

Nurse-Led Supportive Care Intervention for Men With Advanced Prostate Cancer

Nicholas Ralph, PhD, RN, BN, MClInPrac, Suzanne Chambers, AO, RN, PhD,
Amanda Pomery, PhD, John Oliffe, PhD, and Jeff Dunn, PhD

OBJECTIVES: To understand the context for implementing ProsCare by prostate cancer specialist nurses (PCSNs) and, in doing so, further develop the intervention and implementation strategy.

SAMPLE & SETTING: 30 PCSNs participated in four semistructured focus groups to evaluate a telephone-based supportive care intervention led by nurses for men with advanced prostate cancer.

METHODS & VARIABLES: Data were coded into the Consolidated Framework for Implementation Research to evaluate the ProsCare program content and guide the implementation and evaluation of this targeted program for men with advanced prostate cancer.

RESULTS: Participants strongly endorsed specific ProsCare program components amid a recommendation of delivery mechanisms and a comprehensive centralized implementation strategy, including PCSN role promotion, education, and professional development.

IMPLICATIONS FOR NURSING: PCSNs validated ProsCare and supported its implementation as a supportive care intervention. ProsCare is a feasible nurse-led intervention closely matched with men's supportive care needs and the PCSN scope of practice.

KEYWORDS ProsCare; prostate cancer specialist nurses; prostate cancer; supportive care

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Prostate cancer is the most common male cancer in developed countries, with Australia and New Zealand having the highest incidence rates of prostate cancer worldwide (Ferlay et al., 2015). Men with advanced prostate cancer (defined as non-localized disease and distant metastases) can have poor quality of life (QOL) and health outcomes, including increased psychological distress and suicide risk, compared to men with localized disease (Smith et al., 2018). In addition, many of these men have reported unmet psychological needs, high levels of uncertainty, and moderate to high anxiety levels (Smith et al., 2007). About one in four experience regret about treatment decisions, leading to poorer QOL and increased distress (Clark, Wray, & Ashton, 2001). A longitudinal study reporting men's advanced prostate cancer (N = 81) outcomes during a five-year period indicated that 38 men were highly distressed at diagnosis, 13 were still distressed five years later, and health-related QOL declined over time (Zajdlewicz, Hyde, Lepore, Gardiner, & Chambers, 2017). An Australian study of 32 men with advanced prostate cancer (proven metastatic or castration-resistant biochemical regression) investigated men's preferred models of care and their major challenges (Chambers et al., 2018). Key themes were (a) regret about late diagnosis and treatment decisions, (b) being discounted in the health system, (c) fear or uncertainty about the future, (d) acceptance of their situation, (e) masculinity, and (f) treatment effects. Evident in these studies were the complexities facing men with advanced prostate cancer and the need to thoughtfully consider and design targeted interventions to address often emergent issues.

A systematic review of the literature reporting psychosocial interventions for men with prostate cancer concluded that supportive care interventions using effective strategies, including education, cognitive behavioral approaches, relaxation, communication, and decision support, can improve

decision-related distress, mental health, and QOL in men with localized prostate cancer (Chambers et al., 2017). As a result, knowing the supportive care preferences of men with advanced prostate cancer is crucial to designing appropriate and effective interventions. In addition, the planning and delivery of targeted advanced prostate cancer interventions rely deeply on understanding the perspectives of healthcare systems and providers. Although multimodal approaches comprising face-to-face and remote technologies with nurse or peer support have been espoused as likely effective and acceptable for men with advanced prostate cancer, the empirical evidence is lacking. The current study addresses this knowledge gap, at least in part, by exploring the insights of clinical nurse specialists regarding the content and delivery of an existing program, ProsCare, for men with advanced prostate cancer.

Developing ProsCare

The authors' approach to developing the ProsCare manual was reflected in realist evaluation theory (Pawson & Tilley, 1997) as a means to explicitly address "what works, in which circumstances, and for whom" (p. 145). As a result, the authors developed ProsCare with the assumption that a supportive care intervention is unlikely to be effective as a one-size-fits-all solution; rather, its effectiveness would depend on how well it was developed to meet the unique needs of men with prostate cancer.

This study reports on the first phase progress of the realist evaluation cycle as described by Pawson and Tilley (1997) and Salter and Kothari (2014), involving the formulation of initial program theories to be tested and the development of potential context-mechanism-outcome (CMO) configurations. In formulating initial program theories, the authors identified in-context experiences and outcomes of Australian men diagnosed with advanced prostate cancer across a series of studies (Chambers et al., 2013, 2016, 2017, 2018; Zajdlewicz et al., 2017). They also systematically reviewed the literature to identify psychosocial interventions for men with advanced prostate cancer and their partners (Chambers et al., 2017). The elements of ProsCare and their CMO configurations are reflected in their model to guide intervention development (see Figure 1 and Table 1). The authors also identified five contexts where the findings highlighted the need for a targeted supportive care intervention.

As a mechanism for each context of supportive care, the authors chose a problem-solving approach

(Kiosses & Alexopoulos, 2014) responsive to life stage and masculine ideals for coping as the underlying intervention framework for ProsCare. Problem-solving therapy (PST) incorporates a solution-based approach and provides problem-solving skills by addressing problem orientation, defining a problem or problems, problem solving, identifying the best solution, and implementing and testing the solution (Kiosses & Alexopoulos, 2014). Specifically, men with advanced prostate cancer experience improved psychological outcomes when engaging

FIGURE 1. Overview, Components, and Mechanisms of ProsCare

Overview

The intervention will be delivered by specially trained prostate cancer care nurses with five session modules planned. Sessions will be delivered via telephone to overcome barriers to access from geographic location, illness, strained resources, and social networks. Peer support will be integrated, including through an introduction and referral to the Prostate Cancer Foundation of Australia advanced prostate cancer community at <https://bit.ly/2APZZrZ>.

Components and Mechanisms

ProsCare is an individualized, telephone-based supportive care intervention delivered by specialist nurses to men with advanced prostate cancer to facilitate the following:

- Decision support
- Treatment education with self-management and skills training for symptom effects, including exercise prescription
- Routine screening for psychological distress with referral psychoeducation with tailored distress management strategies
- Communication with healthcare providers

The ProsCare intervention schema includes the major contexts of challenges identified by men (e.g., psychological distress, decision regret, disease and treatment effects, communication with health professionals) and applies problem-solving therapy to assist men in the following:

- Defining and formulating the nature of their specific problems
- Generating potential solutions
- Systematically evaluating possible consequences of solutions
- Selecting an appropriate solution
- Monitoring solution outcomes

Note. Based on information from Chambers et al., 2018.

TABLE 1. Contexts, Mechanisms, and Intended Outcomes of ProsCare

Context Targeted	Mechanism	Outcomes Assessed
Decision regret	Decision support	Decisional conflict
Symptom distress	<ul style="list-style-type: none"> ■ Patient education ■ Coaching for self-management ■ Exercise prescription 	<ul style="list-style-type: none"> ■ Domain specific and health-related quality of life ■ Self-efficacy
Psychosocial distress	<ul style="list-style-type: none"> ■ Distress screening ■ Psychoeducation ■ Stress management ■ Counseling referral for moderate to severe distress and persistent distress 	<ul style="list-style-type: none"> ■ Anxiety ■ Depression ■ Somatization ■ Cancer-specific distress
Poor care coordination	<ul style="list-style-type: none"> ■ Communication skills ■ Partner and family support ■ Referral to community supports 	<ul style="list-style-type: none"> ■ Satisfaction with care ■ Use of peer support

Note. Based on information from Chambers et al., 2018.

in approaches to coping that address the threats associated with their cancer (Roesch et al., 2005), and active problem solving and management are consistent with the male values of strength, self-reliance, and action (Chambers et al., 2016). PST has also been found to be effective in reducing depression and disability in older adults aged 60 years or older with chronic illness (Kiosses & Alexopoulos, 2014).

Implementing ProsCare

In 2012, the Prostate Cancer Foundation of Australia (PCFA) launched a pilot program with 12 prostate cancer specialist nurses (PCSNs) working in public and private hospitals across Australia. The Prostate Cancer Specialist Nursing Program services men with prostate cancer with a view of creating a sustainable and professional model of care as part of routine cancer care delivery. PCSNs are RNs who have experience in providing nursing care in urology or oncology, have received workplace-based training in prostate cancer, practice within a nursing competency framework, and specialize in treating men with prostate cancer. PCSNs also work strategically with other healthcare providers to influence prostate cancer care at a systems level. This approach is well supported in the literature, with cancer nurses effectively promoting self-care behaviors to improve symptom management, physical activity, and dietary habits (King et al., 2015), in addition to enhancing care coordination and cancer recurrence (Howell et al., 2012). In June 2018, 45 PCSNs were employed directly by public and private hospitals in regional and metropolitan settings across Australia.

Professional development, as well as the development of a practice framework and competency standards, was undertaken by PCFA to implement a best practice model for a national nursing program (Sykes, 2013). The PCSN role was defined as an expert point of contact for men and their families, providing psychosocial and clinical care using a structured approach. The PCSN coexists alongside other healthcare providers by facilitating optimum access to available resources. Little has been published on the Australian PCSN system, and this knowledge gap has implications for sustaining and scaling this model nationally and worldwide.

Methods

The aim of this study was to understand the context for implementing ProsCare from PCSNs and, in doing so, further develop the intervention and implementation strategy.

Design

The authors used a qualitative design and conducted semistructured focus group interviews to address the following overarching research questions: “From the perspectives of PCSNs, what are program barriers and facilitators to ProsCare? What solutions would solve these barriers?” They asked PCSNs additional questions, such as the following:

- What are your overall thoughts about a nurse-delivered supportive care intervention via telephone for men with advanced prostate cancer?
- How closely do you think the intervention will meet the needs of men with advanced prostate cancer?

- Is there anything missing or unnecessary within the intervention?
- How well do you think the intervention will help you meet the supportive care needs of men with advanced prostate cancer?
- What will you require to deliver the intervention successfully?

Participants and Recruitment

Following approval from Griffith University Human Research Ethics Committee, the PCFA contacted PCSNs by email and provided study information and study investigator contact details. All potential participants who contacted a member of the team were screened for eligibility by email or telephone and were provided with further study information. Subsequently, they agreed to participate in the study. Selection criteria were as follows:

- RNs in Australia designated as either PCSNs supported by the PCFA or oncology or urology RNs providing supportive care to men with advanced prostate cancer
- At least five years of experience in prostate cancer nursing
- Current experience of prostate cancer nursing (within the last three months)

Participants were asked to complete published readings (Chambers et al., 2013, 2017, 2018) before the focus group interview. The interview protocol was trialed in an in-person focus group interview with eight participants and subsequently evaluated for data quality and transferability to conduct via videoconference. Two subsequent focus groups were conducted using videoconferencing, with the final focus group carried out face-to-face. A total of 30 individuals participated in the focus groups, which ranged from 78–210 minutes. Participants consisted of PCSNs (n = 27), oncology nurses (n = 2), a urology nurse (n = 1), regional- or rural-focused nurses (n = 12), and metropolitan-focused nurses (n = 18). Focus groups were audio recorded, transcribed verbatim, and checked for accuracy, removing any potentially identifying details.

Data Analysis

Transcripts were initially coded by an experienced qualitative researcher with a trained research assistant cross-checking the coded data. The study employed the Consolidated Criteria for Reporting Qualitative Research to guide focus group strategy, including semistructuring discussions, limiting group size to 4–12 people, asking broad and focused

questions, and encouraging group discussion (Tong, Sainsbury, & Craig, 2007).

The authors coded the data into the Consolidated Framework for Implementation Research (CFIR). The CFIR is a conceptual framework for systematically assessing complex implementation contexts and factors that influence intervention implementation and effectiveness (Damschroder et al., 2009). It is comprised of five major domains that, according to theory, are likely to influence implementation success, with more specific subordinate constructs within each domain (39 total) (Damschroder et al., 2009). The five CFIR domains are innovation characteristics, outer setting, inner setting, characteristics of the individuals involved, and the process of implementation. The CFIR has been used to identify barriers and facilitators related to the implementation of interventions (Keith, Crosson, O'Malley, Crompt, & Taylor, 2017). Using CFIR to identify barriers and facilitators before project implementation has been reported (English et al., 2013; Robins et al., 2013). However, the authors found no reports of CFIR being used before implementation to produce actionable findings (as reported by Keith et al., 2017) or to adjust the intervention design and implementation strategy. As a result, the current study is the first known preimplementation evaluation of an intervention using the CFIR to produce actionable findings.

Findings

Data were coded against four domains (innovation characteristics, outer setting, inner setting, characteristics of individuals) and 19 related subordinate constructs across these domains.

Innovation Characteristics

PCSNs endorsed ProsCare as favorable for implementation with a relative advantage and a high level of adaptability compared to routine care or similar supportive care interventions for cancer. The adaptability of ProsCare was closely linked to its relative advantage and was an important innovation characteristic because it allowed PCSNs to modify support according to individual disease progression patterns. However, participants advocated for baseline and ongoing distress measures to evaluate and, when necessary, adjust supportive care strategies.

The problem [with other programs] is that they are very focused when they are newly diagnosed and then there is a long time in between treatments. I think the stuff that was identified in the proposed intervention is all good . . . but you need

an initial screening tool identifying the men that are at need so you have a hierarchy of . . . their issues, but each man makes different progress and [their disease] changes and [the changes] need addressing as they come up.

Similarly, ProsCare's adaptability influenced perceptions about its trialability. PCSNs felt that trialing was useful for understanding how to optimize the timing and scheduling of a teleintervention to ensure consistency and follow-up while evaluating the effectiveness of modified approaches.

The first time when you are starting the intervention . . . [you need] to allow [men with advanced cancer] that bit of time because you will get some people that will require up to an hour and then after that . . . you could probably drop them back to being 20 minutes to half an hour. At the end of the exact site every so many months, you'd come back and say, "What are the problems, what didn't work, what did work, [and] how can we refine this?"

As a teleintervention, ProsCare was not complex to administer. However, the complexity associated with its implementation was the subject of extensive discussion, surfacing concerns about the knowledge and skill base of some cancer nurses to deliver the intervention, the fit of the intervention into existing workload models, and the challenge of coordinating a standardized ProsCare intervention across Australia.

You would need people that are very experienced with the side effects of [androgen deprivation therapy] and also treatment plans and management of advanced prostate cancer. You would have to wonder at the quality of the nursing that you would need [and] how sustainable it would be at this current time for the amount of nurses that we do have trained. That is a lot of work. Where am I going to fit this in to even capture those patients? You almost need a dedicated resource who runs this program where men are referred in or self-referred in.

Outer Setting

PCSNs stated that a teleintervention supportive care program delivered by nurses met the "needs and resources of those served by the organization" by providing a model of care that benefited medical specialists, communities, men with advanced prostate

cancer, and health services. PCSNs agreed that medical specialists felt pressured by time constraints and challenged to provide individualized support. Despite these perceived time pressures, participants predicted that most medical specialists would refer individuals to ProsCare if they believed it was effective. As a result, PCSNs emphasized the importance of broadly engaging with health professionals in the area to increase the likelihood of uptake.

You would get uptake from a lot of doctors because they flounder in this area—management of hot flushes, fatigue, the emotional side of things. I often get calls going, "Can you manage this? I haven't got time." But they [medical specialists] are not going to send them out to someone . . . they don't trust. You [need to] get someone to look at the education program . . . someone that is well respected of urologists, oncologists, and hematologists. If they trust the person and they trust the program behind it, they can refer their patient.

The importance of ProsCare being delivered by a nurse was also addressed by participants. Continuity of care was identified by PCSNs as a key advantage of ProsCare, particularly where the rural medical workforce was transient and an ongoing therapeutic relationship was needed to support men who often lacked health literacy amid advancing prostate cancer.

The general practitioners don't live in the community and stay in the community. . . . They're very transient, so they are there for six months to do their time. . . . That's always the thing written about prostate cancer nurses—we are the constant in their lives through their journey.

These issues we've been talking about are significantly more challenging for rural and regional men. . . . I don't think health literacy is particularly high out here . . . so you have to give them a strategy. . . . [It is important] they feel that they are actually being heard and they have somewhere to go or have had some strategy in place . . . [and] this intervention is about empowering the patient to self-manage [his] care in an ongoing way.

They're coming to support groups and crying and saying, "Why am I forgetful? Why do I feel I've got no energy?" or "Yeah, I've got breasts. I am losing my muscle tone. What's going on? I'm falling to

pieces.” You say, “That’s your hormone therapy,” and they go, “Oh. Why wasn’t I told?” We give men a chronic disease the minute they start on the first injection.

PCSNs shared that ProCare provided an opportunity to respond to perceived peer pressure brought on by similar supportive care interventions from external cancer organizations. For example, most PCSNs viewed ProCare favorably and compared it with similar interventions implemented for individuals with other types of cancer.

There is a great scope for it. It is a bit like the Cancer Council, well after the cancer treatment program. Something like that, but they get resourced and deliver it.

It’s like Cancer Council. They have certain people that are just allocated to look after wellness and life after cancer or living with cancer programs. Now they’re doing a survivorship program in our region, which is based on telehealth.

Colorectal [cancer organizations] have [telephone-based supportive care interventions] too. [Nurses] ring them up and ask [individuals with cancer] how they are after their treatment is finished.

Despite reports of peer pressure, PCSNs were realistic that the success of ProCare was dependent on the cosmopolitanism of their organization. Cosmopolitanism refers to the degree to which an organization is networked with other external organizations, and this was perceived to affect the likelihood of successfully implementing ProCare. Participants emphasized that health services needed to network with leading prostate cancer services in Australia, such as the PCFA and major metropolitan services, to facilitate implementation.

We need to develop the metropolitan’s knowledge of our service so that they are happy to re-refer those patients back to us to actually make it a viable service.

Inner Setting

PCSNs stated that the implementation climate for ProCare was ideal because of a strong desire for change to improve supportive care for men with advanced disease and at the end of life because they

frequently misunderstood their cancer experiences and proposed management. They also expressed a concern about resourcing ProCare, with some advocating for a centrally coordinated referral service in which men were allocated to PCSNs based on geographic location.

I think this is some of the saddest sorts of conversation you have with people. They don’t know where they are on their cancer journey, so we’ll tell you that everything is going to be all right, and you are [thinking], *No. You’re going to be dead in a couple of weeks . . .* or the opposite, which is they think it has come to an end and you know that there are all these things that can be done to go on. Farmers [are] selling their farms . . . men are losing their livelihood . . . but nobody sits them down and goes, “This is what the whole thing might look like.” If they are too scared to ask, no one tells them. So everyone sits in the dark.

This group of men [with advanced disease] is only going to get bigger with all these wonderful drugs that prolong survival . . . so we need to empower patients to become self-sufficient and manage their disease. . . . There are gaps in care. Some men are getting lost in the system, particularly in private [health care]. . . . You want every person to deliver the same type of intervention. . . . Anything that standardizes the way we do things really enhances care. You’ve got nurses placed in areas, and [if] they’ve got a central call-in, then they can refer those patients on pretty quickly. . . . A centralized coordinated consistent resource would be really beneficial.

The compatibility of ProCare was discussed by PCSNs in terms of suitability to integrate into existing work practices. The use of a teleintervention to deliver supportive care was also well supported by participants because it was seen to reduce travel and disruption to daily life and provide more timely support.

The clinic numbers are going down because we’re moving them onto phone . . . and that’s because it’s costly [travel]. I see a lot of farmers, [and] there is a loss of hours in their work. Half an hour at lunch time would certainly be better for their time. What is missing, perhaps, is that we need to empower the men to go get things done.

However, with growing numbers of men with advanced cancer, as well as the growing number of PCSNs, participants expressed equivocal messages about the readiness for ProCare implementation. Given the perceived volume of need, PCSNs were cautiously optimistic but aware of limited resources for effectively implementing ProCare. They advocated for an inclusive learning climate in which other nurses were taught how to provide supportive care and re-emphasized the importance of local access to knowledge and information for nurses delivering ProCare.

I like the intervention, but if you're going to do it, we need to set it up correctly. There are not enough [PCSN nurses]. With our resources, we can't cover all men. We need another 100 nurses. You would also need [administration] support. We need to have a centralized place where you can make sure that what you are delivering is absolutely up-to-date. I think that's paramount.

You need to have local knowledge, and so you need to be able to know what resources to refer someone to. You need to know the region, who you're dealing with, what services are available. So you need a local expert.

So you're going to have to think laterally. While we need to promote our specialty group, for those people [who] feel underskilled, you could . . . educate them on what the issues are. Someone has to set up a teaching plan for it. The people doing the intervention need to be trained . . . quite well.

You do not have to be a prostate cancer nurse to care for men with prostate cancer. . . . Allocate people to the region and get knowledge from people like us. . . . It's again about setting [up] that network.

Characteristics of Individuals

PCSNs reflected a strong sense of self-efficacy in their ability to deliver the intervention in the face of acknowledging barriers and facilitators to ProCare. When culturally competent delivery of ProCare was required (such as with individuals from non-English speaking backgrounds), PCSNs identified the use of a translator or a cultural liaison officer to facilitate the treatment session as an ideal strategy when caring for people from different ethnic or cultural backgrounds. Knowing their limitations, scope of practice, and

learning needs to successfully deliver ProCare was seen as a positive factor by the group.

There are many experienced nurses out there. Some of the issues are the skill set[s] of the nurses. Some nurses are quite experienced . . . and some aren't. Some would need to self-select themselves in. I actually feel capable of managing this sort of program. We have a fairly good idea of who we are and what we can achieve.

Actionable Findings

From these data, the authors adapted the work of Keith et al. (2017) by mapping information to produce actionable findings for improving the effectiveness and implementation of ProCare. Table 2 presents a linear process of mapping CFIR domains to components of the ProCare intervention with findings and corresponding actions. The ProCare component column presents the domains of ProCare with structural elements (in parentheses) seen by participants to support the indicated domain.

Discussion

Identifying preimplementation barriers and facilitators to yield actionable findings is an essential step for acknowledging the risk profile of planned interventions and subsequently identifying ways to ameliorate these risks. Also, in line with participatory action approaches to research, the centrality of participants as experts and key stakeholders in its implementation offered important avenues for their buy in and ownership. A benefit of this approach was that networks were garnered both in the process of collecting the data and in showing clear commitment to the ProCare program.

The authors were unaware of any studies mirroring this exact approach; however, measuring the implementability of guideline-oriented interventions like ProCare has resulted in identifying strategies that the authors had not considered or had uncertainty about, or helped them recognize a need for feedback from frontline staff. Identifying ways to develop actionable findings for improving guideline validity and implementation has been discussed in the literature (Eikermann, Holzmann, Siering, & Rütther, 2014; Gagliardi & Brouwers, 2012). Concerns about the relationship between clinical guideline quality and high rates of implementation failure prompted a systematic review of 626 guidelines published from 1980–2007, in which longitudinal improvement in guideline quality was detected, but the overall quality of guidelines was

TABLE 2. Example of Actionable Findings for ProCare Mapped From CFIR Data

ProCare Component	Finding	Action
Innovation (intervention) characteristics		
Routine screening (individualized; telephone based)	<p>Facilitator</p> <p>Benefit to individualizing ProCare delivery because of differing:</p> <ul style="list-style-type: none"> ■ Treatment timelines (e.g., end-of-life care) ■ Cancer progression ■ Access to men ■ Personal availability 	<p>ProCare treatment schedule</p> <ul style="list-style-type: none"> ■ Within 2 weeks of diagnosis ■ Before commencement of treatment ■ During treatment ■ End of treatment ■ At follow-up intervals
Psychoeducation (telephone based; supportive care model)	<p>Facilitator</p> <ul style="list-style-type: none"> ■ Benefit to structured establishment of rapport with men ■ Men may divulge more with the convenience and “safety barrier” of the telephone <p>Barrier</p> <ul style="list-style-type: none"> ■ Establishing professional authenticity without clear referral will obstruct uptake among men. 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> ■ Clear referral pathway to assure men of the integrity of the caller. ■ Rapport-building strategies ■ Initial face-to-face or videoconferenced consult
Decision support (nurse delivered; routine screening; supportive care model)	<p>Facilitator</p> <p>Benefit to ProCare and PCSN delivery because:</p> <ul style="list-style-type: none"> ■ Relatively simple to administer ■ Belief that men are more likely to engage with RNs for support ■ Transience of regional or rural medical professionals <p>Barrier</p> <ul style="list-style-type: none"> ■ Limited capacity to deliver ProCare within existing PCSN workloads ■ Diverse skill mix among PCSNs could cause inconsistencies in ProCare delivery. 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> ■ Phased rollout of ProCare ■ Training for PCSNs to deliver ProCare, including palliative care and end-of-life discussions
Outer setting		
Treatment education/ psychoeducation/ communicating with health professionals (telephone based; supportive care model; nurse delivered)	<p>Facilitator</p> <ul style="list-style-type: none"> ■ Demand for supportive care by medical professionals ■ Demand for health education among men with prostate cancer ■ Demand for ProCare because of comparable interventions for other cancer types <p>Barrier</p> <ul style="list-style-type: none"> ■ Potential low referral to PCSNs because of lack of awareness and/or confidence 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> ■ Promotion of PCSN role and ProCare at a regional and national level ■ Monitor referral pathways, patterns, and uptake throughout implementation.
Inner setting		
Decision support (supportive care model; telephone based; individualized)	<p>Facilitator</p> <p>The demand for ProCare is high because of the widespread desire for the following:</p> <ul style="list-style-type: none"> ■ Improvement support for regional and rural men 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> ■ Identify treatment capacity across PCSNs. ■ Map local/regional health services to improve referral pathways and support.

Continued on the next page

TABLE 2. Example of Actionable Findings for ProCare Mapped From CFIR Data (Continued)

ProCare Component	Finding	Action
Inner setting (continued)		
Decision support (supportive care model; telephone based intervention; individualized)	<p>Facilitator</p> <ul style="list-style-type: none"> Standardization of PCSN supportive care model. <p>Barrier</p> <ul style="list-style-type: none"> Number of men requiring supportive care is growing significantly. Culture and language may limit access. Resourcing, despite increasing, will still be limited. 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> Integrate cultural component of Prostate Cancer Foundation of Australia Standard Framework into ProCare. Mandate the use of indigenous liaison officers for indigenous men with prostate cancer.
Characteristics of individuals		
Decision support (nurse delivered)	<p>Facilitator</p> <p>ProCare is well aligned with characteristics of individuals involved in it.</p> <ul style="list-style-type: none"> PCSNs viewed the problem-solving model as well aligned to masculine models of self-management. Some PCSNs reported high levels of belief in their ability to deliver ProCare. 	<p>ProCare implementation plan</p> <ul style="list-style-type: none"> Design program of professional education for PCSNs. Identify and develop continuing professional development needs associated with ProCare rollout.
CFIR—Consolidated Framework for Implementation Research; PCSN—prostate cancer specialist nurse		

still low (Alonso-Coello et al., 2010). In addition, guideline implementation assessments were still occurring often without a comprehensive consideration of the contexts and mechanisms associated with implementation (Chakraborty, Jones, & Mazza, 2014; Finnell, Stanton, & Downs, 2014; Hill & Lalor, 2009).

The authors found that CFIR extended its usefulness beyond content appraisal by enabling them to identify the contexts in which the intervention (the mechanism) would be implemented, thereby reflecting the CMO model for realist evaluation. This realist approach is shown in participants identifying additions for developing ProCare as well as components of an overall ProCare implementation plan. Other approaches to guide development and implementation have been reported as problematic. Although a range of guideline implementation tools exists, such as ADAPTE, AGREE II, AMSTAR, GLIA and INAHTA, all have been reported to be unsuitable for assessing content comprehensively in a systematic comparison (Eikermann et al., 2014). In the current study, CFIR provided a means for comprehensively assessing guideline content using questions designed to elicit data relevant to the main domain of “intervention characteristics” and its subgroup constructs,

including intervention source, evidence strength and quality, relative advantage, adaptability, trialability, complexity, design quality and packaging, and cost.

ProCare Developments

PCSNs identified the need to initiate ProCare for men within two weeks after diagnosis and at least once before the commencement of treatment. The need for a supportive care intervention at these times reflects previous study findings reporting that 38 of 81 men were highly distressed at diagnosis (Zajdlewicz et al., 2017), with regret about late diagnosis and treatment also reported (Chambers et al., 2018). PCSNs also recommended ProCare at least once during treatment. The authors believed that these time points best served men preferring a problem-solving approach as reported by Roesch et al. (2005) to ensure the provision of supportive care at key stages of their cancer experience and that new issues are solved.

Participants also referred to the need to communicate palliative care choices and end-of-life planning with ProCare when appropriate. Low quality palliative and end-of-life care has been linked to inadequate nursing knowledge and negative attitudes (Hussin, Wong, Chong, & Subramanian, 2018). Improving support for

nurses can increase discussion about prognosis, end-of-life care, and future care options (Harden, Price, Duffy, Galunas, & Rodgers, 2017; Walczak et al., 2017). Because ProsCare is targeted at men with advanced prostate cancer, educating PCSNs on ways to discuss palliative care options with men and initiate end-of-life planning should be included in ProsCare.

ProsCare Implementation Plan

CFIR allowed the authors to consider the implications of actionable findings for each context, mechanism, and outcome of implementation. Given the significant concerns regarding resource limitations, the authors expected the emphasis on a strategic plan of implementation to be a major participant concern and recommendation. Developing a strategic implementation plan for ProsCare was a high priority for PCSNs. The CFIR itself outlines four constructs under the main domain, “process of implementation,” which involves a strategy requiring planning, engaging, executing, and reflecting and evaluating. A compilation of implementation strategies collated by the Expert Recommendations for Implementing Change project revealed strong consensus for developing a formal blueprint inclusive of aims, scope, time frames, and outcome measures (Powell et al., 2015).

Although participants called for centralized coordination and referral for ProsCare, few studies have addressed the role of centralization in implementation. One study outlined supported theories for centralization, including its role in improving the quality of referrals, reducing referrals, and increasing referral process efficiency (Ball, Greenhalgh, & Roland, 2016), and another included a recommendation for centralized technical assistance based on findings from a compilation of implementation reviews (Powell et al., 2015). However, there is a precedent for the centralization of telephone-based supportive care because Asthma Australia centrally coordinates a telephone-based intervention delivered by trained asthma nurses in which individuals are referred by community-based general practitioners, nurses, or hospital staff members (Asthma Australia, 2017). Similarly, the Cancer Council offers a free helpline to Australians living with cancer, providing information and offering emotional and practical support; however, it is not staffed solely by healthcare professionals (Cancer Council, 2018). Outside of this initiative, no Australian-based studies have evaluated telephone-based, nurse-led supportive care interventions.

Centralization of the referral process was also integral to ensuring the authenticity of initial contact.

KNOWLEDGE TRANSLATION

- Prostate cancer specialist nurses strongly support a telephone-based, nurse-led supportive care intervention for men with prostate cancer.
 - Actionable findings provide an overarching concept for focusing the implementation considerations of delivering ProsCare.
 - Preimplementation evaluation by end users is useful for intervention development.
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During one focus group, one PCSN reported that men often refuse to engage with cold-calling nurses because they believed that they were “going to try and sell you a vacuum cleaner” and refuse to divulge confidential information without knowing to whom they were speaking. The privacy and confidentiality implications of a telephone-based intervention have been reported to be risks for preventing interventional uptake in one systematic review; however, only 5 of 20 studies met study criteria for high rigor (Koivunen & Saranto, 2018). Although the current authors found no studies addressing solutions to this issue, some PCSNs argued that privacy concerns could be addressed by an initial face-to-face visit, a legitimate referral service from an organization (e.g., PCFA), and/or increased community awareness, although there was no firm consensus on these solutions.

Participants called for a program of training and professional development based on perceived experience deficits caused by growth in PCSN numbers and the need for standardizing ProsCare rollout across all PCSNs delivering it. However, in view of the data obtained, education may serve two purposes of upskilling inexperienced PCSNs and reskilling experienced PCSNs. Some reported that they were already delivering a form of telephone-based supportive care. Identifying appropriate education strategies, which are known to elicit health behavior changes, is essential to supporting the consistent delivery of ProsCare. For example, an overview of systematic reviews revealed that reminders and educational outreach, as well as regular linking with opinion leaders to evaluate audit and feedback data, were most effective in changing practice and improving care outcomes (Johnson & May, 2015).

Implications for Nursing

Using the CFIR framework elicited rich data from clinicians on barriers and facilitators related to the intervention and its implementation. Identifying

opportunities for improving ProCare is important because implementation of such initiatives can be fraught with difficulty. In a review of telehealth studies published from 2000–2015, Standing, Standing, McDermott, Gururajan, and Mavi (2018) reported that most telehealth interventions were “far from person-centred” (p. 98), were lacking in rigor, and were not often successfully adopted. The implementation climate can also be influenced by overly complex interventions or contexts, which limit capacity to scale up, disseminate, and/or sustain initiatives (Cresswell & Sheikh, 2013; Kessler & Glasgow, 2011).

The implementation of ProCare poses challenges. The supportive care mechanisms available for men with advanced prostate cancer are insufficient, and a strong desire for change exists in Australia. The authors found actionable findings, providing an overarching concept for focusing the implementation considerations of delivering ProCare. These findings, if adopted, will significantly contribute to improving the design and implementation of ProCare. However, these findings will require careful and detailed expansion based on the latest evidence, contexts of care, implementation strategies, and behavioral change strategies to minimize the risk of nonadoption (Greenhalgh et al., 2017).

Conclusion

With advances in screening and treatment, an aging male population, and men’s high and rising life expectancy, prostate cancer incidence and prevalence will increase. Within this context, many men will experience advanced prostate cancer, and specialist supportive care services, such as ProCare, are vitally important. The current study findings, while confirming the need for such programs, contribute critical information for launching, as well as sustaining and scaling, these well-intended (but often failed, stalled, and duplicated) interventions. These findings significantly advance the interventional design of ProCare and its associated implementation strategy by allowing a more developed understanding of “what works, in which circumstances, and for whom” (Pawson & Tilley, 1997, p. 145).

Nicholas Ralph, PhD, RN, BN, MClinPrac, is an associate professor in the School of Nursing and Midwifery at the University of Southern Queensland in Toowoomba, Australia, and senior manager (Health Systems and Psycho-Oncology) at the Cancer Council Queensland in Australia; **Suzanne Chambers, AO, RN, PhD**, is the dean of health at the University of Technology Sydney in Australia; **Amanda Pomeroy,**

PhD, is the director of support and community outreach at the Prostate Cancer Foundation of Australia in Melbourne; **John Olliffe, PhD**, is a professor and associate director of the School of Nursing at the University of British Columbia in Vancouver, Canada; and **Jeff Dunn, PhD**, is a professor of social and behavioural sciences at the University of Southern Queensland in Springfield, Australia. Ralph can be reached at nicholas.ralph@usq.edu.au, with copy to ONFEditor@ons.org. (Submitted June 2018. Accepted July 16, 2018.)

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