Addressing Fear of Recurrence in Cancer Survivors:
Training in Primary Care

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Due to better detection, more effective treatments, and an aging population, the number of cancer survivors in the United States is large and growing. Cancer survivors experience multiple physical and psychosocial long-term effects from cancer. However, oncology practices no longer have the capacity to provide care to survivors. Therefore, cancer survivors are increasingly receiving their healthcare through primary care practitioners, who often lack cancer-specific expertise to effectively treat survivors’ concerns. This dissertation reports the results of 2 studies and a conceptual manuscript on identifying and addressing psychosocial concerns of cancer survivors in primary care settings. The first study utilized 42 key informant interviews of expert health care professionals, health care researchers, and cancer survivors to inform development of a training for interprofessional primary care providers on fear of cancer recurrence (FCR), a prevalent psychosocial concern. Analysis of the interviews yielded findings including: consensus that FCR is a psychosocial concern worthy of training, rich conceptualizations of FCR and its clinical significance, opportunities and challenges in meeting the needs of survivors in primary care, confusion about screening for FCR, and a range of potential interventions to address FCR. These findings were used to develop a brief, in-person training on FCR. The second study reported on pilot data about the effectiveness of the developed training. The training was provided to a total of 46 participants, including physicians, PAs, NPs, nurses, and social workers in 6 different primary care practices. Results indicated that the training increased knowledge and self-efficacy of providers in identifying and addressing FCR. The training was well-received by participants, who had high confidence in implementing practice behavior change, although they also identified barriers to action. The third manuscript used the FCR training as an exemplar to suggest that Screening, Brief Intervention, Referral and Treatment (SBIRT), a public health model that has been effective in addressing alcohol abuse, is a promising framework for implementing guidelines to address psychosocial concerns of cancer survivors in primary care. Finally, for each study, implications for practice and areas of future research are discussed.
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Introduction

Cancer survivorship is a growing public health concern in the United States (U.S.). With improvements in early detection and treatments as well as aging of the U.S. population, numbers of cancer survivors have been rising sharply. Latest estimates indicate that there are 15.5 million cancer survivors in the U.S., with the number projected to grow to over 20 million by 2026 (Miller et al., 2016). Nearly half of cancer survivors are 70 years old or older and almost 70% finished cancer treatment at least five years ago (Miller et al., 2016). The interplay of aging and chronic medical conditions means that cancer survivors often have complex care needs at a time when the increasing volume of patients involved in acute treatment leaves oncologic specialty care services with limited capacity to follow growing populations of survivors. As a result, cancer survivors are increasingly being treated in primary care settings. While primary care clinicians have expertise in managing complex and chronic illnesses, both primary care physicians and nurses have identified gaps in knowledge and confidence to treat survivorship issues (Potosky et al., 2011; Virgo, Lerro, Klabunde, Earle, & Ganz, 2013; Irwin, Klemp, Glennon, & Frazier, 2011).

To address knowledge gaps, the American Society of Clinical Oncology (ASCO) has created a core curriculum for cancer survivorship education which includes information about both physical and psychosocial concerns (Shapiro et al., 2016). However, evidence-informed trainings for disseminating this information to primary care providers have not been widely developed nor has the information been broadly incorporated into educational curricula (Nekhlyudov, O’Malley, & Hudson, 2017). Continuing education programs, required of medical and mental health professionals, have long been identified as important
starting points for better educating practicing clinicians about caring for cancer survivors (Ferrell & Winn, 2006).

Continuing education topics in oncology encompass late and long-term physical and psychosocial effects of cancer. Psychosocial concerns are broadly acknowledged to impact health outcomes (Robert Wood Johnson Foundation, 2011) and are often identified by cancer survivors as unmet needs (Geller, Vacek, Flynn, Lord & Cranmer, 2014; Ness et al., 2013). Cancer survivors experience a range of psychosocial concerns, from higher rates of depression, anxiety disorders, and adjustment disorders to employment and financial concerns to existential distress (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013; Ness et al., 2013; Stanton, Rowland, & Ganz, 2015). Personalized, precise interventions are needed to screen for and treat psychosocial issues related to cancer. One psychosocial issue that has been largely overlooked in screening and intervention efforts in cancer survivorship is fear of cancer recurrence (FCR). FCR, or the worry that cancer will return in the same or different part of the body (Simard, Savard & Ivers, 2010), is a common issue facing almost all cancer survivors. Ironically FCR—a prevalent and distress condition—has been largely unaddressed in the clinical care of cancer survivors (Ness et al., 2013).

This mixed-methods dissertation contributes to the literature by developing and testing the effectiveness of training interprofessional primary care providers to identify and begin to address FCR in cancer survivorship populations. Chapter One reports the results of a qualitative study, grounded in naturalistic inquiry. This study utilized 42 key informant interviews of expert health care professionals, health care researchers, and cancer survivors to inform development of a brief training for interdisciplinary teams on FCR. Chapter Two reports the results of a quantitative study that evaluates the effectiveness of the pilot training.
The training was provided to 46 primary care clinicians in 6 primary care settings. Participants completed pre and post-test surveys; major domains on the survey, including knowledge uptake, self-efficacy, and reaction to training, were guided by a theory of behavior change (Social Cognitive Theory) and training evaluation (Kirkpatrick’s Evaluation of Training Programs). Descriptive, bivariate, and multivariate analyses were performed on the survey data to test for training effectiveness. Finally, the training on FCR was then used as an exemplar in a conceptual paper (Chapter 3), recommending that the framework of Screening, Brief Intervention, and Referral to Treatment (SBIRT) be considered as a model for addressing psychosocial concerns of cancer survivors in primary care settings.

The overarching conceptual frameworks for this dissertation were the construct of FCR developed by Lee-Jones and colleagues (1997) and based on the Self-Regulation Model of Illness (Leventhal, Diefenbach & Leventhal, 1992) as well as the model of interprofessional education (IPE). While FCR is sometimes equated to worry or anxiety, in Lee-Jones and colleagues model FCR is a multidimensional construct that includes thoughts, emotions, and behaviors. FCR can sometimes increase in cancer survivorship due to an individual’s perceptions or thoughts about cancer recurrence risk, which may shift over time (Simard et al., 2010). Emotions such as worry can lead to behaviors such as avoidance, which may then increase worry and preoccupation. Thus, FCR can be conceptualized as a psychosocial (rather than purely emotional) concern and elements of emotions, thoughts, and behaviors should all be considered. IPE, in which two or more individuals from different professions learn “about, with, and from each other,” is seen as necessary preparation for interdisciplinary collaborative practice, which has been shown to improve health outcomes and both patient and provider satisfaction (WHO, 2010, p.7). The framework of
collaborative interdisciplinary practice, in which professional disciplines share overlapping professional competencies (Satin, 2008), underpins this project’s approach to train different disciplines together on addressing a targeted psychosocial concern. It is an overlapping competency of physicians, nurses, and social workers to address psychosocial concerns. IPE, in the form of continuing education trainings, is particular relevant in the current landscape of primary care, in which integrated, team-based models of care delivery are growing in popularity (Patient-Centered Primary Care Collaborative, 2017). Together these frameworks lay the foundation for conceptualizing, designing, and implementing trainings on targeted psychosocial concerns for interprofessional¹ providers.

¹ N.B. The terms interdisciplinary and interprofessional are used interchangeably throughout this dissertation
Chapter One
Developing a Training for Interdisciplinary Primary Care Providers on Identifying and Addressing Fear of Cancer Recurrence

Introduction & Review of the Literature

Approximately 1.69 million Americans are projected to be diagnosed with cancer in 2016 (Siegel, Miller, & Jemal, 2016). Despite high prevalence, success in public awareness, early detection, and disease management have resulted in a sharp decline in mortality and rise in number of cancer survivors; there are an estimated 15.5 million cancer survivors in the United States (U.S.) today, with the number projected to grow to over 20 million by 2026 (Miller et al., 2016). Initiatives such as the Precision Medicine Initiative Cohort Program, which aims to enroll a cohort of one million Americans with goals of identifying biological markers and targeted therapies for illnesses (National Institutes of Health, 2015), and policies such as the Affordable Care Act, which at the time of writing has an uncertain future but has thus far expanded health insurance coverages to over 20 million Americans, highlight the changing landscape of medicine that is likely in the coming years (U.S. Department of Health & Human Services, 2016). However, gains in access to care and the treatment of physical elements of the disease have overshadowed the pervasive, and potentially debilitating psychosocial impact of cancer diagnosis, treatment, and survivorship. Personalized, precise interventions are also needed to screen for and treat psychosocial issues related to cancer, such as emotional distress, relational concerns, and financial burden. In fact, universal screening for distress has become a best practice in cancer care, with research suggesting that screening (and subsequent patient acceptance of referrals) has the potential to reduce distress
One psychosocial issue that has been largely overlooked in screening and intervention efforts in cancer survivorship is fear of cancer recurrence (FCR). FCR, or the worry that cancer will return in the same or different part of the body (Simard, Savard & Ivers, 2010), is a common issue facing almost all cancer survivors. Ironically FCR—a potentially debilitating condition—has been largely unaddressed in the clinical care of cancer survivors (Ness et al., 2013). Although empirical investigations have found varying rates of FCR across study populations, there is consensus among experts that FCR is common among survivors and persists over time (Koch, Jansen, Brenner, & Arndt, 2013; Simard et al., 2010). A recent systematic review of the literature concluded that on average 73% of cancer survivors experience some degree of FCR, with an average of 49% experiencing moderate-high levels of FCR and 7% experiencing a high level of FCR (Simard et al., 2013). Cancer survivors across diagnoses also identified FCR as a prevalent and unaddressed concern. In a survey of 337 cancer survivors, 63% endorsed FCR as a concern and FCR was identified as a more prevalent extreme concern than any physical issue (Ness et al., 2013). The study included a diverse group of survivors of breast, prostate, hematological, gastrointestinal, and gynecological cancers. The number of years since diagnosis ranged from 1 year to over 20 years; authors concluded that FCR and fatigue were concerns that lasted over time in survivorship (Ness et al., 2013). FCR is also associated with poorer quality of life, higher distress, and physical symptoms such as pain, fatigue, and poor sleep in cancer survivors. (Berrett-Abebe, Cadet, Pirl, & Lennes, 2015; Crist & Grunfeld, 2013; Simard et al., 2013; Waters, Liu, Schootman, & Jeffe, 2013). Some demographic characteristics, namely female
gender and young age, have also been associated with higher levels of FCR (Thewes et al., 2012a; Shelby et al., 2012). Additionally, new research suggests that survivors with poor health behaviors, such as smoking and less physical activity, are more likely to experience FCR (Fisher, Beeker, Heinrich, Williams & Wardle, 2016).

Despite the growing evidence of FCR concerns among cancer survivors, the practice and research literature on this topic has been limited. Recently, however, growing research interest in FCR has resulted in several validated scales for measuring FCR in survivorship populations (Thewes et al., 2012b). Furthermore, although there has been a lack of consensus about the most effective treatments for FCR (Thewes et al., 2014), some recent studies have shown promise in effectively treating FCR through evidence-based interventions. These include: randomized control trials (RCTs) of mindfulness-based stress reduction (Lengacher et al., 2014), gratitude intervention (Ott, Szczesny, Soriano, Laurenceau, & Siegel, 2016), and psychoeducation phone intervention (Dieng et al., 2016), as well as pilots of cognitive-existential group therapy (Lebel et al., 2014), theory and evidenced-based individual counseling (Conquer Fear – Smith et al., 2015), and acupuncture treatment (Sommers & Boehmer, 2014). RCTs are also underway to determine the effectiveness of online and in-person cognitive behavioral treatments (van de Wal et al., 2015; van Helmond, van der Lee & deVries, 2016). These various studies show promise in applying both well-researched and novel, theoretically driven treatments to the prevalent concern of FCR. However, more work is needed to identify evidence-based interventions that most effectively address FCR in diverse patient populations and settings, as well as meet identified patient preferences for treatment.
**Primary Care Settings.** One setting with opportunities to identify and address FCR is primary care. Given the high numbers of cancer survivors and limited capacity of oncology providers, care for cancer survivors has been shifting back to primary care providers (Dawes et al., 2015). Institute of Medicine reports, *From Cancer Patient to Cancer Survivor* (Stovall, Greenfield & Hewitt, 2005) and *Cancer Care for the Whole Patient* (Adler & Page, 2008) have emphasized the importance of addressing long-term effects of cancer, working to improve quality of life for survivors, and developing better clinical guidelines, educational opportunities, and care coordination that recognizes primary care providers as partners with oncology specialists.

Despite these mandates, empirical evidence suggests that primary care providers have limited confidence in their knowledge to address survivorship issues (Potosky et al., 2011) and need additional training to effectively treat both biomedical and psychosocial concerns of cancer survivors (Virgo, Lerro, Klabunde, Earle, & Ganz, 2013; Susanibar, Thursh, Khatri, & Hutchins, 2014; Dawes et al., 2015). For example, in a national survey of over 2,000 primary care physicians and medical oncologists, about half of primary care physicians reported feeling inadequately trained to address the medical and psychosocial needs of their patients who are cancer survivors, compared to 10% of the medical oncologists (Virgo et al., 2013). The authors conclude that there needs to be more robust training and continuing education opportunities for primary care physicians, particularly given the growing population of long-term cancer survivors. Likewise, the literature suggests that nurses and advance practice nurses in primary care have an important role to play in treatment of cancer survivors, yet lack survivorship specific knowledge (Irwin, Klemp, Glennon, & Frazier, 2011; Pandey & Barber, 2016).
Purpose of this study. Addressing psychosocial concerns is well within the purview of primary care teams. In a recent survey of oncology and primary care physicians, over half reported significant involvement in addressing psychosocial concerns of patients (Forsythe et al., 2014). Several recent initiatives have shown positive outcomes in providing training to primary care providers on substance abuse (Stoner, Mikko, & Carpenter, 2014) and rural mental health care skills (Heath et al, 2015). Additionally, the model of integrated behavioral health in primary care, in which mental health services are embedded in primary care offices, is gaining momentum in the U.S. (SAMHSA, 2015a), presenting emerging opportunities to train interdisciplinary primary care providers to assess and intervene on psychosocial distress, such as FCR, experienced by their patients who are cancer survivors. However, it is an area in which knowledge and practice gaps of providers are the greatest in caring for patients who are cancer survivors (Luctkar-Flude, Aiken, McColl, Tranmer, & Langley, 2015). The American Society of Clinical Oncology (ASCO) has created a core curriculum for cancer survivorship education which includes information about FCR and other psychosocial issues (Shapiro et al., 2016). However, an evidence informed training for interdisciplinary providers does not exist on this topic. Therefore, this study undertook the task of developing a training for primary care providers on FCR.

Methods

Research design. Grounded in naturalistic inquiry (Lincoln & Guba, 1985), this qualitative study utilized key informant interviews to gather data to inform the development of a training for interdisciplinary primary care teams on FCR. Following IRB approval, the primary researcher used purposive sampling to recruit participants for the study. Specifically, potential participants were identified through a review of the literature
(identifying expert researchers in the field of FCR and cancer survivorship in primary care),
the researchers’ professional networks, and snowball sampling (each participant was asked to
name another expert they would recommend on the topic). Inclusion criteria included being
a health care professional, health care researcher, or cancer survivor. An effort was made to
identify a diverse group of professionals, including: physicians (medical oncologists, primary
care physicians, psychiatrists), nurses (registered nurses, advanced practice nurses, and
doctoral prepared nurses), psychologists, social workers (licensed clinical social workers and
doctoral prepared social workers) and cancer survivors (survivors of mixed cancer types).
Through snowball sampling, public health professionals and a healthcare chaplain were also
identified as key experts and invited to participate in the study.

Potential participants were contacted by email. If they met criteria and agreed to
participate in the study, they were sent an informed consent form and scheduled for a
telephone interview. Telephone interviews were scheduled and audio recorded through Go
To Meeting. The primary researcher conducted these telephone interviews, which were
chosen over face to face interviews for ease of scheduling and ability to capture participants
across the United States and internationally (including participants from Canada and
Australia). Interviews ranged from 15 – 40 minutes in length and were conducted using a
semi-structured interview guide. Sample questions included: Do you think that fear of cancer
recurrence is an issue experienced by your patient population? If yes, when do you think fear
of cancer recurrence is clinically significant? Do you think Primary Care is an appropriate
place to screen for fear of cancer recurrence? If yes, what do you think would be the most
effective and accurate way to screen for fear of cancer recurrence in primary care? Are there
interventions that you would recommend to help people with fear of cancer recurrence?
Follow-up questions or prompts were asked for clarification or to elicit additional information. See Appendix B for a full list of interview questions.

**Sample characteristics.** Forty-two individuals participated in the study. Please see Table 1.1 for demographic information about participants. Thirty-two participants identified as female and 38 identified as White. In terms of professional disciplines, participants identified as physicians (13), nurses (8), social workers (8), psychologists (7), public health (2), and chaplain (1). The average years of professional experience was 21.7. Additionally, 14 participants identified as cancer survivors.

**Table 1.1. Demographic Information**

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<thead>
<tr>
<th>Demographics</th>
<th>M ± SD or Frequency (%)</th>
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<tbody>
<tr>
<td></td>
<td>Participants (N=42)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>76%</td>
</tr>
<tr>
<td>Male</td>
<td>24%</td>
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<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White (non Hispanic)</td>
<td>90%</td>
</tr>
<tr>
<td>Black</td>
<td>5%</td>
</tr>
<tr>
<td>Asian</td>
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</tr>
<tr>
<td>Pacific Islander</td>
<td>2%</td>
</tr>
<tr>
<td>Professional discipline</td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>31%</td>
</tr>
<tr>
<td>Nurse</td>
<td>19%</td>
</tr>
<tr>
<td>Social work</td>
<td>19%</td>
</tr>
<tr>
<td>Psychology</td>
<td>17%</td>
</tr>
<tr>
<td>Public health</td>
<td>5%</td>
</tr>
<tr>
<td>Chaplain</td>
<td>2%</td>
</tr>
<tr>
<td>N/A – survivor only</td>
<td>7%</td>
</tr>
<tr>
<td>Years of professional experience</td>
<td>21.7±10.6</td>
</tr>
<tr>
<td>Self-reported cancer survivor</td>
<td>33%</td>
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</table>
Data analysis. The interviews were transcribed verbatim and analyzed for themes using content analysis. Given that the interview guide asked questions in specific categories for training development (e.g. experience and clinical significance of FCR, screening for FCR, treating FCR), summative content analysis, in which participant responses are counted and compared based on key words and ideas, was the method of choice (Hsieh & Shannon, 2005). In the final step of summative content analysis, the underlying content is interpreted, with efforts made to remain close to participants’ meanings. In order to improve credibility of the data, verbatim quotes from participants were used and themes were compared to the research literature.

Results

Seven main themes were identified: consensus that FCR is a psychosocial concern, richness of FCR definitions, clinical significance can be conceptualized in a variety of ways, opportunities and challenges in primary care, confusion about screening, range of interventions can help, and information is important in training but empathy is primary.

Consensus that FCR is a psychosocial concern. All participants responded “yes” when asked if FCR is an issue faced by cancer survivors. However, participants qualified this “yes” response in various ways. Five individuals stated “definitely” or “absolutely.” Five said that FCR is “ubiquitous,” “across the board,” or “most prevalent issue.” Three qualified their “yes” answer by saying “most” or “probably the majority.” Two participants referred to a “range” or “degree” of severity of FCR. Additionally, most participants stated that they see FCR as experienced by cancer survivors in their clinical practice or research.
However, two primary care physicians stated that while they were familiar with FCR from research, they had not seen the issue clinically present in their own patient population.

**Richness of FCR definitions.** When asked about the definition of FCR, participants shared a range of definitions, adding rich description to our understanding of the issue. Five participants shared the definition agreed upon in the literature, with only minor variations: the worry that the cancer will come back in the same in the same or different part of the body. One added to this definition by saying, “but that if it were to come back, coping with it would beyond on your resources… would be taxing or demanding.” Others focused on the emotional and existential experience of worry: “never far below the surface worry that brings someone’s attention either to the need for treatment again or the prospect of their own death” and “an ever present worry of the cancer returning and what that would mean for the patient in all aspects of their lives… personally, with regards to their family, with regards to their work, financially… multi-faceted.” Several people suggested that FCR is an attempt to cope with “uncertainty.” Five individuals used metaphors such as “sword of Damacles,” “waiting for the other shoe to drop,” and “they’re not able to totally enjoy life… it’s like they’re walking a tightrope” to describe the experience.

Several participants linked FCR to clinical psychological diagnoses. Four participants suggested that FCR is anxiety: “a form of anxiety specific to the cancer coming back” or “part of the anxiety picture after cancer.” Others associated FCR with “terror,” “trauma,” and “real fear that it’s really hard to tame because that fear is real and you can’t tell people it’s never going to come back.” Two participants explicitly suggested similarities to PTSD, citing “hyper-awareness” and “hypervigilance.”
Finally, two participants suggested that FCR should not automatically be considered pathological, stating “it’s part of the process of learning to adapt to that experience (cancer survivorship)” and “it’s not necessarily pathological.” Three others stated that they had no particular definition of FCR; one suggested that based on the state of the science, “I’m not sure we know what it is.”

**Clinical significance can be conceptualized in a variety of ways.** Those participants who had experience of FCR in clinical or research populations provided a variety of conceptualizations for clinically significant FCR. One participant took a patient-centered, versus provider-diagnostic, approach, stating, “the moment a patient feels like it is.” Several others took a systems view, responding that FCR is clinically significant when resulting in “avoidance” or “over-utilization of health care.”

Many other participants focused on “disruption to daily life” or “interference with functioning.” As one individual explained, FCR is clinically significant when the “emotional impact of fears are sufficient to cause an impairment of at least one area of functioning despite efforts to cope with it.” Another stated, “if they’re reporting trouble sleeping or trouble relaxing because it’s on their mind all the time.” Several others spoke of FCR being clinically significant when individuals are unable to move on with their lives post-cancer: “it paralyzes them from moving forward in their life. The fear kind of takes over every aspect of their life…. Even if the fear only takes over part of their life.” Additionally, rather than focusing on individual experiences, several participants described periods of times or “triggers” that often caused FCR to surge and become clinically significant. Examples included: “the first 6 months after treatment,” “before surveillance scans,” and “any illness that comes up.”
Opportunities and challenges in primary care. When asked, the majority of participants stated that it would be appropriate to screen for FCR in primary care settings. Several participants shared opportunities for addressing FCR in primary care, stating that it made sense from a “workforce point of view” and might be driven by insurance products and access to care: “I think that the way that managed care is going, there will be some survivors who need to seek their care in primary care.” Additionally, several participants cited the long-term relationships that survivors may have with primary care providers as being an opportunity to discuss difficult topics:

Well, ideally, hopefully, the PCP is someone who knew the patient before their cancer diagnosis or at least sees the patient more often and hopefully knows them…. (whereas) sometimes they are reluctant are to say they’re fearful (in an oncology setting) because they almost feel like they would be letting the oncologist down.

Approximately 1 in 4 participants identified barriers to identifying and addressing FCR in primary care. One repeated barrier was limited time and multiple demands on primary care physicians. As one physician stated, “So now in primary care settings we are being asked to screen for everything… we screen for depression, we screen for fall risk, we screen for memory. So yes in theory… (but) logistically speaking, not sure that it could really happen.” Another physician stated,

There’s a whole lot of things that primary care doctors need to do…even in practice where I’m really focused on it, I’m still trying to figure out how to treat their high blood pressure and their cholesterol and making sure that they don’t develop diabetes….So screening for something else is… it just takes time and it can be a luxury.

Another identified barrier was fragmentation of the health care system. One survivor stated, “right now it seems like the system is not set up for her (PCP) to think about her patients outside the transaction of a check-up or going to be seen for a particular thing. So it feels much bigger than her or me to shift that.” Other participants expressed concerns about
limited knowledge and lack of available resources in primary care settings. One individual stated, “I don’t think you should screen for anything unless there are resources in place to do something about it,” while another said, “we’re dealing with a pretty sick population, we don’t have adequate support to deal with the really challenging, severe mental illness that we see.” Barriers were more likely to be identified by physicians (primary care physicians and medical oncologists), nurse practitioners, and cancer survivors versus mental health professionals (social workers and psychologists).

Confusion about screening. When asked, none of the participants working in clinical care (across settings of specialty oncologic care, mental health, and primary care) reported currently screening for FCR. When queried about the best way to screen for FCR, participants voiced confusion; the majority of participants stated that no screening strategies were currently used in clinical practice (“there’s certainly no tools that anyone is using”) and they were unsure of what the best way to screen might be. Many then went on to identify possible routes for screening, which varied by profession and practice/research location.

FCR researchers recommended screening through validated measures that have been developed in the research settings, such as Fear of Cancer Recurrence Inventory (FCRI; Simard & Savard, 2009), which was recently validated in short-form for clinical settings (FCRI-SF; Simard & Savard, 2015) and Assessment of Survivor Concerns (ASC: Gotay & Pagano, 2007). Primary care physicians were more likely to name screenings for anxiety/depression that were already occurring in their practices, such as PHQ-2 (Lowe, Kroenke & Grafe, 2005) and GAD-7 (Spitzer, Kroenke, Williams & Lowe, 2006), stating that those screenings could capture the majority of patients in distress. One physician stated, “Now specifically regarding the worries, within the depression questionnaire there is one
piece regarding worries and some physicians may specifically ask if particular patients worry about cancer recurrence.”

In contrast, oncology providers (physicians & advanced practice nurses) and mental health providers (social workers & psychologists) were more likely to suggest screening for FCR by using distress screening tools such as the National Comprehensive Cancer Network (NCCN) Distress Thermometer (NCCN, 2003) and/or by asking targeted, open-ended questions. Examples of suggestions for open-ended questions included: “most people have times… or on a spectrum, with some people not worrying as much and other people really worrying… where do you fall on that spectrum?”, “how are you coping with your status as a survivor?”; and “what in particular worries you most about the prospect of your cancer coming back?”

When explaining his approach to asking open-ended questions, one psychologist stated,

I try to lay out how I experience the trajectory with patients and very much validate that and normalize that and help them to understand that those worries are common. And then use open ended questions about what do they think about when they have to come in for scans or what do they experience if they are getting a head ache or back pain?

**Range of interventions can help.** When asked about treatment for FCR, participants described a range of interventions that they used in practice and/or thought would be helpful to address FCR and improve coping. Several individuals suggested that given the prevalence of FCR, a tiered approach, in which all survivors received basic interventions, and then those with higher FCR received more intense, targeted interventions, was warranted. As one participant stated,

A triage intervention might be direct conversation with the patient that will allay those anxieties for someone who it’s troubling, but not that troubling. Somewhere in the middle, it might take a little more consultation, not just education but a little more
exploration about what’s driving this. And in some cases it’s really a crippling anxiety and there a more serious mental health intervention to get more at the roots of what’s causing this.

Results in this section will be listed in a tiered format.

**First tier (offered broadly to all survivors with some level of FCR).** Many participants mentioned the interventions of normalization and education, which can be done in primary care or specialty settings by a range of professionals.

You’re trying to normalize something that is super common, it isn’t pathological in any way but also that there are some symptoms that are disruptive. So I think putting it on a spectrum is really important, like almost all patients do report FCR but there are groupings of patient who are more at risk.

Reassurance as well as education about real versus perceived risk were also mentioned as helpful interventions. As one participant stated, “clinicians can be both reassuring but pointed (in sharing data about risk of recurrence).” Another described how there can often be a gap between survivors’ perceived risk versus actual risk and this can perpetuate distress:

People have very inaccurate objective information about their re-occurrence rates…. So if you say, how likely is it that you’re going to recur, or something like that, people will be completely off the mark in terms of likelihood. Now objective information is only part of perceived risk… but for some people to know your risk is only…. 1 in 1000, or whatever it might be reassuring.

Additionally, several individuals suggested that communication of care and empathy while providing validation and information is important. As one physician stated, “there’s a tremendous value in letting someone know that you care about them and taking their concerns seriously and I’ve found that can be, I think, therapeutic.”

Finally, many participants recommended education about lifestyle interventions (something that is likely already occurring in primary care settings) as meaningful
interventions to address FCR… “really stressing that patients’ lifestyles have a huge impact on their risk of recurrence from cancer.” Another participant said,

I do use the fact that they’ve had a cancer to further boost what we know about healthy living…one more reason to encourage people to exercise, one more reason to help people get quality sleep, one more reason to have people work on stress management…And I think creating a sense of well-being naturally reduces anxiety when you’re sleeping better and when you exercise and do self-care.

*Second tier (targeted to those who have higher levels of FCR).* For those survivors with higher levels of FCR, participants recommended more structured, intensive interventions to “promote coping.” For health care settings that do not have integrated behavioral health, this would mean referrals to outside resources. Approximately half of the individuals interviewed recommended individual counseling using cognitive-behavioral therapy (with a trained mental health professional). The second most frequent intervention was mindfulness. Several people mentioned the use of mindfulness in individual therapeutic settings while other discussed mindfulness meditation and self-compassion as important components of group or educational settings. Several participants also recommended support groups or formalized peer support, as potential helpful for survivors interested in those types of forums. As a social worker said, “for some people, if they’re feeling really alone and like ‘I’m the only person in the world who’s afraid that my cancer will come back,’ a support group or connecting them with a cancer survivor peer might be the thing they need the most.” Finally, for those with very high levels of FCR, some participants recommended a referral to a psychopharmacologist. Several participants named national or community organizations (e.g. CancerCare, LiveStrong YMCA) that provide support and educational resources for cancer survivors and that could bridge multiple health care settings.
Information is important in training but empathy is primary. When asked specifically about what to include in a training on FCR for interdisciplinary primary care providers on FCR, participants provided a variety of answers. Many suggested providing a brief “Cancer 101” in which trainees could gain information about diverse cancer diagnoses, various treatments and long-term effects from treatments. Additionally, many advised including information specifically about FCR, such as prevalence, severity, and relevance to the health care system, such as the cost to leaving it unaddressed in survivorship populations. Other suggestions included information about community resources and a “tip sheet” or other take-aways from the training.

Of particular note, approximately 1 in 4 participants suggested that providers have an opportunity to “walk in the shoes” of a cancer survivor in order to develop empathy and understanding of the impact of FCR. An advanced practice nurse said, “you could have them attend a support group so they can get an idea about what peer support means to people… to get that feeling that they’ve been in their shoes a little bit because otherwise it’s really hard to know how that person feels.” A physician suggested, “some form of role playing…you can’t really get as far into the way you want to help somebody unless you have some sense of it…you know that expression, you don’t really know what’s going on until you walk a mile in someone’s shoes? That’s what I mean.” A social worker said, “I think for one the voices of patient survivors is something that would go a long way in training.” Similarly, a cancer survivor stated, “unless they’ve had it, they really can’t understand what their patient’s going through and they really need to listen to what their patient tells them.”

Discussion
Results from this study confirm and expand our understanding of FCR, highlight feasibility and systems challenges of addressing emotional concerns of cancer survivors in primary care, and provide a framework for a training on FCR for interdisciplinary primary care providers.

In keeping with a systematic review of prevalence and severity of FCR (Simard et al., 2013), most participants voiced their understanding that FCR is a prevalent issue in cancer survivorship, impacting the majority of survivors. Interestingly, despite their understanding that it is prevalent, two primary care physicians stated that they had not seen FCR in clinical practice. It is possible that FCR might not come up in a clinical encounter unless a provider specifically asks, lending support to developing a training. Additionally, while several participants provided a definition of FCR agreed upon in the literature (Simard, Savard, & Ivers, 2010), many provided rich descriptions and metaphors that expand our conceptualization of the lived experience of FCR. Similarly, this study provides additional insight into providers, researchers, and survivors’ thoughts about when FCR becomes clinically significant. A recent consensus of experts in the field shared possible characteristics of clinically significant FCR, including: high levels of worry or rumination, maladaptive coping, functional impairments, excessive distress, and difficulties making plans for the future (Lebel et al., 2016). These ideas were echoed by the participants in this study. However, other ideas were added, such as patient-focused (when a patient feels it is significant) and systems-focused (avoidance or over-utilization of healthcare).

Another important finding was noted opportunities and barriers to identifying and addressing FCR in primary care settings. While the majority of participants stated that primary care is an appropriate setting in which to screen for FCR, a quarter of participants
identified barriers to identifying and addressing FCR in this setting. Barriers included: limited time and multiple demands on primary care physicians, fragmented health care system, and limited resources and knowledge in primary care settings. These identified barriers lend support to the strategy of training interdisciplinary teams on FCR, so that medical practices can decide which professional disciplines within their team have the time and expertise to identify and address the issue. These results also support calls for research to target strategies for bridging fragmented parts of the health care system and improving communication between oncologic and primary care in order to improve patient care, a priority identified elsewhere in the literature (McCabe, Partridge, Grunfeld, & Hudson, 2013). Although participants in our study voiced confusion about the best way to screen for FCR, most were of the opinion that it was valuable to ask patients about this issue. Given the trends of integrated behavioral health in primary care (SAMHSA, 2015a) and recommendation of routine screening for depression in primary care (U.S. Preventive Services Task Force, 2016), routine screening for a range of psychosocial concerns in primary care is an emerging opportunity.

Finally, the results provide a framework for training interdisciplinary primary care providers on identifying and addressing FCR. Of particularly note was the focus on the opportunity to “walk in the shoes” of cancer survivors and the robust descriptions of interventions used in practice and research settings to address FCR. First tier interventions, such as normalization and education, can be done in routine medical settings by a range of health care professionals who have access to medical information and are trained in communication. Professionals who might be employed in primary care settings include: physicians, nurse practitioners, nurses, physicians assistants, social workers, and
psychologists. Results also expand our understanding of treatments in use in both medical (e.g. lifestyle interventions) and behavioral health (e.g. mindfulness interventions) to address FCR. Lifestyle interventions have not yet been tested as an intervention for FCR but poor health behaviors have been shown to be associated with higher levels of FCR (Fisher et al., 2016). As noted in the introduction, a range of behavioral health and integrative therapy interventions are currently being studied to determine efficacy in treating FCR but more research is needed in both validating interventions and disseminating information about validated interventions through trainings to health and mental health professionals.

The intervention that was developed as a result of this study (see Table 1.2 for training components) was approximately 25 minutes in length, including a pre and post survey. It was designed to be delivered by PowerPoint, with prompts for audience engagement and discussion. At the time of writing, the training that was developed through this research has been disseminated in six primary care practices affiliated with teaching hospitals in the Northeast.

**Table 1.2. Components of the Developed Training for Primary Care Providers on FCR**

<table>
<thead>
<tr>
<th>Components</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient narrative</td>
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</tr>
<tr>
<td>Evidence informed screening questions for FCR</td>
<td>Delivered verbally &amp; presented to trainees on notecard</td>
</tr>
</tbody>
</table>
Limitations

Although efforts were made to identify diverse professionals and cancer survivors, the results reported in this manuscript are only the opinions of the group of individuals interviewed and cannot be generalized to all healthcare professionals, researchers studying FCR and/or cancer survivors. In fact, the sample of this study is predominantly White and female, further limiting generalizability. In the future, efforts should be made to explore perceptions and develop interventions for diverse populations of cancer survivors and providers.

Future Directions

This qualitative study identified and interviewed a robust number (42) of key informants in the fields of health care, FCR research, and cancer survivorship, to inform development of a training for interdisciplinary primary care providers on FCR. The findings contribute to our understanding of FCR from the prospective of providers, researchers, and cancer survivors. They suggest opportunities and challenges for healthcare delivery as well as provide a framework for an evidence-informed training. Disseminating such a training to interdisciplinary primary care teams addresses unmet needs for continuing education about
cancer survivorship. If this training results in practice changes, it also has the potential to improve emotional well-being for millions of cancer survivors in the U.S.
Chapter Two

Impact of an Interprofessional Primary Care Training on Fear of Cancer Recurrence on Clinicians’ Knowledge, Self-efficacy, Anticipated Practice Behaviors, & Attitudes about Cancer Survivorship

Introduction & Review of the Literature

Cancer survivorship is a growing public health concern, with an estimated 15.5 million cancer survivors in the United States (U.S.) today, and numbers expected to exceed 20 million in the next ten years (Miller et al., 2016). Cancer survivors across diagnoses experience a multitude of late and long-term effects from cancer and related treatments, including fatigue, pain, insomnia, risks for secondary cancers, financial concerns, and fear of cancer recurrence (American Society of Clinical Oncology (ASCO), 2016; Ness et al., 2013). Often these concerns are experienced in the context of other comorbid illnesses and psychosocial issues, adding to the complexity of health care management (ASCO, 2016). Additionally, cancer survivors are increasingly being treated in primary care settings, where both physicians and nurses have identified gaps in knowledge and confidence to treat both biomedical and psychosocial aspects of cancer survivorship (Potosky et al., 2011; Virgo, Lerro, Klabunde, Earle, & Ganz, 2013; Irwin, Klemp, Glennon, & Frazier, 2011). To further complicate matters, fragmented systems of health care limit communication and collaboration between specialists and primary care clinicians (ASCO, 2016).

The Institute of Medicine (IOM) reports From Cancer Patient to Cancer Survivor (Stovall, Greenfield & Hewitt, 2005) and Cancer Care for the Whole Patient (Adler & Page, 2008) have emphasized the need to improve quality of life for cancer survivors by developing evidence-based clinical guidelines and enhancing education and communication between specialty and primary care providers. Leading national organization have responded
to this call by developing guidelines for survivorship care. For example, the American Society of Clinical Oncology (ASCO) has created a core curriculum for cancer survivorship education which includes information about both physical and emotional concerns of survivors (Shapiro et al., 2016). In addition, the American Cancer Society (ACS) has developed survivorship care guidelines, covering a broad range of topics, for breast, prostate, colorectal, and head and neck cancers (ACS, 2017). Despite an emerging empirical literature and knowledge base on survivorship, evidence-informed trainings for disseminating this information have not been widely developed (Nekhlyudov, O’Malley, & Hudson, 2017).

Continuing education programs, required of medical and mental health professionals, provide opportunities for disseminating evidence-based guidelines. In fact, continuing education trainings have been specifically identified as the first and most important step in disseminating evidence-based psychological treatments for cancer patients (Brothers et al., 2015). Empirical evidence indicates that curricula on caring for cancer survivors has not been broadly incorporated into formal education programs for physicians and nurses, particularly outside of oncology specialty care (Ferrell & Winn, 2006; Susanibar, Thrush, Khatri, & Hutchins, 2014). Continuing education, preferably with an interdisciplinary focus, is recognized as an important starting point for better educating practicing clinicians about care for cancer survivors (Ferrell & Winn, 2006). Previously evaluated continuing education trainings in cancer survivorship have largely targeted physicians and focused on topics such as communication (Bylund et al., 2011), cultural sensitivity (Quinn et al., 2011), and general survivorship care (Shayne, Culakova, Milano, Dhakal, & Constine, 2014). Multiple disciplines have indicated a preference for in-clinic trainings (Rennie & MacKenzie, 2010), although online trainings have also had high user satisfaction (Burak & Potter, 2014).
Evaluation of in-person trainings have demonstrated positive outcomes such as increased knowledge and confidence in implementing practice changes (Bylund et al., 2011; Shayne et al., 2014). However, continuing education programs in general have been critiqued for being prescribed, not focused on clinicians’ questions arising from practice, lacking rigorous evaluation, and being limited in interprofessional scope and collaboration (Fletcher, 2008). Specifically, World Health Organization (WHO) and IOM have called for interprofessional education (IPE) and training, with the goal of transforming the landscape of health delivery and outcomes (WHO, 2010; IOM, 2015). IPE, in which two or more individuals from different professions learn “about, with, and from each other,” is seen as necessary preparation for collaborative practice, which has been shown to improve health outcomes and patient & provider satisfaction (WHO, 2010, p.7). IPE is particular relevant in the current landscape of primary care, in which comprehensive, team-based medical home and integrated care models of care delivery are growing in popularity (Patient-Centered Primary Care Collaborative, 2017).

Although there are limited examples in the literature of interprofessional continuing education programs in cancer survivorship, one online intervention targeted to multiple primary care disciplines (physicians, nurse practitioners, nurses, physicians assistants, and doctor of osteopathic medicine) showed positive outcomes (Buriak & Potter, 2014). The online CME program, which was designed to be both engaging and informational about the medical and psychosocial concerns facing cancer survivors, resulted in high participant satisfaction with training material, statistically significant increases in knowledge, and positive changes in anticipated practice behaviors (Buriak & Potter, 2014).
The current study builds upon the existing literature by developing an interprofessional training on one specific clinically significant and often unaddressed psychosocial issue in cancer survivorship: fear of cancer recurrence (FCR). FCR, the worry that the cancer will come back in the same or different part of the body, is experienced by the majority of cancer survivors across diagnoses and associated with poor quality of life and negative symptom burden (Simard et al., 2013). Experts in psychosocial oncology have identified FCR as a prevalent concern and suggested that it be addressed in health settings in which survivors are receiving care, as there are unlikely to be other avenues for detection or management (Recklitis & Syrjala, 2017). In the absence of a pre-existing, evidence-based training on FCR, the current training intervention was empirically developed through use of key informant interviews (See Chapter 1). This chapter reports the evaluation results of this training, whose main goal was to increase knowledge and self-efficacy of interprofessional primary care providers on identifying and address FCR in clinical practice.

Conceptual Framework

Consistent with previous research evaluating interprofessional trainings (Hean, Craddock, & O’Halloran, 2009), this study was guided by theories of behavior change (Social Cognitive Theory) and training evaluation (Kirkpatrick’s Evaluation of Training Programs). Social Cognitive Theory (SCT) (Bandura, 2001) posits that personal factors, environmental factors, and behaviors interact in a dynamic process, each influencing the other. Important aspects of personal factors are thoughts and beliefs. Additionally, self-efficacy is a significant factor in change behavior. Self-efficacy, or an individual’s belief that she or he can accomplish a specific task, positively impacts behavior change despite obstacles (Bandura, 2001). Kirkpatrick’s Evaluation of Training Programs (Kirkpatrick &
Kirkpatrick, 2006), suggests that training should be evaluated at multiple levels: reaction to the training, learning (including skills, knowledge, and attitudes), behavior, and results. Kirkpatrick’s model has been modified for IPE to include consideration of changes in organizational practice and benefits to patients/clients (Freeth et al., 2002). This study used constructs of reaction to training, knowledge acquisition, self-efficacy, and anticipated practice behavior change to evaluate the training.

Methods

Participants and Procedure. Data for this exploratory study were obtained from in-person trainings for interdisciplinary primary care teams on identifying and managing FCR in their cancer survivor patient populations. Paper surveys were self-administered pre and post training sessions. The same training was delivered in each setting. The single session training lasted approximately 30 minutes (see Table 1 for training components), and was presented in primary care settings (N = 6) that were affiliated with teaching hospitals in the Northeast. The primary care practices varied in location serving urban, suburban, and rural communities. In total, participants included physicians (N = 28), physician assistants (PA) (N = 5), nurse practitioners (NP) (N = 3), social workers (N = 2), and nurses (N = 8) who practiced in primary care settings were the trainings were delivered. Refreshments were provided during the trainings thank participants’ for their time. Following IRB approval, primary care practice leadership in each setting provided permission for the trainings to be conducted and individual participants completed Informed Consent to participate in the study. To protect confidentiality, a unique identified was created for each participant based on 4 questions; this identifier was used to match pre and post-test questionnaires. All data was collected between June 2016 and December 2016.
### Table 2.1. Components of the Training Intervention for Primary Care Providers on FCR

<table>
<thead>
<tr>
<th>Components</th>
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<tbody>
<tr>
<td>Patient narrative about FCR</td>
<td>3 minute video*</td>
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</tr>
<tr>
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<td>Includes information about prevalence, clinical correlates, clinical significance</td>
</tr>
<tr>
<td>Evidence informed screening questions for FCR</td>
<td>Delivered verbally &amp; presented to trainees on notecard</td>
</tr>
</tbody>
</table>
| Brief interventions to treat FCR | Delivered by PowerPoint:  
  - First tier (education, normalization, & lifestyle interventions delivered in exam room)  
  - Second tier (referrals to behavioral health & community resources) |
| Community resources/ referrals | Delivered verbally & presented to trainees on the backside of notecard  
  - National resources  
  - Local resources tailored to participants’ community of practice |
| Discussion/ questions | As permitted by time |

*when technology wasn’t available for video to work properly, patient narrative was shared verbally by the presenter

**Measures.** The pre/post-test questionnaires were informed by the theoretical framework described above. The aim was to evaluate the training and gather providers’ opinions on issues related to cancer survivorship treatment in primary care. The pre-test had 21 items, categorized into three domains of socio-demographics, FCR knowledge, and self-efficacy. The post-test had 31 items, categorized into five domains of socio-demographics, FCR knowledge, self-efficacy, reaction to training/ anticipated practice behaviors, and attitudes about survivorship issues.
**Socio-demographics.** Socio-demographic information included: gender, race/ethnicity, professional discipline, and years practiced in professional discipline.

**Knowledge.** The majority of knowledge items were on a Likert scale ranging between 0 and 5 (0 = not sure; 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). An example of a knowledge item was: “Fear of cancer recurrence is associated with poor quality of life in cancer survivors.” Negatively phrased items were reverse-coded to match the remainder of the knowledge questions. One knowledge item was formatted differently. This item asked participants if they were aware of cancer specific resources to which they might refer their patients (yes/no/not sure), with space to list up to 3 specific resources.

**Self-efficacy.** All self-efficacy items were on a Likert scale ranging between 0 and 5 (same as above). An example of a self-efficacy item was: “In my clinical practice, I am confident in my ability to ask patients about fear of cancer recurrence.”

**Reaction to training/ anticipated practice behaviors.** Four reaction to training items were on a Likert scale ranging between 0 and 5 (same as above). An example of this type of question was: “The information provided in this training is relevant to my clinical practice.” The fifth question asked, on a Likert scale ranging between 0 and 10 (0 = not confident at all and 10 = extremely confident) how confident participants were that they would be able to apply what they had learned to practice. Participants were also asked to check boxes of items that would help increase confidence. An example of this was: “Additional information and skill development.”

**Attitudes about survivorship issues.** Opinion questions, such as “Are there other topics on which you would like additional training related to providing care to cancer
survivors?" had answer options of (yes/no/not sure), with space to list additional information in narrative format.

**Analysis.** Data were entered into SPSS version 24 for statistical analysis. Descriptive statistics were conducted to assess participants’ (a) socio-demographic characteristics, (b) reactions to training and (c) opinions on survivorship issues. Paired samples t-tests were conducted to examine changes in scores of knowledge and self-efficacy between pre and post-tests. Finally, ANOVAs/ Welch’s F were conducted to explore differences in knowledge and self-efficacy between professional disciplines, both at baseline as well as after completion of the training. In all multivariate analyses, NPs and PAs were grouped together based on previous research that combined NPs and PAs into a category of advanced practice clinicians (APC) in primary care (e.g. Mafi, Wee, Davis & Landon, 2016). Social workers were removed from multivariate analyses due to small numbers. Therefore the three professional groups for multivariate analyses were (a) Physicians (b) Nurses and (c) NPs/PAs. For all analyses, p-values at the two-sided alpha level of < .05 were statistically significant.

**Results**

**Characteristics of sample.** A total of 46 professionals participated in the 6 trainings. Of the 46 participants, 64% were female. Seventy-four percent of the participants identified as White, followed by Asian (11%), Black (9%) and More than one race (4%); ninety-one percent of participants identified as non-Hispanic. The majority of participants were physicians (61%), followed by nurses (17%), PAs (11%), NPs (7%) and social workers (4%). The average number of years of professional experiences was 16.8, with standard deviation of 10.9. Table 2.2 displays the characteristics of this sample.
Table 2.2. Sample Characteristics

<table>
<thead>
<tr>
<th>Demographics</th>
<th>M ± SD or Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participants (N = 46)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>29 (63)</td>
</tr>
<tr>
<td>Male</td>
<td>17 (37)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>34 (73.9)</td>
</tr>
<tr>
<td>Asian</td>
<td>5 (10.9)</td>
</tr>
<tr>
<td>Black</td>
<td>4 (8.7)</td>
</tr>
<tr>
<td>More than one race</td>
<td>2 (4.3)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (2.2)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>42 (91.3)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2 (4.3)</td>
</tr>
<tr>
<td>Missing</td>
<td>2 (4.3)</td>
</tr>
<tr>
<td>Professional Discipline</td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>28 (60.9)</td>
</tr>
<tr>
<td>Nurse</td>
<td>8 (17.4)</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>5 (10.9)</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>3 (6.5)</td>
</tr>
<tr>
<td>Social Worker</td>
<td>2 (4.3)</td>
</tr>
<tr>
<td>Years of Professional Experience</td>
<td>18.8±10.9</td>
</tr>
</tbody>
</table>

**Knowledge.** Results of the paired-samples t-tests show that overall, mean composite knowledge scores significantly differed at pre-test (M = 3.21, SD = .71) and post-test (M = 4.03, SD = .56), t = -7.10, df =45, p < .001. On average, knowledge scores were higher (at the level of agree versus neutral) after the training. With the exception of the knowledge item about the relationship between FCR and sleep quality, paired-samples t-tests analysis of all other knowledge items showed significant changes in scores from pre-test to post-test,
with average knowledge scores higher at post-test (see Table 2.3). Results of descriptive statistics on the item, “Are you aware of any cancer specific resources to which you may refer your patients as needed?” show that only 39% of participants responded “yes” at pre-test while the number rose to 87% at post-test. 39% of participants were able to name at least 1 specific resource at pre-test, while 74% were able to name at least 1 specific resource at post-test.

Prior to conducting multivariate analysis, Cronbach’s alpha reliability coefficient was calculated on knowledge scale items. Using post-test data, Cronbach’s alpha = 0.34, indicating very poor/not acceptable internal consistency (George & Mallery, 2003). Although results are still reported using a knowledge scale composite score, these results should be interpreted with extreme caution given the Cronbach’s alpha result. One-way ANOVA was conducted to explore differences in mean knowledge scores between disciplines at pre-test. There was no statistically significant differences between disciplines (F(2,41) = 0.31, p = 0.74). ANOVA was planned to explore differences in mean knowledge scores between disciplines at post-test. However, given that assumption of equal variances was not met when Levene’s test was conducted and there were differences in group sizes, the non-parametric Welch test was run instead. Results indicated a trend toward significant differences between groups (Welsh’s F(2, 13.33) = 3.49, p = 0.06) (See Table 2.4).

Self-efficacy. Results of the paired-samples t-tests show that overall, mean composite self-efficacy scores significantly differed at pre-test (M = 2.95, SD = 0.69) and post-test (M = 3.95, SD = 0.44), t = -9.58, df = 45, p < .001. On average, self-efficacy scores were a full point higher (at the level of agree versus neutral) after the training. Paired-samples t-tests of all individual self-efficacy items showed significant changes in scores from pre-test to post-test.
at the .001 level of significance, with average self-efficacy scores higher at post-test (see Table 2.3).

Table 2.3. Means, Standard Deviations, and Paired Samples T-Tests Results for Knowledge & Self-Efficacy Domains

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Pretest M</th>
<th>SD</th>
<th>Posttest M</th>
<th>SD</th>
<th>95% CI of Mean Difference</th>
<th>T</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge (composite)</td>
<td>3.21</td>
<td>.71</td>
<td>4.03</td>
<td>.56</td>
<td>-1.05, -59</td>
<td>-7.10***</td>
<td>45</td>
</tr>
<tr>
<td>FCR persists over time</td>
<td>2.93</td>
<td>1.31</td>
<td>3.76</td>
<td>1.06</td>
<td>-1.33, -32</td>
<td>-3.29**</td>
<td>45</td>
</tr>
<tr>
<td>Sleep related to FCR</td>
<td>3.59</td>
<td>1.50</td>
<td>3.39</td>
<td>1.51</td>
<td>-.46, .85</td>
<td>.60</td>
<td>45</td>
</tr>
<tr>
<td>Age related to FCR</td>
<td>3.20</td>
<td>1.54</td>
<td>3.72</td>
<td>1.19</td>
<td>-1.02, -02</td>
<td>-2.10*</td>
<td>45</td>
</tr>
<tr>
<td>FCR prevalence</td>
<td>4.52</td>
<td>.51</td>
<td>4.76</td>
<td>.43</td>
<td>-.37, -.11</td>
<td>-3.76***</td>
<td>45</td>
</tr>
<tr>
<td>ACS survivorship definition</td>
<td>1.61</td>
<td>1.76</td>
<td>4.28</td>
<td>1.56</td>
<td>-3.29, -2.06</td>
<td>-8.78***</td>
<td>45</td>
</tr>
<tr>
<td>FCR related to quality of life</td>
<td>3.41</td>
<td>1.15</td>
<td>4.26</td>
<td>.77</td>
<td>-1.17, -.53</td>
<td>-5.35***</td>
<td>45</td>
</tr>
<tr>
<td>Self-Efficacy (composite)</td>
<td>2.95</td>
<td>.69</td>
<td>3.95</td>
<td>.44</td>
<td>-1.22, -80</td>
<td>-9.58***</td>
<td>45</td>
</tr>
<tr>
<td>Identify FCR</td>
<td>3.04</td>
<td>.97</td>
<td>3.91</td>
<td>.46</td>
<td>-1.17, -.57</td>
<td>-5.88***</td>
<td>45</td>
</tr>
<tr>
<td>Ask about FCR</td>
<td>3.30</td>
<td>.99</td>
<td>3.98</td>
<td>.54</td>
<td>-.95, -.39</td>
<td>-4.84***</td>
<td>45</td>
</tr>
<tr>
<td>Screen for FCR</td>
<td>2.91</td>
<td>1.21</td>
<td>3.83</td>
<td>.80</td>
<td>-1.30, -.52</td>
<td>-4.71***</td>
<td>45</td>
</tr>
<tr>
<td>Address FCR</td>
<td>3.11</td>
<td>1.40</td>
<td>3.87</td>
<td>.62</td>
<td>-1.14, -.38</td>
<td>-4.07***</td>
<td>45</td>
</tr>
<tr>
<td>Referrals FCR</td>
<td>2.80</td>
<td>1.15</td>
<td>4.09</td>
<td>.51</td>
<td>-1.63, -.93</td>
<td>-7.33***</td>
<td>45</td>
</tr>
<tr>
<td>Community orgs -- FCR</td>
<td>2.50</td>
<td>1.03</td>
<td>4.04</td>
<td>.63</td>
<td>-1.87, -1.21</td>
<td>-9.43***</td>
<td>45</td>
</tr>
</tbody>
</table>

M = Mean, SD = Standard Deviation, CI = Confidence Interval, * p < .05, ** p < .01, *** p < .001

Table 2.4. Comparison of Mean Knowledge & Self-Efficacy Scores Between Professional Disciplines at Pre-Test (ANOVA) & at Post-Test (ANOVA & Welch’s F)

<table>
<thead>
<tr>
<th>ANOVA - Knowledge by Discipline (Pre-test)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>.34</td>
<td>2</td>
<td>.17</td>
<td>.31</td>
</tr>
<tr>
<td>Within groups</td>
<td>22.57</td>
<td>41</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.91</td>
<td>43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prior to conducting multivariate analysis, Cronbach’s alpha reliability coefficient was calculated on self-efficacy scale items. Using post-test data, Cronbach’s alpha = .82, indicating good internal consistency (George & Mallery, 2003). One-way ANOVA was conducted to explore differences in mean self-efficacy scores between disciplines at pre-test. There was no statistically significant differences between disciplines (F(2,41) = 2.35, p = .11). ANOVA was conducted to explore differences in mean knowledge scores between disciplines at post-test. No statistically significant differences were found by discipline (F(2,40) = .47, p = .63) (See Table 2.4).

Reactions to training/ anticipated practice behaviors. On average, scores of reaction to training items were high (as measured on Likert scale of 0 to 5). Participants agreed that the information was relevant to clinical practice (M = 4.41, SD = .62), indicated that handouts from training would prove useful in their work (M = 4.5, SD = .86), that the training provided enough time for discussion (M = 4.07, SD = .77) and that participants would recommend the training to others in their profession (M = 4.28, SD = .58). On a scale

<table>
<thead>
<tr>
<th>ANOVA – Self-Efficacy by Discipline (Pre-test)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2.09</td>
<td>2</td>
<td>1.05</td>
<td>2.35</td>
</tr>
<tr>
<td>Within groups</td>
<td>18.27</td>
<td>41</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.36</td>
<td>43</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Welch’s F – Knowledge by Discipline (Post-test)</th>
<th>df</th>
<th>Welch’s F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>13.33</td>
<td>3.49</td>
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</table>

<table>
<thead>
<tr>
<th>ANOVA – Self-Efficacy by Discipline (Post-test)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>.09</td>
<td>2</td>
<td>.04</td>
<td>.20</td>
</tr>
<tr>
<td>Within groups</td>
<td>8.56</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8.64</td>
<td>43</td>
<td>.21</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
of 0-10 of confidence in applying what was learned in the training to practice, participants on average displayed high confidence (M = 7.67, SD = 1.25). When asked what would help increase confidence, the most common checked responses were: time/higher priority (65.2%), additional information/skill development (43.5%), more referral resources (39.1%) and more screening resources (28.3%).

**Attitudes toward survivorship issues.** Participants were asked about attitudes related to training on cancer survivorship issues, communication between oncology and primary care providers, and survivorship care plans. Twenty-eight percent of respondents stated that they had received training in the past about providing care to cancer survivors. Reported topics included: palliative care, local resources, immunizations, and surveillance screening. Twenty-six percent of respondents stated that they would like additional training in providing care to cancer survivors, with identified topics included: cancer’s impact on family/children, long term effects/screening, communication with patient, co-management with oncology providers, and palliative care/end of life. Seventy-six percent of respondents stated that there was a need for improved communication between oncology providers and primary care providers. Suggestions for improved communication included: in-person meetings, “doc to doc” communication, sharing notes, emails, providing survivorship care plans/outlines, better hand-offs, and better care guidelines for follow-up. Although survivorship care plans was listed as a strategy for improving communication, when asked if a participant had ever received a cancer survivorship care plan for any patient, only 13% responded “yes.”

Discussion
This pilot intervention achieved its goal of increasing knowledge and self-efficacy of interdisciplinary primary care providers in identifying and addressing FCR for cancer survivors in primary care settings. With the exception of an item about the relationship between FCR and sleep quality, post-test scores on knowledge showed statistically significant increases from pre-test scores. The pre-test score on FCR/sleep quality (3.59) on a Likert scale of 0-5, was the second highest average pre-test knowledge score and it is possible that material on the relationship between FCR and sleep quality was not emphasized enough in trainings in order to see additional knowledge gain. No statistically significant differences were seen between professional group scores in multivariate analyses although there was trend toward significance in comparing mean knowledge scores at post-test. The lack of significant differences between groups is not surprising, given the small sample size of the study.

All self-efficacy questions showed statistically significant increases from pre-test to post-test. In this study, participants displayed high confidence (7.67 on a 10-point scale) that they would be able to incorporate practice changes from the training. This is in keeping with previous trainings (Buriak & Potter, 2014) that demonstrated high intention for practice change among providers. Commonly identified issues that would improve confidence (time/higher priority, additional information/skill development, more referral resources and more screening resources) have also been identified elsewhere as barriers for comprehensive care for cancer survivors in primary care settings (see results from qualitative study in Chapter 1; Nekhlyudov et al., 2017). Future consultative services and research should focus on helping primary care practices develop practice pathways for identifying and addressing
psychosocial concerns of cancer survivors, including consideration of having disciplines such as nursing or social work take primary responsibility for this practice issue.

The trainings evaluated in this study took place in 6 different clinic settings, some of which were conducive to learning than other (e.g. dedicated conference space versus training in team breakroom/kitchen). However, across settings participants had a very favorable reactions to the training, with participants agreeing that information was relevant to clinical practice, that handouts from training would prove useful in their work, that the training provided enough time for discussion, and that participants would recommend the training to others in their profession. These results are similar to other research that has described provider preference for in-clinic training (Rennie & MacKenzie, 2010) and suggest that a brief training is feasible even in busy or resource-limited primary care practice settings. Despite high favorability, only 28% of participants had previously received training on cancer survivorship issues (some in fellowship training programs) and only 26% identified interest in future trainings, with topics spanning both medical (e.g. surveillance screening guidelines) and psychosocial (e.g. impact of cancer on family/children) issues.

Consistent with the literature (e.g. ASCO, 2016), the majority (76%) of participants agreed that there is need for improved communication between oncology specialists and primary care providers. Participants identified a range of micro (e.g. phone conversations) and macro (e.g. better care guidelines) strategies to improve communication. Survivorship care plans were also mentioned by three participants. Survivorship care plans, written tools to improve communication and care coordination between oncology and primary care providers and recommended by ASCO guidelines (Shapiro et al., 2016), had only been received by
13% of participants. This suggests that there may be a gap between survivorship guidelines and the knowledge and practice behaviors of both oncology and primary care providers.

In sum, this study demonstrated that a brief, on-site interprofessional training is feasible in a range of primary care practices, well-received by participants, and achieved goals of improved knowledge, self-efficacy and confidence to implement anticipated practice behavior changes.

Limitations

This pilot study was limited by small sample size, including small numbers of social workers, resulting in social workers being excluded from multivariate analyses and no significant statistical finds at the multivariate level. Additionally, low Cronbach’s alpha on the knowledge scale items indicates that results in which the cumulative knowledge score was used should be interpreted with extreme caution. The results of the study were also limited by use of a convenience sample with no comparison group. This one group pre-test/post-test design is common in training evaluations, but future research could use a stronger experimental design as well as consider changes in knowledge, self-efficacy, and practice behaviors over time to determine if positive changes persist. Although this study was conducted in primary care practices in communities that spanned urban, suburban, and rural settings, all practices were hospital-affiliated and in the Northeast, making it difficult to generalize study results to other types of practices (e.g. private) and in other parts of the United States.

Future Directions
Quality healthcare for cancer survivors can be improved through continuing education efforts for their interdisciplinary primary care providers. This study demonstrated that a brief, on-site interprofessional training is feasible in a range of primary care practices, well-received by participants, and achieved goals of improved knowledge, self-efficacy and confidence to implement anticipated practice behavior changes. The need remains for ongoing continuing education/ trainings across primary care disciplines to better disseminate evidence-based guidelines for cancer survivorship care. Future research should also explore ways to more broadly disseminate cancer survivorship educational offerings to primary care teams, including online or hybrid (online and on-site) trainings. Outreach and consultation from cancer survivorship experts and champions (e.g. oncologeneralist as described in Nekhlyudov et al., 2017) might increase providers’ interest in attending additional trainings as well as assist in strategizing about how to implement practice changes in busy primary care clinics. Additionally, integrated behavioral health services in primary care practices can offer value in providing resources to patients, consultation to colleagues, and addressing barriers to managing psychosocial concerns in primary care.
Chapter Three
Managing Cancer Survivors’ Psychosocial Concerns in Primary Care Settings: SBIRT as a Promising Model

Introduction

Due to advances in detection and treatment, cancer survivors are a large, diverse and increasing population in the United States (U.S.). Most recent data indicates an estimated 15.5 million cancer survivors in the U.S., with expected increases to over 20 million by 2026 (Miller et al., 2016). Nearly half of cancer survivors are 70 years old or older and almost 70% finished cancer treatment at least five years ago (Miller et al., 2016). The interplay of aging and chronic medical conditions means that cancer survivors often have complex care needs. On average, cancer survivors have five diagnosed medical conditions that can include such diagnoses as diabetes, hypertension, and depression/anxiety, with approximately two being diagnosed after cancer (Leach et al., 2015). In the past, cancer survivors were typically followed by oncology specialist providers following the end of treatment and received care in comprehensive National Cancer Institute (NCI)-designated cancer centers or community oncology practices. However, these oncologic specialty practices no longer have the capacity to care for the growing number of cancer survivors (Stovall, Greenfield & Hewitt, 2005). Therefore, cancer survivors are increasingly being cared for in primary care practice settings (Nekhlyudov, O’Malley, & Hudson, 2017).

Once in primary care, survivors typically cope with co-morbid conditions as well as late and long-term effects of cancer and related treatments, including pain, fatigue, risk for secondary cancers, sexual functioning, and effects on cardiopulmonary system, which add to the complexity of care (American Society for Clinical Oncology, 2016). Increasingly, psychosocial concerns such as anxiety, financial concerns, and managing household tasks,
are also identified as distressing, unmet needs by survivors (Ness et al., 2013). Given the additional burden of cancer in primary care settings, this paper explores the adaptation of the Screening, Brief Intervention, Referral and Treatment (SBIRT) model to implement guidelines to address psychosocial concerns of cancer survivors. A pilot training developed for primary care providers on the issue of fear of cancer recurrence (FCR) is used as an exemplar of the utility and feasibility of the SBIRT approach.

Literature Review

**Psychosocial Concerns of Cancer Survivors.** Psychosocial concerns, which include mental health, social, and environmental factors, are widely acknowledged to impact health outcomes (Robert Wood Johnson Foundation, 2011). Research suggests that cancer survivors experience a range of psychosocial concerns, from higher rates of depression, anxiety disorders, and adjustment disorders to employment and financial concerns to existential distress (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013; Ness et al., 2013; Stanton, Rowland, & Ganz, 2015). Additionally, approximately 30% of cancer survivors report that needs are going unmet, with unmet emotional and information needs being prominent (Geller, Vacek, Flynn, Lord & Cranmer, 2014).

Institute of Medicine reports *From Cancer Patient to Cancer Survivor* (Stovall et al., 2005) and *Cancer Care for the Whole Patient* (Adler & Page, 2008) have emphasized the importance of addressing psychosocial concerns of cancer survivors, improving coordination of care, and working to enhance the long-term quality of life for survivors. The cancer community has embraced guidelines for identifying and addressing psychosocial distress during active treatment with universal distress screening now required for institutional accreditation from the American College of Surgeon’s Commission on Cancer (American
College of Surgeons, 2015). National Comprehensive Cancer Network (NCCN) guidelines on psychosocial distress have also been influential, with patient self-report distress thermometer screening tools being used in many oncology care settings (Jacobsen et al., 2005). However, implementing similar guidelines to screen for and treat common psychosocial issues in cancer survivors has been difficult, given the lack of integrated services outside of oncologic specialty care and the diversity of survivors’ needs (Recklitis & Syrjala, 2017). For example, while some survivors are most concerned about sexual functioning after cancer treatments, others are most concerned about increased risk of a secondary cancer due to a particular treatment. All psychosocial concerns should ideally be addressed in integrated settings in which cancer survivors receive medical care (Recklitis & Syrjala, 2017); primary care is a particularly appropriate setting to treat varied concerns, given the emerging models of integrated primary care, in which interprofessional teams collaboratively address patients’ physical and psychosocial needs (Hunter, Goodie, Oordt, & Dobmeyer, 2009).

Primary Care & Psychosocial Concerns in Cancer Survivorship. Growing numbers of cancer survivors coincides with other trends in primary care. These include: increased complexity of patient care, patient-centered care, shifting composition and roles on health care teams, and reforms of payment structures (Robert Wood Johnson Foundation, 2015). These trends pave the way for better, more comprehensive care for cancer survivors. Primary care providers are becoming increasingly aware and adept at managing complex, chronic medical conditions (Wagner et al., 2001; Robert Wood Johnson Foundation, 2015), while beginning to screen for and address behavioral health needs (Thorpe et al. 2017). For example, Grant et al. (2011) found that primary care physicians on average identified 25% of
their patients as complex, with intersecting medical, social, and behavioral factors. Additionally, up to 70% of primary care visits have been identified as being driven by behavioral health needs (Hunter et al., 2009).

Given complexity, health care systems have developed new models to address patients’ needs. One such innovation is integrated behavioral health in primary care. In integrated behavioral health models, case managers or behavioral health providers work as embedded practitioners or consultants to address the behavioral health needs of patients. Care is patient-centered, team-based, and evidence informed (Hunter et al., 2009). Substance Abuse & Mental Health Services Administration – Health Resources & Service Administration (SAMHSA-HRSA) (2017) has undertaken an integrated health initiative, focused on the specific psychosocial concerns of mental health and substance abuse issues. This has provided tremendous support to development, evaluation, and dissemination of the model of integrated care. Research indicates that integrated, collaborative care results in cost-reductions, improvements in clinical outcomes, and patient and provider satisfaction (American Psychiatric Association (APA) & Academy of Psychosomatic Medicine (APM), 2016).

Managing Psychosocial Concerns of Cancer Survivors using SBIRT. As this model of integrated care gains prominence, it is clear that primary care providers are becoming increasingly involved in the psychosocial care of cancer survivors. In a recent survey of oncology and primary care providers, over half reported significant involvement in addressing psychosocial concerns of patients who are cancer survivors (Forsythe et al., 2012). Primary care providers are ideally positioned to destigmatize treatment of mental health concerns (Smith & Toonen, 2007) and cancer survivors highly rate the psychosocial
There is precedent for training primary care teams to identify and address psychosocial concerns. One area of behavioral health in which there have been opportunities for training and supported implementation for primary care teams is alcohol and substance abuse. The evidence-informed model that has demonstrated utility in identifying and reducing primary care patient problem behavior related to alcohol use is the Screening, Brief Intervention, & Referral to Treatment (SBIRT) model (Agerwala & McCacne-Katz, 2012). The SBIRT model in primary care seeks to minimize barriers by combining screening and tiered interventions while employing universal screening to normalize mental health and psychosocial issues that may have been previously perceived by patients, families and providers as stigmatizing topics to discuss. SBIRT demonstrates that inclusion of brief screening questions to detect psychosocial concerns during primary care visits is feasible (Saitz, 2007).

SBIRT is a public health approach to reducing the negative health outcomes from alcohol overuse/abuse (Babor et al., 2007). It first arose out of the 1990 IOM report on the epidemic of substance abuse, and was intended to fill the gap between primary prevention and more intensive treatment (Agerwala & McCacne-Katz, 2012). SBIRT can be flexibly applied in different health care setting and includes the stages: screening (evidence based screening for alcohol use), brief intervention (including psychoeducation and motivational interviewing) and referral for treatment (intensive services for more severe problems) (SAMHSA, 2011). This model has been studied extensively and has shown positive short-term outcomes when implemented in primary care settings, particularly for reducing problem
drinking in non-dependent patients and cost-effectiveness of care (Babor et al., 2007; Kraemer, 20017; Saitz, 2007).

By contrast, content knowledge and skills for primary care providers about cancer survivorship have not kept pace with the complex needs of cancer survivors. Training programs are not widely incorporating cancer survivorship into curricula and both physicians and nurses have identified gaps in knowledge and confidence to treat biomedical and psychosocial aspects of cancer survivorship (Potosky et al., 2011; Virgo, Lerro, Klabunde, Earle, & Ganz, 2013; Irwin, Klemp, Glennon, & Frazier, 2011). Different models of integrating survivorship care into primary care have been suggested depending on patient’s diagnoses (e.g. care provided mostly in an oncology specialty care setting versus shared care versus care mostly provided in a primary care setting) (Nekhlyudov et al., 2017) but there is consensus that primary care should be increasingly involved in the care of cancer survivors.

Best practices in addressing psychosocial concerns of cancer survivors include screening, referral, and treatment (NCCN, 2016), the hallmarks of SBIRT. Research also indicates that training and practice implementation are important components of successful use of SBIRT in primary care and that allied health professionals, including nurses, social workers, and psychologists are often well-positioned to implement SBIRT, given multiple demands and time limitations experienced by physicians (Rahm et al., 2015; SAMHSA, 2011). Combined, the above bodies of literature suggest that SBIRT could be a feasible model for identifying and addressing psychosocial concerns in integrated primary care settings.

**Billing/ Payment structure.** There are several billing codes developed for SBIRT. These are specific to alcohol and/or substance abuse screening and/or brief intervention and
can be billed to private insurance, Medicare, and Medicaid (SAMHSA, 2015b). Although there are currently no codes specific to screening and brief intervention in psychosocial oncology care, Health Behavior, Assessment, & Intervention (HBAI) codes can be used to bill for identification of psychosocial factors that are important to management of health issues (National Council on Aging, 2015). Additionally, there is movement in primary care toward a combination of fee-for-service and performance-based payments, which might better account for integrated services of non-physician clinicians (Robert Wood Johnson Foundation, 2015). Nekhlyudov et al. (2017) also suggest a policy initiative of providing incentives to primary care physicians who take on coordinated, comprehensive care of cancer survivors, similar to incentives currently provided for other priority conditions such as hypertension and diabetes. These incentives could provide financial support for psychosocial screening, treatment, and referral initiatives, making SBIRT a potentially viable solution for addressing unmet needs of cancer survivors in primary care.

**Application of SBIRT: Example of Training on Fear of Cancer Recurrence.** As discussed above, an efficacious approach to identifying and addressing psychosocial concerns of cancer survivors in primary care is the SBIRT model. This public health model aims to address the limitations of fragmented health care and promote communication and collaboration between specialty, primary, and mental health care. Additionally, given the competing demands for primary care physicians’ time and effort, the needs of patients with multiple co-morbidities are often best served by high-functioning team-based care wherein other professional disciplines have competencies that best serve complex patient needs (Robert Wood Johnson Foundation, 2015). Comprehensive screening and referral pathways for cancer survivors’ psychosocial concerns have already been proven successful in primary
oncology settings (such as NCCN distress thermometer, referenced above). As one method of translating this model to care of survivors in primary care settings, the authors of this paper previously tested a pilot training intervention for interprofessional primary care providers on identifying and addressing the specific psychosocial concern of fear of cancer recurrence (FCR) (described in Chapters 1 & 2 of this dissertation). The training used an independently developed approach similar to SBIRT, demonstrating SBIRT’s utility and feasibility in primary care settings.

**Screening.** Screening is a standard set of questions asked of the entire population in primary care. The rapid assessment of risk can range from a single question to a more comprehensive evaluation; sometimes one question is used and those identified as being at risk are then invited to complete a more detailed set of screening questions (Fleming, 2004). Brief screening tools have utility in clinical practice due largely to their minimal impact on workflow. Screening for depression is health care settings is recommended by US Preventive Services Task Force (US Preventive Services Task Force, 2015) with many practices using screening tools such as the PHQ-2 (Lowe, Kroenke & Grafe, 2005). For psychosocial concerns such as FCR, no “gold-standard” screening tools exists. However, we used key informant interviews to develop a set of potential screening questions for FCR. We trained PCPS to ask all cancer survivors several evidence-informed questions to identify those at risk of FCR. These questions include: Do you worry that your cancer may come back? Over the past month, how often have you worried about the cancer coming back?) (Cancer Australia, 2014). Alternate options for screening for FCR include self-report measures such as Fear of Cancer Recurrence Inventory (FCRI), recently validated in short-form for clinical settings.
Brief Interventions. Integrated primary care settings use interprofessional teams to deliver brief interventions. These can range from a physician in an exam room sharing a prescribed sentence or two in which he/she states concern, to a 15-20 min (sometimes recurring) education and/or therapeutic intervention grounded in theories of behavior change provided by another member of the team such as a nurse practitioner or a social worker (Fleming, 2004; APA & APM, 2016). Previously developed evidence-based interventions for addressing FCR were long-term and required specialized training (e.g. Lengacher et al., 2014; Smith et al., 2015). Our pilot study trained participants, including physicians, NPs, PAs, nurses, and social workers, to deliver brief interventions that included psychoeducation and normalization of the experience of FCR, communication with the patient about perceptions of risk versus actual risk based upon surveillance, and suggested lifestyle interventions to improve wellness and disease prevention such as exercise, nutrition, and stress management.

Referral to treatments. For patients whose distress is severe and unable to be fully addressed through brief interventions, referrals to treatment can take a variety of forms. These forms will depend on the patient’s need and preference as well as available resources. Integrated primary care practices have embedded behavior health providers, making referrals handoffs to colleagues working as a team on a shared treatment plan to address FCR. In practices that do not have mental health providers, referrals were to external providers, local community organizations or support programs (both professional and peer-led) for cancer survivors, and national cancer support and advocacy organizations.
**Reaction to training intervention.** In surveys conducted during the pilot training intervention, participants rated the training favorably, stating that they found the training valuable and were likely to recommend such a training to a colleague. Participants also had high confident in applying what was learned in the training to practice (see Results in Chapter 2 for additional details).

**Conclusion & Future Directions**

Cancer survivorship is a growing public health concern in the U.S. New models of care to better meet the complex needs of cancer survivors, particularly in the psychosocial realm, must be identified and implemented (Recklitis & Syrjala, 2017). Future research should test the feasibility of using SBIRT approaches to address the psychosocial concerns of cancer survivors in primary care settings. Trainings targeting primary care providers on implementing SBIRT models to address psychosocial concerns of patients who are cancer survivors should be developed and implemented in a manner similar to SAMSHA’s universal approach to addressing substance abuse among primary care populations. Implemented models of care should also be tested for efficacy, including short-term and long-term outcomes. Innovative care delivery models, payment models, and medical – community (social service) partnerships should be explored as strategies for improving quality of life and addressing unmet needs of cancer survivors in the most cost-effective manner.
Conclusion

The first and second chapters of this dissertation report on studies to develop and subsequently test the effectiveness of a training for interprofessional primary care providers on FCR. Several conclusions can be drawn from these studies. According to experts interviewed in the qualitative study, FCR is a significant emotional issue for cancer survivors, yet primary care providers are not screening for FCR nor are they aware of treatment approaches to address FCR in their patient populations. This lends support to the campaign to develop high quality continuing education training programs for providers. Additionally, competing demands of limited time and management of multiple comorbid illnesses limit primary care physicians’ ability to screen for FCR. Responses to this challenge might include: training teams on screening and addressing psychosocial concerns of survivors so that nurses and/or behavioral health providers can spearhead this issue and/or working with practices to develop feasible, rapid screening protocols. Primary care settings with integrated behavioral health are ideally situated for social workers or psychologists to be involved with screening, interventions, and referrals.

The second study demonstrated that a brief, on-site interprofessional training is feasible in a range of primary care practices, well-received by participants, and achieved goals of improved knowledge, self-efficacy and confidence to implement anticipated practice behavior changes. Future research should also explore ways to more broadly disseminate cancer survivorship educational offerings to primary care teams, including online or hybrid (online and on-site) trainings. Future research might also consider longitudinal changes in primary care providers’ practice behaviors, as well as explore the link between practice behaviors and patient-reported needs/ unmet needs.
Finally, the project of developing and testing a training on the unmet psychosocial need of FCR led to a conceptual manuscript on how SBIRT model can be applied to identify and address psychosocial concerns of cancer survivors in primary care. SBIRT, an evidence-based model which has been rigorously testing in the context of alcohol use/abuse (SAHMSA, 2011), provides an opportunity to respond to mandate of distress screening across continuum of cancer care (NCCN, 2016) and reduce suffering of cancer survivors. In addition to improved patient centered outcomes, early detection of psychosocial issues such as substance misuse has been shown to reduce health care costs (Fleming et al., 2000). Future research could evaluate the feasibility and cost-effectiveness of psychosocial distress screening and interventions in primary care settings.

New models of primary care, such as integrated behavioral health, present emerging opportunities for clinicians to accomplish the objectives of identifying, providing coordinated care, and evaluating the provision of treatment of physical and psychosocial concerns for increasing numbers of cancer survivors. This has the potential to not only improve care delivery but reduce suffering for millions of Americans in the coming years.
References


Dieng, M., Butow, P. N., Costa, D. S., Morton, R. L., Menzies, S. W., Mireskandari, S., ... & Kasparian, N. A. (2016). Psychoeducational intervention to reduce fear of cancer recurrence in people at high risk of developing another primary melanoma: Results of a randomized controlled trial. *Journal of Clinical Oncology*, 34(36), 4405-4414.


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Appendix A

Informed Consent for Qualitative Key Informant Interviews

Informed Consent to Participate in a Research Study (Interview)

Simmons College

Title of the Study: Addressing Fear of Recurrence in Cancer Survivors: Training in Primary Care

Investigator: Julie Berrett-Abebe, 617-817-8693

Purpose of the Research Study

You are being asked to participate in a research study to develop a training for interdisciplinary primary care providers on identifying and intervening on the significant clinical issue of fear of cancer recurrence (FCR) in cancer survivorship. You have been identified as an expert in the topic of FCR or care of cancer survivors in primary care settings. This study is to fulfill, in part, the requirements of the dissertation for a PhD in Social Work. Ultimately, this research may also be published or presented at professional conferences.

Description of the Study Procedures

Your involvement consists of agreement to participate in a 15-20 minute audio taped interview in which you will be invited to share your thoughts and experiences regarding FCR and/or care of cancer survivors in primary care settings.

Risks/Discomforts of Being in this Study

The study involves minimal risks. Some participants might experience discomfort in responding to some questions about FCR. Another foreseeable risk is a possible breach of confidentiality. To protect against these risks, all audio files will be immediately downloaded to a password protected flash drive. No one other than the researcher will listen to the tape. All identifying information will be deleted from tape transcripts. All audio files will be destroyed within 12 months of the completion of this study.

Benefits of Being in the Study

Although you will not be compensated for your participation, you will be contributing to the knowledge base of psychosocial care in cancer survivorship as well as working toward improving quality of life for cancer survivors.

Right to Refuse or Withdraw
The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any time without affecting your relationship with the researcher of this study or Simmons College. There is no penalty or cost for withdrawing or choosing not to participate.

Right to Ask Questions and Report Concerns

You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, Julie Berrett-Abebe at 617-643-2355 or berrett@simmons.edu. You may also contact Professor Peter Maramaldi, PhD, 617-521-3908, at Simmons College. If you have questions about your rights as a research participant you can contact Valerie Beaudrault, Human Protections Administrator in the Office of Sponsored Programs at Simmons College, 617-521-2415.

Consent

Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study researcher.

Name of Participant (print):
_______________________________________________________

Signature of Participant: ____________________________ Date: _____________

Signature of Researcher: ____________________________ Date: _____________

I agree to be audiotaped during this interview

Name of Participant (print):
________________________________________________________

Signature of Participant: ____________________________ Date: _____________

Signature of Researcher: ____________________________ Date: _____________
Appendix B

Semi-structured Interview Guide for Key Informant Interviews

Welcome and Introduction

Thank you for taking the time to meet with me today. As you know, my name is Julie Berrett-Abebe and I am working on a dissertation to improve emotional well-being in cancer survivorship. This interview is to help inform development of a training for primary care providers on fear of cancer recurrence. There are no right or wrong answers to the questions we will be discussing; I am interested in your unique expertise and opinions.

Before we proceed I want to be certain that you have given consent, and that you are aware that we are recording this interview. With your permission, I’ve begun recording.

---

Do you self-identify as:

- Female
- Male
- Other _____

Do you self-identify as:

- American Indian/Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Black or African American
- White
- More than one race

What is your professional discipline?

For how many years have you been practicing in (name discipline)?

Probe: since residency or since you graduated

How would you describe the population to whom you provide care?

Probe: Would you say that you work with adults in a rural primary care setting?

Because some people have both professional & personal experiences of cancer…. Are you yourself a cancer survivor?

---

Interview Questions

1. Do you think patients who have lived through a cancer diagnosis experience fear of cancer coming back? If yes, how would you define it?
2. Do you think that fear of cancer recurrence is an issue experienced by your patient population? If yes, when do you think fear of cancer recurrence is clinically significant?

3. Do you think Primary Care is an appropriate place to screen for fear of cancer recurrence? If yes, what do you think would be the most effective and accurate way to screen for fear of cancer recurrence in primary care?

4. Do you think Primary Care is an appropriate place to address fear of cancer recurrence? If not where?

5. Are there any interventions that you would recommend to help people with fear of cancer recurrence?

6. What specific content would you recommend be included in a training for interprofessional primary care providers on the topic of fear of cancer recurrence?

7. Can you provide me with the name of another person I should speak with on this topic?
Appendix C

Informed Consent for Training in Primary Care Settings

Informed Consent to Participate in a Research Study: Simmons College

Title of the Study: Addressing Fear of Recurrence in Cancer Survivors: Training in Primary Care

Investigator: Julie Berrett-Abebe, 617-817-8693

Purpose of the Research Study
You are being asked to participate in a research study to evaluate a training for interdisciplinary primary care providers on identifying and addressing the significant clinical issue of fear of cancer recurrence (FCR) in cancer survivorship. Your medical practice has agreed to deliver the pilot training to you during a team meeting. You will be asked to complete a short survey before and after the training. This study is to fulfill, in part, the requirements of the dissertation for a PhD in Social Work. Ultimately, this research may also be published or presented at professional conferences. Any findings from the study will be carefully de-identified with specific findings presented in the aggregate.

Description of the Study Procedures
Your involvement consists of participating in a 30 minute training on FCR and completing a pre-test and post-test survey.

Risks/Discomforts of Being in this Study
The study involves minimal risks. Breach of confidentiality is always a possible concern. To protect against risks, you will be asked to create a unique, unidentifiable code on the pre-test/post-test surveys. Paper surveys will be stored in a locked file cabinet in the researcher’s office.

Benefits of Being in the Study
You will be contributing to the knowledge base of best practices in caring for cancer survivors. If permitted by your institution, refreshments will be served during the training. There is no monetary compensation for participating in the training.

Right to Refuse or Withdraw
The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any time without affecting your employment, collaboration or relationship with the researcher or Simmons College. There is no penalty or cost for withdrawing or choosing not
Right to Ask Questions and Report Concerns
You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, Julie Berrett-Abebe at 617-643-2355 or berrett@simmons.edu. You may also contact Professor Peter Maramaldi, PhD, MPH, 617-521-3908, at Simmons College. If you have questions about your rights as a research participant you can contact Valerie Beaudrault, Human Protections Administrator in the Office of Sponsored Programs at Simmons College, 617-521-2415.

Consent
Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study researcher.

Name of Participant (print):
_______________________________________________________
Signature of Participant: _________________________________ Date: _____________
Signature of Researcher: _______________________________ Date: _____________

CONSENT FORM FOR FUTURE CONTACT

By signing below, I confirm that I have given the researchers permission to contact me directly at some time in the future to ask me to participate in another study involving cancer survivorship. I understand that my participation will be voluntary and that I will be free to say no if I do not want to participate in another study.

Name of Participant (print):
_______________________________________________________
Signature of Participant: _________________________________ Date: _____________
Signature of Researcher: _______________________________ Date: _____________
Appendix D

Data Collection Instrument for Training in Primary Care Settings

Addressing Fear of Cancer Recurrence in Primary Care -- Pre-Test/ Post-Test

Thank you for participating in this training. To help us assess the effectiveness of this training, please take 10 minutes to complete this survey in its entirety; let the facilitator know if you have any questions.

In order to protect your confidentiality, questions 1-4 will be used to create a unique identifier, without revealing your personal identity. The identifier is our attempt to protect your confidentiality while matching responses between the pre-test and post-test.

1. Which of these categories best describes your professional discipline?
   □ Nurse    □ Nurse practitioner    □ Physician    □ Psychologist    □ Social Worker
   □ Other ___________________ (please specify)

2. Please specify the last 2 digits of your social security number ___________________.

3. Please specify the first letter of your mother’s first name ________________.

4. Please specify the first letter of the city in which you were born ________________.

5. Do you self-identify as:
   □ Male    □ Female    □ Other ___________________ (please specify)

6. Do you self-identify as: □ Hispanic or Latino    □ Non Hispanic or Latino

7. Do you self-identify as: □ American Indian/Alaska Native    □ Asian
   □ Native Hawaiian or Other Pac Is    □ Black or African American    □ White
   □ More than one race

8. For how many total cumulative years have you been practicing in your professional discipline?
   ____________________________

Please circle the number—from 5 – 0—that best represents your response.

9. Fear of cancer recurrence is an emotional concern that is prevalent in populations of cancer survivors across diagnoses.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
10. The greater number of years that a cancer survivor is from diagnosis, the less likely he/she is to experience fear of cancer recurrence.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

11. According to American Cancer Society, at what point is someone considered to be a cancer survivor?

<table>
<thead>
<tr>
<th>At diagnosis</th>
<th>Completion Of treatment</th>
<th>One year post diagnosis</th>
<th>Two years post diagnosis</th>
<th>Five years post diagnosis</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

12. Self-reported sleep quality is unrelated to fear of cancer recurrence in cancer survivors.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

13. Fear of cancer recurrence is associated with poor quality of life in cancer survivors.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

14. Older cancer survivors are more likely to experience fear of cancer recurrence than younger cancer survivors.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

15. Are you aware of any cancer specific resources to which you may refer your patients as needed? □ Yes □ No □ Not sure

If yes, please list up to 3 specific resources:

______________________________

______________________________

______________________________

Please circle the number—from 5 – 0—that best represents your response.
16. I am confident in my ability to identify fear of cancer recurrence.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

17. In my clinical practice, I am confident in my ability to ask patients about fear of cancer recurrence.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

18. In my clinical practice, I am confident in my ability to ask a standardized screening question about fear of cancer recurrence.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
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<td>3</td>
<td>2</td>
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</tbody>
</table>

19. If it is determined that a patient has fear of cancer I am confident in my ability to address this concern with my patient.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
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<tr>
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<td>4</td>
<td>3</td>
<td>2</td>
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</tr>
</tbody>
</table>

20. I am confident in my ability to provide appropriate referrals for management of fear of cancer recurrence.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
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<td>3</td>
<td>2</td>
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</tr>
</tbody>
</table>

21. I am confident in my ability to identify community organizations that serve the needs of cancer survivors.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Post-test ONLY

1. The information provided in this training is relevant to my clinical practice.
   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Not Sure |
   | 5             | 4     | 3       | 2        | 1                | 0        |

2. The handouts with information about fear of cancer recurrence that were provided from this training will prove useful in my work.
   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Not Sure |
   | 5             | 4     | 3       | 2        | 1                | 0        |

3. This training provided enough time for discussion about managing fear of recurrence in cancer survivorship.
   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Not Sure |
   | 5             | 4     | 3       | 2        | 1                | 0        |

4. I would recommend this training program to others in my profession.
   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | Not Sure |
   | 5             | 4     | 3       | 2        | 1                | 0        |

5. How confident are you that you will be able to apply what you learned in practice?
   | Extremely confident | Not confident at all |
   | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

What would help increase your confidence?

My confidence would increase if I had (check all that apply)

☐ Additional information and skill development
☐ Time, meaning that screening for cancer recurrence were a higher priority in my practice setting
☐ More resources to screen for fear of cancer recurrence
☐ More referral resources to address my patients’ psychosocial concerns

________________________________________ (please specify type of resources)
□ Identifying someone else on the primary care team who is better suited to address this issue

______________________________________________________________________________ (please specify other’s role)

□ Other ________________________________________________________________________ (please specify)

6. In addition to today’s training, were there other kinds of training have you received specifically about providing care to cancer survivors? □Yes □ No □ Not sure

If yes, what were they?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

7. Are there other topics on which you would like additional training related to providing care to cancer survivors? □Yes □ No □ Not sure

If yes, please list topics below.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

8. Is there a need for improved communication between oncology providers and primary care providers? □Yes □ No □ Not sure

If yes, please list suggestions for improved communication below.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

9. Have you received cancer survivorship care plans for any of your patients? □Yes □ No □ Not sure
If yes, who has provided you with plans (e.g. patient, medical oncologist, patient navigator, etc)?

______________________________________________

If yes, please rate the usefulness of the plans in providing clinical care for your patients.

<table>
<thead>
<tr>
<th>Very useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Not very useful</th>
<th>Not at all useful</th>
<th>Not Sure</th>
</tr>
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10. Please share any additional comments or feedback below. Thank you!

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________