European Journal of Oncology Nursing 20 (2016) 199–206

Contents lists available at ScienceDirect

European Journal of Oncology Nursing

journal homepage: www.elsevier.com/locate/ejon

Recruiting family dyads facing thoracic cancer surgery: Challenges and lessons learned from a smoking cessation intervention

Karen Kane McDonnell [a, *], Patricia J. Hollen [b, c], Janie Heath [d], Jeannette O. Andrews [a]

[a] University of South Carolina College of Nursing, 1601 Greene Street, Columbia, SC 29208, USA
[b] University of Virginia, School of Nursing, Charlottesville, VA 22908-0782, USA
[c] Department Pediatrics, School of Medicine, Charlottesville, VA 22908-0782, USA
[d] University of Kentucky College of Nursing, 315 College of Nursing Building, Lexington, KY 40536-0232, USA

ARTICLE INFO

Article history:
Received 6 March 2015
Received in revised form
3 July 2015
Accepted 25 August 2015

Keywords:
Recruitment and retention
Smoking cessation
Dyads
Family intervention
Decision aid
Thoracic neoplasms

ABSTRACT

Purpose: Persistent smoking after a cancer diagnosis has adverse effects. Most smoking cessation interventions focus on individual behaviors; however, family members who smoke are major barriers to success. This article describes challenges and lessons learned related to recruitment and retention to a longitudinal, dyadic-centered smoking cessation intervention study for individuals confronting a new diagnosis of thoracic cancer and their family members who smoke.

Methods: A prospective, one-group repeated measures, mixed-method feasibility study measured recruitment, retention, adherence, and acceptability over a 6-month period in a thoracic surgery clinic at a university cancer center. A multidisciplinary, multi-component decision aid—"Tobacco Free Family"—was used to intervene with the dyads. Study recruitment occurred preoperatively with a thoracic surgery team member assessing smoking status.

Results: During the 6-month recruitment period, 50 patients who smoked were screened, and 18 eligible families were approached to participate. Sixteen participants (8 dyads) enrolled. Patients were all male, and participating family members were all female—either spouses or long-term girlfriends. Others types of family members declined participation.

Conclusion: Recruitment was lower than anticipated (44%), retention was high (100%), and maximizing convenience was the most important retention strategy. Oncology nurses can assess the smoking status of patients *and* family members, facilitate understanding about the benefits of cessation, refer those willing to stop to expert resources, and help motivate those unwilling to quit. Research is needed to continue developing strategies to help patients with thoracic cancer and their families facing surgery as an impetus for stopping smoking. Novel intervention delivery and communication need further exploration.

1. Introduction

Smoking cessation is an important behavioral change that can have a considerable effect on health. Patients with a new diagnosis of cancer and their family members often lack understanding about the immediate and long-term benefits of smoking cessation specific to their situation, thereby potentially preventing them from making a quality, informed decision about stopping smoking at the time of diagnosis (Ostroff and Dhingra, 2007). The label "teachable moment" has been used to describe a health event, like a cancer diagnosis, thought to motivate individuals to adopt risk-modifying healthy behaviors (Gritz et al., 2005; McBride et al., 2003a,b; McBride and Ostroff, 2003).

Most smoking cessation interventions focus on an individual's behavior. Yet, smoking is a behavior that clusters in families. Family members who smoke have been identified as major barriers to success for individuals attempting to stop (Coley et al., 2007; Schnoll et al., 2004). To date, little is known about the effect family members have on each other's smoking cessation efforts when a serious illness is diagnosed in one of them (Luker et al., 2007; McBride et al., 2003a,b). A hospitalization, need for surgery, or

* Corresponding author.
E-mail addresses: karenkm@mailbox.sc.edu (K.K. McDonnell), p.hollen@virginia.edu (P.J. Hollen), jheath@uky.edu (J. Heath), jandrews@mailbox.sc.edu (J.O. Andrews).

http://dx.doi.org/10.1016/j.ejon.2015.08.006
1462-3889/

potential or real diagnosis of cancer may be a teachable moment for patients and family members in relation to smoking cessation (McBride and Ostroff, 2003). Health-care providers may counsel a patient newly diagnosed with cancer to stop smoking, but little or no attention has been given to assessing the smoking status of family members and intervening with patient and family dyads.

Influencing family members' decisions to stop smoking may have substantial benefits, including improving their own health. Patients may have less difficulty stopping smoking, be less likely to relapse, be exposed to less environmental tobacco smoke, and feel less anxiety about the health of family members (Badr and Taylor, 2006; Bottorff et al., 2009; Zang and Wynder, 1996). A diagnosis of cancer may motivate patients and family members to stop smoking; alternatively, due to the life-threatening nature of the diagnosis and the associated psychological distress, smoking cessation may be a low priority (Ozakinci et al., 2010). The purpose of this article is to describe issues related to recruitment and retention from a longitudinal, dyadic-centered smoking cessation intervention feasibility study of individuals confronting a new diagnosis of thoracic cancer and their family members who smoke. Recruitment and retention of this vulnerable population of patients facing surgery for thoracic cancer were anticipated challenges, but the feasibility for family members as participants was new. Oncology nurses can influence change in standard of practice by integrating smoking status assessment and brief intervention for both patients and family members.

2. Background

2.1. Persistent smoking among family members

A diagnosis of cancer may act as a “catalyst” that personalizes the danger of smoking for family members and friends. A survey of 97 family members of patients with lung cancer showed that a diagnosis of cancer increased their intentions to quit smoking, although the rate was higher in immediate family members (siblings, spouses, and children) than in other family members (McBride and Ostroff, 2003). Researchers exploring the National Cancer Institute's Health Information National Trends Survey (HINTS) also found that having a personal history of cancer, or having a family member with a history of cancer, predicted an intention to quit (Patterson et al., 2010). Two qualitative studies explored family dynamics in relationship to continued smoking after a lung cancer diagnosis and uncovered that a diagnosis of lung cancer did not appear to be a strong motivator for family members to modify their own tobacco use (Bottorff et al., 2009; Robinson et al., 2010). Patients experienced considerable stress and opted to “preserve” their relationships as they struggled to understand their family members' continued smoking (Bottorff et al., 2009). Family members distanced themselves from the diagnosis, taking the position that smoking cessation needed to be individually motivated and that their preferences in terms of timing for smoking cessation may be different than the preferences of patients newly diagnosed with lung cancer. Only a small percentage of family members stopped smoking to support their ill family member and relapse rates were high (Robinson et al., 2010). In an early study by Sarna (1995), using a mixed-method design with 65 women diagnosed with a recent or recurrent lung cancer, interviews revealed that the diagnosis of cancer had a variable effect on the smoking behavior of family members with over 25% stopping smoking in response to the diagnosis; 31% of spouses continued to smoke (31% husbands, 36% sons, 28% daughters) (Sarna, 1995). In a more recent longitudinal study of 230 women with lung cancer, Coley et al. (2007) reported that 21% of household members continued to smoke, while 12% changed their smoking status after the patient was diagnosed with lung cancer. These authors also reported that the majority (77%) stopped smoking, but 12% started smoking again.

2.2. Patients with cancer helping family members stop smoking

Some patients with cancer are willing to influence family members and friends to stop smoking. In a survey of cancer survivors undergoing radiation therapy (n = 114), more than half of survivors (54%) reported knowing someone they would like to see stop smoking, and 78% of the survivors) wanted to help these individuals personally (Garces et al., 2010). One oft-cited cancer control study offered evidence that newly diagnosed patients are willing to identify family members who smoke and assist in persuading them to participate in a smoking cessation intervention delivered by mail. Of 144 enrolled, 60% contacted family members to participate (Schilling et al., 1997). In another study that included proactive recruitment of social network members, 49% of 1062 eligible patients with lung cancer enrolled in a multisite randomized controlled trial (Bastian et al., 2011). These authors found that patients would identify family members and friends who were current smokers, among whom 37% agreed to participate. Enrollees were mostly female, immediate family members who lived in close proximity to the patient. These family members acted as recruiters to persuade others to participate. Lastly, another study testing a unique recruitment strategy asked patients with lung cancer to record personal messages for family members in which they encouraged them to enroll in a family-centered smoking cessation program (Luftman et al., 2011). Initial attempts with audio-recorded personal statements were not as successful as video-recorded statements. Audiotaped personal messages resulted in a 15% recruitment rate, whereas video-recorded messages resulted in a 50% recruitment rate (Luftman et al., 2011).

2.3. Barriers to including family members in smoking cessation decisions

Although family members are a primary source of support for patients with cancer, they are not typically included in research studies. Yet, important health decisions are seldom made by patients alone, and, as in the case of smoking cessation, one person's decision affects the health of the entire household (Northouse et al., 2006, 2005). When family members are included in research, then the design of the study, the data collection and analysis, and the study procedures become more complex. In family-centered research, barriers to recruitment and retention are multiplied as participation becomes dependent on more than one person's willingness and ability to participate (Moriarty and Cotroneo, 1993; Motzer et al., 1997; Northouse et al., 2006, 2005; Quinn et al., 2010; Weaver et al., 2011). Higher refusal rates are common, and there is a greater chance for complexity in obtaining informed consent and scheduling data collection sessions (Motzer et al., 1997; Quinn et al., 2010).

Yet, conflicting evidence exists in the literature. Research has documented that both patients and their family members and friends continue to smoke after a diagnosis of lung cancer (Bottorff et al., 2009; Coley et al., 2007; Robinson et al., 2010; Sarna, 1995). While several studies indicate that patients with cancer are interested in involving family members and friends in decisions to stop smoking (Bastian et al., 2011; Garces et al., 2010; Shilling et al., 1997), others have documented that family members and friends are reluctant or unwilling to participate (McDonnell et al., 2014; Robinson et al., 2010). Few intervention studies to date have involved both individuals diagnosed with cancer and their family members who smoke. Therefore, there is a lack of evidence about