



ENHANCING PATIENT TRANSITIONS
FROM TREATMENT IN A
REGIONAL CANCER CENTRE TO
SURVIVORSHIP IN THE HAMILTON
NIAGARA HALDIMAND BRANT
COMMUNITY



EVIDENCE >> INSIGHT >> ACTION

Evidence Brief:
**Enhancing Patient Transitions from Treatment in a Regional Cancer Centre to
Survivorship in the Hamilton Niagara Haldimand Brant Community**

5 April 2011

McMaster Health Forum

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Merit review

The evidence brief was reviewed by a small number of policymakers, stakeholders and/or researchers in order to ensure its scientific rigour and system relevance.

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KEY MESSAGES

What's the problem?

- The overarching problem is that the cancer care sub-system lacks a sustained approach to supporting cancer patients in the transition from receiving treatment in a regional cancer centre (in this case, in the Hamilton Niagara Haldimand Brant region) to survivorship in the community.
 - The burden of cancer is growing in Canada because of aging, population growth and improved survival from many types of cancers.
 - Primary and community care programs intersect only minimally with cancer care programs.
 - A variety of gaps exist in the health system arrangements within which cancer care is provided, which limits the supports for cancer survivorship. The gaps exist in current delivery arrangements (e.g., little attention is being given to identifying “packages” of cancer monitoring and support that could be delivered in primary and community care), financial arrangements (e.g., primary care remuneration schedule does not make special provision for cancer care or the involvement of alternative providers in cancer care), and governance arrangements (e.g., patients and their families have relatively little collective voice in how cancer survivorship is supported).
 - Existing implementation efforts are focused on earlier stages in the cancer care continuum (i.e., the transition from screening and diagnosis to treatment, rather than the transition from treatment to the community).

What do we know (from systematic reviews) about three viable options to address the problem?

- Option 1 – Researchers accelerate their use of a systematic and transparent approach to develop a range of disease site-sensitive and setting-appropriate cancer survivorship support plans that can be implemented and monitored by any actor in the healthcare system, as well as develop plans to support their local adaptation and implementation
 - Peer support interventions and follow-up care for cancer survivors involving psychosocial interventions have some beneficial effects on patient outcomes. Patient satisfaction is strongest when follow-up care is provided by general practitioners. Integrated care models, provider assessment and feedback, provider incentives, and provider reminder systems may improve patient outcomes and provider performance.
- Option 2 – Ontario Ministry of Health and Long-Term Care accredits and incentivizes primary healthcare teams and community care centres to become engaged in supporting cancer survivorship in the community
 - Fee-for-service payment of primary care physicians yielded greater benefits than salaried payment in continuity of care, efficiency and number of primary care visits. Accreditation is positively linked with the professional development of health professionals and with promoting change in health organizations, however, the quality of this systematic review is low.
- Option 3 – Hamilton's regional cancer centre (with funding from Cancer Care Ontario) becomes a purchaser of cancer survivorship supports in primary and community care settings, and develops a seamless, disease site-sensitive approach to supporting cancer survivorship in the community
 - Establishing supports for teams/centres, such as educational meetings, internet-based learning, electronic continuing education, collaborative learning, and health information technology, have yielded some improvements in healthcare provider knowledge and behaviour, and improved provider performance and patient outcomes. However, none of the studies included in these reviews focused on cancer survivorship care. Financial incentives to encourage consumers/patients' preventive health behaviours have been found to be effective in the short run.

What implementation considerations need to be kept in mind?

- Little research is available about implementation barriers and strategies, however, a number of likely barriers at the patient, provider, organization and system level warrant consideration.
- Studying successes and failures in pursuing similar options in other settings may prove useful in identifying strategies to overcome some of the identified barriers.

REPORT

Cancer can be seen as a chronic disease that requires long-term efforts to address the late effects of treatment and to maximize the health outcomes of survivors. Clinicians, experts and healthcare system leaders in the Hamilton Niagara Haldimand Brant region of Ontario, much like those working in other jurisdictions, are grappling with how best to plan and coordinate these long-term efforts. This evidence brief, and the stakeholder dialogue it was prepared to inform, were designed to support their actions. The hope is that the lessons learned from this demonstration area can inform developments in other regions across the province of Ontario and at the provincial level, in other provinces across Canada and at the national level, and in other countries.

There are more than 200 types of cancer, with the most common types in Ontario being prostate, lung and colorectal cancers for men, and breast, lung and colorectal cancers for women.(1) As many cancer treatments improve and survival rates increase, the number of those living “beyond cancer” – and hence the number of people living with “survivorship” issues and seeking care in the Ontario healthcare system – will continue to grow.(2;3) The cancer care sub-system tends to emphasize disease treatment, however, “survivorship” is part of the cancer journey as well.

A recently published study in *The Lancet* reported that Canada ranks highly in cancer survival rates.(4) The study is an initiative of the International Cancer Benchmarking Partnership (ICBP), a group of academics, clinicians and policymakers seeking to understand how and why cancer survival varies between countries. Based on the voluntary participation of four Canadian provinces – British Columbia, Alberta, Manitoba and Ontario – the study data show that Canada’s survival rates for lung, breast, colorectal and ovarian cancer are among the highest in the world, along with those of Australia and Sweden.(4)

There is no widely accepted definition of cancer survivorship. One commonly cited definition was put forth in a report from the Institute of Medicine: “the phase of continuum of care following diagnosis and prior to the development of reoccurrence of cancer or death.” A second commonly cited definition of cancer survivorship comes from the National Coalition for Cancer Survivorship and the National Cancer Institute: “from the time of cancer diagnosis and for the balance

Box 1: Background to the evidence brief

This evidence brief mobilizes both global and local research evidence about a problem, three options for addressing the problem, and key implementation considerations. Whenever possible, the evidence brief summarizes research evidence drawn from systematic reviews of the research literature and occasionally from single research studies. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies, and to synthesize data from the included studies. The evidence brief does not contain recommendations.

The preparation of the evidence brief involved five steps:

- 1) convening a Steering Committee comprised of representatives from key stakeholder groups and the McMaster Health Forum;
- 2) developing and refining the terms of reference for an evidence brief, particularly the framing of the problem and three viable options for addressing it, in consultation with the Steering Committee and a number of key informants, and with the aid of several conceptual frameworks that organize thinking about ways to approach the issue;
- 3) identifying, selecting, appraising and synthesizing relevant research evidence about the problem, options and implementation considerations;
- 4) drafting the evidence brief in such a way as to present concisely and in accessible language the global and local research evidence; and
- 5) finalizing the evidence brief based on the input of several merit reviewers.

The three options for addressing the problem were not designed to be mutually exclusive. They could be pursued simultaneously, or elements could be drawn from each option to create a new (fourth) option.

The evidence brief was prepared to inform a stakeholder dialogue at which research evidence is one of many considerations. Participants’ views and experiences and the tacit knowledge they bring to the issues at hand are also important inputs to the dialogue. One goal of the stakeholder dialogue is to spark insights – insights that can only come about when all of those who will be involved in or affected by future decisions about the issue can work through it together. A second goal of the stakeholder dialogue is to generate action by those who participate in the dialogue and by those who review the dialogue summary and the video interviews with dialogue participants.

of one's life." These two definitions consider cancer survivorship to include much of the whole continuum of care, including the stages of diagnosis, treatment, recovery, recurrence and end-of-life care (but presumably excluding prevention and screening). A third definition, which is often used implicitly by the medical community, is the period after five years have passed since diagnosis.

This evidence brief defines cancer survivorship more narrowly, as the period from the time of cancer treatment completion (excluding long-term treatment to prevent recurrence, such as hormonal treatment for breast cancer) and for the balance of life. As such, the focus of the evidence brief is the recovery/post-recovery phase in the continuum of cancer care, and not on transitions from screening to diagnosis or from diagnosis to treatment in a regional cancer centre (e.g., wait times). Moreover, the evidence brief focused on two groupings of cancer patients, namely:

- those whose ongoing cancer care can best be provided in primary and community care settings by virtue of the holistic safety and quality of care that can be provided (e.g., co-morbidities, emotional and social issues, ethnocultural issues), the cost-effectiveness of care that can be provided, and/or limitations in the availability of oncologists; and
- those whose ongoing cancer care can be shared between a regional cancer centre and primary and community care settings.

The evidence brief does **not** focus on those cancer patients whose ongoing care can be best provided in a regional cancer centre by virtue of the nature of the care required (e.g., type of provider and technology, complexity of care). This would typically include pediatric cancer patients.

Successful transitions from treatment in a regional cancer centre to survivorship in the community likely require clear plans and accountabilities within health and social care systems for: a) addressing the physical, emotional and social late effects of treatment that might limit the quality of life of survivors; and b) providing secondary cancer prevention, surveillance for recurrence, and health promotion to maximize the health outcomes of survivors. While the need for regular medical check-ups and psychosocial support is increasingly recognized,(5) most healthcare systems are only beginning to assemble the elements of plans to support survivorship in the community, and not the fully developed and widely implemented plans themselves (and they are typically far from establishing accountabilities).(6) For example:

- Australia's guidelines for follow-up cancer care address psychological care, as well as how to discuss the

Box 2: Equity considerations

A problem may disproportionately affect some groups in society. The benefits, harms and costs of options to address the problem may vary across groups. Implementation considerations may also vary across groups.

One way to identify groups warranting particular attention is to use "PROGRESS," which is an acronym formed by the first letters of the following eight ways that can be used to describe groups†:

- place of residence (e.g., rural and remote populations);
- race/ethnicity/culture (e.g., First Nations and Inuit populations, immigrant populations and linguistic minority populations);
- occupation or labour-market experiences more generally (e.g., those in "precarious work" arrangements);
- gender;
- religion;
- educational level (e.g., health literacy);
- socio-economic status (e.g., economically disadvantaged populations); and
- social capital / social exclusion.

The evidence brief strives to address all citizens, but (where possible) it also gives particular attention to two groups:

- individuals who are not linked to a multidisciplinary primary and/or community care team (e.g., Family Health Team or a Community Health Centre); and
- individuals with lower socio-economic status.

Many other groups warrant serious consideration as well (e.g., older patients or patients with particular co-morbidities), and a similar approach could be adopted for any of them.

† The PROGRESS framework was developed by Tim Evans and Hilary Brown (Evans T, Brown H. Road traffic crashes: operationalizing equity in the context of health sector reform. *Injury Control and Safety Promotion* 2003;10(1-2): 11–12). It is being tested by the Cochrane Collaboration Health Equity Field as a means of evaluating the impact of interventions on health equity.

- physical, sexual, emotional and familial concerns of cancer survivors;(7)
- New Zealand's cancer control strategy aims to improve quality of life through support and rehabilitation;(8)
 - United Kingdom's National Cancer Survivorship Initiative has been piloting new models of care and support for cancer survivors for four tumour areas: breast, colorectal, lung and prostate;(9) and
 - United States' American Society of Clinical Oncology offers a form, called a Survivorship Care Plan, based on specific clinical practice guidelines for certain types of cancer, which can be used to guide follow-up care for cancer patients as they transition into survivorship, and which summarizes critical information needed for the survivor's long-term care (e.g., cancer type, treatment received, timing and content of recommended follow-up, recommendation for preventive practices, and availability of psychosocial services in the community).(10)

Efforts have been made over the years by the Canadian federal government (and by initiatives it funds) to improve the quality of cancer care and the transition to survivorship for cancer patients. For example:

- Canadian federal government has funded the Canadian Partnership Against Cancer, an independent organization dedicated to accelerating action on cancer control for all Canadians;
- Cancer Guidelines Action Group of the Canadian Partnership Against Cancer has sponsored the Guidelines Capacity Enhancement Program to assist with the development of evidence-based guidelines and their use across Canada;
- Canadian Partnership Against Cancer has implemented Cancer Transitions, a program designed to help cancer patients make the transition from active treatment to post-treatment care; and
- Canadian federal government has announced a second five-year mandate for the Canadian Partnership Against Cancer to continue its implementation of Canada's national cancer control strategy.(11)

The Ontario provincial government and initiatives it funds have also made efforts to improve the quality of cancer care and address issues surrounding survivorship care for cancer survivors, including:

- Ontario provincial government funds Cancer Care Ontario, a provincial agency responsible for continually improving cancer services in Ontario;
- Ontario provincial government funds the Cancer Quality Council of Ontario, a group that monitors performance and quality indicators and advises Cancer Care Ontario and the Ontario Ministry of Health and Long-Term Care about how to improve the quality of cancer care in the province;
- Cancer Care Ontario first developed the Ontario Cancer Plan in 2005 to improve the quality of cancer care, with goal 4 of the 2008-2011 plan being to improve the patient experience along every step of the cancer journey, one objective of this goal being to increase patient support through the expansion of regional psychosocial oncology and patient education programs, and one initiative undertaken to achieve this objective being to launch a psychosocial oncology program;(12)
- Cancer Care Ontario has developed a new Ontario Cancer Plan for the 2011-2015 period, with goal 5 incorporating the commitment that "new models of funding and remuneration that support the delivery of multidisciplinary and patient-centred care will be in place to optimize the roles of healthcare professionals and improve care and provider satisfaction,"(13) which offers greater opportunity to align incentives and accountability to improve quality of care for cancer patients;
- Cancer Care Ontario funds the Provincial Primary Care and Cancer Network, a network that seeks to engage primary healthcare providers (specifically primary care physicians and nurse practitioners) more actively in their patient's cancer care;(14;15) and
- Ontario provincial government recently passed legislation, called the Excellent Care for All Act, that gives significant attention to enhancing quality of care across the healthcare system (not just in the cancer care sub-system).(16)

In the Hamilton Niagara Haldimand Brant region of Ontario, some initiatives have been developed to provide care and support for cancer patients during the post-treatment phase:

- the Local Health Integration Network (i.e., the regional health authority) funds a variety of community resources and other supports, such as mental health and addiction services and select community support services, that are available to (but not designed specifically for) cancer survivors;(17;18)
- the Hamilton regional cancer centre (formally called the Juravinski Cancer Centre), which serves the Hamilton Niagara Haldimand Brant region, operates the Supportive Care program through which health professionals drawn from a variety of disciplines work collaboratively to meet their patients' medical, physical, emotional social and spiritual needs;(19)
- the Hamilton regional cancer centre also operates the Out of the Shadows program, which is a psycho-educational wellness program for women completing treatment for early-stage breast cancer;(19) and
- the Hamilton regional cancer centre supports the Regional Supportive Cancer Network, which identifies and capitalizes on opportunities to collaborate with community oncology clinics and Family Health Teams to enhance the quality and continuity of care for patients.(20)

Complementary initiatives within the cancer sub-sector, to just give a few examples, have focused on Canadian research priorities for supporting cancer survivorship, Cancer Care Ontario's role in supporting survivorship, and a Toronto-based pilot of a model for enhancing transitions from treatment to survivorship. In March 2008, the Cancer Journey Action Group of the Canadian Partnership Against Cancer convened a national invitational survivorship workshop in Toronto, informed by an environmental scan,(21) to identify priorities for cancer survivorship research. (A similar workshop was convened in Vancouver eight months later).(22;23) More recently, the Canadian Cancer Society Research Institute announced the redesign of its research portfolio, with one long-term goal in the new research portfolio being to improve the quality of life for those living with and beyond cancer, and one focus of this goal will be to enhance survivorship research.(24) In November 2008, Cancer Care Ontario and the Cancer Quality Council of Ontario convened a survivorship care roundtable discussion in Toronto to determine the most effective and appropriate role that a cancer agency could play in improving care and support for patients in the recovery or post-treatment phase. From late 2009 through mid-2010, Princess Margaret Hospital and Women's College Hospital jointly supported the development of an advanced practice nurse-led clinic to accept patients referred from ambulatory care clinics at Princess Margaret Hospital, lead the post-cancer-treatment phase of care for these patients, and support their eventual transitions back to their respective primary care physicians.(25) This Toronto-based pilot was funded jointly by the Academic Health Science Centre (AHSC) Alternative Funding Plan (AFP) Innovation Fund and by the department of nursing at Princess Margaret Hospital, which limits its sustainability at the pilot site and its scalability to the provincial level, but which does provide the incentive to evaluate it carefully (as is being done).

Complementary initiatives in the broader healthcare system include the development of a variety of primary and community models of care (such as the Chronic Care Model), as well as models of primary/secondary care interaction (such as the shared care model and the integrated client care model), which have inspired those developing survivorship care plans for cancer patients.(26) The Chronic Care Model is particularly helpful in how it articulates the elements of what is likely needed in any plan. The model has six components:

- self-management support (i.e., empowering and preparing patients to manage their health and healthcare);
- decision support (i.e., promoting clinical care that is consistent with scientific evidence and patient preferences through, for example, embedding evidence-based guidelines, as well as related patient decision aids, into daily clinical practice, and supporting their implementation through continuing professional development);
- delivery system design (i.e., organizing programs and services to assure the proactive, culturally sensitive delivery of effective, efficient clinical care and self-management support by healthcare teams);
- clinical information systems (i.e., organizing patient and population data to facilitate more efficient care through, for example, an electronic health record that provides reminders for providers and patients and monitors the performance of healthcare teams and the system in which they work);
- health system changes (i.e., creating a culture, organization and mechanisms that promote safe, high quality care, which can include visibly supporting comprehensive system change that moves beyond "silos" for acute care, primary healthcare, public health, home care, and mental healthcare); and

- community resources (i.e., mobilizing community resources to meet the needs of patients even though these resources are not formally part of healthcare systems).(27)

The purpose of this evidence brief, which will be used to inform a stakeholder dialogue that brings stakeholders' views and experience to bear on the issue of enhancing survivorship care in the Hamilton Niagara Haldimand Brant region for cancer patients who transition from treatment to on-going monitoring and support in primary and community care settings, is to review the available data and research evidence about: 1) problems arising from the lack of a sustained approach to supporting cancer patients in the transition from receiving treatment in a cancer centre to survivorship in the community; 2) three options for addressing the problems and enhancing what is already being done; and 3) key implementation considerations for moving the options forward.

The following key features of existing health system arrangements that affect how patients access and receive care in hospitals, regional cancer centres, and in primary and community care environments were taken into account in the preparation of the evidence brief:

- the long-standing private delivery/public payment “bargain” between provincial governments and provincial medical associations, which has historically meant that most primary care is delivered by physicians working in private practice with first-dollar (i.e., no deductibles or cost-sharing), public (typically fee-for-service) payment (and without the service agreements with Local Health Integration Networks that are signed by most other healthcare providers, including community health centres);
- other healthcare providers such as nurses and psychologists are typically not eligible to receive public fee-for-service payment for leading independent healthcare practices (or at least not on terms that make these practices viable on a large scale), however, they may be paid to provide healthcare through targeted provincial or regional programs (as is the case for community-governed primary healthcare organizations, such as community health centres);
- Ontario programs provide supplementary coverage for prescription drugs and home care (especially for the elderly and those with low incomes), albeit not with the same type of first-dollar coverage provided for physician-provided (and hospital-based) care, but programs provide little supplementary coverage for psychosocial supports in the community;
- Ontario’s approach to cancer care is remarkably centralized compared to the approach used to support care for other conditions, with Cancer Care Ontario playing the role of a central funding and coordination agency and regional cancer centres delivering much of the care, which at least offers the potential for:
 - introducing greater flexibility in the breadth of settings (beyond hospitals) and providers (beyond physicians) that can be engaged in supporting survivorship;
 - implementing quality improvements, guidelines and standards for cancer survivorship care with the involvement of cancer care providers;
 - creating a laboratory for innovation in which successful pilots can be rolled out across the system using existing administrative mechanisms;
- Hamilton’s regional cancer centre will soon begin working in close partnership with a second regional cancer centre being planned for the Hamilton Niagara Haldimand Brant region, and the existing regional cancer centre, like most regional cancer centres, generally has close working relationships with the Local Health Integration Network and with local hospitals, but working relationships with local primary healthcare teams/networks and community care organizations are less close and more variable in nature; and
- Hamilton has the largest Family Health Team in the province, which provides significant opportunities for introducing and evaluating innovations in the region.

THE PROBLEM

The overarching problem is that the cancer care system lacks a sustained approach to supporting cancer patients in the transition from receiving treatment in a cancer centre (in this case, the Hamilton regional cancer centre) to survivorship in the community. This problem can be understood at a number of levels: 1) the burden of cancer is growing; 2) primary and community care programs intersect only minimally with cancer care programs; 3) a variety of gaps exist in the health system arrangements within which cancer care is provided, which limit the supports for cancer survivorship; and 4) existing implementation efforts are focused on earlier stages in the cancer care continuum (i.e., the transition from screening and diagnosis to treatment, rather than the transition from treatment to the community).

The burden of cancer is growing

The number of new cases of cancer is increasing in Ontario and locally. The number of new cases of cancer in the province increased in 2010 mostly because of population growth and aging.(28;29) The projected number of new cases of cancer in the Hamilton Niagara Haldimand Brant region in 2010 is 7,766 (compared to 66,341 in the province as a whole), with the prostate, lung, colorectal and breast cancer incidence rates being higher in the Hamilton Niagara Haldimand Brant region compared to the rest of Ontario, which is largely attributable to Hamilton's aging population.(1)

The survival of those diagnosed with cancer is also increasing, with the increase primarily due to earlier detection and improved treatment.(30) The five-year relative survival ratio for Canadians diagnosed with any type of cancer between 2004 and 2006 was 62%, which constitutes a six per cent increase from the 1992 to 1994 period.(1) More specifically the five-year relative survival ratio has increased for prostate cancer (to 96%), breast cancer (to 86%), and colon and rectum cancer (to 62%) over that time period, while remaining the lowest for lung cancer (at 15%).(1) The five-year relative survival ratio in Ontario from 2002-2006 varied considerably according to cancer type, at 90% or higher for thyroid and prostate cancer, and just under 90% for breast cancer, to less than 20% for lung and pancreatic cancer.(1) Prostate cancer and breast cancer have the highest prevalence in the Hamilton Niagara Haldimand Brant region because of their high incidence and good survival (a 96% relative survival rate for prostate cancer and an 87% relative survival rate for breast cancer).(1;31)

Many patients may experience physical, emotional and social late effects of treatment that might limit their quality of life (e.g., cardiac toxicity, weight gain and anxiety or depression) and require secondary cancer prevention (e.g., radiation-induced second malignancies), surveillance for recurrence, and health promotion to maximize their health outcomes.(32;33) Late effects like weight gain can, in turn, place cancer survivors at risk for recurrence, diabetes and cardiovascular risk factors.(34) In one American study, 43% of cancer survivors

Box 3: Mobilizing research evidence about the problem

The available research evidence about the problem was sought from a range of published and "grey" research literature sources. Published literature that provided a comparative dimension to an understanding of the problem was sought using three health services research "hedgies" in MedLine, namely those for appropriateness, processes and outcomes of care (which increase the chances of us identifying administrative database studies and community surveys). Published literature that provided insights into alternative ways of framing the problem was sought using a fourth hedge in MedLine, namely the one for qualitative research. Grey literature was sought by reviewing the websites of a number of Canadian and international organizations, such as the Institute for Clinical Evaluative Sciences, Ontario Health Quality Council, Cancer Care Ontario, Canadian Institute for Health Information, Health Council of Canada, European Observatory on Health Systems and Policies, Health Evidence Network, Health Policy Monitor, and Organization for Economic Co-operation and Development.

Priority was given to research evidence that was published more recently, that was locally applicable (in the sense of having been conducted in Canada), and that took equity considerations into account.

experienced psychological co-morbidity, which was predicted by factors such as disease progression, limited or detrimental social support, low education level, and an age of less than 50 years.(33)

The burden of cancer has a significant financial impact on the entire healthcare system. According to data from a Health Canada report entitled *The Economic Burden of Illness in Canada*, published in 2002, the costs that could be attributed to cancer were nine percent (\$14.2 billion) of the total cost of illness in Canada (\$159 billion) in 1998, which means that cancer ranks third after only cardiovascular disease (12 per cent) and musculoskeletal disease (10 per cent).(35)

Primary and community care programs intersect only minimally with cancer programs

The primary and community care sub-system and the cancer care sub-system often function in relative isolation from one another. The primary and community care sub-system is focused on providing continuous, comprehensive primary care through the lens of the whole person (e.g., addressing all co-morbidities, emotional and social issues, and ethnocultural issues),(36) while the cancer care sub-system is typically focused on providing secondary and tertiary care through the lens of one disease. Transitions from treatment in a regional cancer centre to survivorship in the community then require clarity about: 1) who will address the physical, emotional and social late effects of treatment that might limit the quality of life of survivors (primary and community care sub-system or cancer care sub-system); 2) who will provide secondary cancer prevention, surveillance for recurrence, and health promotion to maximize the health outcomes of survivors (primary and community care sub-system or cancer care sub-system); and 3) how the communication, coordination and integration between these sub-systems will work.(10)

At present, the cancer care sub-system delivers most of the existing programs for monitoring and supporting cancer survivors.(37) Moreover, these programs are organized primarily by disease site, so it is typically disease site leads and staff who prioritize, design and implement the programs. These decisions are usually made in light of existing staff and time constraints within the disease site program, or at most within the regional cancer centre. Opportunities to have at least some types of patients monitored and supported in primary and community care programs, as opposed to in the regional cancer centre, are typically not identified and pursued (although the nurse practitioner-led clinic that is jointly supported by Princess Margaret Hospital and Women's College Hospital is a notable exception).(38)

Two surveys, now seven and five years old, shed some light on primary care physicians' views about challenges and opportunities related to the intersection between primary care and cancer care. A 2004 survey of Ontario primary care physicians found that:

- cancer care and palliative care made up 24% and 34%, respectively, of their professional activity;(39) and
- they feel frustration about the ambiguity of their role and a lack of follow-up care guidelines to assist with monitoring and support for their cancer survivor patients.(40)

A 2006 survey of Canadian primary care physicians' views about routine follow-up care for cancer survivors found that a majority of primary care physicians responded that:

- specialist follow-up care for cancer is important because it ensures that patients are in the cancer sub-system should a recurrence develop (67.2%);
- patients expect to receive follow-up care by a cancer specialist (72%), and would not be adequately reassured if they receive exclusive follow-up from their primary care physician;
- with appropriate guidelines they would be willing to accept exclusive follow-up care for patients after treatment (50-55%); and
- if they are currently not providing follow-up care they may be apprehensive accepting responsibilities that might increase their workload.(41)

The latter point was reinforced through experience with an effort to support the transition of cancer survivors to primary care settings, which found that addressing the physical, emotional and social late effects

of treatment and providing secondary cancer prevention, surveillance for recurrence, and health promotion added significantly to physicians' workload and to their time-management challenge.(42)

The Ontario College of Family Physicians and Cancer Care Ontario co-hosted a symposium in 2007 to develop an action plan to begin the process of better integrating primary care practices and the cancer care sub-system. The two organizations identified the following barriers to integration:(43)

- lack of routine communication systems to share information among providers in the two sub-systems;
- lack of sharing between the two sub-systems of the latest clinical research, best practices and optimal care paths in cancer care;
- focus on isolated roles in identifying the educational needs of primary care physicians, cancer specialists, nurses, palliative care practitioners and public health experts, rather than a focus on meeting the needs of the cancer population throughout the care continuum;
- confusion among primary care physicians caring for patients with cancer about their role and responsibilities;
- time constraints faced by primary care physicians;
- lack of supports available to primary care physicians; and
- lack of collaborative practices among primary care physicians and the cancer care sub-system.

In response to the action plan created at the symposium, and in an effort to strengthen the connection between primary care and the cancer care sub-systems, Cancer Care Ontario created a Primary Care Program in 2008. However, the primary objective of the Primary Care Program is to improve screening and detection rates. The program has not yet developed an action plan to enhance the communication, coordination and integration between the cancer care sub-system and the primary care sub-system in order to support cancer survivorship (particularly among those practices that have embraced something like the Chronic Care Model and hence have instituted the types of coordinated and proactive care needed to support survivorship). The program has also not yet focused on the community care sub-system.

Gaps in health and social care system arrangements limit supports for cancer survivorship

A variety of gaps in the delivery, financial and governance arrangements within Ontario's health and social care systems likely contribute to the poor communication, coordination and integration between primary and community care and the cancer care sub-system. These gaps likely also contribute more generally to the lack of a sustained approach to supporting cancer patients in the transition from receiving treatment in a cancer centre to survivorship in the community.

One significant gap within the category of **delivery arrangements** is the limited attention given to identifying (and achieving consensus on) "packages" of cancer monitoring and support, and to identifying which "packages" can be delivered (and for which types of patients) in primary and community care settings, regional cancer settings or both (given co-morbidities, emotional and social issues, and ethnocultural issues among patients; the type of provider and technology and the complexity of care required; and cost-effectiveness considerations).

The content of these "packages" of care can be thought of in a variety of ways. The Institute of Medicine identified four essential elements: 1) prevention (e.g., of new cancers and late effects); 2) surveillance (e.g., cancer recurrence or second cancers); 3) intervention (e.g., consequences of cancer and its treatment); and 4) coordination (e.g., between specialist and primary care providers).(10) Presumably psychosocial support can be considered either a fifth element or an element of prevention, intervention or both.(44) In this brief we have grouped the elements slightly differently: 1) monitoring of physical, emotional and social late effects of treatment that might limit the quality of life of survivors (e.g., screening for psychosocial problems); 2) provision of appropriate secondary cancer prevention; 3) surveillance for recurrence; and 4) provision of

health promotion programs and services, which would include psychosocial care and self-management supports.

In the absence of agreement about the content or optimal provider of “packages” of care, perhaps it is not surprising that there is variation across Ontario’s regions (as defined by Local Health Integration Network boundaries) in the follow-up care provided to cancer patients (breast, colorectal, lung and prostate cancers combined) by primary care physicians and by oncologists.(45) However, it may be surprising to some that the cancer care sub-system is shouldering a greater share of the burden in the Hamilton Niagara Haldimand Brant region than in most other regions:

- the proportion of care provided to cancer patients by primary care physicians in Ontario ranged from a low of 47% in the Hamilton Niagara Haldimand Brant region to a high of 59% in the South East region (i.e., Belleville and surrounding area); and
- the highest proportion of visits to oncologists in Ontario was in the Hamilton Niagara Haldimand Brant region and in two other regions, namely the North West region (Thunder Bay and surrounding area) and the Central West region (Brampton and surrounding area).(46)

A variety of other gaps in delivery arrangements are spoken about (and some alluded to in the previous subsection) but also not well studied, including:

- disease site leads making decisions about supporting cancer survivorship in relative isolation from one another and from broader system developments;
- primary and community care providers playing variable roles in supporting cancer survivorship and those providers who wish to play a role receiving variable degrees of support from regional cancer centres;(47)
- patients not being well supported in self-management, including symptom monitoring and home-based care;(48)
- monitoring and support being centralized in regional cancer centres and little effort being made to enhance continuity of care as patients transition to the community;(49)
- many primary and community care providers not having electronic health records and, if they do, the records typically not being shareable with regional cancer centres;(50) and
- lack of a system-wide quality and safety monitoring system for primary and community care.(41)

A further challenge exists in how these delivery arrangements are organized into a coherent model. To our knowledge no research evidence is available about the proportion of primary and community care settings in Ontario that adhere to the six features of the Chronic Care Model,(51) which would be a good indication of their preparedness for providing the type of coordinated and proactive care needed to support survivorship in such settings. Similarly, no research evidence is available about the proportion of cancer survivors in Ontario receiving care in settings that adhere to a highly promoted model of shared care between oncologists and other physician groups providing care.(52) A survey of primary care physicians in the Niagara area (the southernmost part of the Hamilton Niagara Haldimand Brant region) found that the highest level of role satisfaction was expressed by physicians who reported being part of a coordinating team, suggesting that models that involve community physicians as team members and not as the sole coordinators of supportive cancer care are more likely to be successfully implemented.(49)

Financial arrangements in Ontario’s healthcare system contribute to the lack of a sustained approach to supporting cancer patients in the transition from receiving treatment in a cancer centre to survivorship in the community. For example, funding for cancer care does not extend to primary care and community care (or to some elements of supporting cancer survivorship, such as select diagnostic tests if ordered by primary and community care providers). The primary care remuneration (Ontario Health Insurance Plan) schedule does not make special provisions for supporting cancer care survivorship (for either routine payments or for financial incentives such as those provided for some other chronic conditions) or for the involvement of alternative providers in cancer care. Also, patients face no financial incentives for self-management, including their preventive or care-seeking behaviours.

Governance arrangements, while improving in their potential to strengthen communication, coordination and integration between sub-systems, also contribute to the lack of a sustained approach to supporting cancer survivorship. First and most promisingly, Cancer Care Ontario's stewardship role in supporting cancer survivorship has recently been extended through its Primary Care Program and its recruitment of primary healthcare leads in all Ontario regions. However, to date the focus has been on the early phases in the continuum of care (screening, diagnosis and treatment) and the stewardship role has not been extended to community care per se. Second, patients and their families have relatively little collective voice in the governance of healthcare practices and more specifically in how the system (and its sub-systems) supports cancer survivorship. Only Community Health Centres (of which there are only 54 in the province) and only one of the two main types of Family Health Teams (Community Family Health Teams, of which there are only five in Ontario) provide an explicit role for patients and citizens in their governance.(53)

It is important to note that while Ontario's cancer care leaders have noted elements of innovations in health system arrangements in select jurisdictions (e.g., British Columbia, Australia, New Zealand and the United Kingdom) that could be considered in Ontario, there is no one clear 'best practice' in supporting cancer survivorship against which Ontario's health system arrangements can be compared.

Existing implementation efforts are focused on earlier stages in the cancer care continuum

As mentioned previously, discussions about models of care at the provincial level are more focused on the transition from screening and diagnosis to treatment, not from treatment to the community. Moreover, when discussions do move to the latter, they tend to be very clinical in orientation, such as what signs and symptoms warrant a work-up, and not on the health system arrangements that would ensure communication, coordination and integration between the primary and community care sub-system and the cancer care sub-system. That said, preliminary work (through Cancer Care Ontario's Program in Evidence-based Care) has begun to use a systematic and transparent approach to develop a range of disease site-sensitive and setting-appropriate cancer survivorship support plans that can be implemented and monitored by any actor in the healthcare system.(54) As well, the models of palliative cancer care established by Cancer Care Ontario in 2004 can provide valuable guidance in the development of models of care for supporting cancer survivorship. The objective of the models of palliative care is to improve the organization and delivery of palliative cancer care in Ontario by emphasizing patient-centred care, interprofessional collaboration, and coordination and continuity of care across all care settings, which are all important components of models of care to support cancer survivorship in primary and community care settings.

Additional equity-related observations about the problem

The available data and research evidence about the problem is relatively silent about whether and how the above features of the problem play out differently for individuals who are not linked to a multidisciplinary primary and/or community care team (e.g., Family Health Team or a Community Health Centre), or for individuals with lower socio-economic status. When the data and research evidence do speak to either of these groups, it is more likely to be the latter. In the United States at least, the burden of cancer, specifically the risk of developing and dying from it, is greater in ethnic minority and medically underserved populations.(55) What has been much less studied is any differential access to, appropriateness of and impacts of cancer monitoring and support among different ethnocultural, vulnerable and geographically isolated populations, including what this means for the design of "packages" of care and decisions about who delivers them and where.(55)

THREE OPTIONS FOR ADDRESSING THE PROBLEM

Many options could be selected as a starting point for deliberations designed to inform future initiatives to support cancer patients in the transition from receiving treatment in a cancer centre (in this case, the Hamilton regional cancer centre) to survivorship in the community. To promote discussion about potentially viable options, three have been selected for more in-depth review. They include: 1) researchers develop cancer survivorship support plans; 2) the ministry accredits and incentivizes teams/centres to support cancer survivorship; and 3) the regional cancer centre purchases cancer survivorship supports. The focus in this section is on what is known about these options. In the next section the focus turns to the barriers to adopting and implementing these options and to possible implementation strategies to address the barriers.

Option 1 – Researchers develop cancer survivorship support plans

With this option, researchers would accelerate their use of a systematic and transparent approach to develop a range of disease site-sensitive and setting-appropriate cancer survivorship support plans that can be implemented and monitored by any actor in the healthcare system, as well as develop plans to support their local adaptation and implementation. This option might include:

- 1) describing the nature of optimal supports for cancer survivorship, which would include:
 - a. monitoring of physical, emotional and social late effects of treatment that might limit the quality of life of survivors (e.g., screening for psychosocial problems),
 - b. provision of appropriate secondary cancer prevention,
 - c. surveillance for recurrence, and
 - d. provision of health promotion programs and services, which would include psychosocial care and self-management supports;
- 2) selecting the optimal setting in which these supports would be provided and the rationale for their selection:
 - a. primary and community care settings by virtue of the holistic quality of care that can be provided (e.g., addressing co-morbidities, emotional and social issues, and ethnocultural issues) or the cost-effectiveness of care that can be provided,

Box 4: Mobilizing research evidence about options for addressing the problem

The available research evidence about options for addressing the problem was sought primarily from a continuously updated database containing more than 1,200 systematic reviews of delivery, financial and governance arrangements within health systems: Health Systems Evidence (www.healthsystemsevidence.org). The reviews were identified by searching the database for reviews addressing features of the options (first with cancer as a keyword to identify any ‘near perfect’ matches, and then, in their absence, to identify relevant reviews focusing on other conditions or dealing with the option feature in general terms). In order to identify evidence about costs and/or cost-effectiveness, the NHS Economic Evaluation Database (available through the Cochrane Library) was also searched using a similar approach.

The authors’ conclusions were extracted from the reviews whenever possible. Some reviews contained no studies despite an exhaustive search (i.e., they were “empty” reviews), while others concluded that there was substantial uncertainty about the option based on the identified studies. Where relevant, caveats were introduced about these authors’ conclusions based on assessments of the reviews’ quality, the local applicability of the reviews’ findings, equity considerations, and relevancy to the issue. (See Appendices for a complete description of these assessments.)

Being aware of what is not known can be as important as being aware of what is known. When faced with an empty review, substantial uncertainty, or concerns about quality and local applicability or lack of attention to equity considerations, primary research could be commissioned, or an option could be pursued and a monitoring and evaluation plan designed, as part of its implementation. When faced with a review that was published many years ago, an updating of the review could be commissioned if time allows.

No additional research evidence was sought beyond what was included in the systematic review. Those interested in pursuing a particular option may want to search for a more detailed description of the option or for additional research evidence about the option.

- b. regional cancer centre by virtue of the nature of the care required (e.g., type of provider and technology, complexity of care), and
 - c. a combination of both types of settings;
- 3) developing the optimal cancer survivorship support plan for each combination of disease site and setting (which would ideally draw on the input of patients and their families and on lessons learned from other jurisdictions that have developed evidence-based guidelines for cancer survivorship support (e.g., BC Cancer Agency)), evidence-based self-management supports for patients and their families, and implementation plans to support the use of these guidelines and self-management supports;
 - 4) grouping cancer survivorship support plans that share similar resources requirements;
 - 5) establishing indicators that could be used to monitor and evaluate the implementation of these cancer survivorship support plans; and
 - 6) developing plans to support the local adaptation and implementation of these cancer survivorship support plans.

A summary of the key findings from the synthesized research evidence is provided in Table 1. For those who want to know more about the systematic reviews contained in Table 1 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 1. Herewith a summary of the key messages from these reviews, by option element:

Describing the nature of optimal supports for cancer survivorship

- In terms of the provider of follow-up care for cancer patients after treatment or surgery that involves regular medical checkups and surveillance for the recurrence of cancer, there is no significant difference between generalist and specialist practitioners in terms of timeliness of recurrence detection, quality of life or overall survival for cancer patients. However, interventions for psychosocial support in primary care settings, particularly those that take patient preferences into consideration and those that are provided by a case manager, show significant improvements in quality of life. Peer-support for cancer survivors, such as telephone calls or internet-based peer support, has positive outcomes on knowledge and behaviour change, such as increased use of mammograms for breast cancer patients. There is no clear evidence on the psychosocial benefit of different peer-support interventions.
- The only physical and psychological harms associated with follow-up care for cancer survivors was identified for colon cancer patients who receive a colonoscopy after curative surgery for colorectal cancer. No reviews were identified that found physical or psychological harms for other types of cancers.

Selecting the optimal setting in which these supports would be provided and the rationale for their selection

- There are mixed findings on the impact of specialized (versus generalist) or multidisciplinary teams involving specialists and general practitioners in follow-up care for cancer survivors. Two reviews identified that long-term survival (e.g., mortality) for breast and ovarian cancer patients was better when follow-up care was provided in a specialized hospital. There was no significant difference in detection of recurrence and quality of life between follow-up provided by specialists versus general practitioners. However, patient satisfaction was greater among patients treated by general practitioners compared to specialists.
- Follow-up care provided by generalist physicians can reduce costs in the healthcare system compared to follow-up care provided by specialist physicians. There is no evidence of harms associated with the setting in which survivorship care is provided.

Developing the optimal cancer survivorship support plan for each combination of disease site and setting, evidence-based self-management supports for patients and their families, and implementation plans to support the use of these guidelines and self-management supports

- Actively involving cancer patients in the development of self-management supports (e.g., patient information materials) is important in reducing patient anxiety towards managing their health. On the other hand, patient-held records did not have an effect on clinical outcomes among cancer patients.

There is limited evidence on the effectiveness of exercise programs for cancer patients in reducing symptoms such as fatigue.

Grouping cancer survivorship support plans that share similar resources requirements

- No systematic reviews were found.

Establishing indicators that could be used to monitor and evaluate the implementation of cancer survivorship support plans

- Publicly releasing performance data and feedback on patient-reported outcomes measures has an impact on processes of care and quality improvement. Medical checklists can be effective in ensuring consistent care if basic requirements in their design include context, content, structure, images and usability.

Developing plans to support the local adaptation and implementation of these cancer survivorship support plans

- There are a number of supports that can assist healthcare providers in providing survivorship care: 1) integrated care programs (which include case management) have been shown to have a positive effect on the quality of life of cancer patients; 2) provider assessment and feedback interventions can increase screening for mammograms, Pap tests, and fecal blood tests; 3) an interdisciplinary model for cancer pain management can have positive effects on pain control, patient satisfaction, and adherence to pain assessment; and 4) provider reminder systems for preventive care can improve the quality of healthcare and health outcomes for racial/ethnic minorities.

Table 1: Summary of key findings from systematic reviews relevant to Option 1 – Researchers develop cancer survivorship support plans

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Describing the nature of optimal supports for cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, recent review found that there is an overall survival benefit for intensifying the follow-up of patients after curative surgery for colorectal cancer, but mixed effects on quality of life measures. There were no studies included in the review that identified a deterioration in quality of life.(56) ○ A high-quality, recent review found that peer-support telephone calls that involve mostly emotional support, can be effective for some health conditions, which can include increasing mammography usage in women aged over 40 years.(57) ○ A high-quality, older review found that internet-based peer support for people with chronic disease appears to have positive effects on knowledge, behaviour change, social support, and clinical outcomes.(58) ○ A medium-quality, recent review found that the components of effective primary care interventions for psychosocial care that significantly predict improvement in patient health outcomes were the provision of a case manager who provided direct feedback to general practitioners and delivered a psychological therapy, as well as the incorporation of patient preferences into care.(59) ○ A medium-quality, older review found that there was no significant difference in breast cancer patients receiving follow-up care involving routine clinical visits and yearly mammography compared with a more intensive follow-up that includes radiological or laboratory tests, in terms of timeliness of recurrence detection, overall survival and quality of life.(60) ○ A medium-quality, older review found that community-based educational interventions that were peer-led, incorporate multiple intervention strategies, or provide easy access via vans, low cost vouchers, home visits or telephone calls, were effective at increasing the uptake of mammography screening in low-income women. Also, the provision of information on how to obtain mammograms has a statistically significant increase in screening.(61) • Selecting the optimal setting in which these supports would be provided and the rationale for their selection <ul style="list-style-type: none"> ○ A medium-quality, older review found a statistically significant impact of specialized care in cancer centres on five-year mortality for breast cancer patients. Studies including breast cancer patients showed an 18% reduction in mortality when treated either by specialist

	<p>clinicians or in specialist centres.(62)</p> <ul style="list-style-type: none"> ○ A medium-quality, older review found that patient satisfaction was greater among patients treated by general practitioners (compared to specialists). However, in one randomized controlled trial there was no significant difference found with respect to timeliness of detection of recurrence, overall survival and quality of life between follow-up care performed by specialists versus generalist practitioners.(60) ○ A medium quality, older review found that increased accessibility to physician care was effective in improving health outcomes of patients, reducing total costs in the healthcare system, and with an increase in patient satisfaction.(63) ○ A low-quality, recent review found that long-term survival for ovarian cancer patients after treatment was better when provided by oncologists in a specialized hospital. However, the actual effect size was not reported.(64) ○ A low-quality, recent review found that primary care contributes to overall health system performance and quality of health through its core dimensions of governance, economic conditions, workforce development, access, continuity of care, coordination of care, comprehensiveness of care, quality of care, efficiency of care, and equity in health. Patient satisfaction is associated with all core dimensions except comprehensiveness.(65) <ul style="list-style-type: none"> ● Developing the optimal cancer survivorship support plan for each combination of disease site and setting, evidence-based self-management supports for patients and their families, and implementation plans to support the use of these guidelines and self-management supports <ul style="list-style-type: none"> ○ A high-quality, older review found that involving consumers in the development of patient information material results in material that is more relevant, readable and understandable to patients, without affecting their anxiety.(66) ○ A medium quality, older review found that patient-held records did not have an effect on clinical outcomes.(67) ○ A low-quality, recent review found that self-management programs and self-efficacy enhancing programs have beneficial effects on exercise adherence and later exercise behaviour for cancer patients.(68) ○ A low-quality, older review found that the impact of a physical training program for cancer patients was most effective during and after completion of cancer treatment.(68) ○ A recent synthesis (for which no rating tool exists) found that interventions that involve people with low literacy in decision-making have shown mixed results, with some leading to improved knowledge and comprehension. Information in other electronic formats has shown mixed results in improving knowledge, but it can have beneficial effects on patients' confidence and ability to be involved in decisions.(69) ● Establishing indicators that could be used to monitor and evaluate the implementation of cancer survivorship support plans <ul style="list-style-type: none"> ○ A medium-quality, recent review found that publicly releasing performance data stimulates quality improvement activity at the hospital level.(70) ○ An older synthesis (for which no rating tool exists) found that there are a number of factors to take into consideration to develop an effective reporting program, such as objectives of the reporting program, audience, content, products, distribution and impacts.(71) ○ A low-quality, recent review found that the primary components of designing an effective medical checklist to ensure consistent care include basic requirements for context, content, structure, images and usability.(72) ○ A low-quality, older review found that feedback of patient-reported outcome measures to healthcare providers appears to have a substantial impact on some processes of care, particularly on diagnosis of mental health conditions.(73) ● Developing plans to support the local adaptation and implementation of these cancer survivorship support plans <ul style="list-style-type: none"> ○ A medium-quality, recent review found that integrated care programs (which commonly include case management) appear to have a positive effect on the quality-of-life of cancer patients. Interventions that were effective include providing an audiotape of the consultation to the patient, providing information to the patient, and use of decision aid. However, there is substantial variability across studies in the program components being examined.(74) ○ A medium-quality, recent review found that incentives and provider assessment and feedback encourage providers to deliver screening services at appropriate intervals. Evidence in these reviews indicates that provider assessment and feedback interventions can effectively increase screening by mammography, Pap test, and fecal occult blood test.(75) ○ A medium-quality, recent review found that three organizational models for cancer pain management involving an interdisciplinary approach – institutionalization model, clinical or critical pathway model, and pain consultation model – showed positive results for pain control, patient satisfaction, use of pain assessment tools and adherence to pain assessment.
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	<p>However, the level of evidence for most of the studies included is low.(76)</p> <ul style="list-style-type: none"> ○ A medium-quality, older review suggests that access is improved by changing the ways in which primary care is delivered, however, the review is not cancer specific. Key findings included: 1) first-wave personal medical services pilots facilitated improvements in access to primary care in previously under-served areas and/or populations; 2) there is some evidence that telephone consultations with general practitioners or nurses can safely substitute for face-to-face consultations, although it is not clear that this reduces the number of face-to-face consultations over time; and 3) nurse practitioners and community pharmacists can manage common conditions without the patient consulting a general practitioner.(77) ○ A medium-quality, older review found that a provider reminder system for the provision of standardized (mostly preventive) services to improve healthcare quality and outcomes for racial/ethnic minorities had favourable outcomes.(78)
Potential harms	<ul style="list-style-type: none"> ● Describing the nature of optimal supports for cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, older review identified only one study on the potential physical and psychological harm from the follow-up of patients receiving a colonoscopy after curative surgery for colorectal cancer (which was a higher perforation rate).(56)
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> ● Describing the nature of optimal supports for cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, older review found that there is no evidence on the costs of intensifying follow-up of patients after curative surgery for colorectal cancer.(56) ○ A medium-quality, older review found little evidence on the costs of provider reminder systems to improve quality of care by healthcare providers.(78)
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> ● Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ Grouping cancer survivorship support plans that share similar resources requirements ● Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no ‘empty’ reviews were found) ● No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Describing the nature of optimal supports for cancer survivorship <ul style="list-style-type: none"> ▪ A medium-quality, recent review found that the evidence of psychosocial benefit of face-to-face (one-on-one and group), telephone (one-on-one and group) and internet-based peer-support for patients with cancer is not clear.(79) ○ Selecting the optimal setting in which these supports would be provided and the rationale for their selection <ul style="list-style-type: none"> ▪ A low-quality, recent review found very few studies and limited evidence on the effectiveness of multidisciplinary teams involving specialists and general practitioners on survival for patients with lung cancer.(80) ○ Developing the optimal cancer survivorship support plan for each combination of disease site and setting, evidence-based self-management supports for patients and their families, and implementation plans to support the use of these guidelines and self-management supports <ul style="list-style-type: none"> ▪ A low-quality, recent review found the effects of exercise for cancer patients on fatigue and role functioning are ambiguous.(68) ▪ A low-quality, older review found limited evidence in the area of primary care on the effects involving people affected by cancer in policy and planning. It is also not clear how much power and influence people have in their involvement in decision-making.(81) ○ Establishing indicators that could be used to monitor and evaluate the implementation of cancer survivorship support plans <ul style="list-style-type: none"> ▪ A medium-quality, recent review found that the long-term impact and effectiveness of formative performance assessments of doctors on education and quality of care remains unclear.(82) ▪ A medium-quality, older review found little evidence on the effectiveness of organizational assessments used in general practice settings.(83) ▪ A low quality, older review found that the impact of the use of patient-reported outcome measures (PROMs) by healthcare providers on patient health status is unclear.(73)
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> ● Not applicable (i.e., no reviews of process evaluations were identified)
Stakeholders’ views and experience	<ul style="list-style-type: none"> ● Describing the nature of optimal supports for cancer survivorship <ul style="list-style-type: none"> ○ A medium-quality, recent review found that patients with cancer indicate a high level of satisfaction with peer-support programs.(79)

Option 2 – Ministry accredits and incentivizes teams/centres to support cancer survivorship

With this option, the Ontario Ministry of Health and Long-Term Care would accredit and incentivize primary healthcare teams and community care centres to become engaged in supporting cancer survivorship in the community. This option might involve:

- 1) identifying the types of primary healthcare teams (e.g., Family Health Teams) and community health centres (e.g., Community Health Centres) and the types of team members or centre staff (e.g., physicians, nurse practitioners, psychologists, psychiatric nurse specialists, social workers and spiritual advisors) that could become engaged in supporting cancer survivorship (or executing cancer survivorship support plans if option 1 is also pursued);
- 2) establishing an accreditation mechanism for eligible teams and centres and ensuring that existing regulations permit the most appropriate providers to function within these teams and centres, and that existing provincial policies permit these teams and centres to access needed diagnostic technologies;
- 3) funding eligible and accredited teams/centres to support cancer survivorship (or execute cancer survivorship support plans) and remunerating the most appropriate providers to function within these funded teams and centres; and
- 4) continuing to remunerate physicians and other healthcare providers who function within these funded teams and centres, and target at least some financial incentives to supporting cancer survivorship (or executing cancer survivorship support plans).

A summary of the key findings from the synthesized research evidence is provided in Table 2. For those who want to know more about the systematic reviews contained in Table 2 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 2. Herewith a summary of the key messages from these reviews, by option element:

Identifying the types of teams/centres and members/staff that could become engaged in supporting cancer survivorship

- Patient satisfaction with nurse-led follow-up care for cancer survivors was high. However, the impact on psychosocial outcomes from nursing interventions is not clear. There was no evidence found on potential harms associated with teams/centres and staff providing cancer survivorship care. Evidence on the cost of nurse-led follow-up versus physician-led follow-up is unclear.

Establishing an accreditation mechanism for eligible teams/centres and ensuring that existing regulations/policies permit optimal professional roles and diagnostic test access

- Accreditation programs are positively linked with professional development of health professionals and with promoting change in health organizations. However, there is uncertainty regarding benefits, with one review demonstrating inconsistent findings in the impact of accreditation on professionals' attitudes to accreditation, organizational impact, financial impact, quality measures and program assessment

Funding eligible and accredited teams/centres to support cancer survivorship (or execute cancer survivorship support plans) and remunerating the most appropriate providers to function within these funded teams and centres

- There is uncertainty regarding the benefits of funding teams/centres to support cancer survivorship. An increase in cost was found with capitated funding models that include acute and long-term care services, case management and subsidized community services for individuals with dementia.

Continuing to remunerate members/staff and targeting at least some financial incentives to support cancer survivorship

- With fee-for-service remuneration, primary care physicians provide more primary care visits and greater continuity of care. There is little evidence on the effects of salaried payment on efficiency and equity of care provided to patients. No clear message was found on the effects of financial incentives measures for

cancer screening guidelines. Also, potential harms were associated with the use of financial incentives for physicians, including limited access to certain types of care, lack of continuity of care, and conflict of interest between physicians and patients.

Table 2: Summary of key findings from systematic reviews relevant to Option 2 – Ministry accredits and incentivizes teams/centres to support cancer survivorship

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Identifying the types of teams/centres and members/staff that could become engaged in supporting cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, recent review found a statistically significant difference in patient satisfaction with nurse-led follow-up care for cancer patients. However, there was no statistically significant differences in survival, recurrence or psychological morbidity with nurse-led follow-up.(84) • Establishing an accreditation mechanism for eligible teams/centres and ensuring that existing regulations/policies permit optimal professional roles and diagnostic test access <ul style="list-style-type: none"> ○ A low-quality, recent review found that accreditation programs were positively linked with the professional development of health professionals and with promoting change in health organizations.(85) • Continuing to remunerate members/staff and targeting at least some financial incentives to supporting cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, older review and a medium-quality, older review found that under fee-for-service primary care, physicians provide more primary care visits/contacts, referrals to specialists and diagnostic and curative services. However, they provided fewer hospital referrals and repeat prescriptions compared with a capitation model. Also, fee-for-service payment had an effect on greater continuity of care and higher compliance with recommended numbers of visits. There was no evidence of an effect of remuneration mechanism on patient health status. No studies included cancer patients.(86;87) ○ A high-quality, older review found that the use of target payments in the remuneration of primary care physicians was associated with improvements in immunization rates, but the increase was statistically significant in only one of the two studies examined. No cancer-related studies were included in the review.(88) ○ A medium-quality, older review found that physician-level financial incentives had partial or positive effects on measures of quality in five of six studies, and provider-level financial incentives had similar effects in seven of nine studies.(89) ○ A medium-quality, older review found only one study of financial incentives that had a positive and significant outcome, and in this case increasing financial incentives translated into provision of more preventive care.(90)
Potential harms	<ul style="list-style-type: none"> • Continuing to remunerate members/staff and targeting at least some financial incentives to supporting cancer survivorship <ul style="list-style-type: none"> ○ A low-quality, recent review identified several risks associated with the use of financial incentives for physicians, such as limited access to certain types of care, lack of continuity of care, and conflict of interest between the physician and the patient.(91)
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> • Identifying the types of teams/centres and members/staff that could become engaged in supporting cancer survivorship <ul style="list-style-type: none"> ○ A high-quality, recent review identified one study (of four included studies) that examined costs, and the study found that the cost of nurse-led follow-up was less than that of physician-led follow-up, however, no statistical comparison was made.(84) • Funding eligible and accredited teams/centres and remunerating the most appropriate providers to support cancer survivorship <ul style="list-style-type: none"> ○ A low-quality, older, non-cancer-focused review found that capitated care models that include acute and long-term care services, case management and subsidized community services for individuals with dementia were associated with increased costs.(92)

<p>Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)</p>	<ul style="list-style-type: none"> • Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ Not applicable (i.e., reviews were found for all option elements) • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no ‘empty’ reviews were found) • No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Identifying the types of teams/centres and members/staff that could become engaged in supporting cancer survivorship <ul style="list-style-type: none"> ▪ A high-quality review found limited evidence to identify the components of nursing interventions that affect the quality of life of women with breast cancer. Three studies assessing psychosocial nursing interventions related to diagnosis and early treatment found that breast care nurses could affect some components of quality of life, such as anxiety and depressive symptoms, but the impact on social and functional aspects of the disease trajectory were inconclusive.(93) ○ Funding eligible and accredited teams/centres and remunerating the most appropriate providers to support cancer survivorship <ul style="list-style-type: none"> ▪ A low-quality, recent review found inconsistent findings with regards to the impact of accreditation on professions’ attitudes to accreditation, organizational impact, financial impact, quality measures and program assessment.(85) ○ Continuing to remunerate members/staff and targeting at least some financial incentives to supporting cancer survivorship <ul style="list-style-type: none"> ▪ A low-quality, older review found inconclusive evidence to suggest that salaried payment is associated with a lower use of test and referrals compared with fee-for-service and capitation; the review also found no clear evidence on the impact of salaried payment on cancer screening. The review identified inconclusive findings in terms of the impact of salaried payment on efficiency and equity of care provided.(94) ▪ No clear messages were derived in the reviews about the effects of financial incentives (e.g., financial bonuses) and the use of performance feedback on quality of care measures for cancer screening guidelines.(90;95) Similarly, no clear evidence was found on the impact of financial incentives on physician performance.(90)
<p>Key elements of the policy option if it was tried elsewhere</p>	<ul style="list-style-type: none"> • Not applicable (i.e., no reviews of process evaluations were identified)
<p>Stakeholders’ views and experience</p>	<ul style="list-style-type: none"> • Not applicable (i.e., no reviews of qualitative studies of stakeholders’ views and experiences were identified)

Option 3 – Regional cancer centre purchases cancer survivorship supports

This option involves the Hamilton regional cancer centre (with funding from Cancer Care Ontario) becoming a purchaser of cancer survivorship supports in primary and community care settings and developing a seamless, disease site-sensitive approach to supporting cancer survivorship in the community. This option could involve:

- 1) identifying local primary healthcare teams and community care centres that are interested in becoming engaged in supporting cancer survivorship (or executing cancer survivorship support plans if option 1 is pursued) within the context of a Chronic Care model;
- 2) ensuring that existing local operating procedures permit these teams and centres to access needed diagnostic technologies;
- 3) funding interested teams/centres to become engaged in supporting cancer survivorship (or executing cancer survivorship support plans);
- 4) establishing educational, coaching, technical and referral supports for funded teams/centres;
- 5) monitoring and evaluating funded teams/centers; and
- 6) establishing financial incentives for self-management among patients.

A summary of the key findings from the synthesized research evidence is provided in Table 3. For those who want to know more about the systematic reviews contained in Table 3 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 3. Herewith a summary of the key messages from these reviews, by option element:

Identifying local teams/centres that are interested in becoming engaged in supporting cancer survivorship within the context of a Chronic Care model

- No systematic reviews were found.

Ensuring that existing local operating procedures permit diagnostic test access

- No systematic reviews were found.

Funding interested teams/centres to become engaged in supporting cancer survivorship

- There was no evidence from systematic reviews on funding interested teams/centres in cancer survivorship care. One review showed that capitated care models and consumer-directed care for home-based and community service are associated with greater client and caregiver welfare. However, these models are associated with increased costs.

Establishing educational, coaching, technical and referral supports for funded teams/centres

- Internet-based learning, electronic continuing education interventions, educational meetings, collaborative learning, health information technology, and computerized clinical decision support systems have been found to lead to some improvements in healthcare provider knowledge and behaviour, and in provider performance and patient outcomes. Only one review included studies on the effectiveness of educational meetings for improving the detection of cancer, and it did not find an impact on professional practice. Evidence of the clinical benefits of information and communication technologies is unclear.

Monitoring and evaluating funded teams/centres

- As summarized for option 1 as well, publicly releasing performance data and feedback on patient-reported outcomes measures has an impact on processes of care and quality improvement. Medical checklists can be effective in ensuring consistent care if basic requirements in their design include context, content, structure, images and usability.

Establishing financial incentives for self-management among patients

- Economic incentives to encourage consumers’/patients’ preventive health behaviours are effective in the short run. There is no evidence of harms associated with financial incentives for consumers/patients.

Table 3: Summary of key findings from systematic reviews relevant to Option 3 – Regional cancer centre purchases cancer survivorship supports

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Funding interested teams/centres to become engaged in supporting cancer survivorship <ul style="list-style-type: none"> ○ A low-quality, older review found that capitated care models and consumer-directed care for home-based and community services were associated with greater client and caregiver welfare, but with increased costs.(92) • Establishing educational, coaching, technical and referral supports for funded teams/centres <ul style="list-style-type: none"> ○ A high-quality, older review found that educational meetings (e.g., courses, conference, lectures, workshops, seminars and symposia) for physicians, alone or combined with other interventions, improved professional practice. However, there were no firm conclusions about the effectiveness of educational meetings compared to other interventions. Seven studies of 81 targeted interventions for improving the detection of cancer, and these studies did not find any statistically significant impact of educational meetings on professional practice.(96) ○ A medium-quality, recent review found that internet-based learning is educationally beneficial and can achieve results similar to those of traditional instructional methods. One of the 214 included interventions in the review examined internet-based oncology teaching for medical students, as an adjunct to an existing course on lung cancer, and found that it yielded a negative effect size.(97) ○ A medium-quality, recent review found a positive effect of electronic continuing education interventions on healthcare provider knowledge and healthcare provider behaviour.(98) ○ A medium-quality, older review found that learners responded well to interprofessional education, that knowledge and skills necessary for collaborative practice were learned, and that there were positive changes in behaviour, service organization and patient/client care.(99) ○ A medium-quality, older review found a positive impact with electronic medical records, computerized prompts, population management, specialized decision support, electronic scheduling, and personal health records on chronic illness care. No studies examined the effects of health information technology in cancer care.(100) ○ A medium-quality, older review found benefits of increased adherence to guideline-based care, enhanced surveillance and monitoring, and decreased medication errors with the use of health information technology. One study of 257 found a positive effect of a computer-based risk assessment program for cancer.(101) ○ A medium-quality, older review found that improved practitioner performance and patient outcomes were associated with computerized clinical decision support systems.(102) • Monitoring and evaluating funded teams/centers (as summarized also for option 1) <ul style="list-style-type: none"> ○ A medium-quality, recent review found that publicly releasing performance data stimulates quality improvement activity at the hospital level.(70) ○ A low quality, recent review found that the primary components of designing an effective medical checklist to ensure consistent care include basic requirements for context, content, structure, images and usability.(72) ○ A low-quality, older review found that feedback of patient-reported outcome measures to healthcare providers appears to have a substantial impact on some processes of care, particularly on diagnosis of mental health conditions.(73) • Establishing financial incentives for self-management among patients <ul style="list-style-type: none"> ○ A medium-quality, older review found that economic incentives for consumers’ preventive health behaviours are effective in the short run.(103)
Potential harms	<ul style="list-style-type: none"> • Not applicable (i.e., harms were not addressed in the available systematic reviews)
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> • Funding interested teams/centre to become engaged in supporting cancer survivorship (or executing cancer survivorship support plans) <ul style="list-style-type: none"> ○ A medium-quality, older review described that the costs of health information technology serves as a barrier to the implementation of information systems in the care of chronic illness.(100) ○ A low-quality, older review found that capitated care models and client-directed care for home and community-based services were associated with increased costs.(92)

<p>Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)</p>	<ul style="list-style-type: none"> • Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ Identifying local teams/centres that are interested in becoming engaged in supporting cancer survivorship within the context of a Chronic Care model ○ Ensuring that existing local operating procedures permit diagnostic test access • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Establishing educational, coaching, technical and referral supports for funded teams/centres <ul style="list-style-type: none"> ▪ A medium-quality, older review found little evidence of any funding barriers in relation to developing and delivering interprofessional education interventions.(99) • No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Establishing educational, coaching, technical and referral supports for funded teams/centres. <ul style="list-style-type: none"> ▪ A medium-quality, older review found that the evidence about the clinical benefits of information and communication technologies for managing chronic disease is unclear.(104) ▪ A medium-quality, older review found inconsistent findings on the effects of computerized clinical decision support systems on patient outcomes.(102)
<p>Key elements of the policy option if it was tried elsewhere</p>	<ul style="list-style-type: none"> • Not applicable (i.e., no reviews of process evaluations were identified)
<p>Stakeholders' views and experience</p>	<ul style="list-style-type: none"> • Not applicable (i.e., no reviews of qualitative studies of stakeholders' views and experiences were identified)

Additional equity-related observations about the three options

As this research evidence suggest, very little is known about the three options in relation to individuals who are not linked to a multidisciplinary primary and/or community care team, (e.g., Family Health Team or a Community Health Centre) and individuals with low-socio-economic status. Only one medium-quality, older review specifically examined one of these groups, and it found that the use of a provider reminder system for the provision of preventive services improved healthcare quality and outcomes for racial/ethnic minorities.(78)

IMPLEMENTATION CONSIDERATIONS

Table 4: Potential barriers to implementing the options

Levels	Option 1 – Researchers develop cancer survivorship support plans	Option 2 – Ministry accredits and incentivizes teams/centres to support cancer survivorship	Option 3 – Regional cancer centre purchases cancer survivorship supports
Patient/Individual	Patients and their families may be concerned that they do not have the ability to play a meaningful role in these support plans, particularly if they have other co-morbidities or complex personal situations	Patients may resist plans for delivering survivorship care that do not actively engage them and their families	Patients and their families may be concerned that they do not have the ability to play a meaningful role in these support plans, particularly if they have other co-morbidities or complex personal situations Patients may resist plans for delivering survivorship care that do not actively engage them and their families Patients and their families may reduce their commitment to self-management as the impact of financial incentives decreases over time (103)
Care provider	Primary care providers may resist the use of cancer survivorship support plans given their resource requirements and the additional responsibility, particularly for patients with multiple co-morbidities Primary care providers may not have the knowledge and skills needed to support self-management and provide links to community-based services	Primary care providers may resist accreditation and incentives as a form of infringement on their professional and commercial autonomy Oncologists may resist taking on roles required by survivorship care plans	Primary care providers may resist interdisciplinary training and supports Oncologists may resist taking on roles required by survivorship care plans
Organization	Disease site teams may not support or participate in the development of cancer survivorship support plans and/or use the plans once they are developed	Physicians or family health teams may not have electronic health records or patient reminder systems to assist with follow-up care for patients Other healthcare providers such as nurses and psychologists are not eligible to receive public fee-for-service payment for supporting cancer survivorship	Physicians or family health teams may not have electronic health records or patient reminder systems to assist with follow-up care for patients
System	Provincial government may be unwilling to finance/support the monitoring and evaluation of survivorship care plans	Provincial government may be unwilling to finance/support the implementation of survivorship care plans and/or the engagement of primary and community care providers	Provincial government may be unwilling to finance/support Cancer Care Ontario in financing/supporting the implementation of survivorship care plans

Many implementation strategies could be considered for any given option. However, given that several options could be pursued simultaneously and that option elements could be combined in different and creative ways, identifying ‘cross-cutting’ implementation strategies could be an important first step. One possible cross-cutting implementation strategy would be to focus initially on launching a participatory process of developing cancer survivorship support plans and creating a “one-stop shop” that includes these plans,

supplementary resources and listings of community support services available to patients and their families, and supplementary resources for motivated primary care teams and community care centres that wish to work in partnership with the regional cancer center. This strategy would complement the work that Cancer Care Ontario is already doing with the Canadian Cancer Society, which focuses on developing an electronic tool to support cancer patients as they move through the diagnostic phase of their interaction with the cancer sub-system.(13)

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APPENDICES

The following tables provide detailed information about the systematic reviews identified for each option. Each row in a table corresponds to a particular systematic review and the reviews are organized by option element (first column) and, within each option element, with high quality, recent and cancer-focused reviews appearing first, and lower quality, older and non-cancer-focused reviews appearing later. The focus of the review is described in the second column. Key findings from the review that relate to the option are listed in the third column, while the fourth column records the last year the literature was searched as part of the review.

The fifth column presents a rating of the overall quality of the review. The quality of each review has been assessed using AMSTAR (A MeaSurement Tool to Assess Reviews), which rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered “high scores.” A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (See Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8.)

The last three columns convey information about the utility of the review in terms of local applicability, applicability concerning prioritized groups, and issue applicability. The third-from-last column notes the proportion of studies that were conducted in Canada, while the second-from-last column comments on the proportion of studies included in the review that deal explicitly with one of the prioritized groups. The last column indicates the review’s issue applicability in terms of the proportion of studies focused on cancer.

All of the information provided in the appendix tables was taken into account by the evidence brief’s authors in compiling Tables 1-3 in the main text of the brief.

Appendix 1: Systematic reviews relevant to Option 1 - Researchers develop cancer survivorship support plans

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
Describing the nature of optimal supports for cancer survivorship, which would include: a. monitoring of physical, emotional and social late effects of treatment that might limit the quality of life of survivors (e.g., screening for psychosocial problems), b. provision of appropriate secondary cancer prevention, c. surveillance for recurrence, and d. provision of health promotion programs and services, which would include psychosocial	Comparing follow-up strategies for patients with colorectal cancer(56)	<p>There is an overall survival benefit for intensifying the follow-up of patients after curative surgery for colorectal cancer.</p> <p>Psychological effects of follow-up were investigated in some of the studies. These studies reported mixed effects on quality of life measures but no study reported a deterioration in quality of life.</p> <p>Only one study reported on the potential harm (physical and psychological) from follow-up.</p> <p>There is no evidence on the costs of intensifying follow-up for these patients.</p>	2006	10/11	0/8	0/8	8/8
	Effectiveness of follow-up strategies for breast cancer patients after treatment(60) (Note that this review is used again for another option element below)	<p>There was no significant difference in breast cancer patients receiving follow-up care involving routine clinical visits and yearly mammography compared with a more intensive follow-up that includes radiological or laboratory tests, in terms of timeliness of recurrence detection, overall survival and quality of life.</p> <p>One randomized controlled study compared follow-up performed by a hospital-based specialist to follow-up performed by general practitioners and found that there was no significant differences in time to detection of recurrence and quality of life. However, patient satisfaction was greater among</p>	2004	6/11	Not reported	Not reported	4/4

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
care and self-management supports		patients treated by general practitioners.					
	Effectiveness of community-based educational interventions in increasing mammography screening in low-income women(61)	<p>Interventions that were peer-led, incorporate multiple intervention strategies, or provide easy access via vans, low cost vouchers or home visits, were effective at increasing the uptake of screening. Four studies evaluated home visits as the primary intervention, of which three showed significant increases in the uptake of mammography screening.</p> <p>One study showed the use of bilingual health educators to deliver community-based education was not associated with a statistically significant increase in the uptake of mammography screening. The provision of information on how to obtain mammograms in addition to core education was associated with a statistically significant increase in the uptake of mammography screening.</p> <p>The use of telephone calls showed a significant increase in the uptake of mammography screening.</p>	2003	4/11	Not reported	24/24	24/24

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effectiveness of primary care interventions for psychosocial care(59)	<p>Components of an effective primary care intervention for psychosocial care which were found to significantly predict improvement were the provision of a case manager who provided direct feedback and delivered a psychological therapy, and incorporated patient preferences into care. Nurse, psychologist and psychiatrist delivered care were effective.</p> <p>Where the case manager provided direct feedback to general practitioners and where the case manager provided some form of enhanced care to patients, such as the delivery of a psychological therapy, outcomes were significantly better.</p>	2005	4/10	Not reported	Not reported	Not reported
	Effectiveness of face-to-face (one-on-one and group), telephone (one-on-one and group) and internet-based peer-support(79)	Patients with cancer indicate a high level of satisfaction with peer-support programs. However, evidence of psychosocial benefit is not clear.	2007	6/10	6/43	Not reported	43/43
	Effectiveness of peer-support telephone calls(57)	Telephone peer support can be effective for some health conditions. The main type of support provided was emotional. There was an effect in increasing mammography usage in women aged over 40 years.	2007	9/11	2/7	Not reported	2/7
	Effectiveness of internet-based peer support(58)	Internet-based peer support for people with chronic disease appears to have positive effects on knowledge, behaviour change, social support, and clinical outcomes.	2003	10/11	0/24	Not reported.	3/24
Selecting the optimal setting in which these supports would be provided and the rationale for their	Effects of specialized care settings for cancer patients(64)	Long-term survival for ovarian cancer patients was better after treatment in a specialized hospital, but the exact size of the effect is not clear. Also, characteristics of the hospitals in the studies were not reported.	2006	4/11	5/19	Not reported	19/19

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
selection: a. primary and community care settings by virtue of the holistic quality of care that can be provided (e.g., addressing co-morbidities, emotional and social issues, and ethnocultural issues) or the cost-effectiveness of care that can be provided, b. regional cancer centre by virtue of the nature of the care required (e.g., type of provider and technology, complexity of care), and c. a combination of both types of settings	Impact of specialization on processes and outcomes of care for cancer patients(62)	Eleven observational studies showed that specialized clinicians and cancer centres had outcomes of care for cancer patients (e.g., five- or three-year mortality) that were statistically significant. Patients had a lower risk of long-term mortality when cared for by specialized centres/clinicians. However, there was a lack of studies with contrary results. All studies including breast cancer patients showed lower five-year mortality (specifically an 18% reduction in mortality) when treated either by specialist clinicians or in specialist centres (regardless of the definition as cancer centres, teaching institutions, and larger hospitals).	1995	6/11	1/47	Not reported	47/47
	Effectiveness of multidisciplinary teams among specialists and general practitioners for patients with lung cancer(80)	One systematic review found very few studies of the impact of multidisciplinary (MD) care and only limited evidence that MD working improves survival of lung cancer patients. This does not mean that MD teams do not improve survival, merely that there is currently only limited evidence to show it. Evidence of the effect of MD teams was stronger for changing patient management than for affecting survival.	2007	4/10	Not reported	Not reported	16/16
	Follow-up strategies for breast cancer patients after treatment(60) (Note that this review is used again for another option element above)	There was no significant difference in breast cancer patients receiving follow-up care involving routine clinical visits and yearly mammography compared with a more intensive follow-up that includes radiological or laboratory tests, in terms of timeliness of recurrence detection, overall survival and quality of life. One randomized controlled trial	2004	6/11	Not reported	Not reported	4/4

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
		<p>compared follow-up performed by a hospital-based specialist to follow-up performed by general practitioners and found that there were no significant differences in time to detection of recurrence and quality of life. However, patient satisfaction was greater among patients treated by general practitioners.</p>					
	<p>Effectiveness of physician care in primary care community settings(63)</p>	<p>The review reported evidence that increased accessibility to physicians working in primary care contributes to better health and lower total costs in the healthcare system.</p> <p>Continuity of care by physicians was associated with a reduction in resource utilization and costs, and increased patient satisfaction.</p> <p>Compared to other specialists, physicians in primary care can take care of many diseases with the same quality and often at considerably lower cost.</p>	<p>1988 or later (however, this is not clear)</p>	<p>5/10</p>	<p>Not reported</p>	<p>Not reported, however, equity and access barriers were noted as being lower for generalists in primary care</p>	<p>0/45</p>
	<p>Effects of primary healthcare delivery(65)</p>	<p>The review identified 10 core dimensions that constitute a primary care system. The structure of a primary care system consists of three dimensions: 1) governance; 2) economic conditions; and 3) workforce development. The primary care process is determined by four dimensions: 4) access; 5) continuity of care; 6) coordination of care; and 7) comprehensiveness of care. The outcome of a primary care system includes three dimensions: 8) quality of care; 9) efficiency care; and 10) equity in health.</p>	<p>2008</p>	<p>4/10</p>	<p>4/45</p>	<p>Not reported, however there was mention of equity considerations in access to primary care in some populations.</p>	<p>6/45</p>

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
		<p>There is a considerable amount of evidence showing the relevance of the governance and economic conditions of a primary care system that contribute to overall health system performance. Few studies focussed on the relevance of primary care workforce development. The available evidence showed associations (of gender balance and availability of nurses) with access, continuity, comprehensiveness and efficiency of primary care. At the process level, there was clear evidence that access, comprehensiveness, continuity and coordination of care are all associated with each other, and each dimension at the process level is associated with quality of care, efficiency of care, and primary care strengthening. Comprehensiveness of care also seemed to relate to equity in health. All the core dimensions, with the exception of comprehensiveness, is associated with patient satisfaction.</p>					
<p>Developing the optimal cancer survivorship support plan for each combination of disease site and setting (which would ideally draw in the input of patients and their families and on lessons learned from other jurisdictions that</p>	<p>Impact of a physical training program for cancer patients(68)</p>	<p>Limited data is available on the effectiveness of exercise for cancer patients. Although evidence supports the positive effects of exercise on exercise capacity during and after completion of cancer treatment, the effects for fatigue and role functioning are ambiguous.</p> <p>Also, there was some evidence from meta analyses showing that self-management programs and self-efficacy enhancing programs have beneficial effects on exercise adherence and later exercise behaviour. However, the quality of the</p>	<p>2006</p>	<p>4/11</p>	<p>Not reported</p>	<p>Not reported</p>	<p>6/6</p>

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
have developed evidence-based guidelines for cancer survivorship support, evidence-based self-management supports for patients and their families, and implementation plans to support the use of these guidelines and self-management supports	Effectiveness of patient-held records on patient outcomes(67)	<p>studies was limited.</p> <p>Patient held records did not appear to have an effect on clinical outcomes.</p> <p>An emerging consideration for successful use of patient-held records is their suitability for use among different patient groups.</p>	2004	6/10	1/13	Not reported	13/13
	Effectiveness of initiatives involving patients in decision-making about their own care(69)	<p>There are significant gaps in the evidence; in particular, evidence on cost-effectiveness and long-term outcomes is weak. Interventions that target people with low literacy have shown mixed results on the effects of involvement, with some leading to improved knowledge and comprehension. Information in electronic formats – such as interactive digital television, mobile-phone texts, audio tapes and web-based interventions – has shown mixed results in improving knowledge, but it has beneficial effects on patients’ confidence and ability to be involved in decisions.</p> <p>The evidence suggests that well designed training courses can improve the communication skills of doctors, nurses and pharmacists. The most effective self-management education programs are those that are longer and more intensive, are well-integrated into the health system, and have health professionals reinforce what is learned during regular follow-up care.</p>	2008	No rating tool available for this synthesis	Not reported	Not reported, however, they do mention that those with lower levels of education and lower incomes may feel less confident about becoming involved in their care and in evaluating health information	Not reported

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effectiveness of involving people affected by cancer in research, policy and planning and practice(81)	Some policy and planning, and research organizations have involved people affected by cancer at a strategic level, most notably in the U.K. and the U.S.A., but it is not clear how much power and influence they hold at a strategic level. 'One-off' involvement exercises to influence local policy and planning have taken place in the U.K. in the acute sector, and at a national level to develop guidelines and services, but no examples were found in social care or primary care. The biggest gap in literature about the involvement agenda is rigorous evidence of its impact on research, healthcare services, on those involved and on the agenda itself.	2004	4/9	Not reported in detail - Description states: U.S., U.K., Canada, Australia; Policy and planning articles only relevant to the U.K.	Not reported, however, the review mentioned the importance of including older people, men, bereaved family carers, those living in deprived communities and in rural and remote areas.	131/131
	Methods of consumer involvement in developing healthcare policy and research, clinical practice guidelines and patient information material.(66)	There is moderate quality evidence that involving consumers in the development of patient information material results in material that is more relevant, readable and understandable to patients, without affecting their anxiety. This consumer-informed material can also improve patients' knowledge. There is very low quality evidence of telephone discussions and face-to-face group meetings engaging consumers better than mailed surveys in order to set priorities for community health goals, and resulting in different priorities being set for these goals.	2005	9/11	0/11	Not reported	0/11
Grouping cancer survivorship support plans that share similar resources requirements	No reviews were found	N/A	N/A	N/A	N/A	N/A	N/A

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
Establishing indicators that could be used to monitor and evaluate the implementation of these cancer survivorship support plans	Feasibility of methods, psychometric properties of instruments that are especially important for summative assessments, and effectiveness of methods serving formative assessments used in routine practice to assess the performance of individual doctors(82)	The review observed six different methods of evaluating performance: simulated patients, video observation, direct observation, peer assessment, audit of medical records and portfolio or appraisal. Peer assessment is the most feasible method in terms of costs and time. There is substantial potential to assess performance of doctors in routine practice. The long-term impact and effectiveness of formative performance assessments on education and quality of care remains hardly known. Future research designs need to pay special attention to unmasking effectiveness in terms of performance improvement.	2006	7/11	Not reported in detail - Description states: Most studies had been conducted in the U.K. and Canada	Not reported	0/58
	Implementing effective medical checklists(72)	Checklists have been important tools in ensuring a consistent standard of care in the medical field. The primary components of designing an effective checklist include basic requirements for context, content, structure, images and usability. Several other sources make similar recommendations on formatting-related issues such as ensuring that all content points of the document are accurate and evidence-based, employing a correct and consistent writing style relevant to the content, and ensuring it is properly organized based on the ultimate goal of the checklist.	2006	Pending	Not reported	Not reported	0/178

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effective use of patient-reported outcome measures (PROMs) by health care providers in their routine practice(73)	<p>Feedback of PROMs results to healthcare providers appears to have a substantial impact on some processes of care, particularly on diagnosis of mental health conditions. However, the impact on patient health status is less consistent. Most of the published studies evaluated PROMs as a one-off screening technology and measured only provider behaviours and patient health outcomes.</p> <p>One study that evaluated the European Organization for Research and Treatment of Cancer core Quality of Life Questionnaire (EORTC QLQ C30) reported that in situations where providers had access to health-related quality of life information for patients with cancer, they were more likely to discuss related issues with patients in the consultation.</p>	2004	2/10	1/38	Not reported	5/38
	Effectiveness of organizational assessments used in general practice settings(83)	The review found a lack of peer-reviewed literature available on the many organizational assessments that are in use in different countries. There was variability across the studies on organizational assessment processes. The review found that those assessments that take account of theory appear to be better able to state assumptions about the nature of general practice and the types of problems they can best address.	2003	6/10	0/13	0/13	0/13

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effectiveness of public reporting on healthcare quality(71)	Reporting to the public is effective if the public has the information, understands the information and uses the information in a manner that accomplishes the objectives of the reporting program. There are a number of factors to take into consideration to develop an effective public reporting program: objective(s), audience, content, products, distribution and impacts (intended and unintended).	2007	No rating tool available for this type of synthesis	Not reported	Not reported	Not reported
	Effects of publicly reported performance data on quality of care(70)	Evidence suggests that publicly releasing performance data stimulates quality improvement activity at the hospital level. A synthesis of data from eight health plan-level studies suggests modest association between public reporting and plan selection. Synthesis of 11 studies, all hospital-level, suggests stimulation of quality improvement activity.	2006	5/11	0/45	Not reported	0/45 However, there were included studies that examined the effect of public reporting for patients with chronic illness
Developing plans to support the local adaptation and implementation of these cancer survivorship support plans	Effect of integrated care interventions on the quality of care for patients with cancer(74)	There was a large variation in interventions reported and in outcomes used for evaluation of interventions. Effective interventions to improve patient-centredness are the provision of an audiotape of the consultation to the patient, provision of information to patients, and the use of a decision aid. Effective interventions to improve the organization of care can be follow-up and case management, especially by nurses and 'one-stop clinics'.	2006	6/11	5/33	Not reported	33/33. 42% of the studies involved patients with breast cancer and 39% of the studies involved patients with different kinds of cancers

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effectiveness of organization models in cancer pain management that contain integrated care processes and describe their effectiveness in terms of patient outcomes, organizational or process outcomes and cost-effectiveness(76)	The level of evidence for most of the studies is low. Three organizational models were identified for pain management: institutionalization model, clinical or critical pathway, and pain consultation model. All three organization models show positive results for pain control, patient satisfaction, use of pain assessment tools and adherence to pain assessment. All interventions within these models are the result of an interdisciplinary approach.	2006	5/11	Not reported	Not reported, however, access barriers for some patients to cancer pain management were mentioned	12/12
	Effectiveness of provider-directed intervention approaches to increase screening for breast, cervical and colorectal cancers (75)	Provider assessment and feedback, and provider incentives encourage providers to deliver screening services at appropriate intervals. Evidence in these reviews indicates that provider assessment and feedback interventions can effectively increase screening by mammography, Pap test, and fecal occult blood test.	2004	4/11	Not reported in detail - Description states: US (5) and UK (1)	Not reported, however, discussion of community- and systems-based interventions to promote cancer screening that target specific communities and reduce access barriers	10/10
	Evidence of seven recent innovations in service provision (implemented in England) to improve access or equity in access to primary care, with the innovations including personal medical services, telephone consultations with general practitioners or nurses, nurse practitioner-led care, walk-in centres, National Health Service Direct, and pharmacist-led initiatives(77)	There is some evidence to suggest that access is improved by changing the ways in which primary care is delivered. Key findings included: 1)first-wave personal medical services pilots facilitated improvements in access to primary care in previously under-served areas and/or populations; walk-in centres and NHS Direct have provided additional access to primary care for white middle-class patients; there is some evidence	2003	6/11	0/30	8/30	0/30

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
		<p>suggesting that these innovations have increased access inequalities; 3) there is some evidence that telephone consultations with general practitioners or nurses can safely substitute for face-to-face consultations, although it is not clear that this reduces the number of face-to-face consultations over time; and 4) nurse practitioners and community pharmacists can manage common conditions without the patient consulting a general practitioner.</p>					
	<p>Findings of controlled studies evaluating interventions targeted at health care providers to improve health care quality or reduce disparities in care for racial/ethnic minorities(78)</p>	<p>Studies that used a provider reminder system for provision of standardized services (mostly preventive) reported favourable outcomes. The following quality improvement strategies demonstrated favourable results: bypassing the physician to offer preventive services directly to patients, provider education alone, use of a structured questionnaire to assess adolescent health behaviours, and use of remote simultaneous translation. There was limited data on the costs of these strategies.</p>	<p>2003</p>	<p>5/11</p>	<p>0/27</p>	<p>0/27 However, the study focused on ethnic minority populations (although only two studies were designed specifically to meet the needs of ethnic minorities)</p>	<p>10/27</p>

Appendix 2: Systematic reviews relevant to Option 2 – Ministry accredits and incentivizes teams/centres to support cancer survivorship

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
Identifying the types of primary healthcare teams (e.g., Family Health Teams) and community care centres (e.g., Community Health Centres) and the types of team members or centre staff (e.g., physicians, nurse practitioners, psychologists, psychiatric nurse specialists, social workers, and spiritual advisors) that could become engaged in supporting cancer survivorship (or executing cancer survivorship support plans if option 1 is also pursued)	Effectiveness of interprofessional interventions on the impact of quality of life for cancer patients(93)	<p>This review found limited evidence to identify the components of nursing interventions which impact on a breast cancer woman’s quality of life, but acknowledge that the nature of their work, provided within a multiprofessional team, serves to complement the team as a whole rather than highlighting the impact of the nurse specialist alone.</p> <p>Three studies assessing psychosocial nursing interventions around diagnosis and early treatment found that breast care nurses could affect some components of quality of life, such as anxiety and early recognition of depressive symptoms. However, their impact on social and functional aspects of the disease trajectory was inconclusive.</p>	2007	10/10	Not reported	Nor reported, however, the benefits of nursing-led interventions in terms of equity were discussed	5/5
	Nurse-led follow-up for patients with cancer(84)	There were no statistically significant differences in survival, recurrence or psychological morbidity with nurse-led follow-up care. There was a statistical significance on patient satisfaction. One study showed the cost of nurse-led follow-up to be less than that of physician-led follow-up, but no statistical comparison was made.	2007	7/10	0/4	Not reported	4/4
Establishing an accreditation mechanism for eligible teams and centres and ensuring that	Accreditation and accreditation processes(85)	Findings consistently showed that accreditation programs were positively linked with the professional development of health professionals. Findings were also consistent in showing that the activity of preparing and undergoing accreditation	2007	3/10	Not reported	Not reported	Not reported

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
existing regulations permit the most appropriate providers to function within these teams and centres, and that existing provincial policies permit these teams and centres to access needed diagnostic technologies		<p>promotes change in health organizations.</p> <p>Findings were inconsistent in regards to five other categories examined in the study: professions' attitudes to accreditation, organizational impact, financial impact, quality measures and program assessment. The remaining three categories -- consumer views or patient satisfaction, public disclosure and surveyor issues -- did not have sufficient studies to draw any conclusion.</p>					
Funding eligible and accredited teams/centres to support cancer survivorship (or execute cancer survivorship support plans) and to remunerate the most appropriate providers to function within these funded teams and centres	Cost-effectiveness of noninstitutional long-term care services(92)	The cost-effectiveness of Medicaid waiver programs, consumer-directed care, capitated models that blend acute and long-term care services, and case management and subsidized community services for individuals with dementia was reviewed. These care models were found to be associated with increased costs, but greater client and caregiver welfare. Capitated care models and consumer directed care were identified as potential mechanisms towards providing services more efficiently.	2004	4/10	0/23	Not reported	Not reported
Continuing to remunerate physicians and other healthcare providers who	Effects of capitation, salary, fee-for-service and mixed systems of payment on the behaviour of primary care physicians(86)	There was some evidence that under fee-for-service (FFS), primary care physicians provide more primary care visits/contacts, visits to specialists and diagnostic and curative services, but fewer	1997	8/11	1/4	0/4	0/4

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
function within these funded teams and centres and target at least some financial incentives to supporting cancer survivorship (or executing cancer survivorship support plans)		<p>hospital referrals and repeat prescriptions compared with capitation. However, the long-term effects are unclear.</p> <p>Compliance with a recommended number of visits was higher under FFS compared with capitation payment. FFS resulted in more patient visits, greater continuity of care, and higher compliance with a recommended number of visits, but patients were less satisfied with access to their physician compared with salaried payment.</p> <p>There was no evidence of the impact of different methods of payment on the health status of patients, and no evidence comparing the relative impact of salary versus capitation payment on primary care physician behaviour.</p>					
	Impact of payment systems on the behaviour of primary care physicians(87)	Fee-for-service resulted in a higher quantity of primary care services provided compared with capitation, but the evidence of the impact on the quantity of secondary care services was mixed. Fee-for-service resulted in more patient visits, greater continuity of care, and higher compliance with a recommended number of visits, but lower patient satisfaction with access to a physician compared with salary payment. The evidence of the impact of target payment on immunization rates was inconclusive.	1997	7/11	1/6	0/6	0/6
	Influence of salaried payment on doctor behaviour(94)	The review was unable to draw conclusions on the likely impact of salaried payment on efficiency and equity. However, one study found limited	1997	2/11	4/23	0/23	1/23

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
		<p>evidence to suggest that payment by salaries is associated with the lowest use of tests and referrals compared with fee-for-service (FFS) and capitation. Salary payment is also associated with lower numbers of procedures per patient, lower throughput of patients per doctor, longer consultations, more preventive care and different patterns of consultation compared with FFS payment.</p> <p>One study found no clear evidence on the impact of salaried payment for cancer screening.</p>					
	Influence of physician-level and provider group-level financial incentives(89)	Physician-level financial incentives had partial or positive effects on measure of quality in five of six studies, and provider-level financial incentives had similar effects in seven of nine studies. Financial incentives had unintended effects in four studies. No studies examined the optimal duration of financial incentives or the persistence of their effects after termination.	2005	6/11	4/17	0/17	3/17
	Impact of pay-for-performance on quality of care(95)	<p>Pay-for-performance yielded no effects in all but two well-designed studies and positive effects in two well-designed studies.</p> <p>One study of six examined the use of performance feedback and financial bonuses based on performance on quality of care measures for cancer screening guidelines, which had no significant impact on performance.</p>	2003	5/10	Not reported	0/6	1/6
	Effect of financial incentives on	Only one study found a positive and	2002	4/10	0/6	4/6	2/6

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	provider preventive care delivery(90)	<p>significant outcome that increasing financial incentives translated into the provision of more preventive care. The review found a lack of evidence related to the impact of financial incentives on physician performance.</p> <p>The two studies of six on cancer screening had no significant effect on physician performance.</p>					
	Assesses the results of different forms of financial incentives on costs, process or outcomes of care(91)	The review identified several risks of financial incentives from included studies: limited access to certain types of care, lack of continuity of care, and conflict of interest between the physician and the patient. Any form of fund holding or capitation decreased the total volume of prescriptions and hospital days compared with fee-for-service. Annual cap on doctors' incomes resulted in referrals to colleagues when target income is reached.	1999	1/11	Not reported	Not reported	1/8
	Effects of target payments in primary care on professional practice and health care outcomes (88)	The use of target payments in the remuneration of primary care physicians was associated with improvements in immunization rates, but the increase was statistically significant in only one of the two studies examined.	1997	10/11	0/2	0/2	0/2

Appendix 3: Systematic reviews relevant to Option 3 – Regional cancer centre purchases cancer survivorship supports

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
Identifying local primary healthcare teams and community care centres that are interested in becoming engaged in supporting cancer survivorship with the context of a Chronic Care Model	No reviews were found	N/A	N/A	N/A	N/A	N/A	N/A
Ensuring that existing local operating procedures permit these teams and centre to access needed diagnostic technologies	No reviews were found	N/A	N/A	N/A	N/A	N/A	N/A
Funding interested teams/centres to become engaged in supporting cancer survivorship (or executing cancer survivorship support plans)	Cost-effectiveness of noninstitutional long-term care services(92) (Note that this review is used again for another option element above)	The cost-effectiveness of Medicaid waiver programs, consumer-directed care, capitated models that blend acute and long-term care services, and case management and subsidized community services for individuals with dementia was reviewed. These care models were found to be associated with increased costs, but greater client and caregiver welfare. Capitated care models and consumer directed care were identified as potential mechanisms towards providing services more efficiently.	2004	4/10	0/23	Not reported	Not reported
Establishing educational, coaching, technical	Effectiveness of internet-based learning in health professional education(97)	Internet-based learning is associated with large positive effects compared with no intervention. The pooled estimate of	2007	6/11	Not reported	Not reported	1/214

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
and referral supports for funded teams/centres		<p>effect size was large across all educational outcomes. In contrast, effects compared with non-internet instructional methods are heterogeneous and generally small, suggesting effectiveness similar to traditional methods.</p> <p>One intervention of the 214 included interventions examined internet-based oncology teaching for medical students, as an adjunct to an existing course on lung cancer, and found that it yielded a negative effect size.</p>					
	Effectiveness of electronic continuing education for advancing knowledge and changing practice patterns among health practitioners(98)	Findings suggest a positive effect of electronic continuing education interventions on health care provider knowledge and health care provider behaviour	2007	4/11	Not reported	0/15	Not reported
	Effects of educational meetings(96)	<p>Educational meetings (e.g., courses, conferences, lectures, workshops, seminars and symposia) for physicians (and other healthcare professionals), alone or combined with other interventions, improved professional practice and the achievement of treatment goals by patients.</p> <p>Seven studies of 81 targeted interventions for improving the detection of cancer, and these studies did not find any statistically significant impact of educational meetings on professional practice.</p>	2006	10/11	4/81	Not reported	7/81
	Effectiveness of interprofessional education interventions compared to education interventions in which the	Four of the studies indicated that interprofessional education produced positive outcomes in the following areas:	2006	9/11	0/6	0/38	1/38

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	same health and social care professionals learn separately from one another; and effectiveness of interprofessional education interventions compared to no education intervention(93)	emergency department culture and patient satisfaction; collaborative team behaviour and reduction of clinical error rates for emergency department teams; management of care delivered to domestic violence victims; and mental health practitioner competencies related to the delivery of patient care. In addition, two of the six studies reported that the interprofessional education interventions had no impact on either professional practice or patient care.					
	Effectiveness of interprofessional education to contribute to collaborative practice and better care(99)	Learners responded well to interprofessional education, that knowledge and skills necessary for collaborative practice were learnt, and there were positive changes in behaviour, service organization and patient/client care. In the studies reviewed, little mention was made of any funding barriers in relation to developing and delivering interprofessional education.	2003	4/11	1/21	Not reported	0/21
	Understanding of the information systems components that are important in supporting team-based care of chronic illness(100)	The majority of published studies revealed a positive impact of specific health information technology components on chronic illness care. Components closely correlated with positive experimental results were a connection to an electronic medical record, computerized prompts, population management (including reports and feedback), specialized decision support, electronic scheduling, and personal health records. Barriers identified included costs, data privacy and	2005	4/10	Not reported	Not reported	0/109

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
	Effect of health information technology on quality, efficiency, and costs of health care(101)	<p>security concerns, and failure to consider workflow.</p> <p>Three major benefits on quality were demonstrated: increased adherence to guideline-based care, enhanced surveillance and monitoring, and decreased medication errors. The primary domain of improvement was preventive health. The major efficiency benefit shown was decreased utilization of care. Data on another efficiency measure, time utilization, were mixed. Empirical cost data were limited.</p> <p>One study of 257 found a positive effect of a computer-based risk assessment program for cancer.</p>	2005	4/11	Not reported	0/257	1/257
	Clinical effectiveness of interventions using information and communication technologies (ICTs) for managing and controlling chronic diseases(104)	The application of information and communication technologies (ICTs) did not show an improvement in clinical outcomes, although no adverse effects were identified. However, ICTs used in the detection and follow-up of cardiovascular diseases provided better clinical outcomes, mortality reduction and lower health services utilization. ICTs used for improving education and social support were shown to be effective. Overall, the present evidence about the clinical benefits of ICTs for managing chronic diseases is limited.	2005	4/10	Not reported	0/24	0/24
	Effects of computerized clinical decision support systems on practitioner performance and patient outcomes(102)	Improved practitioner performance was associated with computerized clinical decision support systems (CDSSs) that automatically prompted users compared with requiring users to activate the system, and studies in which the authors	2004	5/11	5/100	Not reported	15/100

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
		<p>also developed the CDSS software compared with studies in which the authors were not the developers.</p> <p>Evidence suggests that many CDSSs improve practitioner performance. However, the effects on patient outcomes remain understudied and, when studied, inconsistent.</p>					
	Effectiveness of an electronic referral and teleconsultation system between secondary and primary healthcare (105)	The review found that electronic referral and consultation improves co-operation between hospital and health centres, know-how of general practitioners and possibly the quality and effectiveness of patient care. The interactive use of the electronic referral system increases the number of referrals from health centres. On the other hand, telemedicine-supported outpatient clinics are able to choose the right patients at the right moment to be treated in the outpatient clinic. The electronic referral system also allows more patients to be treated at a lower expense. When telemedicine was implemented into the traditional surgical environment, only marginal benefits were accomplished.	1999	Unable to obtain an English translation of this Finnish report	Unable to obtain an English translation of this Finnish report	Unable to obtain an English translation of this Finnish report	Unable to obtain an English translation of this Finnish report
Monitoring and evaluating funded teams/centres ** See the reviews for option 1, specifically the element 'establishing indicators that could be used to monitor	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on cancer
and evaluate the implementation of these cancer survivorship support plans' **							
Establishing financial incentives for self-management among patients	Effects of economic incentives on consumers' preventive health behaviours (103)	The effectiveness of economic incentives varied in relation to the goal of the incentive. Incentives that increased ability to purchase the preventive service worked better than more diffuse incentives, but the type matters less than the nature of the incentive. Economic incentives are effective in the short run for simple preventive care, and distinct, well-defined behavioural goals. Small incentives can produce finite changes, but it is not clear what size of incentive is needed to yield a major sustained effect.	2002	4/10	Not reported	Not reported	5/47