## REVIEW



# What are the mechanisms underlying the delivery of survivorship care information in Australia? A realist review

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#### **Abstract**

Objective: Quality survivorship information is an essential component of cancer care. However, survivors often report not receiving this information and healthcare professionals report limited practical guidance on how to effectively deliver survivorship information. Therefore, this study used realist review methods to identify mechanisms reported within the published literature for communicating survivorship information and to understand the contextual factors that make these mechanisms effective.

Methods: Full-text papers published in CINAHL, PubMed, Web of Science, Scopus, Cochrane Library, and Academic Search Ultimate were included. Studies included in this review were conducted in Australia between January 2006 and December 2023, and reported on how information regarding survivorship care was communicated to adult cancer survivors living in the community. This review utilized realist

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methodologies: text extracts were converted to *if-then* statements used to generate context-mechanism-outcome theories.

Results: Fifty-one studies were included and six theories for mechanisms that underpin the effective delivery of survivorship information were formed. These include: (1) tailoring information based on the survivors' background, (2) enhancing communication among providers, (3) employing dedicated survivorship staff, (4) providing survivorship training, (5) reducing the burden on survivors to navigate their care, and (6) using multiple modalities to provide information.

**Conclusions:** Findings can inform practical guidance for how survivorship care information is best delivered in practice. Clinicians can apply this guidance to improve their individual interactions with cancer survivors, as can policymakers to develop healthcare systems and procedures that support effective communication of cancer survivorship information.

#### **KEYWORDS**

cancer, cancer survivors, health communication, health services, oncology, psycho-oncology, review, survivorship

#### 1 | INTRODUCTION

Cancer is the leading cause of disease burden in Australia and the size of this burden is likely to increase over the coming decades. In the last 10 years, the number of people diagnosed with cancer in Australia has increased by almost 30%, with 125,985 people diagnosed in 2012 compared to an estimated 162,163 cases in 2022. Additionally, due to improvements in early detection, treatment, and availability of support services, the 5-year relative survival rate for all cancers combined has increased from approximately 50%–70% over the past 20 years. Together, higher incidence and better survival equates to a growing number of cancer survivors requiring ongoing healthcare and support in various forms and intensity.

Australia has a publicly funded healthcare system that provides it citizens with low or no cost health and hospital services (i.e., the Medicare system). Despite this model of universal care, hospitals, primary care, and community organizations work somewhat independently to support the needs of Australian cancer survivors and gaps exist in the support provided to survivors transitioning to care in their community after cancer treatment and some needs remain unmet. Cancer survivors have a broad range of ongoing needs to facilitate their transition to life after cancer treatment that remain unmet.<sup>2</sup> Some of the most prevalent unmet needs in the posttreatment period, referred to as the survivorship phase, include support with psychosocial issues (e.g., fear of cancer recurrence, worry about family members, help to reduce stress, sexual changes) and physical issues (e.g., fatigue, difficulty with everyday activities). Survivors also often report that not enough information is provided to them about available services and recommendations for diet and physical activity, particularly those living in rural areas. Such information is vital to enable survivors to manage their own care after treatment.

There is consensus among healthcare professionals that survivorship care is critical for optimal patient outcomes, 4-8 but to date, there is limited practical guidance on how to best deliver this information. For instance, survivors receive information about their ongoing care from various sources, including specialists, primary care physicians, and nurses. Preferences for how information is given can vary depending on the survivor's age and education level. 9-11 Consequently, survivorship care remains fragmented with many individuals lost to follow up or missing out on this information altogether. 6.9.12-14

Previous work has identified various models of survivorship care, including formal and informal ways to transfer this information. For example, survivorship care can be led by nurses, primary care providers, oncology specialists, or shared between these healthcare professionals, with similar outcomes for cancer survivors across these different models. In addition to formal consultations, these models of survivorship care can include the provision of survivorship care plans (SCPs), educational booklets, and group support programs.

The effective implementation of these models of survivorship care has been limited by inadequate resources and coordination between healthcare professionals. In two recent systematic reviews, there was limited evidence for the general effectiveness of SCPs in improving patient-reported health outcomes. <sup>10,16</sup> However, neither review could conclude that SCPs were not beneficial due to inconsistencies in methodology and variations in outcomes measured. For example, when survivorship information was provided, the amount and type of information provided, and the mode of delivery (e.g., in person, phone, mail, or website). Therefore, further research is needed to clarify the optimal methods for disseminating survivorship information and identify processes for effective implementation.

## 1.1 | Study aims

This study uses realist review methodology to: (1) identify the mechanisms that have been used to transfer survivorship information to adult cancer survivors in the published Australian literature, and (2) determine under what circumstances these mechanisms are effective (or ineffective) in terms of receipt of information and satisfaction with care.

#### 2 | METHOD

### 2.1 | Review purpose

In contrast to conventional systematic literature reviews, realist reviews offer a broader exploratory focus for implementation research. Realist reviews aim to explain why certain interventions are more or less likely to be effective in certain circumstances and for certain types of people, rather than focusing on overall success of the intervention.<sup>17</sup> The goal of realist reviews is to generate middle-range theories (i.e., theories abstracted from, yet still close to the available data)<sup>18</sup> explaining "what is it about this program that works for whom, in what circumstances" (p. 22, 17). These middle-range theories typically take the form of context-mechanism-outcome (CMO) configurations, where it is stated in what contexts certain mechanisms produce specific outcomes.<sup>17</sup> This review followed the Realist And Meta-narrative Evidence Syntheses: Evolving Standards<sup>18</sup> see supplementary file S1.

## 2.2 | Search strategy and study selection

The protocol for this review was developed by a research team comprising national experts in the field of cancer survivorship research (registered on PROSPERO: CRD42022299313). This collaborative approach with subject matter experts is a key characteristic of realist reviews. While the review strategy was guided by realist review methodology, database searches and selection processes were akin to traditional systematic review procedures. The review included articles published between January 2006 and December 2023 and identified studies that examined mechanisms through which survivorship care information is delivered.

Searches were conducted in six databases: CINAHL, PubMed, Web of Science, Scopus, Cochrane Library, and Academic Search Ultimate. The search terms revolved around cancer, information, and survivorship care. Supplementary file S2 shows the exact search strategies applied in each database. Title and abstract screening were conducted by five reviewers (AS, LZ, SK, BG, LM), with conflicts resolved by a sixth reviewer (EJ). Two reviewers performed full-text screening against the eligibility criteria and undertook data extraction (LM, EJ). The study selection process is presented in Figure 1.

# 2.3 | Eligibility criteria

Studies were included if they were: (1) conducted inside of Australia; (2) conducted after 2006; (3) not a review, study protocol, conference presentation or abstract; (4) related to transfer of survivorship

## **Original Extract**

Quote from participant: "Having information is very helpful and important for managing the disease and treatment. I feel very frustrated sometimes as there is nowhere, I can find information. The information available in this country is mostly in English which I can't understand. That is also frustrating." (20)

#### **If-Then Statement**

If appropriate language is used in survivorship care information delivery (e.g., native language), then it will increase capacity to utilize survivorship care information.

#### **Combine Similar If-Then Statements**

If appropriate language is used in survivorship care information delivery (e.g., native language),

**then** it will increase capacity to utilize survivorship care information.

**If** appropriate language is used in survivorship care information delivery (e.g., *matching literacy level*), **then** the information will be more relevant to the recipient.

If appropriate language is used in survivorship care information delivery (e.g., use of plain language), then it will increase communication between healthcare professionals and survivors.

## **CMO Middle Range Theory**

Cancer survivors come from a wide range of social, cultural, and linguistic backgrounds, with varying levels of health literacy and experience in navigating healthcare systems (C). When delivering survivorship information, it is important that the language used is tailored for the survivor's particular background (M). This directly facilitates their comprehension of survivorship information and implementation of advice and can result in enhanced communication between the survivor and their healthcare professionals (O).

FIGURE 1 Example of the processes used to generate theories in this realist review of mechanisms for delivery of survivorship care information. For brevity not all if-then statements that informed this middle-range theory are presented.

information; (5) from a perspective of cancer survivors, carers, or healthcare professionals (e.g., medical trial or review of hospital records); (6) contained findings specific to adults (i.e., combined reporting of adult and child outcomes or mechanisms were not included); (7) available in English; (8) available in full text; (9) peerreviewed; (10) participants were not solely non-melanoma skin cancer survivors; (11) not a study of end of life, palliative care, or advance care planning; (12) a study of survivors living in the community (e.g., those in aged care facilities were excluded). For the purposes of this review, survivorship information was defined as any information that would be relevant to someone during the post-treatment phase, who had started or completed treatment for cancer (i.e., excludes information solely about diagnosis, treatment, or treatment decision-making).

## 2.4 Data extraction

Data extraction was completed by two researchers (EJ, LM) using a template designed to easily capture information that can inform the context-mechanism-outcome configurations used in realist reviews. <sup>18</sup> Qualitative and quantitative data were collected under the following headings: study/participant details, survivorship care information delivery characteristics, and sections of text regarding transfer of survivorship information. The two researchers who extracted the data consulted with a third researcher (BG) when necessary to clarify information and resolve issues.

# 2.5 | Quality assessment

The quality of included studies was assessed using the Mixed Method Appraisal Tool (MMAT) version 2018.<sup>19</sup> As recommended by Hong et al., a total score was not calculated, rather a description of specific criteria is reported.<sup>19</sup> A summary of this process is reported in supplementary file S3. No studies were excluded based on the quality assessment.

## 2.6 Data synthesis

Data synthesis was conducted by LM, BG, and EJ during several face-to-face meetings following the approach used by Joseph-Williams et al. in their realist review. This stage involved converting the extracted information from the included papers into *if-then* statements. If the information that was extracted from the original text was quantitative, the qualitative conclusion of those results was used to inform the *if-then* statement. Similar *if-then* statements were identified and combined through group discussion and consensus. LM used these combined *if-then* statements to generate middle-range theories (i.e., how information should be transferred in the context of cancer survivorship care) using the Context-Mechanism-Outcome

(CMO) framework.<sup>20</sup> These middle-range theories were reviewed and refined by EJ and BG. Figure 1 outlines this process of theory generation using one of the extracts from a paper included in this review.

#### 3 | RESULTS

#### 3.1 | Search results

The search strategy retrieved a total of 5306 records across the six databases. After removing duplicates, 4280 records were screened for eligibility based on their title and abstract. Of these, 1421 progressed to full text screening with 1370 excluded, mostly due to the study being conducted outside of Australia (n=866) or not reporting on information transfer (n=206). The remaining 51 studies were included in this review (see Figure 2 for a summary and see the quality appraisal for a description of the studies). In total, 300 pieces of text were extracted from the 51 studies and converted into *if-then* statements. These statements were then consolidated into 93 unique *if-then* statements that informed the generation of six middle-range theories (i.e., CMO dependencies). A summary of the characteristics of included studies can be found in supplementary file S4.

## 3.2 | Quality appraisal

A summary of the quality appraisal with the full results for each study is reported in supplementary file S3. There were 26 qualitative studies, four randomized controlled trials, two quantitative non-RCTs, six quantitative descriptive studies, and 13 mixed method studies. One study did not meet the criteria to be evaluated using the MMAT. The quality appraisal of the remaining studies indicates that almost all studies (n = 41, 82%) met all the MMAT criteria. There were seven studies (14%) that did not meet one specific MMAT criteria each, and one study (2%) that did not meet two specific MMAT criteria (see supplementary file S3). This indicates the overall body of evidence was of high quality.

# 3.3 | Theory 1: Consider cancer survivors' social, cultural, and linguistic backgrounds

Cancer survivors come from a wide range of social, cultural, and linguistic backgrounds, with varying levels of health literacy and experience in navigating healthcare systems (C). When delivering survivorship information, it is important that the language used is tailored for the survivor's particular background and the information is specific to the patient's diagnosis and treatment (M). This directly facilitates their comprehension of survivorship information and implementation of advice and can result in enhanced

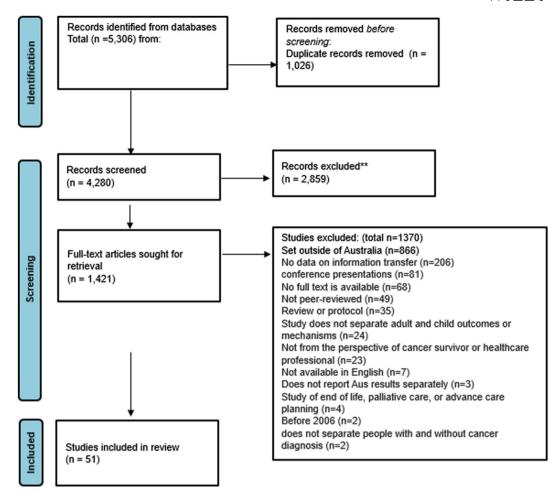


FIGURE 2 Flow chart of identification and screening of studies.

communication between the survivor and their healthcare professionals (O).

Fourteen studies provided data to generate this theory regarding the importance of considering the social, cultural, and linguistic backgrounds of the cancer survivors. 21-34 For instance, Meiklejohn et al. found that for Indigenous Australians, the use of plain language and culturally relevant information greatly facilitated their understanding and use of the information provided.<sup>23</sup> When such efforts were not taken, Indigenous Australian cancer survivors had difficulty relaying information to their family and healthcare workers, limiting their access to support within their community.23

Similarly, Kwok and White interviewed Chinese-Australian breast cancer survivors and found that many women were unable to understand the information they received due to cultural and language barriers.<sup>26</sup> Survivors had varying levels of English proficiency and primarily spoke a language other than English. As survivorship information was communicated in English, many women were unable to understand the information provided. They also expressed that the information provided did not address their survivorship concerns or cultural practices and felt that this affected their ability to use the information.<sup>26</sup>

# 3.4 | Theory 2: Enhance communication among care teams

Providing cancer survivorship care is inherently complex and multifaceted involving a variety of healthcare professionals to address and manage the survivor's supportive care needs (C). It is vital that the individual role of each healthcare team member is clearly defined and communication among healthcare professionals, and between survivors and healthcare professionals, is transparent, consistent, coordinated, and frequent (M). This level of communication ensures the survivor receives relevant and consistent information and aids their ability to determine who to contact for further information. It also facilitates healthcare professionals' capacity to coordinate care provision across the multidisciplinary team (O).

Sixteen studies were used to generate this theory that a high level of communication between healthcare professionals ensures information provided to survivors is relevant and consistent.<sup>27,29,30,34-46</sup> For example, Brennan and colleagues interviewed breast cancer survivors to understand their experiences with survivorship care. Many women reported receiving contradictory and inconsistent advice from healthcare professionals, making it difficult for them to know what advice to follow and who to speak to for more

information. Survivors reported feeling like they had to coordinate their own care as they believed that communication between the different healthcare practitioners was lacking.<sup>36</sup>

Langbecker and colleagues surveyed hematological cancer nurses and found that infrequent contact with other health professionals involved in their patients' care, and limited access to SCPs meant that nurses struggled to coordinate care and assess what survivorship information was yet to be provided. Nurses believed that a variety of healthcare professionals was necessary for providing different aspects of support but requires formal processes for communication to avoid inconsistencies in the information provided to survivors. It was suggested that having defined roles among members of the multidisciplinary team would facilitate survivors' understanding of who to speak to for specific information and support. Clear communication would also allow healthcare professionals to better understand their role in providing survivorship care and how they can complement aspects of care delivered by other healthcare professionals.<sup>38</sup>

## 3.5 | Theory 3: Employ dedicated survivorship staff

Multiple priorities for survivorship care often results in consultations with survivors being focused on the acute and clinical issues requiring immediate attention, with other aspects of survivorship care being overlooked, especially in the context of time-limited consultations (C). This can be overcome by investing in dedicated staff, with dedicated appointment times, to solely focus on providing survivorship care information. The benefits of having dedicated survivorship care staff can also be enhanced by connecting them with the survivor as early as possible (i.e., from diagnosis) for more accurate records and contact with the survivor (M). Dedicated staff and consultation time increases the quality and consistency of the information given to survivors and increase the capacity to coordinate and deliver survivorship care across the multidisciplinary team. (O).

Twenty-three studies contributed to the theory that dedicated survivorship staff can ensure that survivors receive quality survivorship information that addresses their needs. <sup>22,24,25,27,33-38,41,42,44-54</sup> In several studies, healthcare professionals reported that due to their high caseloads and competing priorities, limited time is dedicated to the provision of survivorship information; particularly at times where the survivor is undergoing active treatment and communications tend to focus on clinical issues. <sup>24,33,37,50</sup> Crawford-Williams and colleagues examined experiences of rural Australian cancer survivors and found that due to the limited consultation time dedicated to survivorship, survivors experienced difficulties in processing and retaining this information and felt their emotional needs were overlooked. <sup>49</sup>

Similarly, high turnover among healthcare workers affected the consistent delivery of survivorship information.<sup>25,37</sup> Survivors also reported limitations in building working relationships with their healthcare professionals that facilitate conversations about their

health.<sup>25</sup> Mahony and colleagues evaluated a program where dedicated breast cancer nurses provided survivorship information to breast cancer survivors and reported that this model enabled consistent delivery of quality survivorship information. Dedicated staff also enabled survivors to discuss aspects of survivorship from diagnosis, without this competing with consultation time for managing clinical treatment. This led to more engaged in conversations about survivorship with staff.<sup>52</sup>

# 3.6 | Theory 4: Provide survivorship care training to healthcare professionals

Healthcare professionals involved in cancer care are highly educated and trained individuals. However, specific training regarding the delivery of survivorship care is often limited (C). Healthcare professionals should undergo specific survivorship care training, including education about survivorship care resources (e.g., pamphlets or webpages) that are available to meet the survivor's information needs (M). This training enhances the capacity of healthcare professionals to provide survivorship care, ensures the information provided is accurate, reliable, and relevant, and provides better guidance to the survivor on using the information to improve their health and wellbeing (O).

Twenty-four studies were used to generate the theory that training in survivorship care should be provided to relevant healthcare professionals so they are sufficiently prepared to communicate survivorship information and direct survivors to appropriate support services. 22,24,25,27,28,30,33,34,36,38,39,41,42,44,46,47,50,51,55-60 In a study assessing barriers to providing survivorship care, hematology cancer nurses reported prioritizing clinical treatment over survivorship as they felt inadequately trained to deliver survivorship information.<sup>38</sup> Similarly, Corsini and colleagues obtained feedback from cancer nurses and specialists for developing tools and resources to provide survivorship care and found that cancer nurses expressed a desire for more training on how to communicate survivorship information and conduct motivational interviewing, as they found it difficult shifting from a medical model of care to one of wellness.<sup>22</sup> In another study, hematological cancer survivors reported feeling more comfortable engaging in conversations about survivorship when the healthcare professional communicated this information with empathy and in a manner that was easy to understand.<sup>30</sup>

The desire for additional information and guidance on available support services was expressed by survivors in several studies. <sup>22,28,30,51</sup> However, limited knowledge of available resources and no clear guidelines on when or who to refer survivors to were common barriers highlighted by General Practitioners (GP). <sup>22,24,33,50</sup> Two studies concluded that having access to further support would increase the survivor's ability to self-manage and facilitate wellbeing, particularly in the interim between consultations with their GP. <sup>22,50</sup> This could be achieved by providing healthcare professionals with training on available resources for survivors. <sup>58</sup>

## 3.7 | Theory 5: Reduce burden on survivor

Cancer survivors often experience competing priorities, such as managing their health, attending follow-up appointments, returning to work, and caring for other family members. Many also experience late and long-term effects of cancer treatment. Healthcare professionals involved in survivorship care should aim to minimize the burden placed on survivors during this period (C), through scheduling appointments one after another, making referrals easier to navigate, help with interpreting survivorship information, and only providing necessary information (M). Reducing the burden placed on cancer survivors in accessing, navigating, and utilizing survivorship information prevents survivors from feeling overwhelmed and supports them to self-manage their long-term health (O).

Nine studies contributed to the generation of this theory on the need to reduce the burden on cancer survivors. 27,30,33,41,44-46,58,61 Herrmann and colleagues interviewed 17 adult hematological cancer survivors about their unmet needs and strategies to address them. They reported that some survivors valued assistance searching for relevant information, advice on interpreting the information, and differentiating between scientific evidence and anecdotal sources. Participants felt this guidance from health professionals was important and enabled them to more actively engage in their survivorship care. 30

Qualitative data from a community forum (involving cancer survivors, caregivers, and clinician researchers), indicated that when navigation support was absent and health professionals did not take leadership in that role, the responsibility fell to cancer patients and their families to manage and facilitate the communication and information exchange between healthcare providers. Consequently, there was strong support for medical records to be shared electronically with patients to reduce errors and enhance communication between healthcare providers and survivors.<sup>44</sup>

Other mechanisms identified for reducing the burden on survivors include the taking into consideration the preferences and specific challenges faced by each individual. For example, colorectal cancer survivors with high anxiety when attending appointments in a hospital setting may benefit from follow-up care delivery in a different setting such as their GP.<sup>58</sup> Providing too much survivorship information was identified as a cause of study dropout by Emery and colleagues, indicating the importance of only providing necessary information to survivors.<sup>27</sup> Travel burden could be minimized by scheduling appointments with different specialists consecutively instead of on separate days and times.<sup>41</sup>

# 3.8 | Theory 6: Provide survivorship information in multiple modalities

Cancer survivors have diverse information preferences and varying abilities to access different types of information (C). As such, it is important to deliver survivorship information through multiple modalities, such as written and digital SCPs, face-to-face and telehealth

options for appointments, take-home materials, and links to webpages on the organization's websites (M). This approach ensures the survivor can access the survivorship information in a way that is most suitable for them. This also gives more options for the coordination of care for survivors and further facilitates communication among the healthcare professionals and survivor (O).

Eleven studies contributed to the generation of this theory on the importance of providing multiple modalities of survivorship information. <sup>28,30,31,34,35,41,42,51,54,60,62</sup> Consultations with healthcare professionals, either in-person or phone-based, are valued and regularly utilized by cancer survivors. <sup>30,35,41,42</sup> Indeed, in the study by Herrmann and colleagues, some cancer survivors suggested providing face-to-face information and support sessions at multiple geographical locations to improve accessibility. Written materials and care plans were also considered worthwhile and useful, to enable effective self-management and improve communication between the survivor and other healthcare professionals. <sup>28,30</sup>

Web-based platforms offer a promising approach for delivering survivorship care information through diverse avenues. However, the evaluation of online interventions has revealed that technical issues can pose a barrier for certain participants, highlighting the importance of ensuring easy access to online resources, especially for older persons. Additionally, employing a multimodal approach to information delivery enables audiovisual presentation of information. This can enhance the perceived relevance and use of the resource, particularly when the information is delivered by other cancer survivors. Moreover, incorporating interactive features like direct messaging between survivors and healthcare professionals can increase referrals for survivorship care.

## 4 | DISCUSSION

Cancer survivors should be provided with appropriate information, delivered effectively, to support their health and wellbeing posttreatment. This review identified that extensive research has been conducted on the provision of survivorship information in Australia, resulting in a substantial body of high-quality literature. Despite this, formal guidance on the creation and delivery of survivorship information is lacking. By employing realist review methodology, this study was able to generate middle-range theories for the effective delivery of survivorship information in Australia. This approach facilitates an in-depth understanding of the underlying factors and contextual elements that contribute to successful provision of survivorship information, shedding light on the optimal strategies for supporting cancer survivors in their post-treatment journey. While not a direct objective of this review, the findings tended to focus on how survivorship information is transferred at the level of the health system (i.e., system level) and for interactions with the cancer survivor themselves (i.e., individual level). A summary of these findings is displayed in Figure 3.

The system level factors identified in this review include the importance of clear communication among care teams, dedicated

#### System Level

- Improve communication among care teams
- Establish dedicated consultation time and survivorship care personnel
- Provide survivorship training for healthcare staff

# Individual Level

- Take into consideration the survivor's specific social, cultural, and linguistic backgrounds
- Aim to reduce burden placed on survivor
- Provide survivorship care in multiple modalities

#### FIGURE 3 Overview of findings.

staff for delivering survivorship information, and training the staff involved in survivorship care. These factors have been predominantly addressed through a bottom-up approach, with individual clinicians and organizations taking the initiative for implementation, <sup>48</sup> meaning that the quality of care is dependent on the specific care provider. <sup>9</sup> To address this issue, other care providers, such as allied health professionals and cancer support organizations, could be involved in a systems approach to delivering survivorship information. These groups and organizations are well suited to provide survivorship information during the post-treatment phase, as the survivor is less likely to be in contact with clinicians and their visits to medical centers become less frequent.

To effectively implement the individual level findings identified from this realist review (i.e., providing tailored information, reducing the burden on survivors, and using multiple modalities), a greater reliance on digital infrastructure is likely necessary. Digital platforms offer a promising avenue for addressing these needs by providing a dynamic and customizable approach to delivering survivorship information.<sup>63</sup> These platforms can accommodate different versions of information tailored to the specific needs or characteristics of each survivor. Moreover, they can serve as a centralized repository of information, enabling easy access for survivors at any time. This is of particular importance in the Australian context, as the population is spread across a large geographic area and digital platforms can help overcome geographic barriers to access. Additionally, digital platforms can facilitate the scheduling of appointments, offering convenience and flexibility, both for the survivor and service providers that engage with digital platforms.<sup>64</sup>To ensure the successful adoption and fulfillment of survivors' needs, the development of these digital platforms should follow co-design principles.<sup>65</sup> Collaborating directly with survivors during the design process will ensure that their preferences and requirements are met effectively. 65 However, as noted

in *Theory 6* (i.e., providing survivorship information in multiple modalities), it is important to note that these digital platforms should complement, rather than replace, traditional forms of survivorship information. For example, pamphlets and in-person consultations continue to play a valuable role in the overall provision of survivorship care, particularly for older persons or those with limited Internet access.

Standardized templates, such as a SCP, are useful for delivering survivorship information to an individual. 44,60 However, these templates will likely need to be modified to account for the survivor's cultural background, communication preferences (electronic or hard copy), and specific care needs (see Theory 1: Considering Cancer Survivors' Social, Cultural, and Linguistic Backgrounds). To enhance the utility of these personalized plans, they should be shared with the survivor and other healthcare providers. 60,66 Concerningly, in a survey of cancer survivors conducted by Phansuwon and colleagues, more than half reported they had not shared their SCP with their GP, and one-third did not recall receiving a SCP at all.60 The authors suggest that factors such as incorrect mailing addresses, survivors failing to recognize the SCP package and discarding it, or administrative issues may contribute to the underutilization of provided SCPs by survivors. This highlights the need for improved guidance for healthcare providers regarding the dissemination and utilization of SCPs and the need for SCPs to be accessible to the multidisciplinary team, rather than the cancer survivor having to coordinate their own care.

Lastly, special considerations may need to be considered for survivors with a complex diagnosis. For example, survivor with an advanced or rare diagnosis may require more involvement from their treating specialist during survivorship compared to other survivors who can have their follow-up care predominantly handled by a GP. In complex cases, survivors may require additional appointments to meet all of their care needs. Additionally, where survivors are experiencing high levels of anxiety or are self-navigating their care, communication within a survivorship care team is crucial. Further, a dedicated care coordinator during the post-treatment phase could facilitate a smoother transition between acute and primary care sectors.

## 4.1 | Clinical implications

Current clinical guidelines and optimal care protocols provide guidance on the broader delivery of survivorship care in Australia and abroad. 5.8.68 However, there is limited practical advice within these documents regarding the effective delivery of survivorship information to cancer survivors, and this may contribute to the observed variability in its receipt reported in the literature. 9.69 To improve consistency and quality in the delivery of survivorship information, there is a need for a formalized and standardized system for communicating survivorship information. For example, formal guidelines that provide clear direction on how survivorship information should be delivered, including who, when, how, and what

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information could be useful. In doing this, it will be important to consider health system changes that improve the transition of patient care between multiple healthcare providers, including clinical oncologists, cancer care nurses, allied health, and local GPs.

A significant strength of this study is its large-scale, systematic review of the published literature. The inclusion of a wide range of study designs enabled a comprehensive exploration of the mechanisms underlying the delivery of survivorship information. Furthermore, the development of middle-range theories provides practical guidance on effective methods for delivering survivorship care information. The iterative process used to develop these theories from the data extracted from the included studies ensures the findings are robust and grounded in empirical evidence. The generation of these theories using Context-Mechanism-Outcome (CMO) configurations was conducted in a rigorous and transparent manner, enhancing the credibility of the theories derived from the review.

# 4.2 | Study limitations

Several limitations should be noted when interpreting the findings. Although efforts were made to minimize subjectivity through a systematic and iterative approach, individual interpretations of the included studies can introduce bias during data synthesis and theory generation. Additionally, the factors identified in this study may not constitute an exhaustive list of all considerations necessary for effective delivery of survivorship information. Further, the review only included studies conducted in Australia, which may limit the generalizability of findings to different healthcare settings. For example, the contextual factors and mechanisms identified may not be applicable to resource-constrained healthcare systems. Despite these limitations, this study contributes valuable insights regarding the mechanisms for effective delivery of survivorship information. It provides a foundation for developing formal guidelines outlining best practices for delivering survivorship information to individuals who have completed cancer treatment.

#### 5 | CONCLUSION

Equitable and consistent delivery of high-quality survivorship care information is vital for supporting the health and wellbeing of cancer survivors. This review identified several individual level factors for effective delivery of survivorship information, including tailoring the information to survivors' needs, minimizing the burden on survivors, and utilizing multiple modalities for information delivery. At a health system level, dedicated survivorship care personnel with clearly defined roles, communication channels, and specialized training is needed. By utilizing the mechanisms identified in this review, healthcare systems can enhance the provision of survivorship information, ultimately improving the post-treatment experiences and outcomes for cancer survivors.

#### **AUTHOR CONTRIBUTIONS**

All authors contributed to the study conception and design. Article screening, data extraction and analysis were performed by Belinda Goodwin, Sarah Kelly, Anna Stiller, Leah Zajdlewicz, Elizabeth Johnston, and Larry Myers. The first draft of the manuscript was written by Larry Myers, Nicole Perry, and Leah Zajdlewicz and all authors commented on subsequent versions of the manuscript. All authors read and approved the final manuscript.

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The authors have no relevant financial or non-financial interests to disclose.

#### **DATA AVAILABILITY STATEMENT**

Available upon reasonable request.

## **ETHICS STATEMENT**

Not applicable.

## **CONSENT TO PARTICIPATE**

Not applicable.

## **CONSENT TO PUBLISH**

Not applicable.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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