

## Appendix 1: Methods

### Background to the rapid synthesis

This rapid synthesis mobilizes both global and local research evidence about a question submitted to the McMaster Health Forum's Rapid Response program. Whenever possible, the rapid synthesis summarizes evidence drawn from existing evidence syntheses and from single research studies in areas not covered by existing evidence syntheses and/or if existing evidence syntheses are old or the science is moving fast. An evidence synthesis 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 rapid synthesis does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

The Forum produces timely and demand-driven contextualized evidence syntheses such as this one that address pressing health and social system issues faced by decision-makers (see our website for more details and examples - [www.mcmasterforum.org/find-domestic-evidence/contextualized-es](http://www.mcmasterforum.org/find-domestic-evidence/contextualized-es)). This includes evidence syntheses produced within:

- days (e.g., rapid evidence profiles or living evidence profiles)
- weeks (e.g., rapid syntheses that at a minimum include a policy analysis of the best-available evidence, which can be requested in a 10-, 30-, 60- or 90-business-day timeframe)
- months (e.g., full evidence syntheses or living evidence syntheses with updates and enhancements over time)

Our contextualized evidence syntheses can be prepared in a way that includes a combination of different analyses to inform issues at different stages of the policy cycle. The question(s) we address may focus on helping decision-makers in:

- 1) understanding a problem and its causes
- 2) selecting options for addressing a problem
- 3) identifying implementation considerations
- 4) monitoring implementation and evaluating impacts.

Each synthesis includes, at a minimum, a policy analysis consisting of a profile or synthesis of the best-available evidence. This can be complemented by a systems analysis for determining how the relevant parts of a health or social system currently work and identifying options for doing things differently, and/or a political analysis for understanding the political factors that may affect how issues move onto government agendas and policy decisions are made. This can include conducting jurisdictional scans and key informant interviews to harness a range of insights to contextualize the evidence identified.

This rapid synthesis was prepared over a 60-business day timeframe and involved six steps:

- 1) submission of a question from a policymaker or stakeholder (in this case, the Ontario Ministry of Health)
- 2) identifying, selecting, appraising and synthesizing relevant research evidence about the question
- 3) conducting and synthesizing a jurisdictional scan of experiences about the question from other countries and Canadian provinces and territories

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- 4) interviewing and synthesizing key insights about the question from system, organizational and professional leaders in Ontario
- 5) drafting the rapid synthesis in such a way as to present the evidence concisely and in accessible language
- 6) finalizing the rapid synthesis based on the input of at least two merit reviewers.

### **Identification, selection, quality appraisal and synthesis of evidence**

For this rapid synthesis, we searched [HealthEvidence](#), [Health Systems Evidence](#), and [PubMed](#) for:

- 1) guidelines (defined as providing recommendations or other normative statements derived from an explicit process for evidence synthesis)
- 2) full systematic reviews
- 3) rapid reviews
- 4) protocols for reviews or rapid reviews that are underway
- 5) titles/questions for reviews that are being planned
- 6) single studies (when no guidelines, systematic reviews or rapid reviews are identified or when they are older).

In each database we used the open search function for (“Black women”) AND (“cancer”). We ran additional advanced searches for (((Black women) AND (cancer)) AND (strateg\* OR approach)) AND (health OR care OR healthcare OR treatment).

Each source for these documents is assigned to one team member who conducts hand searches (when a source contains a smaller number of documents) or keyword searches to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the rapid evidence profile, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment.

For any included guidelines, two reviewers assess each guideline using three domains in the AGREE II tool (stakeholder involvement, rigour of development and editorial independence). Guidelines are classified as high quality if they were scored as 60% or higher across each of these domains.

For each systematic review we included in the synthesis, we documented the dimension of the organizing framework with which it aligns, key findings, living status, methodological quality (using AMSTAR), the last year the literature was searched (as an indicator of how recently it was conducted), availability of GRADE profile, and equity considerations using PROGRESS PLUS.

For AMSTAR, two reviewers independently appraise the methodological quality of systematic reviews and rapid reviews that are deemed to be highly relevant. Disagreements are resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. High-quality reviews are those with scores of eight or higher out of a possible 11, medium-quality reviews are those with scores between four and seven, and low-quality reviews are those with scores less than four. 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 health-system arrangements or to economic and social responses. 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, but merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (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.

For primary research (if included), we documented the dimension of the organizing framework with which it aligns, publication date, jurisdiction studied, methods used, a description of the sample and intervention, declarative title and key findings, and equity considerations using PROGRESS PLUS. We then used this extracted information to develop a synthesis of the key findings from the included syntheses and primary studies.

During this process we include published, pre-print and grey literature. We do not exclude documents based on the language of a document. However, we are not able to extract key findings from documents that are written in languages other than Chinese, English, French, Portuguese or Spanish. We provide any documents that do not have content available in these languages in an appendix containing documents excluded at the final stages of reviewing. We excluded documents that did not directly address the research questions and the relevant organizing framework. All of the information provided in the appendix tables was taken into account by the authors in describing the findings in the rapid synthesis.

### **Identifying experiences from other countries and from Canadian provinces and territories**

For each rapid synthesis, we collectively decide on what countries to examine based on the question posed. For other countries we search relevant government and stakeholder websites. In Canada, we search websites from relevant national and provincial governments, ministries and agencies (e.g., Public Health Agency of Canada). We do not exclude countries based on language. Where information is not available in English, Chinese, French or Spanish, we attempt to use site-specific translation functions or Google translate.

### **Identifying experiences from key informants**

#### **Key informant interviews**

For this rapid synthesis, we conducted 15 interviews with a total of 24 key informants between 5 May and 23 May 2023. Eleven interviews were conducted one-on-one with individuals and four interviews were conducted in groups with multiple key informants from the same organization. All interviews were conducted virtually, and each interview lasted approximately 45 minutes. Key informants were healthcare service professionals with experience providing, coordinating, or organizing care for Black women with cancer in Ontario, including healthcare providers (i.e., oncologists, surgeons, family physicians, and nurse practitioners), community-health-centre representatives, and provincial public servants. Most key informants were Black women, and several interviewees also had lived experiences as Black women with cancer or as relatives and caregivers of Black women with cancer. Key informants were recruited through professional networks and snowball referral. Key informants whose work was identified in the jurisdictional scan were also contacted.

The purpose of the key informant interviews was to complement the findings of the evidence synthesis and jurisdictional scan by identifying any gaps that may not have been captured or additional insights on successful strategies to improve health outcomes and experiences of Black women with cancer. The interview guide (Appendix 5) was based on the organizing framework of the rapid synthesis and included questions about experiences providing healthcare for Black women with cancer, strategies to improve experiences and outcomes, implementation features, and equity considerations. All interviews were conducted by the project lead with a notetaker present and detailed notes were recorded during the interview and sent to participants afterwards to review and append.

#### **Data analysis**

For data analysis, interview notes were coded by the notetaker to relevant domains of two behavioural and implementation science frameworks, namely the Action, Context, Target, and Time (AACTT), and Capability,

Opportunity, Motivation – Behaviour (COM-B). (29, 30, 31) The AACTT and COM-B frameworks offered essential insights into the relevant behavioural and implementation features of barriers and strategies reported by key informants. The AACTT framework was useful for identifying implementation features of barriers and strategies (Action) at provider (Actor), community (Target, Context) and system levels. The Time domain was used to identify barriers and strategies as they pertained to stages of the cancer-care continuum. The COM-B framework was useful for identifying relevant behaviour change components of barriers and strategies from patient, provider, and system-level actors. Barriers and strategies related to the actor's awareness of the strategy were coded to the Capability domain (e.g., awareness-raising campaigns), access to the strategy to the Opportunity domain (e.g., community-delivered care, social support), and Motivation (e.g., trust, fear) to engage with the strategy to the Motivation domain. See Appendix 5 for the codebook with applied definitions for each domain and details on data analysis methods. After coding was complete, barrier and strategy themes and subthemes were identified by the project lead and notetaker/coder and discussed until consensus was met.

## Appendix 2: Key findings from highly relevant evidence documents on strategies to improve health outcomes and care experiences for Black women with common cancers

| Organizing framework |                                     | Summary of evidence  |
|----------------------|-------------------------------------|--|
| Screening            | Educational strategies and programs | <p><b>Breast cancer</b></p> <ul style="list-style-type: none"> <li>• <a href="#"><u>Visual tool to distribute breast cancer information</u></a> <ul style="list-style-type: none"> <li>○ In this study, a visual tool was developed using a community participatory approach to disseminate breast cancer information to African-American women living in rural and urban counties in South Carolina, U.S.</li> <li>○ Study results demonstrated that participants had general awareness of risk factors for breast cancer and were willing to share information with families and community members <ul style="list-style-type: none"> <li>▪ Pastors, healthcare providers and social media/the internet were recommended communication channels</li> </ul> </li> </ul> </li> <li>• <a href="#"><u>Using spiritual elements to encourage uptake of breast cancer health material</u></a> <ul style="list-style-type: none"> <li>○ The study focused on examining important spiritual elements that can be included in health communication material to increase breast cancer screening</li> <li>○ The intervention involved three nominal group sessions with 15 African-American women in a U.S. southeastern city, and 20 in-person semi-structured interviews, focusing on identifying relevant spiritual elements to draft a spiritually framed breast cancer screening message</li> <li>○ The authors identified three important spiritual elements that could be incorporated into breast cancer screening health promotion: 1) the body as a temple; 2) going to the doctor does not make you faithless; and 3) God did not give us the spirit of fear</li> <li>○ The authors found that they should structure their messages by starting with the health message, and try to personalize the message through a spiritual lens; the authors highlight that spiritual/religious beliefs can act as barriers to health promotion, therefore focusing on positive aspects to promote breast cancer screening can help overcome this barrier</li> </ul> </li> <li>• <a href="#"><u>Approaches to address disparities in educating African-American women on breast cancer screening</u></a> <ul style="list-style-type: none"> <li>○ The authors highlight the use of mass media to increase screening for breast cancer among African-American women <ul style="list-style-type: none"> <li>▪ Mass media can be combined with other interventions that may enhance access to mammography for low-income individuals, or racial/ethnic minorities (e.g., vouchers, same-day appointments, mobile mammography vans, etc.)</li> <li>▪ No significant results were obtained linking mass media interventions to an increase in screening</li> </ul> </li> <li>○ The authors pointed out that multiple studies indicated that text messaging and smartphone apps were used to increase breast cancer screening, and that ‘Black radio’ was a useful dissemination tool for health messages on screening <ul style="list-style-type: none"> <li>▪ Black radio refers to radio stations that target and are trusted by African-American audiences; it reaches a large African-American audience, and can overcome barriers, such as low health literacy</li> <li>▪ One study found testimonials by breast cancer survivors on Black radio stations with R&amp;B and gospel formats (which aired for one year) to be effective in increasing awareness of screening</li> </ul> </li> </ul> </li> </ul> |

| Organizing framework | Summary of evidence  |
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|                      | <ul style="list-style-type: none"> <li>○ Additionally, the authors indicated that church-based interventions increased acceptability of receiving cancer education, and highlighted the importance of pastoral input, as well as the effectiveness of personal testimonies <ul style="list-style-type: none"> <li>▪ One study used church programs, along with other strategies, and found an increase in regular use of mammography</li> <li>▪ Another study used a church-based telephone mammography counselling program to contact participants and found a reduction in mammography non-adherence rates</li> </ul> </li> <li>● <a href="#">Educational outreach program to encourage mammogram registration</a> <ul style="list-style-type: none"> <li>○ The study aimed to examine a community-based educational outreach program to engage at-risk African-American women with the goal to increase awareness, affect timely care and diagnosis, and encourage mammogram registration</li> <li>○ The outreach program included several components, including survivor videos, patient/neighbourhood outreach programs (consisting of education walks and luncheon seminars), and community outreach with direct-mail campaigns</li> <li>○ Of the 28 women reached through follow-up phone calls, 20 reported a change in their perception of breast cancer, 14 received mammograms, and eight scheduled mammograms <ul style="list-style-type: none"> <li>▪ Of those who did not schedule or receive mammograms, reasons included lack of transportation, lack of medical insurance, lack of time or other issues</li> </ul> </li> <li>○ As a result of this intervention, two women who pursued screening were diagnosed with breast cancer, emphasizing the importance of such initiatives</li> <li>○ Interventions similar to the one implemented here can help reduce barriers in breast cancer screening, including fears of the healthcare system, unnecessary surgery, or potential abandonment by spouse following mastectomy</li> </ul> </li> </ul> <p><b>Cervical cancer</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Health literacy intervention to promote cervical cancer screening among HIV patients</a> <ul style="list-style-type: none"> <li>○ Community-based, HEalth literacy focused intervention for Cervical Cancer group (CHECC-uP) was assessed in this pilot study for feasibility, acceptability and efficacy among women living with HIV</li> <li>○ The intervention consisted of a cervical cancer brochure as well as 30- to 60-minute individualized health literacy-focused education sessions, monthly phone counselling and navigation assistance for completing a Pap test, with three- and six-month follow-up</li> <li>○ All participants were Black or African-American women recruited from inner-city HIV clinics and organizations in Baltimore, MD; of the 58 middle-aged women included in the analysis, nine out 10 (89.5%) were unemployed, retired, or disabled, and more than 40% had less than a high school education</li> <li>○ The study found that participation in the intervention was associated with improvements in health literacy and other psychosocial outcomes only at three months post-intervention; the trend was attenuated at six months</li> <li>○ All participants in the intervention group said that they would recommend the program to promote Pap testing among Black women living with HIV</li> </ul> </li> </ul> |

| Organizing framework  | Summary of evidence   |
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|   | <p><b>Colorectal cancer</b></p> <ul style="list-style-type: none"> <li>• <a href="#"><u>Promoting the use of a home-stool test for screening colorectal cancer (CRC) using a virtual health assistant (VHA)-delivered intervention</u></a> <ul style="list-style-type: none"> <li>○ The VHA intervention consisted of information about CRC and fecal immunochemical testing (FIT) screening, interactive health-behaviour questions, discussion of screening barriers, and an opportunity to request a FIT <ul style="list-style-type: none"> <li>▪ 53 Black women from North Florida participated in focus groups and interviews while testing the VHA intervention</li> </ul> </li> <li>○ Modifications were made to the intervention based on user preferences, such as combining multiple modalities (e.g., audio, visuals, subtitles), and using a VHA simulation that looked real and had a likeable voice and professional appearance; personalization/customization, responsiveness of the intervention and the ability to ask questions were important</li> <li>○ By using a user-centred design and adapting the content iteratively, improvements were seen overall in user perceptions and willingness of Black women to engage with the intervention</li> </ul> </li> </ul> <p><b>Multiple cancers</b></p> <ul style="list-style-type: none"> <li>• <a href="#"><u>Screening program in Toronto for breast, colorectal and cervical cancer patients</u></a> <ul style="list-style-type: none"> <li>○ Program implemented at TAIBU Community Health Centre (CHC) in Toronto, Canada, for the Black and immigrant community</li> <li>○ The quality improvement program, initiated in 2013, consisted of cancer screening education programs, a patient call-back program (operated in the fall to coincide with influenza vaccinations), provider audits and a mammography promotion day</li> <li>○ The program was successful in engaging patients and healthcare providers to increase cancer screening participation from 2011 to 2018 for rates of breast, colorectal and cervical cancer screening from 17% to 72%, 18% to 67%, and 59% to 70%, respectively</li> </ul> </li> <li>• <a href="#"><u>Breast and cervical cancer screening program, the “Ko-Pamoja” intervention</u></a> <ul style="list-style-type: none"> <li>○ The “Ko-Pamoja” intervention served as a breast and cervical cancer screening program for Black women in Ontario, Canada, and utilized pre- and post-session questionnaires to determine the awareness and knowledge of cancer susceptibility and screening among the attendees</li> <li>○ The findings from the study revealed that the “Ko-Pamoja” program was able to increase the participants’ awareness of cancer susceptibility and screening guidelines, with four of the 30 attendees having been screened for breast cancer upon completion of the final session</li> </ul> </li> </ul> |
| Strategies and programs to enhance access to cancer screening | <p><b>Breast cancer</b></p> <p><a href="#"><u>Enhancing access to care</u></a></p> <ul style="list-style-type: none"> <li>• <a href="#"><u>Breast cancer case management intervention</u></a> <ul style="list-style-type: none"> <li>○ The study describes a case management intervention for women of African descent to reduce barriers to breast cancer screening and follow-up diagnosis appointments</li> <li>○ The case management intervention involved case managers who referred 437 Black women ages 40-75 to social services based on participants’ concerns (e.g., transportation, housing, language barriers), and navigation to prompt screening and follow-up appointments</li> </ul> </li> </ul>  |



| Organizing framework              | Summary of evidence   |
|-----------------------------------|---|
|                                   | <ul style="list-style-type: none"> <li>○ There was an uptake in screening, however, housing concerns and the lack of a regular provider predicted poor mammography uptake, resulting in no change in longitudinal patterns</li> </ul> <p><b>Cervical cancer</b></p> <ul style="list-style-type: none"> <li>● <a href="#">HPV (cervical cancer) self-collection intervention for African-American women in Mississippi</a> <ul style="list-style-type: none"> <li>○ The intervention consisted of utilizing a ‘choice’ model of HPV self-collection at home or the ‘standard of care’ model within the existing health system (i.e., Pap test/smear and HPV co-testing by community-health workers)</li> <li>○ The findings revealed that the ‘choice’ intervention displayed greater effectiveness, with a reduction in cervical cancer risk of 14.8% (as opposed to the ‘standard of care’, which was 6.4%), and a cost-effectiveness that totalled \$62,720 every five years per year of life saved</li> </ul> </li> </ul> <p><b>Endometrial cancer</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Home-based intervention for endometrial cancer screening</a> <ul style="list-style-type: none"> <li>○ The intervention incorporated a survey to capture participants’ impressions of tampon use, six focus groups (three with Black women and three with white women), and use of a home-based tampon testing kit</li> <li>○ It was noted that endometrial cancer awareness and knowledge surrounding its associated risk factors were low; however, many participants were accepting of a home sampling cancer screening method</li> <li>○ Concerns among participants arose from the possible complexities and risks involved with this self-sampling intervention, particularly given that many women from the Black community were not as comfortable with tampon use</li> </ul> </li> </ul> |
| Prediction tools for cancer risks | <p><u>Prediction tools</u></p> <ul style="list-style-type: none"> <li>● <a href="#">Simulation of breast cancer patient navigation for breast cancer patients</a> <ul style="list-style-type: none"> <li>○ An agent-based model (ABM) was used in this study to simulate screening mammography, diagnostic resolution, and the stage of cancer at diagnosis for 50-74-year-old African-American women in Chicago</li> <li>○ Three counterfactual scenarios were simulated: 1) a control setting to represent “standard care”, 2) a setting with clinical navigation from hospital-affiliated staff, and 3) a setting with network navigation where agents could receive clinical and/or network navigation</li> <li>○ Simulation results suggested that network navigation may have led up to a 13% increase in screening completion rate, a 7.8% increase in the rate of diagnostic resolution, and a 4.9% increase in early-stage diagnosis</li> </ul> </li> <li>● <a href="#">Impact of individualized breast cancer risk estimates on use of mammography</a> <ul style="list-style-type: none"> <li>○ The study examined whether individualized breast cancer risk estimates as part of routine primary healthcare at federally qualified health centres in medically underserved communities in Chicago were associated with an increase in the rate of mammography</li> <li>○ A total of 347 women ages 25 to 69 years (114 were non-Hispanic African-American) without a history of breast cancer were enrolled and assessed</li> <li>○ The authors found that providing individualized breast cancer risk estimates was associated with increased use of mammography among women from racialized groups</li> </ul> </li> </ul>  |



| Organizing framework |   | Summary of evidence   |
|----------------------|---|---|
| Diagnosis            | Prediction tools for cancer diagnoses                         | <ul style="list-style-type: none"> <li>• <a href="#">Metrics to monitor triple negative breast cancer disparities</a> <ul style="list-style-type: none"> <li>○ Multilevel methods and geospatial mapping were used to determine whether the race and income versions of the neighbourhood Index of Concentration at the Extremes (ICE) metrics can identify trends in triple negative breast cancer (TNBC) disparities in New Castle County, Delaware, where there are elevated rates of TNBC</li> <li>○ Women with TNBC were young, twice as likely to be Black and present with late-stage cancer, and more likely to have Medicaid or no insurance; higher rates of unhealthy alcohol use and obesity were observed in the most disadvantaged neighbourhoods and had the highest odds of TNBC</li> <li>○ Interestingly, only the ICE-race metric was significantly associated with higher odds of TNBC when adjusted for patient-level age and race, suggesting that the relationship between TNBC and area-level metrics of race are affected by both composition and context</li> </ul> </li> </ul>  |
| Treatment            | Strategies and programs to enhance access to cancer treatment | <ul style="list-style-type: none"> <li>• <a href="#">A multidisciplinary care program for breast cancer treatment following genetic testing</a> (<i>medium relevance</i>) <ul style="list-style-type: none"> <li>○ A comprehensive multidisciplinary care (cMDC) program for breast cancer treatment was implemented to test for racial disparities among patients newly diagnosed with invasive breast cancer after using genetic testing; 43.4% were African-American and 56.4% were Caucasian</li> <li>○ The cMDC program was conducted at an academic health system in southeast Michigan, U.S., and included the participation of a geneticist</li> <li>○ After the cMDC program was implemented, there was a significant increase in genetic referrals and in the attendance of participants at genetic testing appointments <ul style="list-style-type: none"> <li>▪ The study suggests that this could have been due to the scheduling of appointments at the time of tumour board rather than at a later time</li> </ul> </li> <li>○ Although the overall rate of genetic referrals increased when the cMDC program was implemented, it did not increase disproportionately based on race <ul style="list-style-type: none"> <li>▪ African-Americans in this study were less likely to attend genetic testing appointments, but there was no difference found in the rates of genetic testing completed or recommended</li> </ul> </li> <li>○ More appropriate referrals were made for participants with private insurance following implementation</li> </ul> </li> </ul> |
| Survivorship         | Educational strategies and programs                           | <ul style="list-style-type: none"> <li>• <a href="#">Survivor stories of breast cancer to improve QoL of non-metastatic breast cancer patients</a> <ul style="list-style-type: none"> <li>○ Narratives of African-American breast cancer survivors were used in an intervention to determine what impact viewing survivor stories had on newly diagnosed non-metastatic breast cancer patients' quality of life (QoL)</li> <li>○ Those in the intervention group (108 in total) watched an interactive video program using 207 clips of stories (one to three minutes) on a touchscreen tablet computer in addition to standard medical care</li> <li>○ The results of the study indicated that the intervention had no significant impact on QoL, depressive symptoms, or concerns of the participants about recurrence, but longer exposure to the intervention was associated with decline in the three QoL subscales of emotional well-being, fatigue and role limitations due to physical health</li> <li>○ Results from the intervention arm also showed promise when it came to engagement as participants spent on average over four hours across the three exposures to survivor stories</li> </ul> </li> </ul>  |

| Organizing framework   |                                   | Summary of evidence   |
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|  | Prediction tools for survivorship | <ul style="list-style-type: none"> <li>• <a href="#">Survival prediction models for women with breast cancer</a> <ul style="list-style-type: none"> <li>○ Race/ethnicity-specific survival machine learning (ML) models for Black and Hispanic women with breast cancer were compared to a general ML model with all races data to assess their performance in forecasting future events</li> <li>○ Survival ML allows health professionals to identify cancer patients at high risk by learning patterns from high-dimensional data and complex feature interactions in order to forecast future events and needs for increased utilization of healthcare services</li> <li>○ The study found that out of the 322,348 female patients identified who were diagnosed with breast cancer, the race/ethnicity-specific ML models for Black and Hispanic women consistently outperformed the general model when predicting race/ethnicity-specific outcomes (among these patients, 59,204 (18.4%) were Hispanic and 20,073 (6.2%) were Black)</li> </ul> </li> </ul>   |
| Barriers and facilitators of cancer strategies and interventions for Black women |                                   | <ul style="list-style-type: none"> <li>• <a href="#">Barriers and facilitators to encouraging breast cancer screening (systematic review)</a> <ul style="list-style-type: none"> <li>○ Black, Asian and minority ethnic (BAME) women were found to lack knowledge in identifying breast cancer and the screening program, as well as risks and treatments available</li> <li>○ In terms of cultural-related factors, two of the studies drew associations between faith and decreased appreciation of preventive medicine amongst BAME women</li> <li>○ The stigma associated with cancer and the fears of marital consequences and lack of family support due to treatment were barriers that BAME women faced</li> <li>○ Gender of health professionals was also identified as a barrier, as women mentioned being uncomfortable being examined by a male professional</li> <li>○ Forming interprofessional relationships between BAME women and health professionals was identified as a facilitator to encourage screening</li> <li>○ In terms of access, logistical factors (e.g., cost of attendance, time convenience and distance) were barriers identified in several studies</li> </ul> </li> <li>• <a href="#">Factors affecting breast cancer screening amongst African-American churchgoers</a> <ul style="list-style-type: none"> <li>○ The Andersen Behavioral Model of Health Services Use was used to assess factors associated with adherence to the US National Comprehensive Cancer Networks' breast cancer screening guidelines amongst 919 church-going African-American women from Southwest Houston, Texas</li> <li>○ The study found that older age, having a personal diagnosis of cancer, and having health insurance and ideal patient-provider communication was associated with increased odds of screening adherence</li> <li>○ To increase screening adherence, future interventions may need to target uninsured women for free mammograms and also include the training of physicians to communicate information in a way that builds trust and respect</li> </ul> </li> <li>• <a href="#">Breast cancer screening recommendations for Black women in the U.S.</a> <ul style="list-style-type: none"> <li>○ Tradeoffs of screening strategies in Black women were compared to those of white women using a race-specific simulation model</li> <li>○ Benefits of screening generally increased when the number of mammograms increased due to early and more frequent screening; the most efficient screening for Black women was biennial screening from ages 45-74, while the most equitable screening was from ages 40-74</li> </ul> </li> </ul> |

| Organizing framework | Summary of evidence   |
|----------------------|---|
|                      | <ul style="list-style-type: none"> <li>○ Black-white mortality disparities were reduced by 57% when screening was initiated 10 years earlier in Black versus white women, with comparable life years gained for both populations</li> <li>○ The results suggest that Black women should consider initiating biennial screening for breast cancer at age 40 rather than age 50</li> <li>● <a href="#"><u>Haitian patients' perceptions of a breast cancer screening program in Quebec</u></a> <ul style="list-style-type: none"> <li>○ The authors conducted in-depth interviews to understand cultural phenomena and held focus groups to understand women's personal experiences with the Quebec Breast Cancer Screening program (QBCSP) letters</li> <li>○ The authors state that low levels of literacy, stress related to mammograms and the importance of religious beliefs in Haitian culture are valuable factors to consider when creating referral letters</li> <li>○ The participants suggested translating the words "breast," "mammogram," and "cancer" into Creole, a shorter letter using simpler, more appealing, and accessible language, and communicating mammography and breast cancer screening programs on television and radio</li> </ul> </li> <li>● <a href="#"><u>Narrative intervention to promote genetic counselling for breast cancer among African-American women</u></a> <ul style="list-style-type: none"> <li>○ A culturally sensitive narrative intervention was developed to promote genetic counselling for African-American women with hereditary breast cancer</li> <li>○ The study found that barriers associated with genetic counselling included a nearly universal misconception among participants that they would be told that they have breast cancer, structural challenges associated with healthcare systems (e.g., costs, complexity, discrimination), familial secrecy, and lack of trust and poor communication with providers</li> <li>○ To address the barriers identified, the narrative was specifically designed to allay the fears of women about genetic counselling, describe the benefits to women and their families, and minimize the scientific information presented</li> <li>○ Women believed in the importance of social support for genetic counselling, religious/spiritual beliefs and health literacy</li> </ul> </li> <li>● <a href="#"><u>Increasing recruitment of Black women in breast cancer research</u></a> (<i>medium relevance</i>) <ul style="list-style-type: none"> <li>○ A community-based participatory approach was used to recruit African-American women into the Sistat Taking a Stand for Breast Cancer Research (STAR) genetic study in Memphis, Tennessee, U.S.</li> <li>○ 364 African-American women completed a consent form with information about breast cancer genetic research, a three-page self-report health questionnaire, and also provided a saliva specimen</li> <li>○ More than 85% of recruits agreed to be contacted for future studies</li> <li>○ Two major factors that contributed to successful recruitment were the development of partnerships with breast cancer advocates in the Memphis community and the incorporation of culturally sensitive educational workshops</li> </ul> </li> <li>● <a href="#"><u>Barriers and facilitators of cervical cancer screening and self-testing</u></a> <ul style="list-style-type: none"> <li>○ Five focus groups were conducted with 35 African-American women from ages 25 to 53, in Kansas City, U.S</li> </ul> </li> </ul> |

| Organizing framework |  | Summary of evidence   |
|----------------------|--|---|
|                      |  | <ul style="list-style-type: none"> <li>○ The study found that 74% of participants were screened for cervical cancer in the past three years; however, barriers to care/screening still persist and include past trauma, prioritizing the well-being of children over themselves, and apprehension regarding the administration and accuracy of the self-test</li> <li>• <a href="#"><u>Case management intervention for cervical cancer</u></a> <ul style="list-style-type: none"> <li>○ A case management intervention for cervical cancer prevention developed by the Boston REACH coalition for Black women to identify and reduce medical and social barriers to cervical cancer screening and follow-up</li> <li>○ The study found that a lack of a regular health provider, poor self-rated health, concerns communicating with providers and having less than a high school education had an impact on the recency of Pap smear screening</li> <li>○ During the intervention, researchers found a significant increase in recommended Pap smear screening intervals among women who recently received a Pap smear prior to the intervention</li> <li>○ Insurance status was identified as the key factor in timely follow-up of abnormal results rather than the case management intervention</li> </ul> </li> <li>• <a href="#"><u>Identifying barriers to care of Black women in Boston at risk for delays in breast cancer care (protocol)</u></a> <ul style="list-style-type: none"> <li>○ The protocol describes a cluster-randomized, stepped-wedge hybrid type 1 effectiveness-implementation study design (i.e., large focus on effectiveness and a small focus on implementation) on a community-based care coordination intervention for Black, non-Hispanic women in Boston at risk for delays in breast cancer care</li> <li>○ The intervention includes patient navigation services, shared patient registry and a web-based social determinants of health platform to identify and address barriers of care</li> </ul> </li> </ul> |

## Appendix 3: Key findings from jurisdictional experiences on strategies to improve health outcomes and care experiences for Black women with common cancers

Table 1: High-level summary of jurisdictional scan findings on strategies to improve health outcomes and care experiences for black women with common cancers

| Organizing framework | Summary of findings  |
|----------------------|--|
| Screening            | <p><b>Breast cancer</b></p> <ul style="list-style-type: none"> <li>• <a href="#">The Canadian Cancer Society partners</a> with organizations to develop virtual events such as Best Health for Black Women, which provided Black women with information on breast health and wellness, breast cancer risk factors and gynecological conditions <ul style="list-style-type: none"> <li>○ Participants also learned from the lived experiences of others through stories and conversations</li> </ul> </li> <li>• The <a href="#">Love &amp; Nudes company</a> planned a breast cancer campaign to include a bra insert in multiple skin tones that has been made to mimic how a cancerous lump may look on a person of colour <ul style="list-style-type: none"> <li>○ The Toronto-based company collaborated with a surgical oncologist in Toronto to design the insert for its breast cancer campaign</li> </ul> </li> </ul> <p><b>Cervical cancer</b></p> <ul style="list-style-type: none"> <li>• <a href="#">U.S. CDC has a cervical cancer screening program</a> to educate African-American women; participants work with community-health workers <ul style="list-style-type: none"> <li>○ Face Your Health was developed by researchers at CDC with input from African-American community-health workers and program administrators</li> <li>○ Educational resources grounded in behaviour-change theories (e.g., learning sessions, materials, visual aids) are provided at different reading skill levels and knowledge</li> <li>○ CHWs can adapt learning sessions based on the number of participants, setting and level of interaction (e.g., games and other activities to promote discussion)</li> </ul> </li> </ul> <p><b>Multiple cancers</b></p> <ul style="list-style-type: none"> <li>• A resource hub in Ontario called <a href="#">‘Every Breast Counts’</a>, which provides evidence-based cancer information for breast cancer primarily, but also for cervical and uterine cancers <ul style="list-style-type: none"> <li>○ ‘Black-centred’ resources can be located on the project’s webpage, which include but are not limited to mental health, physical fitness, financial, transportation and spiritual supports</li> <li>○ The resource hub offers many community events, such as <a href="#">Breast Health for Black Women</a>, <a href="#">Breast and Cervical Cancer Screening for Black Women</a> and <a href="#">Best Health for Black Women</a></li> <li>○ Within six months of their launch, the resource’s webpage garnered a total of 2,000 <a href="#">views</a>, and was disseminated across social media and to 130+ cancer and community-health centres</li> <li>○ A spokesperson of the project has indicated that this project has led to increased <a href="#">discussions</a> regarding equity and diversity among leadership tables and cancer programs across the country</li> <li>○ Upon completion of the Breast and Cervical Cancer Screening for Black Women event, the follow-up <a href="#">evaluation</a> found: 1) 97.6% of respondents felt as if the event nurtured a safe environment for cancer screening; 2) 87.5% of respondents were empowered; 3) 92.7% of respondents believed that an ethnic- and racially tailored event for Black women allowed them to be heard and supported; and 4) all of the respondents expressed the need for more events like the one they attended</li> </ul> </li> </ul> |

| Organizing framework | Summary of findings   |
|----------------------|---|
|                      | <ul style="list-style-type: none"> <li>A patient navigator program in New York – <a href="#">NYC CONNECT</a> – helps to increase screening of breast, cervical and colorectal cancers by using trained patient navigators to help people overcome health-system barriers to cancer-care access <ul style="list-style-type: none"> <li>The program was developed by the NYU School of Medicine in collaboration with the NYU Cancer Prevention and Control Research Networks, Albert Einstein Cancer Center, the Food Bank for New York City, the Laura and Isaac Perlmutter Cancer Center, and other network partners</li> </ul> </li> </ul>  |
| Treatment            | <p><b>Breast cancer</b></p> <ul style="list-style-type: none"> <li><a href="#">Olive Branch of Hope</a> in Toronto supports Black women living with breast cancer <ul style="list-style-type: none"> <li>The program <a href="#">services</a> include support groups (e.g., informative and uplifting meetings), educational seminars (e.g., health and nutrition topics every three months), faith-based supports and conversations with community ambassadors</li> <li>The program’s webpage includes <a href="#">resource articles</a> on a variety of subject areas, ranging from stigma and breast self-examination to strengthening immunity and having better nutrition</li> <li>This program hosts a number of events for the community, including <a href="#">Sowing the Seeds: Fundraising Gala</a> and <a href="#">Lymphedema: After Breast Cancer Treatment</a></li> <li><a href="#">Annie Parker Foundation</a> in Nova Scotia provides information on a website about breast cancer, healthy lifestyles and places to look for breast cancer screening</li> </ul> </li> </ul> |
| Survivorship         | <p><b>General cancer</b></p> <ul style="list-style-type: none"> <li>Three programs in the U.K. for supporting cancer-care survivors in general <ul style="list-style-type: none"> <li>The <a href="#">Black Women Rising cancer support program</a> facilitates peer-to-peer support groups, events, podcasts and other initiatives to support, educate and bring opportunities for women from Black, Asian and minority ethnic groups</li> <li><a href="#">Cancer Black Care</a> provides support for cancer sufferers and their carers, especially those from Black and other ethnic minority communities</li> <li><a href="#">NHS England YouTube series: NHS England published a set of three videos</a> to help providers and commissioners understand how <a href="#">perceived bias</a>, <a href="#">poor communication</a> and <a href="#">dignity issues</a> can worsen patient experience for Black and minority ethnic cancer patients</li> </ul> </li> </ul>  |

Table 2: Experiences in other countries on strategies to improve health outcomes and care experiences for Black women with common cancers

| Country        | Type of cancer  | Components of the cancer-care continuum                         | Delivery arrangements   | Implementation strategies                                       |   | Equity considerations   |
|----------------|---|---|---|---|---|---|
|                |   |   |   | Features  | Impact  |   |
| Australia      |   |   |   |   |   |   |
|                | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> |
| New Zealand    |   |   |   |   |   |   |
|                | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul> |
| United Kingdom |   |   |   |   |   |   |

| Country   | Type of cancer  | Components of the cancer-care continuum   | Delivery arrangements  | Implementation strategies  |  | Equity considerations  |
|---|---|---|--|--|--|--|
|   |   |   |  | Features   | Impact   |  |
| <a href="#">Black Women Rising cancer support project</a> | <ul style="list-style-type: none"> <li>Not specified (general focus)</li> </ul> | <ul style="list-style-type: none"> <li>Treatment</li> <li>Survivorship</li> </ul> | <ul style="list-style-type: none"> <li>The <a href="#">Black Women Rising cancer support project</a> facilitates peer-to-peer support groups, events, podcasts and other initiatives to support, educate and bring opportunities for women from Black, Asian and other minority ethnic groups</li> </ul> | <ul style="list-style-type: none"> <li>Peer-to-peer monthly support groups provide the foundation for the project</li> <li>Patient and carer targeted support</li> </ul> | <ul style="list-style-type: none"> <li>Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/language</li> </ul>  |
| <a href="#">Cancer Black Care</a>                         | <ul style="list-style-type: none"> <li>Not specified (general focus)</li> </ul> | <ul style="list-style-type: none"> <li>Treatment</li> <li>Survivorship</li> </ul> | <ul style="list-style-type: none"> <li><a href="#">Cancer Black Care</a> provides support for cancer sufferers and their carers, especially those from Black and other ethnic minority communities</li> </ul>  | <ul style="list-style-type: none"> <li>Patient and carer targeted support</li> </ul>   | <ul style="list-style-type: none"> <li>Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/ language</li> </ul> |
| <a href="#">NHS England YouTube Series</a>                | <ul style="list-style-type: none"> <li>Not specified (general focus)</li> </ul> | <ul style="list-style-type: none"> <li>Treatment</li> </ul>                       | <ul style="list-style-type: none"> <li>NHS England <a href="#">published a set of three videos</a> to help providers and commissioners understand how <a href="#">perceived bias</a>, <a href="#">poor communication</a> and <a href="#">dignity issues</a> can worsen</li> </ul>                        | <ul style="list-style-type: none"> <li>Video-based training resources designed to help improve care delivery</li> </ul>  | <ul style="list-style-type: none"> <li>Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/ language</li> </ul> |



| Country  | Type of cancer   | Components of the cancer-care continuum                       | Delivery arrangements  | Implementation strategies   |  | Equity considerations  |
|--|--|---|--|---|--|--|
|  |  |   |  | Features  | Impact   |  |
|  |  |   | patient experience for Black and other minority ethnic cancer patients   |   |  |  |
| <b>United States</b>   |  |   |  |   |  |  |
| <a href="#">U.S. Centers for Disease Control and Prevention (CDC)'s Face Your Health</a> | <ul style="list-style-type: none"> <li>• Cervical</li> </ul> | <ul style="list-style-type: none"> <li>• Screening</li> </ul> | <ul style="list-style-type: none"> <li>• Educational outreach program to encourage cervical cancer screening among African-American women (ages 21 to 65) for the first time or who do not get screened regularly</li> <li>• Participants engage with community-health workers to learn more about cervical cancer and connect them with screening and support services</li> </ul> | <ul style="list-style-type: none"> <li>• Face Your Health was developed by researchers at CDC with input from African-American community-health workers and program administrators</li> <li>• Educational resources grounded in behaviour-change theories (e.g., learning sessions, materials, visual aids) are provided at different reading skill levels and knowledge</li> <li>• CHWs can adapt learning sessions based on the number of participants, setting, and level of interaction (e.g., games and other activities to</li> </ul> | <ul style="list-style-type: none"> <li>• Not reported</li> </ul> | <ul style="list-style-type: none"> <li>• Race/ethnicity/culture/ language</li> </ul> |

| Country  | Type of cancer   | Components of the cancer-care continuum                     | Delivery arrangements  | Implementation strategies                                      |  | Equity considerations   |
|--|--|---|--|--|--|---|
|  |  |   |  | Features   | Impact   |   |
|  |  |   |  | promote discussion)  |  |   |
| <a href="#">New York City Cancer Outreach Network in Neighbours for Equity and Community Translation (NYC CONNECT)</a> | <ul style="list-style-type: none"> <li>Breast</li> <li>Cervical</li> <li>Colorectal</li> </ul> | <ul style="list-style-type: none"> <li>Screening</li> </ul> | <ul style="list-style-type: none"> <li>A patient navigator program to increase screening for specific cancers by using trained patient navigators to help people overcome health-system barriers to cancer-care access</li> <li>The program was developed by the NYU School of Medicine in collaboration with the NYU Cancer Prevention and Control Research Networks, Albert Einstein Cancer Center, the Laura and Isaac Perlmutter Cancer Center, the Food Bank for New York City, and other network partners</li> </ul> | <ul style="list-style-type: none"> <li>Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/language</li> </ul> |

**Table 3: Experiences across Canadian provinces and territories on strategies to improve health outcomes and care experiences for Black women with common cancers**

| Jurisdiction                            | Type of cancer  | Components of the cancer-care continuum  | Delivery arrangements   | Implementation strategies  |   | Equity considerations   |
|---|---|--|---|--|---|---|
|   |   |  |   | Features   | Impact  |   |
| Pan-Canadian                            |   |  |   |  |   |   |
| <a href="#">Canadian Cancer Society</a> | <ul style="list-style-type: none"><li>Breast cancer</li></ul>                           | <ul style="list-style-type: none"><li>Screening</li><li>Diagnosis</li></ul>  | <ul style="list-style-type: none"><li><a href="#">The Canadian Cancer Society partners</a> with organizations to develop virtual events such as Best Health for Black Women</li></ul> | <ul style="list-style-type: none"><li>Best Health for Black Women provided Black women with information on breast health and wellness, breast cancer risk factors and gynecological conditions</li><li>Participants also learned from the lived experiences of others through stories and conversations</li><li>This event was held on 30 March 2023</li></ul> | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>Race/ethnicity/culture/language</li></ul> |
| British Columbia                        |   |  |   |  |   |   |
|   | <ul style="list-style-type: none"><li>None identified</li></ul>                         | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>                 |
| Alberta                                 |   |  |   |  |   |   |
|   | <ul style="list-style-type: none"><li>None identified</li></ul>                         | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>                 |
| Saskatchewan                            |   |  |   |  |   |   |
|   | <ul style="list-style-type: none"><li>None identified</li></ul>                         | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>                 |
| Manitoba                                |   |  |   |  |   |   |
|   | <ul style="list-style-type: none"><li>None identified</li></ul>                         | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>  | <ul style="list-style-type: none"><li>None identified</li></ul>   | <ul style="list-style-type: none"><li>None identified</li></ul>                 |
| Ontario                                 |   |  |   |  |   |   |
| <a href="#">Every Breast Counts</a>     | <ul style="list-style-type: none"><li>Breast</li><li>Cervical</li><li>Uterine</li></ul> | <ul style="list-style-type: none"><li>Screening</li><li>Diagnosis</li><li>Treatment</li><li>Survivorship</li></ul> | <ul style="list-style-type: none"><li>This project is a <a href="#">one-stop-shop</a> for ethnic- and culturally tailored,</li></ul>  | <ul style="list-style-type: none"><li>‘Black-centered’ resources can be located on the project’s webpage, which include, but are not limited to, mental</li></ul>  | <ul style="list-style-type: none"><li>Within six months of their launch, the resource’s webpage garnered a total of 2,000</li></ul> | <ul style="list-style-type: none"><li>Race/ethnicity/culture/language</li></ul> |

| Jurisdiction | Type of cancer | Components of the cancer-care continuum | Delivery arrangements   | Implementation strategies   |   | Equity considerations |
|--------------|----------------|---|---|---|---|-----------------------|
|              |                |   |   | Features  | Impact  |                       |
|              |                |   | <p>evidence-based cancer information for Black women in the breast cancer community</p> <ul style="list-style-type: none"> <li>○ This resource hub was launched in <a href="#">partnership</a> with the Peter Gilgan Centre for Women's Cancers at Women's College Hospital and the Canadian Cancer Society, with support from The Olive Branch of Hope and four co-creators</li> </ul> | <p>health, physical fitness, financial, transportation and spiritual supports</p> <ul style="list-style-type: none"> <li>○ Digital videos prepared by Black doctors, and print material are available for individuals to view</li> <li>○ The online resource is tailored to include the lived experiences of Black women who have been diagnosed with breast cancer</li> <li>● The resource hub offers many community events, such as <a href="#">Breast Health for Black Women</a>, <a href="#">Breast and Cervical Cancer Screening for Black Women</a>, and <a href="#">Best Health for Black Women</a></li> <li>○ The events listed provided <a href="#">accessible cancer screening to 46 Black women</a> through a non-clinical and culturally sensitive approach, along with follow-up care, mindfulness sessions, social support, food and transportation to the event</li> <li>● The last of these aimed to empower Black women through <a href="#">increased knowledge and</a></li> </ul> | <p><a href="#">views</a>, and was disseminated across social media and to 130+ cancer and community-health centres</p> <ul style="list-style-type: none"> <li>● A spokesperson of the project has indicated that this project has led to increased <a href="#">discussions</a> regarding equity and diversity among leadership tables and cancer programs across the country</li> <li>● Upon completion of the Breast and Cervical Cancer Screening for Black Women event, the follow-up <a href="#">evaluation</a> found: 1) 97.6% of respondents felt as if the event nurtured a safe environment for cancer screening; 2) 87.5% of respondents were empowered; 3) 92.7% of respondents believed that an</li> </ul> |                       |

| Jurisdiction                             | Type of cancer   | Components of the cancer-care continuum   | Delivery arrangements  | Implementation strategies   |   | Equity considerations   |
|--|--|---|--|---|---|---|
|  |  |   |  | Features  | Impact  |   |
|  |  |   |  | <a href="#">educational awareness</a> regarding risk factors, prevention, screening and detection for breast and uterine cancers, and endometriosis | ethnic- and racially tailored event for Black women allowed them to be heard and supported; and 4) all of the respondents expressed the need for more events like the one they attended |   |
| <a href="#">The Olive Branch of Hope</a> | <ul style="list-style-type: none"> <li>Breast</li> </ul> | <ul style="list-style-type: none"> <li>Treatment</li> <li>Survivorship</li> </ul> | <ul style="list-style-type: none"> <li>The Olive Branch of Hope is a leading resource hub for women of African ancestry living with breast cancer</li> <li>The program <a href="#">services</a> include support groups (e.g., informative and uplifting meetings), educational seminars (e.g., health and nutrition topics every three months), faith-based supports and conversations with</li> </ul> | <ul style="list-style-type: none"> <li>Not reported</li> </ul>  | <ul style="list-style-type: none"> <li>Many of the community events held by this organization are <a href="#">free of charge</a> to attend</li> </ul>                                   | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/language</li> </ul> |

| Jurisdiction  | Type of cancer  | Components of the cancer-care continuum                     | Delivery arrangements  | Implementation strategies  |   | Equity considerations   |
|---|---|---|--|--|---|---|
|   |   |   |  | Features   | Impact  |   |
|   |   |   | community ambassadors <ul style="list-style-type: none"> <li>The program's website includes <a href="#">resource articles</a> on a variety of subject areas, ranging from stigma and breast self-examination to strengthening immunity and having better nutrition</li> <li>This program hosts a number of events for the community, including <a href="#">Sowing the Seeds: Fundraising Gala</a> and <a href="#">Lymphedema: After Breast Cancer Treatment</a></li> </ul> |  |   |   |
| <a href="#">Love &amp; Nudes breast cancer campaign</a> | <ul style="list-style-type: none"> <li>Breast cancer</li> </ul> | <ul style="list-style-type: none"> <li>Screening</li> </ul> | <ul style="list-style-type: none"> <li>Toronto-based lingerie company Love &amp; Nudes collaborated with a surgical oncologist in Toronto to design the insert for their</li> </ul>  | <ul style="list-style-type: none"> <li>The Love &amp; Nudes company planned a breast cancer campaign to include a bra insert in multiple skin tones that has been made to mimic how a cancerous lump may look on a person of colour</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>Race/ethnicity/culture/language</li> </ul> |

| Jurisdiction   | Type of cancer  | Components of the cancer-care continuum                           | Delivery arrangements  | Implementation strategies   |   | Equity considerations   |
|--|---|---|--|---|---|---|
|  |   |   |  | Features  | Impact  |   |
|  |   |   | breast cancer campaign   | <ul style="list-style-type: none"> <li>This collection was named “Stage Zero” to highlight awareness and prevention of breast cancer</li> </ul> |   |   |
| <b>Québec</b>  |   |   |  |   |   |   |
|  | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>  | <ul style="list-style-type: none"> <li>None identified</li> </ul>   | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>   |
| <b>New Brunswick</b>   |   |   |  |   |   |   |
|  | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>  | <ul style="list-style-type: none"> <li>None identified</li> </ul>   | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>   |
| <b>Nova Scotia</b>   |   |   |  |   |   |   |
| <a href="#">Educate, Evaluate, Empower: Breast health For Black Women By Black Women</a> | <ul style="list-style-type: none"> <li>Breast</li> </ul>          | <ul style="list-style-type: none"> <li>Screening</li> </ul>       | <ul style="list-style-type: none"> <li><a href="#">Annie Parker Foundation</a> has a website that provides information to Black women about risk factors, healthy lifestyles and places to look for breast cancer screening. This website provides information for residents of Ontario and Nova Scotia</li> </ul> | <ul style="list-style-type: none"> <li>Not described</li> </ul>   | <ul style="list-style-type: none"> <li>Not described</li> </ul>   | <ul style="list-style-type: none"> <li>Place of residence</li> <li>Race/ethnicity/culture/language</li> <li>Gender/sex</li> </ul> |
| <b>Price Edward Island</b>   |   |   |  |   |   |   |
|  | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>  | <ul style="list-style-type: none"> <li>None identified</li> </ul>   | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>   |
| <b>Newfoundland and Labrador</b>   |   |   |  |   |   |   |
|  | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>  | <ul style="list-style-type: none"> <li>None identified</li> </ul>   | <ul style="list-style-type: none"> <li>None identified</li> </ul> | <ul style="list-style-type: none"> <li>None identified</li> </ul>   |



| Jurisdiction          | Type of cancer    | Components of the cancer-care continuum | Delivery arrangements | Implementation strategies |                   | Equity considerations |
|-----------------------|-------------------|---|-----------------------|---------------------------|-------------------|-----------------------|
|                       |                   |   |                       | Features                  | Impact            |                       |
| Yukon                 |                   |   |                       |                           |                   |                       |
|                       | • None identified | • None identified                       | • None identified     | • None identified         | • None identified | • None identified     |
| Northwest Territories |                   |   |                       |                           |                   |                       |
|                       | • None identified | • None identified                       | • None identified     | • None identified         | • None identified | • None identified     |
| Nunavut               |                   |   |                       |                           |                   |                       |
|                       | • None identified | • None identified                       | • None identified     | • None identified         | • None identified | • None identified     |

## Appendix 4: Barriers and strategies identified by key informants, with illustrative quotes

| Barriers   | Recommended strategies to address barriers  | Illustrative quotes  |
|--|---|--|
| <b>System level</b>  |   |  |
| <p>Delays in screening and late diagnosis of Black women, trans and non-binary people</p> <p>Current breast cancer screening eligibility is ages 50-74 years</p> | <p>Updating Ontario's breast cancer screening eligibility to women, trans and nonbinary people from age 40 for the general population and earlier for those who may be at higher risk</p> | <ul style="list-style-type: none"> <li>• “As a system, the preventative care and strategies are just not there. So, we wait until people are sick, and then it's too late.” - S3, Community Health Centre Representative</li> <li>• “You hopefully heard that the age is increasing in the U.S. for screening. We've talked about this for 10 years. We do not need to collect the data; one death is all the data we need. You do not need to do a study to determine that people are dying because of this. The hospital knows this. We know this. What we need to do is lower the age for mammograms, and get every woman, especially those at high risk, to get a baseline mammogram at age 40.” - S23, Researcher</li> <li>• “I am interested to see how guidelines [here] get changed for screening, especially with the new U.S. guidelines. In Europe and in the States, this has been in practice for quite some time, and we often lag behind.” - S20, Physician</li> <li>• “When it's grounded in science that some cancers affect certain populations more, they should actually respond to that by, for example, ensuring that there is advocacy for that population. Social demographics affect health outcomes for Black Canadians. This doesn't have to do with genes; it's who they are and what they are exposed to. There is no protocol for care for the Black population, but they are affected more aggressively than other populations. The protocol is for Caucasians, but they are less affected by the aggressive cancers. So, I think that this is very important and needed in this country where we have such a diverse population with so many immigrants.” - S8, Physician</li> <li>• “Late screening delays diagnosis when they think they can't have it because they're under 50. One woman this year was asking how to get her doctor to take her seriously about her complaints. There are physician factors involved. Having a diagnosis delayed by six months could mean the difference between cure and metastatic disease.” - S7, Oncologist</li> </ul> |
| <p>Lack of race- or ethnicity-based data specific to healthcare in Canada</p>  | <p>Increase opportunities for race-based research through targeted grants and other financial means</p>   | <ul style="list-style-type: none"> <li>• “We don't collect demographic data in Canada – huge barrier. Nobody talks about it – another barrier.” - S23, Researcher</li> <li>• “This work has been difficult to do over the years because few people were interested, and race-based data is not collected in Canada, so we rely on U.S. data, which does not reflect all of our challenges.” - S1, Oncologist</li> <li>• “I often see people jumping to the biological-race focus, but we need to as a north star for this work recognize that race is social, so if something is connected to race it's because of social and systemic issues.” - S23, Researcher</li> <li>• “But I will say that in terms of system-wide perspective, we need to shed light on some of the inequities that are experienced, so having data available on that. . . We need a push for individual-level data as well. Area level can show gaps, but we have no way to ensure that</li> </ul>  |

| Barriers  | Recommended strategies to address barriers   | Illustrative quotes   |
|---|--|---|
|   |  | <p>we are meeting the needs of the actual people in those areas without individual-level data.”- S11, Provincial Public Servant</p>   |
| <p>Challenges navigating healthcare system for patients</p> <p>Siloed healthcare system slows provider coordination</p> | <p>Improve collaboration and information sharing between providers, researchers, decision-makers and organizations at all levels</p> | <ul style="list-style-type: none"> <li>• “The system is very siloed. So, when people are hit with chronic disease in general and cancer in particular, they don’t know where to go to. You are given a diagnosis and it has different implications; could be an oncologist, gynecologist, urologist, radiologist, but having all of those people around the same table or in the same zoom meeting is so difficult.” - S8, Physician</li> <li>• “I know there are many teams that work smoothly and efficiently, and in the interest of sharing what works, best practices, tips, bringing those people together.” - S9, Plastic Surgeon</li> <li>• “We need some sort of health-system navigator to bring specialists together to talk about a case because everything is so siloed that at the end of the day, the patient is very confused.” - S8, Physician</li> </ul>  |
| <p>A lack of representation at all leadership and decision-making levels in healthcare</p>                              | <p>Ensure that the Black community is represented in healthcare leadership roles and decision-making</p>                             | <ul style="list-style-type: none"> <li>• “We have to have representation across the healthcare system at all levels, not just at front-line staff, [but] at senior leadership at hospitals and the Ontario Ministry of Health. When there are decision-makers around the table, you have to have a variety of perspectives.” - S4, Physician and Researcher</li> <li>• “Are we reflective of the communities that we serve as a health sector? And if so, what kinds of positions are they in: decision-making or client-facing?” - S5, Community Health Centre Representative</li> <li>• “What’s important is the overarching principle of having community members at the table and representation in decision-makers. Have people with lived experience as co-creators and actually listen to what they’re saying, not just have them to say that they were there. They need to be involved in the design and implementation and to be seen as experts.” - S4, Physician and Researcher</li> <li>• “Involve the community that is affected. We often leave them out when making decisions. It's easier to slap on some pink ribbons and say it's awareness month than to actually do that work of going into the community and saying, "Hey, we noticed this isn't working for you, what can we do? You've known about this lump for two years, but you don't want to get treatment for it, what can we do? How can we improve the trust between the healthcare system and us?" Any sort of research or solutions have to come from the community that is being affected.” - S2, Surgical Oncologist</li> <li>• “Continue to bring Black folks to the table for future conversations. A lot of the time in planning stages we get the voices but as rollout happens, Black people are not brought to the table and the initial ideas presented kind of get lost and there is nobody there to remind</li> </ul> |

| Barriers  | Recommended strategies to address barriers   | Illustrative quotes   |
|---|--|---|
|   |  | them what the work is about or why it was stated to begin with.” - S12, Provincial Public Servant, Provincial public servant  |
| <b>Provider level</b>   |  |   |
| <p>Less-than-optimal care due to inherent biases because of racism and sexism</p> <p>Mistrust of healthcare systems</p> <p>Provider lack of cultural competence</p> <p>Provider lack of awareness of high-risk groups</p> | <p>Mandatory cultural awareness training and education for healthcare providers to address any inherent biases</p> | <ul style="list-style-type: none"> <li>• “Folks don’t feel heard. Even if they are heard they are very worried about how they will be perceived, or that they won’t be believed. You don’t need to read the research if you’ve had that lived experience, it’s obvious. They know they won’t get the same care or experience as their white counterparts. It puts them on edge, knowing that they have to be advocates for themselves.” - S22, Family Physician</li> <li>• “One thing I’ve heard quite a bit is Black women having to advocate for themselves and push for a diagnosis, and the “angry Black woman” stereotype coming out.” - S4, Physician and Researcher</li> <li>• “Even with a healthcare provider, they may have a certain hangup or concern that may be cultural that healthcare providers don’t take the time to stop and listen to, no matter how outlandish it might sound by Western standards. This is something that may prevent the person from getting the care that they need.” - S10, Community Health Centre Representative</li> <li>• “Part of the issue is that our physicians have to take these continuing medical education courses, but I don’t think they’re taking the right ones. They do the frivolous ones or the ones that they get to go to exotic places. They are not keeping up with what is current in terms of keeping up with the healthcare of specific populations, especially equity-deserving groups.” - S23, Researcher, Researcher</li> <li>• “Another system-level issue is to incorporate anti-Black racism into training of healthcare providers at medical schools, nursing schools and other providers. That is important. I would really want to see this mandated by the provincial government. It should not depend on the individuals.” - S15, Community Health Centre Representative</li> <li>• “It’s not up to the patient to change, it’s up to the system. And people need to actually believe women. It’s a gendered issue.” - S2, Surgical Oncologist</li> <li>• “From a breast cancer perspective specifically, I think I didn’t have this understanding [of high-risk groups] just from my medical training alone but learned from my fellowship that we have easy point-of-care tools available to understand who is at higher risk for breast cancer and who should be referred for genetics assessment or even a more detailed family history.” - S20, Physician</li> </ul> |
| <p>Mistrust of non-Black healthcare providers</p> <p>Lack of Black healthcare providers</p>   | <p>Increase the number of Black health and social-services providers available to serve Black communities</p>      | <ul style="list-style-type: none"> <li>• “The best enhancement is building capacity of healthcare providers and staff to serve Black populations. It’s one thing to invite people for care, and a whole other to invite people for appropriate care without causing harm or minimizing the chances of causing harm.” - S10, Community Health Centre Representative</li> </ul>   |

| Barriers  | Recommended strategies to address barriers   | Illustrative quotes   |
|---|--|---|
|   |  | <ul style="list-style-type: none"> <li>• “When they do access care, they don’t see someone who looks like them or who has experience working with people who look like them.” - S1, Oncologist</li> <li>• “People feel more at ease when they see me, feel more comfortable. There is an impression that we [Black physicians] are more connected than maybe other physicians, especially given more of them have never seen a Black physician before, so there is this trust that happens.” - S22, Physician</li> <li>• “Having more clinicians who identify with the populations we are supporting. Patients who come to see me tend to ease up a little bit and I see the tension relief. I had a patient say, ‘It’s nice to see a practitioner I can relate to because I may not feel like I can relate to someone else.’ ” - S17, Nurse Practitioner</li> <li>• “A Black woman called me who wanted to discuss her case. She’d been seen downtown and heard of me. Even though what I had to say didn’t differ much from what she was being offered, what I gain from that I would say is there was a lack of trust in who was giving her the information, presenting her options to her. She said at the end, ‘Now that I’ve heard this from you, I feel more reassured.’ She was being seen at a tertiary centre with lots of resources, but at the end of the day, she wasn’t sure that she was being given the best information.” - S9, Plastic Surgeon</li> <li>• “Black practitioners for Black patients is huge. It applies to any serious or chronic, potentially fatal health conditions, not unique to cancer. There is no way around representation – until we have a healthcare system and education that reflects the population, there’s only so far you can go with improvements. When I do see Black patients they say, ‘I know you know what I mean.’ They tell me things that they haven’t told their other providers because they know how it will be looked at or they know they won’t be understood.” - S4, Physician and Researcher</li> <li>• “Tapping in Black providers but not exclusively Black providers. If I live in a community without a Black physician, I should not suffer as a result.” - S11, Provincial Public Servant</li> <li>• “It’s important to increase the rate of admissions [to medical school] for Black students. . . There have been a lot of programs within various universities to address that, but it will take a while to see an effect. A lot of Canadians are international medical graduates and Black physicians find it very hard to enter into practice, even though they have contributed historically to rural and Indigenous health.” - S1, Oncologist</li> </ul> |
| <b>Community level</b>  |  |   |
| <p>Lack of knowledge, awareness and accessible information for Black people</p> <p>Lack of culturally tailored care</p> | <p>Increase culturally tailored supports, community-partnered education and awareness-raising events and campaigns for Black communities</p> | <ul style="list-style-type: none"> <li>• “Community-specific. Churches, mosques, youth and community organizations. For example, for breast cancer, the high schools can be targeted because it happens in younger Black women compared to other populations. Subway, buses.” - S1, Oncologist</li> <li>• “We work with community-health centres as part of a working group for advice on what's important to consider for the screening-day program. The working group recommended the different facets of the screening day (e.g., a woman-led mindfulness and yoga session). We</li> </ul>   |

| Barriers  | Recommended strategies to address barriers  | Illustrative quotes   |
|---|---|---|
| Fear and misinformation   |   | <p>also talked a lot about food – they wanted to serve hot food rather than cold sandwiches. We talked about gift-bag content. The co-creators guided all of these decisions. We wanted to avoid the typical cold, transactional clinical care. We tend to think about providing care more clinically, separate like organs, instead of as entire people.” - S4, Physician and Researcher</p> <ul style="list-style-type: none"> <li>• “We worked with the hospital and had field trips to a cancer-screening unit there so women can see what it looks like, the mammogram, to counter misinformation, trying to break down myth and misunderstandings so people book. . . we established a direct relationship with the hospital and screening unit to even just increase uptake of understanding what it's like through field trips, be able to talk in a safe and non-judgmental environment around screening.” - S3, Community Health Centre Representative</li> <li>• “We got testimonies from clients, and they are really happy about the grocery gift cards. They tell their friends, the program is getting bigger and bigger. So little incentives here and there work.” - S18, Community Health Centre Representative</li> <li>• “Hospitals can be unsafe spaces: women said they would have never come to a hospital if it weren't for that in-person screening day and how it was structured.” - S4, Physician and Researcher</li> <li>• “I've heard that the breast cancer support space is a very white space, haven't heard good things about <a href="#">‘Look Good Feel Better’ events</a> from Black women. . . Black women attend and end up feeling so much worse. That's why <a href="#">The Olive Branch of Hope</a> and other groups exist, because Black people can go and know that there will be support and understanding for their lived experiences.” - S4, Physician and Researcher</li> <li>• “Fear. Cancer is a big word in the Black community. Communicate to people that cancer does not equal death. This will increase screenings.” - S10, Community Health Centre Representative</li> <li>• “When people are asking about cancer screening, they are usually terrified, and technology doesn't provide that human part of what they need. So, supporting someone with cancer or someone who should be screened requires a human touch in many cases and we need to provide opportunities where people can just ask a question on their mind and potentially get connected to the services to support the care that they need.” - S10, Community Health Centre Representative</li> </ul> |
| Limited funding, resources and personnel for community-level programs | Increase and allocate dedicated funding for programs that serve Black communities | <ul style="list-style-type: none"> <li>• “The money is there but who is making sure it's being dished out equitably in terms of who is impacted by the work?” - S13, Provincial Public Servant</li> <li>• “Funding would make this much better. I think these initiatives have the potential to be successful. The higher the level you can make changes at, the better.” - S9, Plastic Surgeon</li> <li>• “Unfortunately, it is not sustainable because we have no dedicated funding to focus on this.” - S3, Community Health Centre Representative</li> </ul>  |

| Barriers  | Recommended strategies to address barriers   | Illustrative quotes  |
|---|--|--|
|   |  | <ul style="list-style-type: none"> <li>• “We get very little funding; we always have to supplement it. Over the last 10 years, our clientele has doubled or tripled but the funding amount has never increased. They need to increase our funding and realise that our work keeps people away from the emergency department, ultimately costing the province and the government less financially.” - S8, Physician</li> <li>• “It’s a lot of work. We have some doctors from East Africa doing some work at the community-level on webinars, but again, it’s all done out of our own time, and our numbers are small.” - S1, Oncologist</li> <li>• “Lack of access to primary care is a big issue here; there just aren’t personnel.” - S7, Oncologist</li> <li>• “You need clinicians on the floor who can actually see these people. The wait times are too long.” - S17, Nurse practitioner</li> <li>• “Sometimes with EDI work I see a checkbox approach. Emphasize to the Ministry that this is a long game, a marathon, not a sprint. We can't address hundreds of years of systematic racism with a one-year \$250K grant. If they are going into this area, they need to make a long-term commitment.” - S4, Physician and Researcher</li> </ul>   |
| Lack of representation of Black women in cancer media | Increase representation of Black people and other racialized groups from diverse backgrounds in cancer awareness media campaigns | <ul style="list-style-type: none"> <li>• “In terms of survivorship, patients have told me in terms of ‘feel good, look good’, most of their suggestions are geared towards white people, white women. X hospital even is a very white space, they don’t feel like they belong. We have to see colour in support groups because lived experiences are very different.” - S2, Surgical Oncologist</li> <li>• “The marketing materials don’t have Black people pictured in them, so this compounds the issue: Black people think it doesn’t apply to them when it’s only white women in the breast cancer ads. If you don’t see yourself, you’ll think it doesn’t apply to you.” - S14, Provincial Public Servant</li> <li>• “There is lower uptake of screening in Black and racialized communities, mainly because there are no targeted campaigns for engagement. Black and racialized women are not featured in breast cancer screening campaigns.” - S2, Surgical Oncologist</li> <li>• “Based on conversations I’ve had with community members, the big thing was targeted messaging. A lot of women thought breast cancer was not a Black woman’s disease because they don’t see themselves in the advertising. All they knew was breast cancer was about pink and run for the cure.” - S12, Provincial Public Servant</li> <li>• “And if you make a brochure about reconstruction you need to have actual photos of actual Black women who have undergone reconstruction. There is a paucity of visual representation of Black women in photos of reconstructive surgery. People love photos; it’s a very visual field. This could be online as well.” - S9, Plastic Surgeon</li> </ul> |



| Barriers   | Recommended strategies to address barriers                                      | Illustrative quotes   |
|--|---|---|
| <p>Socioeconomic and sociodemographic access issues</p> <p>Fear and misinformation</p> <p>Religious fatalism</p> | <p>Enable easy access to wraparound social supports for those who need them</p> | <ul style="list-style-type: none"> <li>• “The perceived barriers and the real barriers. People are disconnected from healthcare a lot; I hear this demonstrated in the questions they ask. They may make connections that to me don’t make sense, maybe aren’t backed by science but social media, TikTok; those things are really informing people. And in Canada we don’t really capitalize on social media. Social media is the currency of information and knowledge these days. It’s more accessible than reading a newspaper or a book. And the number of people I have come in and say that I’ve seen this on TikTok, to me it says people want to learn, but they don’t know where to access the information.” - S22, Physician</li> <li>• Education for prevention and screening early enough on is important. That message needs to be in different languages so that its accessible to different populations. We have many people who, if the communication is only in English, are completely left out. For people to know things, it has to be communicated to them in a way they will understand. This can be in a group setting, knocking on doors, getting community ambassadors, which worked very well for us during COVID.” - S8, Physician</li> <li>• “Another thing we noticed is fatalism. A lot of these women were very religious but didn’t think that it was useful for them to get screened for breast cancer because they thought it was God’s will for them to get breast cancer, so who are they to intervene? But why would God make you want to die? I think that needs to be explored. It could be cultural beliefs like not talking about illnesses, praying things away.” - S12, Provincial Public Servant</li> <li>• “We are so proud of our social safety net in Canada, but it’s not great when we actually talk about people getting care. People have to take a day off just to come and see me, and they lose a day of pay. There are so many systematic and equity issues within the system that we don’t pay attention to. We think everyone has a unionized job, and that’s not the case.” - S2, Surgical Oncologist</li> <li>• “Barriers for these patients are often money and time; taking time off work is not an option because they don’t get paid. I wish I had a social worker, not just a navigator which is also important for clinical understanding, but a social worker for bus passes or rideshare service passes.” - S7, Oncologist</li> <li>• “People who don’t have a doctor in this country or who don’t know much about the healthcare system are often a little lost because there are so many things to attend to at the same time. It’s difficult to deal with as a patient. Unfortunately, patients need to advocate for themselves but when they are in a marginalized population it’s hard to do this, and when you don’t advocate for yourself, you get forgotten.” - S8, Physician</li> <li>• “Many folks are living alone or in isolation, so they don’t even know a lot about the healthcare system. Many come from countries where they have to pay for every touchpoint with a healthcare system. They’re even afraid to come to clinic because they think they will come home with a bill.” - S3, Community Health Centre Representative</li> </ul> |

| Barriers | Recommended strategies to address barriers | Illustrative quotes   |
|----------|--|---|
|          |  | <ul style="list-style-type: none"> <li>• “We had a woman come in with a bunch of papers when she was diagnosed that the doctors gave her and she didn’t know how to interpret them. [She] said, ‘Please tell me what this means and what I need to do.’” - S10, Community Health Centre Representative</li> <li>• “Women don’t want to get screened, don’t want to know, because they don’t know how to live after. Many are caring for their families; single moms. What would they do, what would happen to their children? We know at Child Protection Services, Black children are not taken care of properly. Knowing that they would have nobody to support them through treatment, women sacrifice themselves.” -S3, Community Health Centre Representative</li> <li>• “I worked with a woman from India who shared her experience recently migrating to this country. Her father had recently passed, and she had a lot of challenges in her marital home, a host of traumas and things she was dealing with. She came to Canada, had some health concerns, went to the doctor and found out she has cancer. She said she told the doctor, ‘No, I don’t have time for cancer right now. I just came here and have other things to do, the cancer has to wait.’ Her children were not registered for school, that was a priority before starting treatment. This story resonates with a lot of Black women as well.” - S11, Provincial Public Servant</li> <li>• “We have a vision for a respite centre where any woman can go after a surgery just to recover for a couple of weeks and focus on their health without having to think about it . . . Like a healing centre, not big, maybe 20 beds. This is something the government can do. . . The women are the glue of their families whether we want to admit it or not.” - S23, Researcher</li> <li>• “From working with Black women, I know they often put themselves last. It’s hard to compete with other priorities like work, childcare. The challenge is to support them in making the time for themselves to get these pieces done. Building up caregiver capacity. How do we provide support to Black women who may be dealing with cancer? Family support is important but if everyone is scared and your support system is saying, ‘Oh gosh, you’re going to die,’ that’s not a good place to be. Teach people how to support someone dealing with cancer or other challenging health issues.” - S10, Community Health Centre Representative</li> <li>• “I also think we need to work on inclusive language. There are a lot of nonbinary people who have breast cancer. This has been recognized by the Breast Cancer Society of Canada. We need to make sure we stay on top of screening for nonbinary and trans individuals. Even if you have 3-4% breast tissue left after top surgery, you can still get breast cancer. We want to make sure we’re not alienating folks. We need to teach this in medical school, how to approach screening with a trans or nonbinary patient who has undergone chest masculinization.” - S2, Surgical Oncologist</li> </ul> |

## Appendix 5: Questions and analysis framework for key informant interviews

### Questions for key informants

- What has your experience been like providing cancer care to Black women in your organization?
- What strategies are you aware of to improve the healthcare outcomes and experiences of Black women with cancer?
  - Which forms of cancer do strategies focus on, or are they not diagnosis-specific?
  - What part(s) of the cancer-care continuum do they focus on (e.g., screening, diagnosis, treatment, survivorship, end-of-life care)?
  - How have they been designed to meet the needs of Black women?
  - Who is involved in delivering these strategies and what impact do you think this has on their success (or lack of) and why?
  - Where is the strategy delivered and what impact do you think this has on its success (or lack of) and why?
  - What other supports are in place for the strategy to help it enhance health outcomes and care experiences?
- What other strategies or resources across the cancer-care continuum do you think would help to improve the healthcare outcomes and experiences of Black women with cancer?
- How do you think system features need to be changed to enhance care outcomes and experiences for Black women with cancer (e.g., design, who delivers them, where they are delivered and other supports needed)?
- How do you think the implementation of any of the approaches you discussed can be enhanced to ensure they reach Black women who need them across the cancer-care continuum?
- In what ways do you think these, or other strategies, need to be attentive to and address other equity-related considerations (e.g., accessibility, race/ethnicity/culture/language, gender/sex, religion, education, socioeconomic status, age, caregivers, location of residence)?

### Codebook for behavioural science and implementation frameworks

#### Action, Actor, Context, Target, Time Framework (AACTT) applied definitions

- **Actor:** provider; who is providing or facilitating the strategy (role/program/organisation)
- **Action:** what the strategy is
- **Context:** where the strategy is provided
- **Target:** patients; demographics of the women for whom the strategies are provided (e.g., type of cancer, rural/urban)
- **Time:** stage of cancer continuum that strategy targets (e.g., screening, diagnosis, treatment, survivorship, palliative)

#### Capability, Opportunity, Motivation, Behaviour Framework (COM-B) with examples from the Theoretical Domains Framework (TDF)

- **Capability:** knowledge, skills, memory, attention, decision-making processes (physical and psychological capability) e.g., awareness of the strategy
- **Opportunity:** environmental context and resources, social influences (physical, financial and social opportunity) e.g., access to the strategy
- **Motivation:** intention, goals, emotion, reinforcement, social professional role and identity, optimism, beliefs about capability, skills (conscious planning, evaluations) and unconscious (desires, habits) motivation) e.g., wanting to do the strategy

## Appendix 6: Findings from each evidence document, organized by document type and sorted by relevance to the question

**Table 1: Detailed findings from systematic reviews about strategies to improve health outcomes and care experiences for Black women with common cancers**

| Dimension of organizing framework | Key findings   | Living status | Quality (AMSTAR)                             | Last year literature searched          | Availability of GRADE profile | Equity considerations           |
|-----------------------------------|--|---------------|--|--|-------------------------------|---------------------------------|
| Screening                         | <p>Barriers and facilitators of women from Black, Asian and minority ethnic (BAME) backgrounds attending breast cancer screening (19)</p> <p>This U.K.-based systematic review aimed to identify barriers and facilitators of women from Black, Asian and minority ethnic (BAME) backgrounds attending breast cancer screening.</p> <p>Three overarching themes were identified from the eight studies included in review: knowledge-, access- and culture-related factors. BAME women were found to lack knowledge in identifying breast cancer and the screening program, as well as risks and treatments available. In terms of cultural-related factors, two of the studies drew associations between faith and decreased appreciation of preventative medicine amongst BAME women. The stigma associated with cancer and the fears of marital consequences and lack of family support due to treatment were barriers that BAME women faced. Gender of health professionals was also identified as a barrier, as women mentioned being uncomfortable being examined by a male professional. Forming interprofessional relationships between BAME women and health professionals was identified as a facilitator to encourage screening. In terms of access, logistical factors (e.g., cost of attendance, time convenience and distance) were barriers identified in several studies. This review highlights the importance of community interventions and public health promotion at the point of care.</p> | N/A           | 4/9 (AMSTAR rating by McMaster Health Forum) | Literature last searched December 2017 | No                            | Race/ethnicity/culture/language |

**Table 2: Summary of findings from primary studies about strategies to improve health outcomes and care experiences for Black women with common cancers**

| Dimension of the organizing framework | Study characteristics   | Sample and intervention description   | Key findings   |
|---------------------------------------|---|---|--|
| Screening                             | <p><i>Focus of study:</i> A <a href="#">health literacy intervention</a> for cervical cancer screening – Community-based, Health literacy focused intervention for Cervical Cancer group (CHECC-uP)(6)</p> <p><i>Publication date:</i> February 2023</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Randomized pilot study</p> | <p><i>Sample</i><br/>The Pap test brochure distributed to both the control and intervention groups was tailored to women living with HIV, highlighting causes, risk factors and symptoms of cervical cancer, and were written at a sixth-grade level or lower. All participants were Black or African-American women recruited from inner-city HIV clinics and organizations in Baltimore, MD. Of the 58 middle-aged women included in the analysis, nine out of 10 (89.5%) were unemployed, retired or disabled, and more than 40% had less than a high school education.</p> <p><i>Intervention</i><br/>This pilot study assessed a health-literacy intervention for cervical cancer screening – Community-based, Health literacy focused intervention for Cervical Cancer group (CHECC-uP) – for feasibility, acceptability and efficacy among women living with HIV. The intervention consisted of a cervical cancer brochure as well as 30-60-minute individualized health literacy-focused education, monthly phone counselling and navigation assistance for completing a Pap test, with a three- and six-month follow-up.</p> | <p>The study found that participation in the intervention was associated with improvements in health literacy and other psychosocial outcomes (e.g., self-efficacy, depression and cultural beliefs addressing cultural barriers) only at three months post-intervention; the trend was attenuated at six months. All participants in the intervention group said they would recommend the program to promote Pap testing among Black women living with HIV.</p> |
| Screening                             | <p><i>Focus of study:</i> Cervical cancer screening and HPV self-testing <a href="#">perception</a> (25)</p> <p><i>Publication date:</i> September 2022</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Mixed methods study</p>   | <p><i>Sample</i><br/>The intervention consisted of a total of five focus groups, with 35 participants ranging in ages 25-53 in Kansas City, U.S.</p> <p><i>Intervention</i><br/>The main focus of this study was to explore the attitudes, barriers, facilitators and intentions of African-American women (who are affiliated with church institutions) regarding cervical cancer screening and HPV self-testing perception.</p>   | <p>The study found that 74% of participants were screened for cervical cancer in the past three years; however, barriers to care/screening still persist and include past trauma, prioritizing the wellbeing of children over themselves, and apprehension regarding the administration and accuracy of the self-test.</p>   |

| Dimension of the organizing framework | Study characteristics  | Sample and intervention description  | Key findings   |
|---------------------------------------|--|--|--|
| Screening                             | <p><i>Focus of study:</i> <a href="#">Tradeoffs</a> of breast cancer screening strategies in Black women (23)</p> <p><i>Publication date:</i> December 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Cohort study</p> | <p><i>Sample</i><br/>A 1980 cohort of Black and white women in the U.S.</p> <p><i>Intervention</i><br/>Tradeoffs of screening strategies in Black women were compared to those of white women using a race-specific simulation model – the Cancer Intervention and Surveillance Monitoring Network (CISMN) – that was used to inform screening mammography guidelines in the United States</p>   | <p>Of the nine identified strategies that were tested in Black women, benefits generally increased when the number of mammograms increased due to early and more frequent screening. The most efficient screening for Black women was biennial screening from ages 45-74 while the most equitable screening was from ages 40-74. Black-white mortality disparities were reduced by 57% when screening was initiated 10 years earlier in Black vs white women, with comparable life years gained for both populations. In other words, if disparities in treatment dissemination persist or widen, Black women may benefit from more intensive screening than white women. The results suggest that Black women should consider initiating biennial screening for breast cancer at age 40 rather than age 50.</p>   |
| Screening                             | <p><i>Focus of study:</i> <a href="#">Screening program</a> for breast, colorectal, and cervical cancer patients (8)</p> <p><i>Publication date:</i> November 2021</p> <p><i>Jurisdiction studied:</i> Ontario, Canada</p> <p><i>Methods used:</i> N/A</p> | <p><i>Sample</i><br/>Cancer patients at TAIBU Community Health Centre (CHC)</p> <p><i>Intervention</i><br/>This study described a screening program for breast, colorectal and cervical cancer patients that was implemented at TAIBU Community Health Centre (CHC) in Toronto, Canada for the Black and immigrant community. TAIBU CHC was established in response to community advocacy in 2008 for a centre that focuses on providing primary healthcare services to Black population health in the greater Toronto area. The quality improvement program (initiated in 2013) consisted of cancer screening education programs, a patient call-back program, provider audits and a mammography promotion day.</p> | <p>Provider audits of screening practices were performed quarterly, and provider education sessions about screening disparities for immigrant populations and gaps in provider practices were provided annually. Administrative staff were responsible for annually calling and offering screening to eligible patients in a culturally sensitive way (e.g., avoiding the use of the word <i>cancer</i>), and if the patient agreed to screening, a trained registered nurse (RN) and physician assistant (PA) provided education, performed Pap tests, and ordered fecal occult blood tests (FOBTs) and mammography.</p> <p>The call back program operated in the fall to coincide with influenza vaccinations. Patients were also provided with education pamphlets about cancer screening, and community feedback was used to develop breast cancer screening posters and videos and promote a local mammography “booking day.” The program was</p> |

| Dimension of the organizing framework | Study characteristics  | Sample and intervention description   | Key findings   |
|---------------------------------------|--|---|--|
|                                       |  |   | successful in engaging patients and healthcare providers to increase cancer screening participation from 2011 to 2018 for rates of breast, colorectal, and cervical cancer screening from 17% to 72%, 18% to 67%, and 59% to 70%, respectively.  |
| Screening                             | <p><i>Focus of study:</i> The impact of individualized <a href="#">breast cancer risk estimates</a> (14)</p> <p><i>Publication date:</i> 10 September 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Cohort study</p>  | <p><i>Sample</i><br/>347 women ages 25-69 without a history of breast cancer</p> <p><i>Intervention</i><br/>The study examined whether individualized breast cancer risk estimates as part of routine primary health care at federally qualified health centres in medically underserved communities in Chicago were associated with an increase in the rate of mammography.</p>  | A total of 347 women ages 25 to 69 years without a history of breast cancer were enrolled and assessed with a validated risk assessment tool during their annual visit with their primary care clinician. Among the participants, 114 were non-Hispanic African-Americans. The authors found that providing individualized breast cancer risk estimates was associated with increased use of mammography among women from racialized groups.   |
| Screening                             | <p><i>Focus of study:</i> Factors associated with adherence to the US National Comprehensive Cancer Networks' breast cancer screening <a href="#">guidelines</a> (21)</p> <p><i>Publication date:</i> August 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Cohort study</p> | <p><i>Sample</i><br/>919 church-going African-American women from Southwest Houston, Texas who ranged from age 40 to 86. 11.4% of the group reported having less than a high school education, 88.36% were insured, 69.75% were employed, and 5.01% had been diagnosed with at least one cancer.</p> <p><i>Intervention</i><br/>This study used the Andersen Behavioral Model of Health Services Use to assess factors associated with adherence to the US National Comprehensive Cancer Networks' breast cancer screening guidelines amongst African-American women from Southwest Houston, Texas.</p> | The study found that older age, having a personal diagnosis of cancer, and having health insurance and ideal patient-provider communication was associated with increased odds of screening adherence. To increase screening adherence, future interventions may need to target uninsured women for free mammograms and also include the training of physicians to communicate information in a way that builds trust and respect. Additionally, church settings may be a useful method to increase screening adherence by acting as a resourceful method for distributing information about mammography screening to Black women. |
| Screening                             | <p><i>Focus of study:</i> <a href="#">Genetic counselling</a> for African-American women with hereditary breast cancer (22)</p> <p><i>Publication date:</i> July 2021</p>  | <p><i>Sample</i><br/>20 African-American women ages 25-69 attending an annual wellness visit at a federally qualified health centre (FQHC) in Chicago</p> <p><i>Intervention</i></p>  | <p>The study found that barriers associated with genetic counselling included:</p> <ul style="list-style-type: none"> <li>• a nearly universal misconception of participants that they would be told that they have breast cancer</li> </ul>   |



| Dimension of the organizing framework | Study characteristics  | Sample and intervention description  | Key findings  |
|---------------------------------------|--|--|---|
|                                       | <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Cohort study</p>   | <p>In this study, a culturally sensitive narrative intervention was developed to promote genetic counselling for African-American women with hereditary breast cancer. Data collection included one-on-one interviews and story circles to identify themes and lived experiences of participants.</p>  | <ul style="list-style-type: none"> <li>• structural challenges associated with health care systems (e.g., costs, complexity, discrimination)</li> <li>• familial secrecy</li> <li>• lack of trust and poor communication with providers</li> </ul> <p>To address the barriers identified, the narrative was specifically designed to allay the fears of women about genetic counselling, describe the benefits to women and their families, and minimize the scientific information presented. Women believed in the importance of social support for genetic counselling, religious/spiritual beliefs, and health literacy. The approach used in this study can be applied to increase the use of genomic testing approaches for personalizing cancer care for African-American women as a tool for mitigating health disparities.</p> |
| Screening                             | <p><i>Focus of study:</i> Use of a <a href="#">home-based sampling</a> intervention for endometrial cancer (12)</p> <p><i>Publication date:</i> May 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Mixed methods</p> | <p><i>Sample</i><br/>Six focus groups (three with Black women and three with white women) living in community locations in Jacksonville, Fla.</p> <p><i>Intervention</i><br/>The primary objective of this study was to investigate the use of a home-based tampon sampling intervention for endometrial cancer. After providing oral consent, participating in the focus group, and completing a survey on their impressions of tampon use and the tampon collection kit, participants were provided with testing kits.</p> | <p>The study found that endometrial cancer awareness and knowledge surrounding its associated risk factors were low amongst participants, however, many of them were accepting of a home sampling cancer screening method.</p> <p>Black participants were younger on average and were more likely to express discomfort with using tampons. Concerns among participants arose from the possible complexities and risks involved with this self-sampling intervention, particularly given that many women from the Black community were not as comfortable with tampon use.</p>  |
| Screening                             | <p><i>Focus of study:</i> A <a href="#">visual tool</a> used to disseminate breast cancer information (2)</p>  | <p><i>Sample</i><br/>49 African-American women living in rural and urban counties in South Carolina, U.S.</p>  | <p>Study results demonstrated that participants had general awareness of risk factors for breast cancer and were willing to share information with families and community members. Pastors,</p>   |

| Dimension of the organizing framework | Study characteristics  | Sample and intervention description  | Key findings  |
|---------------------------------------|--|--|---|
|                                       | <p><i>Publication date:</i> April 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Qualitative study</p>   | <p><i>Intervention</i></p> <p>In this study, a visual tool was developed using a community participatory approach to disseminate breast cancer information to African-American women living in rural and urban counties in South Carolina, U.S.</p>  | <p>healthcare providers and social media/the internet were recommended communication channels.</p>  |
| Screening                             | <p><i>Focus of study:</i> A virtual health assistant (VHA)-delivered intervention for non-Hispanic Black women that promoted <a href="#">colorectal cancer (CRC) screening</a> (7)</p> <p><i>Publication date:</i> December 2020</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Qualitative study</p> | <p><i>Sample</i></p> <p>53 Black women (ages 50-73) from North Florida participated in focus groups and interviews</p> <p><i>Intervention</i></p> <p>In this study, participant responses to a virtual health assistant (VHA)-delivered intervention for non-Hispanic Black women that promoted colorectal cancer (CRC) screening with a home-stool test was studied. The intervention consisted of information about CRC and fecal immunochemical testing (FIT) screening, interactive health behaviour questions, discussion of screening barriers, and an opportunity to request a FIT.</p> | <p>While testing the VHA intervention, participants identified 26 cues and three heuristics that related to the intervention's credibility. Modifications were made to the intervention based on user preferences for communicating with a human doctor, suggested interactive features, and critiqued of the intervention's appearance and movements.</p> <p>In terms of a framework for enhancing credibility of VHA-delivered messages, the MAIN (Modality Agency Interactivity Navigability) model was used, and participants indicated that combining multiple modalities (e.g., audio, visuals, subtitles), and using a VHA simulation that looked real and had a likeable voice and professional appearance enhanced the overall experience of the intervention. Users also suggested that personalization/customization and responsiveness of the intervention as well as the ability to ask questions were important for the interactivity of the intervention. By using a user-centered design and adapting the content iteratively, improvements were seen overall in user perceptions and willingness of Black women to engage with the intervention.</p> |
| Screening                             | <p><i>Focus of study:</i> <a href="#">Perceptions of Haitian women</a> in Montreal on experiences with the Quebec Breast Cancer Screening program (QBCSP) (20)</p>   | <p><i>Sample</i></p> <p>32 Haitian women ages 40-49 living in disadvantaged areas in Montreal</p> <p><i>Intervention</i></p>   | <p>The authors reported their results in four categories: understanding, sociocultural characteristics, knowledge and health systems.</p> <ul style="list-style-type: none"> <li>• Understanding – including not understanding the letter, a question, or certain words, or</li> </ul>  |

| Dimension of the organizing framework | Study characteristics   | Sample and intervention description   | Key findings  |
|---------------------------------------|---|---|---|
|                                       | <p><i>Publication date:</i> November 2020</p> <p><i>Jurisdiction studied:</i> Quebec Canada</p> <p><i>Methods used:</i> Qualitative study</p> | <p>The study focused on how Haitian women in Montreal are approached by the Quebec Breast Cancer Screening program (QBCSP) and perceive referrals they receive. The authors conducted in-depth interviews to understand cultural phenomena and held focus groups to understand women's personal experiences with the QBCSP letters.</p> | <p>respondents shaping their responses to what they assume is socially desirable</p> <ul style="list-style-type: none"> <li>• Sociocultural characteristics – included favourable (some Haitian women recognized the breasts as important parts of their body and recognized the importance of going to a doctor), and unfavourable (some women claimed to not be afraid of breast cancer), as well as mistaken beliefs and fatalistic disposition</li> <li>• Knowledge – including lack of knowledge or presence of knowledge of the disease</li> <li>• Health system – including barriers in the health system (participants expressed a preference for Haitian doctors, and concerns about waiting times, cost-associated with waiting times, etc.)</li> </ul> <p>The participants suggested the following changes for QBCSP letter:</p> <ul style="list-style-type: none"> <li>• The words “breast,” “mammogram,” and “cancer” be translated into Creole</li> <li>• A shorter letter relative to the standard one-page letter using simpler, more appealing and accessible language</li> </ul> <p>They also suggested communicating mammography and breast cancer screening programs on television and radio. The authors state that low levels of literacy, stress related to mammograms and the importance of religious beliefs in Haitian culture are valuable factors to consider when creating referral letters.</p> |
| Screening                             | <p><i>Focus of study:</i> Feasibility of the <a href="#">“Ko-Pamoja” intervention</a> (9)</p> <p><i>Publication date:</i> November 2017</p>   | <p><i>Sample</i><br/>30 Black women in Ontario, Canada</p> <p><i>Intervention</i><br/>The purpose of this single study was to examine the feasibility of the “Ko-Pamoja” intervention, which aims</p>   | <p>The findings from the study revealed that the “Ko-Pamoja” program was able to increase the participants' awareness of cancer susceptibility and screening guidelines, with four attendees having been screened for breast cancer upon completion of the final session.</p>   |

| Dimension of the organizing framework | Study characteristics   | Sample and intervention description   | Key findings   |
|---------------------------------------|---|---|--|
|                                       | <p><i>Jurisdiction studied:</i> Ontario, Canada</p> <p><i>Methods used:</i> Qualitative study</p>   | <p>to serve as a breast and cervical cancer screening program for Black women in Ontario, Canada. This peer-educator program recruited Black women for its sessions and utilized pre- and post-session questionnaires in order to determine the awareness and knowledge of cancer susceptibility and screening among the attendees.</p>   |  |
| Screening                             | <p><i>Focus of study:</i> Including spiritual elements in breast cancer screening <a href="#">communication material</a> (5)</p> <p><i>Publication date:</i> 2015</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Qualitative study</p> | <p><i>Sample</i><br/>15 African-American women</p> <p><i>Intervention</i><br/>The study focused on examining important spiritual elements that can be included in health communication material to increase breast cancer screening. The intervention involved three nominal group sessions with 15 African-American women, focussing on identifying relevant spiritual elements to draft a spiritually-framed breast cancer screening message. This was followed by 20 in-person semi-structured interviews to finalize the message.</p> | <p>The authors identified three important spiritual elements that could be incorporated into breast cancer screening health promotion: 1) the body as a temple; 2) going to the doctor does not make you faithless; and 3) God did not give us the spirit of fear</p> <ul style="list-style-type: none"> <li>• The body is a temple – many participants believed it is very important to honour their faith through taking care of their bodies</li> <li>• Going to the doctor does not make you faithless – participants wanted messages that emphasized that having faith in God does not excuse individuals from taking care of themselves, and this does not negate their faith</li> <li>• God did not give us the spirit of fear – participants hoped this message would help women overcome the fear of discovering they have the disease</li> </ul> <p>The authors found that they should structure their messages by starting with the health message, and try to personalize the message (through a spiritual lens). They also found that messages should be more spiritual and less religious, as religion involves relatively more strict doctrines, whereas participants define spirituality as an “outlook of a personal relationship with a higher power.”</p> |

| Dimension of the organizing framework | Study characteristics   | Sample and intervention description | Key findings  |
|---------------------------------------|---|-------------------------------------|---|
|                                       |   |                                     | The authors highlight that spiritual/religious beliefs can act as barriers to health promotion; therefore, focusing on positive aspects to promote breast cancer screening can help overcome this barrier. Limitations of the study mentioned were modest sample size, low generalizability, a generally young sample of women who were not close to the age of recommended screening, and the sample population being from a single Southeastern city.   |
| Screening                             | <p><i>Focus of study:</i> <a href="#">Approaches</a> to address breast cancer disparities among African-American women (4)</p> <p><i>Publication date:</i> September 2014</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> N/A</p> | N/A                                 | <p>The authors highlight the use of mass media to increase screening for breast cancer:</p> <ul style="list-style-type: none"> <li>• Mass media can be combined with other interventions that may enhance access to mammography for low-income individuals, or racial/ethnic minorities (these interventions include vouchers, same-day appointments, mobile mammography vans, etc.)</li> <li>• No significant results were obtained linking mass media interventions to an increase in screening</li> </ul> <p>The authors pointed out that multiple studies indicated that text messaging and smartphone apps were used to increase breast cancer screening. The authors also mentioned the use of “Black radio” as a dissemination tool for health messages on screening:</p> <ul style="list-style-type: none"> <li>• Black radio refers to radio stations that target and are trusted by African-American audiences; it reaches a large African-American audience, and can overcome barriers such as low health literacy</li> <li>• One study found testimonials by breast cancer survivors on Black radio stations with R&amp;B and gospel formats (which aired for one year) to be effective in increasing awareness of screening</li> </ul> |

| Dimension of the organizing framework | Study characteristics  | Sample and intervention description  | Key findings   |
|---------------------------------------|--|--|--|
|                                       |  |  | <p>Additionally, the authors highlighted church-based interventions for screening:</p> <ul style="list-style-type: none"> <li>• One study used church programs, along with other strategies, and found an increase in regular use of mammography</li> <li>• Another study used a church-based telephone mammography counselling program to contact participants and found a reduction in mammography non-adherence rates</li> </ul> <p>Church-based interventions increased acceptability of receiving cancer education, and highlighted the importance of pastoral input, as well as the effectiveness of personal testimonies</p>  |
| Screening                             | <p><i>Focus of study:</i> Community-based educational outreach program to engage at-risk African-American women for <a href="#">mammogram registration</a> (3)</p> <p><i>Publication date:</i> September 2014</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Predictive modelling</p> | <p><i>Sample</i><br/>28 African-American women participating in the community-based outreach program</p> <p><i>Intervention</i><br/>The outreach program included several components including survivor videos, patient/neighbourhood outreach programs (consisting of education walks and luncheon seminars), and community outreach with direct-mail campaigns. The intervention was a result of the collaboration between a for-profit medical-education company and a grassroot patient-advocacy group</p> | <p>Of the 28 women reached through follow-up phone calls, 20 reported a change in their perception of breast cancer, 14 received mammograms and eight scheduled mammograms. Of those who did not schedule or receive mammograms, reasons included lack of transportation, lack of medical insurance, lack of time or other issues.</p> <p>As a result of this intervention, two women who pursued screening were diagnosed with breast cancer, emphasizing the importance of such initiatives. Interventions similar to the one implemented here can help reduce barriers in breast cancer screening, including fears of the healthcare system, unnecessary surgery, or potential abandonment by spouse following mastectomy</p> |
| Screening, diagnosis                  | <p><i>Focus of study:</i> <a href="#">Simulating breast cancer screening</a> mammography and cancer diagnosis (13)</p> <p><i>Publication date:</i> October 2022</p> <p><i>Jurisdiction studied:</i> United States</p>  | <p><i>Sample</i><br/>50-74 year-old African-American women in Chicago</p> <p><i>Intervention</i><br/>An agent-based model (ABM) was used in this study to simulate screening mammography, diagnostic</p>   | <p>Three counterfactual scenarios were simulated: 1) a control setting to represent “standard care”, 2) a setting with clinical navigation from hospital-affiliated staff, and 3) a setting with network navigation where agents could receive clinical and/or network navigation. Simulation results suggested that network navigation may have led</p>   |

| Dimension of the organizing framework | Study characteristics  | Sample and intervention description   | Key findings   |
|---------------------------------------|--|---|--|
|                                       | <i>Methods used:</i> Predictive modelling  | resolution, and the stage of cancer at diagnosis for African-American women   | up to a 13% increase in screening completion rate, a 7.8% increase in the rate of diagnostic resolution, and a 4.9% increase in early-stage diagnosis. Widespread adoption of patient navigation can lead to substantial improvements in early-stage breast cancer diagnoses for African-American women.   |
| Screening, diagnosis                  | <p><i>Focus of study:</i> <a href="#">Using geospatial mapping</a> to identify trends in triple negative breast cancer (15)</p> <p><i>Publication date:</i> 1 June 2022</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Multilevel methods</p>               | <p><i>Sample</i><br/>The study sample was a cohort of 3,316 breast cancer cases (diagnosed 2012 to 2020) in New Castle County, Delaware where there are elevated rates of triple negative breast cancer (TNBC).</p> <p><i>Intervention</i><br/>This study used multilevel methods and geospatial mapping to determine whether the race and income versions of the neighbourhood Index of Concentration at the Extremes (ICE) metrics can identify trends in triple negative breast cancer (TNBC) disparities.</p>                                 | The study found that women with TNBC were young, twice as likely to be Black and present with late-stage cancer, and more likely to have Medicaid or no insurance. Higher rates of unhealthy alcohol use and obesity were observed in the most disadvantaged neighbourhoods and had the highest odds of TNBC. Interestingly, only the ICE-race metric was significantly associated with higher odds of TNBC when adjusted for patient-level age and race, suggesting that the relationship between TNBC and area-level metrics of race are impacted by both composition and context. |
| Screening, diagnosis                  | <p><i>Focus of study:</i> The cost-effectiveness of a cervical cancer screening with <a href="#">HPV self-collection intervention</a> (11)</p> <p><i>Publication date:</i> June 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Micro-costing study</p> | <p><i>Sample:</i> N/A</p> <p><i>Intervention</i><br/>The primary aim of this study was to evaluate the cost-effectiveness of a cervical cancer screening strategy with HPV self-collection intervention that could possibly help to reduce disparities among African-American women in the Mississippi Delta. The intervention consisted of utilizing a 'choice' model of HPV self-collection at home or the 'standard of care' model within the existing health system (i.e., Pap test/smear and HPV co-testing by community-health workers)</p> | The findings of the study revealed that the 'choice' intervention displayed greater effectiveness, with a reduction in cervical cancer risk of 14.8% (as opposed to the 'standard of care' which was 6.4%), and a cost-effectiveness that totalled \$62,720 every five years per year of life saved.   |
| Screening, diagnosis                  | <p><i>Focus of study:</i> A <a href="#">case management intervention</a> for cervical cancer prevention (26)</p> <p><i>Publication date:</i> 2011</p>  | <p><i>Sample</i><br/>732 Black women ages 18-74 who were at risk of inadequate Pap smear screening were evaluated</p> <p><i>Intervention</i></p>  | The study found that a lack of a regular health provider, poor self-rated health, concerns communicating with providers, and having less than a high school education impacted the recency of Pap smear screening. During the  |



| Dimension of the organizing framework | Study characteristics  | Sample and intervention description  | Key findings   |
|---------------------------------------|--|--|--|
|                                       | <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Cohort study</p>   | <p>A case management intervention for cervical cancer prevention was developed by the Boston REACH coalition for Black women to identify and reduce medical and social barriers to cervical cancer screening and follow-up. The participants were evaluated after case managers provided social services referrals to address patient social needs.</p>  | <p>intervention, researchers found a significant increase in recommended Pap smear screening intervals among women who recently received a Pap smear prior to the intervention. Insurance status was identified as the key factor in timely follow up of abnormal results rather than the case management intervention.</p>  |
| Screening, diagnosis                  | <p><i>Focus of study:</i> A <a href="#">case management intervention</a> for women of African descent (10)</p> <p><i>Publication date:</i> May 2009</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Prospective cohort study</p>   | <p><i>Sample</i><br/>437 Black women ages 40-75 years</p> <p><i>Intervention</i><br/>The study describes a case management intervention for women of African descent to reduce barriers to breast cancer screening and follow-up diagnosis appointments. The case management intervention involved case managers referring 437 Black women ages 40-75 years to social services based on participants' concerns (e.g., transportation, housing, language barriers), and on navigation to prompt screening and follow-up appointments.</p>   | <p>There was an uptake in screening; however, housing concerns and the lack of a regular provider predicted poor mammography uptake, resulting in no change in longitudinal patterns.</p>  |
| Treatment                             | <p><i>Focus of study:</i> Use of <a href="#">genetic testing</a> after a comprehensive multidisciplinary care (cMDC) program for breast cancer (16)</p> <p><i>Publication date:</i> January 2020</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Retrospective study</p> | <p><i>Sample</i><br/>431 patients (average age: 61 years) who were newly diagnosed with invasive breast cancer were included; 43.4% were African-American and 56.4% were Caucasian</p> <p><i>Intervention</i><br/>This retrospective study assessed the referral and use of genetic testing after a comprehensive multidisciplinary care (cMDC) program for breast cancer treatment was implemented; racial disparities in the results were also assessed. The cMDC program was conducted at an academic health system in southeast Michigan, US and included the participation of a geneticist.</p> | <p>After the cMDC program was implemented, there was a significant increase in genetic referrals and in the attendance of participants at genetic testing appointments. The study suggests that this could have been due to the scheduling of appointments at the time of tumour board rather than at a later time. Although the overall rate of genetic referrals increased when the cMDC program was implemented, it did not increase disproportionately based on race.</p> <p>African-Americans in this study were less likely to attend genetic testing appointments, but there was no difference found in the rates of genetic testing completed or recommended. More appropriate referrals were made for participants with private insurance following implementation.</p> |



| Dimension of the organizing framework | Study characteristics  | Sample and intervention description   | Key findings   |
|---------------------------------------|--|---|--|
| Treatment                             | <p><i>Focus of study:</i> Recruiting African-American women into a <a href="#">cancer genetic research</a> study (24)</p> <p><i>Publication date:</i> December 2018</p> <p><i>Jurisdiction studied:</i></p> <p><i>Methods used:</i></p>  | <p><i>Sample</i><br/>364 African-American women in Memphis, Tennessee, U.S.</p> <p><i>Intervention</i><br/>This study evaluated the feasibility of using a community-based participatory approach to recruit African-American women into the Sistas Taking a Stand for Breast Cancer Research (STAR) genetic study in Memphis, Tennessee, US. Volunteers for the study were recruited at several events and community venues and educational workshops and brochures were provided to inform volunteers of the importance of participating in cancer genetic research.</p>  | Participants completed a consent form with information about breast cancer genetic research, a three-page self-report health questionnaire, and also provided a saliva specimen. More than 85% of recruits agreed to be contacted for future studies. Two major factors that contributed to successful recruitment were the development of partnerships with breast cancer advocates in the Memphis community and the incorporation of culturally sensitive educational workshops.                       |
| Survivorship                          | <p><i>Focus of study:</i> Race/ethnicity-specific <a href="#">survival machine learning (ML) models</a> for Black and Hispanic women with breast cancer (18)</p> <p><i>Publication date:</i> January 2023</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Predictive modelling</p> | <p><i>Sample</i><br/>Data on 322,348 female patients who were diagnosed with breast cancer was retrieved from the US National Cancer Institute's Surveillance, Epidemiology and End Results programme registries. Among these patients, 59,204 (18.4%) were Hispanic and 20,073 (6.2%) were Black.</p> <p><i>Intervention</i><br/>In this study, race/ethnicity-specific survival machine learning (ML) models for Black and Hispanic women with breast cancer were compared to a general ML model with all races data to assess their performance in forecasting future events. Survival ML allows health professionals to identify cancer patients at high risk by learning patterns from high-dimensional data and complex feature interactions in order to forecast future events and needs for increased utilization of healthcare services.</p> | The study found that out of the 322,348 female patients identified who were diagnosed with breast cancer, the race/ethnicity-specific ML models for Black and Hispanic women consistently outperformed the general model when predicting race/ethnicity-specific outcomes. Predicting survival outcomes of breast cancer as accurately as possible can provide the necessary evidence to determine treatment options and delivery high quality, patient-centered care for under-represented populations. |
| Survivorship                          | <p><i>Focus of study:</i> <a href="#">Survivor stories'</a> impact on newly diagnosed non-metastatic breast cancer patients' quality of life (17)</p>  | <p><i>Sample</i><br/>288 participants who were 30 years or older, had Stages 0-3 breast cancer, and were being treated at U.S. hospitals</p>  | The results of the study indicated that the intervention had no significant impact on quality of life (QoL), depressive symptoms, or concerns of the participants about recurrence, but longer exposure to the intervention was associated with  |

| Dimension of the organizing framework | Study characteristics   | Sample and intervention description   | Key findings  |
|---------------------------------------|---|---|---|
|                                       | <p><i>Publication date:</i> February 2021</p> <p><i>Jurisdiction studied:</i> United States</p> <p><i>Methods used:</i> Mixed methods</p> | <p><i>Intervention</i></p> <p>In this study, an interactive intervention that used the narratives of African-American breast cancer survivors was tested to determine how viewing survivor stories affected newly diagnosed non-metastatic breast cancer patients' quality of life. In the study, participants completed five interviews over a 24-month period, and those in the intervention group (108 in total) watched an interactive video program using 207 clips of stories (one to three minutes) on a touchscreen tablet computer in addition to standard medical care. The survivor stories were shared with the intervention group three times in the year after enrollment in between interviews, and a study staff member called participants about a week after they watched the stories to troubleshoot any problems.</p> | <p>decline in the three QoL subscales of emotional well-being, fatigue, and role limitations due to physical health. Results from the intervention arm also showed promise when it came to engagement as participants spent on average over four hours across the three exposures to survivor stories. The study concluded that more research is needed to develop a clearer picture of specific intervention content and delivery contexts for the narratives.</p> |

## Appendix 7: Documents excluded at the final stages of reviewing

| Type of document   | Hyperlinked title  |
|--------------------|--|
| Systematic reviews | <ul style="list-style-type: none"> <li>• <a href="#">Understanding Black Women's Perspectives and Experiences of Cervical Cancer Screening: A Systematic Review and Qualitative Meta-synthesis</a></li> <li>• <a href="#">The impact of social and environmental factors on cancer biology in Black Americans</a></li> <li>• <a href="#">Persistent Disparities in Postmastectomy Breast Reconstruction and Strategies for Mitigation</a></li> <li>• <a href="#">Vasomotor symptoms and management of women undergoing treatment for breast cancer: literature review with focus on the therapeutic potential of cytoplasmic pollen extract</a></li> <li>• <a href="#">Racial disparities in treatment-related cardiovascular toxicities amongst women with breast cancer: a scoping review</a></li> </ul> |
| Single studies     | <ul style="list-style-type: none"> <li>• <a href="#">Fragmentation of Care Among Black Women With Breast Cancer and Comorbidities: The Role of Health Systems</a></li> <li>• <a href="#">Patterns of chronic disease management and health outcomes in a population-based cohort of Black women with breast cancer</a></li> </ul>  |

Bain T, Langmuir T, Presseau J, DeMaio P, Bhuiya AR, Alam S, Velez CM, Khan Z, Lavis JN, Wilson MG. Rapid synthesis: Strategies to improve health outcomes and care experiences for black women with cancer. Hamilton: McMaster Health Forum, 9 June 2023.

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