

The Power of Videotaped Personal Statements of Patients With Lung Cancer: A Recruitment Strategy for Smoking Prevention and Cessation Programs

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Cigarette smoking continues to be the leading cause of preventable morbidity and mortality in the United States (U.S. Department of Health and Human Services, 2004). Cigarette smoking causes an estimated 443,000 deaths each year, including approximately 49,400 deaths from exposure to secondhand smoke. In 2009, about 21% of U.S. adults were cigarette smokers; 90% of lung cancer deaths among men and approximately 80% of lung cancer deaths among women are related to smoking (National Cancer Institute, 2010). Although 70% of smokers report that smoking is hazardous to health (Viscusi, 1990), rates of smoking have not significantly declined and an estimated 21% of adults in the United States continue to smoke. Patients with cancer are willing to intervene with their families, and family members self-report a decrease in their smoking habits that may be a result of the occurrence of lung cancer in the family (Gerrard & Hingorani, 2001; Schilling et al., 1997). However, professed interest in study participation, unfortunately, does not ensure that family members will then participate in an intervention. The effectiveness of a recruitment strategy when working with patients with cancer and their families can determine the success or failure of the intervention.

Krant and Johnston (1977) reported that families of patients with cancer expressed feelings of tension and helplessness and voiced their desire of finding a way to best help the patient. McBride and Ostroff (2003) identified a cancer diagnosis as a catalyst that can personalize the dangers of smoking, therefore directing the patient and loved ones who smoke toward restoration and maintenance of good health. In addition, relatives of patients with lung cancer who smoke were found to be more inclined to quit than were the family members of patients diagnosed with cancers other

than lung cancer (McBride & Ostroff, 2003). However, a meta-analysis by McBride, Emmons, and Lipkus (2003) showed that the family members' needs and perceptions of the cancer experience often are different from those of the diagnosed patient.

Conceptual Frameworks for Smoking Cessation Programs

Smoking cessation programs have addressed multiple variables that have been shown to be associated with persistence and frequency of use, including smoking among peers, drug use, and poor self-esteem (Flay, Hu, & Richardson, 1998), self-efficacy (Baer, Kamarck, Lichtenstein, & Ransom, 1989), health locus of control (Leventhal & Cleary, 1980), temptation and coping (Shiffman, 1993), parental disapproval (Hansen, Malotte, & Fielding, 1988), beliefs about body weight and smoking and health beliefs about smoking (Cleary, Hitchcock, Semmer, Flinchbaugh, & Pinney, 1988), and the cost of smoking (Silvis & Perry, 1987). The question of what is necessary to motivate individuals to spontaneously stop engaging in a risky health behavior has been a driving force in research. The Health Belief Model (Hochbaum, 1958) was the first model that emphasized the importance of cues to action, or negative health consequences, as a precursor to behavior change. Other models have expanded on behavior change as a cognitive experience in which the individual's interpretation and judgment are determinants of change. A naturally occurring health event (i.e., the development of lung cancer) that motivates individuals to stop engaging in a behavior that compromises health (i.e., smoking) has been identified as a teachable moment. The concept of a teachable moment draws on the Health Belief Model and explains that a cue to action occurs when three constructs are identified as being present:

heightened emotionality, an increased perception of risk, and a change in social norms.

The purpose of this article is to report on a novel recruitment effort used to engage family members of a patient with lung cancer in a smoking cessation and prevention program. Supported by a grant from the Kentucky Lung Cancer Research Foundation, the project was initiated in 2007 with a goal of trying to find a methodology that would break the cycle of nicotine addiction in families by assessing the diagnosis of lung cancer as a teachable moment. The authors identified patients with a diagnosis of lung cancer who were attending the clinic either for a second opinion, tissue typing through biopsy, or an evaluation for surgery through onsite recruitment at a university-based multidisciplinary lung cancer clinic. The patients were approached to see whether they would be interested in participating in a family-based smoking cessation and prevention program. All of the patients approached were eligible for the study unless clinic staff determined that a patient was emotionally fragile; the patient had uncertainty regarding diagnosis; that the lung cancer was not a primary lung lesion, but rather a secondary metastasis; or the patient was too ill to be approached. Potential participants also were required to have a history of tobacco use to be included in the research study.

The smoking cessation and prevention intervention involved several components: a baseline and follow-up assessment of smoking behaviors and attitudes; an education session about the risks of smoking; a personalized message from the patient to his or her family that focused on why he or she did not want family members to smoke; viewing a video entitled "Coach's Final Lesson," a documentary of a high school football coach's battle with lung cancer, which followed him from diagnosis

through death (American Lung Association, 1986); and homework involving interviewing a smoker and observing for community postings regarding smoking cessation. Self-nominated smokers were aware that the level of carbon monoxide in their lungs would be monitored at each session.

The medical institutional review board at the University of Kentucky approved the program development process. Participant consent and, in the case of patients younger than age 18, participant assent and parental consent were obtained for all aspects of the study. Reasons given for not participating included that patients were not interested, had no family members appropriate for the study, and did not feel that family would be interested or would come. The patients with lung cancer who did participate invited all family members aged 11 years or older to take part in the smoking cessation and prevention intervention. The definition of family members was determined by the family and ended up including all family, significant others, and close friends that patients had indicated were "like family."

Overcoming Barriers

The project was modified four times during the 18-month process because of poor recruitment and low participation of family members. A brief description of these alterations follows.

Phase 1. Transcribed verbal statements: Clinic patients were asked to provide addresses of any family members aged 11 years and older who they thought could benefit from a program directed to smoking cessation or prevention of onset of smoking. Patients were then asked to respond to the following sentences.

- "I worry that . . ."
- "I hope that . . ."
- "Smoking . . ."
- "I wish that . . ."

Responses were manually recorded by the research assistant. Letters were then mailed to the identified family members, explaining the study and how their names and addresses had been obtained. During recruitment, the patient was informed that his or her personal statement was to be a part of the intervention and would be conveyed to family members at the time of the intervention. The family members also were informed in the mailings that the patient had made a statement that would be conveyed to them as part of the cessation and prevention program.

Phase 2. Tape-recorded statements and mail contact: The authors then began to tape record patients' responses and again mailed information on the smoking cessation and prevention program to the family to inform them that their family member had tape recorded a personal message regarding smoking. Ten patients agreed to be tape recorded. Again, no responses to mailed information were received.

Phase 3: Tape-recorded statements, phone contact, meeting family midway, and key family member: When mail contact did not yield any participants, the authors surmised that personal contact by phone was needed. At this time, the authors asked the patients for permission to identify and call a "key" family member identified as the one that had the most contact with family members. Sixteen patients agreed to be tape recorded and to have the key family member contacted by phone. Three of the sixteen families who were contacted participated in the intervention. Although increased interest was seen, families reported that travelling the distance to the study site was a hardship because many of the patients resided 70–100 miles from the clinic. To deal with this barrier, the authors decided that, for families living greater than a one-hour drive from the clinic, the authors would meet them at a location equidistant from the clinic and their home (e.g., libraries, churches).

Phase 4. Videotaped statements, phone contact, meeting family midway, and key family member: The authors observed that the patients had commented repeatedly how important this program was to them and their wish for family members not to have to go through what they were going through. Their emotion and passion regarding smoking cessation and prevention was clearly evident. Their comments were moving, and the authors felt that the families also should be seeing this firsthand.

After the patient consented to participate in the project, videotapes were made in the clinic using a handheld video camera. Participants showed no hesitation to this innovation. Their comfort with the videotaping was evidenced in their occasional jokes that they needed to put on their makeup or comb their hair. At the end of the videotaping, they were offered the opportunity to view their video, and all did so. Family members who were in the examination room commented on what a good job they had done or how good they looked on camera. The key family member was then contacted by

phone to inform the rest of the family that the patient had made a videotaped personal statement regarding smoking, and the family was invited to participate in a smoking cessation and prevention program. They were told that viewing a videotape would be a part of the intervention. In addition, they were told that the family would receive a copy of the video at the conclusion of the intervention.

Observations and Discoveries

Personal statement changes: With the implementation of the videotaped statement, the answers to posed questions and prompts became much longer. Instead of a sentence completion, some patients embarked on soliloquies. Patients addressed family members by name, such as, "Joey, I am really worried about you," and, on occasion, pointed directly at the camera while addressing family members. Making the videotape elicited increases in the amount of emotion displayed. When the authors began videotaping the patients, family and staff members in the examination room were sometimes moved to tears. This had never happened with tape recorded or transcribed personal statements.

In several instances, patients who had previously been tape recorded returned to the clinic for another appointment. The authors approached these patients again and asked whether they would now be willing to make a videotaped statement, and all agreed. The authors then compared these patients' original tape-recorded responses to the videotaped responses. Responses on the videotape were longer, more direct, personal, and emotional than tape-recorded responses (see Table 1).

Increased interest: Initially, when calling family members about the study, identifying the study personnel and giving a short description of the study were necessary because family members had no information regarding what the authors were calling about. After the implementation of the video, it no longer was necessary to explain what the study was about. Family members were clearly anticipating the recruitment call and made comments such as, "We wondered when you would be calling about the video," "Dad told us about the video he made," "How soon can we come to see the video?" and "Do we get a copy of the video?" Wanting to "see the video" was a common phrase and many families had already gotten together to come up with dates that would work for everyone in

Table 1. Comparison of One Patient's Audiotape Versus Videotape Interview

Audiotape	Videotape
"I worry that . . . side-stream smoke will affect my children."	"I worry that . . . side-stream smoke may affect my children. They do not smoke. They have never smoked. One does chew, the oldest one. He chews tobacco and I would really like him to quit. I don't think he does it as a constant thing, but if he's out on the lake with other men and they offer him tobacco, he'll do it with other people."
"I hope that . . . my children never smoke, or grandchildren either."	"I hope that . . . they are never around cigarettes or tobacco of any sort."
"Smoking . . . is deadly and I found out the hard way."	"Smoking . . . is a terrible, filthy, dangerous habit. Well, it's not a habit, it's an addiction. But, it can be broken. And, what I really found was that you're gonna want to smoke regardless. If you smoke now, 10 minutes from now, you're gonna smoke again. You'll never get through wanting to smoke. So, you might as well not smoke, cause you'll still want to smoke. I mean, you can't win. If you've ever smoked, you let yourself in for a bad, bad time because, and so I figure, if I want to smoke I'll not smoke because, that is if I go ahead and have a cigarette, it wouldn't be five more minutes. It's just a vicious cycle and you can't . . . you're never satisfied with cigarettes."
"I wish that . . . I had never smoked and I wish that I had been more aware of the dangers. At the time that I started smoking in high school, the only drawback that they knew was it would shorten your height and, you know, we were girls and we really didn't care."	"I wish that . . . that I had never fooled with them. I wish I had never thought of them and I certainly wish that I had never . . . you know . . . and I really like cigarettes. I mean it wasn't something that I made myself do. It just seemed as natural . . . and I must have been about 12 years old and I was hooked in a week, or maybe less. And, of course, any addiction escalates and, by the time I quit, I was smoking a couple packs of cigarettes a day."

the family. Being able to view the video was a major priority.

Increased participation: Twenty-six patients made audiotapes and four family dyads (15%) responded to the invitation to participate in the study. The four family dyads recruited a total of 12 additional family members to the intervention. Twenty-eight patients made videotapes; 14 family dyads (50%) responded. The 14 that responded led to 72 additional family members participating in the intervention. Seven of the participants, following the videotape session, completed the intervention. None of the tape-recorded patients participated in the intervention. An increase in the number of family participants who completed the intervention in the videotape group also was noted. In the tape-recorded group, only 7 (58%) completed the intervention, but 61 (84%) in the videotaped group completed the intervention (see Table 2).

Discussion of Barriers and Family Processes

Many barriers were identified during recruitment for a smoking cessation and prevention program targeting the families of patients with lung cancer and may require modification of standard recruitment strategies. The authors did not encounter clinical gatekeepers unwilling to have their patients approached. The

clinical staff in the multidisciplinary clinic was welcoming and enthused about the study. From the outset of the project, a consistently high level of interest existed on the part of the patients; this did not change with recruitment strategy. Patients were ready and willing to participate in a program that might reduce smoking by their family members, whether it included a tape-recorded or videotaped message. However, they were clearly much more effusive and engaging in the videotaping compared to the audio recording and conveyed that enthusiasm to family members. The authors noted that the level of interest of the family members was very different from that of the patients with lung cancer—until the implementation of the videotape, as evidenced initially by a poor family response rate. Once the videotape was implemented, patient

enthusiasm and interest matched family member enthusiasm and interest.

The authors' experience with non-participation difficulties and attrition in smoking cessation and prevention programs prior to the videotape intervention was similar to that in other studies. However, when the patients' personal statements were videotaped, issues with recruitment, participation, and attrition were dramatically reduced. Major differences were noted in several areas: as staff and patient investment increased, personal statement length increased, family recruitment was much easier, family participation increased, and study attrition decreased. The initiation of the videotape clearly contributed to mobilizing the social network of the patient's family and dramatically increased participation.

The patients were very interested in having their family members participate

Table 2. Participation in the Audiotape Versus Videotape Groups

Group	Families Agreeing to Participate		Participating Patients		Family Members Beginning the Intervention		Family Members Completing the Intervention	
	n	%	n	%	N	n	%	
Audiotape	4	15	—	—	12	7	58	
Videotape	14	50	7	25	72	61	84	

Note. Each group was accompanied by phone contact and meeting participants at an equidistant location from the program site, if needed.

and felt that their family members would feel the same. However, it was not until the introduction of the videotape that family members' perception of a need to participate coincided with that of the patient. Families may be overwhelmed in multiple ways when a diagnosis of lung cancer is given, and the knowledge that the diagnosed patient took the time to make a personal video could have provided a strong incentive for participation in a smoking cessation and prevention program.

Based on the authors' experiences from this project, healthcare providers working with patients with cancer can approach their patients and their family members with the knowledge and confidence that a smoking cessation intervention, even at this difficult time, is welcomed by both groups. The importance that healthcare providers place on patient and family relationships, and the power of family members to motivate healthy behavior change, was demonstrated in this project.

Although the project was not designed to test the optimal strategy for recruitment for family members of patients with lung cancer into a smoking cessation and prevention program, the authors were able to observe enhanced participation as new strategies were implemented, including identifying a key family member, meeting the family half way, and, most importantly, using a personalized video statement from the patient. The videotaped statement may provide a personal connection between the patient and family members during a time of high emotion that can enhance recruitment and promote retention in a smoking cessation and prevention program.

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Leadership & Professional Development

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