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A Scoping Review of Innovative Implemented Workforce Solutions in Canadian Cancer Care: Implications for Pan-Canadian Scaling and Policy

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INTRODUCTION

Review question / Objective Review Question(s)
What implemented workforce and service delivery innovations in cancer care have been reported across Canadian jurisdictions?
What implementation barriers and facilitators influence adoption, sustainability, and scale-up of these innovations?
What policy, workforce, digital infrastructure, and system-level considerations are required to support pan-Canadian scaling of innovative cancer care models?

Objectives
The objectives of this scoping review were to:
Identify implemented innovations in cancer care delivery and workforce models across Canada;
Examine implementation characteristics, barriers, facilitators, and contextual considerations using the Consolidated Framework for Implementation Research (CFIR);
Synthesize evidence regarding digital health, AI, team-based care, enhanced scopes of practice, and home/community-based oncology models;
Inform policy and implementation recommendations for pan-Canadian scaling and sustainability.

Background Cancer care systems across Canada are experiencing unprecedented pressures driven by rising cancer incidence, population aging, increasing survivorship, persistent health inequities, and growing workforce shortages. Nearly one in two Canadians are expected to develop cancer during their lifetime, and demand for oncology services continues to increase across the continuum of prevention, diagnosis, treatment, survivorship, and palliative care. Concurrently, oncology systems are facing significant human health resource (HHR) challenges, including shortages of oncologists, oncology nurses, radiation therapists, pharmacists, and other allied health professionals, alongside increasing provider burnout and system strain. These pressures have

been further exacerbated by the COVID-19 pandemic, which exposed vulnerabilities in healthcare infrastructure, workforce resilience, digital readiness, and continuity of cancer services across jurisdictions.

In response, Canadian provinces and territories have accelerated the implementation of innovative workforce and service delivery models designed to improve access, optimize workforce capacity, enhance patient experience, and support more sustainable cancer care delivery. These innovations include virtual oncology care, AI-enabled clinical and operational tools, remote patient monitoring, navigation programs, expanded scopes of practice, multidisciplinary and team-based models of care, home infusion and home-based cancer care, pharmacist-led clinics, and community-based approaches to survivorship and supportive care. Many of these models were rapidly implemented or scaled during and following the COVID-19 pandemic and have demonstrated early evidence of improved access, efficiency, patient satisfaction, and workforce optimization.

At the policy level, there is increasing recognition that innovation in cancer care is no longer optional but necessary to address widening gaps in access to timely care and access to qualified healthcare professionals. National initiatives, including the Canadian Strategy for Cancer Control (2019–2029), emphasize equitable access, person-centred care, workforce sustainability, Indigenous health equity, digital transformation, and integrated models of care. Simultaneously, investments in digital health infrastructure, virtual care expansion, and workforce modernization across provinces have created important opportunities to strengthen implementation and scaling of innovative cancer care models nationally.

Despite this momentum, substantial implementation and scaling challenges remain. Variability in provincial regulatory frameworks, reimbursement structures, digital infrastructure readiness, interoperability limitations, workforce training capacity, and funding sustainability continue to impede broader adoption and long-term sustainability of innovations across Canadian jurisdictions. Many promising initiatives continue to rely on short-term pilot funding, while inconsistencies in workforce competencies, licensure pathways, and digital literacy create additional barriers to pan-Canadian implementation. Rural, remote, northern, and underserved communities continue to experience inequitable access to digital infrastructure, specialized workforce capacity, and culturally safe care models.

Implementation science provides an important framework for understanding how innovations can move beyond isolated pilots toward sustained system transformation. The Consolidated Framework for Implementation Research (CFIR) offers a structured approach to examining contextual, organizational, workforce, and policy-level determinants influencing implementation, adoption, and sustainability. Applying an implementation science lens enables identification of cross-cutting barriers, facilitators, and policy levers needed to support scale and spread of effective cancer care innovations across diverse healthcare settings.

Accordingly, this scoping review was undertaken as part of a broader initiative led by the Canadian Association of Provincial Cancer Agencies (CAPCA) and supported through funding from the Canadian Partnership Against Cancer (CPAC). CAPCA is a pan-Canadian alliance representing provincial cancer agencies and programs across Canada that works collaboratively to advance innovation, system improvement, policy alignment, and knowledge sharing in cancer care delivery. CPAC, funded by Health Canada, leads implementation of the Canadian Strategy for Cancer Control and supports national efforts to improve equitable access, quality, coordination, and sustainability of cancer care services across the country. Through this collaboration, the initiative sought to identify implemented workforce and service delivery innovations across Canadian jurisdictions and generate evidence-informed recommendations to support pan-Canadian scaling, sustainability, and policy transformation in cancer care.

Rationale Although numerous innovations in cancer care delivery and workforce models have emerged across Canadian jurisdictions, evidence regarding their implementation, scalability, sustainability, and broader policy implications remains fragmented. Existing literature has largely focused on individual interventions, single jurisdictions, or clinical effectiveness outcomes, with comparatively limited synthesis examining implementation processes, workforce implications, contextual determinants, and scalability considerations across healthcare systems. Furthermore, there remains limited consolidated evidence integrating innovations across virtual care, artificial intelligence (AI), enhanced scopes of practice, home and community-based care, and team-based oncology models within a pan-Canadian context.

This evidence gap is particularly important given ongoing oncology workforce shortages, growing

service demands, and increasing policy emphasis on health system sustainability, equitable access, and digital transformation across Canada. While many innovations demonstrated rapid implementation during and following the COVID-19 pandemic, significant variability persists in adoption, infrastructure readiness, reimbursement models, regulatory frameworks, workforce training, and implementation supports across provinces and territories. These differences create important challenges for sustainability and pan-Canadian scaling of promising models of care.

Traditional evidence reviews often emphasize effectiveness outcomes without adequately examining the contextual, organizational, workforce, and policy factors influencing implementation success. As a result, there remains limited understanding of the barriers and facilitators that shape successful adoption and spread of innovative cancer care models across diverse healthcare settings. An implementation science approach, particularly using the Consolidated Framework for Implementation Research (CFIR), provides a structured lens to examine intervention characteristics, organizational readiness, external policy environments, stakeholder engagement, workforce capabilities, and implementation processes that influence sustainability and scale-up.

A scoping review methodology was selected because of the breadth and heterogeneity of innovations, implementation contexts, and evidence sources relevant to this topic. In addition to peer-reviewed literature, important implementation insights are frequently reported in grey literature, policy documents, organizational reports, and operational initiatives that are not consistently captured within traditional systematic reviews. The broader mixed-methods initiative also incorporated pan-Canadian survey findings and key informant interviews to strengthen contextual understanding of implementation experiences and policy considerations across jurisdictions.

This review was undertaken as part of a broader initiative led by the Canadian Association of Provincial Cancer Agencies (CAPCA) and supported through funding from the Canadian Partnership Against Cancer (CPAC). CAPCA represents provincial cancer agencies and programs across Canada and works collaboratively to advance innovation, policy alignment, and system improvement in cancer care delivery. CPAC, funded by Health Canada, supports implementation of the Canadian Strategy for Cancer Control and national efforts to improve equitable access, quality, and sustainability of cancer care services across Canada. Within this context, the review aimed to generate evidence-informed insights regarding implemented innovations, implementation barriers and facilitators, workforce transformation strategies, and policy opportunities to support pan-Canadian scaling and sustainability of innovative cancer care models.

METHODS

Strategy of data synthesis Data synthesis was conducted using a mixed-methods narrative synthesis approach informed by implementation science methodology and guided primarily by the Consolidated Framework for Implementation Research (CFIR). Given the breadth and heterogeneity of the included evidence—including systematic reviews, grey literature, policy documents, survey responses, and key informant interviews—a meta-analysis was not appropriate. Instead, the synthesis focused on identifying, categorizing, and interpreting implemented innovations, implementation experiences, and system-level considerations relevant to the adoption, sustainability, and pan-Canadian scaling of innovative cancer care models.

The synthesis process was iterative and involved multiple phases of organization, charting, thematic coding, and triangulation across evidence sources. Findings from academic literature, grey literature, environmental scans, surveys, and interviews were first independently reviewed and summarized by members of the research team using a standardized data extraction and charting template. Extracted information included characteristics of interventions, implementation setting, workforce composition, digital and AI applications, implementation processes, barriers and facilitators, workforce and policy considerations, and reported outcomes aligned with the Quintuple Aim framework, including impacts on patient experience, provider wellbeing, equity, health outcomes, and system efficiency.

A convergent integrated approach was used to synthesize qualitative and descriptive findings across all evidence sources. Quantitative findings from surveys and descriptive literature data were transformed into narrative summaries to enable integration with qualitative findings from grey literature and interviews. This approach facilitated examination of implementation considerations across diverse intervention types and jurisdictions while maintaining attention to contextual variation.

The CFIR framework was used as the primary analytic lens to organize and interpret findings. CFIR was selected because it provides a

comprehensive and widely applied framework for examining multilevel determinants influencing implementation and sustainability of healthcare innovations. The framework supported systematic categorization of findings across five major domains: Intervention Characteristics, Outer Setting, Inner Setting, Characteristics of Individuals, and Process. Using these domains enabled identification of cross-cutting implementation considerations and policy implications relevant across diverse innovations and healthcare contexts.

Within the Intervention Characteristics domain, synthesis focused on attributes of innovations that influenced implementation and scale-up, including adaptability, complexity, relative advantage, implementation cost, and compatibility with existing workflows and models of care. Innovations synthesized within this domain included virtual oncology models, AI-enabled scheduling and triage systems, remote symptom monitoring applications, home infusion programs, navigation initiatives, and expanded scope-of-practice models. Particular attention was given to how interventions were adapted to local contexts and how flexibility of implementation contributed to sustainability and spread across jurisdictions.

The Outer Setting domain focused on external influences shaping implementation, including patient and community needs, policy environments, reimbursement structures, regulatory considerations, workforce shortages, digital infrastructure readiness, and inter-organizational partnerships. Synthesis within this domain examined how innovations addressed inequities in access to cancer care, particularly for rural, remote, northern, Indigenous, and underserved communities. This component of the synthesis also examined how broader provincial and national policy contexts, including virtual care standards, digital transformation strategies, and workforce modernization initiatives, facilitated or constrained implementation efforts.

Within the Inner Setting domain, findings were synthesized to examine organizational readiness for implementation, leadership engagement, institutional culture, communication structures, resource availability, and alignment with provincial or regional cancer system priorities. The synthesis explored how organizational factors influenced successful implementation of innovations such as team-based oncology care, virtual care standards, navigation models, and advanced practice workforce roles. Particular attention was given to implementation variability across healthcare organizations and jurisdictions, including the influence of leadership support, infrastructure capacity, and workforce integration processes.

The Characteristics of Individuals domain focused on workforce-related implementation considerations, including provider knowledge, competencies, digital literacy, attitudes toward innovation, confidence with expanded scopes of practice, and readiness for change. The synthesis identified workforce competencies as a major determinant of successful implementation across multiple innovation domains, particularly in relation to digital health, AI integration, virtual care delivery, and advanced practice roles. Findings highlighted the importance of interdisciplinary education, competency-based workforce development, communities of practice, change management supports, and role-specific training to facilitate adoption and sustainability.

The Process domain examined implementation planning, stakeholder engagement, co-design approaches, evaluation activities, communication strategies, and iterative scaling processes. Particular emphasis was placed on understanding how successful implementations incorporated early and ongoing engagement of patients, providers, communities, policymakers, and intersectoral partners. This domain also explored how pilot initiatives transitioned toward broader implementation and the extent to which evaluation frameworks, implementation monitoring, and feedback mechanisms were embedded into implementation processes. Programs that incorporated phased implementation, iterative refinement, and structured evaluation approaches were identified as more likely to demonstrate sustainability and scalability.

Following domain-based coding and categorization, thematic synthesis was undertaken to identify cross-cutting barriers and facilitators influencing implementation and pan-Canadian scaling across innovation categories and jurisdictions. Barriers were grouped into major thematic areas including funding instability, regulatory variability, workforce shortages, gaps in training and competencies, digital infrastructure limitations, interoperability challenges, provider resistance to role expansion or AI integration, and inequities in broadband access and community-based workforce capacity. Facilitators identified across evidence sources included strong stakeholder engagement, demonstrated patient benefits, alignment with health system priorities, dedicated implementation funding, collaborative partnerships, structured workforce training programs, digital infrastructure investments, and supportive leadership environments.

Data triangulation constituted a central component of the synthesis process. Findings from peer-reviewed literature were compared and integrated with findings from grey literature, policy reports,

survey responses, and interviews to strengthen validity and contextual interpretation. This approach enabled the research team to identify areas of convergence and divergence across evidence sources and to capture implementation experiences that may not have been reflected in published academic literature alone. Grey literature and interview findings were particularly important for identifying operational realities, emerging implementation practices, jurisdictional innovations, and policy considerations not consistently represented in systematic reviews.

The synthesis also incorporated comparative analyses across Canadian jurisdictions and selected international exemplars identified within the literature and stakeholder consultations. Comparative synthesis examined implementation approaches, scaling strategies, and policy mechanisms associated with innovations in virtual care, AI-enabled systems, enhanced scopes of practice, and home-based cancer care. These comparisons supported identification of transferable lessons and implementation considerations relevant to pan-Canadian policy development.

Eligibility criteria Eligibility criteria were developed iteratively by the research team and informed by the objectives of the review, implementation science methodology, the Quintuple Aim framework, and the Consolidated Framework for Implementation Research (CFIR). Given the broad and evolving nature of innovations in cancer care delivery and workforce transformation, the eligibility criteria were intentionally designed to capture implemented and operationalized innovations relevant to workforce sustainability, equitable access to care, digital transformation, and system redesign across Canadian healthcare contexts. Criteria were refined during preliminary scoping activities and environmental scanning to ensure alignment with emerging implementation trends and the broader objectives of identifying scalable and sustainable innovations applicable to pan-Canadian policy and practice.

The review focused on literature and implementation evidence related to cancer care, primary care, and community-based care settings. While cancer care was the primary focus of the review, literature from primary care and community-based care contexts was included because many workforce innovations and models of care relevant to oncology—such as virtual care, navigation models, interdisciplinary team-based care, pharmacist-led clinics, home care, and enhanced scopes of practice—are implemented across integrated healthcare environments rather than exclusively within specialized oncology settings. Inclusion of primary and community-based care literature enabled broader examination of transferable workforce and implementation strategies relevant to cancer systems transformation and integrated care delivery.

To be eligible for inclusion, publications were required to examine implemented or operationalized innovations rather than theoretical, conceptual, or proposed interventions. Implemented innovations were defined as initiatives, models, programs, or interventions that had progressed beyond planning or pilot proposal stages and demonstrated evidence of implementation, operationalization, scale-up, evaluation, or integration into healthcare delivery contexts. This focus reflected the implementation science orientation of the review and the broader objective of identifying practical lessons regarding sustainability, adoption, spread, and scalability across jurisdictions.

Eligible innovations included a broad range of workforce and service delivery interventions related to virtual care, digital health, artificial intelligence (AI), enhanced scopes of practice, interdisciplinary and team-based care, home and community-based oncology care, navigation models, remote monitoring, and other innovative models intended to improve access, efficiency, workforce optimization, or patient-centred care delivery. Innovations were not limited to clinical interventions alone but also included operational, organizational, workforce, digital infrastructure, and system-level transformation initiatives where implementation considerations and workforce implications were explicitly discussed.

The review specifically prioritized innovations that aligned with one or more domains of the Quintuple Aim framework, including improvements related to patient experience, population health outcomes, provider wellbeing, equity and inclusion, and cost/resource optimization. Publications were therefore required to report evaluative, implementation, operational, experiential, or outcome-related information demonstrating the impact or implications of the innovation. This criterion was included to ensure the review synthesized innovations with demonstrated relevance to health system performance, workforce sustainability, and patient-centred care.

The review included systematic reviews, scoping reviews, rapid reviews, umbrella reviews, integrative reviews, and selected grey literature sources that provided sufficient implementation detail relevant to the objectives of the study. Grey literature sources included government reports, policy documents, organizational reports, strategic plans, cancer agency publications, technical

reports, and implementation summaries identified through environmental scanning, survey responses, and key informant interviews. Inclusion of grey literature was considered essential because many implemented innovations in cancer care and workforce redesign are operationalized within healthcare systems but may not yet be fully represented within peer-reviewed academic literature. Grey literature also provided important contextual information regarding implementation processes, policy environments, funding models, operational barriers, and jurisdictional experiences that are often absent from traditional evidence syntheses.

To ensure contemporary relevance and alignment with rapidly evolving implementation environments following the COVID-19 pandemic, publication date limits were applied. For cancer care literature, searches included publications from January 2022 to November 28, 2024. For primary care and community-based care literature, searches included publications from January 2024 to February 27, 2025. These date ranges were selected to capture recent and implemented innovations reflective of post-pandemic system transformation efforts, accelerated digital adoption, workforce redesign initiatives, and evolving implementation experiences across Canadian jurisdictions.

Eligible publications were limited to English-language sources due to feasibility considerations and available team capacity for screening and synthesis. Geographic inclusion was intentionally broad, with literature from all jurisdictions considered eligible where findings were relevant to implementation, workforce innovation, or cancer care transformation. Although the primary emphasis of the review was Canadian cancer care contexts, international literature and examples identified through reviews and grey literature were also examined where they provided transferable implementation insights, scaling strategies, or policy lessons applicable to Canadian healthcare systems.

Exclusion criteria were similarly informed by the objectives of the review and implementation science orientation. Publications describing solely conceptual, theoretical, hypothetical, or proposed innovations without evidence of implementation or operationalization were excluded. This included planning documents or recommendations lacking implementation activity, evaluation findings, or operational experiences. The review aimed specifically to synthesize evidence related to implemented innovations and therefore excluded literature focused exclusively on future recommendations or aspirational models without practical implementation evidence.

Editorials, opinion papers, commentaries, conference abstracts, letters to editors, and purely theoretical discussions were excluded unless they contained substantial implementation findings or operational evidence directly relevant to the review objectives. Primary research studies were generally excluded where they did not align with the review's focus on synthesized evidence, implementation experiences, or broader system-level innovation analysis. However, select implementation reports and operational evaluations identified through grey literature searching were retained where they provided substantial information regarding implementation processes, workforce considerations, or scaling experiences.

Publications lacking implementation detail, evaluative findings, workforce implications, or outcomes related to innovation adoption and operationalization were also excluded. Studies focused exclusively on clinical efficacy without discussion of implementation, sustainability, workforce impact, delivery models, or operational considerations were not considered eligible for inclusion. Similarly, literature unrelated to cancer care, primary care, community-based care, or workforce and service delivery innovation was excluded during screening.

Eligibility criteria were applied iteratively throughout the screening process by two lead reviewers using predefined inclusion and exclusion criteria. Screening involved title and abstract review followed by full-text assessment where necessary. Regular consensus meetings were conducted among the broader multidisciplinary research team.

Source of evidence screening and selection

The evidence screening and selection process was conducted using a structured and iterative approach aligned with PRISMA 2020 guidance and informed by scoping review methodology and implementation science principles. Given the breadth of the review and the inclusion of multiple evidence sources including academic literature, grey literature, environmental scans, survey findings, and stakeholder-identified documents the screening process was designed to balance methodological rigor with flexibility appropriate for a mixed-methods scoping review focused on implemented innovations in cancer care and workforce transformation.

All records retrieved through database searches were imported into a literature management and screening platform to facilitate organization, duplicate removal, and screening activities. Duplicate citations identified across databases were removed prior to formal screening. Following de-duplication, title and abstract screening was

conducted using predefined inclusion and exclusion criteria developed by the research team. Screening criteria were informed by the objectives of the review, implementation science considerations, the Quintuple Aim framework, and the Consolidated Framework for Implementation Research (CFIR). Particular emphasis was placed on identifying implemented innovations relevant to cancer care delivery, workforce redesign, digital transformation, enhanced scopes of practice, team-based care, and home or community-based oncology models.

The screening process occurred in multiple stages. Initial title and abstract review focused on assessing relevance to the review objectives and determining whether publications examined implemented innovations, implementation experiences, workforce implications, or evaluative outcomes related to cancer care, primary care, or community-based care settings. Publications clearly unrelated to the scope of the review, including editorials, opinion pieces, theoretical discussions, non-healthcare studies, and interventions lacking implementation evidence, were excluded during this stage.

Full-text screening was subsequently conducted for publications that met inclusion criteria or where eligibility could not be determined based on title and abstract review alone. During full-text assessment, reviewers examined publications in greater detail to confirm alignment with implementation-focused eligibility criteria, including evidence of operationalization, implementation outcomes, workforce considerations, implementation barriers and facilitators, or relevance to system-level transformation and scaling. Particular attention was given to whether studies described implemented innovations rather than proposed or hypothetical interventions.

Two lead reviewers independently conducted screening activities and met regularly throughout the review process to discuss uncertainties, refine interpretation of eligibility criteria, and ensure consistency in screening decisions. Given the complexity and heterogeneity of included evidence sources, an iterative consensus-building process was used to address disagreements or ambiguous cases. Where uncertainties remained, publications were reviewed collaboratively with members of the broader multidisciplinary research team until consensus was achieved. This iterative approach enabled the research team to maintain consistency while accommodating the evolving and interdisciplinary nature of implementation-focused literature.

In addition to peer-reviewed literature identified through database searches, the screening and selection process incorporated grey literature and environmental scanning procedures to capture implementation experiences and operational innovations not consistently represented in academic literature. Grey literature sources included government reports, policy documents, cancer agency publications, organizational reports, strategic frameworks, technical reports, and implementation summaries identified through targeted website searches and stakeholder engagement activities.

Data management Data management procedures were established to support organization, transparency, consistency, and rigor throughout the review process. Given the mixed-methods design and inclusion of multiple evidence sources including academic literature, grey literature, environmental scans, survey responses, and key informant interviews,a structured data management approach was required to facilitate screening, extraction, synthesis, and integration of findings across diverse formats and evidence types.

All records retrieved through database searches were imported into a data management platform to support citation organization, duplicate identification, and screening activities. Duplicate records identified across databases were removed prior to title and abstract screening. Full-text articles and relevant grey literature documents were stored electronically in secure project folders accessible only to members of the research team.

A standardized data charting and extraction template was developed collaboratively by the research team and informed by the objectives of the review, the Quintuple Aim framework, and the Consolidated Framework for Implementation Research (CFIR). The extraction template included fields related to intervention characteristics, implementation setting, workforce models, digital and AI applications, implementation barriers and facilitators, workforce implications, policy considerations, and reported outcomes. The template was piloted on a subset of included studies and refined iteratively to ensure consistency and relevance across evidence sources.

Data from academic literature, grey literature, survey findings, and key informant interviews were managed and synthesized using structured spreadsheet-based charting tools and thematic coding approaches. Survey and interview findings were summarized in aggregate form and integrated into broader thematic synthesis activities. No personal identifying information from survey respondents or interview participants was included in the synthesis or reporting process.

Throughout the review, data management procedures emphasized version control, secure storage, standardized documentation practices, and collaborative review among team members. Extracted data and synthesis tables were reviewed iteratively by the multidisciplinary research team to support consistency, completeness, and accuracy.

Reporting results / Analysis of the evidence Results were reported using a narrative and thematic synthesis approach informed by PRISMA 2020 guidance and implementation science methodology. Given the heterogeneity of included evidence sources, interventions, implementation settings, and outcome measures, quantitative pooling or meta-analysis was not appropriate. Instead, findings were synthesized descriptively and organized according to key innovation domains, implementation themes, and the Consolidated Framework for Implementation Research (CFIR).

Descriptive summaries were developed to characterize the volume and types of evidence included across cancer care, primary care, and community-based care literature, as well as grey literature, survey findings, and key informant interviews. Results were reported using frequencies, summary tables, implementation matrices, and thematic narrative summaries to provide an overview of implemented innovations, implementation considerations, workforce implications, and policy opportunities identified across jurisdictions.

Analysis focused on identifying implemented innovations demonstrating operationalization, scale, sustainability, or evidence of broader adoption across healthcare systems. Innovations were grouped into major thematic categories including virtual care, artificial intelligence and digital health, enhanced scopes of practice, interdisciplinary and team-based care, navigation programs, and home or community-based oncology care. Findings within each category were synthesized to identify common implementation barriers, facilitators, workforce considerations, infrastructure needs, and policy implications.

A CFIR-informed analytic approach guided interpretation of implementation findings across five domains: Intervention Characteristics, Outer Setting, Inner Setting, Characteristics of Individuals, and Process. This approach enabled systematic identification of contextual factors influencing implementation success, scalability, and sustainability across Canadian jurisdictions. Cross-cutting themes including funding instability, regulatory variability, digital infrastructure limitations, workforce shortages, stakeholder engagement, leadership support, and training requirements were identified through iterative thematic analysis.

Data triangulation was used to compare and integrate findings from academic literature, grey literature, surveys, and interviews to strengthen interpretation and contextual understanding. Results were ultimately synthesized into narrative summaries, comparative tables, and implementation-focused findings intended to support evidence-informed policies.

Presentation of the results Results will be presented using a combination of narrative synthesis, descriptive summary tables, implementation matrices, and visual figures to support transparency, clarity, and interpretation of findings across evidence sources. Consistent with scoping review methodology and PRISMA 2020 reporting guidance, the presentation of results will emphasize breadth of evidence, implementation considerations, and cross-cutting themes relevant to the adoption, sustainability, and pan-Canadian scaling of innovative cancer care models.

A PRISMA 2020 flow diagram will be used to illustrate the evidence identification, screening, eligibility, and inclusion process across academic literature and grey literature sources. The flow diagram will summarize the number of records identified through database searches, duplicate removal, records screened, exclusions at title/abstract and full-text stages, and the final number of included studies and documents. Additional evidence identified through environmental scanning, surveys, and key informant interviews will also be summarized within the adapted PRISMA flow diagram to reflect the broader mixed-methods evidence synthesis approach.

Descriptive summary tables will be used to characterize included literature and implementation evidence. These tables will present information related to publication type, jurisdiction, intervention category, implementation setting, workforce composition, digital or AI applications, and implementation status. Separate summary tables will also be developed to categorize included innovations according to major domains including virtual care, artificial intelligence and digital health, team-based care, enhanced scopes of practice, home and community-based care, navigation models, and workforce transformation initiatives.

Comparative implementation tables and matrices will be used to summarize implementation barriers, facilitators, workforce considerations, policy implications, and implementation outcomes across jurisdictions. These tables will integrate findings from academic literature, grey literature, survey findings, and key informant interviews to identify

common implementation themes and system-level considerations relevant to scalability and sustainability. Comparative tables examining Canadian and international implementation exemplars will also be presented where applicable.
Results will additionally be organized and presented according to the Consolidated Framework for Implementation Research (CFIR) domains. Narrative summaries and thematic tables will describe findings related to Intervention Characteristics, Outer Setting, Inner Setting, Characteristics of Individuals, and Process. These analyses will highlight contextual determinants influencing implementation success, workforce readiness, organizational capacity, stakeholder engagement, digital infrastructure, and policy alignment across healthcare settings.
Figures and conceptual diagrams may also be developed to visually represent relationships between innovation categories, implementation barriers and facilitators, workforce implications, and strategic policy opportunities identified through the synthesis.

Language restriction The review was limited to English-language publications due to feasibility, project timelines, and available reviewer capacity for screening and synthesis. This may have excluded relevant non-English implementation evidence.

Country(ies) involved Canada.

Keywords Innovations in Cancer Care, AI and digital, enhanced scopes of practice, home and community-based care, policy and practice, oncology workforce.

Dissemination plans Findings from this review will be disseminated through multiple academic, policy, and practice-focused channels to support knowledge translation and uptake across cancer care systems in Canada in alignment with knowledge dissemination strategy of CAPCA. The primary dissemination strategy includes publication of findings in a peer-reviewed journal focused on oncology, health services research, implementation science, or health policy. Additional manuscripts may be developed to further explore specific themes including workforce transformation, digital health and artificial intelligence, home and community-based care, and implementation science considerations for pan-Canadian scaling.
Results will also be shared with national and provincial cancer system partners through presentations, policy briefs, webinars, and stakeholder engagement activities led by CAPCA and the Canadian Partnership Against Cancer (CPAC). Findings will support ongoing discussions related to workforce planning, digital transformation, innovation scaling, and implementation strategies within Canadian cancer systems.
Knowledge translation activities will include dissemination to healthcare leaders, policymakers, researchers, professional associations, cancer agencies, and implementation partners through conference presentations, workshops, and targeted presentations to relevant stakeholder groups. Summary materials, implementation considerations, and policy-focused recommendations may also be developed to support operational and strategic planning activities across jurisdictions.

Contributions of each author

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