Primary care provider interventions for addressing cancer screening participation with marginalised patients: a scoping review protocol

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ABSTRACT

Introduction Cancer screening is an integral component of primary care, and providers can play a key role in facilitating screening. While much work has focused on patient interventions, there has been less attention on primary care provider (PCP) interventions. In addition, marginalised patients experience disparities in cancer screening which are likely to worsen if not addressed. The objective of this scoping review is to report on the range, extent and nature of PCP interventions that maximise cancer screening participation amongst marginalised patients. Our review will target cancers where there is strong evidence to support screening, including lung, cervical, breast and colorectal cancers.

Methods and analysis This is a scoping review conducted in accordance with the framework by Levac et al. Comprehensive searches will be conducted by a health sciences librarian using Ovid MEDLINE, Ovid Embase, Scopus, CINAHL Complete and the Cochrane Central Register of Controlled Trials. We will include peer-reviewed English language literature published from 1 January 2000 to 31 March 2022 that describes PCP interventions to maximise cancer screening participation for breast, cervical, lung and colorectal cancers. Two independent reviewers will screen all articles and identify eligible studies for inclusion in two stages: title and abstract, then full text. A third reviewer will resolve any discrepancies. Charted data will be synthesised through a narrative synthesis using a piloted data extraction form informed by the Template for Intervention Description and Replication checklist.

Ethics and dissemination Since this is a synthesis of digitally published literature, no ethics approval is needed for this work. We will target appropriate primary care or cancer screening journals and conference presentations to publish and disseminate the results of this scoping review. The results will also be used to inform an ongoing research study developing PCP interventions for addressing cancer screening with marginalised patients.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This scoping review will summarise the nature, scope and extent of primary care provider interventions to maximise cancer screening participation with patients experiencing marginalisation.

⇒ Our review will include interventions targeting cancers where there is strong evidence to support screening, including lung, cervical, breast and colorectal cancers.

⇒ Research team includes provincial stakeholder(s) for the cancer screening programmes.

⇒ We use a broad definition for marginalisation and as such, not all interventions identified may be applicable to the entire target population.

INTRODUCTION

Screening for breast, cervical, lung and colorectal cancers has been shown to improve patient outcomes including cancer morbidity and mortality.1-5 Despite the availability of organised screening programmes for these cancers in many jurisdictions,6 including in the Canadian province of Ontario, participation remains suboptimal and below benchmarks.2 6 7 Data from an international review looking at colon cancer screening programmes found participation rates to range from 16% to 84% in the first round of screening depending on the screening test used.6 Suboptimal participation rates can also be found in Ontario. For example, breast cancer screening participation in the province was 66% in 2017–2018, below the Canadian target of at least 70%.8 For colon cancer, over 37.8% of eligible Ontarians were overdue for screening, and participation in the cervical cancer screening programme was approximately 60% in 2018.9 Moreover, those who experience marginalisation such as new immigrants or those with low income are even less likely to get screened.9-11

Since March 2020, the COVID-19 pandemic has had a paramount impact on healthcare services locally and across the globe. The pandemic has resulted in additional strain through the large number of people infected with the disease and requiring care, and the
shortage of health human resources. As a result, many non-emergency services including cancer screening activities were suspended or curtailed. For example, in some jurisdictions, the number of colonoscopies being performed decreased by over 90%. Though many screening services have resumed since the start of the pandemic, additional strains (like the Omicron variant and health system backlogs) are likely to pose further challenges to jurisdictions as they strive to operate at full capacity. Moreover, some work suggests that individuals have also changed their health-seeking behaviours during this time for fear of contracting COVID or due to physical distancing measures. The disruptions to cancer screening services to date along with reduced health-seeking behaviours have already resulted in even lower screening participation rates and have created a backlog in diagnostic follow-up. For example, data from Ontario show that there were 951,000 (−41%) fewer screenings completed over the course of 2020 in comparison with screenings completed in 2019 in the Ontario provincial breast, cervical, colorectal and lung cancer screening programmes. Not surprisingly, individuals living in lower income neighbourhoods were 1.28 times (95% CI 1.07–1.52) more likely to experience diagnostic delay in 2020 when compared with those in the highest income neighbourhoods. Diagnostic delay in this case was defined as the date of diagnosis (with or without tissue biopsy) occurring >7 weeks after an abnormal mammogram for those at average risk of disease or mammogram and MRI within 30 days for those at increased risk of disease. A similar trend was also observed for colorectal cancer screening in those with a positive faecal immunochemical test (FIT). For colorectal cancer, diagnostic delay was defined as colonoscopy occurring >8 weeks following the positive FIT. This diagnostic delay is likely to impact patient outcomes including increased number of cancer-related deaths and more advanced stage of diagnosis. As a result, innovative approaches are required to increase suboptimal screening rates worldwide in addition to addressing reduced participation rates and the backlog in diagnostic follow-up caused by the pandemic. Focusing on those who are marginalised is of paramount importance as the cancer screening inequities magnified by the pandemic are likely to only get worse.

While previous reviews on interventions aimed at increasing screening uptake have been published, none have focused specifically on our topic. For example, there have been general reviews published on interventions for screening uptake, those focused on a specific cancer type only, those focused on a specific type of intervention, those focused on a specific population, or those in a primary care setting but without an equity focus. Given that physician recommendation is one of the strongest and most consistent predictors of screening uptake, a closer look at primary care provider (PCP) interventions for cancer screening is warranted. Moreover, much of the prior work published has focused on those who are eligible for screening broadly and not specifically on patients experiencing marginalisation. Thus, a better understanding of the literature available on this topic is needed. To our knowledge, this would be the first review focused on PCP interventions for maximising cancer screening participation among marginalised patients.

Objective
This paper serves as our protocol for a scoping review to comprehensively examine the literature on the extent, range and nature of PCP interventions designed to maximise cancer screening participation among patients experiencing marginalisation. Findings from this review will inform an ongoing research study developing PCP interventions for addressing cancer screening with patients experiencing marginalisation.

METHODS AND ANALYSIS
This is a scoping review to be conducted in accordance with the framework by Levac et al and reported in accordance with the Preferred Reporting Items for Systematic Review and Meta-Analysis Extension for Scoping Reviews (PRISMA-ScR) guidelines. The framework includes six stages including identifying the research question, identifying relevant studies, study selection, charting the data, collating, summarising and reporting the result, and consultation. A scoping review is appropriate for this work as we are interested in summarising the nature, range and extent of PCP interventions designed to address cancer screening with patients experiencing marginalisation. This protocol will follow the reporting guidelines provided by the PRISMA Protocols statement (online supplemental appendix 1). The protocol has been registered in OSF Registries (doi: 10.17605/OSF.IO/6G9WU).

Patient and public involvement
Since this is a review of previously published literature, seeking patient and public involvement was not applicable.

Eligibility criteria
We will search for published literature describing PCP interventions aimed at maximising lung, cervical, breast and/or colorectal cancer screening participation with marginalised patients as guidelines for programmatic screening exist for these cancers and our jurisdiction (Ontario) has organised screening programmes for these cancers. The term PCP will be inclusive of family and community medicine physicians, general practitioners, nurses and nurse practitioners, and PCP interventions will be defined as inclusive of any interventions that are undertaken by a PCP, targeted at a PCP or take place in a primary care setting that may result in an improvement on the outcome of cancer screening participation. Multimodal interventions will be included if at least one component of the intervention is delivered by a PCP.
targeted at a PCP or in a primary care setting. For the purposes of our study, we will define marginalised patients broadly as those with low socioeconomic status or living in low-income neighbourhoods, including those who may be unhoused/underhoused or homeless, immigrants, those with limited language proficiency in the country they live in, those who are racialised including Indigenous peoples and/or those who are part of a sexual (eg, non-heterosexual) or gender (eg, transgender) minority, as cancer screening disparities have been well documented for these groups.32–35 Studies that are not solely conducted with marginalised patients will be included if outcomes for marginalised patients can be identified from the larger context. Studies will be restricted to those conducted in adults aged 18 years or older, published in English and published from 1 January 2000 to 31 March 2022 to focus on most pertinent interventions. Any type of study design will be eligible. We will also exclude papers not published in English as we cannot reliably translate these to extract data.

**Information sources**

We will search in the following databases: Ovid MEDLINE (1946 to present, including Epub Ahead of Print, and In-Process & Other Non-Indexed Citations), Ovid Embase (1947 to present), Scopus, EBSCO CINAHL Complete and the Cochrane Central Register of Controlled Trials.

**Search strategy**

The search strategy will be developed in collaboration with an information specialist (SC) and use a combination of Subject Heading terms and text words to capture the following concepts: lung, cervical, breast and colorectal cancer screening, PCPs and marginalised patients. Keywords will include those to capture cancer site and screening (eg, mass screening; early detection of cancer; breast neoplasms), the screening tests for each cancer (eg, Papanicolaou test, colonoscopy, mammography), the primary care setting including providers (eg, primary healthcare, general practice, primary care nursing) and the patient population of interest (eg, vulnerable populations, marginalised, unhoused/underhoused persons). The search strategy in Ovid MEDLINE was reviewed by a second information specialist (Teruko Kishibe) following the Canadian Agency for Drugs and Technologies in Health Peer Review of Electronic Search Strategies checklist.36 The search strategy in Ovid MEDLINE is attached in online supplemental appendix 2. The information specialist (SC) will translate the searches accordingly in the selected databases with appropriate subject headings and keywords as needed. We will also review the reference lists of selected articles and identify any additional references that may be pertinent for the review.

**Source selection**

Results from all database searches will be exported in EndNote using the Bramer method.37 Two independent reviewers will use a piloted form to screen study titles and abstracts using the software Covidence. Citations that meet the inclusion criteria will then be screened in a second stage, where the full text of the articles will be reviewed by two independent reviewers. Consensus will be required between the reviewers for inclusion in the review. Any discrepancies between the reviewers will be resolved by a third reviewer.

**Data charting process and data items**

We will use a piloted data extraction form in Excel informed by the Template for Intervention Description and Replication checklist38 to chart data from each included publication including study characteristics (authors, year of publication, location/country, funding, study design, setting), participant characteristics (sample size, sociodemographic characteristics and screening eligibility) and intervention details (type of intervention, components, duration, mode of delivery, etc). If information on intervention effectiveness is provided with regard to cancer screening participation, we will also capture this information. Data will be extracted independently by two members of the research team. Any discrepancies will be resolved by discussion or by a third reviewer if needed.

**Synthesis of results**

Since the objective of this review is to report on the extent, range and nature of the literature on this topic, we will not conduct critical appraisal of individual sources of evidence. Instead, we will synthesise the charted data through a narrative synthesis. We hope to be able to describe the type, range and nature of PCP interventions that address cancer screening participation with marginalised patients. We anticipate this review to inform a planned research study and other future work in this field including in the design of tailored PCP interventions for this patient population. Research team members are also stakeholders with the provincial screening programmes and as such, we anticipate this review to inform the programmes on useful strategies to address screening inequities in the context of COVID recovery. This is a key priority for screening programmes at the moment. Additionally, this scoping review can further inform a systematic review and meta-analysis in this topic is feasible.

**Ethics and dissemination**

Since this is a synthesis of published literature, no ethics approval is needed for this work. We will target appropriate primary care or cancer screening journals to publish the results of this scoping review.

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