

Survivorship care planning in a comprehensive cancer center using an implementation framework

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Cancer survivorship care plans (SCPs) have been recommended to improve clinical care and patient outcomes. Research is needed to establish their efficacy and identify best practices. Starting in 2015, centers accredited by the American College of Surgeons Commission on Cancer must deliver SCPs to patients completing primary cancer treatment with curative intent. We describe how we established routine SCP delivery at the Robert H Lurie Comprehensive Cancer Center in Chicago, Illinois, using the Quality Implementation Framework. We evaluated local practices, gathered clinician and patient stakeholder input, developed customized SCP templates within the electronic health record (EHR), and implemented 2 complementary delivery models. Clinician interviews (n = 41) and survey responses (n = 12), along with input from patients (n = 68) and a patient advisory board (n = 15), indicated support for SCPs and survivorship services. To promote feasible implementation and leverage existing workflows, we harmonized 2 SCP delivery models: integrated care within clinics where patients received treatment, and referral to a centralized survivorship clinic. We are implementing SCP delivery with prominent disease sites and will extend services to survivors of other cancers in the future. We developed four electronic disease-specific SCP templates for breast, colorectal, lung, and prostate cancers and a fifth, generic template that can be used for other malignancies. The templates reduced free-text clinician entry by autopopulating 20% of the fields from existing EHR data, and using drop-down menus for another 65%. Mean SCP completion time is 12 minutes (range, 10-15; n = 64). We designed our framework to facilitate ongoing evaluation of implementation and quality improvement. **Funding/sponsorship** Robert H Lurie Comprehensive Cancer Center, the Coleman Foundation, and the Lynn Sage Cancer Research Foundation

The ever-growing number of cancer survivors experience a host of physical and psychosocial late- and long-term effects that can extend years after diagnosis and treatment. These sequelae must be managed along with comorbid conditions, age-related declines, and other challenges (eg, financial burden).¹ Many patients become “lost in transition” because of fragmentation within the health care system that results in inadequate coordination across providers.² The American Society of Clinical Oncology (ASCO) and other leading organizations have recommended providing survivorship care plans (SCPs) at the end of primary cancer treatment to improve survivors’ clinical care and health.

Cancer SCPs consist of detailed treatment summaries, comprehensive surveillance and follow-up

care recommendations, links to support services, and health promotion information. Ideally, they are tailored to meet patients’ unique needs and characteristics and are shared with their primary care providers. Delivery of the SCPs in medical visits – the process of survivorship care planning (SCPing) – should serve as teachable moments that promote patient self-efficacy and positive health behaviors.^{3,4} In September 2014, the American College of Surgeons Commission on Cancer (CoC) updated its patient-centered care guidelines to require the approximately 1,500 accredited institutions to deliver SCPs to patients completing primary treatment.⁵

Research on SCPing is limited and has produced mixed results. Cancer survivors, primary care providers, and oncology providers generally respond positively; however, the latter have concerns about

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feasibility.⁶⁻⁸ Implementation of SCPs has been slow, with national surveys indicating that only a minority of post-treatment survivors receive them and a minority of centers and medical oncologists supply them.^{7,9-11} Primary implementation barriers are provider burden, lack of reimbursement for preparation, and questions regarding efficacy.^{6,7} Findings from observational studies suggest that SCPs are related to improved patient outcomes (knowledge, emotional concerns, and unmet needs).^{12,13} Collectively, findings from a few randomized controlled trials have indicated that SCPs: increase awareness of follow-up care and contact with primary care providers; may not improve satisfaction with care; and may increase or decrease health-related worry and concerns. Given that the interventions did not include targeted symptom management, it is not surprising that SCPs did not significantly improve distress or health-related quality of life.¹⁴⁻¹⁷ The National Cancer Institute (NCI) has emphasized that more research is needed to evaluate SCPs' efficacy and identify best practices.¹⁸

The NCI and others have encouraged appropriate documentation of the organizational contexts and care processes in which SCPing occurs, in order to build a body of science and inform successful interventions.^{18,19} The purpose of this paper is to illustrate how we developed SCPing at the Robert H Lurie Comprehensive Cancer Center (RHLCCC) of Northwestern University in Chicago. Our aim was to establish optimum care processes that facilitate routine, universal SCPing across the center in ways that are feasible and sustainable given existing resources. We are sharing our implementation process to inform others experiencing the challenges of establishing SCPing in their institutions.

Methods

We adopted the Quality Implementation Framework (QIF) because it synthesizes existing models and research support to provide a conceptual overview of the critical steps that comprise quality implementation.²⁰ The QIF incorporates implementation research as well as specific procedures and resources into a model of systems and processes for moving research-based innovations into widespread applications. Our efforts to date have followed the QIF's first 2 phases: considering the host setting and creating a structure for implementation (Table 1). The first phase included assessing clinic needs, resources, and readiness; the fit of different care delivery models; and whether SCP templates needed to be adapted. It also involved capacity building by including critical stakeholders, fostering a supportive organizational climate, and designating and training staff responsible for implementation. The second phase included developing customized SCP templates and delivery models.

Considering local clinical practice

We formed a multidisciplinary cancer survivorship working group that included 1 medical oncologist, 1 internist,

4 oncology advanced practice providers (APPs: physician assistants and advanced practice nurses), 3 clinical health psychologists who are also academic researchers, 3 nurse navigators, 2 hospital administrators, and 1 health information technology programmer. Members consisted of clinicians and researchers leading development of SCPing at the center.

Clinician interviews

We asked members of the working group to select the disease types that would be the focus of initial SCPing interventions: breast, colorectal, lung, and prostate cancers. Depending on their disease stage, patients with those cancers can complete primary therapy and receive SCPs from a number of center's specialty clinics (medical oncology; breast, colorectal, or thoracic surgery; urology; or radiation oncology). Therefore we held stakeholder meetings with physicians and clinical staff in all those specialties. In the meetings, we mapped clinical workflows, ascertained clinician preferences regarding SCP delivery methods, and educated them on SCPs.

Clinician survey

In addition to participating in the stakeholder interviews, we asked oncology clinicians who treat breast, colorectal, lung, or prostate cancer to complete a short online survey. The survey contained 9 items and included questions regarding the feasibility of delivering SCPs within current clinical workflows, clinicians' likelihood to refer patients to a centralized survivorship clinic, as well as their general views on the usefulness of SCPs (Table 2).

Patient feedback

The scope of our initiative did not allow for patient interviews or focus groups. However, we had access to comments from participants in an SCPing study conducted in the RHLCCC.²¹ Two reviewers identified main themes within comments from 68 post-treatment breast cancer survivors responding to a follow-up assessment about 3 months after receiving individualized SCPs (created from an electronic template and delivered by APPs). We incorporated main themes articulated by those study participants throughout our development. We also engaged members of the center's patient advisory board to gain their insights. The members we consulted were representative of patients seen in the RHLCCC survivorship clinics (ie, survivors of breast, prostate and colorectal cancers), some of whom had received SCPs.

Developing customized SCPing

Template content

A number of SCP templates are used broadly, but the CoC has specified that the ASCO data set will serve as the minimal content to be delivered to patients in accredited institu-

TABLE 1 Establishing survivorship care planning at the Robert H Lurie Comprehensive Cancer Center using the Quality Implementation Framework

Considering local settings (9 months)

Assessing system and provider needs, resources, capacity/readiness & care model fit

- Estimation of the number of eligible patients with common (breast, colorectal, lung, prostate) cancers
- Survey and interviews of oncology providers regarding capacity to incorporate SCP delivery into their workflow, including relevant needs and resources, and their preference for SCP delivery models

Adapting clinical tools and delivery models

- Review and evaluation of SCP delivery in local clinics and by other institutions
- Creation and finalization of SCP delivery models, incorporating stakeholder (provider and patient) input
- Review and evaluation of existing SCP templates
- Creation and finalization of disease-specific SCP templates that meet CoC requirements and incorporate stakeholder input
- Development and finalization of SCP templates within the EHR that include some autopopulation of fields

Capacity building

- Formation and regular convening of multidisciplinary cancer survivorship working group
- Collection of stakeholder input toward development and vetting of SCP templates and delivery models
- Designation and training of clinicians delivering SCPs
- Promotion of referrals via web and print advertising, provider education and communications
- Inclusion of leadership and administration to foster a supportive organizational climate

Creating structure for implementation (1 month)

Creating implementation teams & developing an implementation plan

- Implementation of 2 SCP delivery models (Integrated Survivorship Care and Centralized Survivorship Clinic)
 - Breast and colorectal cancer Medical oncology: centralized survivorship; Surgical oncology: centralized survivorship
 - Lung cancer Medical oncology: centralized survivorship; Surgical oncology: integrated care
 - Prostate cancer Urology: centralized survivorship; Radiation oncology: integrated care
- Standardization and harmonization of care across delivery models and clinics

Maintaining structure for continued implementation (ongoing)

Maintaining implementation support strategies

- Provision of retraining and professional education opportunities for clinicians delivering SCPs
- Ongoing communication with leadership about integration of SCP delivery within larger clinical care models
- Ongoing promotion of referrals through web and print advertising, and professional education and communications
- Ongoing communication with billing office regarding optimal billing codes for SCPing services

Engaging in continuous process and quality improvement evaluation

- Identification of any changes to accreditation requirements, clinical care guidelines, or local clinical practice needs and preferences
- Evaluation of reach, adoption, implementation and maintenance of SCP delivery
- Evaluation of comparative feasibility and sustainability of 2 SCP delivery models

Establishing and utilizing supportive feedback mechanisms

- Incorporation of identified updates to SCP templates
- Execution of adjustments to SCP delivery models and procedures

Improving future applications (planned)

- Development of SCP templates for other disease sites using steps above and benefitting from lessons learned
- Improvement of SCP templates in EHR: autopopulation of additional data fields, SCPs to be sent to patients electronically
- Expansion of SCP delivery services to other disease sites using steps above and benefitting from lessons learned
- Integration of institutional quality improvement assessment with SCP research on patient and system outcomes

CoC, [American College of Surgeons] Commission on Cancer; EHR, electronic health record; SCP, survivor care plan

tions.²²⁻²⁴ Being COC-accredited, we used the ASCO templates as the basis for the SCPs for all selected disease sites (breast, colorectal, lung, and prostate). We gathered and considered additional data elements identified as particularly important by the clinicians whom we consulted. We referred to the National Comprehensive Cancer Network (NCCN)

and American Cancer Society (ACS) guidelines when creating language for the follow-up care recommendations and corresponding decision rules about when and how they are made to patients with certain clinical characteristics. The SCP templates were vetted by the working group, oncology clinicians we interviewed, primary care physicians, and

TABLE 2 Clinician survey responses (n = 12)

Question	n (%)
Can cancer survivorship care and the delivery of SCPs fit into your workflow?	
Yes	8 (67)
No	4 (33)
Who is the best provider to deliver cancer survivorship care and SCPs?	
Treating oncology provider	2 (17)
Nurse or other member of the cancer care team	1 (8)
Survivorship provider separate from the cancer care team	9 (75)
How likely would you be to refer your patients to a survivorship clinic separate from the cancer care team?	
Not likely	0 (0)
Somewhat likely	2 (17)
Very likely	10 (83)
Do you believe SCPs will be beneficial to patients?	
Yes	12 (100)
No	0 (0)
Do you believe SCPs will improve coordination of care between providers?	
Yes	11 (92)
No	0 (0)
Don't know	1 (8)

SCP, survivorship care plans

members of the RHLCCC's patient advisory board. We instituted quarterly reviews by survivorship APPs to ensure that they remain current with care guidelines.

Programming the electronic template

General SCP templates available through our EHR (Epic), along with the CoC standards, served as starting points for our customized electronic templates. Members of the working group reviewed the CoC Standard 3.3 and mapped where in the EHR the information each required element was located. We aimed for uniformity across disease sites wherever possible (ie, consistent formatting and ordering of common fields) to minimize Epic programming, promote clinicians' familiarity with the templates, and track use more easily. The working group met weekly for 9 months toward finalization of the templates. Since the templates went into production, we have been gathering feedback from clinicians using them. The working group reviews this feedback, then selects and batches appropriate revisions that can be made to the SCP templates in order to better meet the needs of clinicians and patients.

Training clinicians

We delivered 10 in-person demonstrations to cancer survivorship clinicians to familiarize them with the SCP templates. To promote accurate template completion, we also developed a manual with detailed steps to which clinicians could refer. We designated a specific Epic lead and oncology PA to respond to end-user questions. We also made available a training video we created of a clinician role playing delivering an SCP to a mock patient.

Establishing referrals

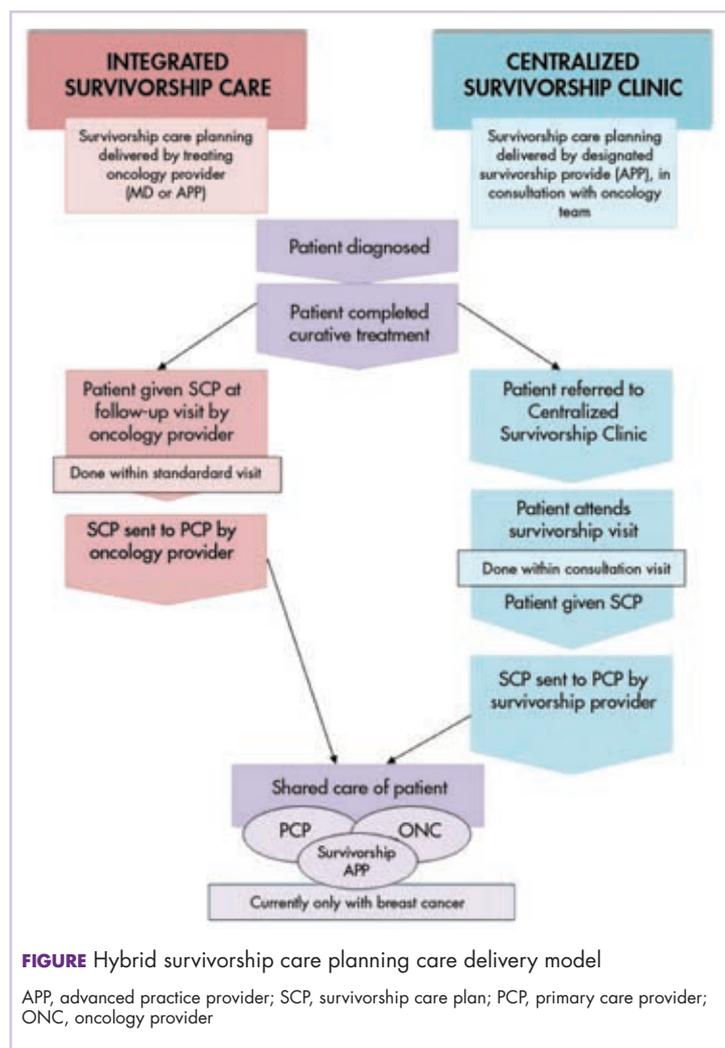
Given that SCPs are relatively new, we believe that educating clinicians about them is necessary to promote referrals to survivorship clinics. We gave presentations throughout the RHLCCC that were attended by oncology and primary care clinicians. We publicized the availability of SCPs for eligible patients on webpages for the center and its specialized survivorship clinics. We also developed brochures and posters outlining available survivorship services and distributed them throughout the center.

Results

Local clinical practice

System structure and capacity. The RHLCCC of Northwestern University is an NCI-designated comprehensive cancer center and member of the NCCN. The center treats a high volume of patients who are eligible for SCPs (2,651 analytic cases of stage I-III cancers in 2014). When we began work on this initiative, the center was providing specialized survivorship care (for breast cancer, adolescent and young adults, adult survivors of childhood cancers, and older adults) but was not providing SCPs routinely for other patients. The pre-existing survivorship programs followed consultative or integrated care models.²⁵ Services were delivered primarily by oncology APPs working in close coordination with medical oncologists and internists.

The CoC's Standard 3.3 defines eligible patients as those who have completed active therapy with curative intent (other than long-term hormonal therapy) and requires 25% of eligible patients to receive SCPs in 2016 (increasing incrementally to 100% by 2019). Accordingly, the working group decided to focus initially on the largest cancer survivor groups at the center (breast, colorectal, lung, and prostate) and to expand to additional cancer sites in upcoming years. We queried our tumor registry for the number of analytic cases of stage I, II, and III breast, colorectal, lung, and prostate cancers to estimate the amount of eligible patients at the center and then calculate the target number for SCPing services between 2015 and 2019. Given the clinician burden associated with completing and delivering SCPs, we opted to invest in developing electronic SCP templates in our local EHR and in training APPs who would be dedicated to cancer survivorship care.



These choices were influenced by the availability of institutional and grant funds, the center’s pre-existing specialty survivorship clinics, and use of a single EHR across clinics.

Clinician interviews. The majority of clinicians interviewed (n = 41: 23 MDs, 14 APPs, 4 RNs) shared positive attitudes about SCPing but had some concerns about burden. Those in clinics with an established patient exit process tended to prefer delivering SCPs within current workflows, expressed confidence in their ability to do so, and were able to designate clinicians (primarily APPs) who would be responsible. Those in clinics that treat large numbers of early-stage disease expressed less confidence in their ability to provide SCPing and a preference for patient referral for survivorship services. All clinicians consulted were in favor of electronic SCPs within the EHR compared with other formats.

Clinician survey. We approached 31 oncology clinicians who treat breast, colorectal, lung, and prostate cancers, 12 of whom completed the survey: 6 physicians, 5 APPs and 1 RN. Responding clinicians tended to endorse that: SCPing

was feasible within their workflows, designated survivorship clinicians were best equipped to provide SCPing, they would refer post-treatment patients to in-house survivorship clinics, and SCPs are beneficial to patients and inter-provider communication (Table 2). We acknowledge that these responses were subject to self-selection bias, with the surveyed clinicians being among the most interested in survivorship care.

Patient feedback. When we began this initiative, the RHLCCC’s survivorship services were not collecting patient feedback but we had data from an SCPing study of breast cancer survivors (n = 80).²¹ A resounding theme amongst those study participants who provided comments in their follow-up assessments (n = 68; 79% non-Hispanic white, 64% married, 93% college education or higher, 59% having received chemotherapy) was how the SCPs they received helped their understanding of follow-up care and self-management. A representative quote noted: “It mapped out all areas of concern – what to watch for, when procedures are due, what lifestyle changes, etc. Very comprehensive guide.” Many participants expressed a desire to have had a survivorship visit sooner. We recognize that this breast cancer survivor feedback cannot be generalized to survivors of other cancers treated at the RHLCCC. However, we did incorporate their feedback into our center-wide SCPing initiative (eg, emphasizing delivery of SCPs as close to treatment completion as possible). Similarly, all of the members of the center’s patient advisory board we spoke to (n = 15) expressed support for SCPs and/or wished to have received one. They generally expressed a preference to receive survivorship care from their oncology providers but most indicated a willingness to see a dedicated survivorship APP for SCPing.

SCP templates

Content. Our decision to create customized SCP templates rather than simply using the ASCO templates, was driven by clinicians’ expressed desires for additional content and our aim to autopopulate as many SCP clinical data fields as possible using existing EHR fields. We developed 4 disease-specific SCP templates for the disease sites most commonly treated at the center (breast, colorectal, lung, and prostate cancer) and a fifth, generic template that can be used for other malignancies. The most frequent clinician-driven additions to the SCP templates were fields capturing the presence and severity of specific symptoms common among patients with each disease type. As an example, 37% of the data elements in the breast cancer SCP template are in addition to those captured in the corresponding ASCO template. In response to clinician input, we made changes to SCP content order so they better matched discussions in medical visits.

Format and operability in the EHR. Our aim was to develop SCP templates within the local EHR to reduce

TABLE 3 Current survivorship billing at the Robert H Lurie Comprehensive Cancer Center^{ab}

Code type	CPT code	Time (min)	100% MD ⁴	85% APP direct billing ⁵
Primary	99214, Level 4 established patient ¹	25-39	\$114.73	\$97.52
Primary	99215, Level 5 established patient ²	40	\$155.68	\$132.33
Add-on for 99215	99354 prolonged ³	+30 face-to-face	\$107.07	\$91.01

APP, advanced practice provider; CPT, Current Procedural Terminology; MD, medical doctor

^aRates reflect published Medicare reimbursement rates; individual institutions contracted rates may differ. ^bBilling level based on complexity and/or time: ¹moderate complexity, ²high complexity, ³longer than 70 minutes, ⁴physician bills, ⁵advanced practice provider bills

clinician burden while facilitating accurate completion and timely delivery. To reduce free-text manual data entry, we designed the templates such that 20% of the fields are autopopulated from existing EHR data and another 65% use drop-down menus. We have found that the autopopulated information is consistent with EHR clinician documentation and patient reports an overwhelming majority of the time. Average time to complete the SCP templates is 12 minutes (range, 10-15 minutes; n = 64); average time to abstract patient information from medical records before completing the templates is generally 10-40 minutes, depending on complexity and whether records are across different institutions. To promote care coordination, SCPs are linked to patients' EHR problem lists and are viewable by anyone accessing the charts. Completed SCPs can be routed electronically to primary care physicians' EHR inboxes within our health network, or printed and then mailed or faxed to those at outside institutions. They can also be printed for patients after they are discussed in medical visits. We are working toward future functionality that allows SCPs to be sent to patients through the EHR patient portal and for additional fields to be autopopulated.

Survivorship care planning services

Care models. Our emphasis on establishing SCPing services that leveraged existing workflows prompted us to harmonize 2 separate models of delivery (Figure). For 2 clinical groups that have a low volume of cancer survivors and a relatively adequate amount of nursing staff (radiation oncology for prostate cancer and thoracic surgery for lung cancer), SCPs are completed by the treating care team (either APPs or MDs, using the templates we created) and then delivered to patients during existing appointments within 6 months of treatment completion. In another 6 clinical groups with high volumes of survivors and/or insufficient clinical staff to prepare SCPs (eg, colorectal surgery, breast surgery, and urology), the care team refers patients to a centralized survivorship clinic for SCPing services. That clinic is staffed by oncology APPs specializing in survivorship care and collaborating closely with patients' treating oncologists. In line with CoC standards, survivorship clini-

cians provide patients with SCPs within 3-6 months after treatment completion. The centralized survivorship clinic currently offers only consultative visits (to survivors of cancers other than breast cancer) and does not assume primary responsibility for patients' follow-up oncology care after SCPing. However, clinicians in our medical, surgical, and radiation breast cancer clinics treat a high volume of patients with early-stage disease and consequently refer those who have completed treatment to the centralized survivorship clinic for either one-time consultative survivorship visits (for SCPing) or full transition of care (for patients 5 or more years after treatment). The decision to transition breast cancer survivors' long-term oncology care to the survivorship clinic is a case-specific, patient-provider decision.

Sustainable survivorship care. In our experience, initial survivorship consultation visits require about 45-90 minutes (mean, 60 minutes) per patient, with most of this time devoted to education, counseling, and coordination of care. Currently, there are no established billing codes specifically for delivery of SCPs. Follow-up care visits are routinely covered by all payers, but some states have limitations on the types of cancer survivorship clinicians that can bill. Further, clinicians may bill for the total face-to-face time spent examining and counseling patients but not for the time spent preparing SCPs. As of now, the RHLCCC bills for SCPing based on time criteria. Table 3 summarizes the billing codes we are currently using for survivorship care, along with corresponding reimbursement rates. Given ongoing billing practice changes, we maintain regular communication with the billing department to maximize reimbursement and, thus, sustainability of survivorship services.

The RHLCCC began providing SCPing services to survivors of breast, colorectal, lung, and prostate cancers as part of routine clinical care in June 2015. To date, more than 550 patients have received SCPing at the center (this number does not include SCPs provided to survivors of childhood cancers). We plan to expand services to gynecology oncology, lymphoma, and genitourinary cancer clinics by the end of 2016.

Discussion

Numerous CoC-accredited institutions are working diligently to provide routine SCPing services to patients completing primary cancer treatment. This article portrays the lessons we learned as we approached that challenge at the RHLCCC. First and foremost, it was essential to form a multidisciplinary cancer survivorship working group that championed the SCPing initiative. We and members of that working group aimed to develop SCPing models and tools that not only meet CoC requirements, but are optimal and sustainable in our local settings. As a result of gathering stakeholder input, we opted for SCPing delivery that maximizes existing workflows and resources, will first be implemented routinely with prominent disease sites and then extended to other malignancies, and uses electronic customized SCP templates housed in the EHR.

We developed our hybrid model (Figure) to provide that flexibility while also standardizing how SCPing services are delivered using either an integrated care or a centralized survivorship model, and operationalizing patient eligibility and points of transfer in care. Congruent with research findings on successful strategies for SCPing, as well as input from local stakeholders, we trained designated clinicians to prepare and deliver SCPs. We chose to begin routine SCPing with breast, colorectal, lung, and prostate cancers but took a long-sighted approach and developed systems and tools that would be feasible for later application to all cancers. To that end, 2 major infrastructure investments we made were establishing a centralized survivorship care clinic staffed by dedicated APPs and developing SCP templates in the EHR.

We chose to devote time to develop customized templates to garner the buy-in of clinicians, given that most of those we consulted were interested in adding SCP fields beyond those included in the ASCO templates or those already available in Epic. As others have found, we were able to benefit by importing existing discrete fields from the EHR to autopopulate a portion of the SCP elements.²⁶ However, well-documented inconsistencies in how clinicians note patient information in EHRs limit the percentage of SCP fields that can be autopopulated.²⁷ Therefore, we added drop-down options to the SCP fields that clinicians need to complete manually in an attempt to maximize completion rates by reducing free typing (which is associated with time burden, risk of human error, and more difficulty querying data for future summaries). We believe that it is still important for a qualified clinician to review for accuracy and completeness any information autopopulated from EHR fields into patients' SCPs.

We established a centralized survivorship care clinic at the RHLCCC to offer SCPing to patients treated in clinics that prefer to refer for those services. Currently, the survivorship clinic is equipped to offer ongoing survivorship services to breast cancer survivors who are 5 years or more post treatment but works under a consultative model that provides just

SCPing (with referral back to oncology clinics for follow-up care) for survivors of other cancers. We recognize that projected shortages of oncologists and primary care providers may call for clinicians specializing in cancer survivorship to play a greater role in the long-term care of post-treatment survivors.^{28,29} Therefore, we are examining the feasibility of gradually extending follow-up care through the survivorship clinic and increasing the degree to which that clinic integrates with patients' primary care providers. Throughout our efforts, it became evident that integrating SCPing into a cancer center requires some cultural shift (eg, oncologists' tendencies to see long-term survivors versus "graduating" them to survivorship care). Accordingly, we found it useful to collaborate with stakeholders and strengthen referral streams to the survivorship clinics.

We present the development process for our SCPing initiative not to recommend it as a universal strategy but, rather, to illustrate how incorporating implementation science can help address common challenges across settings. We acknowledge that our experiences may not be representative of other practices (eg, smaller hospital systems or community practices are making decisions regarding SCPing services for significantly different volumes of patients). On the one hand, we benefited from leadership and clinician stakeholders that were largely supportive of SCPing, as well as institutional support and grant funding that permitted us to establish a centralized survivorship clinic and create customized EHR SCP templates. On the other hand, one challenge of establishing SCPing in a large cancer center was the need to establish delivery models and tools that were suitable to clinicians across numerous practices. We anticipate that there may be distinct advantages and disadvantages to the integrated care and centralized survivorship clinic models at the RHLCCC (Figure) and are gathering data to evaluate their implementation. Our next steps will follow critical steps in phases 3 and 4 of the Quality Implementation Framework, namely, implementation maintenance and quality improvement.²⁰ We will emphasize additional stakeholder input within those steps and will evaluate any changes to our SCPing models and tools using established indicators (eg, number of SCPs and referrals to survivorship services). We plan to integrate those evaluations with our ongoing SCPing research on patient and system outcomes.

Research on SCPing is in its nascence and has yielded unclear findings. It has been noted that the few randomized controlled trials examining SCPing's efficacy have evaluated outcomes hypothesized to be distal to intervention targets and that future research must identify appropriate patient and system outcomes.⁴ Experts have emphasized that SCPing research must properly describe and quantify intervention components, along with their implementation, in order to validly evaluate their efficacy and subsequently inform any future dissemination efforts.^{18,19,30} Concurrently, Standard 3.3 of the CoC guidelines requires

accredited institutions to deliver SCPs as part of standard care before we have definitive empirical evidence regarding their efficacy. If we apply implementation science to SCPing services now being delivered at CoC-accredited institutions, we will have an unprecedented opportunity to understand how and why different SCP delivery methods succeed (or do not) across diverse settings.

References

1. Stanton AL, Rowland JH, Ganz PA. Life after diagnosis and treatment of cancer in adulthood: contributions from psychosocial oncology research. *Am Psychol*. 2015;70:159-174.
2. Hewitt M, Greenfield S, Stovall E, Institute of Medicine (US), American Society of Clinical Oncology. From cancer patient to cancer survivor: lost in transition. Washington, DC: National Academies Press; 2006.
3. Ganz PA. A teachable moment for oncologists: cancer survivors, 10 million strong and growing! *J Clin Oncol*. 2005;23:5458-5460
4. Parry C, Kent EE, Forsythe LP, Alfano CM, Rowland JH. Can't see the forest for the care plan: a call to revisit the context of care planning. *J Clin Oncol*. 2013;31:2651-2653.
5. American College of Surgeons Commission on Cancer. Accreditation Committee Clarifications for Standard 3.3 Survivorship Care Plan. Chicago, IL: American College of Surgeons; 2014: <https://www.facs.org/publications/newsletters/coc-source/special-source/standard33>. Published September 9, 2014. Accessed April 24, 2016.
6. Mayer DK, Nekhlyudov L, Snyder CF, Merrill JK, Wollins DS, Shulman LN. American Society of Clinical Oncology clinical expert statement on cancer survivorship care planning. <http://jop.ascopubs.org/content/early/2014/10/14/JOP.2014.001321.full>. *J Oncol Pract*. Epub ahead of print. October 14, 2014. Accessed April 24, 2016.
7. Salz T, Oeffinger KC, McCabe MS, Layne TM, Bach PB. Survivorship care plans in research and practice. *CA Cancer J Clin*. 2012;62:101-117.
8. Shalom MM, Hahn EE, Casillas J, Ganz PA. Do survivorship care plans make a difference? A primary care provider perspective. *J Oncol Pract*. 2011;7:314-318.
9. Rechis R, Bann C, Nutt S, et al. Who is receiving survivorship care plans? Findings from the 2012 Livestrong Survey. *J Clin Oncol*. 2013;31(Suppl; abstract 9608).
10. Blanch-Hartigan D, Forsythe LP, Alfano CM, et al. Provision and discussion of survivorship care plans among cancer survivors: results of a nationally representative survey of oncologists and primary care physicians. *J Clin Oncol*. 2014;32:1578-1585.
11. Forsythe LP, Parry C, Alfano CM, et al. Use of survivorship care plans in the United States: associations with survivorship care. *J Natl Cancer Inst*. 2013;105:1579-1587.
12. Nissen MJ, Tsai ML, Blaes AH, Swenson KK, Koering S. Effectiveness of treatment summaries in increasing breast and colorectal cancer survivors' knowledge about their diagnosis and treatment. *J Cancer Surviv*. 2013;7:211-218.
13. Rechis R, Beckjord EB, Nutt S. Potential benefits of treatment summaries for survivors' health and information needs: results from a Livestrong survey. *J Oncol Pract*. 2014;10:75-78.
14. Brothers BM, Easley A, Salani R, Andersen BL. Do survivorship care plans impact patients' evaluations of care? A randomized evaluation with gynecologic oncology patients. *Gynecol Oncol*. 2013;129:554-558.
15. Grunfeld E, Julian JA, Pond G, et al. Evaluating survivorship care plans: results of a randomized, clinical trial of patients with breast cancer. *J Clin Oncol*. 2011;29:4755-4762.
16. Hershman D, Greenlee H, Awad D, et al. Randomized controlled trial of a clinic-based survivorship intervention following adjuvant therapy in breast cancer survivors. *Breast Cancer Res Treat*. 2013;138:795-806.
17. Nicolaije KAH, Ezendam NPM, Vos MC, et al. Impact of an automatically generated cancer survivorship care plan on patient-reported outcomes in routine clinical practice: longitudinal outcomes of a pragmatic, cluster randomized trial. *J Clin Oncol*. 2015;33:3550-3559.
18. Examination of Survivorship Care Planning Efficacy and Impact [R21]. <http://grants.nih.gov/grants/guide/pa-files/PA-12-274.html>. Published August 29, 2012. Accessed April 24, 2016.
19. Mayer DK, Birken SA, Chen RC. Avoiding implementation errors in cancer survivorship care plan effectiveness studies. <http://jco.ascopubs.org/content/early/2015/08/21/JCO.2015.62.6937.full>. *J Clin Oncol*. Epub ahead of print, August 24, 2015. Accessed April 24, 2016.
20. Meyers D, Durlak J, Wandersman A. The Quality Implementation Framework: a synthesis of critical steps in the implementation process. *Am J Community Psychol*. 2012;50:462-480.
21. Garcia SF, Snyder M, Abel R, Veneruso A, Abramson J. Developing a cancer survivorship care plan template auto-populated by electronic health record and patient-reported data. *Psychooncology*. 2014;23(Suppl 1):54145-54149.
22. American Society of Clinical Oncology. ASCO Cancer Treatment Summaries. <http://www.cancer.net/patient/Survivorship/ASCO+Cancer+Treatment+Summaries>. Published 2014. Accessed September 15, 2015.
23. Abramson Cancer Center of the University of Pennsylvania. Livestrong Care Plan. <http://www.livestrongcareplan.org/>. Released 2010. Accessed September 15, 2015.
24. National Coalition for Cancer Survivorship. UCLA Cancer Survivorship Center, WellPoint Inc, Genentech. Journey Forward: guiding survivors as they move ahead. <http://www.journeyforward.org>. Updated February 25, 2016. Accessed September 20, 2015.
25. American Society of Clinical Oncology. Models of long-term follow-up care. 2015; <http://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship-3>. Updated March 2016. Accessed September 1, 2015.
26. Tevaarwerk AJ, Wisinski KB, Buhr KA, et al. Leveraging electronic health record systems to create and provide electronic cancer survivorship care plans: a pilot study. *J Oncol Pract*. 2014;10:e150-e159.
27. Garcia SF, Ganz PA. Cancer care planning and quality improvement: 2 for the price of 1? *Cancer*. 2013;119:4-6.
28. Yang W, Williams JH, Hogan PF, et al. Projected supply of and demand for oncologists and radiation oncologists through 2025: an aging, better-insured population will result in shortage. *J Oncol Pract*. 2014;10:39-45.
29. US Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. Projecting the supply and demand for primary care practitioners through 2020. <http://bhpr.hrsa.gov/healthworkforce/supplydemand/usworkforce/primarycare/>. Published November 2013. Accessed April 24, 2016.
30. Alfano CM, Smith T, de Moor JS, et al. An action plan for translating cancer survivorship research into care. *J Natl Cancer Inst*. 2014;106(11). <http://dx.doi.org/10.1093/jnci/dju287>. Accessed April 24, 2016.

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