

# Physician Recruitment for a Community-Based Smoking Cessation Intervention

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## KEY POINTS FOR CLINICIANS

1. We describe a successful method of recruiting physicians into a community-based trial.
2. Our multiphase multifaceted recruitment design included an initial mailing, presentations at local hospitals, clinic and office visits, and follow-up phone calls.
3. Successful recruitment rate was attributed to the enhanced involvement by a physicians, and the minimized research demands in return for participation.

- **OBJECTIVE:** Our goal was to describe a strategy to recruit a population-based sample of physicians to test an approach to disseminate physician-delivered smoking cessation interventions.
- **STUDY DESIGN:** The 3-phase population-based recruitment trial included: (1) a print-based promotional appeal; (2) in-person presentations by the principal investigator (PI); and (3) follow-up calls by the PI and paid physician recruiters. Participation requirements were kept minimal to facilitate recruitment.
- **POPULATION:** All primary care physicians statewide were targeted; 3 counties were chosen as intervention areas and 2 counties as control areas. A subsample of physicians was targeted in the larger control areas through a matching process.
- **OUTCOME MEASURED:** We measured physician recruitment rate.
- **RESULTS:** Eighty-one percent (n=259) of all eligible physicians were successfully recruited into our study.
- **CONCLUSIONS:** The full multistep process was important in getting participation agreement. By using an intensive recruitment strategy and minimizing research demands, it is possible to recruit community-based primary care physicians for research projects that will help them enhance the preventive services they provide to their patients.

**key words** Smoking cessation; physician recruitment methods [non-MESH]; health services research. (J Fam Pract 2002; 51:70)

Controlled research trials have demonstrated that physician-delivered smoking interventions are an effective means of increasing quit rates among patients who smoke.<sup>1-4</sup> However, these trials involved samples of physicians-in-training or volunteer physicians that were not representative of the general primary care physician population. Furthermore, the percentage of eligible physicians who participated in community-based trials ranged from 5% to 50%,<sup>5-9</sup> and obstacles to practicing physician' participation in research are now greater than ever.<sup>10</sup>

Physicians Counseling Smokers (PCS) is a National Cancer Institute-funded phase IV trial that tested the effectiveness of an approach to disseminate physician-delivered smoking cessation interventions.<sup>11,12</sup> Because this was a dissemination trial that would assess smoking outcomes at a population level, it was necessary to recruit a very high percentage of practicing primary care providers within the discreet geographic areas. The objective of this paper is to describe the process of recruiting a population-based sample of physicians.

## ■ METHODS

### Identification of intervention and control areas

The entire state population of primary care physicians was targeted for recruitment. Three counties served as intervention areas; the 2 smaller counties (Newport and Washington) were combined to approximately match the size of the third (Kent). These 2 geographic areas were chosen for intervention because it was feasible to intervene with the total estimated number of physicians (n=100) in each area. Saturation of intervention areas was important because patient level outcomes were being assessed with random digit dial techniques.<sup>15</sup> The largest and smallest counties (Providence and Bristol) were combined to serve as the control area.

Given the comparatively large number of physicians in the control area, a subsample of these physicians were targeted for recruitment. This subsample was created by matching the intervention sample on gender, practice specialty, and years since graduation from medical school. In addition, the control sample was matched at a rate of 1.5 times the mean of the number of eligible physicians in the 2 intervention areas. Eligible physicians in the intervention and control areas practiced in community health centers, colleges or universities, private practices, and a state-wide staff model health maintenance organization. Five large urban public health clinics in Providence, Rhode Island, were not targeted because there was no comparable group of urban public health clinics in the intervention areas. We targeted physicians for enrollment because they were most often the key decision makers, both for consent for the office to participate and for their influence over change in practice patterns. Further, the NCI model being disseminated had been previously tested on physicians. However, once the office was enrolled, all clinicians were invited to participate in sessions with our practice consultants.

We did not include practice-based midlevel providers since the purpose of the study design was to assess the NCI smoking cessation recommendations for physicians, which was a model that had previously been tested specifically on physicians. Also, to conduct a practice-based study, the consent of the physicians is necessary. Our emphasis was to establish physician buy-in so that we could enhance our ability to conduct the intervention and involve all practice-based clinicians.

### Identification of the physician sample

To be eligible for participation in PCS, physicians had to (1) have a primary care specialty; (2) provide regular, ongoing care to at least 25% of their patients; (3) practice in a nonhospital-based location; and (4) intend on being available during the 3-year evaluation period.

A Health Department list of all physicians licensed in the state was obtained to identify potentially eligible physicians, and the list was supplemented with a private directory of physicians who practice in the state.<sup>16</sup> Medical staff lists from local hospitals, health maintenance organizations, and community health centers were used. Office addresses were further verified by phone.

## **Recruitment strategy**

The multi-stepped recruitment process included 3 phases. Phase 1 of recruitment included widespread promotion through various forms of written communication in which the important role of physician involvement in smoking cessation efforts was emphasized.<sup>1,7,17,18</sup> based on the work of Rogers<sup>19</sup> and Lomas and coworkers,<sup>20</sup> an advisory board made up of local, influential physicians was formed to assist with recruitment efforts during the Phase 1. Board members were selected from various physician and health-related organizations throughout the state. The advisory board was designed to serve as a linkage system<sup>21</sup> between research intervention offerings and community physicians.

A mailed invitation to participate was sent on advisory board letterhead, under the signature of the medical director of the state Health Department and the president of the state medical society. The mailing included information about the study, an enrollment form that assessed eligibility, and a consent form for participation along with a postage-paid return envelope. Mailed postcards and telephone calls from research staff were used as follow-up for those who did not respond to the initial mailing. In addition, public relations departments at the State Health Department, state medical society, 3 community hospitals, and a regional metropolitan newspaper were asked to include a brief article about the study in their newsletter or newspaper, which they all did.

Phase 2 of the recruitment process involved making appearances at local hospitals and visits to practices and clinics. Physicians had an opportunity to enroll at department staff meetings following presentations that were made by the principal investigator and staff. In addition, individual meetings were scheduled with a small number of physicians who requested this. Also, members of the physician advisory board were asked to make brief phone calls to a small number of their physician colleagues to solicit their participation in the study. Physicians who enrolled during these 2 phases were also encouraged to talk to their colleagues informally about participating in the project. Phase 3 of the recruitment process focused on enrolling remaining eligible physicians. Paid physician recruiters were hired to assist the principal investigator in making telephone contact. Physicians who could not be reached by the paid recruiters also received a phone call from the principal investigator. Early outreach required participant initiative for enrollment, therefore all refusals occurred during telephone contacts in Phase 3.

## **Participation requirements**

Participation requirements were kept minimal to facilitate and encourage enrollment of all eligible physicians, regardless of their readiness to adopt smoking interventions.<sup>12,19,22,23</sup> To enroll, physicians had to agree to complete 3 annual, 20-minute surveys and allow 20-minute assessments of the office environment to determine smoking cessation tools and resources available to patients and providers. This latter assessment was conducted with one of the office staff in order to minimize time demands of the physician. The intervention was designed to test an approach to gain enhanced access to physicians in their offices. Acceptance of intervention visits from research staff was optional in order to encourage participation of physicians with a broad range of interest and readiness to adopt smoking cessation interventions.

Upon return of their completed baseline survey, physicians in the intervention were offered information based on their readiness to enhance their cessation efforts, samples of patient education materials, a poster listing local smoking cessation programs, and the NCI physician manual, "How to Help Your Patients Stop Smoking."<sup>24</sup> Physicians in the intervention area were offered various resources and training opportunities to enhance smoking cessation interventions in their office. Research staff, trained as consultants to deliver tailored interventions based on an academic detailing approach, scheduled intervention meetings to be most convenient for the physician and office staff. While physician attendance at intervention meetings was encouraged, physicians were offered the option of designating office staff to meet with the research consultants. The goal was to meet with physicians or designated staff roughly 4 to 5 times during

the intervention year. No adoption of cessation efforts were required. Physicians in the control area were offered the same manual after completing their baseline survey and the opportunity to receive the other resources and participate in counseling skills training at the end of the intervention period.

## ■ RESULTS

Of 2316 licensed physicians in Rhode Island in 1989, 822 were identified as meeting the primary care specialty criteria, based on information provided in the listings used: 557 from the control area and 265 from the 2 intervention areas. Of the physicians from the control area, 202 were matched to the physicians from the intervention areas and became part of the sampling frame. Initial contacts to physicians in the sampling frame determined that an additional 148 were not eligible. The majority of these did not meet the requirements for primary care due to not practicing in a primary specialty or not providing regular, ongoing care to at least 25% of their patients.<sup>25</sup> Others had moved from the state, retired, or died. After elimination of physicians who did not meet eligibility criteria, 187 intervention area physicians and 132 control area physicians remained in the final pool of physicians eligible for recruitment. Less than 10% of recruitments responded to the initial mailing, and another 10% were recruited directly from the in-person presentations at department meetings.

Eighty percent of recruitment came from Phase 3, from phone calls by the physician recruiters. Approximately two thirds of study participants were recruited by the principal investigator. However, the ground work from publicity, endorsements from physician leadership, and familiarity with the aims of the trial were clearly important in getting agreement during the recruitment phone call.

Among all eligible physicians, 81% (N=259) were successfully recruited into the study: 80% (n=106) of targeted control area physicians (Providence/Bristol); 85% (n=88) of physicians in the first intervention area (Newport/Washington); and 77% (n=65) of physicians in the second intervention area (Kent) were enrolled. Characteristics of the sample are displayed in **Table 1**.

The 18% of physicians who refused to take part cited the following reasons for not participating: (1) they preferred not to participate in studies or fill out surveys; (2) they had a shortage of resources and did not have the time; (3) they were undergoing significant staff turnover or felt that their office staff were already overburdened; (4) they felt they were already providing effective smoking cessation interventions to their patients; or (5) they did not accept smokers into their practice. Chi square tests indicated that refusers were significantly more likely to be male ( $F=6.5$ ,  $P < .05$ ) and to have been out of medical school for more than 25 years ( $F=20.7$ ,  $P < .001$ ). Less than 5% of eligible female physicians refused to participate as compared with 21% of men. Medical specialty did not have a significant impact participation in this study.

## ■ DISCUSSION

Results of the multi-faceted recruitment approach used in the Physicians Counseling Smokers project demonstrate that it is feasible to enroll a population-based sample of primary care physicians into a dissemination trial. We were successful at recruiting a representative sample of community-based physicians. It was our goal to saturate our target geographic area to obtain a truly population based sample. We succeeded in achieving this, recruiting 81% of eligible physicians. It is noteworthy that we were able to retain 88% of enrolled physicians at the end of the 3-year study period. This reinforces that physicians were willing and able to keep their minimal commitment to complete the annual assessments. The most common reason for drop out was leaving the practice/moving out of state.

Recruiting physicians and practices into community-based trials is a challenging process, and several investigators have examined the effectiveness of different recruitment strategies. Recruitment efforts have evolved from a single mailing method to a multi-stepped process. Kottke and colleagues<sup>13</sup> assessed and compared mailed recruitment methods for primary care physicians in Minnesota for a 1-month office-based smoking intervention. Eligible family medicine physicians (n=1100) were mailed a brochure alone or a brochure with an explanatory letter signed by one of the investigators on university letterhead or by an investigator on a state Academy of Family Physicians letterhead. Ten percent of eligible physicians responded and no difference between brochure alone or brochure plus letter groups. In a

second study, the brochure only mailing strategy was used again to recruit 1108 general internists and cardiologists on the mailing list of a state Medical Association into a one-year trial. Five percent responded and 2.7% participated. Dietrich and colleagues<sup>14</sup> used a multi-faceted approach to recruit community-based physicians into a randomized trial to increase cancer prevention practices. Of 628 eligible family physicians and internists in Vermont and New Hampshire, 234 physicians (37%) agreed to participate. Physicians with name recognition in their communities assisted with recruitment **Table 2**.

Since PCS was conducted, recruitment strategies targeting community-based individual physicians and practices for cancer prevention studies have evolved from single mailing techniques to more common use of multi-step approaches, including face-to-face visits, advisory boards, and physician phone calls **Table 3**. Participation incentives including honorarium, office staff trainings, and patient materials are often included to enhance recruitment rates,<sup>25,26</sup> but even substantial physician incentives do not guaranteed high participation rates.<sup>10</sup>

In reviewing these studies, it is difficult to assess the impact of each specific recruitment strategy used. However, the in-person appearance of the principal investigator, a physician, appeared to have a major impact on physician enrollment. Earlier studies<sup>7,13</sup> producing lower recruitment rates did not involve this in-person meeting component, and Asch's review of physician recruitment studies supports the importance of personal contact. Two recent community-based physician office recruitment trials included in-person office visits.<sup>25,26</sup> In addition to office and clinic visits, in PCS the principal investigator was also present at hospital departmental meetings and gave grand rounds at these hospitals.

Another successful strategy demonstrated in PCS was involvement of the principal investigator in calling physicians who were difficult to recruit. Although nonphysician PCS research staff made concerted efforts to assist with recruitment, their access to the physician by phone was often limited by gatekeepers within the office. PCS demonstrated that, although time intensive and costly, the use of a physician recruiter may be necessary to recruit a representative sample, for example, with at least 75% of eligible physicians, into a dissemination trial. Although difficult to assess the impact of the impact of these preliminary phases, it was also evident that the work completed in Phases 1 and 2 created familiarity and laid the groundwork for the Phase 3 calls.

Obtaining support of prominent local physicians, and involving many in our advisory board, contributed to our success. The "RAND" method, which involves influential physicians recruiting community-based physicians,<sup>10</sup> was deemed useful in this study. Similarly, a study which investigated the relationship between medical malpractice claims and physician patient communication, also utilized prominent members of the local physician community as advisory board members who made recruitment calls and endorsed the study introductory letter.<sup>27</sup> In PCS these physicians not only participated in recruitment calls and endorsed the study introductory letter, but also allowed access to hospitals and physicians so that in-person visits and presentations could occur.

Finally, minimizing research demands, maintaining flexibility in scheduling interventions, and offering tailored interventions to meet physician's needs all appeared to enhance recruitment rates. In particular, emphasizing that a low burden will be caused by study participation seems key, as lack of time was cited in our study as a reason for nonparticipation and has been the most common reason given for nonparticipation in other studies.<sup>10</sup> Initial contacts with physicians focused on the individual benefits that each physician would gain from participation. An emphasis was placed on acknowledgment of physicians' time constraints; we emphasized our intent to share resources and tools that would help physicians be more effective with the existent time constraints. Additionally, our study did not require medical office staff to be involved in recruiting patients, nor did it require access to patients' medical records.

Several recruitment strategies used in PCS appeared to be less effective. Use of physician graduate fellows, physicians who were awarded a fellowship for postgraduate study, as a final step to contact and enroll eligible physicians did not appear to contribute to our success. Also, recruitment rates were lower among physicians who were at least 25 years out of medical school. This is consistent with Dietrich and colleagues<sup>14</sup> finding that nonparticipants were significantly older than participants. The reasons for this result are unclear. Perhaps more recently trained physicians are more receptive to participation in a study that targets prevention, or more receptive to participating in research. Another potential reason is that an age-based sampling bias occurred. We know that the majority of our sample were generalists, but we did not measure other variables, such as race or practice setting, that may have also influenced the formation of the sample. It

was a limitation that we did not gather information on background variables that may have influenced the sample makeup, and, in using physician recruiters, there is a potential that a sampling bias will occur.

## Conclusions

There is a growing need to disseminate effective strategies to assist physicians with the delivery of preventive services. We were successful in recruiting more than 80% of community-based physicians, saturating a discreet geographic area, into a dissemination trial. The enhanced involvement by a physician investigator and endorsement and efforts by local influential physicians contributed to our success. Additionally, we minimized research demands in return for participation. Studies that have required more physician involvement have not been as successful and may need more intensive recruitment strategies. The relatively low refusal rate in this study suggests that community-based, primary care physicians are interested and willing to participate in research that will help them enhance the preventive services they provide to their patients.

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