ABSTRACT

Introduction Transitions in Care (TiC) are vulnerable periods in care delivery associated with adverse events, increased cost and decreased patient satisfaction. Patients with cancer encounter many transitions during their care journey due to improved survival rates and the complexity of treatment. Collectively, improving TiC is particularly important among patients with cancer. The objective of this scoping review is to synthesise and map the existing literature regarding TiC among patients with cancer in order to explore opportunities to improve TiC among patients with cancer.

Methods and analysis This scoping review will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analysis-Scoping Review Extension and the Joanna Briggs Institute methodology. The PubMed cancer filter and underlying search strategy will be tailored to each database (Embase, Cochrane, CINAHL and PsycINFO) and combined with search terms for TiC. Grey literature and references of included studies will be searched. The search will include studies published from database inception until 9 February 2020. Quantitative and qualitative studies will be included if they describe transitions between any type of healthcare provider or institution among patients with cancer. Descriptive statistics will summarise study characteristics and quantitative data of included studies. Qualitative data will be synthesised using thematic analysis.

Ethics and dissemination Our objective is to synthesise and map the existing evidence; therefore, ethical approval is not required. Evidence gaps around TiC will inform a programme of research aimed to improve high-risk transitions among patients with cancer. The findings of this scoping review will be published in a peer-reviewed journal and widely presented at academic conferences. More importantly, decision makers and patients will be provided a summary of the findings, along with data from a companion study, to prioritise TiC in need of interventions to improve continuity of care for patients with cancer.

INTRODUCTION

The incidence of cancer continues to grow; in 2018, an estimated 18.1 million new cases of cancer were diagnosed worldwide, and it is projected that in 2040, there will be 29.4 million new cases. There has been a corresponding rise in life-sustaining and life-prolonging treatments for cancer. The combination of successful early cancer detection methods and innovative treatment options has prolonged the length of time a patient with cancer can be on the cancer care continuum, whereby cancer can be considered a chronic condition. Collectively, the burden of cancer on patients and healthcare systems has increased. Cancer contributes substantially to the global burden of disease, second only to cardiovascular disease, which represents a four-point increase since 1990 when it was ranked sixth. The annual global burden of cancer, as measured by years of life lost (years lost from average life expectancy due to ill-health or premature death), was estimated to be 233.5 million years in 2017. Moreover, healthcare systems are increasingly charged with caring for more patients with cancer and caring for them for longer durations of time.
Despite advances in treatment for cancer, providing cancer care remains remarkably complex. Modern cancer treatment and follow-up often involve multimodal therapies, management of multiple comorbidities and the delivery of care across multiple organisational levels, health services, institutions and providers. The coordination of cancer care is often shared between healthcare providers and institutions and patients and their caregivers and ultimately involves navigating many points along the cancer care continuum in an effort to promote successful treatment and optimise survivorship. The cancer care continuum spans from the period of cancer detection, through treatment, to survivorship or end-of-life care. Between and often within each of these interactions are discrete moments known as Transitions in Care (TiC), a transfer of responsibility between providers and institutions.

TiC are challenging and often vulnerable periods in care delivery. TiC are associated with increased medical errors and lapses in patient safety, patient dissatisfaction and overuse of healthcare resources (inappropriate use of diagnostic tests and hospital readmission) resulting in a heavy financial burden on the healthcare system. Research has identified deleterious outcomes related to poor-quality care during some TiC: the continuity of care between primary healthcare providers and specialists has been found to be poor; the transition from hospitals to home is associated with increased emergency department visits, rehospitalisation and adverse events resulting in permanent disability and death; and even transitions between hospital units within hospital result in adverse events nearly 20% of the time. Patients with cancer experience several, if not all, of these TiC.

Patients with cancer bring with them exceedingly complex health information regarding their comorbidities and treatment, and they transition between an exceptionally high number of healthcare providers, institutions and sectors as their healthcare status changes. In 2006, a report by the Institute of Medicine provided a call to action to study and improve the TiC among patients with cancer, with a focus on the TiC from treatment to survivorship, and other agencies have echoed the importance of improving care during TiC. Since the Institute of Medicine report, key advances have been made to improve the transition from treatment to survivorship, and several reviews on the effectiveness of survivorship care plans have been conducted. However, less is known about all of the other TiC throughout the cancer care continuum. There is much that can be done to understand and improve transitions from diagnosis to end of treatment, so patients have the best outcomes and a better chance at transitioning into survivorship. Evidence is needed to understand gaps in the quality of care during these TiC among patients with cancer, so we can design, implement and evaluate interventions to improve care.

The objective of this study is to systematically describe, characterise and map the existing literature on TiC among patients with cancer throughout the care continuum to explore opportunities to improve TiC among patients with cancer. Four aims will help guide this scoping review: (1) explore evidence around the quality of TiC and gaps in the literature around TiC among patients with cancer, (2) explore factors that are associated with the quality of TiC among patients with cancer, (3) explore interventions that have been used to improve TiC among patients with cancer and (4) identify variables for measuring the quality of TiC among patients with cancer.

METHODS AND ANALYSIS

Given the exploratory nature of this review and our objective to describe, characterise and map the literature guided by the four aims outlined above, scoping review methodology was chosen. The strength of scoping review methodology is that it provides a rigorous and transparent approach to mapping the literature and identifying gaps in the literature around TiC among patients with cancer. This scoping review will be conducted in accordance with the Joanna Briggs Institute methodology and will be reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Scoping Review Extension.

Search strategy and information sources

The preliminary search strategy was developed with the guidance of a research librarian (DL) with expertise in systematic reviews and is presented in online supplemental Appendix A. Search terms and relevant synonyms related to the population of interest (patients with cancer) and the intervention of interest (TiC) will be used to identify sources of evidence using titles, abstracts and subject headings (eg, MeSH within MEDLINE). An existing PubMed cancer filter will be used and modified for each of the unique databases. Additional cancer text words will also be added to increase the sensitivity of our search strategy. Search terms from a scoping review of TiC among critically ill patients will be used to develop our search terms for TiC. Additional TiC terms related to other care settings (eg, primary care and outpatient treatment centres) and healthcare providers will also be included. The search terms will be tailored to each of the data sources: MEDLINE, Embase, Cochrane CENTRAL and Database of Systematic Reviews, CINAHL and APA PsycINFO. To minimise publication bias, grey literature sources will be searched for sources of evidence. Grey literature sources will include reports produced by national and international organisations responsible for guiding the care of patients with cancer (ie, Canadian Cancer Society, American Cancer Association, European Society for Medical Oncology and WHO) and conference proceedings. References of included studies will be searched for additional evidence sources. The search will include studies published from database inception until 9 February 2020.

Eligibility criteria

Studies will be included if they describe transitions between healthcare providers (eg, handovers) or within
and between institutions among patients with cancer. Healthcare providers include multidisciplinary and multiprofessional healthcare providers (eg, physicians, nurses and allied healthcare professionals) in any healthcare setting (eg, hospital, clinic or community). Studies will not be excluded based on year or language of publication. Eligible studies are those that meet the following criteria:

**Population:** Include adult patients at any stage of their cancer journey; studies that only include infants or children will be excluded, but studies that include infants or children in addition to adults will be included if a subgroup analysis of adults is provided.

**Intervention:** Studies will be eligible if they describe or explore any TiC defined as a handover of responsibility between healthcare providers or between healthcare settings. Studies describing the transition from paediatric care to adult care will be excluded because of the uniqueness of this transition.

**Outcome(s):** Studies exploring TiC among patients with cancer using any outcomes will be eligible. Outcomes reported may include process of care or clinical outcomes and may describe any aspect of the quality of care provided (safety, effectiveness, efficiency, equality, timeliness and patient-centeredness).

**Design:** Studies describing TiC among patients with cancer will be eligible regardless of study design, including but not limited to qualitative study designs, mixed-method study designs and quantitative study designs (randomised control trials, quasi-experimental and observational). Reviews (systematic, scoping, narrative and so on), editorials, viewpoints and letters will be eligible; however, inclusion of the primary evidence sources cited within these evidence sources will be prioritised (if primary sources are available, they will be included rather than the review), and duplicate data will be excluded. Conference proceedings of evidence sources will be included if a peer-reviewed, published manuscript does not exist.

### Selection of sources of evidence

Titles, abstracts and full-text manuscripts will be screened for eligibility in duplicate by two independent reviewers. Reliability between reviewers will be ensured by employing a calibration process whereby all reviewers will screen a sample of potential evidence sources (~20 for title and abstract screening and ~10 for full-text screening). The calibration process will be repeated until reliability between reviewers is adequate (Cohen’s kappa coefficient of at least 0.8). Any disagreement between reviewers at the title and abstract screening phase will not be resolved, and any evidence source considered eligible by at least one reviewer will move forward to the full-text screening phase. Disagreements between reviewers at the full-text screening phase will be resolved through consensus, and if need be, a third reviewer will adjudicate. Agreement between reviewers at each screening stage will be measured using Cohen’s kappa statistic.

### Data charting process and data items

A standardised data abstraction form will be used to abstract data by two independent reviewers. The standardised data abstraction form will be data-informed and developed through consensus of the authors after full-text screening to chart the data. Two trained reviewers will pilot test the data abstraction form using a sample (approximately five) data sources that meet eligibility criteria. The standardised form will be modified based on the pilot testing, and the pilot testing process will be repeated until the authors are satisfied that the standardised form captures the relevant data. The reliability of data abstraction between reviewers will be tested using a sample of eligible evidence sources (Cohen’s kappa will be calculated using each variable as a separate entry). Discrepancies in the data abstracted will be discussed between the two reviewers, and additional evidence sources will be abstracted and discussed until data abstraction is consistent between the two reviewers. Once data abstraction is reliable, one reviewer will abstract the data from the eligible evidence sources, and the second reviewer will check the data abstraction. If there are any disagreements in the data abstracted, disagreements will be resolved through consensus between the two reviewers, and if need be, a third reviewer will be consulted.

Data items abstracted from the evidence sources include bibliometric information, data on the population, the healthcare environment, the healthcare professionals involved in the care, any interventions used to improve the quality of care, care outcomes, study design and quality of the evidence source (table 1).

### Data analysis

Data will be collated, summarised and reported based on the Ideal Transitions in Care framework, which was developed using guidelines, analysis of the literature and expert opinion and evaluates TiC using 10 domains. Descriptive statistics will summarise evidence sources, study characteristics and quantitative data. A narrative synthesis of the evidence sources will be provided, and any qualitative data will be synthesised using thematic analysis. Data will be summarised according to the four aims that will help guide the review: (1) explore evidence around the quality of TiC and gaps in the literature around TiC among patients with cancer, (2) explore factors that are associated with the quality of TiC among patients with cancer, (3) explore interventions that have been used to improve TiC among patients with cancer and (4) identify variables for measuring the quality of TiC among patients with cancer. We will also map the evidence to discrete TiC throughout the care continuum among patients with cancer.

### Patient and public involvement

Patients and the public were not involved in the conception of this study. A patient advisory group will be involved in an overarching study examining TiC among patients with cancer and will provide a report of our findings prior
Studies have shown, among patients with cancer, that implementing survivor care plans can improve knowledge regarding treatment and treatment plans among patients and primary care providers.\(^47\) Similarly, implementation of a guideline for survivorship care targeting primary care physicians resulted in a non-significant tendency to improve clinical outcomes (cancer recurrence and death).\(^48\) It is anticipated that the results of this scoping review will inform and refine research questions to systematically review the effectiveness of interventions including the effectiveness of the implementation strategies. As with any intervention aimed at improving the quality of care, interventions tailored to the context (eg, specific TiC, setting and patient population) are more likely to be effective.\(^44\) Information garnered from studies exploring gaps in care during TiC can help tailor interventions to specific patient populations and settings to ensure the effectiveness of interventions aimed to improve the quality of TiC. The findings of this scoping review will provide foundational evidence for a programme of research aimed at designing, implementing and evaluating interventions to improve TiC among patients with cancer.

**ETHICS AND DISSEMINATION**

This protocol outlines our approach to better understand the existing evidence surrounding transitions among patients with cancer. Our objective is to synthesise and map the current literature on TiC among patients with cancer; therefore, ethical approval is not required. The gaps and shortcomings in the evidence and with regard to TiC will inform a programme of research aimed to improve high-risk transitions among patients with cancer. The findings of this scoping review will be published in a peer-reviewed journal and widely presented at academic conferences.
More importantly, decision makers and patients will be provided with a summary of the findings from this scoping review, along with data from a companion study, to prioritise TiC in need of interventions to improve continuity of care for patients with cancer.

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Contributors KS conceptualised and led this work, assisted with the development of the search strategy and drafted the manuscript. AM drafted the manuscript. MM and DL developed the search strategy and critically revised and approved the final manuscript. JD and SC critically revised and approved the final manuscript. KS is accountable for all aspects of the work and ensures that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

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