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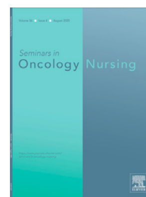

The Role of General Practitioners Across the Cancer Continuum Using the Caring Life-Course Theory

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ABSTRACT

Purpose: General Practitioners (GPs) play a crucial role across the cancer continuum, from prevention and early detection to end-of-life care. GPs provide comprehensive care that addresses a broad spectrum of health issues rather than a specific disease. Elements such as person-centeredness, continuity of care and whole-person care define the specialty of general practice. Other characteristics, such as expertise in managing uncertainty, undifferentiated illness and complexity, care coordination and teamwork, facilitate its evolution as a specialty.
Procedures: This paper uses the Caring Life-Course Theory as a theoretical framework to discuss the role of GPs in cancer care. We explore the barriers and enablers of providing optimal care in general practice for people diagnosed with cancer on an micro-, meso- and macro-level using the Caring Life-Course Theory.
Findings: The fundamentals of care framework aligns with the key characteristics of general practice namely first contact care, comprehensive care, continuity of care, person-centeredness and whole-person care. General practice is underpinned by a long-term therapeutic partnership with the patient, the ability to meet a range of care needs simultaneously, and an understanding of the context in which care is taking place. GPs provide care across the life course, facilitate self-care, care from others and care for others, assess care needs at transitions during the cancer continuum, and maintain a detailed care biography of the patient.
Conclusions: Adequate funding of longer consultations to facilitate the delivery of complex care, and expansion of multidisciplinary primary care teams, is required to sustain the delivery of quality cancer care in general practice.
Implications for Nursing Practice: There is significant opportunity to enhance the role of primary care nursing in delivery of cancer care in general practice, but this must be supported by enablers across all levels of care delivery.
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Globally, over 19 million people are diagnosed with cancer each year.[1,2] Optimizing cancer outcomes for individuals affected by cancer requires high-quality care across the cancer continuum, including prevention, early detection, diagnosis, treatment, survivorship, and palliative care end-of-life care.[3] This includes regular screening and monitoring, ongoing assessment of the impact of cancer and its treatment, interventions to manage symptoms, collaboration between healthcare providers, and the delivery of sustainable and cost-effective follow-up care. To empower cancer survivors and support self-management, care must also be personalized to the individual.[4]

The seminal Alma-Ata Declaration of 1978 identified primary health care as the key to the attainment of the goal of *health for all.*[5] Primary health care is defined by the World Health Organisation as *"a whole-of-society approach to health that aims to ensure the highest possible level of health and well-being and their equitable distribution by focusing on people's needs and preferences (as individuals, families and communities) as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people's everyday environment."*[6] The discipline of general practice, which is a major component of primary health care, is defined by the provision of comprehensive

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Layperson summary

What we investigated and why?

General practitioners play an important role in the care of people with cancer. This role includes prevention of cancer, finding it early, making a diagnosis of cancer, and supporting patients during cancer treatment and beyond. The care provided by a GP to a patient has certain elements such as providing care for any type of medical condition (not just cancer); providing care for extended periods of time, allowing the patient and doctor to develop a trusting relationship over time; and coordinating the care provided by other healthcare professionals.

How we did this?

In this paper, we used the Caring Life Course theory to discuss the role of general practitioners in cancer care.

What we found?

Using this theory, we propose that general practitioners are able to meet the needs of people with cancer because of their ongoing relationship with patients and thorough knowledge of a patient's full medical and social history and the ability to provide care that meets all of the patient's needs (including mental health needs).

What it means?

However, when there is a lack of funding for longer general practitioners consultations, this ability to provide the best possible care is negatively affected. Strengthening the role of other team members in general practice, such as practice nurses, could improve the delivery and quality of care. Policy makers and funders must consider these issues if they intend to improve the health and wellbeing of people affected by cancer.

longitudinal person-centered whole-person care. General practitioners (GPs), also referred to as primary care physicians (PCPs) in some countries, provide care that extends beyond a single disease or aspect of health. As experts in complex consultations, GPs use their diagnostic and therapeutic skills to manage clinical uncertainties and undifferentiated illnesses, as well as, coordinate care in partnership with multidisciplinary teams for complex care.[7] Other important responsibilities include health promotion, prevention, health maintenance, counselling, and patient education.[8]

Management of chronic illness, including cancer, in primary care is predominantly underpinned by the Chronic Care Model. The Chronic Care Model, developed by Wagner and colleagues, is a patient-centered approach for improving chronic illness management within primary care. It outlines six interrelated components: self-management support, clinical information systems, delivery system redesign, decision support, health care organization, and community resources.[9] There is a need for greater involvement of GPs in the cancer care continuum.[10] As the initial point of contact for patients in the healthcare system,[11] GPs have important responsibilities in identifying symptoms and signs that are associated with cancer for timely investigations and management, and play a key role in the health and wellbeing recovery of individuals with cancer across the care continuum, and also all life-stages of people (pregnancy, birth, childhood, adolescents and young adults, adults, older adults, and end-of-life). The long-term therapeutic partnerships between the GP and the person living with cancer, and their families, exemplify whole-person care, while providing a leading role of cancer care coordination in the community setting, safely embedded within the cancer multidisciplinary team.[12,13]

The Caring Life-Course Theory (CLCT) Framework

The Caring Life-Course Theory (CLCT) provides a framework for addressing the multiple complex unmet care needs of people affected by cancer.[14] The framework is built upon the fundamentals of care framework, with fundamental (universal) care defined as *the provision of what is necessary to every person's survival, health, welfare, maintenance, protection, or even peaceful death*.[15,16] Fundamental care involves three key dimensions:

1. Relationship between care *providers and recipients*.
2. Integration and meeting of a *range of care needs simultaneously* (physical, psychosocial, relational).
3. *Context* in which care is taking place.

Fundamental care is multidimensional and dynamic to meet the individual's changing physical, psychological, and relational care needs by developing trusting relationships with the person being cared for, and their care partners, within a supportive care context.[17]

The CLCT framework comprises 14 constructs (see Table 1). These components interact dynamically to address each person's needs in a way that is care-focused, flexible, and contextually sensitive.[18] This paper discusses the role of the GP in cancer care throughout the continuum using the CLCT framework. First, we explore the role of the GP using the fundamentals of care framework. Second, we map the 14 CLCT constructs to the characteristics of general practice across the cancer care continuum. Finally, we discuss challenges and strategies for optimizing cancer care in general practice across the continuum at the micro-, meso- and macro levels. The CLCT framework will be used to illustrate the complex and varied roles of general practice in cancer care across the care continuum for the individual person with cancer (micro), meso- and macro-levels. The meso- level refers to care networks and support mechanisms, and the macro-level referring to systems and policies that address the complexities of cancer care, embracing a whole-system approach to overcome fragmentation of care nationally.[19]

In this paper, "general practice" refers to the discipline of general practice as practised by GPs, rather than the broader definition of general practice which includes nonmedical health professionals such as practice nurses, allied health practitioners and the general practice administrative team.

General Practice and the Fundamentals of Care Framework

The fundamentals of care framework aligns with key characteristics of general practice; namely: *first contact care, comprehensive care, continuity of care, person-centeredness*, and *whole-person care*.

Relationship Between Care Providers and Recipients

General practice is underpinned by a long-term therapeutic partnership between the GP and patient across the life-span, with timely access to care. There is evidence that patients highly value partnerships with their GP, with up to 88% of patients stating this was more important for them than having a convenient appointment. Patients value this partnership particularly when facing serious physical, psychological, social and family issues.[20] Strong therapeutic patient-clinician partnerships are highly professional, with GPs demonstrating high clinical acumen, effective doctor-patient collaboration, and a responsibility to put the patient first. These partnerships are underpinned by trust and continuity of care, which is associated with improved health outcomes, such as lower mortality and lower use of emergency departments. During difficult times, these relationships

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TABLE 1
Caring Life Course Theory Constructs Mapped to the Characteristics of General Practice

Construct	Description	Mapping to general practice	Mapping to cancer care
1. Fundamental care	The care required by everyone for survival, health, welfare, maintenance, protection or peaceful death, regardless of the presence or type of clinical condition or the setting in which care is taking place.	*First contact care, comprehensive care, continuity of care, person-centered care, whole person care* GPs provide universal care to all patient groups and for all patient problems. General practice is usually underpinned by a continuing relationship between a patient and GP. GPs provide whole-person care and meet all care needs, including psychosocial attributes of care	All
2. Life Course	The life stages, transitions and trajectories in health and well-being across the lifespan from birth until death.	*Comprehensive care, continuity of care, person-centered care, diagnostic and therapeutic skills, health promotion, disease prevention and patient education* GPs provide cradle-to-grave care, which is tailored to individual care needs at different life stages. GPs are skilled in disease prevention that is tailored to life stages, and are often involved in transitions between life stages for example puberty, menopause, older age, and end of life. GP's diagnostic and therapeutic skills mean that GPs are often lead in the timely referral of a 'new cancer diagnosis' and therefore herald a new transition in a patient's health trajectory in the community	All
3. Care network	The relationship and support mechanisms surrounding individuals and their families and friends.	*Coordination and teamwork, whole person care.* GPs are usually the designated care coordinators of multidisciplinary teams in the community	Diagnosis Survivorship Palliative and end-of-life care
4. Care need (CN)	A fundamental care need- physical, psychosocial or relational throughout the life span met by oneself or by others.	*First contact care, comprehensive care, person-centered care, whole person care, diagnostic and therapeutic skills* GPs look after all care needs including psychosocial. The person-centered and whole person care provided by GPs means that GPs understand the intrinsic (eg, genetics) and extrinsic factors (eg, environment, social) that influence an individual's care needs. GPs use their diagnostic and therapeutic skills to understand and meet their patients' care needs.	All
5. Care provision (CP)	How care needs are met, through the enactment of care activities either by oneself or by others.	*First contact care, coordination and teamwork, health promotion, disease prevention and patient education.* GPs and primary care teams provide care (including first contact care) and engage others to provide care. GPs refer to a multidisciplinary team and coordinate this team. GPs provide health promotion and patient education in order to facilitate self-care, self-management, and, where required, supported self-management.	All
6. Self-care (SC)	Tasks intentionally performed by individuals to address their own care needs. Maintain health and well-being, prevent and manage illness and attain specific goals.	*Person-centered care, whole person care, health promotion, disease prevention and patient education.* GPs provide health promotion and patient education in order to facilitate self-care. For example, GPs advise on lifestyle changes for the prevention and management of chronic diseases such as diabetes.	All
7. Care-from-others (C-Fm- O)	Care actions or processes received from others to address a person's care needs.	*Coordination and teamwork, person-centered care, whole person care, diagnostic and therapeutic skills* GPs play an important role in facilitating and coordinating a range of care from others – such as other healthcare professionals (formal care) or (informal care) from the person with cancer family and friends. GPs use their diagnostic and therapeutic skills to understand where there is a self-care deficit requiring care-from-others.	All
8. Care for-Others (C-Fo-O)	Care actions or processes provided to address another care needs.	*Coordination and teamwork, person-centered care, whole person care.* GPs provide care, and also facilitate the meeting of care needs from other team members, within the support care network mobilizing both formal and informal care provision.	All
9. Care provision package	The full complement of care required to be provided for a person, made up of a combination of self-care and care from informal, formal or professionals carers.	*Coordination and teamwork, person-centered care, whole person care, diagnostic and therapeutic skills, health promotion, disease prevention and patient education* GPs are key players in ensuring patients have the full complement of care, using their diagnostic and therapeutic skills to determine care needs and capability for selfcare; providing health promotion and patient education to facilitate disease specific self-management, and delivering supported self-management; and referring to and coordinating a multidisciplinary team.	Diagnosis Survivorship End-of-life care
10. Capability	The ability (skills, knowledge and motivation) to care for oneself and others throughout the life course.	*Whole person care, diagnostic and therapeutic skills, health promotion, disease prevention and patient education* GPs need adequate capability in diagnostic and therapeutic skills in order to care for their patients, families and friends. They can also increase the capability of patients to care for themselves through tailored and individualized patient education.	All
11. Capacity	The amount/volume of care available to oneself and others throughout the life course.	*First contact care, comprehensive care, continuity of care, coordination and teamwork, person-centered care, whole person care, health promotion, disease prevention and patient education* Capacity of GPs to care for their patients is a significant modern issue. Limitations to GP workforce and funding are barriers to the full capacity of GPs to provide timely first contact care, comprehensive care, continuity of care, act as care coordinators, provide person-centered and whole person care, and engage in health promotion and patient education, will be limited.	All

(*continued*)

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TABLE 1 (*Continued*)

Construct	Description	Mapping to general practice	Mapping to cancer care
12. Care transition	An event or life stage that triggers a change in a person's care needs.	*First contact care, comprehensive care, continuity of care, whole person care, diagnostic and therapeutic skills* GPs use their diagnostic and therapeutic skills to assess care needs at transitions (when an event triggers a change in care needs). Continuity of care ensures that GPs are present at all care transitions in a person's care and life-course trajectory. First contact care means that GPs are likely to be the first people to recognize a care transition.	All
13. Care trajectory	The potential impact a life event might have upon a person's self-care and care-for-others capability and capacity.		
14. Care biography	A personalized history of an individual's self-care and caring capability and capacity and their understanding of the care they have and should receive from other people.	*Comprehensive care, Continuity of care, whole person care* GPs maintain a longitudinal history of a patient's entire medical and social history, which identifies self-care and caring capability and capacity at different care stages.	All

provide a sense of safety, protection, care and support to patients and their families.[21]

A strong patient-clinician partnership has many implications in cancer care. Patients who have developed trust in their GP are more likely to present to them with cancer alarm symptoms.[22] Meanwhile, for patients with cancer, one of the perceived benefits of "shared care" (a formalized arrangement between primary and tertiary care on cancer follow-up care) is the personal nature of the GP-patient relationship.[23]

Integration and Meeting of a Range of Care Needs Simultaneously

General practice provides whole-person care, with consideration of the multiple factors that influence health and wellbeing, beyond the biomedical; the substantial length, depth and breadth of general practice extends from "cradle to grave," for all patient groups and all problems.[24] Health is viewed as more than the absence of disease.[25] The comprehensive, wholistic nature of general practice aligns with this dimension, and provision of care for all aspects of health is perceived as an important part of the role of the GP in cancer survivorship.[26]

Context in Which Care is Taking Place

Caring for a patient with cancer requires an understanding of the broader context of psychosocial, cultural, spiritual, community and family factors, as well as individual needs, preferences and values that may influence the experience of cancer. Because general practice is characterized by its continuity of care, GPs are exceptionally well placed to have an understanding of the context in which care is taking place, and are highly trained in the provision of person-centered care which takes into account these individual person-centered factors. Patients expect GPs to provide psycho-social care with competence.[27,28] Moreover, the vast "accumulated knowledge" that a regular GP acquires about a patient may be part of the mechanism linking relational continuity to the improvement in patient outcomes that is associated with greater continuity of care, such as reduced hospital admission, mortality, and increased patient satisfaction with care.[29,30]

Characteristics of General Practice and the Caring Life-Course Theory Constructs Across the Cancer Care Continuum

Table 1 shows the 14 CLCT constructs mapped to the characteristics of general practice across the cancer care continuum.

Person-Centered Care

As a core characteristic of general practice, person-centered care puts individuals at the center of their care, with respect to their rights, values, preferences and goals, including their nonmedical needs when making decisions about their health.[31] It aligns with the CLCT constructs of *fundamental care,* where the required *care needs* are provided through *care provision* that is tailored to the patient's *life course.* GPs support patients in priority setting throughout the cancer continuum, ranging from prevention, health promotion, early detection to managing complications associated with cancer treatment side, cancer surveillance, maintaining psychosocial wellbeing, and palliative care needs.[32]

GPs play a crucial role in symptom management and preserving patients' highest quality of life, particularly during end-of-life care. A cohort study reported that 95% of patients visited their GPs in the last 6 months of life, 72% in the second-last month, and 74% in the last month of life,[33] receiving home visits (24%) and opioid prescriptions (58%) from their GP. When providing palliative care, the CLCT theory highlights how crucial it is to comprehend the patient's *life history* in order to make sure that treatments are in line with their values and long-term objectives.[34]

Continuity of Care

Distinct from other medical specialties, general practice provides a significant degree of continuity of care. Continuity of care is characterized by two core elements: care over time, and the focus on individual patients, with continuity referring to the degree to which a series of discrete healthcare events is experienced as coherent and connected and consistent with the patient's medical needs and personal context.[35] In primary care, it usually refers to the relationship between a single practitioner and patient that extends beyond specific episodes of illness or disease.[35]

In general practice, *fundamental care* is provided by the same provider or group of providers over time, across the *life course* of a patient's *care trajectory* and at critical *care transitions.* This provides the GP with a longitudinal *care biography* to inform decisions about *care needs*, with reference to the patient's *care networks, capability and capacity.* This type of continuity is referred to as informational continuity or the use of information on past events and personal circumstances to make current care appropriate for each individual. Informational continuity guides management continuity whereby there is a consistent and coherent approach to management of a health condition.[35] There could be opportunities to collaboratively develop a shared, partnered care-biography resource/instrument for use by patients together with their GP, to further enhance this

therapeutic relationship and self-care capacity and capability, extending the enactment of this construct (care biography) of the CLCT further in the real-world community setting.[36]

Continuity of care is a strength in provision of cancer care in the community, as GPs play a key role in all stages of the cancer continuum. This continuity of care provides for a strong relationship between care provider and recipient ("relational continuity").[35] which is a key dimension of *fundamental care* and demonstrates the construct of the *life course.* Continuity of care provided by GPs across the cancer continuum also plays a role in *care transitions.* GPs are likely to be the key health professional involved in care transitions across the cancer care continuum. The *care trajectory* is captured in a *care biography* that can be an electronic (or patient held resource they take with them during each consultation) and should also be documented in the medical record kept by the GP.

Continuity of care is highly valued by both patients and GPs, and is associated with improved clinical, economic and patient-reported outcomes.[37-40] The management of the diagnostic process by GPs is underpinned by continuity of care (the *life course)* in general practice. Around 85% to 90% of GPs report being involved in diagnosis of cancer[12] and patients with chronic comorbidities are more likely to see the same GP after a cancer diagnosis, preferring to entrust their health care to the same person.[41]

Comprehensive Whole-Person Care

General practice is, by definition, comprehensive. Comprehensive whole-person care is provided for all patient groups and problems, extending beyond a single disease or aspect of health. In alignment with the construct of *fundamental care,* it spans the *life course,* to all *care needs,* across all *care transitions* and *care trajectories,* with reference to the patient's *care networks, and self-care capability and capacity*. General practice advises on self-care, with understanding of *care provision* and *care provision packages*, in the context of the patient's *care-for-others* and *care-from-others*. This is reflected in the comprehensive *care biography* that is maintained by the general practice. The comprehensiveness whole-person care provided is a strength; however, given the breadth of generalist care, some GPs report lacking confidence in providing follow-up cancer care, particularly for surveillance testing and managing long-term side effects.[12,42]

Complex Consultations Skills

GPs, as experts in complex consultations, are trained in managing clinical uncertainty and undifferentiated illnesses. Their skills are essential in facilitating timely diagnosis and management of cancer and other diseases, with early GP interventions reducing time to diagnosis.[43] The CLCT framework highlights the important roles of GPs in offering emotional support alongside medical care[26] which is tailored to the patient's *life course, care trajectory, care needs, and self-care capability and capacity*, at every *care transition*. GPs, as the patient's advocate, assist in navigating complex healthcare systems[44] to curate a *care provision package* with reference to their care network, including *care-from-others* and *care-for-others*, at the time. Across the cancer care continuum, GPs provide holistic support to patients and their families. Complex consultation skills include managing cancer diagnosis, its treatment and any associated complications, as well as any other chronic comorbidities, such as hypertension or coronary heart disease.[26]

Care Coordination and Teamwork

GPs have important responsibilities in coordinating care within multidisciplinary teams, both within primary care and more broadly in collaboration with tertiary care. These *care networks* facilitate *care provision* as part of a *care provision package* for their patients. In this role GPs facilitate *care-from-others* and are directly involved in *care-for-others*. In some countries, GPs also play a "gatekeeper" role by assessing need from other care services. GPs perceive care coordination to be an important part of their role in cancer care,[26,45,46] including during end-of-life care.[47] The long-term GP-patient therapeutic partnerships support *care transitions.* Formalized collaboration between primary and tertiary care is referred to as "shared care;" it is preferred by patients, and showed to effective compared with tertiary-led cancer follow-up care.[48]

Health Promotion, Prevention and Health Maintenance

GPs have important responsibilities in health promotion, disease prevention and health maintenance, a *fundamental care*, with preventive interventions delivered in general practice associated with risk-reduction behaviors. GPs facilitate preventive *care provision* as part of a *care provision package* that is tailored to the patient's life course. By optimizing *self-care, capability and capacity*, there is potential to change future *care trajectories* and the associated *care needs*. GPs also play important role in cancer screening by providing patient education, being trusted advisors, facilitating informed decision-making, and through direct provision of screening for example cervical cancer screening.[32,49]

There is evidence that brief advice from GPs about modifiable risk factors for cancer is effective. For example, randomized controlled trials demonstrate that alcohol screening and brief interventions by GPs can reduce the number of standard drinks consumed by their patients.[50] Analysis of cross-sectional population-based data suggests that respondents who had received lifestyle advice from GPs were more likely to change their behavior (alcohol intake, smoking, and diet) than those who had not.[51] There is also randomized controlled trial evidence that invitations to screen that come from a GP are more effective in increasing screening participation than population-based cancer screening strategies alone.[32,52] The provision of preventive health advice and health education by GPs increases the patient's *capability* to perform *self-care* with the aim of preventing cancer and increasing early detection.

Initial Point of Contact

General practice is the point of first contact for many patients within the healthcare system, with some presenting with undifferentiated illnesses. This is particularly important in the early detection and diagnosis of cancer. It aligns with patients' needs for *fundamental care,* with GPs identifying patients' *care needs* upon presentation, and *care provision.* GPs may also be the first point of contact for a change in care needs, or a *care transition*, for example, when a patient requires palliative cancer care. Studies have shown that GPs may play a particularly important role in assisting patients at the time of *care transition* from active treatment to follow-up care, which is a time when patients commonly feel abandoned, vulnerable and anxious.[26]

Optimizing Cancer Care in General Practice Across the Cancer Care Continuum at the Micro-, Meso- and Macro Levels

The CLCT provides a thorough framework for comprehending the important responsibilities of GPs across the cancer care continuum. GPs are in a unique position to meet patients' medical, emotional, and social needs by offering longitudinal comprehensive whole-person patient-centered care throughout the cancer continuum. Their capacity to cultivate enduring GP-patient therapeutic partnerships facilitates the provision of tailored care that adjusts to the patient's needs. However, there are known barriers and enablers to providing comprehensive cancer care in general practice. Here we explore these barriers and enablers using the CLCT as a framework.

Micro Level: Self-Care and Care Need

Patients may lack trust in GPs to manage cancer-related concerns or perceive the role of the GP may be unclear,[26] and this is coupled with inadequate resources leading some GPs to lack confidence and knowledge in some aspects of providing care.[12,42] Not all patients will access a regular GP who knows them well. Poor communication, lack of trust, and perceptions that GPs are too busy may also impact on the care provided to patients.[26]

Enablers that address these issues are mainly relevant to the meso and macro levels, however, optimizing the use of cancer survivorship guidelines may be a micro level enabler. An observational study comprising 401 PCPs reported those using cancer survivorship guidelines were more likely to assess genetic risk, participate in cancer surveillance and manage depression, and that training in survivorship care was associated with improved clinical assessment of the late/long-term effects and its management.[53] Recently, a systematic review of cancer survivorship training for GPs also found benefits to GP learners, including increased confidence, knowledge and behavior change.[54]

Meso Level: Care Networks and Provision

At the meso level, the CLCT recognizes the community and organizational structures that support care delivery. This includes primary care networks, professional networks, health maintenance organizations, and the local healthcare teams, with GPs working as care coordinators within multidisciplinary care teams to support patient care needs through locally available resources.

This level entails multidisciplinary collaboration with primary care nurses, oncologists, surgeons, radiologists, pathologists, allied health, and cancer nurses. Barriers at the meso level include poor communication from tertiary care and lack of role clarity which are consistently highlighted in the literature.[12,26,55] GPs also perceive that their skills are not recognized by non-GP specialists.[26]

Meso level enablers include delivery of cancer care as a primary care team and not solely through the relationship between a single GP and patient. This has significant benefits for patients and their families, as well as easing time pressures on GPs. Patients perceive the incorporation of allied health professionals improves their knowledge of chronic illness and care processes, and interprofessional care increases patient and staff satisfaction and team function. Indeed, important health outcomes such as mortality are improved when an interprofessional approach to disease management is used in general practice.[56] In particular, primary care nurses (who represent the largest group of primary care providers in Australia[57]) play a substantial role in cancer care across the continuum. These roles include prevention through smoking cessation and other lifestyle advice to reduce cancer risk, provision of screening for cervical cancer and recommendations to screen for other cancers such as breast and bowel.[58] Indeed patients report greater satisfaction with care received from nurse practitioners rather than GPs regarding cancer prevention, and that primary care nurses spend more time with patients and carry out more opportunistic cancer screening than GPs.[58] Primary care nurses are likely to encounter patients with cancer warning signs and contribute to early diagnosis of cancer through conversations with patients about the benefits of prompt help-seeking.[59] In survivorship, primary care nurses play important roles in providing psychosocial support, reviewing and optimizing survivorship care plans,[60] assisting with postdischarge care such as wound care,[61] providing health promotion and disease prevention, and continuing to manage comorbid chronic conditions. Primary care nurses are able to initiate conversations about advance care planning[62] and in rural/remote settings provide palliative care as part of their generalist role.[63]

Other enablers include shared care models that formalize GP-specialist collaboration in follow-up care and the use of patient-held records, with a system of care that involves both primary care and specialist services working collaboratively using agreed processes and outputs.[64] Primary-care led models of follow-up care are also as safe as tertiary-led care, are more cost-effective, and preferred by patients.[32,65]

Macro Level: Life Course, Systems and Policy

At the macro level, the CLCT recognizes the societal and structural elements across the life course, including cumulative advantage and disadvantage, social structures, resource allocations arrangements, cultural perspectives on care, and healthcare policies, and its impact on healthcare. Barriers at this level include financial constraints within current funding models, with lack of remuneration for managing complex conditions. In Australia, general practice is mainly funded using a fee-for-service model, with Medicare, the national health insurance scheme, providing rebates for services based on consultation length.[66] This model is better suited for the management of acute than chronic and complex conditions. Furthermore, as the demand for general practice services is increasing,[67] the general practice workforce is decreasing[68] with a shortfall of between 3,100 to 10,600 full-time equivalent GPs in Australia projected by 2031 to 2032.[69] These pressures will likely impact the provision of cancer care across the continuum.[70]

Macro level enablers include national initiatives to better manage chronic disease and improve continuity of care in general practice, such as voluntary patient enrolment, and the use of "microteams" of GPs instead of a single regular GP. To improve chronic care, alternative funding models, including capitation models, such as MyMedicare in Australia,[66,71] the new voluntary patient enrolment scheme, have been introduced. Other opportunities include strengthening multidisciplinary team care in general practice.[29,56] There is an urgent need to support the delivery of interprofessional care in general practice with appropriate funding and practice-level arrangements,[56] role clarity, access to support and debriefing for primary care nurses providing palliative care,[63] access to relevant education, and address workforce shortage issues.

Conclusion

General practice facilitates comprehensive, longitudinal, whole-person and patient-centered care that is tailored to the patient's needs. GPs are in a unique position to support patients throughout the cancer care continuum, ranging from cancer prevention and diagnosis to treatment, survivorship, and end-of-life care. However, the nature of general practice and its workforce, the needs of individuals with cancer and broader socioeconomic context are dynamic and will continue to change. Adaptation is required to accommodate the increasing complexity associated with comprehensive cancer care and strengthen the role of GPs across the cancer care continuum.

The CLCT has considerable alignment with the characteristics of general practice across all constructs. Using the CLCT framework allows for consideration of where general practice may experience relative gaps in provision of optimal care to patients. The characteristics of general practice do not explicitly address self-care for GPs, workplace wellbeing and burnout (capability). While this is increasingly recognized in general practice as a challenge, it is currently not captured in the characteristics of general practice, which are solely focused on the patient and neglects the role of self-care for the care provider (GP). A greater acknowledgement of the fundamental role of care for care providers should be considered, in order to optimize the care of patients with cancer in general practice.

The CLCT, as a comprehensive framework, highlights barriers and opportunities to meet unmet needs of people at risk of and living

with cancer and therefore can be utilized by clinicians, funders, and policy makers to optimize the delivery of cancer care in general practice. Micro-, meso- and macro-level barriers to provision of comprehensive cancer care in general practice should be systematically addressed to optimize health and wellbeing outcomes of people affected by cancer. There is significant opportunity to strengthen interprofessional collaboration in general practice, particularly to enhance the role of primary care nursing in delivery of cancer care across the continuum, but this must be supported by enablers across all levels of care delivery.

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CRediT authorship contribution statement

Carolyn Ee: Writing – original draft, Validation, Supervision, Project administration, Methodology, Data curation, Conceptualization. **Betty Kandagor:** Writing – original draft, Methodology, Data curation. **Catherine Paterson:** Writing – review & editing, Conceptualization. **Kylie Vuong:** Writing – review & editing, Supervision.

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