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BMJ Open Applications of implementation science frameworks, models and theories in disparities-focused cancer screening interventions: a scoping review protocol

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ABSTRACT

Background Implementation science (IS) frameworks, models and theories (FMTs) have gained popularity in guiding the implementation and evaluation of evidence-based interventions (EBIs) for cancer screening. However, there are significant research gaps in understanding their applications in cancer health disparities contexts. This paper outlines a scoping review protocol designed to explore the utilisation of IS FMTs in cancer screening EBIs to inform intervention designs and adaptations.

Methods and analysis This scoping review protocol adheres to Arksey and O'Malley's five-step methodological framework for conducting scoping studies. Search strategies were conducted in five bibliographic databases: Ovid MEDLINE, PubMed, Scopus, Web of Science and EMBASE. The search was run on 22 June 2023 with an English language filter and a date limit of 2001-current. Two reviewers will independently screen studies for inclusion and exclusion criteria. A third reviewer will be consulted, where appropriate at any of the review stages, to achieve consensus or resolve conflicts. Data will be collected, managed and analysed using Covidence. A narrative synthesis, based on Popay *et al*'s methodology, will guide reporting and summarisation of results. The review will adhere to the PRISMA Extension for Scoping Reviews guidelines.

Ethics and dissemination This scoping review is a novel approach for examining a growing corpus of research literature on IS FMT applications used in cancer screening EBIs. As a secondary analysis, this scoping review does not require approval from an institutional review board. We anticipate the review will produce insightful information (eg, challenges, key areas for future directions) on the applications of IS FMTs in designing, deploying and testing EBIs for populations experiencing cancer screening disparities. We will disseminate the results through journals and conferences targeting IS and cancer prevention researchers and practitioners.

INTRODUCTION

Significant advances in research and health-care services have been made to curb cancer mortality in the USA; however, population groups from disadvantaged racial/ethnic, sex, gender, age, geographical and socio-economic backgrounds have minimally

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This novel scoping review aims to characterise how implementation science frameworks, models and theories have been employed in cancer screening evidence-based interventions to inform and guide intervention designs and/or adaptations within cancer health disparities contexts.
- ⇒ A feasible method for identifying cancer screening interventions that have used implementation science frameworks, models and theories over the past 20 years is presented.
- ⇒ A pragmatic technique for synthesising research that encompasses diverse methodological approaches, settings, study populations and cancer screening types is described.
- ⇒ Due to the heterogeneity and extensive scope of the studies included, the final data extraction framework will not be completed until the conclusion of the review.
- ⇒ The included studies within the review will be limited to English-only, peer-reviewed publications.

benefited from these advances.¹ Consequently, cancer disparities between more-advantaged and less-advantaged population groups have continued to widen. According to the National Cancer Institute's (NCI) Surveillance, Epidemiology and End Results Programme, non-Hispanic blacks had the highest cancer death rates among all racial/ethnic groups, with a rate of 166.8 deaths per 100 000 people, compared with 149.3 deaths per 100 000 people among non-Hispanic whites over a 20-year period (2000–2020).² Many of these cancers are preventable, yet disadvantaged populations bear a disproportionate burden of cancer deaths. Reducing these cancer inequities will require researchers and healthcare practitioners to prioritise the design and implementation of evidence-based cancer preventions targeting health disparities.^{3 4}

Research on cancer prevention has led to the development of numerous evidence-based interventions (EBIs) (eg, screening practices and programmes, vaccination recommendations).^{5 6} However, many cancer prevention EBIs are never fully implemented or fail to be scaled-up.⁷⁻⁹ Challenges associated with implementing these EBIs often include difficulties on the part of researchers and practitioners in understanding and identifying EBIs, limited planning strategies (eg, use of a preimplementation theory or framework) to enhance their delivery, and problems adapting existing EBIs for new settings and populations. Recently, researchers within the cancer care continuum have been calling for increased recognition and application of implementation science (IS) to illuminate and address some of these implementation challenges.¹

Frameworks, models and theories (FMT) are becoming recognised as critical instruments to the mission of IS.¹⁰ When selected intently, an FMT can significantly improve an IS study. Models provide a systematic structure for developing, managing and evaluating implementation efforts, linking study aims, design, measures and analytical strategies.^{11 12} Frameworks can also help narrow the scope of a study by assisting with the focus of the research question and guiding the selection of constructs to measure. Framing a study within an IS FMT can also help explain why an EBI works or does not work in its chosen context. In this way, theoretical applications can help on the front-end to organise and understand implementation impacts and on the back-end to understand why or how implementation strategies succeed or fail.^{13 14}

Current FMTs, however, include little guidance on how to adapt an intervention or identify implementation strategies for different disadvantaged groups to address health disparities.^{15 16} Adaptations, defined as intentional change(s) to the design or delivery of an intervention to facilitate effectiveness or contextual fit,¹⁷ may positively impact cancer prevention and implementation outcomes in populations affected by health disparities.^{3 18-20} For example, as shown in several pilot studies with the Somali community in Minnesota, culturally tailored cancer-prevention efforts can increase motivation to participate in cancer screening.^{21 22} Yet, little research exists on whether the specific tailoring or adaptations identified and implemented through IS FMTs in cancer prevention EBIs can lead to any significant reduction in cancer-related disparities. Discussions on how IS FMTs can address health inequities have only recently emerged within both national and global health contexts.²³ Central to these conversations is how FMTs can be employed to appropriately identify and adapt evidence-based cancer screening practices to the context, culture and acceptance levels of key stakeholders (eg, implementing organisations, intended programme recipients).^{16 17}

Since the awarding of the National Institutes of Health NCI supplements to promote dissemination and implementation of evidence-based cancer programmes and practices in 2001,²⁴ no effort has been made to characterise how IS FMTs have been applied within cancer screening interventions.

The aims of this scoping review are: (1) to characterise how IS FMTs have been employed in cancer screening EBIs within cancer health disparities contexts and (2) to describe how IS FMTs have informed and guided intervention designs and/or adaptations. For the scope of this review, we have defined a cancer health disparities context as a health disparity population, legally defined by the 2000 Minority Health and Health Disparities Research and Education Act and endorsed by the National Institute on Minority Health and Health Disparities as ‘a population is a health disparity population if there is a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates in the population as compared with the health status of the general population’ with a known or reported cancer health disparity (eg, difference in cancer incidence, prevalence mortality, screening rates and so forth).²⁵

METHODS AND ANALYSIS

Given the variability and growing body of literature in cancer screening EBIs, we decided to undertake a scoping review of published studies to best map out and characterise how IS FMTs have been applied in this cancer prevention domain. Unlike systematic reviews or meta-analyses that require narrow parameters (eg, questions, populations) and quality assessments, scoping reviews are conducive to examining general topics and most useful for comprehensively and systematically reviewing the literature for key concepts, theories, evidence and research gaps.^{26 27} To guide the design of our scoping study, we drew from Arksey and O’Malley’s five-step methodological framework.²⁷ We have outlined and discussed each of the five stages below.

Stage 1: identifying the research questions

The objective of our scoping review is to examine how IS FMTs have been employed in cancer screening EBIs to target disparities. We were aware that FMTs can span a variety of disciplines and may not be specific to the field of IS alone. Per Arksey and O’Malley’s framework, we used an iterative approach to continually refine our FMT parameters and arrive at our research questions (see [table 1](#)). Given the health disparities focus of this scoping review, we also drew from the PRISMA-Equity 2012 Extension²⁸ to include components of equity in our research questions.

Stage 2: identifying relevant studies

To identify relevant studies for our scoping review, we deliberated and decided on the following criteria for eligibility, bibliographic databases to search and formulated a search strategy and key terms.

Eligibility criteria

The following inclusion criteria were used to guide the search strategy and will also be used when reviewing articles:

Table 1 List of research questions and operational definitions

| Research questions | Operational definitions |
|---|---|
| What types of frameworks, models and theories (FMTs) are being used in cancer screening evidence-based interventions (EBIs) for populations experiencing cancer health disparities? | Definitions and applications of FMTs used in implementation science are based on Nilsen's taxonomy ¹⁴ <ul style="list-style-type: none"> ▶ Process models ▶ Determinant frameworks ▶ Classic theories ▶ Implementation theories ▶ Evaluation frameworks Dissemination and Implementation Models in Health Science Webtool. ³⁷ Cancer screening refers to secondary prevention services focus on detecting and treating cancers in specific anatomical sites that have well-established screening methods recommended by clinical guidelines. ³⁸ The specific cancer sites of interest for this scoping review are: <ul style="list-style-type: none"> ▶ Breast ▶ Cervical ▶ Colorectal ▶ Lung EBIs are broadly defined as healthcare programmes, practices, processes, policies and guidelines proven with efficacy and effectiveness. ³⁹ |
| How are FMTs being used in cancer screening EBIs? | Applications of FMTs are based on Nilsen's taxonomy ¹⁴ and as stated by the author(s) The level of FMT integration, defined as the extent to which a framework, model, or theory is integrated into the intervention/implementation process of a study, is captured with the following de novo scale: <ul style="list-style-type: none"> ▶ Low (defined as <20% of constructs applied). ▶ Moderate (defined as ≥20% to 50% of constructs applied). ▶ High (defined as ≥51% constructs applied). If an FMT was used to adapt a cancer screening EBI, the FRAME ¹⁷ will be used to extract information on this process and outcome. |
| What barriers and facilitators to applying FMTs are being described in the cancer screening literature? | As stated by the author(s) |
| How are cancer health disparities being described and integrated in published studies? | Cancer health disparities are informed by the following rationale and objective elements of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses - Equity (PRISMA-Equity) extension checklist ²⁸ : <ul style="list-style-type: none"> ▶ Population characteristics including gender, age, race/ethnicity, geographical location, socioeconomic status ▶ Assumptions and rationale related to equity are stated ▶ Intention to address equity as the focus of study, the research question or within the analysis |

- ▶ Any type of study design (including randomised controlled trials (RCTs), non-RCTs, intervention and non-intervention studies, comparative-effectiveness research), qualitative, quantitative and mixed-methods).
- ▶ Any study involving an EBI reflecting the following cancer screening types: breast, cervical, colon and/or lung.
- ▶ A study conducted within the context of a health disparity population(s) with a reported or known cancer disparity(ies).
- ▶ Published in peer-reviewed journals with full-text available for sufficient information to assess eligibility.
- ▶ English-only publications.
- ▶ Published between 2001 and current (2023).
- ▶ Explicitly used an IS FMT (as referenced in Nilsen's taxonomy or the D&I Models in Health Research and Practice Webtool).

Studies were excluded if they included pilot or formative studies leading to the development of an IS FMT, case studies and case series of cancer screening interventions,

systematic reviews or meta-analyses of cancer screening interventions, studies that did not use an IS framework, and studies with no empirical data (involving primary data collection) or were research protocols.

Databases

Studies were identified through searches from five bibliographic databases: (1) Ovid MEDLINE, (2) PubMed, (3) Scopus, (4) Web of Science and (5) EMBASE.

Search strategies and key terms

The published literature was searched using strategies created by a medical librarian for implementation science frameworks for cancer screening and health disparities. The search strategies were established using a combination of standardised terms and keywords including, but not limited to, (colorectal cancer OR lung cancer OR breast cancer OR cervical cancer) AND (screening OR prevention OR detection OR smoking cessation OR mammogram OR pap test OR colonoscopy) AND (disparity OR low-to-middle-income country OR minority group OR



inequity OR socioeconomic factors) AND (implementation science theory, model, or framework OR known IS TMs OR evidence based medicine). The search was run on 22 June 2023 with an English language filter and a date limit of 2001–current in the databases Ovid MEDLINE, PubMed, Scopus, Web of Science, and EMBASE. A total of 9153 citations were imported into Covidence. A total of 4637 duplicates were assumed to be accurately identified and removed for a total of 4516 unique citations. Full electronic search strategies are provided in online supplemental table S1. Additional studies will also be identified by checking the bibliographies of included studies (eg, snowball searching with forward and backward citations).

Stage 3: study selection

All identified citations from the search strategies will be exported and managed in Covidence,²⁹ wherein duplicates will be removed. Titles and abstracts of the remaining citation records will be screened for inclusion against the eligibility criteria. Full-text articles of records that appear to meet the eligibility criteria will be retrieved and screened for inclusion, and those that fulfil all the inclusion criteria will be included in the review. All the above steps will be conducted by two reviewers working independently at first and then meeting to compare the results and reach agreement. A pilot round will be conducted between the two reviewers with a subset (eg, 5–10%) of identified articles during the title and abstract screening stage. Following refinements, the review process will proceed as planned. If any discrepancies arise at any stage of the review, they will be arbitrated and resolved through consensus and consultation with a third reviewer. Kappa statistics will also be calculated to assess interrater reliability agreement for both inclusion and exclusion processes. Studies not meeting the inclusion criteria will be excluded. Once all studies have been thoroughly vetted and arbitrated, an additional pilot round will be conducted between two reviewers with 10% of included studies during the chart review (data extraction) phase. If any conflicts arise during charting, they will be arbitrated and resolved through consensus and consultation with a third reviewer. The final results will be reported in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram and follow the PRISMA-Extension for Scoping Review (PRISMA-ScR) guidelines.³⁰

Stage 4: charting the data

Extraction of data on study characteristics and study findings will be organised into three domains: (1) study characteristics, (2) IS characteristics, (3) IS FMT-informed applications and/or adaptations and (4) cancer health disparities context.

Study characteristics

For each included study, the following characteristics will be collected: study design, study dates, analytical sample, type of cancer/cancer site, study location, setting of intervention and intervention description. Study design refers to the type of design employed in the study. Study dates refer to the year(s) in which data collection for the study took place (eg,

2009–2010). Analytical sample is defined as the sample size used to analyse cancer-related outcomes. Type of cancer/cancer site reflects the type of cancer(s)/cancer site(s) the screening intervention or study targeted. Study location refers to the geographic context (eg, country, state) in which the intervention took place. Setting of intervention refers to the place in which the intervention was deployed (eg, faith-based organisation, healthcare system). Study/intervention description reflects a short overview of the cancer screening EBI. For example, ‘a patient navigation colorectal cancer screening programme for African-American patients’.

IS characteristics

Given the focus on IS, we will extract the following information to elucidate the IS processes and outcomes of cancer screening EBIs identified in the search: (1) phase of intervention implementation, (2) implementation strategies and (3) implementation outcomes. Phase of intervention implementation refers to the temporal context in which the study was undertaken (eg, preimplementation) and will be coded with the framework from Handley *et al.*³¹ Implementation strategies defined by Proctor *et al.* as ‘the methods or techniques used to enhance the adoption, implementation and sustainability of a clinical programme or practice’³² will be extracted and catalogued using the Expert Recommendation for Implementing Change Project inventory developed by Powell *et al.*³³ Implementation outcomes (eg, acceptability, adoption) will be extracted using the definitions and schemes provided by Proctor and colleagues.³⁴ Included studies will also be extracted for information on whether they used the Standards for Reporting Implementation Studies checklist.³⁵

IS FMT applications

To characterise the applications of IS FMTs (research questions 1–3, table 1), the following information will be extracted for all included studies: (1) name(s) of IS FMT used in the study; (2) FMT applications; (3) level of FMT integration and (4) barriers/facilitators to applying FMTs as stated by authors. All IS FMT names will be referenced and verified with Nilsen’s taxonomy or the D&I Models in Health Science Webtool. FMT applications will be assessed using the authors’ stated purpose(s) or objective(s) for using the IS FMTs. Coding of FMT applications will then be based on the following options: (1) inform research questions, aims and/or hypotheses; (2) guide intervention design; (3) guide intervention adaptation and (4) identification, sampling or recruitment of the focus population; (5) selection of variables (predictors, determinants and implementation outcomes); (6) measurement and analysis and (7) other (describe). For studies that used an IS FMT to guide intervention adaptation, defined as modifications or alterations made to the design or delivery of an EBI to improve its fit or effectiveness, information on the adaptation process and outcome will be extracted and codified with the expanded Framework for Modification and Adaptations.¹⁷ This framework provides a comprehensive approach for identifying rationales, the timing, contextual factors (eg, funding, policies) and actors driving the adaptations to an EBI.

The level of FMT integration, defined as the extent to which a framework, model or theory, is integrated into the intervention/implementation process of a study, is captured with the following de novo scale: low (defined as <20% of constructs applied), moderate (defined as ≥20%–50% of constructs applied) and high (defined as ≥51% constructs applied). Barriers and/or facilitators to selecting and integrating IS FMTs in the identified cancer screening EBIs (research question 4, table 1) will also be captured and described based on the contextual clues and reflections provided by authors. Given the iterative nature of the scoping review process, this coding scheme will be expected to be changed in light of new evidence.

Cancer health disparities context

Information related to the cancer health disparities context in identified studies will draw from the rationale and objective elements of the PRISMA-Equity extension checklist.²⁸ The data extracted on these elements will include (1) the population characteristics of the target population(s), such as gender, age, race/ethnicity, socioeconomic status; (2) the authors' stated assumptions and rationale for addressing equity and (3) their intention to address equity as the focus of study, the research question or within the analysis. Information on these characteristics will be pulled and triangulated from various sections (eg, introduction, methods, limitations conclusion) within the publication of the included study, and narratively described in the scoping review. Given the varied places where equity intentions and assumptions may be described throughout a publication, the data extraction process for capturing the cancer health disparities context may be later refined based on earlier results.

Stage 5: collating, summarising and reporting the results

The study characteristics of all three domains will be collected and managed with an ad hoc template. This template will be created by the research team through consultations and will operate as an Excel spreadsheet. It should be noted that the template may undergo refinements in the future based on further consultations. Whenever necessary and possible, the authors of included studies will be contacted to obtain any missing data.

The findings will be organised according to the three domains of data extraction elements. These data elements have been designed to address the key objectives of the scoping review. The reporting of all study characteristics will be presented in a narrative format using the methodology proposed by Popay *et al*,³⁶ and where appropriate, with a numerical summary. For instance, we may report the percentage of studies conducted within various settings (eg, healthcare setting vs community-based setting). Due to the potential variations among studies conducted in low-income countries, lower-middle-income countries, upper-middle-income countries and high-income countries, the results will be categorised according to the World Bank's analytical income classification groups to characterise differences at both the micro (within countries) and macro (across countries) levels.³⁷ Whenever feasible, the findings will be

presented in tables or concept maps to enhance their visual interpretation. The final conduct of the scoping review will adhere to the PRISMA-ScR guidelines.³⁰

Patient and public involvement

No patients' or public input was sought in the development and conceptualisation of this scoping review.

ETHICS AND DISSEMINATION

As a secondary analysis, this scoping review does not require approval from an institutional review board. The results of the review will be shared through two channels. First, as publications in peer-reviewed journals. It is anticipated that there will be two separate publications—one focusing on all types of cancer screening and another specifically on cervical cancer. Additionally, the findings will be presented at national and international conferences.

Contributors SX conceived of the idea for the study. SX, MD, LK and RJP constructed and refined the study protocol. SX drafted, refined and revised the manuscript, and is the guarantor of this paper. All authors edited, read and approved the final manuscript.

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Competing interests None declared.

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SUPPLEMENTAL MATERIALS

Table S1. Full electronic search strategies conducted within the following databases on June 22, 2023: Ovid MEDLINE, PubMed, Scopus, Web of Science, and EMBASE.

| Date | Database | Results Returned |
|---|--------------|------------------|
| 06/22/2023 | Ovid MEDLINE | 2,420 |
| Search Strategy | | |
| <p>1 exp breast neoplasms/ or exp cervical neoplasms/ or exp colorectal neoplasms/ or exp lung neoplasms/ or exp "Tobacco Use Cessation"/ or ((breast or mammary or cervix or cervical or colorectal or colon or colonic or rectal or rectum or sigmoid or anal or anus or colitis or lung or lungs or pulmonary or bronchial or mesothelioma) adj3 (cancer or cancerous or neoplasm* or tumor* or tumour* or malignan* or carcinoma* or adenocarcinoma or biops* or adenoma)).mp. or exp Aberrant crypt foci/ or aberrant-crypt-foci.mp. or (polyp* adj3 (Colorectal or colon* or sigmoid* or rectal or rectum or anal or anus)).mp. or ((pap or Papanicolaou) adj2 (test or smear)).mp. or mammogram*.mp. or colposcop*.mp. or colonoscop*.mp. or fecal-occult-blood-test.mp. or barium-enema.mp. or (cessation adj2 (tobacco or smoking)).mp. or breast-exam*.mp.</p> <p>2 exp Risk Reduction Behavior/ or exp "Tobacco Use Cessation"/ or exp mass screening/ or exp preventive health services/ or exp early detection of cancer/ or Prevention.fs. or screen*.mp. or prevent*.mp. or detection.mp. or ((pap or Papanicolaou) adj2 (test or smear)).mp. or mammogram*.mp. or colposcop*.mp. or colonoscop*.mp. or fecal-occult-blood-test.mp. or barium-enema.mp. or (cessation adj2 (tobacco or smoking)).mp. or low-dose-computed-tomography.mp. or breast-exam*.mp. or fecal-immunochemical-test*.mp. or visual-inspection-with-acetic-acid.mp.</p> <p>3 exp Healthcare Disparities/ or exp health inequities/ or exp "Health Disparate, Minority and Vulnerable Populations"/ or exp Minority Groups/ or exp medically uninsured/ or exp socioeconomic factors/ or inequit*.mp. or Inequalit*.mp. or disparity.mp. or disparities.mp. or disparate.mp. or Access-barrier*.mp. or limited-resource*.mp. or lmic.mp. or lmic*.mp. or minorit*.mp. or (low* adj4 income adj2 countr*).mp. or (mid* adj2 income adj2 countr*).mp. or equit*.mp. or equality.mp. or race.mp. or racial.mp. or ethnic.mp. or vulnerable.mp. or underserved.mp. or under-served.mp. or socioeconomic*.mp. or rural.mp. or urban.mp. or racial.mp. or ethnicit*.ti,ab. or ethnic group*.ti,ab. or minority group*.ti,ab. or minorities.mp. or uninsured.mp. or un-insured.mp. or socioeconomic factors.mp. or medicare.mp. or medicaid.mp. or poverty.mp. or Socioeconomic-Status.mp. or social-class.mp. or Asian-American*.mp. or socioeconomic-factor*.mp. or economic-status.mp. or impoverished.mp. or black-patient*.mp. or white-patient*.mp. or blacks.mp. or whites.mp. or African-american*.mp. or amish.mp. or hispanic*.mp. or latino*.mp. or latina*.mp. or arab.mp. or arabs.mp. or asian-american.mp. or immigrant*.mp. or non-native.mp. or native.mp. or natives.mp. or indigenous.mp. or pacific-islander*.mp. or mexican*.mp. or american-indian*.mp. or aboriginal*.mp. or maori*.mp. or jews.mp. or roma.mp. or transgender*.mp. or trans-gender*.mp. or transexual*.mp. or transsexual*.mp. or two-spirit*.mp. or LGBT*.mp. or non-heterosexual*.mp. or ((glbt or lbg or intersex*) adj3 (person* or people or patient*)).mp. or lesbian*.mp. or lesbian*.mp. or gay.mp. or gays.mp. or queer*.mp. or bisexual*.mp. or bi-</p> | | |

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sexual*.mp. or homosexual*.mp. or homo-sexual*.mp. or (Afghanistan/ or Albania/ or Algeria/ or American Samoa/ or Angola/ or Argentina/ or Armenia/ or Azerbaijan/ or Bangladesh/ or Belarus/ or Belize/ or Benin/ or Bhutan/ or Bolivia/ or "Bosnia and Herzegovina"/ or Botswana/ or Brazil/ or Bulgaria/ or Burkina Faso/ or Burundi/ or Cabo Verde/ or Cambodia/ or Cameroon/ or Central African Republic/ or Chad/ or China/ or Colombia/ or Comoros/ or Congo/ or Costa Rica/ or Cote d'Ivoire/ or Cuba/ or Djibouti/ or "Democratic Republic of the Congo"/ or Dominica/ or Dominican Republic/ or Ecuador/ or Egypt/ or El Salvador/ or Equatorial Guinea/ or Eritrea/ or Eswatini/ or Ethiopia/ or Fiji/ or Gabon/ or Gambia/ or "Georgia (Republic)"/ or Ghana/ or Grenada/ or Guinea/ or Guinea-Bissau/ or Guyana/ or Haiti/ or India/ or Indonesia/ or Iran/ or Iraq/ or Jamaica/ or Jordan/ or Kazakhstan/ or Kenya/ or Kiribati/ or Kosovo/ or Kyrgyzstan/ or Laos/ or Lebanon/ or Lesotho/ or Liberia/ or Libya/ or Madagascar/ or Malaysia/ or Maldives/ or Mali/ or Micronesia/ or Mauritania/ or Mauritius/ or Mexico/ or Moldova/ or Montenegro/ or Morocco/ or Mozambique/ or Myanmar/ or Namibia/ or Nauru/ or Nepal/ or Nicaragua/ or Nigeria/ or "Democratic People's Republic of Korea"/ or "Republic of North Macedonia"/ or Pakistan/ or Papua New Guinea/ or Paraguay/ or Peru/ or Philippines/ or Romania/ or exp Russia/ or Rwanda/ or Samoa/ or Senegal/ or Serbia/ or Sierra Leone/ or Melanesia/ or Somalia/ or South Africa/ or South Sudan/ or Sri Lanka/ or Saint Lucia/ or "Saint Vincent and the Grenadines"/ or Sudan/ or Suriname/ or Syria/ or Tajikistan/ or Tanzania/ or Thailand/ or Timor-Leste/ or Togo/ or Tonga/ or Tunisia/ or Turkey/ or Turkmenistan/ or Uganda/ or Ukraine/ or Uzbekistan/ or Vanuatu/ or Venezuela/ or Vietnam/ or Yemen/ or Zambia/ or Zimbabwe/ or (Afghan*OR Albania* or Algeria* or "American Samoa*" or Angola* or Armenia* or Azerbaijan or Azeri* or Bangladesh* or Belarus* or Belize* or Benin* or Bhutan* or Bolivia* or Bosnia* or Botswana or Motswana or Batswana or Brazil* or Bulgaria* or Herzegovina or "Burkina Faso" or Burkinabe* or Burundi* or "Cabo Verde*" or "Cape Verde*" or Cambodia* or Cameroon* or "Central African" or Chad* or China or Chinese or Columbia* or Congo* or "Comoros Eritrea*" or Comorian* or "Ivory Coast" or "Côte d Ivoire" or Ivoirian or "Costa Rica*" or Cuba* or Djibouti or Dominica* or Ecuador* or "Equitorial Guinea*" or Equatoguinean* or Egypt* or "El Salvador*" or Ethiopia* or Eritrea* or Fiji* or Gabon* or Gambia* or Ghana* or Grenada or Grenadian* or Guatemala* or Guinea* or "Guinea-Bissau" or Guyan* or Haiti* or Honduras or Honduran* or India or Indonesia* or Iran* or Iraq* or Jamaica* or Jordan* or Kazakhstan* or Kazakh* or Kenya* or Kiribati or Kosovo or Kosovar or Kyrgyz or Kyrgyzstan or Lao or Laos or Laotian* or Lebanon or Lebanese or Lesotho or Liberia* or Macedonian* or Madagascar* or Malawi* or Malaysia* or Maldives or Maldivian* or Mali* or "Marshall Islands" or Marshallese or Mauritania or Mauritius or Mauritian* or Mexico or Mexican* or Micronesia* or Moldova* or Mongolia* or Montenegro or Montenegrin* or Morocc* or Mozambique* or Mozambican* or Myanmar or Burma or Namibia* or Nauru* or Nepal* or Nicaragua* or Nigeria* or Niger* or "North Korea*" or Pakistan* or "Papua New Guinea*" or Paraguay* or Peru* or Peruvian or Philippines or Filipino* or Phillipino* or "Republic of Georgia" or Romania* or Russia* or Rwanda* or "Saint Lucia*" or "Saint Vincent" or "Sao Tome and Principe" or Samoa* or Senegal* or Serbia* or "Sierra Leone*" or "Solomon Islands" or Somali* or "South Africa*" or "South Sudan" or "Sri Lanka*" or Sudan* or Suriname* or Swaziland or Swazi or Syria* or Tajikistan* or Tanzania* or Thai* or "Timor-Leste" or Togo* or Tonga* or Tunisia* or Turkey or Turkish or Turkmenistan or Turkmen or Tuvalu* or Ukrain* or Uganda* or

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Uzbekistan* or Uzbek* or Vanuatu or Venezuela* or Vietnam* or viet-nam or "Gaza strip" or Palestine or "West Bank" or Yemen* or Zambia* or Zimbabwe* or Zaire).ti,ab. or (((("low income" or "low-income" or "lower income") adj2 (countr* or nation* or econom*)) or ((low* or middle*) adj2 ("income country" or "income countries" or "income nation" or "income countries"))) or (("middle income" or "middle-income") adj2 (countr* or nation* or economy*))).ti,ab. or lmic.mp. or lamic.mp. or sub-saharan-africa*.mp. or subsaharan-africa*.mp.)

4 exp evidence-based medicine/ or exp evidence-based practice/ or Translational Research, Biomedical/ or exp implementation science/ or (tmf or epis).mp. or pathways-to-evidence-informed-policy.mp. or ottawa-model-of-research-use.mp. or outcomes-focused-knowledge-trans*.mp. or (outpatient*-treatment adj2 ontario-service*).mp. or emtrek.mp. or Parihs.mp. or Kilbourne*.mp. or advancing-health-disparities-research.mp. or behaviour-change-wheel.mp. or Community-Based-Participatory-Research.mp. or CBPR.mp. or (Concept* adj2 disseminat* adj2 research*).mp. or (conduct* adj2 utilization adj2 research).mp. or Social-Marketing-Approach-for-Disseminat*.mp. or (dissemination adj2 evidence-based).mp. or Reach-Effectiveness-Adoption-Implementation.mp. or evidence-integration-triangle.mp. or (evidence-based adj2 behavior-change).mp. or (integrat* adj2 interacting-elements).mp. or intervention-mapping.mp. or continuum-indicator-summar*.mp. or Process-theory.mp. or (model adj2 (Institute-of-Medicine* or IOM)).mp. or (innovation* adj2 (diffusion or determinant*)).mp. or knowledge-transfer-and-exchange.mp. or (marketing adj2 distribution adj2 public-health).mp. or outcome*-focus-knowledge-trans*.mp. or pathways-to-evidence-informed-policy.mp. or ((theory or model) adj6 (diffusion or evidence-based or implement* or knowledge-trans* or community-intervention* or organizational-intervention* or research-cycle or advancing-reasearch or practice-development or knowledge-action or knowledge-utilization or knowledge-utilisation or utilization or utilisation or pathman or preceed or sustainment or precede or proceed or push-pull or pathway*)).mp. or ((theory or model or framework or frameworks or process) adj3 (technology or innovation* or predict or prediction or predicts or practice or knowledge or research) adj3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion)).mp. or ((practice* or guideline* or intervention* or policy or public-health or public-service* or health-service*) adj3 (technology or innovation* or knowledge or research) adj3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion or implement*)).mp. or re-aim.mp. or real-world-dissemination.mp. or research-knowledge-infrastructure.mp. or sticky-knowledge.mp. or streams-of-policy-progress.mp. or queri.mp. or quality-enhancement-research-initiative.mp. or weiner-organizational-readiness.mp. or (implement* adj6 (research-method* or outcomes or innovation* or effectiveness or theory or science or evidence-based or research or adaptation or disseminat* or equity or disparity or proctor* or blueprint* or blue-print or framework*)).mp. or (promot* adj2 research adj2 implement*).mp. or (model adj6 (effectiveness or best-practice* or facilitat* or adopt* or sustainment or transfer or evidence-based or implement* or utilization or utilisation or preceed or davis or pathman or translation or disseminat* or research-use or ontario or outpatient-treatment or precede-proceed or rand or persuasive-communication or chronic-care)).mp. or (theory adj3 (normalization or process or implement* or innovation*)).mp. or (Disseminat* adj6 (science or Blueprint* or blue-print or research or knowledge or initiative

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| | or social-marketing or evidence-based or evidence-base or research-design or research-method* or effective or strateg* or enhancing or real-world or physical-activity)).mp. or ((framework* or frame-work*) adj5 (evaluation or maintenance or reach or effectiveness or analysis or analyze or analyse or D&I or evaluation or disseminat* or implement* or evidence or optimiz* or optimis* or research or practice or deimplement* or choosing-wisely or CDC or conceptual or knowledge or transfer* or connect or context* or intervention* or sustainability or EQ-DI or equity or equality or analyz* or adopt* or health-innovation* or complex or enhanc* or spread or policy or patient-safety or health-service* or health-promotion or multi-stream* or multiple-stream* or exchange or system or systems or innovation* or re-aim or reach or efficacy or maintenance or replicating or effective or modification* or adaptation* or theor* or domain* or translational or quality-enhancement or surveillance or health-outcome* or acceptability)).mp. or ((framework* or frame-work*) adj10 (evidence or implement* or disseminat*)).mp. or ((model or theory) adj5 (ottawa or mckinlay or huff or evidence or implement* or disseminat* or greenhalgh)).mp. | |
|---|--|------------------|
| 5 | 1 and 2 and 3 and 4 | |
| 6 | limit 5 to (english language and yr="2001 -Current") | |
| Date | Database | Results Returned |
| 06/22/2023 | PubMed | 828 |
| Search Strategy | | |
| <p>(("breast neoplasms"[mesh] or "Uterine Cervical Neoplasms"[Mesh] or "colorectal neoplasms"[mesh] or "lung neoplasms"[mesh] or "Tobacco Use Cessation"[mesh] or breast-cancer*[tiab] OR breast-neoplasm*[tiab] or cervical-cancer*[tiab] OR colorectal-cancer*[tiab] or colon-cancer*[tiab] or colonic-cancer*[tiab] or rectal-cancer*[tiab] or rectum-cancer*[tiab] or sigmoid-cancer*[tiab] or anal-cancer*[tiab] or anus-cancer*[tiab] or colitis-cancer*[tiab] or lung-cancer*[tiab] OR "Aberrant crypt foci"[mesh] or aberrant-crypt-foci[tiab] or pap-test[tiab] or pap-smear[tiab] OR Papanicolaou[tiab] or mammogram*[tiab] or colposcop*[tiab] or colonoscop*[tiab] or fecal-occult-blood-test[tiab] or barium-enema[tiab] or tobacco-cessation[tiab] OR smoking-cessation[tiab] or breast-exam*[tiab] or fecal-immunochemical-test*[tiab] or visual-inspection-with-acetic-acid[tiab])</p> <p>AND ("Risk Reduction Behavior"[mesh] or "Tobacco Use Cessation"[mesh] or "mass screening"[mesh] or "preventive health services"[mesh] or "early detection of cancer"[mesh] or "prevention and control"[Subheading] OR screen*[tiab] or prevent*[tiab] or detection[tiab] or mammogram*[tiab] or colposcop*[tiab] or colonoscop*[tiab] or fecal-occult-blood-test[tiab] or barium-enema[tiab] or tobacco-cessation[tiab] OR smoking-cessation[tiab] or low-dose-computed-tomography[tiab] or breast-exam*[tiab] or fecal-immunochemical-test*[tiab] or visual-inspection-with-acetic-acid[tiab])</p> <p>AND ("Healthcare Disparities"[mesh] or "health inequities"[mesh] or "Health Disparate, Minority and Vulnerable Populations"[mesh] or "Minority Groups"[mesh] or "medically uninsured"[mesh] or "socioeconomic factors"[mesh] or inequit*[tiab] or Inequalit*[tiab]</p> | | |

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or disparity[tiab] or disparities[tiab] or disparate[tiab] or Access-barrier*[tiab] or limited-resource*[tiab] or lmic[tiab] or lmic[tiab] or lmic[tiab] or minorit*[tiab] or equit*[tiab] or equality[tiab] or race[tiab] or racial[tiab] or ethnic[tiab] or vulnerable[tiab] or underserved[tiab] or underserved[tiab] or socioeconomic*[tiab] or socio-economic*[tiab] or rural[tiab] or urban[tiab] or racial[tiab] or ethnicit*[tiab] or ethnic group*[tiab] or minority group*[tiab] or minorities[tiab] or uninsured[tiab] or un-insured[tiab] or socioeconomic-factors[tiab] or medicare[tiab] or medicaid[tiab] or poverty[tiab] or Socioeconomic-Status[tiab] or social-class[tiab] or Asian-American*[tiab] or socioeconomic-factor*[tiab] or economic-status[tiab] or impoverished[tiab] or black-patient*[tiab] or white-patient*[tiab] or blacks[tiab] or African-american*[tiab] or amish[tiab] or hispanic*[tiab] or latino*[tiab] or latina*[tiab] or arab[tiab] or arabs[tiab] or asian-american[tiab] or immigrant*[tiab] or non-native[tiab] or native[tiab] or natives[tiab] or indigenous[tiab] or pacific-islander*[tiab] or mexican*[tiab] or american-indian*[tiab] or aboriginal*[tiab] or maori*[tiab] or jews[tiab] or roma[tiab] or transgender*[tiab] or trans-gender*[tiab] or transexual*[tiab] or transsexual*[tiab] or two-spirit*[tiab] or LGBT*[tiab] or non-heterosexual*[tiab] or glbt-patient*[tiab] or lbg-patient*[tiab] or intersex*-patient*[tiab] OR lesbian*[tiab] or lesbigay*[tiab] or gay[tiab] or gays[tiab] or queer*[tiab] or bisexual*[tiab] or bisexual*[tiab] or homosexual*[tiab] or homo-sexual*[tiab] or "Developing Countries"[Mesh] OR "low income country"[tiab] or "low income countries"[tiab] or "middle income country"[tiab] or "middle income countries"[tiab] or lmic[tiab] or lamic[tiab] or sub-saharan-africa*[tiab] or subsaharan-africa*[tiab] OR Afghan*[Title/Abstract] OR Albania*[Title/Abstract] OR Algeria*[Title/Abstract] OR "American Samoa"*[Title/Abstract] OR Angola*[Title/Abstract] OR Armenia*[Title/Abstract] OR Azerbaijan[Title/Abstract] OR Azeri*[Title/Abstract] OR Bangladesh*[Title/Abstract] OR Belarus*[Title/Abstract] OR Belize*[Title/Abstract] OR Benin*[Title/Abstract] OR Bhutan*[Title/Abstract] OR Bolivia*[Title/Abstract] OR Bosnia*[Title/Abstract] OR Botswana[Title/Abstract] OR Motswana[Title/Abstract] OR Batswana[Title/Abstract] OR Brazil*[Title/Abstract] OR Bulgaria*[Title/Abstract] OR Herzegovina[Title/Abstract] OR "Burkina Faso"[Title/Abstract] OR Burkinabe*[Title/Abstract] OR Burundi*[Title/Abstract] OR "Cabo Verde"*[Title/Abstract] OR "Cape Verde"*[Title/Abstract] OR Cambodia*[Title/Abstract] OR Cameroon*[Title/Abstract] OR "Central African"[Title/Abstract] OR Chad*[Title/Abstract] OR China[Title/Abstract] OR Chinese[Title/Abstract] OR Columbia*[Title/Abstract] OR Congo*[Title/Abstract] OR "Comoros Eritrea"[Title/Abstract] OR Comorian*[Title/Abstract] OR "Ivory Coast"[Title/Abstract] OR "Côte d Ivoire"[Title/Abstract] OR Ivoirian[Title/Abstract] OR "Costa Rica"*[Title/Abstract] OR Cuba*[Title/Abstract] OR Djibouti[Title/Abstract] OR Dominica*[Title/Abstract] OR Ecuador*[Title/Abstract] OR "Equatorial Guinea"[Title/Abstract] OR Equatoguinean*[Title/Abstract] OR Egypt*[Title/Abstract] OR "El Salvador"*[Title/Abstract] OR Ethiopia*[Title/Abstract] OR Eritrea*[Title/Abstract] OR Fiji*[Title/Abstract] OR Gabon*[Title/Abstract] OR Gambia*[Title/Abstract] OR Ghana*[Title/Abstract] OR Grenada[Title/Abstract] OR Grenadian*[Title/Abstract] OR Guatemala*[Title/Abstract] OR Guinea*[Title/Abstract] OR "Guinea-Bissau"[Title/Abstract] OR Guyan*[Title/Abstract] OR Haiti*[Title/Abstract] OR Honduras[Title/Abstract] OR Honduran*[Title/Abstract] OR India[Title/Abstract] OR Indonesia*[Title/Abstract] OR Iran*[Title/Abstract] OR Iraq*[Title/Abstract] OR Jamaica*[Title/Abstract] OR Jordan*[Title/Abstract] OR Kazakhstan*[Title/Abstract] OR

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Kazakh*[Title/Abstract] OR Kenya*[Title/Abstract] OR Kiribati[Title/Abstract] OR Kosovo[Title/Abstract] OR Kosovar[Title/Abstract] OR Kyrgyz[Title/Abstract] OR Kyrgyzstan[Title/Abstract] OR Lao[Title/Abstract] OR Laos[Title/Abstract] OR Laotian*[Title/Abstract] OR Lebanon[Title/Abstract] OR Lebanese[Title/Abstract] OR Lesotho[Title/Abstract] OR Liberia*[Title/Abstract] OR Macedonian*[Title/Abstract] OR Madagascar*[Title/Abstract] OR Malawi*[Title/Abstract] OR Malaysia*[Title/Abstract] OR Maldives[Title/Abstract] OR Maldivian*[Title/Abstract] OR Mali*[Title/Abstract] OR "Marshall Islands"[Title/Abstract] OR Marshallese[Title/Abstract] OR Mauritania[Title/Abstract] OR Mauritius[Title/Abstract] OR Mauritian*[Title/Abstract] OR Mexico[Title/Abstract] OR Mexican*[Title/Abstract] OR Micronesia*[Title/Abstract] OR Moldova*[Title/Abstract] OR Mongolia*[Title/Abstract] OR Montenegro[Title/Abstract] OR Montenegrin*[Title/Abstract] OR Morocco*[Title/Abstract] OR Mozambique*[Title/Abstract] OR Mozambican*[Title/Abstract] OR Myanmar[Title/Abstract] OR Burma[Title/Abstract] OR Namibia*[Title/Abstract] OR Nauru*[Title/Abstract] OR Nepal*[Title/Abstract] OR Nicaragua*[Title/Abstract] OR Nigeria*[Title/Abstract] OR Niger*[Title/Abstract] OR "North Korea"[Title/Abstract] OR Pakistan*[Title/Abstract] OR "Papua New Guinea"[Title/Abstract] OR Paraguay*[Title/Abstract] OR Peru*[Title/Abstract] OR Peruvian[Title/Abstract] OR Philippines[Title/Abstract] OR Filipino*[Title/Abstract] OR Phillipino*[Title/Abstract] OR "Republic of Georgia"[Title/Abstract] OR Romania*[Title/Abstract] OR Russia*[Title/Abstract] OR Rwanda*[Title/Abstract] OR "Saint Lucia"[Title/Abstract] OR "Saint Vincent"[Title/Abstract] OR "Sao Tome and Principe"[Title/Abstract] OR Samoa*[Title/Abstract] OR Senegal*[Title/Abstract] OR Serbia*[Title/Abstract] OR "Sierra Leone"[Title/Abstract] OR "Solomon Islands"[Title/Abstract] OR Somali*[Title/Abstract] OR "South Africa"[Title/Abstract] OR "South Sudan"[Title/Abstract] OR "Sri Lanka"[Title/Abstract] OR Sudan*[Title/Abstract] OR Suriname*[Title/Abstract] OR Swaziland[Title/Abstract] OR Swazi[Title/Abstract] OR Syria*[Title/Abstract] OR Tajikistan*[Title/Abstract] OR Tanzania*[Title/Abstract] OR Thai*[Title/Abstract] OR "Timor-Leste"[Title/Abstract] OR Togo*[Title/Abstract] OR Tonga*[Title/Abstract] OR Tunisia*[Title/Abstract] OR Turkey[Title/Abstract] OR Turkish[Title/Abstract] OR Turkmenistan[Title/Abstract] OR Turkmen[Title/Abstract] OR Tuvalu*[Title/Abstract] OR Ukrain*[Title/Abstract] OR Uganda*[Title/Abstract] OR Uzbekistan*[Title/Abstract] OR Uzbek*[Title/Abstract] OR Vanuatu[Title/Abstract] OR Venezuela*[Title/Abstract] OR Vietnam*[Title/Abstract] OR viet-nam[Title/Abstract] OR "Gaza strip"[Title/Abstract] OR Palestine[Title/Abstract] OR "West Bank"[Title/Abstract] OR Yemen*[Title/Abstract] OR Zambia*[Title/Abstract] OR Zimbabwe*[Title/Abstract] OR Zaire[Title/Abstract])

AND ("evidence-based medicine"[Mesh] or "evidence-based practice"[Mesh] or "Translational Research, Biomedical"[Mesh] or "implementation science"[Mesh] or tmf[tiab] or epis[tiab] or ottawa-model-of-research-use[tiab] or outcomes-focused-knowledge-trans*[tiab] or emtrek[tiab] or Parihs[tiab] or Kilbourne*[tiab] or advancing-health-disparities-research[tiab] or behaviour-change-wheel[tiab] or Community-Based-Participatory-Research[tiab] or CBPR[tiab] or Concept-dissemination-research[tiab] or conducting-utilization-research[tiab] or Social-Marketing-Approach-for-Disseminat*[tiab] or evidence-based-dissemination[tiab] or Reach-Effectiveness-Adoption-

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Implementation[tiab] or evidence-integration-triangle[tiab] or evidence-based-behavior-change[tiab] or integrating-interacting-elements[tiab] or intervention-mapping[tiab] or continuum-indicator-summar*[tiab] or Process-theory[tiab] or Institute-of-Medicine-model[tiab] or IOM-model[tiab] OR knowledge-transfer-and-exchange[tiab] or evidence-based-model OR evidence-based-theory OR outcomes-focus-knowledge-trans*[tiab] or pathways-to-evidence-informed-policy[tiab] or diffusion-model or implementation-model or knowledge-transfer-model or community-intervention-model or organizational-intervention-model or research-cycle-model or advancing-reasearch-model or practice-development-model or knowledge-action-model or knowledge-utilization-model or knowledge-utilisation-model or utilization-model or utilisation-model or pathman-model or preceed-model or sustainment-model or precede-model or proceed-model or push-pull-model or pathway-model[tiab] or transfer-model or translate-model or traslation-model or exchange-model or utilization-model or adoption-model or dissemination-model or diffusion-model OR transfer-framework or translate-framework or traslation-framework or exchange-framework or utilization-framework or adoption-framework or dissemination-framework or diffusion-framework OR Technology-translat* or innovation-translat* or knowledge-translat* or research-translat* or re-aim[tiab] or real-world-dissemination[tiab] or research-knowledge-infrastructure[tiab] or sticky-knowledge[tiab] or streams-of-policy-progress[tiab] or queri[tiab] or quality-enhancement-research-initiative[tiab] or weiner-organizational-readiness[tiab] or research-method-implement* or outcome-implement* or innovation-implement* or effectiveness-implement* or implementation-theory or science-implement* or evidence-based-implement* or effectiveness-model or best-practices-model or facilitation-model or sustainment-model or transfer-model or evidence-based-model or implementation-model* or utilization-model or utilisation-model or davis-model or pathman-model or translation-model or dissemination-model or research-use-model or ontario-model or outpatient-treatment-model or precede-proceed-model or rand-model or persuasive-communication-model or chronic-care-model or normalization-theory or process-theory or implementation-theory or innovation-theory or Dissemination-science or Dissemination-Blueprint* or Dissemination-blue-print or Disseminate-research or evidence-based-Dissemination or evidence-base-Dissemination or research-design-Dissemination OR evaluation-framework or maintenance-framework or reach-framework or effectiveness-framework or analysis-framework or analyze-framework or analyse-framework OR evaluation-framework or dissemination-framework or implementation-framework or evidence-framework or optimization-framework or optimisation-framework or research-framework or practice-framework or deimplementation-framework or choosing-wisely-framework or CDC-framework or conceptual-framework or knowledge-framework or transfer-framework or connect-framework or contextual-framework or interventions-framework or sustainability-framework or EQ-DI-framework or equity-framework or equality-framework or analyzation-framework or complex-framework or spread-framework or policy-framework or patient-safety-framework or health-services-framework or health-promotion-framework or multi-streaming-framework or multiple-streaming-framework or exchange-framework or system-framework or systems-framework or innovations-framework or re-aim-framework or reach-framework or efficacy-framework or maintenance-framework or replicating-framework or effectiveness-framework or quality-enhancement-framework or surveillance-framework or health-outcomes-framework or acceptability-framework)) AND ((english[Filter]) AND (2001:2023[pdat]))

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| Date | Database | Results Returned |
|--|----------|------------------|
| 06/22/2023 | Scopus | 1,349 |
| Search Strategy | | |
| <p>1 (TITLE-ABS-KEY (((breast or mammary or cervix or cervical or colorectal or colon or colonic or rectal or rectum or sigmoid or anal or anus or colitis or lung or lungs or pulmonary or bronchial or mesothelioma) w/3 (cancer or cancerous or neoplasm* or tumor* or tumour* or malignan* or carcinoma* or adenocarcinoma or biops* or adenoma)) or aberrant-crypt-foci or (polyp* w/3 (Colorectal or colon* or sigmoid* or rectal or rectum or anal or anus)) or ((pap or Papanicolaou) w/2 (test or smear)) or mammogram* or colposcop* or colonoscop* or fecal-occult-blood-test or barium-enema or (cessation w/2 (tobacco or smoking)) or breast-exam*))</p> <p>2 (TITLE-ABS-KEY (screen* or prevent* or detection or ((pap or Papanicolaou) w/2 (test or smear)) or mammogram* or colposcop* or colonoscop* or fecal-occult-blood-test or barium-enema or (cessation w/2 (tobacco or smoking)) or low-dose-computed-tomography or breast-exam* or fecal-immunochemical-test* or visual-inspection-with-acetic-acid))</p> <p>3 (TITLE-ABS-KEY (inequit* or Inequalit* or disparity or disparities or disparate or Access-barrier* or limited-resource* or lmic or lmic* or minorit* or (low* w/4 income w/2 countr*) or (mid* w/2 income w/2 countr*) or equit* or equality or race or racial or ethnic or vulnerable or underserved or under-served or socioeconomic* or rural or urban or racial or ethnicit* or ethnic-group* or minority-group* or minorities or uninsured or un-insured or socioeconomic factors or medicare or medicaid or poverty or Socioeconomic-Status or social-class or Asian-American* or socioeconomic-factor* or economic-status or impoverished or black-patient* or white-patient* or blacks or whites or African-american* or amish or hispanic* or latino* or latina* or arab or arabs or asian-american or immigrant* or non-native or native or natives or indigenous or pacific-islander* or mexican* or american-indian* or aboriginal* or maori* or jews or roma or transgender* or trans-gender* or transexual* or transsexual* or two-spirit* or LGBT* or non-heterosexual* or ((glbt or lbg or intersex*) w/3 (person* or people or patient*)) or lesbian* or lesbigay* or gay or gays or queer* or bisexual* or bi-sexual* or homosexual* or homo-sexual* or Afghan* OR Albania* or Algeria* or "American Samoa*" or Angola* or Armenia* or Azerbaijan or Azeri* or Bangladesh* or Belarus* or Belize* or Benin* or Bhutan* or Bolivia* or Bosnia* or Botswana or Motswana or Batswana or Brazil* or Bulgaria* or Herzegovina or "Burkina Faso" or Burkinabe* or Burundi* or "Cabo Verde*" or "Cape Verde*" or Cambodia* or Cameroon* or "Central African" or Chad* or China or Chinese or Columbia* or Congo* or "Comoros Eritrea*" or Comorian* or "Ivory Coast" or "Côte d Ivoire" or Ivoirian or "Costa Rica*" or Cuba* or Djibouti or Dominica* or Ecuador* or "Equatorial Guinea*" or Equatoguinean* or Egypt* or "El Salvador*" or Ethiopia* or Eritrea* or Fiji* or Gabon* or Gambia* or Ghana* or Grenada or Grenadian* or Guatemala* or Guinea* or "Guinea-Bissau" or Guyan* or Haiti* or Honduras or Honduran* or India or Indonesia* or Iran* or Iraq* or Jamaica* or Jordan* or Kazakhstan* or Kazakh* or Kenya* or Kiribati or Kosovo or Kosovar or Kyrgyz or Kyrgyzstan or Lao or Laos or Laotian* or Lebanon or Lebanese or Lesotho or Liberia* or Macedonian* or Madagascar* or Malawi* or Malaysia* or Maldives or Maldivian* or</p> | | |

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Mali* or "Marshall Islands" or Marshallese or Mauritania or Mauritius or Mauritian* or Mexico or Mexican* or Micronesia* or Moldova* or Mongolia* or Montenegro or Montenegrin* or Morocc* or Mozambique* or Mozambican* or Myanmar or Burma or Namibia* or Nauru* or Nepal* or Nicaragua* or Nigeria* or Niger* or "North Korea*" or Pakistan* or "Papua New Guinea*" or Paraguay* or Peru* or Peruvian or Philippines or Filipino* or Phillipino* or "Republic of Georgia" or Romania* or Russia* or Rwanda* or "Saint Lucia*" or "Saint Vincent" or Samoa* or Senegal* or Serbia* or "Sierra Leone*" or "Solomon Islands" or Somali* or "South Africa*" or "South Sudan" or "Sri Lanka*" or Sudan* or Suriname* or Swaziland or Swazi or Syria* or Tajikistan* or Tanzania* or Thai* or "Timor-Leste" or Togo* or Tonga* or Tunisia* or Turkey or Turkish or Turkmenistan or Turkmen or Tuvalu* or Ukrain* or Uganda* or Uzbekistan* or Uzbek* or Vanuatu or Venezuela* or Vietnam* or viet-nam or "Gaza strip" or Palestine or "West Bank" or Yemen* or Zambia* or Zimbabwe* or Zaire or (("low income" or "low-income" or "lower income") w/2 (count* or nation* or econom*)) or ((low* or middle*) w/2 ("income country" or "income countries" or "income nation" or "income countries")) or (("middle income" or "middle-income") w/2 (count* or nation* or economy*)) or lmic or lamic or sub-saharan-africa* or subsaharan-africa*))

4 (TITLE-ABS-KEY (tmf or epis or pathways-to-evidence-informed-policy or ottawa-model-of-research-use or outcomes-focused-knowledge-trans* or (outpatient*-treatment w/2 ontario-service*) or emtrek or Parihs or Kilbourne* or advancing-health-disparities-research or behaviour-change-wheel or Community-Based-Participatory-Research or CBPR or (Concept* w/2 disseminat* w/2 research*) or (conduct* w/2 utilization w/2 research) or Social-Marketing-Approach-for-Disseminat* or (dissemination w/2 evidence-based) or Reach-Effectiveness-Adoption-Implementation or evidence-integration-triangle or (evidence-based w/2 behavior-change) or (integrat* w/2 interacting-elements) or intervention-mapping or continuum-indicator-summar* or Process-theory or (model w/2 (Institute-of-Medicine* or IOM)) or (innovation* w/2 (diffusion or determinant*)) or knowledge-transfer-and-exchange or (marketing w/2 distribution w/2 public-health) or outcome*-focus-knowledge-trans* or pathways-to-evidence-informed-policy or ((theory or model) w/6 (diffusion or evidence-based or implement* or knowledge-trans* or community-intervention* or organizational-intervention* or research-cycle or advancing-research or practice-development or knowledge-action or knowledge-utilization or knowledge-utilisation or utilization or utilisation or pathman or precede or sustainment or precede or proceed or push-pull or pathway*)) or ((theory or model or framework or frameworks or process) w/3 (technology or innovation* or predict or prediction or predicts or practice or knowledge or research) w/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion)) or ((practice* or guideline* or intervention* or policy or public-health or public-service* or health-service*) w/3 (technology or innovation* or knowledge or research) w/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion or implement*)) or re-aim or real-world-dissemination or research-knowledge-infrastructure or sticky-knowledge or streams-of-policy-progress or queri or quality-enhancement-research-initiative or weiner-organizational-readiness or (implement* w/6 (research-method* or outcomes or innovation* or effectiveness or theory or science or evidence-based or research or adaptation or disseminat* or equity or disparity or proctor* or

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| <p>blueprint* or blue-print or framework*) or (promot* w/2 research w/2 implement*) or (model w/6 (effectiveness or best-practice* or facilitat* or adopt* or sustainment or transfer or evidence-based or implement* or utilization or utilisation or precede or davis or pathman or translation or disseminat* or research-use or ontario or outpatient-treatment or precede-proceed or rand or persuasive-communication or chronic-care)) or (theory w/3 (normalization or process or implement* or innovation*)) or (Disseminat* w/6 (science or Blueprint* or blue-print or research or knowledge or initiative or social-marketing or evidence-based or evidence-base or research-design or research-method* or effective or strateg* or enhancing or real-world or physical-activity)) or ((framework* or frame-work*) w/5 (evaluation or maintenance or reach or effectiveness or analysis or analyze or analyse or evaluation or disseminat* or implement* or evidence or optimiz* or optimis* or research or practice or deimplement* or choosing-wisely or CDC or conceptual or knowledge or transfer* or connect or context* or intervention* or sustainability or EQ-DI or equity or equality or analyz* or adopt* or health-innovation* or complex or enhanc* or spread or policy or patient-safety or health-service* or health-promotion or multi-stream* or multiple-stream* or exchange or system or systems or innovation* or re-aim or reach or efficacy or maintenance or replicating or effective or modification* or adaptation* or theor* or domain* or translational or quality-enhancement or surveillance or health-outcome* or acceptability)) or ((framework* or frame-work*) w/10 (evidence or implement* or disseminat*)) or ((model or theory) w/5 (ottawa or mckinlay or huff or evidence or implement* or disseminat* or greenhalgh)))</p> <p>5 AND PUBYEAR > 2000 AND PUBYEAR < 2024 AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "no") OR LIMIT-TO (DOCTYPE , "ed") OR LIMIT-TO (DOCTYPE , "sh") OR LIMIT-TO (DOCTYPE , "er") OR LIMIT-TO (DOCTYPE , "le")) AND (LIMIT-TO (LANGUAGE , "English"))</p> | | |
|--|----------------|------------------|
| Date | Database | Results Returned |
| 06/22/2023 | Web of Science | 2,466 |
| Search Strategy | | |
| <p>1 TS=(((breast or mammary or cervix or cervical or colorectal or colon or colonic or rectal or rectum or sigmoid or anal or anus or colitis or lung or lungs or pulmonary or bronchial or mesothelioma) near/3 (cancer or cancerous or neoplasm* or tumor* or tumour* or malignan* or carcinoma* or adenocarcinoma or biops* or adenoma)) or aberrant-crypt-foci or (polyp* near/3 (Colorectal or colon* or sigmoid* or rectal or rectum or anal or anus)) or ((pap or Papanicolaou) near/2 (test or smear)) or mammogram* or colposcop* or colonoscop* or fecal-occult-blood-test or barium-enema or (cessation near/2 (tobacco or smoking)) or breast-exam*)</p> <p>2 TS=(screen* or prevent* or detection or ((pap or Papanicolaou) near/2 (test or smear)) or mammogram* or colposcop* or colonoscop* or fecal-occult-blood-test or barium-enema or (cessation near/2 (tobacco or smoking)) or low-dose-computed-tomography or breast-exam* or fecal-immunochemical-test* or visual-inspection-with-acetic-acid)</p> | | |

Applications of Implementation Science Frameworks, Models, and Theories in Cancer Screening Interventions: A Scoping Review Protocol

3 TS=(inequit* or Inequalit* or disparity or disparities or disparate or Access-barrier* or limited-resource* or lmic or lmic* or minorit* or (low* near/4 income near/2 countr*) or (mid* near/2 income near/2 countr*) or equit* or equality or race or racial or ethnic or vulnerable or underserved or under-served or socioeconomic* or rural or urban or racial or ethnicit* or ethnic-group* or minority-group* or minorities or uninsured or un-insured or socioeconomic factors or medicare or medicaid or poverty or Socioeconomic-Status or social-class or Asian-American* or socioeconomic-factor* or economic-status or impoverished or black-patient* or white-patient* or blacks or whites or African-american* or amish or hispanic* or latino* or latina* or arab or arabs or asian-american or immigrant* or non-native or native or natives or indigenous or pacific-islander* or mexican* or american-indian* or aboriginal* or maori* or jews or roma or transgender* or trans-gender* or transexual* or transsexual* or two-spirit* or LGBT* or non-heterosexual* or ((glbt or lbg or intersex*) near/3 (person* or people or patient*)) or lesbian* or lesbigay* or gay or gays or queer* or bisexual* or bi-sexual* or homosexual* or homo-sexual* or Afghan* OR Albania* or Algeria* or "American Samoa*" or Angola* or Armenia* or Azerbaijan or Azeri* or Bangladesh* or Belarus* or Belize* or Benin* or Bhutan* or Bolivia* or Bosnia* or Botswana or Motswana or Batswana or Brazil* or Bulgaria* or Herzegovina or "Burkina Faso" or Burkinabe* or Burundi* or "Cabo Verde*" or "Cape Verde*" or Cambodia* or Cameroon* or "Central African" or Chad* or China or Chinese or Columbia* or Congo* or "Comoros Eritrea*" or Comorian* or "Ivory Coast" or "Côte d Ivoire" or Ivoirian or "Costa Rica*" or Cuba* or Djibouti or Dominica* or Ecuador* or "Equatorial Guinea*" or Equatoguinean* or Egypt* or "El Salvador*" or Ethiopia* or Eritrea* or Fiji* or Gabon* or Gambia* or Ghana* or Grenada or Grenadian* or Guatemala* or Guinea* or "Guinea-Bissau" or Guyan* or Haiti* or Honduras or Honduran* or India or Indonesia* or Iran* or Iraq* or Jamaica* or Jordan* or Kazakhstan* or Kazakh* or Kenya* or Kiribati or Kosovo or Kosovar or Kyrgyz or Kyrgyzstan or Lao or Laos or Laotian* or Lebanon or Lebanese or Lesotho or Liberia* or Macedonian* or Madagascar* or Malawi* or Malaysia* or Maldives or Maldivian* or Mali* or "Marshall Islands" or Marshalllese or Mauritania or Mauritius or Mauritian* or Mexico or Mexican* or Micronesia* or Moldova* or Mongolia* or Montenegro or Montenegrin* or Morocc* or Mozambique* or Mozambican* or Myanmar or Burma or Namibia* or Nauru* or Nepal* or Nicaragua* or Nigeria* or Niger* or "North Korea*" or Pakistan* or "Papua New Guinea*" or Paraguay* or Peru* or Peruvian or Philippines or Filipino* or Phillipino* or "Republic of Georgia" or Romania* or Russia* or Rwanda* or "Saint Lucia*" or "Saint Vincent" or Samoa* or Senegal* or Serbia* or "Sierra Leone*" or "Solomon Islands" or Somali* or "South Africa*" or "South Sudan" or "Sri Lanka*" or Sudan* or Suriname* or Swaziland or Swazi or Syria* or Tajikistan* or Tanzania* or Thai* or "Timor-Leste" or Togo* or Tonga* or Tunisia* or Turkey or Turkish or Turkmenistan or Turkmen or Tuvalu* or Ukrain* or Uganda* or Uzbekistan* or Uzbek* or Vanuatu or Venezuela* or Vietnam* or viet-nam or "Gaza strip" or Palestine or "West Bank" or Yemen* or Zambia* or Zimbabwe* or Zaire or ("low income" or "low-income" or "lower income") near/2 (countr* or nation* or econom*) or ((low* or middle*) near/2 ("income country" or "income countries" or "income nation" or "income countries")) or ("middle income" or "middle-income") near/2 (countr* or nation* or economy*) or lmic or lamic or sub-saharan-africa* or subsaharan-africa*)

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4 TS=(tmf or epis or pathways-to-evidence-informed-policy or ottawa-model-of-research-use or outcomes-focused-knowledge-trans* or (outpatient*-treatment near/2 ontario-service*) or emtrek or Parihs or Kilbourne* or advancing-health-disparities-research or behaviour-change-wheel or Community-Based-Participatory-Research or CBPR or (Concept* near/2 disseminat* near/2 research*) or (conduct* near/2 utilization near/2 research) or Social-Marketing-Approach-for-Disseminat* or (dissemination near/2 evidence-based) or Reach-Effectiveness-Adoption-Implementation or evidence-integration-triangle or (evidence-based near/2 behavior-change) or (integrat* near/2 interacting-elements) or intervention-mapping or continuum-indicator-summar* or Process-theory or (model near/2 (Institute-of-Medicine* or IOM)) or (innovation* near/2 (diffusion or determinant*)) or knowledge-transfer-and-exchange or (marketing near/2 distribution near/2 public-health) or outcome*-focus-knowledge-trans* or pathways-to-evidence-informed-policy or ((theory or model) near/6 (diffusion or evidence-based or implement* or knowledge-trans* or community-intervention* or organizational-intervention* or research-cycle or advancing-reasearch or practice-development or knowledge-action or knowledge-utilization or knowledge-utilisation or utilization or utilisation or pathman or precede or sustainment or precede or proceed or push-pull or pathway*)) or ((theory or model or framework or frameworks or process) near/3 (technology or innovation* or predict or prediction or predicts or practice or knowledge or research) near/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion)) or ((practice* or guideline* or intervention* or policy or public-health or public-service* or health-service*) near/3 (technology or innovation* or knowledge or research) near/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion or implement*)) or re-aim or real-world-dissemination or research-knowledge-infrastructure or sticky-knowledge or streams-of-policy-progress or queri or quality-enhancement-research-initiative or weiner-organizational-readiness or (implement* near/6 (research-method* or outcomes or innovation* or effectiveness or theory or science or evidence-based or research or adaptation or disseminat* or equity or disparity or proctor* or blueprint* or blue-print or framework*)) or (promot* near/2 research near/2 implement*) or (model near/6 (effectiveness or best-practice* or facilitat* or adopt* or sustainment or transfer or evidence-based or implement* or utilization or utilisation or precede or davis or pathman or translation or disseminat* or research-use or ontario or outpatient-treatment or precede-proceed or rand or persuasive-communication or chronic-care)) or (theory near/3 (normalization or process or implement* or innovation*)) or (Disseminat* near/6 (science or Blueprint* or blue-print or research or knowledge or initiative or social-marketing or evidence-based or evidence-base or research-design or research-method* or effective or strateg* or enhancing or real-world or physical-activity)) or ((framework* or frame-work*) near/5 (evaluation or maintenance or reach or effectiveness or analysis or analyze or analyse or evaluation or disseminat* or implement* or evidence or optimiz* or optimis* or research or practice or deimplement* or choosing-wisely or CDC or conceptual or knowledge or transfer* or connect or context* or intervention* or sustainability or EQ-DI or equity or equality or analyz* or adopt* or health-innovation* or complex or enhanc* or spread or policy or patient-safety or health-service* or health-promotion or multi-stream* or multiple-stream* or exchange or system or systems or innovation* or re-aim or reach or efficacy or maintenance or replicating or effective or modification* or adaptation* or theor* or

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| <p>domain* or translational or quality-enhancement or surveillance or health-outcome* or acceptability)) or ((framework* or frame-work*) near/10 (evidence or implement* or disseminat*)) or ((model or theory) near/5 (ottawa or mckinlay or huff or evidence or implement* or disseminat* or greenhalgh)))</p> | | |
|--|----------|------------------|
| <p>5 #1 AND #2 AND #3 AND #4 and 2023 or 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2013 or 2011 or 2012 or 2010 or 2009 or 2008 or 2007 or 2006 or 2005 or 2003 or 2002 or 2004 or 2001 (Publication Years) and English (Languages) and Article or Review Article or Early Access or Editorial Material or Reprint (Document Types)</p> | | |
| Date | Database | Results Returned |
| 06/22/2023 | EMBASE | 2,090 |
| Search Strategy | | |
| <p>1 'breast cancer'/exp or 'uterine cervix cancer'/exp or 'colorectal cancer'/exp or 'lung cancer'/exp or 'smoking cessation'/exp or 'aberrant crypt focus'/exp OR ((breast or mammary or cervix or cervical or colorectal or colon or colonic or rectal or rectum or sigmoid or anal or anus or colitis or lung or lungs or pulmonary or bronchial or mesothelioma) near/3 (cancer or cancerous or neoplasm* or tumor* or tumour* or malignan* or carcinoma* or adenocarcinoma or biops* or adenoma)):ti,ab,kw,de or aberrant-crypt-foci:ti,ab,kw,de or (polyp* near/3 (Colorectal or colon* or sigmoid* or rectal or rectum or anal or anus)):ti,ab,kw,de or ((pap or Papanicolaou) near/2 (test or smear)):ti,ab,kw,de or mammogram*:ti,ab,kw,de or colposcop*:ti,ab,kw,de or colonoscop*:ti,ab,kw,de or fecal-occult-blood-test:ti,ab,kw,de or barium-enema:ti,ab,kw,de or (cessation near/2 (tobacco or smoking)):ti,ab,kw,de or breast-exam*:ti,ab,kw,de</p> <p>2 'mass screening'/exp or 'preventive health service'/exp or 'cancer screening'/exp OR 'smoking cessation'/exp or screen*:ti,ab,kw,de or prevent*:ti,ab,kw,de or detection:ti,ab,kw,de or ((pap or Papanicolaou) near/2 (test or smear)):ti,ab,kw,de or mammogram*:ti,ab,kw,de or colposcop*:ti,ab,kw,de or colonoscop*:ti,ab,kw,de or fecal-occult-blood-test:ti,ab,kw,de or barium-enema:ti,ab,kw,de or (cessation near/2 (tobacco or smoking)):ti,ab,kw,de or low-dose-computed-tomography:ti,ab,kw,de or breast-exam*:ti,ab,kw,de or fecal-immunochemical-test*:ti,ab,kw,de or visual-inspection-with-acetic-acid:ti,ab,kw,de</p> <p>3 'health care disparity'/exp or 'health disparity'/exp or 'social determinants of health'/exp OR 'Vulnerable Population'/exp or 'minority group'/exp or 'medically uninsured'/exp or 'black person'/exp OR 'hispanic'/exp OR 'indigenous people'/exp OR inequit*:ti,ab,kw,de or Inequalit*:ti,ab,kw,de or disparity:ti,ab,kw,de or disparities:ti,ab,kw,de or disparate:ti,ab,kw,de or Access-barrier*:ti,ab,kw,de or limited-resource*:ti,ab,kw,de or lmic:ti,ab,kw,de or lmic:ti,ab,kw,de or minorit*:ti,ab,kw,de or (low* near/4 income near/2 countr*):ti,ab,kw,de or (mid* near/2 income near/2 countr*):ti,ab,kw,de or equit*:ti,ab,kw,de or equality:ti,ab,kw,de or race:ti,ab,kw,de or racial:ti,ab,kw,de or ethnic:ti,ab,kw,de or vulnerable:ti,ab,kw,de or underserved:ti,ab,kw,de or under-served:ti,ab,kw,de or socioeconomic*:ti,ab,kw,de or rural:ti,ab,kw,de or urban:ti,ab,kw,de or racial:ti,ab,kw,de or ethnicit*:ti,ab or ethnic group*:ti,ab or minority group*:ti,ab or minorities:ti,ab,kw,de or uninsured:ti,ab,kw,de or un-insured:ti,ab,kw,de or</p> | | |

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socioeconomic factors:ti,ab,kw,de or medicare:ti,ab,kw,de or medicaid:ti,ab,kw,de or poverty:ti,ab,kw,de or Socioeconomic-Status:ti,ab,kw,de or social-class:ti,ab,kw,de or Asian-American*:ti,ab,kw,de or socioeconomic-factor*:ti,ab,kw,de or economic-status:ti,ab,kw,de or impoverished:ti,ab,kw,de or black-patient*:ti,ab,kw,de or white-patient*:ti,ab,kw,de or blacks:ti,ab,kw,de or whites:ti,ab,kw,de or African-american*:ti,ab,kw,de or amish:ti,ab,kw,de or hispanic*:ti,ab,kw,de or latino*:ti,ab,kw,de or latina*:ti,ab,kw,de or arab:ti,ab,kw,de or arabs:ti,ab,kw,de or asian-american:ti,ab,kw,de or immigrant*:ti,ab,kw,de or non-native:ti,ab,kw,de or native:ti,ab,kw,de or natives:ti,ab,kw,de or indigenous:ti,ab,kw,de or pacific-islander*:ti,ab,kw,de or mexican*:ti,ab,kw,de or american-indian*:ti,ab,kw,de or aboriginal*:ti,ab,kw,de or maori*:ti,ab,kw,de or jews:ti,ab,kw,de or roma:ti,ab,kw,de or transgender*:ti,ab,kw,de or trans-gender*:ti,ab,kw,de or transexual*:ti,ab,kw,de or transsexual*:ti,ab,kw,de or two-spirit*:ti,ab,kw,de or LGBT*:ti,ab,kw,de or non-heterosexual*:ti,ab,kw,de or ((glbt or lbg or intersex*) near/3 (person* or people or patient*)):ti,ab,kw,de or lesbian*:ti,ab,kw,de or lesbigay*:ti,ab,kw,de or gay:ti,ab,kw,de or gays:ti,ab,kw,de or queer*:ti,ab,kw,de or bisexual*:ti,ab,kw,de or bi-sexual*:ti,ab,kw,de or homosexual*:ti,ab,kw,de or homo-sexual*:ti,ab,kw,de or (('low income country'/exp OR 'middle income country'/exp OR 'Afghanistan'/exp OR 'Albania'/exp OR 'Algeria'/exp OR 'American Samoa'/exp OR 'Angola'/exp OR 'Argentina'/exp OR 'Armenia'/exp OR 'Azerbaijan'/exp OR 'Bangladesh'/exp OR 'Belarus'/exp OR 'Belize'/exp OR 'Benin'/exp OR 'Bhutan'/exp OR 'Bolivia'/exp OR 'Bosnia and Herzegovina'/exp OR 'Botswana'/exp OR 'Brazil'/exp OR 'Bulgaria'/exp OR 'Burkina Faso'/exp OR 'Burundi'/exp OR 'Cabo Verde'/exp OR 'Cambodia'/exp OR 'Cameroon'/exp OR 'Central African Republic'/exp OR 'Chad'/exp OR 'China'/exp OR 'Colombia'/exp OR 'Comoros'/exp OR 'Congo'/exp OR 'Cost Rica'/exp OR 'Cote d'Ivoire'/exp OR 'Cuba'/exp OR 'Djibouti'/exp OR 'Democratic Republic Congo'/exp OR 'Dominica'/exp OR 'Dominican Republic'/exp OR 'Ecuador'/exp OR 'Egypt'/exp OR 'El Salvador'/exp OR 'Equatorial Guinea'/exp OR 'Eritrea'/exp OR 'Eswatini'/exp OR 'Ethiopia'/exp OR 'Fiji'/exp OR 'Gabon'/exp OR 'Gambia'/exp OR 'Georgia (republic)'/exp OR 'Ghana'/exp OR 'Grenada'/exp OR 'Guinea'/exp OR 'Guinea-Bissau'/exp OR 'Guyana'/exp OR 'Haiti'/exp OR 'India'/exp OR 'Indonesia'/exp OR 'Iran'/exp OR 'Iraq'/exp OR 'Jamaica'/exp OR 'Jordan'/exp OR 'Kazakhstan'/exp OR 'Kenya'/exp OR 'Kiribati'/exp OR 'Kosovo'/exp OR 'Kyrgyzstan'/exp OR 'Laos'/exp OR 'Lebanon'/exp OR 'Lesotho'/exp OR 'Liberia'/exp OR 'Libya'/exp OR 'Madagascar'/exp OR 'Malaysia'/exp OR 'Maldives'/exp OR 'Mali'/exp OR 'Marshall Islands'/exp OR 'Mauritania'/exp OR 'Mauritius'/exp OR 'Mexico'/exp OR 'Federated States of Micronesia'/exp OR 'Moldova'/exp OR 'Montenegro'/exp OR 'Morocco'/exp OR 'Mozambique'/exp OR 'Myanmar'/exp OR 'Namibia'/exp OR 'Nauru'/exp OR 'Nepal'/exp OR 'Nicaragua'/exp OR 'Nigeria'/exp OR 'North Korea'/exp OR 'Republic of North Macedonia'/exp OR 'Pakistan'/exp OR 'Papua New Guinea'/exp OR 'Paraguay'/exp OR 'Peru'/exp OR 'Philippines'/exp OR 'Romania'/exp OR 'Russian Federation'/exp OR 'Rwanda'/exp OR 'Samoa'/exp OR 'Sao Tome and Principe'/exp OR 'Senegal'/exp OR 'Serbia'/exp OR 'Sierra Leone'/exp OR 'Solomon Islands'/exp OR 'Somalia'/exp OR 'South Africa'/exp OR 'South Sudan'/exp OR 'Sri Lanka'/exp OR 'Saint Lucia'/exp OR 'Saint Vincent and the Grenadines'/exp OR 'Sudan'/exp OR 'Suriname'/exp OR 'Syrian Arab Republic'/exp OR 'Tajikistan'/exp OR 'Tanzania'/exp OR 'Thailand'/exp OR 'Timor-Leste'/exp OR 'Togo'/exp OR 'Tonga'/exp OR 'Tunisia'/exp OR 'Turkey'/exp OR

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'Turkmenistan'/exp OR 'Tuvalu'/exp OR 'Uganda'/exp OR 'Ukraine'/exp OR 'Uzbekistan'/exp OR 'Vanuatu'/exp OR 'Venezuela'/exp OR 'Viet Nam'/exp OR 'Yemen'/exp OR 'Zambia'/exp OR 'Zimbabwe'/exp) OR (Afghan*OR Albania* OR Algeria* OR 'American samoa*' OR Angola* OR Armenia* OR Azerbaijan OR Azeri* OR Bangladesh* OR Belarus* OR Belize* OR Benin* OR Bhutan* OR Bolivia* OR Bosnia* OR Botswana OR Botswana OR Batswana OR Brazil* OR Bulgaria* OR Herzegovina OR 'Burkina Faso' OR Burkinabé* OR Burundi* OR 'Cabo Verde*' OR 'Cape Verde*' OR Cambodia* OR Cameroon* OR 'Central African' OR Chad* OR China OR Chinese OR Columbia* OR Congo* OR 'Comoros Eritrea*' OR Comorian* OR 'Ivory Coast' OR 'Côte d Ivoire' OR Ivoirian OR 'Costa Rica*' OR Cuba* OR Djibouti OR Dominica* OR Ecuador* OR 'Equatorial Guinea' OR Equatoguinean* OR Egypt* OR 'El Salvador*' OR Ethiopia* OR Eritrea* OR Fiji* OR Gabon* OR Gambia* OR Ghana* OR Grenada OR Grenadian* OR Guatemala* OR Guinea* OR 'Guinea-Bissau' OR Guyan* OR Haiti* OR Honduras OR Honduran* OR India OR Indonesia* OR Iran* OR Iraq* OR Jamaica* OR Jordan* OR Kazakhstan* OR Kazakh* OR Kenya* OR Kiribati OR Kosovo OR Kosovar OR Kyrgyz OR Kyrgyzstan OR Lao OR Laos OR Laotian* OR Lebanon OR Lebanese OR Lesotho OR Liberia* OR Macedonian* OR Madagascar* OR Malawi* OR Malaysia* OR Maldives OR Maldivian* OR Mali* OR 'Marshall Islands' OR Marshallese OR Mauritania OR Mauritius OR Mauritian* OR Mexico OR Mexican* OR Micronesia* OR Moldova* OR Mongolia* OR Montenegro OR Montenegrin* OR Morocc* OR Mozambique* OR Mozambican* OR Myanmar OR Burma OR Namibia* OR Nauru* OR Nepal* OR Nicaragua* OR Nigeria* OR Niger* OR 'North Korea*' OR Pakistan* OR 'Papua New Guinea*' OR Paraguay* OR Peru* OR Peruvian OR Philippines OR Filipino* OR Phillipino* OR 'Republic of Georgia' OR Romania* OR Russia* OR Rwanda* OR 'Saint Lucia*' OR 'Saint Vincent' OR 'Sao Tome and Principe' OR Samoa* OR Senegal* OR Serbia* OR 'Sierra Leone*' OR 'Solomon Islands' OR Somali* OR 'South Africa*' OR 'South Sudan' OR 'Sri Lanka*' OR Sudan* OR Suriname* OR Swaziland OR Swazi OR Syria* OR Tajikistan* OR Tanzania* OR Thai* OR 'Timor-Leste' OR Togo* OR Tonga* OR Tunisia* OR Turkey OR Turkish OR Turkmenistan OR Turkmen OR Tuvalu* OR Ukrain* OR Uganda* OR Uzbekistan* OR Uzbek* OR Vanuatu OR Venezuela* OR Vietnam* OR viet-nam OR 'Gaza strip' OR Palestine OR 'West Bank' OR Yemen* OR Zambia* OR Zimbabwe* OR Zaire):ti,ab OR (((('low income' OR 'low-income' OR 'lower income') NEAR/2 (countr* OR nation* OR econom*)):ti,ab OR (('middle income' OR 'middle-income') NEAR/2 (countr* OR nation* OR economy*)):ti,ab)) or lmic:ti,ab,kw or lamic:ti,ab,kw or sub-saharan-africa*:ti,ab,kw or subsaharan-africa*:ti,ab,kw

4 'evidence based medicine'/de or 'implementation science'/exp or 'conceptual framework'/exp OR 'theoretical study'/exp OR 'outcomes research'/exp OR (tmf or epis):ti,ab,kw,de or pathways-to-evidence-informed-policy:ti,ab,kw,de or ottawa-model-of-research-use:ti,ab,kw,de or outcomes-focused-knowledge-trans*:ti,ab,kw,de or (outpatient*-treatment near/2 ontario-service*):ti,ab,kw,de or emtrek:ti,ab,kw,de or Parihs:ti,ab,kw,de or Kilbourne*:ti,ab,kw,de or advancing-health-disparities-research:ti,ab,kw,de or behaviour-change-wheel:ti,ab,kw,de or Community-Based-Participatory-Research:ti,ab,kw,de or CBPR:ti,ab,kw,de or (Concept* near/2 disseminat* near/2 research*):ti,ab,kw,de or (conduct* near/2 utilization near/2 research):ti,ab,kw,de or Social-Marketing-Approach-for-Disseminat*:ti,ab,kw,de or (dissemination near/2 evidence-based):ti,ab,kw,de or Reach-

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Effectiveness-Adoption-Implementation:ti,ab,kw,de or evidence-integration-triangle:ti,ab,kw,de or (evidence-based near/2 behavior-change):ti,ab,kw,de or (integrat* near/2 interacting-elements):ti,ab,kw,de or intervention-mapping:ti,ab,kw,de or continuum-indicator-summar*:ti,ab,kw,de or Process-theory:ti,ab,kw,de or (model near/2 (Institute-of-Medicine* or IOM)):ti,ab,kw,de or (innovation* near/2 (diffusion or determinant*)):ti,ab,kw,de or knowledge-transfer-and-exchange:ti,ab,kw,de or (marketing near/2 distribution near/2 public-health):ti,ab,kw,de or outcome*-focus-knowledge-trans*:ti,ab,kw,de or pathways-to-evidence-informed-policy:ti,ab,kw,de or ((theory or model) near/6 (diffusion or evidence-based or implement* or knowledge-trans* or community-intervention* or organizational-intervention* or research-cycle or advancing-research or practice-development or knowledge-action or knowledge-utilization or knowledge-utilisation or utilization or utilisation or pathman or precede or sustainment or precede or proceed or push-pull or pathway*)):ti,ab,kw,de or ((theory or model or framework or frameworks or process) near/3 (technology or innovation* or predict or prediction or predicts or practice or knowledge or research) near/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion)):ti,ab,kw,de or ((practice* or guideline* or intervention* or policy or public-health or public-service* or health-service*) near/3 (technology or innovation* or knowledge or research) near/3 (transfer or translate or traslation or exchange or utilis* or utiliz* or adopt* or disseminat* or diffusion or implement*)):ti,ab,kw,de or re-aim:ti,ab,kw,de or real-world-dissemination:ti,ab,kw,de or research-knowledge-infrastructure:ti,ab,kw,de or sticky-knowledge:ti,ab,kw,de or streams-of-policy-progress:ti,ab,kw,de or queri:ti,ab,kw,de or quality-enhancement-research-initiative:ti,ab,kw,de or weiner-organizational-readiness:ti,ab,kw,de or (implement* near/6 (research-method* or outcomes or innovation* or effectiveness or theory or science or evidence-based or research or adaptation or disseminat* or equity or disparity or proctor* or blueprint* or blue-print or framework*)):ti,ab,kw,de or (promot* near/2 research near/2 implement*):ti,ab,kw,de or (model near/6 (effectiveness or best-practice* or facilitat* or adopt* or sustainment or transfer or evidence-based or implement* or utilization or utilisation or precede or davis or pathman or translation or disseminat* or research-use or ontario or outpatient-treatment or precede-proceed or rand or persuasive-communication or chronic-care)):ti,ab,kw,de or (theory near/3 (normalization or process or implement* or innovation*)):ti,ab,kw,de or (Disseminat* near/6 (science or Blueprint* or blue-print or research or knowledge or initiative or social-marketing or evidence-based or evidence-base or research-design or research-method* or effective or strateg* or enhancing or real-world or physical-activity)):ti,ab,kw,de or ((framework* or frame-work*) near/5 (evaluation or maintenance or reach or effectiveness or analysis or analyze or analyse or D&I or evaluation or disseminat* or implement* or evidence or optimiz* or optimis* or research or practice or deimplement* or choosing-wisely or CDC or conceptual or knowledge or transfer* or connect or context* or intervention* or sustainability or EQ-DI or equity or equality or analyz* or adopt* or health-innovation* or complex or enhanc* or spread or policy or patient-safety or health-service* or health-promotion or multi-stream* or multiple-stream* or exchange or system or systems or innovation* or re-aim or reach or efficacy or maintenance or replicating or effective or modification* or adaptation* or theor* or domain* or translational or quality-enhancement or surveillance or health-outcome* or acceptability)):ti,ab,kw,de or ((framework* or frame-work*) near/10 (evidence or

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implement* or disseminat*)):ti,ab,kw,de or ((model or theory) near/5 (ottawa or mckinlay or huff or evidence or implement* or disseminat* or greenhalgh)):ti,ab,kw,de

5 #1 AND #2 AND #3 AND #4 AND ([article]/lim OR [article in press]/lim OR [editorial]/lim OR [erratum]/lim OR [letter]/lim OR [note]/lim OR [review]/lim) AND [english]/lim AND [2001-2023]/py