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Effects of a smoke-free policy on an inpatient psychiatric unit

Christi A Patten, Barbara K Bruce, Richard D Hurt, Kenneth P Offord, Jarrett W Richardson, Lisa R Clemensen, Susan M Persons

Abstract

***Objective* – To evaluate prospectively the effects of a smoke-free policy on the behavioural functioning of patients in a locked adult inpatient psychiatric unit and on staff attitudes towards the policy.**

***Methods* – Data were collected on patient medication use and behavioural indices three months before and three months after policy implementation. Additionally, unit staff completed a survey six months before and six months after policy implementation.**

***Results* – The smoke-free policy produced significantly fewer adverse effects than the staff had anticipated. Staff attitudes also changed to favour a smoke-free environment. Results of a follow up interview indicated that hospital admission in a smoke-free environment did not appear to alter the long term smoking behaviour of patients.**

***Conclusions* – Successful implementation of a smoke-free policy in a psychiatric unit can be achieved with careful planning.**

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Keywords: smoke-free policy; smoke-free environment; psychiatric unit; psychiatric patients; staff attitudes; smoking cessation

Introduction

The appropriateness and feasibility of establishing smoke-free psychiatric facilities is a topic of recent interest. The prevalence of cigarette smoking among psychiatric patients is high, with estimates ranging from 52% to 88%.[1,2] Although the American Psychiatric Association recognises nicotine as a drug of dependence, psychiatric facilities are less likely than general medical facilities to restrict smoking.[3,4] Psychiatric patients have generally been viewed as too anxious and agitated while in acute psychiatric distress to be able to tolerate the added stress and frustration of smoking withdrawal.[5]

Recently, the implementation and effectiveness of smoke-free policies in psychiatric facilities were reported.[6–10] These studies examined staff and patient attitudes as well as patient acceptance of a smoke-free policy. They indicate that staff anticipate more smoking–related problems (for example, verbal threats, inappropriate attention seeking) than actually occur.

Although published reports suggest that psychiatric patients are generally accepting of a smoke-free environment, there have been some negative findings.[11,12] For example, Greeman and McClellan[12] found that over a two year period after implementation of a smoke-free policy in an inpatient psychiatric unit, an estimated 20–25% of patients who smoked had difficulty adjusting to the policy and some patients experienced major disruption in their treatment. However, because the 1992 Joint Commission on Accreditation of Healthcare Organizations accreditation standards were intended to restrict smoking to a minimum in hospitals, with the eventual goal of establishing a smoke-free environment,[13] the emphasis will necessarily shift to how best to implement the policy.

The Joint Commission standards offer an opportunity to affect the long term health maintenance of smokers by providing them with an incentive to stop smoking during treatment and to remain abstinent after hospital dismissal.[14] However, little is known about the long term smoking status of psychiatric patients after hospital admission in a smoke-free unit.

In 1987 Mayo Medical Center (Mayo Clinic and its two affiliated hospitals, Rochester Methodist Hospital and Saint Marys Hospital) implemented a smoke-free policy.[15] For many of the reasons cited previously, the psychiatric units were initially excluded from complete adherence to the policy. At the time of this study, Saint Marys Hospital had three adult inpatient psychiatric units; two were open units and one was locked. Although all three units became smoke-free on 1 January 1991, this report focuses on the effects of implementing the policy on the patients in the locked psychiatric unit and on the staff of all three units. The implementation of the policy was expected to be more difficult in the locked psychiatric unit because patients in this unit are more likely to be involuntarily admitted, acutely psychotic, or more disorganised behaviourally. The purpose of this study was to evaluate the effects of the smoke-free policy on the behavioural functioning of patients and on staff attitudes. In addition, we examined the long term smoking status of patients who were admitted to hospital after implementation of the smoke-free policy.

The Mayo Clinic and Mayo Foundation, Rochester, Minnesota, USA
CA Patten
BK Bruce
RD Hurt
KP Offord
JW Richardson
LR Clemensen
SM Persons

Correspondence to: Barbara K Bruce, PhD, Section of Behavioral Medicine, Mayo Clinic, 200 First Street SW, Rochester, Minnesota 55905, USA.

Methods

SUBJECTS

We studied prospectively patients admitted for psychiatric treatment to a 28 bed locked adult inpatient psychiatric unit at Saint Marys Hospital between October 1990 and March 1991.

PROCEDURE

Smoke-free policy

The adult psychiatric units at Saint Marys Hospital became smoke-free on 1 January 1991. Before implementation of the smoke-free policy, a task force consisting of representatives from physician, psychologist, social work, and nursing staffs was appointed to communicate information on the decision to become smoke-free and to seek input from other staff members about implementation. In preparation for implementation of the policy, inservice educational sessions on the treatment of nicotine dependence were held for all staff. Presented by staff from the Mayo Nicotine Dependence Center, these sessions provided information on the management of patients who smoked.

Before implementation of the smoke-free policy, patients in the locked unit were allowed to smoke in a designated smoking lounge. With the implementation of the policy, patients were expected to refrain from smoking within the hospital and during activities that were part of the treatment programme outside the hospital. Although very few patients in the locked unit had off–unit privileges, those at an appropriate privilege level were granted brief passes to leave the building unaccompanied to smoke. Self–help materials, nicotine gum, and a weekly support group led by counsellors from the Nicotine Dependence Center were made available to the patients.[16] These counsellors also provided counselling and support for patients who were stopping smoking at the request of their physician or on their own initiative. This service had been available to patients before the smoke-free policy was implemented.

Staff survey

Six months before the policy became effective, a survey was distributed to staff in the adult psychiatric units. The survey was used to involve the staff in the development of implementation procedures, not as a means to debate the decision to become smoke-free. The staff were asked to indicate whether they supported a smoke-free policy and to describe the potential advantages and disadvantages they perceived would result from implementing the policy. Responses were obtained from staff psychiatrists and psychologists, resident physicians, nurses, nurse clinicians, psychiatric social workers, activity therapists, and unit assistants from all three of the adult psychiatric units at Saint Marys Hospital.

To assess the effects of the smoke-free policy on staff attitudes, a follow up survey was distributed to the staff six months after policy implementation. The staff were asked to indicate how well they thought the smoke-free policy was working and whether they would recommend that the units remain smoke-free. They were asked to compare what they had expected with what they observed about the ease or difficulty of implementing the smoke-free policy in the units. The follow up survey also addressed the perceived advantages and disadvantages that the staff described on the initial survey. For example, the staff were asked to indicate what effect, if any, the policy had on the safety and healthiness of the environment.

Behavioural data

To assess the effects of the policy change on the behaviour of patients, nursing records were analysed for data on medication use and behavioural indices of acting out for three months before and three months after the policy was implemented. Definitions of medication use and behavioural indices of acting out that were studied are described in table 1. Nursing records were also reviewed to obtain the number of patient complaints related to smoking issues.

Follow up interview

To determine smoking status over time, we conducted a follow up interview among all smokers admitted to the psychiatric unit during the three months after the smoke-free policy was implemented. These patients were mailed a form that asked for permission to call them for a telephone interview. Those who gave informed consent by signing and returning the form were interviewed 16 to 18 months after hospital dismissal. In a structured telephone interview, they were asked to report their current smoking status, smoking status over time, hospital admissions, and participation in smoking cessation programmes or interventions after discharge from hospital. They were also asked whether they used nicotine gum during their stay in the psychiatric unit.

Record review

Medical records were reviewed by a psychology research assistant for information on age, sex, treatment duration, psychiatric diagnosis, and smoking status. The medical

Table 1 Definitions of behavioural indices of acting out

Behavioural index	Definition
PRNs	Medications given as needed (not on a scheduled basis) to calm patients (for example, neuroleptics, antihistamines, minor tranquilizers)
Smoking in room	Patient is found smoking in his or her room
Additional nursing assistance	Patient requires 1:1 nursing assistance beyond the usual care
Seclusion	Patient is put in separate room with doors locked
Restraint	Patient is put in restraints in a separate room with doors locked
Monitor	Patient is continuously monitored by a video camera placed in his or her room and is visually checked every 30 min; when out of the room, patient is checked every 5 to 10 min
AMA	Patient leaves the hospital against medical advice

Table 2 Demographic characteristics of patients seen before and after implementation of smoke-free policy

Characteristic	Preimplementation (n = 184)	Postimplementation (n = 178)	Test value (df)	p*
Sex (%)				
Female	59.2	51.7	$\chi^2 = 1.796$	0.180
Male	40.8	48.3		
Age (years)				
Mean (SD)	39.3 (16.2)	39.3 (18.6)	$t = 0.0331$	0.9737
Median	37.0	35.0	(360)	
Range	11–82	14–83		
Treatment duration (days)				
Mean (SD)	12.5 (10.8)	11.6 (11.7)	$t = 0.8496$	0.3961
Median	9.0	8.0	(355)	
Range	1–53	1–70		

* Continuous variables were compared with Student's t tests. Categorical variables were compared with the χ^2 statistic. All comparisons were non-significant, $p > 0.05$.

Table 3 Primary psychiatric diagnosis based on DSM-III-R criteria for patients seen before and after implementation of smoke-free policy

Diagnosis	Percent of patients[a]	
	Preimplementation (n = 184)	Postimplementation (n = 178)
Mood disorders	32.1	34.8
Adjustment disorders	19.0	18.5
Psychotic disorders not elsewhere classified	10.9	15.7
Schizophrenia	11.4	5.6
Psychoactive substance use disorders	7.1	7.9
Axis II disorders	4.3	3.9
Organic mental disorders	4.3	3.4
Anxiety disorders	4.3	1.7
Psychoactive substance induced organic mental disorders	2.2	1.7
Axis III disorders	0.5	1.1
Organic mental disorders (axis III)	0.0	1.1
Somatoform disorders	1.6	2.2
Others	2.2	2.2

[a] Percentages compared with use of the χ^2 statistic. Percentage in each group was compared with percentage in all others. All comparisons were non-significant ($\chi^2 = 10.554$, df = 12, $p = 0.567$).

records of 362 consecutive patients admitted from October 1990 (three months before the smoke-free policy) to the end of March 1991 (three months after the smoke-free policy) were reviewed. Records from the Nicotine Dependence Center were also reviewed to obtain information on patient use of services (for example, consultations, support group) offered to patients in the unit. Statistical analyses included t tests, Fisher's exact test, and χ^2 tests. Two tailed p values of < 0.05 were considered evidence of statistical significance.

Results

SUBJECTS

All 362 patients admitted to the locked inpatient psychiatric unit from October 1990 to the end of March 1991 served as subjects in the study. Of these, 184 were admitted in 1990 before, and 178 were admitted in 1991 after, implementation of the policy. There were 18 patients admitted before implementation of the smoke-free policy whose treatment duration extended into the postimplementation period. For analyses of data on demographics, psychiatric diagnosis, smoking status, and treatment duration, these patients were counted only once on the basis of admission date. Table 2 summarises age, sex, and treatment duration. There were 201 female and 161 male patients whose mean age was 39 years. The primary psychiatric diagnoses, based on DSM–III–R criteria (*Diagnostic and statistical manual of mental disorders*, 1987), are listed in table 3. The patient populations before and after implementation did not differ significantly in age, sex, treatment duration, or psychiatric diagnosis.

Table 4 summarises the smoking status of the patients. The preimplementation and postimplementation groups were not significantly different in smoking status, cigarettes smoked per day, or number of years of smoking.

Overall, for 78 (21.5%) of the patients, either a secondary DSM–III–R diagnosis of psychoactive substance use was made or substance abuse was noted in the patient's medical record without a formal diagnosis being made. Of these patients, 46 had a diagnosis of alcohol abuse. For four of the 78 patients, a diagnosis of nicotine dependence was made in the records.

PREIMPLEMENTATION STAFF SURVEY

The response rate for the initial staff survey was 67% (137/204). Among the respondents, 9.5% were current smokers, 52.0% had never smoked, 36.5% were former smokers, and 2.0% did not indicate smoking status. Forty nine percent of the staff were in favour of the smoke-free policy, 44% did not support the policy, and 7% were undecided or did not indicate a response.

The staff described several advantages that they perceived would result from implementing a smoke-free policy: (1) a healthier environment and health promotion, (2) consistency with Mayo Medical Center policy, (3) an increased ability to address nicotine dependence in patients, (4) a safer environment, (5) an increase in the involvement of smokers with activities other than smoking, (6) a decrease in the subgrouping of smokers and non-smokers, and (7) an opportunity for patients to learn healthier ways of coping with problems than by smoking.

Although the staff perceived that there were several advantages to having a smoke-free environment, they also raised many concerns about patient acceptance of the smoke-free policy. Perceived disadvantages included (1) an increase in patients acting out (for example, physical aggression, angry outbursts), (2) an increase in rule infractions (for example, surreptitious smoking) leading to an increased need to "police" patients to enforce the policy,

Table 4 Smoking status of patients, number of years of smoking, and number of cigarettes smoked per day before and after implementation of smoke-free policy

Variable	Preimplementation	Postimplementation	Test value (df)	p[a]
Smoking status (%)				
N[b]	180	165		
Smoker	43.3	33.3	$\chi^2 = 3.224$ (1)	0.073
Years of smoking (smokers only)				
N‡	66	43		
Mean (SD)	16.2 (11.0)	16.9 (12.6)	$t = 0.2968$ (107)	0.7672
Median	17.0	16.0		
Range	1–55	1–64		
Cigarettes per day (smokers only)				
N[c]	71	47		
Mean (SD)	27.1 (17.8)	28.7 (28.7)	$t = 0.3768$ (116)	0.7070
Median	20.0	20.0		
Range	5–100	5–170		

[a] Continuous variables were compared with Student's *t* tests. Categorical variables were compared with the χ^2 statistic. All comparisons were non-significant, $p > 0.05$.
[b] The total number of subjects does not equal 362 because information on smoking status was not available for all patients.
[c] The total number of subjects does not equal 133 (patients who were smokers) because data on years smoked and cigarettes smoked per day were not available for all patients.

Table 5 Patient-days with acting-out behaviour or medication use before and after implementation of smoke-free policy

	Patient-days					
	Preimplementation (184 patients)		Postimplementation (178 patients)			
	No[a]	%[b]	No[a]	%[b]	χ^{2c}	p[d]
Total patient-days	2077		2119			
PRN total[e]	280	0.135[f]	312	0.147[f]	1.337	0.249
PRN patient-days[g]	179	8.6	209	9.9	1.937	0.166
Smoking in room	0	0.0	18	0.8	17.719	0.000*
Additional nursing assistance	2	0.1	18	0.8	12.543	0.000*
Seclusion	95	4.6	64	3.0	6.944	0.010*
Restraint	46	2.2	34	1.6	2.088	0.175
Monitor	150	7.2	87	4.1	19.113	0.000*
AMA (% of patients)	0	0.0	2	1.1	1.961	0.500

[a] Number of patient-days with behaviour incident or medication use indicated (except for total patient days).
[b] Percentage of total patient days (except for AMA).
[c] All χ^2 tests have one degree of freedom.
[d] Comparisons of the three-month preimplementation and postimplementation periods were with Fisher's exact test. Two tailed p values are reported. Except where noted, the unit of analysis is a patient-day.
[e] Reflects total number of medication doses dispensed per month, including multiple medications for some patients.
[f] Expressed as average number of medication doses per patient-day (total medication-days [number of medications times number of days taking them] divided by total patient-days).
[g] Considers number of days during which patient received ⩾ 1 PRN.
* Significant result, $p < 0.05$.

(3) additional stress of smoking withdrawal in acutely psychotic patients and a resultant increase in the use of PRN ("as needed") medications, (4) an infringement of involuntary patients' rights, (5) a decrease in admissions to the units, (6) an increase in patients leaving against medical advice, and (7) a need for resources to assist patients through smoking withdrawal and continued abstinence after discharge from hospital.

EFFECTS OF THE SMOKE-FREE POLICY ON PATIENT BEHAVIOURS AND MEDICATION USE

Because the length of stay of the patients varied, patient–days were used as the unit of analysis. As mentioned earlier, there were 18 patients whose hospital admission overlapped the periods before and after policy implementation. Data on medication use and behavioural indices of acting out were tallied by nursing staff as each episode occurred and were not recorded separately for each patient. Thus in table 5 these 18 patients were included in the denominator for patient-days in the periods both before and after implementation. Table 5 summarises the census statistics of patients included in the study and the percentage of patient–days with behaviour incidents or use of as required medication. The numbers of admissions and patient–days were similar during the preimplementation and postimplementation periods.

To determine whether there was any tendency for smokers to stay for shorter or longer periods on the unit than non-smokers, we conducted a two way analysis of variance, with smoking status (smoker or non-smoker) and period of admission (preimplementation or postimplementation) as the independent variables and patient–days as the dependent variable. This analysis showed a significant main effect for smoker ($F_{1,335} = 6.54$, $p = 0.01$), with non-smokers tending to stay for longer periods than smokers. The mean duration of stay was 13.27 days for non-smokers and 10.07 days for smokers. However, there was no main effect for period of admission ($F_{1,335} = 1.16$, $p = 0.20$) nor was thereany evidence that the effect of smoking status was specific to period of admission ($F_{1,335} = 1.26$, $p = 0.26$). We also conducted a rank sum test comparing patient–days for smokers admitted before and after implementation. This analysis revealed that smokers tended to stay for significantly shorter periods during the postimplementation period than during the preimplementation period ($p < 0.05$). The median duration of stay was eight days for smokers admitted during the preimplementation period and five days for smokers admitted during the postimplementation period.

To assess the effects of the policy on patient behaviours and medication use, preimplementation and postimplementation periods were compared using Fisher's exact test. When preimplementation and postimplementation periods were compared, no significant differences were found in total medication use or in the percentage of patient–days with medication use indicated (table 5). There were

also no significant differences in rates of leaving against medical advice or in the use of restraints. Two patients left against medical advice in the postimplementation period and none in the preimplementation period. The use of seclusion and television monitors was significantly less ($p < 0.01$) in the postimplementation period. Because data on medication use and behavioural indices of acting out were not recorded separately for each patient, we were not able to determine differences in these behavioural outcomes for smokers and non-smokers.

The frequency of smoking in the hospital room and the need for additional nursing assistance were significantly greater during the postimplementation period ($p < 0.001$). During the postimplementation period, additional nursing assistance was required in 18 instances, 17 of which involved the same patient, who was reportedly distressed because she was not able to smoke. This patient was a female smoker who was also responsible for the only recorded patient complaint related to a smoking issue.

The number of consultations to the Nicotine Dependence Center was the same during the preimplementation and postimplementation periods, and 13 patients attended the weekly support group offered by the Nicotine Dependence Center staff.

LONG TERM SMOKING STATUS OF PATIENTS

Fifty smokers were admitted to the psychiatric unit after implementation of the smoke-free policy (January 1991 and March 1991). Of these, 19 were contacted and agreed to participate in the follow up interview (response rate 38%). Of the other 31 patients, four refused to participate, two had died, and 25 could not be reached by mail or telephone. At 16 to 18 months after hospital dismissal, 18 of the 19 patients (95%) reported that they were smoking. All patients said that they had resumed smoking immediately after hospital dismissal. However, two of the patients stated that they were not smoking at six and 12 months after discharge from hospital.

Only five patients reported that they had used nicotine gum during their treatment at Saint Marys Hospital. According to their reports, after discharge from hospital only four patients had participated in any formal smoking cessation intervention, three had used nicotine gum, and none had used the nicotine patch. Finally, most of the patients (74.0%) had not been admitted to hospital since their admission to Saint Marys Hospital.

Table 6 Staff attitudes toward a smoke-free policy by smoking status[a] six months after implementation of the policy

Question	n	Response (%) Yes	No	NR[b]
Would you recommend that the adult psychiatric units *not* remain smoke-free?				
All staff	126	21	71	8
Current smokers	9	44	44	12
Former smokers	33	18	82	0
Never smoked	79	20	75	5
Would you recommend that other adult psychiatric units be smoke-free?				
All staff	126	76	13	11
Current smokers	9	78	0	22
Former smokers	33	76	21	3
Never smoked	79	81	13	6

[a] Smoking status was not reported by five (4%) of the staff.
[b] "No opinion," "not applicable," or did not indicate a response.

Table 7 Staff ratings on and perceptions of the effects of the smoke-free policy in the psychiatric unit six months after implementation of the policy (n = 126)

	Response (%) Positive	Negative	No effect	NR[a]
Effect on smokers	17	44	24	15
Effect on environment (health)	78	2	10	10
Effect on environment (safety)	51	17	23	9
	Increase	*Decrease*		
Occurrence of rule infractions	58	10	20	12
Ability of staff to address nicotine addiction	62	3	24	11
Time patients spent with activities other than smoking	48	6	29	17

[a] "No opinion," "not applicable," or did not indicate a response.

EFFECTS OF THE SMOKE-FREE POLICY ON STAFF ATTITUDES

The response rate to the staff survey given six months after implementation of the smoke-free policy was 56% (126/225). Ninety percent of respondents reported that their work involved direct contact with patients in the psychiatric units. Among the respondents, 7% were current smokers, 63% had never smoked, 26% were former smokers, and 4% did not indicate smoking status. Table 6 summarises staff attitudes toward the smoke-free policy by smoking status. Current smokers, although a small subset (n = 9), were the most divided about whether the units should remain smoke-free, but seven of nine thought that other psychiatric units should be smoke-free.

Sixty one percent of the staff reported that the smoke-free policy was working well in the units, 19% indicated that it was working all right, 12% reported that it was not working well, and 9% were undecided or did not indicate a response. When comparing what they had expected with what they observed about the ease or difficulty of implementing the smoke-free policy in the units, 62% of the staff thought that it was much easier or somewhat easier, 22% that it was neither more difficult nor easier, and only 6% that it was somewhat more difficult than expected; 10% did not respond.

Table 7 summarises the responses of the staff to questions about the perceived effects and advantages and disadvantages of the policy

Discussion

Our results show that a smoke-free policy can be implemented successfully in a closed psychiatric unit. Six months after implementation of the policy, the majority of the staff (71%) reported that the psychiatric units should remain smoke-free.

One of the strengths of our study was that we collected behavioural data to document the

effects of the policy on psychiatric patients, whereas previous studies relied primarily on anectodal data. Thus we were able to show that the smoke-free policy produced significantly fewer adverse effects than the staff had anticipated. A primary concern raised by staff before the policy was implemented was that an increase in acting–out behaviour would occur. With the exception of patients smoking in their hospital rooms, there were no significant increases in the indicators of acting–out behaviour: use of as required medications, seclusion, monitors, restraints, or discharge against medical advice. It should be pointed out, however, that the lower smoking prevalence and shorter length of stay of smokers in the postimplementation period reduced the unit's exposure to these patients; this may have diluted any pre/post increases that might have occurred in acting-out behaviour and medication use.

The concerns raised by the staff on the initial staff survey were similar to those expressed by others.[6–10] Consistent with other studies, our results indicate that the staff anticipated more problems with implementing the policy than were actually observed. For example, on the follow up survey, the staff were asked to recount how many patients they thought had acted out as a result of the policy. The responses ranged from 0 to 30 patients, with a median of three patients. They were also asked to recount how many patients they thought had left against medical advice as a result of the policy. The responses ranged from 0 to 25 patients, with a median of two patients. As shown in table 5, the actual rates were much lower than those perceived by the staff. However, the range of responses about perceived episodes of acting out and dismissals against medical advice indicates some deeply established perceptions among the staff. A smoke-free policy could easily be undermined unless these staff are made aware of actual data.

On the initial staff survey, the groups that tended to favour the policy least were resident physicians, nurses, and psychiatric social workers. These groups typically have more day–to–day contact with patients and may have expected more problems with patients over smoking related issues. On the follow up survey, although 90% of respondents reported that their work involved direct contact with patients, there were no significant differences among professional groups in their acceptance of the smoke-free policy. The change in staff attitudes may have been due to the ease with which the patients accepted the smoke-free policy. We recognise that the data on staff attitudes are limited by the undetermined reliability of the single item measures used in the staff surveys and the low survey response rates. However, these response rates do not reflect an intensive survey effort; the staff were sent each survey only once, with no additional mailing to those who did not respond. Furthermore, these response rates are comparable to those obtained in previous studies that assessed staff attitudes toward a smoke-free policy.[8,17]

A concern raised on the initial staff survey was that there would be a need for resources for assisting patients through both initial withdrawal from smoking and continued abstinence after discharge from hospital. On the follow up survey, most of the staff (74%) reported that resources had been sufficient. Even though resources were underused, their availability may have contributed to the ease with which the staff implemented the smoke-free policy.

On the follow up survey, the staff reported several positive aspects (advantages) that they had observed of the smoke-free policy: (1) a healthier environment and health promotion, (2) a cleaner environment, (3) increased patient interaction and decreased subgrouping of smoking and non-smoking patients, (4) increased involvement of smokers with activities other than smoking, (5) more staff time spent with patients on activities other than lighting cigarettes and monitoring the smoking lounge, and (6) reinforcement of effective methods of coping and managing stress other than by smoking. When these responses are compared with those of the initial survey, it is apparent that the staff anticipated several positive aspects (advantages) of the smoke-free policy that they subsequently observed. Some of these positive effects have been observed by others.[8,10]

Several staff members commented that the patients had been provided with the opportunity to stop smoking in a supportive structured environment. In addition, 48% of the staff reported that the time patients spent with activities other than smoking had increased (table 7). A smoke-free policy may thus be a means toward enhancing therapeutic intervention and assisting patients in learning new ways of interacting without a focus on smoking.

Although several positive aspects of the policy were observed by the staff, various negative aspects (disadvantages) of the smoke-free policy were reported on the follow up survey. These included (1) an increase in surreptitious smoking and in the smuggling of cigarettes, matches, and lighters into the unit; (2) inconsistency in staff enforcement of the policy (for example, some staff gave patients passes to smoke, but others did not); (3) an occasional increase in the privilege level of the patient sooner than appropriate so that he or she could leave the unit to smoke; (4) attention often diverted from more psychotherapeutic issues to a focus on smoking; (5) some patients leaving against medical advice or prematurely so that they could smoke; and (6) added anxiety in some patients, especially those receiving tapered doses of medication, because of smoking withdrawal.

The negative aspects of the smoke-free policy noted by our staff were similar to those reported by others. For instance, Bronaugh and Frances[11] observed the preferential treatment given to some patients who were smokers, particularly those with severe nicotine dependence. Smith and Grant[17] observed that patients were occasionally allowed passes to

smoke when the psychiatric status of the patients would have indicated otherwise. These observations point to the need for consistency by all staff in the enforcement of a smoke-free policy.

The problem of surreptitious smoking has also been encountered by other psychiatric units that have become smoke-free.[9-11] Bronaugh and Frances[11] observed that severely nicotine dependent patients were less compliant with a smoke-free policy and accounted for most of the unit's surreptitious smokers. It is possible that many of the smokers on our unit engaged in covert smoking to reverse or cope with symptoms of nicotine withdrawal. The median duration of stay for smokers admitted during the postimplementation period was five days; nicotine withdrawal symptoms typically peak one to four days after cessation.[19] However, we did not obtain a biochemical assessment of smokers' levels of nicotine. Nevertheless, these patients should be identified early and selected for more intensive smoking cessation intervention (for example, counselling, staff support, behavioural techniques, and nicotine replacement therapy).

Interestingly, we found that the smokers in our unit generally did not use the smoking cessation services offered to them. Patients anecdotally reported that they chose not to use the smoking cessation resources because they thought that they could manage on their own. Patients also commented that they did not want to think about long term smoking abstinence but rather wanted to focus on getting through their time in hospital. This finding supports the observation that patients who smoke may have little interest in using a smoke-free policy as a means toward abstinence.[20] Hartman *et al*[21] found that psychiatric inpatients smoked significantly fewer cigarettes while wearing a nicotine patch than while wearing a placebo patch. They suggested that transdermal nicotine treatment may be a useful adjunct in treating nicotine dependent psychiatric patients, whether or not they desire to stop smoking permanently.

We observed that hospital admission in a smoke-free environment did not appear to alter the long term smoking behaviour of the patients in our unit. In fact, most of the smokers interviewed reported that they began smoking immediately after discharge from hospital. These findings should be tempered by the fact that our response rate at follow up was low, which limits the extent to which our results can be generalised. However, these findings suggest the need to offer smokers more intensive treatment of nicotine dependence. The establishment of a smoke-free policy cannot be viewed as an end in itself but must be part of the process of providing comprehensive intervention for smoking cessation.[13,22] In psychiatric treatment units, an integrative approach to smoking cessation has the potential to yield synergistic effects, because many high risk severely nicotine dependent smokers can be treated.[14] However, further research is needed to determine which smoking cessation procedures are the most effective for and acceptable to psychiatric patients.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, a smoke-free policy can be implemented successfully on a closed psychiatric unit with careful planning and consistency by all staff. Our experience may provide guidance to other psychiatric units in the process of becoming smoke-free. It would also be helpful for others to report data on their experiences. Problems encountered and solutions implemented should be reported.

Although it appears that psychiatric patients are generally accepting of a smoke-free environment, further research is needed to evaluate whether the effects of a smoke-free policy are similar among smokers and non-smokers. It would also be useful to study smokers' behavioural reactions to a smoke-free policy as a function of the level of nicotine withdrawal. Finally, research is also needed to document the long term smoking status of these patients after discharge from hospital. The 1992 accreditation standards from the Joint Commission on Accreditation of Healthcare Organizations offer an opportunity to provide nicotine dependence intervention for the long term health maintenance of psychiatric patients. This would appear to be important, even if only a few patients stopped smoking as a result. However, insufficient data exist on the smoking cessation interventions that are most effective with this patient population and on strategies that motivate such patients to participate in these interventions. Clearly, research efforts need to be made in these directions.

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Second Annual Conference of the Society for Research on Nicotine and Tobacco

15–17 March 1996
Sheraton Washington Hotel
Washington, DC, USA

The second annual conference of the Society for Research on Nicotine and Tobacco will be held 15–17 March 1996 at the Sheraton Washington Hotel in Washington, DC. Encouraged by the success of our inaugural conference in 1995, this year's meeting will be expanded to 2 full days, running from Friday afternoon through Sunday morning. The 1996 SRNT meeting will overlap with the 4th International Congress of Behavioral Medicine and the 17th Annual Meeting of the Society of Behavioral Medicine. Attendance at each meeting will require separate registration.

The SRNT programme will feature invited sessions on a variety of topics on the scientific study of nicotine and tobacco. Tentatively scheduled symposia include: Safety and Toxicity of Nicotine, Efficacy of Nicotine Replacement Therapy, Issues in Prevention of Teenage Smoking, and Advances in Nicotinic Receptors, and Nicotine Neuropharmacology.

A vital component of the programme will be poster sessions presenting the most recent findings in the field of nicotine and tobacco. At least two poster sessions are planned, one of which will be held jointly with the Society of Behavioral Medicine.

For information about the meeting and registration materials, contact Society headquarters: Society for Research on Nicotine and Tobacco, 103 South Adams Street, Rockville, MD 20850, USA +1 301-251-9133 or srnt@aol.com