A Voluntary Smokers’ Registry: Characteristics of Joiners and Non-Joiners in the Community Intervention Trial for Smoking Cessation (COMMIT)

Beti Thompson, PhD, Lauren E. Rich, William R. Lynn, Rusty Shields, and Donald K. Corle, MS, for the COMMIT Research Group

Introduction

Community smoking cessation programs use regular and repeated messages to reach all smokers in the population.

One way to disseminate such messages is a “smokers’ registry” in which smokers enroll to receive information about smoking cessation. Newsletters and other materials have been sent to smokers as adjuncts to community-wide trials.

The Community Intervention Trial for Smoking Cessation (COMMIT) established smokers’ registries in 11 intervention communities. Joiners received regular messages about smoking cessation. In this paper, characteristics and cessation rates of joiners and nonjoiners of smokers’ registries are reported.

Methods

Setting

COMMIT was a 22-community study that tested a community approach to assisting smokers in quitting. Eleven intervention communities implemented a comprehensive 4-year intervention. The research included extensive evaluation.

Baseline Assessment of Smokers

A baseline prevalence survey of approximately 125,000 households asked smokers questions about previous quit attempts, addiction to tobacco, desire to stop smoking, gender, education, marital status, living arrangements, and age.

Smokers’ Registry

Each of the 11 intervention communities had a smokers’ registry. Joiners received regular newsletters containing stories on local quitters, descriptions of local cessation services, tips for quitting, humorous stories about quitting, and descriptions of upcoming events. To enroll, joiners completed a registry card that asked only for their name and address, age, and number of cigarettes smoked per day.

The registered smokers were entered into a centrally developed computerized database that generated letters and mailing labels to minimize the staff effort required for mailing newsletters. Duplicates in the database were removed regularly.

Although any smokers were allowed to join the registry, smokers outside of the...
trial age focus (25 to 64 years) were excluded from analysis. Information was collected on number of cigarettes smoked per day to distinguish heavy smokers (≥25 cigarettes/day) from light-to-moderate smokers (<25 cigarettes/day).

Quit Rates in the Endpoint Cohorts

Endpoint cohorts were identified at baseline for heavy smokers and light-to-moderate smokers (about 440 for each cohort per community). The reported quit rates in these cohorts were used to compare joiners and nonjoiners.

Comparing the Baseline, Registry, and Endpoint Data

A computerized routine linked individuals in the baseline prevalence survey, the endpoint cohort survey, and the registries. Individuals who matched on both names and addresses were considered matches; 139 heavy smokers and 83 light-to-moderate smokers were matched across all 11 intervention communities.

Measures

Characteristics distinguishing joiners from nonjoiners originated in the literature on participation and cessation in other smoking cessation programs. These characteristics included age (older people are more likely to quit), gender (men are more likely to quit), education (higher educated people are more likely to quit), marital status (married smokers are more likely to quit), cigarettes smoked per day (lighter smokers are more likely to quit), nicotine dependency (less dependent smokers are more likely to quit), previous quit attempts (smokers with previous quit attempts are more likely to quit), desire to quit (smokers who express more desire to quit are more likely to quit), and living with a smoker (smokers living with a nonsmoker are more likely to quit). Cessation was defined as self-reported 6-month continuous cessation at the final survey.

Statistical Analyses

Community differences in the proportion of smokers enrolled were assessed in a 2×11 chi-square test for independence. Differences in the mean number of cigarettes smoked per day at baseline by joiners and nonjoiners were evaluated via a one-sided permutation test to account for community rather than individual randomization. The mean of the 11 pairwise differences between those in and those not in the registry was calculated for each of the two possible group designations, and the rank of the observed mean among all possible means provided the significance level.

Baseline characteristics of joiners and nonjoiners of the registries are reported via means of the percentages of the 11 communities. The differences among the 11 observations (mean percentages) were tested with the Mantel-Haenszel statistic.

Results

Heavy-smoking joiners of the registries numbered 4842, equivalent to 8.4% of all heavy smokers in the 11 communities. Light-to-moderate smokers accounted for 4082 joiners (3.9% of all such smokers). As can be seen in Table 1, significant community variability existed in the proportion of smokers who joined the registry. Communities consistently enrolled about twice the proportion of heavy smokers as light-to-moderate smokers (the rank order correlation between percentages enrolled for heavy and light-to-moderate smokers was .94 (P < .001).

Table 1 also summarizes the mean number of cigarettes smoked by joiners and nonjoiners of the registry by community. For heavy smokers, there was no significant difference in amount smoked between the joiners and nonjoiners; furthermore, there was consistency in amount smoked across communities. Among light-to-moderate smokers, however, joiners included those who smoked significantly more cigarettes per day.

Numbers of matches between baseline and registries by community were too small to allow examination of characteristics of joiners and nonjoiners by community; thus, the remaining data reflect the mean of the combined community percentages, as shown in Table 2.

Among heavy smokers, increased desire to quit, living with a nonsmoker, age, and prior quit attempts were significantly different among joiners and nonjoiners.

<table>
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<tr>
<th>TABLE 1—Smokers Enrolled in Registry and Mean Number of Cigarettes Smoked per Day at Baseline Prevalence Survey, by Smoking Level and Community: Community Intervention Trial for Smoking Cessation</th>
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Note. The number of nonenrolled smokers was estimated from baseline smoking prevalence rates in each community applied to the 1990 census figures for each community.

a. chi-square tests for independence significant for both smoking groups among the 11 communities: heavy smokers, χ² = 1307.9, df = 10, P < .001; light-to-moderate smokers, χ² = 1064.2, df = 10, P < .001.

b. One-tailed permutation test, P = .006.
Level of addiction, gender, education, and marital status were not associated with joining among the heavy smokers. Among light-to-moderate smokers, significant differences were seen in level of addiction and desire to quit. As a means of gaining an overall picture of the entire population of smokers, the total joiner group was compared with the nonjoiner group by combining all of the heavy and light-to-moderate joiners. For the combined group of smokers, previous quit attempts, level of addiction, and desire to quit were significantly associated with joining. None of the other variables differentiated joiners from nonjoiners.

Table 3 summarizes the 6-month cessation rates of joiners and nonjoiners. Cessation rates were not significantly different among joiners and nonjoiners who were either heavy smokers or light-to-moderate smokers. When the groups were combined, the difference in cessation rate was significant, with joiners less likely to achieve cessation than nonjoiners.

**Discussion**

The goal of the registry activity in COMMIT was to recruit at least 8% of heavy smokers into a registry that provided regular messages about smoking cessation. Overall, 8.4% of heavy smokers and 3.9% of light-to-moderate smokers joined the registry. The numbers of heavy smokers and light-to-moderate smokers enrolled were approximately the same; however, heavy smokers make up only about one third of all smokers, indicating that a greater proportion of heavy smokers than light-to-moderate smokers were enrolled.

Few differences were seen between joiners and nonjoiners in terms of demographic variables; however, all joiners expressed more desire to quit than nonjoiners. Heavy-smoking joiners were more likely to live with nonsmokers than were
nonjoiners. Light-to-moderate smokers who joined were more heavily addicted and smoked more than light-to-moderate nonjoiners.

All communities used similar registry recruiting techniques, including placing registry sign-up cards in physician and dental offices, hospitals, work sites, organizations, launderettes, bowling alleys, bars, and other locations. Special efforts were made in all communities to encourage smokers to join the registry during key events (e.g., the Great American Smoke-Out, quit and win contests, and New Year’s Day). Enrollment was higher during these times; otherwise, all communities showed a fairly consistent level of enrollment.

In the COMMIT trial overall, there were no significant differences in heavy-smoker quit rates. This analysis of the intervention communities shows that heavy smokers who joined the registry were only 70% as likely to quit as nonjoiners and that light-to-moderate smokers were only 65% as likely to quit as nonjoiners. When the two groups of smokers were combined, the overall quit rate of nonjoiners was significantly higher than that of joiners. (Part of this effect may be attributed to combining of the groups, which resulted in scoring of the trends in each group so as to allow sufficient differences for significance in only 11 communities.)

It is difficult to explain the lower quit rates in joiners relative to nonjoiners. Within the light-to-moderate group, joiners smoked more and were possibly more heavily addicted than nonjoiners. Perhaps COMMIT did not provide the kind of specific help the joiners needed to address their addiction. Since heavy-smoking joiners were more likely to live with nonsmokers, it may be that such joiners signed up for the registry primarily in response to pressure from others with whom they lived. Another potential explanation is that heavy smokers with long histories of smoking may have had the perception that they needed more assistance in achieving cessation than that provided by self-help, contests, or referrals to community groups.

In summary, COMMIT was able to achieve its registry enrollment goal, and a number of communities exceeded the goal. Because registry sign-up was totally voluntary, the registration of more than 8000 smokers provides some indication that both heavy and light-to-moderate smokers desire to quit and wish to receive information about quitting. Joining the registry to obtain information was not predictive of quitting; instead, nonjoiners had a higher cessation rate. More research is needed to understand what appropriate materials or programs should be provided to this group of smokers who, through their actions, express interest in cessation. □

Acknowledgments
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References
21. DHHS publication CDC 90-8416.
23. DHHS publication CDC 89-8411.