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Continued Family Smoking After Lung Cancer Diagnosis: The Patient's Perspective

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Creating the conditions for sustained tobacco reduction and cessation after a lung cancer diagnosis is challenging. The difficulties of smoking cessation in patients with cancer have been described (Clark et al., 2004; Cox, Patten, et al., 2002; Cox, Sloan, et al., 2002; Walker, Larsen, Zona, Govindan, & Fisher, 2004). However, the smoking behaviors of relatives of patients with lung cancer have received little attention, and few researchers have developed smoking cessation programs tailored for family members. Although spouses often continue to smoke after a patient is diagnosed (Sarna, 1995), less is known about the smoking behavior of other relatives. Lung cancer diagnosis has not been a consistent motivator for smoking cessation among relatives (McBride, Pollack, et al., 2003). The presence of family members who smoke increases the risk of exposure to secondhand smoke, access to cigarettes, and difficulty of cessation efforts in patients and may cause anger and resentment toward the family members (Zang & Wynder, 1996). In addition, spouses' continued smoking may be a source of conflict in the context of lung cancer diagnosis (Badr & Taylor, 2006).

Researchers have suggested tailoring cessation interventions for family members based on relationship factors (e.g., immediate versus extended family) and relatives' distress levels (McBride, Pollack, et al., 2003), but additional research is needed to clarify the influence of intrafamily effects on smoking and smoking cessation. An understanding of families' methods for addressing tobacco reduction could help develop tailored tobacco reduction interventions. As a result, this article will report on a qualitative pilot study to address how patients with lung cancer interact with family members who smoke after a lung cancer diagnosis (Bottorff, Robinson, Nelems, & Humer, 2007).

Purpose/Objectives: To explore the influence of lung cancer diagnosis on interpersonal dynamics in families in which one or more members continue to smoke following diagnosis.

Research Approach: Descriptive, qualitative.

Setting: Three cancer care sites in western Canada.

Participants: 16 participants from 8 family dyads.

Methodologic Approach: Patients with lung cancer receiving treatment and immediate family members were recruited to participate in individual or conjoint semistructured interviews. Thematic analysis was conducted on transcribed interviews.

Main Research Variables: Intrafamily interaction patterns, smoking and smoking cessation, lung cancer diagnosis.

Findings: Following diagnosis, patients with lung cancer experienced considerable distress as they struggled to understand family members' continued smoking. Patient orientations to family members who smoked included *preserving relationships* (maintaining harmony and connection with family members took priority over directly intervening with smokers) and *risking relationships* (patients repeatedly confronted family members about continued smoking to influence their cessation despite the impact on relationships). Neither pattern was successful in engaging relatives in smoking reduction or cessation, and the risking relationships approach resulted in conflict and strained family relationships.

Conclusions: The findings provide additional support for examining family dynamics related to tobacco reduction and cessation as well as directions for future research.

Interpretation: Nurses should encourage tobacco reduction as a supportive intervention for patients with lung cancer and their families to eliminate smoking-related distress.

Methods

This descriptive, qualitative study was informed by grounded theory methods (Strauss & Corbin, 1998). In the present study, *family* is defined as individuals identified by patients as relatives. Sampling units consisted

of a person with lung cancer and one immediate family member. Participants were recruited through local organizations in western Canada that provide service to patients with lung cancer. Ethics approval was granted by institutional review boards, and all participants gave informed consent. The study sample included eight family dyads. Seven dyads were interviewed together; one was interviewed individually.

Indepth, semistructured, audiorecorded interviews were conducted by a trained interviewer (see Figure 1). Participants were offered the choice of conjoint or individual interviews. Interview questions focused on generating perspectives on the role of tobacco in family functioning and the influence of lung cancer diagnosis on tobacco use and reduction, secondhand smoke exposure, and family dynamics related to smoke exposure before and after diagnosis. A brief questionnaire was used to obtain demographic information and smoking history. Field notes were written to capture observations of general responses to the interview, including nonverbal interactions, context, and the interviewer's impressions.

A thematic analysis using constant comparative methods was conducted with transcribed interviews and field notes. The research team reviewed data independently, then negotiated codes together and developed the coding framework. Data were coded and retrieved

with the qualitative software program NVIVO, then compared to generate themes.

Results

Most participants with lung cancer were women ($n = 6$); all but one had quit smoking before the interview (see Table 1). Participating family members included partners ($n = 5$), siblings ($n = 1$), and adult children ($n = 2$). At the time of the interview, four participating family members were smokers.

The patients in the current study experienced a heightened sense of vulnerability for themselves and their family members following their diagnosis. Although all patients felt fear and concern, they differed in their response to family members who continued to smoke.

Vulnerability Associated With Lung Cancer Diagnosis

The influence of lung cancer diagnosis on attitudes toward smoking was felt most profoundly by the patients. Although most patients reluctantly linked their disease with smoking, some attributed their diagnosis to bad luck. Regardless, the disease and its treatment were frightening experiences for most. Fear precipitated

Perspectives Regarding Diagnosis

- What has the experience been like for you both since the diagnosis? How has your life changed or remained the same?

Perspectives on Smoking in Relation to Diagnosis

- What was smoking like in your family *before* the diagnosis? How has that changed *after* the diagnosis?
- Tell me about a typical day and routines around smoking *before* you were diagnosed. What has changed *since* the diagnosis?
- Tell me about the first conversation your family had about smoking and the diagnosis. What things do you feel you cannot talk about in relation to smoking?
- Evidence suggests that some diseases are related to smoking and secondhand smoke, and some are not related to either. What do you believe contributed to your illness? If other family members were here, what would they say?
- Before the diagnosis, did anyone in your family have concrete plans to reduce or quit? What did your family think about smoking? How has this changed, if at all?

Experiences of Continued Smoking or Tobacco Reduction in the Context of the Diagnosis

- What has your experience been like in quitting, reducing, or continuing smoking since the diagnosis and treatments (for the patient and for family members)? What has been most helpful or difficult?
- What kinds of interactions with family members occur now around smoking? How do family members respond to each others' smoking at this time? In what kinds of situations would the topic of [the patient's] smoking come up? What about anyone else's tobacco use?
- What do you think the experience has been like for other family members as you or they have quit, reduced, or continued

smoking? How did you get a sense of that? What has that meant for your relationships?

- Have you experienced any unanticipated consequences or difficulties for your family as a result of one person stopping or reducing smoking (e.g., strained relationships, changed relationships)? If reduced or stopped, what do you think has replaced tobacco in your life or your family's life?
- What, if anything, is different this time compared to past attempts to reduce or quit smoking?
- Tell me about the rules of smoking in your home. How were the rules established? Did they change after the diagnosis? If so, how were the changes made? (Probe for roles played by family members with respect to the rules.)

Styles of Interaction

- How would you describe the way you and your family members dealt with disagreements before the diagnosis? Has that changed since the diagnosis?
- At times, has quitting, reducing, or continuing smoking become a source of conflict or disagreement?
- How would you describe your family's way of dealing with smoking in a couple of sentences? How does this compare to the way your family deals with other issues (e.g., finances, drinking, eating healthy, exercise)?

Plans for Future and Suggestions

- What are your family's plans or hopes for the future with regard to smoking (e.g., patient's smoking status, family members' smoking status, rules in the house)?
- In terms of developing smoking cessation programs, do you have any suggestions or ideas about what might be helpful for people who have had a diagnosis of lung cancer in their family and want to quit?

Figure 1. Interview Guide

Table 1. Sample Characteristics

Characteristic	Patients (N = 8)	Family Members (N = 8)
	\bar{X}	\bar{X}
Age (years)	65.5	61.5
Characteristic	n	n
Gender		
Male	2	4
Female	6	4
Education		
Less than high school	5	4
High school	1	1
Postsecondary	2	3
Type of family member		
Partner or spouse	—	5
Adult child	—	2
Sibling	—	1
Smoking status (at time of interview)		
Daily smoker	1	4
Nonsmoker	—	1
Ex-smoker	7	3

a heightened sense of risk related to smoking and the effects of secondhand smoke on health and, for some, premature death. A 53-year-old woman with lung cancer explained that although she had wanted to quit smoking, she was not successful until her diagnosis.

Getting cancer was the reason for quitting. . . . Just the thought of smoking [now] scares the hell out of me. . . . Oh! I could never even take a puff [again] because I'm terrified.

The vulnerability experienced by patients resulted in worry and concern about the future health of family members who continued to smoke as well as a sense of urgency to encourage family to quit smoking. A 68-year-old man described his fears for his 42-year-old daughter, a daily smoker for 30 years.

I'm thinking about what's going to happen to her. . . . 'Cause I don't want her to go through this [expletive]. 'Cause she doesn't realize *how* painful it is. It is painful, sweetheart.

Seven of eight participating patients quit smoking before or following their lung cancer diagnosis. Most struggled to understand how their family members, particularly adult children, could continue to smoke after the diagnosis. A 53-year-old woman who had smoked for 42 years but quit at diagnosis reflected on her daughter's health.

Look what I've gone through! How can [she] smoke? She's 27, and she has such a good chance right now. You know, to quit now, she's got the

chance to get it all out of her system, she's still quite young, but, oh, it just drives me crazy.

Patients' concern for the health of smokers in their families also were influenced by fears that lung cancer could have a genetic component. In addition, some patients worried that they may not be present to help relatives get through lung cancer and that they may not have enough time to influence family members to quit smoking.

Orientations to Others' Smoking Behavior

Two orientations described patient responses to family members who continued to smoke. Although both orientations were based in love and concern for family members, they manifested differently. The *preserving relationships* orientation focused on maintaining harmony and connection with family members, such that continued smoking was not a key concern in interactions. Patients with lung cancer disengaged themselves from others' smoking by framing cessation as an individual choice. Some took the position that a gentle suggestion or role modeling successful cessation was the best way to motivate others to quit; others simply supported cessation if family members decided to quit. However, in the *risking relationships* orientation, patients directly confronting family members about continued smoking to influence cessation. Patients were willing to risk sacrificing harmonious relationships because of marked concern for their family members' health. Participating patients with cancer described intense worry for their loved ones who continued to smoke and felt responsible for ensuring change.

The orientations were not mutually exclusive; however, patients tended to adopt one orientation over the other. One patient used the preserving relationship orientation with one family member and the risking relationship orientation with another, indicating that patients' responses to continued family smoking may be influenced by the nature of relationships. Exemplars of the orientations are presented as follows.

Preserving relationships: One woman prioritized relationships with family members over directly addressing her concerns about their smoking behavior. She was similar to other patients in that her diagnosis influenced her to perceive smoking as an increased risk to herself and family members. She had smoked for 46 years, but quit at age 59 after her diagnosis. She joined the study with her 58-year-old sister, who continued to smoke; they agreed to be interviewed together. Of interest was that the sister stated quitting had "never crossed [her] mind" after the patient's diagnosis. Although the patient openly acknowledged that she wished "everybody would quit," she emphasized that she was "not a preacher," which was confirmed by her sister. As a result, matter-of-fact conversations about smoking continued between the sisters as they had

prior to the diagnosis, with an occasional acknowledgement that “lung cancer really can happen to you.” The patient explained conversations about smoking.

No, I think it’s just the same. You always thought that it was going to happen to somebody else, not you . . . [but] this time, the fact [is] it really does happen to you. It’s just that kind of conversation and, you know, like the same old thing, like you know you’re tempting fate when you smoke. Everybody knows that kind of conversation.

The patient was open about her desire for her sister to quit smoking; however, her sister was open about her ambivalence toward cessation. The sisters gently accepted each other’s position during the interview, and the topic was dropped.

Patient: No, I’ve said to her that she should [quit smoking], because now it’s in the family.

Interviewer: What’s your reaction to that?

Sister: I would like to [quit]. Well, you know, only part of me wants to quit, to be perfectly honest.

Patient: I have brought it up, and then you have to [stop there]. You can’t be a preacher because I know for sure it doesn’t help.

The patient did not let her sister’s smoking change their shared activities after her diagnosis. They travelled together, stopping when necessary to accommodate the sister’s smoking.

Interviewer: Have your routines changed at all when you’re together?

Sister: I don’t think so . . . but I also feel comfortable enough that when I’m ready to smoke that I can say, you know, let’s stop.

Patient: Also, you want to keep a relationship. If I have a friend [and] she would never stop [to let me smoke], so, therefore, you never want to ever go anyplace with her, ever. “I’m not going to see you if you won’t stop and let me have a smoke.” I don’t want to be that person. I want people to come with me, you know?

The patient joined her sister when she stepped outside for a cigarette as she had done many times in the past, but she did not smoke. In this way, the patient continued doing activities with her sister while minimizing her exposure to secondhand smoke, thus sustaining important aspects of their relationship. The patient’s disengagement from her sister’s continued smoking was supported by her belief that smoking and cessation were individual choices. The patient believed that she only could offer support if her sister decided to quit on her own.

The patient dyad exemplified the orientation of preserving relationships. The patient minimized her concerns about the risk associated with her sister’s continued

smoking, believing that she should be supportive of her sister’s choices. The patient felt deeply connected to and supported by her family. Although the patient and her sister showed the strongest pattern of preserving relationships, the behavior was evident in other family dyads. The hallmark of the orientation was the belief that smoking was an individual’s choice. One husband remarked, “She keeps her thoughts [about smoking] to herself.” Patients oriented to preserving relationships believed that telling others to stop smoking would not work and that their new status as an “ex-smoker” put them at risk for being viewed as a “nag” or “preacher” if they encouraged family members to quit. One patient said, “I have met ex-smokers that are the worst, the most judgmental, the most . . . you know, very, very bad.”

Risking relationships: The assertive confrontation of others’ continued smoking was adopted more frequently than preserving relationships. After diagnosis, some patients who were concerned about their health and the health of their family members became vocal about smoking cessation. The desire to protect family members from lung cancer took precedence over concerns about how their actions were viewed. The behavior was sometimes supported by a dislike of smokers and smoking, despite selectively excluding close relatives who smoked. Although all participants worried about nagging or becoming “the dreaded ex-smoker,” their behavior often became demanding and sometimes was aggravated by irritability caused by nicotine cravings.

A 62-year-old woman, who had smoked for 25 years prior to her diagnosis, participated in the study with her 40-year-old daughter, who continued to smoke. The mother and daughter were interviewed separately. The daughter gave her account of what happened following diagnosis.

When mom was diagnosed, she came and told me; she made me promise I’d quit smoking. And I did, I made her that promise. And I haven’t stuck to that promise yet, but I will. I told her I didn’t say when. I’m trying.

Despite possible negative repercussions, the mother admitted to sounding more and more “frantic” over time as she confronted her daughter about smoking. She believed that she could deal with increased worry about her daughter’s health as well as her disdain for the smell of cigarettes and smoking only through confrontation. Acutely aware of her own vulnerability, the mother disclosed that she worried “way more now,” fearing that she might not be present to help if her daughter developed lung cancer.

When she smelled smoke on her daughter, she often commented, “Gee, you smell like tobacco.” She took every opportunity to address smoking (including her daughter’s asthma diagnosis), justifying her confrontations as requests to keep conversations about smoking

open rather than demands. She provided examples of what she said to her daughter: "I'd rather you didn't, you know. I wished you would quit, but I don't say you've got to quit." Although the patient was aware that confronting her daughter's smoking was negatively influencing their relationship, she continued to do so.

She's 40 years old, you know. She's not my little girl that I can take her cigarettes away and say, "You're not going to smoke anymore." . . . I [nag] all the time because I don't want her to start lying to me and saying, "Well, I did quit, mom," just to shut me up, you know?

The daughter described her mother as an incessant "nagger" who was unsupportive of her efforts to cut back on smoking.

Just because she'd nag at me. She wouldn't say, "Good for you, at least you're trying." She'd come right out and say, "You promised me!" and get mad at me that I was still smoking.

The patient's efforts to influence her daughter's smoking were not successful, and at the time of the interview, she did not know what to do next. The risking relationships orientation to family members' smoking resulted in significant tensions among family members and the patient. The mother was acutely aware of the negative impact of her nagging as well as the stress that worry was causing her at a time when she needed to be concerned about her own health. However, she was unable to cease confronting her daughter.

I have to keep trying to talk to her. See what she needs to help her, maybe having me butt out would be. I don't know, maybe it's rebellion. I don't know what it is with her. She just can't seem to quit. . . . I worry about it, but there's nothing I can [do]. I've got so many worries already. I shouldn't stress about it, but she's important to me, so I don't know what the answer is. [I feel] helpless. . . . I don't know how to help her. I would like to give her the strength, but there's nothing I can do.

In summary, the risking relationships orientation is a reflection of patients' deep concern for close relatives who smoke and a resolve to protect others from lung cancer. Patients who adopted this orientation were caught in a cycle of needing to influence change while experiencing negative outcomes and helplessness. Despite being motivated by good intentions, the patients' actions and the continued smoking of relatives added additional tension to relationships and increased worry as well as frustration.

Alternating orientation patterns: One family demonstrated the selective use of preserving as well as risking orientations. A 53-year-old woman who quit smoking after diagnosis became upset and confrontational with

her family about their smoking. Her behavior may have been motivated, in part, by the seriousness of her diagnosis; she had metastases to the brain. She became aggressive with her husband and admitted to nagging, weeping, and bullying him to quit smoking. Smoking had been an important part of her relationship with her husband, and she felt left out of their social interactions after she quit. Although he initially ignored her pleas, he eventually quit smoking, an accomplishment partially attributed to her direct efforts. Smoking-related tension between the husband and wife dissolved with his cessation, which provided the present study's only evidence that confronting smokers may inhibit smoking behavior. More evidence suggested that confrontation actually increased smoking behavior. The husband explained,

I'd continue to smoke outside like I always did, but I would smoke a little less than I did before. But, it really wasn't [less smoking], because I'd make up for it later when I was at work or away from home. 'Cause then I would just smoke more to make up for cigarettes I didn't have at home because of [my wife].

The patient also confronted her 27-year-old daughter, who promised to quit smoking. However, the mother admitted that her supportive efforts sounded like "nagging" and strained the mother-daughter relationship. She initially discussed smoking with her daughter to encourage her to quit. However, the daughter reacted angrily to the suggestions and reminders, creating an uncomfortable tension in their relationship. The patient began to avoid the topic of smoking altogether to minimize the potential for continued conflict and being perceived as a "nag." She reasoned that her daughter should make the decision to quit on her own. The patient believed she could be an important source of support if her daughter quit smoking. She was adamant that her daughter's continued smoking would not change their relationship.

As much as I dislike her smoking, she's still my daughter, and I love her dearly. . . . Whether she smokes or not, or does drugs, or, you know, whatever she does, she's still my daughter.

Drawing on mutual respect, the mother and daughter continued to be involved in joint activities, even those that involved smoking. The patient demonstrated that when direct confrontation of continued smoking threatened her relationship with her daughter, she was able to reorient to a relationship-preserving approach.

Discussion

The current study is the first to provide detailed descriptions of the ways patients with lung cancer respond to family members' continued smoking and

the challenges they experience in influencing tobacco reduction among relatives. Although components of individual behavior (e.g., attitudes, motives, other psychological qualities) have been the focus of health behavior change theories and health-promotion practices, the current study's findings support focusing on collective behavior in family settings to understand processes that influence health behavior change (Buntton, Murphy, & Bennett, 1991; Falba & Sindelar, 2008) and including kinship networks in which immediate and extended relatives share strong family ties. The findings particularly support continued research examining the social dynamics of cigarette smoking and the influence of family relationships. Such research may help develop perspectives on nonindividual factors that contribute to the persistence of smoking, despite obvious health risks, and improve the understanding of collective processes of change (Bottorff et al., 2005; Doherty & Whitehead, 1986; Lewis et al., 2006; Rohrbaugh et al., 2001).

Two types of orientations that patients with lung cancer use in their interactions with family members who smoke were identified: preserving relationships by disengaging from others' smoking behavior and risking relationships by confronting smokers. The intrafamily interaction patterns support previously identified patterns of couple interaction that were found to maintain smoking behavior (Shoham, Rohrbaugh, Trost, & Muramoto, 2006) as well as influence tobacco reduction efforts (Bottorff et al., 2006). The orientation used by patients appeared to be influenced by the nature and importance of existing relationships, how smoking behavior was constructed (e.g., individual choice), beliefs about how best to influence smoking behavior, and level of concern for the smoker's health.

Patients with lung cancer experience decreased psychological well-being and increased feelings of burden, stress, and social stigma as a result of their diagnosis (Henoch, Bergman, Gustafsson, Gaston-Johansson, & Danielson, 2007; McBride, Emmons, & Lipkus, 2003; Sarna et al., 2005); in addition to dealing with their diagnosis and their own efforts to stop smoking, some patients with lung cancer also may develop significant levels of distress and worry about continued smoking among their family members. Although the distress may be related, in part, to locus of control beliefs (i.e., the disease is under one's personal control), patients in the present study linked first-hand experiences with lung cancer and its treatment to their heightened concern for relatives who smoke. Neither orientation appeared to alleviate worry or motivate smoking cessation. Rather, the results were tension and sometimes conflict within relationships. Conflict between intimate partners also has been observed in other contexts in which health conditions indicated a need for tobacco reduction and individuals were reluctant to quit

(Bottorff et al., 2005). However, in patients with lung cancer, relational turmoil with close relatives about continued smoking may be accompanied by the added risk of losing crucial support from family members; patients who used the preserving relationships orientation with family members who smoked and had more equanimity in their relationships with family members had better relations.

In drawing implications based on study findings, several limitations should be considered. The findings of this exploratory, descriptive study are limited by the small, culturally homogeneous sample, in which most patients with lung cancer were women. However, the findings provide a useful starting point for considering directions for practice. The findings stress the importance of providing advice related to smoking cessation. In a family with a lung cancer diagnosis, the disease does not appear to be a strong motivator for family members to reduce or cease tobacco use. Others have reported similar findings that family members often associated a patient's diagnosis with initial worry for their own risk of lung cancer and an intention to quit; however, few participants succeeded in smoking cessation (McBride, Pollack et al., 2003; Sarna et al., 2006). The findings do not support the results of a population-based study that the improved health habits of a spouse increased the likelihood of the other spouse making similar changes to their behavior (Falba & Sindelar, 2008).

Optimistic bias may explain why family members continue to smoke despite having first-hand knowledge of associated consequences. The difficulties encountered by patients in motivating family members to reduce or stop smoking suggest that healthcare professionals should advise relatives who smoke about their personal susceptibility to lung cancer, encourage tobacco reduction, and provide smoking cessation resources. In addition, McBride, Pollack et al. (2003) recommended that smoking cessation be encouraged as a strategy for adaptive coping because family members may use smoking to manage distress related to their loved one's lung cancer diagnosis.

The findings also stress the importance of involving family members in supporting tobacco reduction in patients with lung cancer. Several patients in the present study talked about relatives smoking in their presence, including in their homes and cars. The practices often were part of well-established patterns of family interaction, and family members demonstrated little understanding or acknowledgement of the health risks posed to patients with lung cancer, including the risk of smoking relapse. Because of the potential for disturbing family relationships, patients should not be encouraged to intervene with family members who smoke. Rather, nurses and other healthcare providers could intervene directly with family members to encourage them to

protect patients with lung cancer from exposure to secondhand smoke, assist with establishing new patterns of interaction that do not involve smoking, and enlisting their involvement in collective efforts to reduce tobacco use. In a small pilot study by Shoham et al. (2006) of 20 couples in which one partner had a heart or lung issue exacerbated by smoking, cessation was found to be more successful among a small number of couples who viewed smoking as "our problem," protected their relationship during the quit phase (e.g., finding ways to engage in important conversations and shared activities without smoking), and conjointly chose and prepared for a quit date.

Conclusion

The findings indicate the potential for heightened distress among patients with lung cancer when family members smoke and the importance of encouraging tobacco reduction among family members as a supportive intervention for patients. Additional research with

diverse samples is needed to evaluate and extend the framework of interaction patterns. In addition, the influence of gender differences on tobacco-related interaction patterns should be explored. Family units in which a lung cancer diagnosis has prompted relatives to stop smoking also should be studied to determine other relationship and interaction factors.

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