follow-up data among patients seen for intake in 2003 and who set a quit date at the Clinic (n =511).**

	<u>Number of patients</u>	<u>Percentage</u>
<b><u>4 Weeks</u></b>		
Total number of patients with quit dates	511	
Total follow-ups	374	73%
Patients quit	211	41%
Patients smoking sig. less ( $\leq 50\%$ )	87	17%
Smoking less but not significantly less.	36	7%
Smoking at least the same amount as at intake*	177	35%
* Includes 137 (27%) who could not be contacted		
<b><u>6 Months</u></b>		
Total number of patients with quit dates	511	
Total number of follow-ups	322	63%
Patients quit	129	25%
Patients smoking sig. less ( $\leq 50\%$ )	68	13%
Smoking less, but not significantly less	57	11%
Smoking at least the same amount as at intake*	261	51%
* Includes 189 (37%) who could not be contacted for follow-up		

## **Overall Treatment Outcomes 2001-3**

As shown in the tables in appendices 1 and 2, the overall quit rates for over 1000 patients who tried to quit at the clinic during 2001-3 were 46% at four weeks and 28% at six months, with an additional 15% continuing to smoke significantly less at six month follow-up. It should be noted that the quit rate was lower (25%) in 2003 than in 2001-2 (31%). This may be partly due to a reduction in the proportion successfully followed up in 2003 (due to cuts in resources at the clinic) and may be partly due to changes in client characteristics (more young, less educated and non-employed patients in 2003).

## **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. As described in our annual report for 2002, abstinence rates within the clinic are strongly positively related to the number of treatment sessions attended and the number of tobacco dependence treatment medications used. For example, among patients attending Withdrawal-Oriented Group Therapy, of those attending 1-3 group sessions, 15% are abstinent at six-month follow-up, whereas of those attending 4-6 group sessions, 65% are abstinent at six-month follow-up. Similarly, we find that our patients who use more medication and use it for longer periods of have significantly higher success rates. We have therefore continued to encourage patients to make use of group treatment (typically a new group starting on a Tuesday evening every seven weeks), our relapse prevention group (typically every Monday evening), and an appropriate combination of tobacco dependence treatment medications.

Patients who cannot attend evening groups are seen individually at hours to suit their needs, and where there is sufficient demand, assessments and treatments can be provided on-site at workplaces or educational institutions.

## **Summary and Targets for 2004-05.**

### **Summary**

The Clinic has continued to grow and to improve its services. We have treated over 1500 patients, most of whom are highly addicted to tobacco, and achieved very respectable short and long-term outcomes (3 year totals of 46% and 28% 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 increased treatment intensity for both group counseling and pharmacotherapy will result in better outcomes. 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.

Demand for the Clinic’s services from 2001 to 2004 has continued to grow. We have also improved in our outreach to underserved populations as the clinic is serving more minorities, unemployed, people without insurance, and people without a high-school diploma.

**Goals for 2004**

The main aims for 2004 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 2004 are as follows:

- Assess at least 20% more new patients than in 2003 and therefore see over 600 patients in 2004.
- Increase the proportion of patients who identify as Hispanic/Latino and Asian to at least 15%.
- Achieve follow-up rates of at least 80% at both the 4-week and 6-month follow-up points.
- Maintain high abstinence rates at four week and six month follow-ups.

This report was prepared by Michael Burke EdD, Jonathan Foulds PhD and Michael Steinberg MD MPH, with input from colleagues at the Tobacco Dependence Program at UMDNJ-School of Public Health. The Tobacco Dependence Program is supported by a grant from the New Jersey Department of Health and Senior Services, Office of the State Epidemiologist, through funds from New Jersey's Comprehensive Tobacco Control Program

**Appendix 1 Summary of patients' follow-up and smoking outcomes at 1-month post quit date for patients assessed 2001 and 2002, those assessed in 2003, and a total for all 3 years.**

**4 weeks after quit date**

	<b>2001 and 2002</b>			<b>2003</b>			<b>Total 2001-2003</b>		
	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed
Total Number	585	<b>525(90%)*</b>	472(90%)**	541	<b>511 (94%)*</b>	374 (73%)**	1126	<b>1036 (92%)</b>	846 (82%)
Percent patients reporting quit	45% (n=267)	<b>51%</b>	56%	39% (n=211)	<b>41%</b>	56%	42% (n=478)	<b>46%</b>	56%
Patients smoking ≤ 50% of cigarettes at intake	16% (n=92)	<b>18%</b>	19%	16% (n=87)	<b>17%</b>	23%	16% (n=179)	<b>17%</b>	21%
Patients smoking less but not significantly less	8% (n=46)	<b>9%</b>	10%	7% (n=36)	<b>7%</b>	10%	7% (n=82)	<b>8%</b>	10%
Percent of patients smoking at least as much per day or not successfully followed	31% (n=180)	<b>23% (n=120)</b>	14% (n=67)	38% (n=207)	<b>35% (n=177)</b>	11% (n=40)	34% (n=387)	<b>29% (N=297)</b>	13% (N=107)

\* Percentage = number of quit dates set as a percentage of total number of assessments

\*\* Percentage = number of follow-ups completed as a percentage of those with quit date (intent to treat)

**Appendix 2 Summary of patients' follow-up and smoking outcomes at 6-month post quit date for patients assessed during 2001 and 2002, those assessed in 2003, and a combined total (2001-3)**

**6 months after quit date**

	2001 and 2002			2003			Total		
	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed	Patients assessed	Patients with Quit Date (intent to treat)	Successfully followed
Total Number	585	<b>525 (90%)*</b>	381 (73%)**	541	<b>511 (94%)</b>	322 (63%)**	1126	<b>1036 (92%)</b>	703 (68%)**
Percent patients reporting quit	29% (n=165)	<b>31%</b>	43%	24% (n=129)	<b>25%</b>	40%	26% (n=294)	<b>28%</b>	42%
Patients smoking ≤ 50% of cigarettes at intake	14% (n=83)	<b>16%</b>	22%	13% (n=68)	<b>13%</b>	21%	13% (n=151)	<b>15%</b>	22%
Patients smoking less but not significantly less	10% (n=61)	<b>12%</b>	16%	11% (n=57)	<b>11%</b>	18%	10% (n=118)	<b>11%</b>	17%
Percent of patients smoking at least as much per day or not successfully followed	47% (n=276)	<b>41% (n=216)</b>	19% (n=72)	54% (n=291)	<b>51% (n=261)</b>	21% (n=67)	50% (n=567)	<b>46% (n=477)</b>	20% (n=139)

\* Percentage = number of quit dates set as a percentage of total number of assessments

\*\* Percentage = number of follow-ups completed as a percentage of those with quit date (intent to treat)