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Care of Adult Cancer Survivors

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Care of Adult Cancer Survivors

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Abstract

As innovative cancer treatments emerge, more people are surviving cancer. Cancer survivors have multiple and unique healthcare needs due to their cancer and cancer treatments. Communication among those treating the cancer, primary care providers, and cancer survivors is necessary to coordinate care once treatment is finished. The development of a survivorship care plan that is reviewed with the cancer survivor is intended to facilitate communication among all stakeholders. This quality improvement project examined current practice in a survivorship clinic in a Midwestern health system cancer center that cares for a variety of types of cancer patients. By reviewing evidence in the literature regarding cancer survivorship care, a quality improvement project was designed and implemented to standardize cancer survivorship care. Clinician education led to increased knowledge regarding Commission on Cancer requirements for survivorship care (p-Value 0.0016), and 100% were able to identify time parameters for survivorship care. Overall, a low rate of survivorship care and care plans were found. An 18% increase in patients being offered survivorship care (p-Value 0.18) occurred post education and identification of need for care. A survey of patients who received survivorship care found patients used the survivorship care plan and reported more support with symptom management when a plan was mailed and reviewed over the phone.

*Keywords: oncology, cancer survivor, survivorship care plan*
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Care of Adult Cancer Survivors

A cancer survivor is a person who has had any form of cancer, starting with diagnosis and lasting through the remainder of life (American Cancer Society (ACS), 2016). More than 15 million Americans have survived cancer, and more than 526,000 live in Michigan (ACS, 2016). Cancer survivors have unique needs including managing comorbid chronic conditions that may have been influenced by cancer treatment and monitoring for reoccurrence and secondary cancers (Spears, Craft, & White, 2017).

In 2006, the Institute of Medicine (IOM) (IOM, 2006) published the landmark document “Lost in Transition” identifying a need for cancer survivorship care (ACS, 2016). The accreditation organizations, American College of Surgeons: Commission on Cancer (CoC) and National Accreditation Program for Breast Cancers (NAPBC), added survivorship standards of care in 2015 (Oncology Nursing Society, 2016).

CoC has three designations for cancer survivorship accreditation: Integrated Network, Community, and Pediatric Cancer Programs (American College of Surgeons, 2016). Twelve services must be available, including diagnostic services, psychosocial support, rehabilitation, nutritional services, distress screening, synaptic diagnostic reporting from biopsies and surgeries, and the presence of a SCP (American College of Surgeons, 2016). Accreditation is awarded (contingency or commendation) for three-years. The organization must also hold a cancer conference or have a tumor board, nurses must hold oncology certification, and patients must enroll in clinical trials. NAPBC accreditation requires 17 services be available, including imaging, nurse navigation, interdisciplinary conferences, research, genetic counseling, and a cancer survivorship program (CSP) (NAPBC, 2014).
CoC and NAPBC require stage 0, I, II, and III cancer patients to have a survivorship care plan (SCP) introduced within a year of diagnosis and six months of completing active treatment (American College of Surgeons, 2016; NAPBC, 2014). For accreditation, CoC requires 50% of SCPs be completed by December 31, 2017 and 75% by December 31, 2018 (American College of Surgeons, 2017). To date, 43% of National Cancer Institute-designated cancer centers use SCPs; and it is estimated that 20% of oncologists provide SCPs overall (Nelson, 2018).

SCPs include many components (American College of Surgeons, 2016; NAPBC, 2014). A summary with dates of treatment and drugs administered, short- and long-term side effects such as sexual dysfunction, are required. A plan for follow-up with a responsible provider and health maintenance recommendations must be listed. SCPs must also include referrals for health maintenance (i.e., lymphedema specialists or physical therapy).

This Doctorate of Nursing Practice (DNP) project examined current practice in a CSP in a Midwestern health system in a comprehensive cancer center and conducted a literature review on CSP models of care. The goal of the project is to assure cancer survivors are provided survivorship care (i.e., CSP or alternative). Thus, the project will focus on standardizing the referral process, implementing and evaluating improvement, and dissemination of findings.

**Current Practices**

The cancer center consists of city-based and rural satellite hospitals and clinics. The cancer center is a collaborative venture between a non-profit health system and a private medical oncology practice. Patients receive medical oncology management in the private medical oncology practice and in the gynecology oncology, urology, and one breast cancer physician in the health system. There are two CSPs: one managed by the non-profit health system and one by the private medical oncology practice. This project focuses on the health system CSP.
History of Survivorship

Early attempts to address cancer survivors’ needs resulted in applying for and receiving a Livestrong Cancer Transitions grant in 2012. The grant developed survivorship classes that were two and a half hours in length and offered over eight weeks. In 2014, funding was obtained to implement the Survivorship Training and Rehabilitation program (STAR), which included sharing of information nationwide. STAR funding trained 100 health professionals in cancer survivorship care focused on rehabilitation to identifying early physical side effects and deficits to initiate physical and occupational therapy. The cancer rehabilitation program offered services in 22 community locations, closer to patients’ homes. Supportive program needs were identified and a lymphedema clinic, yoga classes, and art and music therapy started. The STAR program dissolved in 2015, however, the cancer center continued to offer rehabilitation and supportive services. In August 2016, a physician assistant (PA) was hired to oversee the survivorship clinic. As an initial step, the PA obtained input from the Patient-Family Advisory Council, which consisted of 12 oncology patients and family members, to design the CSP. Initially, the CSP focused on the breast cancer patients with the first patient seen in December 2016. Since then, the CSP expanded to include gynecology oncology, prostate, and recently, head and neck cancer patients. In 2017, the cancer center CSP provided care to 112 cancer survivors.

Team Member Roles

The cancer center CSP team was multidisciplinary and included a PA, cancer rehabilitation specialist, a dietitian, and a social worker (SW). A PA led the cancer center CSP. Prior to patient arrival, the PA reviewed the electronic health record (EHR) to assess for health needs and review the diagnosis and care provided. The PA was usually the last team member to interact with the patient during the appointment. The PA conducted a history and physical. Based
on the findings, the PA added or modified medications as needed, such as prescribing nicotine patches for smoking cessation or adding medication for treatment of depression or anxiety. The PA could also refer to services as needed (e.g., cardio-oncology or sexuality/menopause clinic). Last, the PA provided the SCP to the patient and reviewed each item, particularly focusing on treatment modalities the patient received, short- and long-term side effects, and tests needed (i.e., echocardiogram or colonoscopy).

The cancer rehabilitation specialist conducted a record review to include the past medical history, psychosocial concerns, employment status and occupation, and medications. An interview occurred with the patient to discuss concerns of either the patient or rehabilitation specialist. The rehabilitation specialist performed a physical therapy evaluation by assessing range of motion and physical deficits. He or she educated on the importance of exercise to include cardio exercise and strength training. Exercises that the survivor could perform were provided to improve strength and flexibility, and handouts and exercise bands were provided as needed. Concerns such as home safety and lingering side effects (i.e., neuropathy or weakness that affect both activities of daily living and hobbies) were addressed. If any issues or concerns that needed care beyond the appointment were identified, a referral to physical or occupational therapy occurred as needed. The SCP was modified based on appointment findings.

The dietician reviewed the record to assess nutrition needs (i.e., weight management or restricted diet). An assessment of nutritional status occurred using a 24-hour food recall tool. The dietician assessed risks that can be reduced through improved nutrition, such as adding foods high in calcium to assist with osteopenia, recommending supplements for a patient who is underweight, or weight reduction for prevention of future cancers. An evaluation of taste alterations and diet restrictions, such as difficulty swallowing, occurred throughout the
appointment. If additional assistance or information was needed, follow-up appointments were scheduled. SCPs were modified based on appointment findings.

The SW reviewed the distress screening, collected prior the appointment, to identify a need for interventions, such as financial or mental health counseling. During the appointment, a discussion regarding how the patient is feeling emotionally after finishing treatment occurred. If needed, the SW referred to resources such as financial counseling or supportive care and informed the patient of support groups. The SW followed up with the patient if needed. The SCP was modified based on appointment findings.

**Appointment Process**

Prior to the initial CSP appointment, the CSP team conferred with each other regarding the appointment reason and each clinician documented in their sections of the SCP. The SCP was printed and discussed during the two-hour appointment. The office staff assigned the patient to a room and the team met with the patient individually. The CSP team reported significant findings to each other throughout the appointment to prevent duplication of care. At the end of the appointment, the patient was provided the SCP, an after appointment summary with future appointments, and was discharged from the CSP by the PA. Health system physicians were able to access the SCP in the EHR; however, no alert occurred when a SCP is completed. Therefore, the PA copied the SCP and pasted it at the end of the progress note. When the PA signed the progress note, the note was forwarded to the PCP, referring provider, and all treating oncologist, and an alert to review the progress note appeared in the EHR messaging inboxes. For PCPs outside the health system, the PA faxed the progress note and SCP via the EHR, after the appointment.
Process for Referral to Cancer Survivorship Care

Physicians and nurse navigators referred patients to the CSP, and patients could self-refer. Each type of cancer diagnosis seen in the CSP was unique and had its own distinct needs. Therefore, the point of contact leading to referral to the CSP was different for each oncology group.

The breast cancer group had one surgeon who ordered chemotherapy for patients, while all other patients were cared for in the medical oncology practice CSP. A standardized referral process existed with the nurse navigator referring to the CSP upon completion of treatment. However, this did not address those who declined a CSP referral or did not engage with nurse navigation.

In the gynecology oncology practice, referral to the CSP was not a consistent part of a workflow and was dependent upon the oncologist awareness of patient eligibility, nor was alternatives to the CSP available. Thus, not all patients were offered survivorship care.

In the urology department, the chief of urology did not want patients to be charged for an additional appointment, so a urology advanced practice provider (APP) was trained in survivorship care. The urology patients were offered a standard 6-week post-operative appointment combined with survivorship care in the multidisciplinary CSP. The APP conducted five patients’ survivorship care appointments since September 2017.

In the colorectal group, the surgeon’s office or the colorectal multidisciplinary clinic provided the patients who only had surgery with survivorship care. If the colorectal patient received chemotherapy, the private medical oncology practice referred patients to their CSP.

For the lung cancer patients who only had surgery, the surgeon’s practice or the lung multidisciplinary clinic provided survivorship care.
The majority of the cancer survivors were referred from a single breast surgeon and the gynecology oncology groups. Thus, an opportunity to improve exists.

**Commission on Cancer Accreditation**

The hospital system has had CoC accreditation since 1934 (Spectrum Health, 2018) with the site visit on October 11 and 12, 2018. The director of the cancer registry was overseeing the application for the CoC reaccreditation and verified policies and procedures. One month prior to the visit (September), the director submitted the application that included data on the 12 required areas. The site visit team reviewed the application prior to arrival and used that information to guide the site visit. During the site visit, the site team reviewed the policies and procedures for the cancer center and randomly selected records to review. In 2017, 66% of patients had an SCP documented. A plan to improve SCP completion rates was also provided.

**Problem Statement**

Cancer survivorship care promotes wellness and early prevention and detection of reoccurrences and secondary cancers (ACS, 2016). Survivorship care, with an SCP designating where each health condition will be managed, reduces duplication of care and costs (Grant, DeRossi, & Sussman, 2015). As the number of those diagnosed with cancer increases, the number of survivors is growing exponentially, making survivorship care an important issue.

The referral process workflow for survivorship care lacks standardization making consistent implementation of a CSP challenging. This leads to the clinical question for this DNP project: Does implementation of a standardized workflow process improve referrals to the CSP, survivorship appointments, and the SCP completion rate?
Evidence-based Initiative

To determine evidence surrounding cancer survivorship models, the DNP student performed a literature review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher, Liberati, Tetzlaff, Altman, & PRISMA group, 2009). The student searched the electronic databases CINAHL and PubMed using search terms “survivorship,” “cancer survivors,” and “care model.” The DNP student limited the articles to those pertaining to the adult population, written in the English language and published within the past five years. The student excluded articles assessing interventions for specific cancer survivorship health conditions without evaluating a model of care. The objectives of the review were fourfold.

1. What survivorship care models were evidence based?
2. What were the components of survivorship care model?
3. Who provided the survivorship care?
4. Where did the survivorship care occur?

The initial search resulted in 145 articles. The DNP student applied the inclusion and exclusion criteria, which narrowed the review to seven articles (see Appendix A). Appendix B summarizes the seven articles in the review by author, year, country, research design, sample size, and survivorship program components.

Four articles were systematic reviews that contained randomized control studies (RCT), non-randomized prospective studies, cohort studies, pre/post test, and retrospective studies. One article each were a non-randomized controlled study, an RCT, and a case-control pre/post test survey. In total, 20 RCTs, six non-randomized controlled studies, two cohort, three-pre/post test, and one retrospective design were among these seven articles. The research type was not
identified in Halpern, Viswanarthan, Evans, Birken, Bosch, & Mayer’s (2015) systematic review. Six studies occurred in the United States (US), three occurred in Canada, one was in the US and Canada, and one each in the United Kingdom, Netherlands, and Australia. Two systematic reviews containing 18 studies did not disclose location. The DNP student examined articles to answer the objectives of the review.

**Model Components** Models had various components (see Appendices C and D). The student reviewed each.

**Survivorship clinician and outcomes.** The most commonly used leaders of survivorship care were registered nurses (RN) (Brennan, Gormally, Butow, Boyle, & Spillane, 2014; Halpern et al., 2015; Hebdon, Abrahamson, McComb, & Sands, 2014; Howell et al. 2012; Kvale et al., 2016; Rosenberg et al., 2015). The second most common leaders were oncologists (Brennan, et al., 2014; Halpern et al., 2015; Hebdon et al., 2014; Howell et al., 2012). Hebdon et al. (2014) and Rosenberg et al. (2015) identified three out of 10 studies, or 30%, that used an oncologist collaborating with an RN. One study used a nurse practitioner (NP) as lead (Brennan et al., 2014). Two studies examined PCPs as the leader of survivorship care (Hebdon et al., 2014; Howell et al., 2012) while three studies used shared care between the oncologist and PCP (Brennan et al., 2014; Grant, De Rossi, & Sussman, 2015; Halpern et al., 2015). Kvale et al. (2016) used a masters-prepared RN or SW as a health coach that directed care and assisted the survivor with goal setting.

Two studies did not dictate the leader of survivorship care but instead described a team approach. The first utilized shared care between the survivorship clinic and PCP (Hebdon et al., 2014). The other article had a multi-disciplinary team that included an oncology RN, dietician, psychologist, SW, and sexologist (Howell et al., 2012). In summary, there were four single
person leaders and four multidisciplinary leaders, for a total of eight variations, with the most common being an RN.

Patient satisfaction was high with all clinicians of survivorship care. Howell et al. (2012) reported that patients spent more time with RNs than doctors and had high satisfaction (p < 0.01). In addition, 95.7% of patients found the RN knowledgeable, and 97% of patients reported at least one lifestyle change following survivorship care with RN (Rosenburg et al., 2015). However, survivors preferred to meet with the oncologist (Halpern et al., 2015) despite no difference being found between the services offered and usefulness of survivorship care (Hebdon et al., 2014).

_Primary care-led survivorship care outcomes and satisfaction._ Cancer survivor outcomes including morbidity and mortality were not significantly different when survivors received care from their PCP compared to an oncologist (Brennan et al., 2014; Halpern et al., 2015; Howell et al., 2012; Kvale et al., 2016). Hebdon et al. (2014) found that 84% of PCPs in the Netherlands performed the cancer screenings per the country’s recommendations and guidelines. In addition, survivors cared for by their PCP had longer visits (p<0.01), and the PCPs were more likely to order testing and screening for other cancers, such as fecal occult and blood tests (p<0.001). Hebdon et al. (2014) found 88% of cancer survivors were satisfied with care from their PCP; and 82% of PCPs were satisfied with the shared care model. However, Halpern et al. (2015) reported that a study found that patients preferred to meet with their oncologist rather than their PCP.

_Resources._ The most commonly used resource was the SCP. Most often, either the oncologist or the RN provided SCPs to the patient after completion of treatment (Brennan et al., 2014; Grant et al., 2015). Furthermore, the oncologist, PCP, and the survivor used the SCPs as a
communication tool (Brennan et al., 2014; Grant et al., 2015, Hebdon et al., 2014; Rosenberg et al., 2015). SCP components included a treatment summary, follow-up guidelines, and lifestyle recommendations (Brennan et al., 2014; Grant et al., 2015; Hebdon et al., 2014). Brennan et al. (2014) provided survivors with a wallet-card version of the SCP to keep treatment information easily accessible. Additionally, the CoC and NAPBC used SCPs and included elements required for accreditation.

Other studies utilized resources in addition to the SCP. The most common resource was educational classes (Brennan et al., 2014; Hebdon et al., 2014; Rosenberg et al., 2015). Hebdon et al. (2014) described an RN-led class that was a question and answer session with an oncologist. If the survivors had more needs beyond the class, they followed up with the survivorship clinic (Hebdon et al., 2014). Rosenberg et al. (2015) offered monthly seminars on survivorship topics, such as lifestyle changes, genetics, sexuality, cognition, and lymphedema. Two programs offered individual counseling for the survivors (Halpern et al., 2015; Kvale et al., 2016). Master’s-prepared health coaches, trained in motivational interviewing, helped the survivors set wellness goals; the survivors had improved physical function ($p=.0009$), decreased pain ($p=.03$), and decreased depression scores ($p=.003$) (Kvale et al. 2016). Two studies included handouts, booklets, and DVDs that focused on survivor-specific issues, such as lymphedema (Brennan et al., 2014; Hebdon et al., 2014). Brennan et al. (2014) also used educational websites that contained the survivors’ SCPs. Overall, resources utilized beyond the SCP included educational classes and seminars, health coaches and counseling, and materials including handouts and DVDs.

**Setting.** The survivorship setting used most often was survivorship clinics (Brennan et al., 2014; Grant et al., 2015; Halpern et al., 2015; Hebdon et al., 2014; Kvale et al., 2016). Both
initial visits and additional education classes occurred in survivorship clinics (Hebdon et al., 2014; Rosenberg et al., 2015). Other locations were either in the oncologist or PCPs’ offices (Brennan et al., 2014; Grant et al., 2015; Halpern et al., 2015; Hebdon et al., 2014; Rosenberg et al., 2015). Brennan et al. (2014) and Halpern et al. (2015) reported the survivorship appointment as integrated into a follow-up appointment with the oncologist. However, most survivorship appointments were a separate visit (Grant et al., 2015; Hebdon et al, 2014; Howell et al, 2012). The primary settings were a survivorship clinic, embedded in the oncology practice, or in the PCP office.

**Follow-up.** Consultative visits in CSPs without ongoing follow-up were reported in four studies (Brennan et al., 2014; Halpern et al., 2015; Hebdon et al., 2014; Rosenberg et al., 2015). Rather than going to the CSP, survivors followed up with the oncologist or PCP. As part of follow-up, Rosenberg et al. (2015) offered ongoing educational resources in the form of monthly seminars. Kvale et al. (2016) had long-term follow-up with the health coach. Grant et al. (2015) had multiple visits with the survivorship clinic prior to transfer to PCP-led care. Howell et al. (2012) included three studies that had PCP follow-up every three to six months. Additionally, four studies were RN-led follow-up after an initial CSP visit through either an office visit or phone calls that occurred monthly or every five months (Howell et al., 2012). Two studies had oncology-led follow-up; one was patient-initiated without a regular schedule while the other occurred at regularly scheduled intervals (Howell et al., 2012).

**Model summary.** The literature does not support one model as superior over another and recommended use of the model that best fits an organization (Powel & Seibert, 2017). The most common models were nurse-led (n=6) followed by oncologist-led (n=4). The most common locations were in a survivorship clinic (n=5) followed by integration in an oncology appointment.
The literature also recommended utilization of materials beyond the SCP, such as classes, seminars, educational handouts, and videos regarding survivorship issues.

**Conceptual Model**

Both a theoretical and implementation model guided project implementation to promote quality improvement and sustainability. Utilization of conceptual models identifies key elements needed for success that may not have been addressed otherwise. The theoretical model for this project was the Promoting Action on Research in Health Sciences (PARiHS) framework (see Appendix E). The implementation model was Kotter’s Eight Steps to Accelerate Change (see Appendix F).

**Theoretical Model – Promoting Action on Research in Health Sciences Framework**

Researchers developed the PARiHS model in 1998 as a way to identify the interplay and interdependence of the factors that influence implementation of evidence into practice (Kitson, Harvey, & McCormack, 1998). The framework is rooted in the medical field because clinicians, mostly nurses, developed it. The framework consists of three dimensions: evidence, context, and facilitation. Kitson et al. (1998) designed the model to represent the complexity of change and implementation of research into practice by considering the three dimensions simultaneously rather than in a linear or hierarchal pattern. Therefore, the framework utilizes the equation:

\[ \text{SI} = f(E, C, F) \]

Where SI = successful implementation, E = evidence, C = context, F = facilitation, and f = function of.

**Evidence.** Evidence is a combination of research, clinical expertise, and patient choice (Kitson et al., 1998). Research can range from low quality, such as anecdotal and descriptive, to high quality, such as rigorous systematic reviews. In addition, clinical expertise can range from
low evidence, or widely divided, to high evidence, or high consensus. Patient preferences are considered low evidence when completely overlooked, and high evidence when considered in decision-making (Kitson et al., 1998).

**Context.** Kitson et al. (1998) described context as the setting or environment where the change will occur. It consists of three core elements: an understanding of the culture, the human relationships and leadership roles, and the organization’s routine monitoring of systems and services, which is also known as measurements. Each core element can be considered on a continuum of high to low. High culture occurs when the organization supports learning, values people, and is patient-centric, while low culture is task-driven with low regard for individuals and low morale. High leadership occurs when clear roles and leadership with effective teamwork are defined while low leadership has diffuse roles, poor organization or management, and poor leadership. Finally, high measurement occurs when internal measurement and audits occur regularly along with peer review and external review (Kitson et al., 1998).

**Facilitation.** Kitson et al. (1998) defined facilitation as the technique used to make tasks easier for other people. The facilitator identifies the support needed to change attitudes, habits, skills, and work and helps people change to achieve the desired outcome. The three dimensions for facilitation are personal characteristics, role, and style. Characteristics of respect, empathy, authenticity, and credibility along with a clearly defined, authoritative role and consistent, flexible style are important for facilitation.

**Successful Implementation.** Each component previously described is fundamental for successful implementation. Successful project implementation is most likely when high evidence, high context, and high facilitation exist. This DNP project had high levels of evidence because the majority of the literature was systematic reviews, and the DNP student conducted an
organizational assessment to evaluate the context. The PARiHS framework clearly outlines the complexity of change and fits well into the organization.

Implementation Model – Kotter’s Eight Step Change Model

The DNP student chose Kotter’s Eight Step Change Model as a guiding framework for this practice change. Kotter originally developed the model in 1996 but in 2014 published an update to better reflect the faster pace and different obstacles that organizations face in a more technological world. The model still consists of eight steps that are all vital for implementing and maintaining successful change in an organization.

Step 1. First is creation of a sense of urgency (Kotter International, 2017). During this time, leadership needs to articulate the opportunity in a way that appeals to the employees’ hearts and minds. Describing the stakes when change succeeds and the consequences when change fails accomplishes this (Kotter International, 2017).

Step 2. After creating a sense of urgency, a guiding coalition needs to be built. This coalition consists of a volunteer army of effective people to guide, coordinate, and communicate activities. In order to be successful, usually 50% of the organization needs to support the change and see it as a “want to” rather than a “have to” (Kotter International, 2017).

Step 3. Next is creating a strategic vision and initiative. Strategic initiatives are well-designed, targeted, and coordinated activities that will make a vision a reality. The organization as a whole should be aligned around and motivated to reach the goal. Everyone should be aware and able to articulate the change vision (Kotter International, 2017).

Step 4. After creating the strategic vision, the next step is to enlist a volunteer army. Large-scale changes are most successful when a significant number of employees support a
common opportunity. Individuals who participate in the volunteer army are usually those who “step forward and act” and encourage positive change (Kotter International, 2017).

**Step 5.** Following creation of strategic vision is enabling action by removing barriers. Barriers include inefficient processes or hierarchies. Analyzing previous change initiatives that failed and finding the barriers that were not overcome can identify new barriers. Common statements associated with previous barriers are “it’s just not done that way,” and “we tried that before, and it didn’t work” (Kotter International, 2017).

**Step 6.** Next is generating short-term wins. Tracking and communicating results to the team can assist with continuing the drive to change. Celebrating success will assist with sustainment of the change (Kotter International, 2017).

**Step 7.** After generating short-term wins, the acceleration needs to be sustained. During this phase, the change leader must monitor the change and make adjustments to the process as needed. This monitoring involves frequently identifying barriers and misaligned processes so that momentum is not lost. The facilitator at this time needs to balance over-managing and allow the employees to work independently (Kotter International, 2017).

**Step 8.** The final step is to institute change, which is crucial toward maintaining change. During this phase, employees connect new behaviors to the organization’s success. New behaviors must become strong enough to become habits (Kotter International, 2017).

The Kotter Change model has been successfully used in this organization prior to the project. It is designed to institute and sustain change. It is important that survivorship care continue beyond this project for provision of high quality care.
Feasibility Assessment of the Organization

Assessment of the feasibility of practice change in an organization is fundamental. Without assessment, the opportunities and barriers remain unknown. The Burke-Litwin Causal Model was used to assess the external environment, motivations, culture, and climate (see Appendix G); and a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis (see Appendix H) was performed.

Burke-Litwin Causal Model

Litwin and colleagues developed the Model of Organizational Performance and Change in 1960 and Burke and colleagues refined and tested the model (Burke & Litwin, 1992; Stone, 2015). Since 1992, studies have indicated strong validity and consistent reliability (Stone, 2015). As a causal model, each factor affects another. There are 12 factors: external environment, mission and strategy, leadership, organizational culture, structure, management practices, systems containing policies and procedures, work unit climate, task and individual skills, individual needs and values, motivation, and individual organizational performance (Burke & Litwin, 1992; Stone, 2015).

Burke and Litwin (1992) do not weigh factors equally, as culture and climate are more influential; and culture affects climate. Culture is the values, principles, and overt and covert rules that guide organizational behavior. Climate is the current expectations, impressions, and feelings of the work units, which then affects the relationships with the other units, the boss, and with each other. Transformational and transactional dynamics are also important to consider.

Transformational factors are areas in which changes are most likely influenced by environmental forces or the leaders in an organization and are closely related to culture, and can cause new behaviors from organization members. Transformational factors include external
environment, mission and strategy, leadership organizational culture, and individual and organizational performance. Transactional factors focus on structural effects and the short-term interactions between people and groups and is related to the climate of the organization, and the focus of management. Peers for leading through change recognize organizational leaders, while organizations designate managers to direct practices. Transactional variables include structure, management practices, policies and procedures systems, work unit climate, tasks and individual skills, individual needs and values, motivations, and individual and organizational performance. These factors were used to assess the CSP. The following is the results.

**Assessment Using the Burke-Litwin Model**

Stakeholders are the people affected by or who effect organizational change, with key stakeholders having positive or negative effect (National Criminal Justice Association, n.d.). The CSP has five key stakeholder groups. First, the physician(s) (oncologist, surgeons, and radiation oncologists) and their APPs, RNs, and medical assistants (MAs) who refer to the CSP. Second cancer practice staff, professionals, and administration who refer, direct appointment for patients, tailor interventions, and coordinate with PCPs. Third, the healthcare system administration, to include the cancer registry and cancer services directors, oversees budgets and assists with accreditation. Fourth are the healthcare system CSP provider (PA) and clinicians (cancer rehabilitation specialist, dietician, and SW). Lastly, the cancer survivors, who are recipients of care and impact on CSP outcomes and satisfaction with ratings.

The upcoming CoC reaccreditation in October 2018, as well as ongoing NAPBC accreditation were major driving factors. As the CSP was new, referral rates have increased over the past few years due to education on use of the CSP directed at nurse navigators and physicians in the breast and gynecology oncology groups. In January 2017, one patient had an appointment
in the CSP, while 23 patients had appointments in December 2017. The total number CSP appointments in 2017 were 112. From January 1, 2018 to April 30, 2018, there were 67 appointments in the CSP, an upward trend. In addition, three practices (urology, colorectal, lung) directly provide survivorship care.

The CSP model is patient-centered. Thus, the unique needs of each patient and their type of cancer are met.

The practices that utilized the CSP had increased referrals each month; however, the workflow did not assure survivorship care was offered to every survivor. In the breast cancer, gynecology oncology, and urology offices, alternatives to CSP appointments were discussed, but needed further development. In the breast cancer office, nurse navigators were willing to provide survivorship care but were not able to create the SCP. In the gynecology oncology office, a PA had agreed to provide survivorship via an appointment for patients unable to utilize the CSP, and had recently been trained in creation of SCPs. The PA had not seen a survivorship patient yet. In gynecology oncology, RNs were able to review the SCP with patients over the phone and mail a copy, but had not received training. In the urology department, the nurse navigator could build the SCP throughout treatment, and an APP could review the SCP with the patient during a standard appointment, but this process was under development.

Audit and feedback regarding CSP usage or completion of SCPs needed further development. The cancer registry manager utilized the registry software to develop a list of cancer survivors by cancer type to assess SCP completion rates; however, data abstraction ran six months behind. The manager also reviewed EHRs of patients who should have SCPs completed during the six months. The private practice also provided a list of CSP/SCP completed monthly. Data was compiled into a list of patients due for survivorship care to prompt
referral to the CSP or the completion of a SCP. However, the process was time consuming and would change as SCPs were developed within the EHR.

The DNP student assessed survivorship care over a period of 2 weeks. The student surveyed the daily schedules for patients eligible for survivorship care and assessed if the referral was placed or if there was a discussion surrounding survivorship care. Of the 20 patients seen during this period, six patients (30%) were offered a referral to the survivorship clinic. Of the six patients, five patients (83.3%) were referred and one patient (1.7%) refused the referral. Ultimately, six of 20 patients (30%) eventually were seen in the survivorship clinic as one patient was offered a referral at a later date.

Key findings in the organizational assessment included the following. The upcoming CoC visit was a driver of change. The cancer center had SCPs for approximately 66% of cancer survivors for breast, uterine, colon, prostate, and lung cancer, and included patients from the private medical oncology practice. In breast cancer survivors, 63% had a SCP; however, no workflow existed to refer a patient to the CSP nor a process for patients declining to make an appointment.

**SWOT Analysis**

SWOT is an examination of the organization, project, program, or process (Moran, 2017). SWOT takes into account internal strengths, weaknesses, external opportunities, and threats and provides a perspective of the current state in an organization (Moran, 2017).

**Strengths.** The cancer center and CSP had multiple strengths. A large organization, recognized for providing high-quality care through awards such as the Healthgrades® America’s 50 Best Hospitals Award™ (SH, 2017e) and Truven Health Analytics® 15 Top Health Systems
(SH, 2017d), owned the cancer center and operated the CSP. A desire for continued accreditation from the CoC and the NAPBC were evident.

The cancer center history in provision of survivorship care created a strong foundation for the current program. The Livestrong grant assisted with creation of classes. Then, the STAR program provided training on oncology rehabilitation and other specialists. The lymphedema clinic, art and music therapy, yoga classes, financial assistance, and other services were created. Despite STAR dissolving, the training received and programs created carried through to current staff and services offered. Services, such as the lymphedema clinic, were an integral part of cancer care. Finally, the Patient-Family Advisory Council continued to be a key resource for feedback and provided insight into patient needs, values, and suggestions. Recommendations regarding the CSP assisted with maximizing appointment value. Survivorship needs were identified and addressed through programing and resources.

The CSP was patient-centric with dedicated resources and staff to providing care for cancer survivors. Staff had grown as survivorship care evolved. The CSP had the multidisciplinary team who worked well together and were passionate about improving the quality of life of cancer survivors. The team communicated well with each other throughout the appointment. Additionally, each team member was knowledgeable and able to direct care and resources as needed. The climate was positive, and the PA, dieticians, and rehabilitation specialists were excited to be involved in a CSP. The SCP was embedded in the EHR and could be built as the patient underwent treatment and used as a communication tool with oncologists.

Oncologists and staff who referred were passionate about providing patients with excellent survivorship care. Referring oncology offices and the survivorship PA were
collaborating to develop alternative methods to provide survivorship care if the patient was not able or chose not to attend a CSP appointment.

The CSP collected feedback from survivors immediately following care in the CSP. The responses were overwhelmingly positive. In addition, patients reported positive experiences regarding the CSP during oncologist and APP appointments after CSP services were provided.

**Weaknesses.** Identification of patients eligible for survivorship care remained a challenge. The CSP referral patterns were inconsistent and varied depending on the specialty. When patients were informed about the CSP, the scripting describing the clinic was inconsistent. Not all patients had access to survivorship care if they are not able to attend a CSP appointment or refused a referral. A process for feedback regarding the number of survivors seen each day in each office, and those who are offered survivorship care did not exist.

In breast cancer services, patients that declined navigation or were discharged from navigation were not being referred to the CSP. In some instances, patients were not identified as eligible for survivorship care. For patients not able to attend the CSP appointment, navigators were able to review the SCP via the phone. However, the navigators reported that many patients declined and did not return phone calls. Gynecology oncology did not have a standardized system for identification of eligible patients and only referred patients when the oncologist remembered during an appointment or identified the patient as a complex. The oncologists and APPs did not know where to locate the SCP in the EHR. The urology department trained a PA to provide survivorship care during an appointment with the multidisciplinary CSP. The urology oncologists and APPs offered the survivorship services to many patients, however the uptake was low. The navigator and CSP PA discussed creation of the SCP throughout treatment and urology APPs reviewing SCPs during appointments, but this process had not been finalized.
In the CSP, SW turnover occurred and SWs were not routinely included in the CSP appointments unless needs were identified on the distress screening or during the appointment. This issue had not yet been resolved.

The number of completed SCPs for 2017 was below the originally required 75% rate, but within the changed requirement of 50%; however, this was not unique to this cancer center, as it was also an issue within National Cancer Institute-designated cancer centers (Nelson, 2018). The cancer registry list to identify patients missing SCPs was manually complied, time-consuming to create, and was not sustainable. While weaknesses have been identified, they provided opportunities for improvement.

**Opportunities.** Numerous opportunities existed for improvement. Further education of referring clinicians regarding the upcoming accreditation and the CSP could occur. The upcoming visit could be a driving force to increase utilization of the CSP or alternatives to the CSP, such as appointments within practices or SCP review by phone then mailed. There were many points of contact prior to completion of treatment when clinicians could educate patients regarding survivorship care. Additionally, the staff could have learned where to locate the SCP in the EHR.

There was an opportunity to educate referring APPs and RNs regarding creation of the SCP. The gynecology oncology PA was willing to provide survivorship care. The urology RN navigator was able to update the SCP treatment summary throughout the patient’s treatment so that APPs can review the SCP during appointments.

A standardized workflow that included identification of cancer survivors and a process to refer to the CSP and provide alternatives to the CSP would increase provision of cancer survivorship care to all those with cancer. The breast cancer and gynecology oncology offices
were groups that were likely to utilize the CSP and amenable to providing care for patients who
did not desire a CSP appointment. The practice managers and APPs were change agents
supportive of survivorship care and provided insight and assistance in development of a
workflow that is tailored for each group.

An opportunity to develop a feedback process also existed. There was no data available
regarding how many patients oncologists and APPs had seen each day that were eligible for
survivorship care nor data on who was offered the CSP or its alternatives. The EHR could be
used to identify and track how many cancer survivors had appointments each day and what
percentage were referred to the CSP or its alternatives. The data collected could be shared daily
on the rounding board in each practice, to prompt increased survivorship care. Feedback could be
also be collected from stakeholders and cancer survivors.

Ultimately, education of the referring providers, defining the workflow, creating
feedback process and collecting stakeholder feedback had the potential to increase survivorship
care uptake, which is predicted to positively affect patient outcomes and satisfaction.

Threats. The EHR continues to change causing disruption in workflow. The CoC accreditation
was in October, 2018 so time was limited to develop, implement, and adjust the workflow.
Additionally, there was concern that a lack of physician buy-in would lead to low referral rates.

In summary, the SWOT analysis identified multiple strengths in the CSP, valued patient-
centric survivorship care, a passionate multidisciplinary team, referring offices that collaborated,
and a SCP within the EHR. Weaknesses were inconsistent workflow surrounding identification
of survivors, lack of feedback regarding percentage of eligible patients offered survivorship care
daily, and alternatives to the CSP not fully developed. Additionally, not all oncologists/APPs
were aware of the SCP location in the EHR. Opportunities for additional education, development
of workflow to identify eligible patients, and creation of a feedback process were important to consider when increasing survivorship care. Finally, the cancer center could use the upcoming accreditation visit in October as a driving force for change.

**Project Plan**

**Purpose**

The purpose of this DNP project was to standardize the process for providing survivorship care. An evaluation of the referring providers and patient perceptions and understanding of the survivorship care also occurred. This project aimed to answer the clinical question: Does implementation of a standardized workflow process improve referrals to the CSP, survivorship appointments, and the SCP completion rate?

**Objectives and Implementation Strategies**

The objectives for this project promoted survivorship care for patients with breast and gynecological cancer. The DNP student used evidence-based implementation strategies to meet the plan objectives. The six objectives with strategies to improve practice are below.

1. **Build a coalition from July 16 to August 13, 2018.**

   Building a coalition engages and fosters relationships with others in partnership with an implementation effort (Powell et al., 2015). Strategies to achieve this objective included:

   - Presented survivorship evidence (see Appendix I) and apply it to the context of the cancer center to the director of cancer services on July 16, 2018. The director of cancer services oversaw the CSP and worked closely with both the breast and gynecology oncology offices and was viewed as an authority figure in the cancer center. As such, the director supported the project by assisting the student with communication among identified key
stakeholders and practice managers. In addition, the director assisted the student with the audits and other components of the project as needed.

- Enlist a volunteer army (Kotter, 2017) by presenting project plan to champions in the breast services and gynecology oncology by August 1, 2018. The champions were individuals who supported, marketed, and drove implementation while overcoming indifference and resistance to change in the practice (Powell et al., 2015). The student had identified one or two champions from the gynecology oncology and breast offices as stakeholders. The champions promoted the project in their respected practices and led by example. In addition, the champions provided feedback to the student as needed.

- Met with manager of the cancer registry July 17 to August 1, 2018, and throughout project to assist with identifying patients who had completed cancer treatment but did not have follow-up appointments with oncologists within the CoC parameters.

2. Educated the physicians, APPs, and RNs from referring offices regarding survivorship care by August 10 to 13, 2018 (see Appendix I).

   The physicians and APPs frequently referred patients for survivorship care and worked closely with their RNs. Without their support, survivorship care could not occur. Steps to achieve this objective included:

   - Create a survivorship toolkit. The student assembled a toolkit consisting of a flier for the CSP, a pre- and post-test to assess clinician knowledge regarding survivorship care (see Appendix J), scripting to discussing survivorship care (see Appendix K), the CSP flier (see Appendix L), and a table to auditing workflow changes (see Appendix N). The education information included a description of the CoC accreditation standards for survivorship care, evidence surrounding survivorship, and changes to workflow.
• Attended the gynecology oncology, and breast services staff and provider meetings, and used the tool kit to educate clinicians. During meetings, the student assessed the physician, APP, and RN knowledge regarding cancer survivorship care through pre-/post-survey prior to and immediately after education. The student emailed the survey if staff were unable to attend meetings (see Appendix J).

• Provided staff with education, handouts, and scripts (see Appendices I and K). The education assisted the referring staff with the change to workflow and provided a contact for assistance (Powell et al., 2015). The student placed the materials in the CSPs shared data folder.

• Practiced the script to discuss survivorship care with the oncologists, APPs, and RNs at the staff meeting (see Appendix K). The student provided each person a script to use when discussing survivorship with patients, and the attendees verbalized the script at least once to the student. By making education didactic (Powell et al., 2015), the physicians, APPs, and RNs, were be prepared to discuss survivorship care with the patients. In addition, the individuals provided feedback regarding the scripting and workflow modifications, and adjustments were made as needed to remove barriers (Kotter, 2017).

3. Modify workflow (August 13 to October 5, 2018)

Discussion of cancer survivorship care was not a regular part of the workflow in the gynecology oncology and breast cancer offices. The student audited the schedules each day and identified patients who were appropriate for survivorship care by adding the term “survivorship” to the appointment description. The word “survivorship” was a visual reminder for providers to offer a CSP referral.
• In the gynecology oncology practice, providers educated the patient about the CSP at a designated point of treatment.
  o For patients who were only having surgery, providers discussed survivorship during their patients’ first post-operative appointment and offered a referral. If patients did not want the appointment at that time as they were still recovering from surgery, the oncologist or APP added “survivorship” to the follow-up appointment description. Then, at the next appointment, providers discussed the topic again and placed a referral.
  o For patients who received chemotherapy after surgery, providers discussed survivorship at the final pre-chemotherapy appointment. If patients were interested in a CSP appointment prior to their first post-treatment follow up appointment, then providers placed a referral. If patients desired to wait until after the next appointment, or the oncologist or APP deemed it appropriate to wait for post-treatment CT results, then providers added “survivorship” to the follow-up appointment description and to the plan section of the progress note.
  o According to Kitson et al. (1998), context includes patient preference. Therefore, if a patient declined a referral to the CSP, the oncologist or APP offered to include survivorship care embedded in the next follow up appointment with a designated APP. The next appointment was then scheduled with the designated APP and included “survivorship care plan” in the appointment note. This ideally prompted the APP to create the SCP prior to the next appointment and to review the document with the patient.
o If a patient was not able to attend an embedded survivorship visit with the APP, then the APP created and mailed the SCP. An RN from the oncologist’s office would call the patient, review the SCP, and document the encounter as a telephone encounter.

o If patients ultimately refused CSP referral, an embedded visit, and a phone call, then the oncologist or APP would document the refusal in the progress note.

• The breast services offices addressed survivorship at a designated point in treatment along with utilizing nurse navigators.

o For patients who were only having surgery, the APP or surgeon verified that the private medical oncology office was not also managing patients. If medical oncology was not involved, providers discussed survivorship during the patients’ first post-operative appointment and offered a referral. If patients did not want the appointment at that time as they were still recovering from surgery, the oncologist or APP educated the patient that this appointment could be scheduled at a later date to allow time for recovery. If the patient still refused, the oncologist or APP added “survivorship” to the follow-up appointment description. Then, at the next appointment, providers could discuss the topic again and place a referral.

o For patients who received chemotherapy and/or radiation after surgery, the oncologist or APP addressed survivorship again at the final pre-chemotherapy or final appointment prior to beginning radiation. If patients were interested in a CSP appointment prior to their first post-treatment follow up appointment, then providers placed a referral. If patients desired to wait until after the next
appointment, then providers added “survivorship” to the follow-up appointment description.

- The MAs in the breast services office also scribed for the oncologists and APPs. During the patient appointment, the MA alerted the oncologist or APP if a patient is eligible for survivorship care to prompt education of the patient. Additionally, the MA placed the referral to the CSP or documented if the patient refused referral. If the patient refused SCP referral, the MA notified their supervisor. The supervisor compiled a list of patients who refused referrals and reported to the survivorship PA weekly. The survivorship PA drafted the SCP for the nurse navigators to mail and review with the patient.

- The nurse navigators continued to follow patients throughout treatment and monitored for CSP referral. If patients had not been referred prior to navigation discharge, the nurse navigator offered a CSP referral upon treatment completion. If patients refused, the navigators documented the refusal in a progress note and notified the survivorship PA. Then, the survivorship PA drafted the SCP for the navigator to mail and review with the patient.

- To prompt staff, the student posted the script from education sessions on all computers in patient care areas, providing oncologists, APPs, RNs, and MAs with a visual reminder to address survivorship care and a way to approach the patient regarding the referral. Providing uniformed information and presenting survivorship care as an ordinary part of cancer treatment normalized the process to the patient and with the goal of increasing uptake and adherence (Powell et al., 2015).
4. Developed and organized audit and feedback process from August 13 to October 5, 2018 (see Appendices L, M, N, and O).

The development and organization of systems and procedures to monitor the clinical processes and outcomes allow the opportunity to not only implement a change but also monitor progress (Powell et al., 2015). The steps needed to achieve this objective included:

- Using the audit tool for patient identification (see Appendix N), the student tracked daily the patients cared for in the breast and gynecology oncology offices who were eligible for survivorship care. After the visit occurred, the student assessed whether the referral to CSP was placed, the term “survivorship” was added to the next appointment note, or documentation of refusal. In addition, the student used the tool to track the time when the CSP visit occurs and time from diagnosis and treatment completion to SCP.

- Relay of clinical data close to real-time increases communication and promotes use of the intervention (Powell et al., 2015). Therefore, the student, as a facilitator, provided the total number of patients who had been offered a CSP referral and total number not offered to the breast and gynecology oncology practice managers daily. The goal was that the providers would identify 100% of appropriate patients for referral to the CSP. In addition, the goal was that 100% of identified patients either had a referral in place, the term “survivorship” added to the next appointment description, or documentation of refusal. The student presented the results in the daily staff huddle white board each Monday morning and would provide positive feedback when 100% of the patients were offered survivorship care within a week, as this was a short-term win (Kotter, 2017).

Additionally, the student emailed referring oncologists and APPs, the director of cancer services, and director of cancer registry. During this time, the DNP student also acted as a
facilitator (Kitson et al., 1998) by listening to concerns, answering questions, and removing barriers as needed (Kotter, 2017).

• Consumer feedback strengthens change efforts (Powell et al., 2015). The student used the patient survey (see Appendix O) to assess patient retention of survivorship information and feedback. Using a list of all patients who received an SCP from January 1 to July 15, 2018, the student contacted ten patients from each type of survivorship visit. During weekly meeting at the daily huddle white board, the student provided a positive patient statement regarding the CSP.

5. Promote sustainability.

Upon completion of the project, it is important that the acceleration is sustained (Kotter, 2017), and cancer survivors continued to have access to survivorship care. Therefore, current staff members from each practice needed to be educated to support survivorship care.

• The survivorship toolkit has been given to the site and can be used for education of new employees or re-education of current staff.

• The scripting that was posted in patient care areas will remain as a visual reminder to clinicians to discuss survivorship care.

• The CSP practice manager will generate a monthly report of the total number of patients seen in CSP. The report is shared with the director of cancer services and the CSP PA. If the number of patients referred begins to decrease, the CSP PA will meet with the oncologists and APPs to assess barriers to referring patients.

• To assess if patients are declining a CSP referral or requesting an appointment at a later date, the CSP PA will review one random day of the breast services and gynecology oncology schedules every two weeks by looking for the term
“survivorship” in the appointment notes. If the notes are not being made, the PA will report results to the practice managers. The practice managers will assess whether patients are immediately accepting the referral or if the task is being missed entirely. If the task is not being done and further education is needed, the survivorship PA can review CoC standards using the previously used education materials in the toolkit.

- Within the breast services group, the providers are to begin educating patients about the CSP during the post-operative appointments and offer a referral.
- Within the gynecology oncology group, the term “first follow up/survivorship” will be added to visit type instructions for follow up appointment scheduling. Currently, the practice has set descriptors to select, such as post-op, pre-chemo, and 3-month follow up. By selecting “first follow up/survivorship” at the final pre-chemotherapy appointment or during a post-operative appointment, the provider will be reminded to discuss survivorship as treatment has now been completed.
- The practice managers and the director of the cancer registry will add survivorship to the physician report cards. Currently, the oncologists receive a monthly report card with their personal quality metrics, such as post-operative infection rates. The director of cancer registry will use the registry software to calculate the percentage of patients that have SCPs documented. The percentages will be shared with the practice managers and added to the monthly report cards.
- If the cancer center would like to continue work from the quality improvement project, future DNP students could continue the work.

6. Present report on project results by December 12, 2018.
The distribution of the knowledge obtained is an important implementation strategy that shares how clinicians changed their practices in the setting (Powell et al., 2015). This encourages individuals to continue to build on the successes and sustain the behaviors that promoted change (Kotter International, 2017). Steps to achieve this objective include:

- Email the results to the practice managers and all the oncologists, APPs, RNs, and MAs who participated.
- Present results to clinicians and staff during the November 2018 meetings.
- Present results to the director of cancer services and the director of the cancer registry.
- Present results to the health system’s Cancer Committee during quarterly meeting.
- Presenting results to academic panel at Grand Valley State University during project defense.
- Upload results to Scholarworks.

**Type of Project**

This quality improvement project was broadly defined as purposeful efforts to cause positive change (Portela, Pronovost, Woodcock, Carter, & Dixon-Woods, 2015). Quality improvement projects focus less on generating new knowledge but instead aim to promote positive change in an identified service (Portela et al., 2015). This project sought to increase survivorship care and assess patient understanding.

**Setting and Resources Needed**

This project took place in a cancer center in a Midwestern hospital system, specifically in the gynecology oncology, breast cancer services, and CSP. For this project, the DNP student needed education materials, people, and technology. The student needed technology to view
schedules and patient EHR, to have access to email, and to upload materials to the interweb. The people necessary for this project included the survivorship PA; the oncologists, APPs, RNs, and MAs from the different offices; and administration including the director of cancer services and the director of the cancer registry. The education materials needed were the one-page education for the oncologists, APPs, RNs, and MAs; and the weekly updates for the daily huddle white board.

**Design for the Evidence-Based Initiative**

This evidence-based design was structured on the PARiHS framework. The DNP student considered three core components of the framework during project design.

**Evidence.** Evidence is the highest when supporting systematic reviews, high clinical expertise, and patient buy-in exist (Kitson et al., 1998). As established, the recommended models in the literature review used embedded visits and consultative care. In this site, the preferred method was the consultative visit in the CSP. If this is not feasible, then the survivor could have either an embedded visit in the oncology practice or a telephone conference and a mailed SCP, the latter being less preferable. However, the patient preference needed to be considered.

**Context.** The context involved the culture, relationships, leadership roles, and measurement (Kitson et al., 1998) and was identified in the organizational assessment. This initiative worked with the fluid culture, which strived to provide high-quality care with the close relationships among the different offices and leadership. The project emphasized patient-centered care by promoting that all patients have the opportunity to receive survivorship care. The staff had cues by scripting posted in rooms and communication from other groups, such as navigation, to assist with identifying patients for care. The patients had access to one of three
types of survivorship visits so that barriers were minimized. Measurement occurred through daily audits and feedback of current states of survivorship care.

**Facilitation.** Facilitation is the way tasks are made easier for other people (Kitson et al., 1998). The facilitator is essential as he or she identifies the group’s needs and assists people with obtaining the goals (Kitson et al., 1998). The current state of the cancer center was that discussion of survivorship care was not a habit. Therefore, the student assisted with identifying patients due for survivorship care.

The DNP student acted as facilitator by assisting and guiding the workflow modifications. The student created prompts and cues for providers and was on site prior to the first patient scheduled at least three mornings a week in each office. During this time, the student could answer questions and address concerns and suggestions. The DNP student understood any workflow disruptions that arose and promptly assisted with any needs.

**Participants**

The participants for this project were primarily the cancer survivors and the physicians and other healthcare workers who interacted with the survivors. The student encouraged the physicians and their staff to discuss the CSP with the cancer survivors. Surveying schedules in the EHR determined patients’ eligibility for survivorship care; in addition, this pilot project included any patient in the CoC parameters for survivorship care. Moreover, the DNP student was on site at least one day a week conducting patient survey telephone calls.

**Measurements: Sources of Data and Tools**

The student collected data through survey, EHR chart review, and observation. Measurement began with a pre/post survey regarding CoC survivorship standards for the
referring healthcare providers. The DNP student provided the survey at the September 2018 staff meetings.

This project purpose was to improve survivorship care. In order to track this, EHR review audited breast and gynecology oncology patients being cared for by the cancer center every day and their eligibility for survivorship care. The student then reviewed the EHRs of eligible patients at the end of each day for one of three components: a referral to the CSP, the term “survivorship” in the next appointment note, or documentation of refusal. Then, the student tracked for CSP visit and congruent uploading of the SCP in the EHR. The DNP student also calculated days from diagnosis to SCP presence. The DNP student tracked these patients on a spreadsheet saved on the organization’s interweb (see Appendix N).

The second purpose of this project was to assess the perception and understanding of survivorship care among cancer survivors cared for in the CSP. The student interviewed ten patients who received care in the CSP, 10 patients who received an embedded visit, and 8 patients who had a SCP mailed and reviewed over the phone. In addition, the student interviewed patients for satisfaction with survivorship care and unmet needs. The data was for the organization to inform where programming is needed.

Steps for Implementation of Project

Kotter’s Eight Steps to Accelerate Change guided project implementation to ensure the clinical question and objectives are met. see Appendix P for the timeline of each step.

1. **Create a Sense of Urgency:** Beginning July 17, 2018, the student met with key stakeholders, including the director of cancer services, the director of cancer registry, the CSP PA, and office managers, to address the gaps in practice, particularly the lack of standardized workflow, results of the chart audit, and the upcoming CoC reaccreditation
visit. During these meetings, the evidence surrounding survivorship care was also presented.

2. **Build a Guiding Coalition:** Between July 17 and July 23, 2018, the DNP student met with staff members from the different practices who were passionate about patient care and open to change. The staff had a variety of backgrounds: practice managers, RNs, APPs, physicians, and administrative staff. The staff agreed to champion the project via promotion and leading by example. The context was set during these meetings as specific practices were identified for the project and evidence was presented again (Kitson, et al. 1998).

3. **For a Strategic Vision and Initiatives:** Starting in November 2017, the DNP student created a vision to increase survivorship care and to meet CoC accreditation standards. The vision was carried through the project by increasing awareness of upcoming CoC visit during the education sessions and the pre/posttest. By July 24, 2018, the student informed all breast and gynecology oncologists, APPs, RNs, and MAs of the upcoming October 2018 visit and their role in reaccreditation.

4. **Enlist a Volunteer Army:** Starting August 10, 2018, the student invited healthcare clinicians who were passionate about patient care to participate in supporting survivorship care, even if they were unable to refer the cancer survivor for survivorship care. The “army” held each other accountable and advocated for positive change.

5. **Enable Action by Removing Barriers:** Beginning August 10, 2018, the student fulfilled the role of facilitator (Kitson et al., 1998) by being present to communicate and problem-solve with the different offices regarding issues that arose during the project.
6. **Generate Short-Term Wins:** Beginning August 13, 2018, the student posted an audit, feedback, and trending report in each office’s DCI board and email practice managers twice a week. This encouraged the staff to continue with the change. The student also attended the Monday huddles.

7. **Sustain Acceleration:** The DNP student no longer provided progress reports after two months of implementation, and the staff identified patients eligible for survivorship care without the student’s assistance. The student provided a final review to staff by October 10, 2018. The education materials remained on the CSP’s computer folder. The student presented the final review to the director of cancer services and the director of cancer registry by October 10, 2018.

8. **Institute Change:** By standardizing the timing of the survivorship care discussion, the student attempted to create a new practice habit. The education materials will remain in the offices and be a part of training new staff. Additionally, this model of providing survivorship care could be utilized in the rural cancer centers.

**Project Evaluation Plan**

The evaluation of this DNP project and its objectives occurred throughout the implementation. The project was to be deemed a success if 100% of patients were referred to the CSP or have a refusal documented. Additionally, the project had a goal of 50% of patients identified have an SCP, the minimum CoC accreditation standard. The student collected this data in a Microsoft Excel table. Education of the staff occurred via survey results. The weekly reports were on the daily huddle white board. The student attended the Monday daily huddles to give updates. If the student was unable to attend for any reason, the student will ask the champion whether the survivorship results were shared.
Finally, the student evaluated patient perceptions and knowledge outcomes via a phone survey. The student asked a question specifically regarding the SCP to assess the survivors’ knowledge. During the survey, the student also collected satisfaction information.

Ultimately, evaluation of the project success depended on whether the clinical question was answered. CoC requires 50% of cancer survivors to have an SCP in place, and the student considered the project a success if 50% of the patients identified had an SCP in their EHR with an associated encounter and 100% of patients had documentation of either a referral to the CSP or refusal of the referral. Prior to the project, a random chart audit of 23 EHRs resulted in 13% (n=3) having an SCP in place. Thus, the student expects a 27% increase as a result of this project.

**Ethics and Human Subjects Protection**

The student considered ethical concerns in the design of this project. Grand Valley State University and the site Institutional Review Boards (IRBs) approved this project and determined it to be a quality improvement project (see Appendices P and Q).

**Budget**

The DNP student donated some costs for this project (see Appendix S). The DNP student donated her time to create the education plan (20 hours), education of staff at each staff meeting (four hours), creation of the educational materials (five hours), and approximately three hours a day during the pilot period (eight weeks total). The total estimate is 149 hours. The DNP student was an RN with five years of experience and has the oncology nursing certification, but has not yet completed the DNP education. Therefore, the hourly-rate for the DNP student’s time will be $29 per hour (Pay Scale, 2018). The total cost donated by the project manager is $4,321. In
addition, the Presidential Research Grant provided $80 for the development of education materials including portfolios that will stay in the offices to promote sustainability.

Other resources included time spent by other members of the healthcare teams during staff meetings and the assistance of the director of cancer services, the director of cancer registry, and the CSP PA. The directors and the CSP PA assisted the student leading up to the project for approximately nine months or 36 weeks. On average, the student spent approximately one hour per week with the directors and an additional hour with the CSP PA. The average APP hourly rate is $50 (Salary.com, 2018c; Salary.com 2018f; Salary.com, 2018g), and the average nursing director salary is $66 hourly (Salary.com, 2018d). The student anticipated that this would continue into the project, leading to an approximate cost of $6,032 for a year’s assistance.

During the project, the staff meetings consisted of the oncologists, APPs, RNs, MAs, secretaries, and practice managers. The oncologist average hourly salary was $136 (Salary.com 2018e), APP average hourly rate was $50 (Salary.com, 2018c; Salary.com 2018f; Salary.com, 2018g), the MA hourly rate was $16 (Salary.com, 2018b), and NT hourly rate was $15 (Salary.com, 2018a). In order to educate the staff about the project, the student added 15 minutes onto one staff meeting. Using these hourly rates for 11 oncologists, five APPs, 18 nurses, three MAs, and eight NTs, the 15-minute meeting cost was $609 for the organization. The student incorporated any additional education into the daily huddles at the DCI board, so the student anticipated no other additional costs. The director of the cancer registry was the only individual able to monitor OncoLog for SCPs from the private practice, so that person allocated approximately one hour a week at to assist the student. Nursing directors averaged approximately $66 hourly (Salary.com, 2018d) totaling $582 for the eight weeks.
Results

Physician, APP, and RN education

Was the education effective and was there a knowledge increase? Fourteen clinicians (5 physicians, 6 APPs, and 3 RNs) were present for the education sessions, and immediately prior to and after a pre and posttest of the knowledge was given. Thirteen of 14 (92%) of pre and post education tests (see Appendix U) were completed. The mean score for the pre-test was 52.8% (SD 20.52) and post was 75.8% (SD 14.74); an improvement of 22.17% (p-Value 0.0016). On the pre-test one (8.3%) clinician identified when the next CoC site visit date was within the organization; while post-test showed 9 (75%) could (p-Value 0.0047, see Appendix W). The pre-test found 6 participants could correctly identify when a cancer survivor required an SCP; while the post-test found 13 (100%) could. The pre-test scores supported the need for education. The improvements from pre to post-test demonstrated improvement and that the survivorship education was effective and that there was a knowledge increase.

Workflow Modification

How many eligible patients were seen and referred or missed? Data on the audit of the daily schedule to identify patients eligible for survivorship care post intervention is shown in Appendices W and X. During the 8 weeks post intervention, 42 patients were identified as appropriate for survivorship care. Of the 42 patients, 24 patients (57.1%) were offered a referral to the survivorship clinic. Of the 24 patients offered referrals, 3 patients (12.5%) refused the referral and 21 (87.5%) accepted the referral. Out of the 21 patients that accepted the referral, 16 patients (76.2%) were scheduled and 5 patients (23.8%) refused to schedule after the referral was placed. Four of the 16 patients (25%) scheduled were seen prior to the end of the tracking period. Prior to implementation, 6 of 19 patients were offered survivorship care (31.6%) and ultimately 6
of 19 patients (31.6%) were seen and had an SCP in place. Therefore, an 18% (p-Value 0.18) increase was noted in patients being offered a referral to the survivorship clinic.

The DNP student provided daily feedback regarding patient’ referral status to the practice managers. In only one instance was it discovered that student identified two patients as being eligible for survivorship care in the daily schedule, but the patient care representative had not noted survivorship status in the appointment note as requested. Thus, the process for adding the term “survivorship” to the appointment description was changed; the student was able to directly modify the note instead of one of the practice employees.

**Is one practice more likely to refer to the CSP?** Differences in referral rates by practice were examined (see Appendix X). Within breast services 0 of 3 (0%) patients were referred prior to the intervention and 8 of the 19 (42%) after (p-Value 0.27). Within the gynecology oncology office, 6 of 16 (37.5%) patients were referred prior to intervention, and 13 of 23 (56.5%) after (p-Value 0.24).

In the gynecology oncology office, when a patient was seen but no discussion regarding the survivorship clinic occurred, the gynecology oncology practice manager identified each patients’ next appointment and noted that survivorship care needed to be addressed. In the breast services office, an appropriate patient was not offered a CSP referral, so the practice supervisor called the patient to offer the referral. Two patients identified by the student as needing survivorship care were not offered care during the oncologist appointment. Following the office visit, those two patients were identified as eligible for survivorship care by the nurse navigators and were referred to the clinic and scheduled.

**Is one type of provider (APP or physician) more likely to refer to the CSP?** In regards to provider type (see Appendix Y), for physicians, 4 of 11 (36.4%) patients were referred
prior to the intervention, and 3 of 11 (27.3%) patients were referred post-intervention (p-Value 1.0). In the APP group pre-intervention, 2 of 8 (25%) patients were referred, and post-intervention 18 of 31 (58%) of patients were referred (p-Value 0.13). Therefore, the odds of referral are the same for both types of providers pre- and post-intervention (p-Value 0.14). In one instance, an APP emailed a patient through the EHR portal to offer a survivorship referral following the scheduled visit.

How many days are between diagnosis date and SCP date? Prior to implementation, the mean number of days from diagnosis to SCP was 217.8 (SD 114.6); while post it was 222.9 (SD 82.6) (p-Value 0.72, see Appendix Z). However, both means were within the 365 days required by CoC.

How many days are between treatment completion date and SCP date? Prior to implementation, the mean number of days from treatment completion to SCP was 105.5 (SD 94.2); and post intervention was 101.1 (SD 66.0) (p-Value 0.94), both within the 183 days required by CoC (see Appendix AA).

Patient Surveys Regarding Survivorship Care

Twenty-eight patients who received survivorship care and had documentation of an SCP review were surveyed (see Appendices BB - EE). The survey examined if patients kept the SCP, remembered the material, and found the information helpful (see Appendix BB). Of the 28 patients 10 (35.7%) were seen in the CSP, 10 (35.7%) had an embedded visit with an APP, and 8 (28.6%) had a SCP mailed then and reviewed over the phone with a nurse navigator.

Do patients keep their SCP? Of the 28 patients, 25 (89.3%) reported receiving an SCP and three (10.7%) did not. For patients seen in the CSP, 10 of 10 (100%) recalled receiving an SCP. Of the 10 patients who had survivorship care embedded within an APP visit, 9 (90%)
recalled receiving an SCP. Of the 8 patients who had a mailed SCP, 6 (75%) reported receiving an SCP. There was no significant difference in patients remembering receiving an SCP based on visit type (p-Value 0.26).

The 25 patients who recalled receiving an SCP were asked if they kept the SCP. Eighteen of the 25 (72%) reported they had the SCP. Of the 10 patients seen in the CSP, eight (80%) reported they kept the SCP. Five of the nine (55.6%) of the patients seen in an embedded visit kept the SCP, and five of the six (83.3%) patients who had a mailed SCP kept the SCP. There was not a significant difference between the groups (p-Value 0.53).

Of the 25 patients who recalled receiving an SCP, 12 (48%) were able to locate the SCP. Six of the ten (60%) patients seen in the survivorship clinic knew where the SCP was locating. Of the patients who received an embedded visit, 2 of the 9 (22.2%) were able to locate the SCP. Within the mailed group, four of the six (66.7%) patients were able to locate the SCP. There was not a significant difference in patient report of SCP location based on visit type (p-Value 0.19).

**Are patients retaining information?** In order to assess retention of the SCP information, the student asked patients which doctor they would follow up with for standard care, such as a lipid blood test (see Appendix CC). Twenty-one of the 25 (84%) patients reported follow up with the PCP, and 4 (16%) reported either their oncologist or that they did not know. Nine of 10 (90%) patients seen in the CSP correctly identified their PCP for standard follow up care. Of the nine patients who had embedded visits, 8 (89%) correctly identified their PCP, and 4 of the 6 (66.7%) of patients in the mailed SCP group correctly identified their PCP as the physician to order the blood work. The findings were not significantly different for the different groups (p-Value 0.51).
Do patients find their SCP valuable? Patients who recalled receiving a SCP were questioned regarding SCP value and helpfulness with follow up care. Of the 25 patients who remembered receiving an SCP, 23 (92%) found it helpful for follow up care while 2 (8%) did not.

Three questions were asked regarding the SCP usefulness and overall satisfaction with care, scored from 0 to 5 with 0 being not useful nor satisfied to 5 being very useful and highly satisfied (see Appendix DD). The first question was “How well did the SCP help you learn ways to stay healthy?” The CSP’s mean score was 4.5 (SD 0.71), the embedded visit’s mean score was 4.44 (SD 1.67), and the mailed SCP’s mean score was 4.33 (SD 1.21). There was no significant difference reported between the three groups (p-Value 0.51). The second question was “How well did the SCP help you deal with symptoms?” The CSP mean score was 3.63 (SD 1.06), embedded visit mean score was 4.29 (SD 1.89), and the mailed SCP mean score was 4.80 (SD 0.45). Patients who had an SCP mailed and then reviewed over the phone reported significantly higher support with symptom management (p-Value 0.03). The third question was “How satisfied were you with the SCP?” The CSP’s mean score was 3.95 (SD 1.46), the embedded visit’s mean score was 4.38 (SD 1.66), and the mailed SCP’s mean score was 4.33 (SD 1.03). There was no significant difference reported between the three groups (p-Value 0.28).

The final two questions collected qualitative data regarding the survivorship encounter, overall cancer care, and if the patient had any other feedback for the organization (see Appendix EE). One patient seen in the CSP stated that they would have liked more time with the dietician. Another patient also wished they would have gone to the CSP sooner. A patient who had the SCP reviewed over the phone had more questions about follow up scans, and if there were foods they should avoid like aspartame. A patient who had an embedded visit had further questions for
their APP about their ability to work. The overall theme noted was that patients were appreciative of the time spent reviewing the SCP. One patient stated “It made me feel like the term ‘survivor’ is a positive thing”.

**Discussion**

The DNP project ultimately aimed to answer the question: Does implementation of a standardized workflow process improve referrals to the CSP, survivorship appointments, and the SCP completion rate? There were also nine sub-questions:

- Was the education effective and was there a knowledge increase?
- How many eligible patients were seen and referred or missed?
- Is one practice more likely to refer to the CSP?
- Is one type of provider (APP or physician) more likely to refer to the CSP?
- How many days are between diagnosis date and SCP date?
- How many days are between treatment completion date and SCP date?
- Do patients keep their SCP?
- Are patients retaining information?
- Do patients find their SCP valuable?

Initially provider knowledge of survivorship care was low, however, a brief provider education intervention was highly effective. There was a significant increase in the pre-post test scores, and all clinicians were able to identify CoC’s time parameters for survivorship care.

Despite education and modification of workflow to identify patients eligible for survivorship care, low rates of survivorship care and referrals to the CSP occurred. Ultimately, while there were more patients referred to the CSP, the improvement was not significant. No differences between types of providers or between the two offices in use of CSP or SCP were
found. Providers were educated to offer alternative methods to survivorship care if the patient declined a referral to the CSP, however alternative methods were never offered. No differences were found in time from diagnosis and treatment completion to SCP documented.

The patient survey found that 72% of patients kept their SCP. Based on survey results, patients who received survivorship care retained the SCP when provided within the CSP or when the SCP was mailed. When the three groups were combined, 87.7% retained the SCP information and knew where follow up care was to occur with no differences noted between the groups. Patients also found the SCP useful and helpful, and valued the discussion around the SCP. The patients who had the survivorship care plan mailed and reviewed over the phone reported higher support with symptom management. Patients who attended the CSP clinic were highly satisfied.

Limitations

Limitations for the project included time for physicians to complete the education module. Further, the project had a one-month implementation period and a small sample size; and longer duration could have found additional improvements. During the project, numerous physicians were off due to vacation or medical leave, which created additional burden with competing time demands on time for survivorship care. While all APPs were present for the entire project, only two physicians were.

Additionally, there may have been a relationship bias during the patient surveys. The patients who received care in an embedded visit had been receiving care from the APPs starting with diagnosis and throughout treatment. The nurse navigators who reviewed SCPs over the phone had followed the patients starting with diagnosis through treatment completion. When patients were seen in the CSP, they were meeting the staff for the first time. Therefore, patients
may have rated the SCPs higher due to a previous relationship with the clinician reviewing the SCP.

**Stakeholder Support and Sustainability**

During the organizational assessment, the student investigated the stakeholder support. The site advisor provided the student with a letter of support (see Appendix S). In addition, the director of the cancer registry met with the student several times for consultation and assisted the student with the EHR audit. The DNP student had worked with the CSP PA to develop education materials and script for the referring offices. The CSP PA also invited the student to attend staff meetings surrounding survivorship care and survivorship clinic visits at outlying rural sites. The practice managers in the referring offices expressed support and provided feedback regarding the project.

Sustainability of this DNP project can be achieved in several ways. First, the student made the educational materials available by uploading into the online folder in the practice for future education and reference. Second, the student presented the results to the practice managers and key stakeholders to encourage continuation of the behaviors promoted in the project. Following this presentation, it was determined that survivorship referral percentages will be added to each provider’s monthly report card generated by the organization. Third, the DNP student expects that habits will have been formed during the project will continue beyond completion. Finally, if the organization continues interest, a new DNP student will continue the project.

**Implications for Practice**

Multiple implications for practice can be addressed as a result of this DNP project. Education of clinicians can significantly improve knowledge regarding survivorship care. While
not statistically significant, there was an increase in percentage of patients referred to the CSP. Survivorship is an important area in oncology, as these individuals have unique needs (Spears, Craft, & White, 2017). Proper survivorship care has potential to increase patient confidence and prevent duplication of care (Brennan et al., 2014). Patients greatly value the conversation about SCPs. The patients also reported that SCPs help them understand the necessary follow up care and help them deal with ongoing symptoms.

**Reflection on Doctorate of Nursing Practice Essentials**

The American Association of Colleges of Nursing (AACN) requires all DNP students to address the eight essential competencies as a part of their graduation requirements (AACN, 2006). The essentials are core competencies that are vital for all DNP graduates, even though the DNP graduate may have a wide variety of specialties (AACN, 2006). Throughout the development, implementation, and dissemination of this project, the eight essentials were addressed.

**Scientific Underpinnings for Practice**

The first essential addresses the importance of applying evidence gleaned from all sciences to nursing practice (AACN, 2006). The cancer survivorship project not only looked at evidence surrounding survivorship care, but also utilized theory from the other sciences. The DNP student used the PARiHS Framework for the theoretical model with an emphasis on context and facilitation (Kitson et al., 1998). Additionally, Kotter’s Eight Steps to Accelerate Change was the guiding implementation model. The student especially focused on steps 5 through 7 by facilitating barrier removal, tracking and communicating results, and making adjustments to the project as needed.
Organizational and Systems Leadership

The second essential is critical for DNP students as they must be able to work within the organizations and policies in order to improve patient and healthcare outcomes (AACN, 2006). The DNP student demonstrated systems leadership by meeting with organizational leaders and performing an organizational assessment. Therefore, the student was able to use the organizational assessment results to develop a project that fit the organization’s needs. Additionally, the student used leadership skills when communicating with stakeholders such as the practice managers, physicians, and APPs. The unique needs of each practice participating in the project were considered and interventions were tailored to meet their unique needs. The student submitted the project to the organization and university’s IRBs, and the project was determined to be quality improvement.

Clinical Scholarship and Analytical Methods

According to the AACN (2006), DNP graduates must be able to critically review literature to determine best evidence. The evidence is then applied to develop practice guidelines and design quality improvement along with identifying gaps in evidence (AACN, 2006). The DNP student critically appraised the literature surrounding survivorship care. The student used the evidence combined with the organization’s survivorship data to design, direct, and evaluate the quality improvement project. Upon completion of the project, the student used statistics to evaluate the data.

Information Systems/Technology

It is essential that DNP graduates are proficient using information systems and technology in order to improve patient care (AACN, 2006). This project relied heavily on information systems and technology. The student used the cancer registry to collect baseline data
and to identify patients who had already received SCPs. In addition, this student used the EHR in order to assess the survivorship status of each patient seen in the breast and gynecology oncology’s practices every day. Then, the student also used the documentation in the EHR to track if survivorship care was addressed during the appointments.

**Health Care Policy for Advocacy**

Health care policy refers to policies at the organizational and governmental level. The DNP graduate is able to influence, design, and implement health care policy surrounding multiple issues such as finance, access, safety, and quality (AACN, 2006). The DNP worked within the survivorship care policies at the organization. Additionally, the policy was revised and reviewed during the project, and this DNP student was able to provide feedback. This DNP student did not participate with policy at the local, state, federal, or international level as a part of this project.

**Interprofessional Collaboration**

The sixth essential describes that collaborative teamwork within the different disciplines is crucial in order to provide safe, effective, and patient-centered care (AACN, 2006). This DNP student worked with team members from different specialties. First, the student worked with the interdisciplinary CSP staff during the organizational assessment. Then, the student collaborated with the variety of staff within the referring practices, such as physicians, APPs, and RNs. The student initially worked with the staff by providing cancer survivorship education, and then was able to answer questions throughout implementation.

**Clinical Prevention and Population Health**

The foundation of the DNP-prepared practitioner is within health promotion and disease prevention (AACN, 2006). The DNP graduate is to use the foundation to analyze
epidemiological, occupational, and environmental data while developing, implementing, and evaluating clinical prevention. The DNP student assessed national cancer and survivorship epidemiological data and the organizational data regarding survivorship data.

**Advanced Nursing Practice**

The final essential requires the DNP graduate to develop advanced knowledge and mastery within one area of nursing practice (AACN, 2006). This DNP student, through the project, has focused on the adult and geriatric population. The student utilized advanced nursing practice through the design, delivery, and evaluation of the project to improve the patients’ survivorship outcomes. The DNP student acted as a leader and partnered with other professionals to improve outcomes.

**Dissemination of Outcomes**

The DNP student first disseminated the project outcomes by reporting the results to the director of the cancer services and survivorship PA on October 30, 2018. Additionally, the results were shared with the practice managers and the director of the cancer registry on November 21, 2018. The student will present the DNP project in the student’s final defense on December 12, 2018. Those from the organization and the community are welcome to attend. In addition, the student will disseminate the outcomes during the staff meetings in the organization. During these meetings, the DNP student will present recommendations for continuing the CSP process. Finally, the DNP student will consider opportunities to disseminate the outcomes to relevant journals and conferences and ultimately upload the results to Scholarworks.
References


https://swz.salary.com/SalaryWizard/Medical-Assistant-Salary-Details-Grand-Rapids-MI.aspx?&fromevent=swz.selectjob.freepop

https://swz.salary.com/SalaryWizard/Nursing-Director-Salary-Details-Grand-Rapids-MI.aspx?&fromevent=swz.selectjob.freepop


https://newsroom.spectrumhealth.org/spectrum-health-earns-cancer-accreditation/

Appendix A

PRISMA Flow Diagram of Systematic Search

### Appendix B

**Table of Evidence**

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Design</th>
<th>Sample (Inclusion) location</th>
<th>Components of Program(s)</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Brennan (2014) | Systematic Review | 10 articles: five RCTs, five non-randomized prospective studies; four-US, two-Canada, one-US/Canada, one-United Kingdom, one-Netherlands, one-Australia (Analyzed SCPs; measured quality of life, satisfaction with care, oncology outcomes of treatment satisfaction, distress, recurrence, serious clinical events, understanding of SCP, worry about health, confidence in PCP, and unmet needs.) | • 10-utilized SCP: three-consultative, one web-based, six integrated into oncology visit  
• One-hour face-to-face consultative visit with NP/dietician  
• Oncologist reviewed SCP with patient during routine follow-up visit  
• RN delivered SCP during face-to-face additional education office visit.  
• Integrated into oncology appointment; some managed by PCP others with oncologist.  
• Handbook on follow-up care with the SCP provided  
• SCP/after-visit summary provided to patient prior to/upon completion of treatment by oncologist  
• SCP provided to patient by oncologist in regular follow-up appointment; with phone survey of distress one to six weeks later  
• Web-based managed by oncologist with patient/PCP access; patient directed PCP implementation. Mailed SCP to patient with access to survivorship website. | • 90% had SCPs: survivorship resources (booklets, DVDs, websites)  
• 94% of patients had improved communication with oncologist  
• 82% improved communication among physicians  
• 96% of patients prepared for treatment side effects  
• 95% of patients expressed interest in online or wallet-card version of treatment summary/SCP  
• 97% of PCPs reported SCP user friendly  
• 100% of PCPs satisfied with SCP |
| Grant (2015) | Non-randomized controlled study | 3,418 breast cancer survivors (Stage 0-III breast cancer, in remission, completed all planned chemotherapy and/or radiation therapy, no reoccurrence, had PCP, could be on adjuvant endocrine therapy) | • Survivors transitioned to PCP after one “transition” visit at cancer center, one to three appointments with transition clinic, or a shared care model between oncology and PCP (for high-risk group)  
• Each patient received SCP, transition letter, and education materials (local resources, long term side effects, recommended screenings, and health promoting behaviors) | • 85% of patients felt prepared for transition  
• 87% of patients satisfied with information received |
|---|---|---|---|---|
| Halpern (2015) | Systematic Review | Nine articles: types not described (adult cancer survivors with >one survivorship intervention)  
Location: Canada | • Disease-specific survivorship care in clinic/other care incorporated into broader oncology practice  
• Three models led by physicians; two RN-led; three SCP as the key component; one analyzed individual versus group-based counseling  
• Group based and individual care | • Survivors preferred to meet with oncologist rather than PCP (no difference in outcomes)  
• Follow-up time period varied |
| Hebdon (2014) | Systematic Review | Nine articles: two cohort studies, four RCT, two pre/post test, one retrospective design. | Multiple models:  
• Two used shared care between survivorship clinic and PCP.  
• One oncologist led. Treatment group received SCP and physician recommended SCP shared with other healthcare providers. | • Shared care:  
• 14% of survivors thought PCP knowledge was inadequate  
• 70% of survivors had not received information about late effects prior to initial |
| Location not disclosed | - Three were PCP led: One had nurse create the SCP and mail it to patient and PCP. All PCPs received information on follow-up guidelines. One used a resource kit for supportive care.  
- Two led by RN:  
  - Developed SCP with NP, and/or medical oncologist using ASCO templates. Follow-up telephone call one month after visit for additional questions.  
  - Used DVDs, booklets, and question prompt lists to address individual needs. Appointment two weeks after completing treatment. Follow-up phone call to reinforce education and screening for distress and unmet needs.  
- One led by a specialized survivorship clinic. Consisted of a group educational session with RN and a question-and-answer session with oncologist. Patients provided a binder with educational information and resources. Patients educated about survivorship clinic and could follow-up in clinic. **visit.**  
- 96% survivors found SCP user-friendly  
- 97% PCPs found SCP to be user-friendly.  
- 88% of survivors satisfied with care by PCP  
- 82% of physicians satisfied with shared care model.  
- Oncologist led:  
  - No differences found among groups with services, helpfulness of written materials, educational services, and likelihood of recommending the clinic.  
- PCP led  
  - No statistical differences in serious clinical events, recurrences, and patient satisfaction.  
  - Colorectal managed by PCPs more likely to have fecal occult blood test and surgeon led more likely to have ultrasounds and colonoscopies.  
- Nurse-led  
  - 23/30 patients satisfied.  
  - All PCPs reported increased communication in one study.  
  - Tracked additional needs of survivors (support group
<p>| Howell (2012) | Systematic Review | Nine RCTs and 10 practice guidelines (Adult survivors, non-pharmacological interventions, quantitative studies, primary evidence, systematic reviews, and consensus-based practice guidelines) Location not disclosed. | Multiple models. Guidelines recommend consultative survivorship clinic, shared care between oncologist and PCP, nurse-led survivorship care, or the multi-disciplinary models. The multidisciplinary team includes oncology nurses, psychologists, dieticians, and sexologists. RCTs: • Three PCP-led: frequent follow up of three to six months recommended. • Four Nurse-led: • Patients see nurse every three months or with request • Nurse call patients monthly or upon request • Nurse calls every six months or upon request • Did not describe the program. • Two oncologist-led. • Patient-initiated follow-up care. • Decreased amount of follow-up appointments and referrals, genetic counseling/testing, smoking cessation resources) • Follow-up phone call to make sure all needs addressed. • Anxiety scores significantly decreased from baseline (p&lt;0.05). • No statistical difference in outcomes between PCP and oncologist care. • 83% oncologist performed screenings per country recommendations. • No difference between oncologist and PCP-led patient outcomes. • Increased patient satisfaction with PCP-led care. • Patients had more/longer visits with PCPs (p&lt;0.001). • PCPs were more likely to perform more testing (p&lt;0.001). • High patient satisfaction with nurse-led care (p&lt;0.01). • Patients spent more time with nurses than doctors (p&lt;0.01). • Nurse- and PCP-led care more cost effective than oncologist-led care. • Patients stated preferred less follow-up appointments and did not result in an increase use of |</p>
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Sample</th>
<th>Description</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kvale (2016)</td>
<td>Randomized Control Trial</td>
<td>79 breast cancer patients ages 19 and above. (Non-metastatic cancer, cared for in a year of completing active cancer treatment, may be on hormone treatments and Herceptin)</td>
<td>Consultative Model. POSTCARE stands for Patient-owned Survivorship Transition Care for Activated, Empowered Survivors. Involves motivational interviewing, goal setting, and transitions coach to assist with goal setting, problem solving, and symptom management. Coaches masters-level mental health professional and either a nurse or social worker.</td>
<td>POSTCARE had significant improvement in QOL (physical function role ( p=.0009 ), pain ( p=.03 ), decrease in depression ( p=.003 )) Model effective in increasing physical function role</td>
</tr>
<tr>
<td>Rosenberg (2015)</td>
<td>Case-control pre/post survey</td>
<td>1,713 cancer patients in a year of completing treatment. (Not listed).</td>
<td>Nurse-led consultative model with oncologist input. Oncologist directs LIFE program and certified oncology nurse is the clinical coordinator. One hour visit when SCP developed. Oncology nurse gathers patient information, drafts SCP for director to review. Survivor fills out surveys and needs, and meets with nurse to discuss needs and plans. Follow-up with oncologist as recommended and ongoing</td>
<td>Immediate post-survey results: 94% more confident in ability to communicate SCP information to other healthcare providers 90% more comfortable with signs and symptoms of reoccurrence 95.7% felt RN was knowledgeable</td>
</tr>
</tbody>
</table>
education via monthly seminars.

<table>
<thead>
<tr>
<th>One-year post survey:</th>
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<tbody>
<tr>
<td>• 100% of participants found SCP useful</td>
</tr>
<tr>
<td>• 72% discussed the SCP with PCP</td>
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<tr>
<td>• 97% reported &gt;one positive lifestyle change (dietary changes and/or exercise).</td>
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<tr>
<td>• 89% of patients attended an educational seminar.</td>
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<tr>
<td>• Model intense: RNs need at least two hours/patient.</td>
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</table>
### Appendix C

**Leader of Survivorship Care by Author, Year**

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>NP</th>
<th>RN</th>
<th>PCP</th>
<th>Oncologist</th>
<th>Shared oncologists/PCP</th>
<th>Shared survivorship clinic/PCP</th>
<th>Oncologist Shared with RN</th>
<th>Multi-disciplinary</th>
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<tr>
<td>Brennan (2014)</td>
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<td></td>
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<td>Howell (2012)</td>
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<td>X*</td>
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<tr>
<td>Kvale (2016)</td>
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<td>Rosenberg (2015)</td>
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<td>X</td>
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<tr>
<td>SCP</td>
<td>Advised to Share SCP?</td>
<td>Group counsel/education</td>
<td>Individual counseling</td>
<td>SCP provided</td>
<td>Additional Resources</td>
<td>On Site Education Classes</td>
<td>Survivorship clinic</td>
<td>Integra ted Oncology Appointment</td>
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<td>Howell (2012)</td>
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<td>X</td>
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</table>
Appendix E

PARiHS Continua of Dimensions

Appendix F

Kotter’s Eight Step Change Model

Adapted from “Eight Steps to Accelerate Change”, by J. Kotter. Copyright 2018 by Kotter International
Appendix G

Burke-Litwin Causal Model

### SWOT Analysis of Survivorship Care at Cancer Center

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Part of large corporation</td>
<td>1. Identification of patients eligible for survivorship care not methodical</td>
</tr>
<tr>
<td>2. Recognized for high quality care</td>
<td>2. Referral process not standardized</td>
</tr>
<tr>
<td>3. History of providing survivorship care</td>
<td>3. Inconsistent scripting when educating patients about CSP</td>
</tr>
<tr>
<td>- Livestrong grant</td>
<td>4. Some patients unable to prefer not to use CSP and alternative options need standardization</td>
</tr>
<tr>
<td>- STAR program</td>
<td>5. Feedback regarding percentage of eligible cancer survivors offered survivorship care each day</td>
</tr>
<tr>
<td>- Patient-Family Advisory Council support</td>
<td>not available</td>
</tr>
<tr>
<td>4. Cancer program has dedicated resources developed as the CSP evolved</td>
<td>6. Some oncologists/APPs unable to locate SCP in EHR</td>
</tr>
<tr>
<td>- Nutrition Classes</td>
<td>7. Cancer program SW turnover; SW not a part of every CSP appointment</td>
</tr>
<tr>
<td>- Exercise Classes</td>
<td>8. Registry process for tracking eligible patients is manual, time consuming, and may not be not</td>
</tr>
<tr>
<td>- Lymphedema Classes</td>
<td>sustainable</td>
</tr>
<tr>
<td>- Financial Assistance</td>
<td>9. SCP compilation is time intensive</td>
</tr>
<tr>
<td>5. Provides patient centric care</td>
<td></td>
</tr>
<tr>
<td>- Oncology dedicated CSP multidisciplinary team that works well together</td>
<td></td>
</tr>
<tr>
<td>- Dieticians</td>
<td></td>
</tr>
<tr>
<td>- Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>- Social Work</td>
<td></td>
</tr>
<tr>
<td>- Nurse Navigators</td>
<td></td>
</tr>
<tr>
<td>- All parties communicate well throughout survivorship appointment</td>
<td></td>
</tr>
<tr>
<td>6. A positive climate</td>
<td></td>
</tr>
<tr>
<td>7. SCP embedded in EHR.</td>
<td></td>
</tr>
<tr>
<td>- Ability to build SCP throughout treatment</td>
<td></td>
</tr>
<tr>
<td>- Communication tool with oncologists</td>
<td></td>
</tr>
<tr>
<td>8. Oncologists/staff passionate about providing patients with excellent care</td>
<td></td>
</tr>
<tr>
<td>9. Collaboration to create multiple options for survivorship care</td>
<td></td>
</tr>
<tr>
<td>10. Initial patient feedback regarding CSP was positive.</td>
<td></td>
</tr>
<tr>
<td>11. Oncologists and APPs report positive feedback from patients regarding CSP</td>
<td></td>
</tr>
<tr>
<td>12. Education: referring oncologists, APPs, RNs, and MAs</td>
<td></td>
</tr>
<tr>
<td>- Inform about CoC accreditation visit</td>
<td></td>
</tr>
<tr>
<td>- CoC survivorship accreditation standards</td>
<td></td>
</tr>
<tr>
<td>- Alternatives to CSP such as embedded appointment or mailed SCP</td>
<td></td>
</tr>
<tr>
<td>- Creation and location of SCPs in EHR</td>
<td></td>
</tr>
<tr>
<td>- Gynecology PA and urology navigator on building SCP throughout treatment</td>
<td></td>
</tr>
<tr>
<td>13. Define and improve workflow</td>
<td></td>
</tr>
<tr>
<td>14. Utilize change agents: APPs and practice managers</td>
<td></td>
</tr>
<tr>
<td>15. Create feedback process about percentage of CSP referrals</td>
<td></td>
</tr>
<tr>
<td>- Share daily results on daily rounding board.</td>
<td></td>
</tr>
<tr>
<td>16. Receive input from stakeholders, including the survivor</td>
<td></td>
</tr>
<tr>
<td>17. Increase survivorship awareness and care</td>
<td></td>
</tr>
<tr>
<td>18. Improve patient satisfaction/outcomes</td>
<td></td>
</tr>
<tr>
<td>19. Perform study during accreditation visit</td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
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</table>
CARE OF ADULT CANCER SURVIVORS

Appendix I

Education Handout

Survivorship Care

The Commission on Cancer (CoC) accreditation visit will be in October 2018. One requirement is the presence of a survivorship care plan (SCP) and an encounter to review the SCP with the patient.

Who needs survivorship care?
• All patients stage I, II, and III cancers treated with curative intent.
• Within 12 months of diagnosis and 6 months of treatment completion.

What is in an SCP?
• Treatment summary with dates and drugs provided
• Short- and long-term side effects
• Follow-up plan and health maintenance
• Healthcare provider that will follow-up (ex: who is ordering colonoscopies, mammograms, bone scans, etc.)
• Any referrals, such as lymphedema clinic or sexuality/menopause clinic.
• Shared with all treating providers and primary care provider.

Why is Survivorship Care Important?
• Outlines which healthcare group is responsible for each aspect of care.
• Decreases duplication of services (Hebdon, Abrahamson, McComb, & Sands, 2014).
• Improves health outcomes (Brennan, et al., 2014; Kvale, et al., 2016).
• Decreases patient anxiety (Hebdon, et al. 2014)
• Prepares patients and increases their understanding of long-term side effects of treatment (Brennan, et al., 2014).
• One study found that one year after survivorship visit 100% patients still found SCP useful and 72% had discussed it with their PCP. 97% of patients reported at least one positive lifestyle change such as dietary changes and/or exercise (Rosenberg, et al., 2015).

Survivorship MST Clinic:
• Consists of a survivorship PA, dietician, rehabilitation specialist, and social worker.
• Approximately 2 hour visit.
• Patient leaves armed with dietary recommendations and tips, exercise recommendations with specific exercise handouts and resistance bands, and the SCP.

What Does Each Group Need to Do?
• For patients receiving surgery only, inform of survivorship program at first post-op appointment, and offer referral. If patient declines at this time, add “survivorship” to the next appointment description and re-address then.
  • Excludes patients shared with private medical oncology office.
• For patients undergoing chemotherapy treatment, discuss survivorship at the final pre-chemotherapy appointment. If interested, place referral. If not ready for visit, add “survivorship” to next appointment description and re-address then.

• Pocket card script will be provided to use to educate patients regarding survivorship care; and placed on computers in patient rooms.

References


1. CoC requires that patients diagnoses with which of the following stages of cancer be provided with a survivorship care plan?
   a. All stages
   b. Stages I & II
   c. Stages I, II, & III
   d. Stage IV

2. Patients need to have had a survivorship care plan compiled, reviewed, and sent to all treating physicians within _____ months of diagnosis and _____ months of completing treatment.

3. True or False? Per CoC, a survivorship care plan must be sent to the PCP?
   a. True
   b. False

4. The survivorship care plan must include (select all that apply)
   a. Cancer Type and Stage
   b. Potential long term side effects
   c. List of treatment modalities the patient received for cancer including surgery, chemo, and radiation including dates.
   d. Cancer re-occurrence risk
   e. List of vital signs
   f. Surveillance plan

5. Select the statement that is false about survivorship care plans.
   a. Survivorship care plans should be complied for all patients
   b. All survivorship care plans must be reviewed with the patient
   c. The patient and all treating providers should be given a copy of the care plan
   d. If the patient declines a survivorship visit, the care plan can be complied and mailed without review

6. When is the next CoC accreditation visit?
Finishing treatment can be a positive time, but also can bring fear and uncertainty. Some patients have many symptoms at the end of treatment. Other patients feel mostly well and are anxious to get on with their lives. The XXX Cancer Center includes an important service at this point in your cancer care called “survivorship care”. Survivorship care helps bridge the time in treatment with care afterwards. Cancer survivors make an appointment to meet with a team specifically trained to help with post-treatment problems to help transition. The team is a cancer rehab specialist, a social worker, a dietician, and a survivorship physician assistant. Together, you will address any post treatment symptoms or concerns you may have. You will also review how to stay as healthy as possible as you move beyond your cancer, and discuss follow-up.

I am referring you to the survivorship clinic will then call you to set up an appointment. This appointment usually lasts 2 hours. Others tell us this has been very helpful, and we believe it will also help you.
Appendix L

Survivorship Clinic Flier

Available upon request
## Appendix M

### Table of Measures

<table>
<thead>
<tr>
<th>Implementation strategies</th>
<th>Concept measured</th>
<th>How measured (tool, survey, variable)</th>
<th>When measured</th>
<th>Who measures</th>
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</thead>
<tbody>
<tr>
<td>Clinician education</td>
<td>Survey</td>
<td>Pre/post education session</td>
<td>Student</td>
<td></td>
</tr>
<tr>
<td>Patient identified need for CSP referral</td>
<td>Audit Tool</td>
<td>Daily</td>
<td>Student</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient perception and knowledge</th>
<th>Knowledge of SCP</th>
<th>Survey</th>
<th>Weekly</th>
<th>Student</th>
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</table>

<table>
<thead>
<tr>
<th>Patient outcomes</th>
<th>Survivorship care conducted</th>
<th>Presence of CSP visit, office visit, or phone call</th>
<th>Pre/post implementation</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCP presence</td>
<td>Uploaded into Epic and Oncolog</td>
<td>Pre/post</td>
<td>Student</td>
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Appendix N

Patient Need for Cancer Survivorship Care Capture Tracking Log

<table>
<thead>
<tr>
<th>Date</th>
<th>MRN</th>
<th>Provider</th>
<th>Diagnosis</th>
<th>Stage</th>
<th>Diagnosis Date</th>
<th>Treatment Completion Date</th>
<th>SCP Date</th>
<th>Days from diagnosis to SCP</th>
<th>Days from treatment completion to SCP</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
Appendix O

Cancer Survivor Survey

When calling patient state: Hello, my name is Kelsey Kloosterman and I am a student at Grand Valley State University. I am calling people who were recently received survivorship care at my project site. May I ask you 10 questions about your recent visit? It will not more than 5 minutes of your time. Your personal information such as name and birthday will not be added to the survey results and will not be shared.

1. Were you provided a survivorship care plan? If no, skip to question 8.
2. Do you still have your survivorship care plan?
3. Do you know where your survivorship care plan is?
4. Did the survivorship care plan help you to understand what follow up care you need for your cancer, such as what doctor you need to see and how often?
5. If you need a cholesterol or lipid screening, which doctor will order the lab?
6. On a scale of 0-5, with 0 meaning not at all and 5 meaning really well, how well did the survivorship care plan provide you tips on how to stay healthy after your cancer treatment?
7. On a scale of 0-5, with 0 meaning not at all and 5 meaning really well, how well did the survivorship care plan information help you to better deal with symptoms you are experiencing from your cancer or its treatments? (If no symptoms, not applicable).
8. On a scale of 0-5, with 0 being not at all useful and 5 being very useful, how useful was your survivorship care plan?
9. Is there anything you wish could have been discussed during your survivorship visit or phone call?
10. Do you have any other feedback for the organization that could have improved your care or the care for other cancer survivors?

After survey complete: Thank you for taking time out of your day to answer my questions. Your answers will be shared with the CSP and Grand Valley State University.
Appendix P

Project Timeline

**Project Timeline**

**Build Coalition**
- Present evidence to director of cancer services
- Present plan to

**Begin Workflow Modification**
- Survivorship addressed during designated appointment
- Referrals placed, "survivorship" added to next appointment description, or documentation of refusal

**Sustainability**
- Monthly report of number of patients seen in CSP
- CSP PA review schedules every two weeks for "survivorship" in appointment description
- PA will provide education for new employees and as needed

**Education**
- Education complete for oncologists, APPs, RNs, and MAs
- Pre/Post-test collected

**Audit and Feedback Process Begins**
- Verify that patients identified were offered CSP referral
- Report percentage of patients captured and referred in each practice every Monday
- Survey patients seen in CSP and relay feedback to appropriate parties

**Final Report**
- Results to practice managers
- Results presented to clinicians during staff meetings
- Results presented to director of cancer services,
Appendix Q

GVSU IRB Determination

DATE: August 4, 2017

TO: Sandra Spoelstra, PhD, RN
FROM: Grand Valley State University Human Research Review Committee
STUDY TITLE: [1093406-1] Care of Adult Cancer Survivors
REFERENCE #: 18-017-H
SUBMISSION TYPE: New Project
ACTION: NOT RESEARCH
EFFECTIVE DATE: August 4, 2017
REVIEW TYPE: Administrative Review

Thank you for your submission of materials for your planned research study. Upon review of the aims and description of your study, it has been determined that this project DOES NOT meet the definition of covered human subjects research* according to current federal regulations. The project, therefore, DOES NOT require further review and approval by the HRRC.

According to your study description, you are conducting an evidence project to increase utilization of the survivorship program at the Lemmen-Holton Cancer Pavilion, which therefore does not meet 45 CFR 46.102 (d); Research is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

Should you change the aims and activities of your project such that it would then meet the definition of human subjects research, please cease any contacts with potential human subjects until such time as you submit the project protocol to the HRRC and receive the committee's approval to proceed. Should you change the aims and activities of your project such that you are unsure if it meets the definition of human subjects research, please submit a new Non-Human Research Determination Form for review by the Office of Research Compliance and Integrity.

If you have any questions, please contact the Office of Research Integrity and Compliance at (616) 331-3197 or rci@gvsu.edu. Please include your study title and reference number in all correspondence with our office.

*Research is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge (45 CFR 46.102 (d)).

Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains: data through intervention or interaction with the individual, or identifiable private information (45 CFR 46.102 (f)).
Appendix R

Project Organization IRB Determination

Available upon request.
# Initial Cost: Care of Adult Cancer Survivors

<table>
<thead>
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<th>Revenue</th>
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<tr>
<td>Project Manager Time (in-kind donation)</td>
<td>$4321</td>
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<td>Team Member Time:</td>
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<td>Statistician (in-kind donation)</td>
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<td>Presidential Research Grant:</td>
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<td>Visit to CSP</td>
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<tr>
<td><strong>Total Income</strong></td>
<td><strong>$4501</strong></td>
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<table>
<thead>
<tr>
<th>Expenses</th>
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</thead>
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<td>$4321</td>
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<tr>
<td>Statistician (in-kind donation)</td>
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</tr>
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<td>Color-printed Portfolios</td>
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<td>Team Member Time:</td>
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<td>Director of Cancer Services</td>
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<td>Survivorship PA</td>
<td>$2600</td>
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<td>Registered Nurses (extra time spent in staff meeting to be educated on pilot project)</td>
<td>$130.50</td>
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<tr>
<td>Educate NPs and Pas (time spent in staff meeting to be educated on project)</td>
<td>$62.50</td>
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<tr>
<td>Educate Physicians (time spent in staff meeting to be educated on project)</td>
<td>$374</td>
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<tr>
<td>Educate NTs and MAs</td>
<td>$42</td>
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<tr>
<td>Director of Cancer Registry Assistance</td>
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<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$11,734</strong></td>
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Operating Income $7,233
Appendix T

Letter of Support from Organization Advisor

Available upon request.
Appendix U

Pre/Post Clinician Education Average Test Scores

<table>
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<tr>
<th>Clinician Education Score Means</th>
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<tbody>
<tr>
<td><strong>Overall Scores (N=13)</strong></td>
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<tr>
<td>Pre Test</td>
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<tr>
<td>Post Test</td>
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Appendix V

Box Plot of Total Scores for Clinician Pre/Post Test

Box Plot of Total Scores for Clinician Pre/Post Test
Appendix W

Individual Clinician Pre/Post Test Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre N = 13</th>
<th>Post N = 13</th>
<th>p-Value</th>
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<tbody>
<tr>
<td><strong>Correct</strong></td>
<td><strong>Incorrect</strong></td>
<td><strong>Correct</strong></td>
<td><strong>Incorrect</strong></td>
</tr>
<tr>
<td>CoC requires that patients diagnosed with which of the following stages of cancer, are required to be provided with a survivorship care plan?</td>
<td>7 (58.3%)</td>
<td>5 (38.5%)</td>
<td>10 (83.3%)</td>
</tr>
<tr>
<td>Patients need to have had a survivorship care plan compiled, reviewed, and sent to all treating physicians within _____ months of diagnosis</td>
<td>5 (41.7%)</td>
<td>7 (58.3%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>.and _____ months of completing treatment.</td>
<td>8 (66.7%)</td>
<td>4 (33.3%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>True or False? Per CoC, a survivorship care plan must be sent to the PCP?</td>
<td>11 (91.7%)</td>
<td>1 (8.3%)</td>
<td>10 (83.3%)</td>
</tr>
<tr>
<td>The survivorship care plan must include (select all that apply).</td>
<td>5 (41.7%)</td>
<td>7 (58.3%)</td>
<td>5 (41.7%)</td>
</tr>
<tr>
<td>Select the statement that is false about survivorship care plans.</td>
<td>6 (50.0%)</td>
<td>6 (50.0%)</td>
<td>7 (58.3%)</td>
</tr>
<tr>
<td>When is the next CoC accreditation visit at the cancer center?</td>
<td>1 (8.3%)</td>
<td>11 (91.7%)</td>
<td>9 (75.0%)</td>
</tr>
</tbody>
</table>
Appendix X

Audit of Daily Schedules for Referrals to Survivorship Care by Office Type

<table>
<thead>
<tr>
<th>Number of Patients Referred by Practice</th>
<th>Referred</th>
<th>% (n) Pre-intervention</th>
<th>% (n) Post-intervention</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breast</strong></td>
<td>Yes</td>
<td>0% (0)</td>
<td>42.1% (8)</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>100% (3)</td>
<td>57.9% (11)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>(3)</td>
<td>(19)</td>
<td></td>
</tr>
<tr>
<td><strong>Gynecology</strong></td>
<td>Yes</td>
<td>37.5% (6)</td>
<td>56.5% (13)</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>62.5% (10)</td>
<td>43.5% (10)</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>(16)</td>
<td>(23)</td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>Yes</td>
<td>31.6% (6)</td>
<td>50% (21)</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>68.4% (13)</td>
<td>50% (21)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>(19)</td>
<td>(42)</td>
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</tr>
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Appendix Y

Audit of Daily Schedules for Referrals to Survivorship Care by Provider Type

<table>
<thead>
<tr>
<th>Number of Patients Referred by Provider Type</th>
<th>Completed</th>
<th>% (n) Pre-intervention</th>
<th>% (n) Post-intervention</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred by Physicians</td>
<td>Yes</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>63.6% (7)</td>
<td>72.7% (8)</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>63.6% (11)</td>
<td>72.7% (11)</td>
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<tr>
<td>Referred by APP</td>
<td>Yes</td>
<td>25% (2)</td>
<td>45.1% (18)</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>75% (6)</td>
<td>41.9% (13)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>75% (8)</td>
<td>41.9% (31)</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>Yes</td>
<td>31.6% (6)</td>
<td>50% (21)</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>68.4% (13)</td>
<td>50% (21)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>68.4% (19)</td>
<td>50% (42)</td>
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</table>
Appendix Z

Audit of Days from Diagnosis of Cancer to SCP Documented in Electronic Health Record

<table>
<thead>
<tr>
<th>Intervention (N)</th>
<th>Mean (SD) Range</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Intervention (n=6)</td>
<td>217.8 (114.6) 112-386</td>
<td>181</td>
</tr>
<tr>
<td>Post-Intervention (n=18)</td>
<td>222.9 (82.6) 60-357</td>
<td>223</td>
</tr>
</tbody>
</table>
Appendix AA

Audit of Days from Treatment of Cancer Completion to SCP Documented in Electronic Health Record

<table>
<thead>
<tr>
<th>Intervention (N)</th>
<th>Mean (SD) Range</th>
<th>Median</th>
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</thead>
<tbody>
<tr>
<td>Pre-Intervention (n=6)</td>
<td>105.5 (94.2) 112-386</td>
<td>181</td>
</tr>
<tr>
<td>Post-Intervention (n=14)</td>
<td>101.1 (66) 60-357</td>
<td>223</td>
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</table>
## Patient Responses to Survivorship Care Plan Helpfulness by Visit Type

<table>
<thead>
<tr>
<th>Questions</th>
<th>Visit Type</th>
<th>Yes N (%)</th>
<th>No N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Survivorship Clinic</td>
<td>10 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td></td>
<td>Embedded</td>
<td>9 (90%)</td>
<td>1 (10%)</td>
</tr>
<tr>
<td></td>
<td>Mailed and Reviewed</td>
<td>6 (75%)</td>
<td>2 (25%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25 (89.3%)</td>
<td>3 (10.7%)</td>
</tr>
<tr>
<td>Were you provided a survivorship care plan?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you still have your survivorship care plan?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you know where your survivorship care plan is?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the survivorship care plan help you understand what follow up care you need?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix CC

Patient Survey Results Knowledge of Follow-up Care

<table>
<thead>
<tr>
<th>Visit Type</th>
<th>PCP</th>
<th>Oncologist/Don't know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survivorship Clinic</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>90.00</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>Embedded</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>88.89</td>
<td>11.11</td>
<td></td>
</tr>
<tr>
<td>Mailed and Reviewed</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>66.67</td>
<td>33.33</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>
### Appendix DD

**Patient Perceptions by Survivorship Visit Type**

<table>
<thead>
<tr>
<th>Question</th>
<th>Visit Type</th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How well did the SCP help you learn ways to stay healthy?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Survivorship Clinic (n=10)</td>
<td>4.5 (0.7)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Embedded (n=9)</td>
<td>4.4 (1.7)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mailed and Reviewed (n=10)</td>
<td>4.3 (1.2)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total (=25)</td>
<td>4.4 (1.19)</td>
<td>5</td>
</tr>
<tr>
<td><strong>How well did the SCP help you deal with symptoms?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Survivorship Clinic (n=8)</td>
<td>3.6 (1.1)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Embedded (n=7)</td>
<td>4.3 (1.9)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mailed and Reviewed (n=5)</td>
<td>4.8 (0.5)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total (n=20)</td>
<td>4.2 (1.4)</td>
<td>5</td>
</tr>
<tr>
<td><strong>How satisfied are you with the SCP?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Survivorship Clinic (n=10)</td>
<td>4.0 (1.5)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Embedded (n=9)</td>
<td>4.3 (1.7)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mailed and Reviewed (n=6)</td>
<td>4.3 (1.0)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total (n=25)</td>
<td>4.2 (1.4)</td>
<td>5</td>
</tr>
</tbody>
</table>
### Appendix EE

Patient Qualitative Answers

| Is there anything you wish could have been discussed during your survivorship visit or phone call? |
|---------------------------------|---------------------------------|---------------------------------|
| CSP                            | Embedded                       | Phone Review                    |
| • More time with the nutritionists would have been helpful. This is what I needed the most help with. | • Yes. This is my second time going through this. I don’t have much lung capacity left and I'm struggling at work. I'm trying to figure out if I should keep struggling through work or if I need to stop. | • Yes: are there certain things you should be aware of? Your body is never the same, what are the things I should be looking for? And questions like is ok to use aspartame, things like that. Should I be getting CT scans and MRIs or additional testing? |
| • No. The questions I had were answered thoroughly. | • Yes. | • It would have been nice to go to the clinic sooner. |

| Do you have any other feedback for Spectrum that could have improved your care of the care for other cancer survivors? |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|
| CSP                                                                         | Embedded                                                                  | Phone Review                                                               |
| • It would have been nice to go to the clinic sooner.                      | • Yes, more information before I actually received the surgery.           | • I felt like the team I had was very thorough. They answered all my questions and took the time I needed.  |
| • They had suggested a bone density test, and my PCP did not get any information about that. It was a hassle getting it ordered: more coordination needed. | • The nurse practitioner was very thorough, explicit, understanding, and informative. Any questions we had she answered, better than what I expected. | • No, very thorough |
| • It was fine for what it was, but I felt like it didn't really apply to me. Everyone was very nice and had a lot of offer, but it's more suited towards somebody who was maybe starting from a different place in overall health and physical fitness. | • I felt nurtured and cared for. That made me more comfortable and made me feel like this is a good place to be, a good thing that is happening, and I'm getting better. It made me feel like the term survivor was a positive thing. |   |
Appendix FF

PowerPoint Presentation
Care of Adult Cancer Survivors

Kelsey N. Kloosterman
DNP Project Final Defense
December 12, 2018

Acknowledgements

• Advisor: Dr. Sandra Spoelstra
• Advisory Committee:
  – Dr. Marie Vanderkooi
  – Gerri Roobol
• Site professionals:
  – Susanne Pettigrew
  – Deb Bisel
• Presidential Research Grant
Objectives for Presentation

1. Review the clinical problem
2. Review organizational assessment
3. Review evidence surrounding cancer survivorship
4. Describe the quality improvement project
5. Disseminate project results
6. Review DNP Essentials

The Problem

• Currently >15 million cancer survivors\(^1\)
  – More than 526,000 in Michigan
• Cancer survivors have unique needs\(^2\)
• American College of Surgeons Commission on Cancer (CoC) and National Accreditation Program for Breast Cancers (NAPBC):
  – Survivorship accreditation standards\(^3\)
  – Survivorship Care Plans (SCP)
Organizational Assessment

Organizational Assessment: Burke Litwin Causal Model\textsuperscript{12}
IRB Approvals

- Site IRB approval available upon request

Stakeholders

- Oncologists, APPs, RNs, and MAs in the referring gynecology oncology and breast cancer services offices
- Cancer center practice support staff
- Cancer center administration
- Nurse navigators
- CSP staff
- Cancer survivors
SWOT Analysis of Survivorship Care

**Strengths**
- Part of large corporation
- Recognized for high quality care
- History of providing survivorship care
- Cancer program has dedicated resources developed as the CSP evolved (Nutrition Classes, Exercise Classes, Lymphedema Classes, Financial Assistance)
- Provides patient centric care
  - Oncology dedicated SCP multidisciplinary team that works well together (Dieticians, Rehabilitation, Social Work, Nurse Navigators)
  - All parties communicate well throughout survivorship appointment
- A positive climate
- SCP embedded in EHR
  - Ability to build SCP throughout treatment
  - Communication tool with oncologists
- Oncologists/staff passionate about providing patients with excellent care
- Collaboration to create multiple options for survivorship care
  - Initial patient feedback regarding CSP was positive.
  - Oncologists and APPs report positive feedback from patients regarding CSP
- Oncologists/staff passionate about providing patients with excellent care
- Collaboration to create multiple options for survivorship care
  - Initial patient feedback regarding CSP was positive.
  - Oncologists and APPs report positive feedback from patients regarding CSP
- Oncologists and staff are passionate about providing patients with excellent care
- Collaboration to create multiple options for survivorship care

**Weaknesses**
- Identification of patients eligible for survivorship care not methodical
- Referral process not standardized
- Inconsistent scripting when educating patients about CSP
- Some patients unable to/prefer not to use CSP and alternative options need standardization
- Feedback regarding percentage of eligible cancer survivors offered survivorship care each day not available
- Some oncologists/APPs unable to locate SCP in EHR
- Cancer program SW turnover; SW not a part of every CSP appointment
- Registry process for tracking eligible patients is manual, time consuming, and may not be sustainable
- SCP compilation is time intensive

**Opportunities**
- Education: referring oncologists, APPs, RNs, and MAs
  - Inform about CoC accreditation or accreditation standards
  - Alternative to CoC embedded appointment/mailed SCP; SCPs in EHR
- Define and improve workflow
  - Utilize change agents: APPs and practice managers
  - Create feedback process about percentage of CSP referrals and share daily results on daily rounding board.
  - Receive input from stakeholders, including the survivor
- Increase survivorship examinations and care
  - Improve patient satisfaction/satisfaction
  - Perform study during CoC visit

**Threats**
- Recent changes to EHR
- Timeline to accreditation in October
- Lack of physician buy-in

**Clinical Question**
In cancer survivors:
Does implementation of a standardized workflow process improve referrals to the CSP, survivorship appointments, and the SCP completion rate?
Literature Review

Objectives:
1. What survivorship care models were evidence-based?
2. What were components of survivorship care models?
3. Who provided the survivorship care?
4. Where did the survivorship care occur?
Literature Review: PRISMA\textsuperscript{18}

- 7 articles
  - 4 systematic reviews
  - 1 RCT
  - 1 Non-RCT
  - 1 Case-control pre/post test survey

<table>
<thead>
<tr>
<th></th>
<th>NP</th>
<th>RN</th>
<th>PCP</th>
<th>Oncologist</th>
<th>Shared Oncologist/PCP</th>
<th>Shared Survivorship Clinic/PCP</th>
<th>Oncologist Shared with RN</th>
<th>Multi-disciplinary</th>
</tr>
</thead>
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<td>Halpern (2015)\textsuperscript{5}</td>
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<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
### Evidence for Project

- Multiple models have been successful
- Most common setting is a survivorship clinic
- Recommended:
  - Use of materials beyond the SCP
    - Handouts
    - Classes
Project Plan

Project Purpose and Objectives

• Standardize process for providing survivorship care
• Collect patient perceptions of survivorship care
• Answer the clinical question:
  – Does implementation of a standardized workflow process improve referrals to the CSP, survivorship appointments, and the SCP completion rate?
Project Type, Setting, Participants, Resources

- Project Type: Quality Improvement\textsuperscript{14}
- Setting: Cancer Center
- Participants: Cancer Survivors and Cancer Center Staff
- Resources: Education materials, people, and technology

Project Design

- Based on the PARiHS Framework\textsuperscript{15}

\[ \text{SI} = f(E,C,F) \]

- SI: successful implementation
- E: evidence
- C: context
  - Culture, leadership, and measures
- F: facilitation
- f: function of
Kotter’s 8 Step Change Model to Address Practice Change\(^{16}\)

1. Build a coalition
   - Directors of cancer services and cancer registry
   - Survivorship PA
   - Champions
Implementation Strategy & Element

2. Educate the staff
   – Pre/post test
   – Educational Handout
   – Scripting

Implementation Strategy & Element

3. Modify workflow\textsuperscript{17}
   – Survivorship discussed at designated point in treatment
   – Script posted on all computers in patient care areas
   – All patients initially offered referral to CSP
     • If refused or unable to refer, patient offered embedded visit with a designated APP within the oncologist office.
     • If unable to have embedded visit, APP will compose SCP, mail to patient, and RN will call patient to review SCP.
Implementation Strategy & Element

4. Develop and organize audit and feedback process
   – Audit tool for patient identification
   – Relay clinical data daily
   – Cancer survivor feedback

Implementation Strategy & Element

5. Promote Sustainability by Sustaining the Acceleration
   – CSP PA will randomly review schedules
   – Monthly report of total patients seen in CSP
Measuring & Evaluating Objectives

- Staff education: Pre/post education survey
- Patient identification: Audit tool daily throughout project
  - Goal: 100%
- Patient outcomes:
  - Patient cared for in CSP
  - SCP presence
  - Patient knowledge and perception

Analysis Plan

- Clinician Education
  - Mean Scores
  - Paired t-test
  - McNemar’s Test
- Daily Audit
  - Frequency tables
  - Chi Squared tests
  - Fisher’s Exact Test
- Patient Survey
  - Frequency Tables
  - Fisher’s Exact Test
  - Kruskal-Wallis Test
CARE OF ADULT CANCER SURVIVORS

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12/15/18

Resources & Cost

- Time
- Technology
- Printing services

Timeline

<table>
<thead>
<tr>
<th>Build Coalition</th>
<th>Begin Workflow Modification</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Present evidence to director of cancer services</td>
<td>• Survivorship addressed during designated appointment</td>
<td>• Monthly report of number of patients seen in CSP</td>
</tr>
<tr>
<td>• Present plan</td>
<td>• Referrals placed, &quot;Survivorship&quot; added to next appointment description, or documentation of refusal</td>
<td>• CSP PA review schedules every two weeks for &quot;survivorship&quot; in appointment description</td>
</tr>
<tr>
<td>7/16/2018</td>
<td>8/15/2018</td>
<td>10/3/2018</td>
</tr>
<tr>
<td>8/15/2018</td>
<td>9/15/2018</td>
<td>12/15/2018</td>
</tr>
<tr>
<td>Education</td>
<td>Audit and Feedback Process Begins</td>
<td>Final Report</td>
</tr>
<tr>
<td>• Education complete for oncologists, ARPs, RNs, and MAs</td>
<td>• Verify that patients identified were offered CSP referral</td>
<td>• Results to practice managers</td>
</tr>
<tr>
<td>• PrePost-test collected</td>
<td>• Report percentage of patients captured and referred in each practice every Monday</td>
<td>• Results presented to clinicians during staff meetings</td>
</tr>
<tr>
<td></td>
<td>• Survey patients seen in CSP and relay feedback to appropriate parties</td>
<td>• Results presented to director of cancer services</td>
</tr>
</tbody>
</table>

1
Results

Pre/Post Clinician Test

- N=13
  - RNs=6
  - APPs=4
  - MDs=4
- Knowledge improved p=0.0016

<table>
<thead>
<tr>
<th>Clinician Education Score Means</th>
<th>Mean (SD)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Scores (N=13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre Test</td>
<td>52.8 (20.52)</td>
<td>0.0016</td>
</tr>
<tr>
<td>Post Test</td>
<td>75.8 (14.74)</td>
<td></td>
</tr>
</tbody>
</table>
Daily Audit and Referrals Placed

<table>
<thead>
<tr>
<th>Number of Patients Referred by Provider Type</th>
<th>Completed</th>
<th>% (n) Pre-intervention</th>
<th>% (n) Post-intervention</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred by Physicians</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>36.4% (4)</td>
<td>27.5% (3)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>63.6% (7)</td>
<td>72.7% (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(11)</td>
<td>(11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referred by AEP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25% (2)</td>
<td>45.1% (18)</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>75% (6)</td>
<td>41.9% (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(8)</td>
<td>(31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>31.6% (6)</td>
<td>50% (21)</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>68.4% (15)</td>
<td>50% (21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(19)</td>
<td>(42)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Patients Referred by Practice

<table>
<thead>
<tr>
<th>Referred</th>
<th>% (n) Pre-intervention</th>
<th>% (n) Post-intervention</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>0% (0)</td>
<td>42.1% (8)</td>
<td>0.27</td>
</tr>
<tr>
<td>No</td>
<td>100% (3)</td>
<td>57.9% (11)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(3)</td>
<td>(11)</td>
<td></td>
</tr>
<tr>
<td>Gynecology</td>
<td>37.5% (6)</td>
<td>56.5% (13)</td>
<td>1.0</td>
</tr>
<tr>
<td>No</td>
<td>62.5% (10)</td>
<td>43.5% (10)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(16)</td>
<td>(23)</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>31.6% (6)</td>
<td>50% (21)</td>
<td>0.10</td>
</tr>
<tr>
<td>No</td>
<td>68.4% (15)</td>
<td>50% (21)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(19)</td>
<td>(42)</td>
<td></td>
</tr>
</tbody>
</table>

Days: Diagnosis to SCP/Treatment Completion to SCP

<table>
<thead>
<tr>
<th>Days from diagnosis to SCP completion</th>
<th>Pre N=6 mean (SD)</th>
<th>Post N=18 mean (SD)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[range]</td>
<td>[range]</td>
<td></td>
</tr>
<tr>
<td>Diagnosis to SCP completion</td>
<td>217.8 (114.6)</td>
<td>222.9 (82.6)</td>
<td>0.7172</td>
</tr>
<tr>
<td>[112-386]</td>
<td>[60-357]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days from treatment completion to SCP completion</td>
<td>105.5 (94.2)</td>
<td>110.1 (66.0)</td>
<td>0.9351</td>
</tr>
<tr>
<td>[15-278]</td>
<td>[6-223]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Patient Phone Survey N=28

- **Receipt of SCP:**
  - 100% (10 of 10) at survivorship clinic
  - 90% (9 of 10) at embedded visits
  - 75% (6 of 8) who had it mailed and reviewed
  - No difference by type of care \( p=0.26 \)

- **Knew where SCP was located in home:**
  - 6 of 10 (60%) from the survivorship clinic
  - 2 of 9 (22.2%) from embedded visits
  - 4 of 6 (66.7%) mailed
  - No difference by type of care \( p=0.19 \)

### Patient Phone Survey N=25

- **Retention of SCP**
  - 72% (18) patients still had SCP
  - 28% (7) did not
  - No differences by 3 types of care \( p=0.5271 \)

- **Helpfulness of SCP for follow-up**
  - 92% (23) helpful
  - 2% (2) not helpful

- **Who would order lipid panel?**
  - 84% (21) PCP
  - 15% (3) Oncologist
  - 4% (1) did not know
Location & Health, Symptoms, Satisfaction

<table>
<thead>
<tr>
<th>Care Location</th>
<th>Survivorship Clinic (10) Mean (SD)</th>
<th>Embedded (10) Mean (SD)</th>
<th>Mailed Reviewed (8) Mean (SD)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well did the SCP help you learn ways to stay healthy?</td>
<td>4.5 (0.71)</td>
<td>4.44 (1.67)</td>
<td>4.33 (1.21)</td>
<td>0.513</td>
</tr>
<tr>
<td>How well did the SCP help you deal with symptoms?</td>
<td>3.63 (1.06)</td>
<td>4.29 (1.89)</td>
<td>4.80 (0.45)</td>
<td>0.0257</td>
</tr>
<tr>
<td>How satisfied are you with the SCP?</td>
<td>3.95 (1.46)</td>
<td>4.38 (1.66)</td>
<td>4.33 (1.03)</td>
<td>0.28</td>
</tr>
</tbody>
</table>

Patient Comments

- The questions I had were answered thoroughly.
- It would have been nice to go to the clinic sooner.
- Very thorough, explicit, understanding, and informative
- I felt like the team I had was very thorough. They answered all my questions and took the time I needed.
- It was fine for what it was, but I felt like it didn't really apply to me. Everyone was very nice and had a lot of offer, but it's more suited towards somebody who was maybe starting from a different place in overall health and physical fitness.
- I felt nurtured and cared for. That made me more comfortable and made me feel like this is a good place to be, a good thing that is happening, and I'm getting better. It made me feel like the term survivor was a positive thing.
Discussion

• Education improved survivorship knowledge
• Improved rates of referral
  – Low rates
  – Still need for improvement
• Patients retained SCP better when cared in clinic or mailed
• Patients found the SCP helpful
  – Managing symptoms and health
  – Valued the conversation surrounding the SCP

Limitations

• Short time frame
  – Multiple clinicians on leave
• Limited sample size
• Patient Interview:
  – No control group
  – Does not account for previous relationships
Implications for Practice

• Successes:
  – 100% of clinicians correctly identified when patients need survivorship care
  – Survivors’ feedback

• Challenges:
  – Offering survivorship care if not addressed during appointment
  – Clinicians on leave

Sustainability Plan

• Education materials
• “First follow up and survivorship”
• Oncologist Report Card
• Future DNP students
Conclusions

- Still a need to increase survivorship care
  - Continuation of sustainability workflow changes
  - Staff meetings
  - Physician Report Cards
- Clinician education increased survivorship care knowledge
- Cancer survivors appreciated and used information from survivorship care provided
- All cancer survivors need access to SCP

Budget

<table>
<thead>
<tr>
<th>Initial Cost: Care of Adult Cancer Survivors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Project Manager Time (in-kind donation)</td>
</tr>
<tr>
<td>Team Member Time:</td>
</tr>
<tr>
<td>Statistician (in-kind donation)</td>
</tr>
<tr>
<td>Presidential Research Grant</td>
</tr>
<tr>
<td>Visit to CSP</td>
</tr>
<tr>
<td>Total Income</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Project Manager Time (in-kind donation)</td>
</tr>
<tr>
<td>Team Member Time:</td>
</tr>
<tr>
<td>Statistician (in-kind donation)</td>
</tr>
<tr>
<td>Coder-granted Patience</td>
</tr>
<tr>
<td>Team Member Time:</td>
</tr>
<tr>
<td>Director of Cancer Services</td>
</tr>
<tr>
<td>Survivorship PA</td>
</tr>
<tr>
<td>Registered Nurses (extra time spent in staff meeting to be educated on pilot project)</td>
</tr>
<tr>
<td>Educate NPs and PAs (time spent in staff meeting to be educated on project)</td>
</tr>
<tr>
<td>Educate Physicians (time spent in staff meeting to be educated on project)</td>
</tr>
<tr>
<td>Educate NTF and MAs</td>
</tr>
<tr>
<td>Director of Cancer Registry Assistance</td>
</tr>
<tr>
<td>Total Expenses</td>
</tr>
</tbody>
</table>

Operating Income: $7,233
Dissemination

- Presented results to champions
- Final defense
- Cancer Committee
- Gerontological Society of America
- Scholarworks

DNP Essentials Reflection

I. Scientific Underpinnings for Practice
II. Organizational and Systems Leadership
III. Clinical Scholarship and Analytical Methods
IV. Information Systems/Technology
V. Health Care Policy for Advocacy
VI. Interprofessional Collaboration
VII. Clinical Prevention and Population Health
VIII. Advanced Nursing Practice
References


