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A scoping review protocol to identify and classify interprofessional primary care performance indicators

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Keywords:	Interprofessional Relations, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PRIMARY CARE

A scoping review protocol to identify and classify interprofessional primary care performance indicators

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KEYWORDS

Quality Indicators, Outcome and Process Assessment, Interprofessional Relations, Primary Health Care, Family Practice

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ABSTRACT

Introduction Measuring the performance of interprofessional primary care is needed to examine whether this model of care is achieving its desired outcomes on patient care and health system effectiveness as well as to guide quality improvement initiatives. The aim of this scoping review is to map the literature on primary care performance measurement indicators to determine the extent to which current indicators capture or could be adapted to capture processes, outputs and outcomes that reflect interprofessional practice.

Methods and analysis The review will be guided by the six-stage framework by Arksey and O'Malley (2005). Peer-reviewed and grey literature published in English or French between 2000 and 2022 will be searched to identify any study related to the concepts of performance indicators, frameworks, interprofessional teams and primary care. Two reviewers will independently screen all abstracts and full-text studies for inclusion. Eligible indicators will be classified according to process, output and outcome domains proposed by two validated frameworks.

Ethics and dissemination This review does not require ethical approval. The results will be published as an article in a peer-reviewed journal. The results will be disseminated through a peer-reviewed publication, conference presentations and presentations to stakeholders.

Strengths and limitations of this study

- To the best of our knowledge, this will be the first scoping review to focus on identifying performance indicators that can measure the contribution of interprofessional primary care providers to processes, outputs and outcomes.
- A large cross-disciplinary stakeholder group including clinicians, managers and patient-partners will be consulted throughout the scoping review process.
- This review will inform the development and measurement of a core set of stakeholder-informed indicators to guide ongoing performance measurement and quality improvement of interprofessional primary care teams.
- While we sought to use broad search and eligibility criteria to identify relevant studies, exclusion criteria by language, date range and country may limit the assessment of other potentially relevant studies.

INTRODUCTION

An interprofessional approach to primary care is considered a key tenet in achieving high-quality primary care by facilitating access to integrated, comprehensive, and continuous person-centred care.[1–3] As the population ages and the prevalence of chronic disease increases, health systems globally have shifted towards interprofessional primary care (IPC) teams.[4–6] These teams bring together interprofessional health providers with complementary expertise, including family physicians, nurse practitioners, nurses, social workers, pharmacists, physiotherapists, psychologists, kinesiologists, occupational therapists, dietitians, and others, to "enhance the integration of services and emphasize health promotion and chronic disease management."[7]

Measuring the performance of IPC teams is needed to examine whether these new models of care are achieving their desired outcomes on patient care and health system effectiveness as well as to guide quality improvement initiatives.[8,9] In general, performance measurement aims to improve the quality of decisions made by all actors within the health system.[9] Performance measurement of IPC teams has also been cited as a key feature for high-performing IPC teams.[10]

Several primary care performance measurement frameworks have been proposed, including indicators on care processes such as the types of services provided, outputs related to quality of care such as timely access, continuity of care, comprehensiveness, coordination as well as patient and health system outcomes.[11–16] Despite the shift to IPC teams, the measurement of many of the indicators proposed within these frameworks rely on information related to physician encounters, obscuring the involvement and impact of the various members of the interprofessional team. For example, continuity of care is frequently measured through the proportion of visits made to the regular family physician in a given time period.[17] Excluding visits to and tasks performed by other interprofessional health providers within the team may distort the extent to which IPC teams are providing accessible and ongoing care to their patients and, more generally, may lead to potentially misleading evidence on performance.[7,18]

The aim of this scoping review is thus to map the literature on primary care performance measurement indicators to determine the extent to which current indicators capture or could be adapted to capture processes, outputs and outcomes that reflect interprofessional practice. This review constitutes the first step in a larger research project aimed at developing and measure a core set of stakeholder-informed indicators to guide ongoing performance measurement and quality

improvement of IPC teams. Overall, this review will provide new insight on existing indicators relevant to interprofessional primary care teams and identify gaps for future research. Ultimately, we hope the results of this review will support practice and policymakers in planning the organization, resources and quality initiative based on indicators that reflect interprofessional practice.

METHODS AND ANALYSIS

The protocol for this scoping review was based on the Arksey and O'Malley's (2005) framework for scoping reviews,[19] the Levac *et al*. methodological enhancement,[20] as well as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews (PRISMA-ScR).[21] Accordingly, six stages will be undertaken: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; (5) collating, summarizing, and reporting the results and (6) consulting with relevant stakeholders. The protocol is not registered with PROSPERO, as it currently does not accept scoping reviews.

Stage 1: Identifying the research question

The main research question for this scoping review was codesigned with our research team consisting of approximately 20 clinicians, researchers, methodologists, managers, and a patient-partner with expertise in primary care performance evaluation, interprofessional primary care teams and insight into priorities for policy making aimed at strengthening primary care. Accordingly, the scoping review is centered on the following main question:

- Which existing primary care performance measurement indicators measure or could be adapted to measure the involvement and impact of interprofessional health providers on performance?

Based on this initial question, the following secondary questions will be examined:

- How are indicators classified according to different domains of performance (processes, outputs, and outcomes)?

-What data sources may be utilized to measure these indicators?

Stage 2: Identifying relevant studies

Published literature will be searched using the following electronic databases: MEDLINE (PubMed), EMBASE and Cumulative Index to Nursing and Allied Health Literature (CINAHL).

Grey literature will also be consulted using Cochrane, Google Scholar, Google, Grey Literature Report and OpenGrey to identify reports relevant to this review. Authors of the identified articles and reports will be contacted if needed for further or missing information. We will also consult local, regional, and national organizations' online sites, published materials, and experts from our research teams for relevant studies. Additionally, the reference list of included studies will be hand-searched to identify more relevant literature.

Studies published in English or French will be included. Given that reforms proposing the creation of interprofessional primary care teams have occurred mainly in the last two decades, studies published from 2000 to 2022 will be considered.

An initial exploratory search was conducted using MEDLINE to identify search terms contained in relevant articles in order to develop a full search strategy. The search terms and strategy were validated through input from the research team and an experienced research librarian. Additional search terms and keywords were taken from known studies that report indicators to measure interprofessional or overall primary care performance. The search strategy was pilot tested and refined to compile a list of keywords from titles, abstracts, keyword heading, keyword heading word and MeSH terms used in publications most relevant to the review. It will be adapted for each database and information source. The search strategy combines four concepts including the following terms as listed in table 1.

Table 1: MEDLINE (PubMed) search strategy

Concepts	**Research equation with keywords for Abstract/Title/Keyword Heading/Keyword Heading Word and MeSH terms**
Performance Indicator	(((Indicator* or outcome* or measur* or reporting or parameter* or norm* or criteria or standard* or scale*) adj3 (performance or quality)) or QI or PQI).ab,kf,kw,ti. OR (Quality Indicators, Health Care/ or "Quality of Health Care"/ or Quality Improvement/ or Quality Control/ or Medical Audit/ or Guideline Adherence/ or Benchmarking/ or Clinical Audit/ or Standard of Care/ or Outcome and Process Assessment, Health Care/)
Framework	(Framework* or conceptual* model*).ab,kf,kw,ti. OR (Models, Theoretical/ or Concept Formation/)

Interprofessional Teams	(Interprofessional or interdisciplinary or cross-disciplinary or multidisciplinary or multiprofessional or cooperation or teamwork or team-based).ab,kf,kw,ti. OR (Cooperative Behavior/ or Interprofessional Relations/ Interdisciplinary Communication/)
Primary Care	(Family practice or medical practice or general practice or family medicine or primary care or primary health care or health care delivery or patient-centered medical home or gp or gps or primary care practitioner or (family adj (physician* or doctor*))).ab,kf,kw,ti. OR (Primary Health Care/ or Family Practice/ or "Delivery of Health Care, Integrated"/ or Group Practice/ or Health Personnel/ or Physicians, Family/)

Stage 3: Study selection

Following the search, the results will be recorded into Endnote™, a bibliographic reference management software to remove duplicates and facilitate referencing. The results will then be exported to Covidence for screening and data collection.[22] The screening and selection of eligible studies will involve a first screening of title and abstract followed by a full-text review of those studies selected at the first screening stage. Studies meeting the following inclusion and exclusion criteria, as described in table 2, will be considered.

Table 2: Inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Focus	Indicators measuring the contribution of interprofessional primary care teams on performance including processes, outputs (quality of care) and outcomes	Frameworks outside primary care Theoretical frameworks without operational indicators Indicators specific to a disease (cancer, pain-management) or subpopulation (veterans, diabetic, palliative...)
Type of studies	Reviews, framework development studies, commentaries, qualitative	Experimental or quasi-experimental studies (focus on evaluation of an intervention or program),

	studies, observational studies, cross-sectional studies	Study protocols, conference proceedings, editorials
Context	The eleven high-income countries of the Commonwealth Fund: Australia, Canada, England, France, Germany, Netherlands, New Zealand, Norway, Sweden, Switzerland, United States	Other countries

Country selection was informed by the Commonwealth Fund's international health policy surveys.[23] We considered these countries in order to select studies covering healthcare systems comparable to the Canadian system.[24]

Two members of our team will review all studies against the inclusion/exclusion criteria. Studies will be sorted as included, excluded or uncertain. Any discrepancies in their independent assessment will be resolved through discussion, consensus, and consultation with the lead member of the research team. The scoping review will report the reasons for excluding studies at full-text review. Inter-rater reliability will be assessed on a sample of studies at both screening stages to calibrate and refine the process. Suppose agreement between the reviewers is inferior to 75% at any of these stages. In that case, reasons for disagreement will be explored, eligibility criteria will be clarified, and testing will be repeated until the inter-rater reliability is adequate. Before beginning the abstract review, the inclusion and exclusion criteria will also be tested on a sample of study abstracts produced by the keyword database searches. This will verify that our selection criteria are robust and specific enough to capture relevant studies.

Stage 4: Data collection

Study characteristics to be extracted include but are not limited to source details, healthcare context and results extracted. A full list of characteristics is provided in Table 3. Data collection will be conducted by two reviewers independently extracting data from all included studies, and disagreement will be discussed among the research team. To ensure the accuracy of the process, the form will be tested on a sample of studies and revised if needed. The scoping review manuscript will acknowledge any modifications to the following form.

Table 3: Data collection form

Characteristics	Details
Source details	Authors
	Year
	Document type (published or grey literature)
	Country
	Purpose
	Methods
	Results
Healthcare context	Setting
	Model of care (including funding, governance, and team composition), if applicable
	Geographical region, if applicable
Results extracted	Description of framework and/or indicators
	Total number of indicators extracted

Stage 5: Data summary and synthesis of results

A table synthesising the indicators identified in the review will be classified based on relevant domains from two frameworks: the primary care measurement framework proposed by the World Health Organization and the Quintuple Aim framework proposed by the Institute for Health Improvement. The WHO framework classifies indicators according to service delivery processes (e.g. selection and planning of services, community linkages) and outputs (e.g.: access, comprehensiveness, continuity, coordination, efficiency, equity…) as well as health system outcomes to monitor PHC performance.[15] Outcomes will be further classified according the Quintuple Aim proposes five key outcomes (population health, patient experience, cost reduction, care team well-being, and health equity) of a high performing health system.[16] . The data source (e.g.: administrative data, electronic medical records, survey…) proposed for each indicator will also be extracted. The final format of the table will depend on the gathered data.

The meaning and implication of the findings captured in this scoping review will be reported considering the stated objectives in consultation with the research team. The PRISMA-ScR instrument for reporting scoping review results will be used to guide the publication of results.[21]

Stage 6: Stakeholder consultation

During the development of the scoping review, there will be regular consultations with the research team. The consultations will be held mainly through videoconference. The purpose of the first consultation will be to collect feedback on the scoping review protocol regarding the search strategy and to refine our research question. It is also an occasion to gather additional sources of information about potential studies to include in the review. The next consultation will allow us to inform and validate preliminary findings from stage five of the scoping review and discuss the dissemination strategy. A final consultation will take place to inform the synthesis of the results and their implications.

PATIENT AND PUBLIC INVOLVEMENT:

A patient-partner is included in our team and participated in commenting the protocol. She will participate in team meetings and consulted at various stages of the review to inform the interpretation of results and knowledge dissemination strategy.

DISSEMINATION AND ETHICS:

This review does not require ethics approval, since it involves reviewing and collecting data from published and/or publicly available articles. This study is expected to be completed by June 2023. The dissemination strategy includes a peer-review publication of the scoping review results, as well as presentations at primary care conferences and to key stakeholders.

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FOOTNOTES

Sopie Marielle Yapi[a], Marie-Eve Poitras[b], Catherine Donnelly[c], Rachelle Ashcroft[d], Michelle Greiver[e], Yves Couturier[f], Jean Noël Nikiema[g], Mylaine Breton[h], Géraldine Layani[i], Janusz Kaczorowski[a,i], Howard Bergman[j], Marie-Thérèse Lussier[a], Monica Aggarwal[k], Pamela Fernainy[a,g], Monica McGraw[c], Djims Milius[a], Kavita Mehta[l], Kevin Samson[l], Nadia Sourial[a,g,*]

Contributorship statement: NS conceived of the idea, developed the research question and study methods and contributed meaningfully to the drafting and editing; SMY aided significantly in developing the study methods and contributed meaningfully to the drafting, editing and formatting of the manuscript; MEP contributed to conceiving the idea and aided in developing the research question and study methods, contributed meaningfully to the editing of the manuscript. CD, RA, MG, YC, JNN, MB, GL, HB, MTL, MA, KM, KS, DM and JK aided in developing the research question and study methods, contributed meaningfully to the editing of the manuscript. PF and MM contributed to developing the methods. All authors approved the final manuscript.

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- A large cross-disciplinary stakeholder group including clinicians, managers and patient-partners will be consulted throughout the scoping review process.
- The study followed established and systematic methods for conducting scoping reviews.
- While we sought to use broad search and eligibility criteria to identify relevant studies, exclusion criteria by language, date range and country may limit the assessment of other potentially relevant studies. Furthermore, we limited the results to studies using conceptual frameworks to identify indicators. Complementary studies have been added to the review through backward citation research and consultation with experts in primary care.
- There will be no formal assessment of included studies quality or quality of the indicators identified.

INTRODUCTION

Primary care constitutes the first point of contact between a patient and the health care system to provide services including prevention, diagnosis, treatment, health promotion, and counselling.[1,2] An interprofessional approach to primary care is considered a key tenet in achieving high-quality primary care by facilitating access to integrated, comprehensive, and continuous person-centred care.[3–5] As the population ages and the prevalence of chronic disease increases, health systems globally have shifted towards interprofessional primary care (IPC) teams.[6–8] These teams bring together interprofessional health providers with complementary expertise, including family physicians, nurse practitioners, nurses, social workers, pharmacists, physiotherapists, psychologists, kinesiologists, occupational therapists, dietitians, and others, to "enhance the integration of services and emphasize health promotion and chronic disease management."[9]

Measuring the performance of IPC teams is needed to examine whether these new models of care are achieving their desired outcomes on patient care and health system effectiveness as well as to guide quality improvement initiatives.[10,11] In general, performance measurement aims to improve the quality of decisions made by all actors within the health system.[11] Performance measurement of IPC teams has also been cited as a key feature for high-performing IPC teams.[12] Several primary care performance measurement frameworks have been proposed, including indicators on care processes such as the types of services provided, outputs related to quality of care such as timely access, continuity of care, comprehensiveness, coordination as well as patient and health system outcomes.[13–18] Despite the shift to IPC teams, the measurement of many of the indicators proposed within these frameworks rely on information related to physician encounters, obscuring the involvement and impact of the various members of the interprofessional team. For example, continuity of care is frequently measured through the proportion of visits made to the regular family physician in a given time period.[19] Excluding visits to and tasks performed by other interprofessional health providers within the team may distort the extent to which IPC teams are providing accessible and ongoing care to their patients and, more generally, may lead to potentially misleading evidence on performance.[9,20] To our knowledge, there is currently no knowledge synthesis on performance indicators that can measure the contribution of interprofessional primary care providers, across multiple diseases or care settings. However, the need to develop such indicators is growing. [9]

The aim of this scoping review is thus to map the literature on primary care performance measurement indicators to determine the extent to which current indicators capture or could be adapted to capture processes, outputs and outcomes that reflect interprofessional primary care. This review constitutes the first step in a larger research project aimed at developing and measuring a core set of stakeholder-informed indicators to guide ongoing performance measurement and quality improvement of IPC teams. Overall, this review will provide new insight on existing indicators relevant to interprofessional primary care teams and identify gaps for future research. Ultimately, we hope the results of this review will support practice and policymakers in planning the organization, resources and quality initiative based on indicators that reflect interprofessional primary care.

METHODS AND ANALYSIS

The protocol for this scoping review was based on the Arksey and O'Malley's (2005) framework for scoping reviews,[21] the Levac *et al*. methodological enhancement,[22] as well as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews (PRISMA-ScR).[23] Accordingly, six stages will be undertaken: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; (5) collating, summarizing, and reporting the results and (6) consulting with relevant stakeholders. The protocol is not registered with PROSPERO, as it currently does not accept scoping reviews. The review started in November 2022 and is expected to take approximatively 8 months to be completed. As of March 2023, two electronic databases (MEDLINE and EMBASE) have been searched.

Stage 1: Identifying the research question

The main research question for this scoping review was codesigned with our research team consisting of approximately 20 clinicians, researchers, methodologists, managers, and a patient-partner. The members of the team have expertise in primary care performance evaluation, interprofessional primary care teams and primary care policy. Accordingly, the scoping review is centered on the following main question:

- Which existing primary care performance measurement indicators measure or could be adapted to measure the involvement and impact of interprofessional health providers on performance?

Based on this initial question, the following secondary questions will be examined:

- How are indicators classified according to different domains of performance (processes, outputs, and outcomes)?

-What data sources may be utilized to measure these indicators?

Stage 2: Identifying relevant studies

Published literature will be searched using the following electronic databases: MEDLINE (PubMed), EMBASE and Cumulative Index to Nursing and Allied Health Literature (CINAHL). Grey literature will also be consulted using Cochrane, Google Scholar, Google, Grey Literature Report and OpenGrey to identify reports relevant to this review. Authors of the identified articles and reports will be contacted if needed for further or missing information. We will also consult local, regional, and national organizations' online sites, published materials, and experts from our research teams for relevant studies. Additionally, the reference list of included studies will be hand-searched to identify more relevant literature.

Studies published in English or French will be included. Given that reforms proposing the creation of interprofessional primary care teams have occurred mainly in the last two decades, studies published from 2000 to 2022 will be considered.

An initial exploratory search was conducted using MEDLINE to identify search terms contained in relevant articles in order to develop a full search strategy. The search terms and strategy were validated through input from the research team and an experienced research librarian. Additional search terms and keywords were taken from known studies that report indicators to measure interprofessional or overall primary care performance. The search strategy was pilot tested and refined to compile a list of keywords from titles, abstracts, keyword heading, keyword heading word and MeSH terms used in publications most relevant to the review. It combines terms from four concepts: performance indicator, framework, interprofessional team and primary care. The draft search strategy is shown in online supplemental Appendix A. It will be further adapted for each database and information source.

Stage 3: Study selection

Following the search, the results will be recorded into Endnote™, a bibliographic reference management software to remove duplicates and facilitate referencing. The results will then be

exported to Covidence for screening and data collection.[24] The screening and selection of eligible studies will involve a first screening of title and abstract followed by a full-text review of those studies selected at the first screening stage. Studies meeting the following inclusion and exclusion criteria, as described in table 1, will be considered.

Table 1: Inclusion and exclusion criteria

	Inclusion criteria	**Exclusion criteria**
Focus	Indicators measuring the contribution of interprofessional primary care teams on performance including processes, outputs (quality of care) and outcomes	Frameworks outside primary care Theoretical frameworks without operational indicators Indicators specific to a disease (cancer, pain-management…) or subpopulation (veterans, diabetic, palliative...)
Type of studies	Reviews, framework development studies, commentaries, qualitative studies, observational studies, cross-sectional studies	Experimental or quasi-experimental studies (focus on evaluation of an intervention or program) Study protocols, conference proceedings, editorials
Context	The eleven high-income countries of the Commonwealth Fund: Australia, Canada, England, France, Germany, Netherlands, New Zealand, Norway, Sweden, Switzerland, United States	Other countries
Setting	Primary care clinic in the community	Palliative and end-of-life care Paediatric care Long-term care homes

Country selection was informed by the Commonwealth Fund's international health policy surveys.[25] We considered these countries in order to select studies covering healthcare systems comparable to the Canadian system.[26] We limited the setting to primary care delivered in the

community for the general adult population and therefore excluded studies related to paediatric, palliative and end-of-life care.

Two members of our team will review all studies against the inclusion/exclusion criteria. Studies will be sorted as included, excluded or uncertain. Any discrepancies in their independent assessment will be resolved through discussion, consensus, and consultation with the lead member of the research team. [27] The scoping review will report the reasons for excluding studies at full-text review. Inter-rater reliability will be assessed on a sample of studies at both screening stages to calibrate and refine the process. Suppose agreement between the reviewers is inferior to 75% at any of these stages. In that case, reasons for disagreement will be explored, eligibility criteria will be clarified, and testing will be repeated until the inter-rater reliability is adequate.[27] Before beginning the abstract review, the inclusion and exclusion criteria will also be tested on a sample of study abstracts produced by the keyword database searches. This will verify that our selection criteria are robust and specific enough to capture relevant studies.

Stage 4: Data collection

Study characteristics to be extracted include but are not limited to source details, healthcare context and results extracted. A full list of characteristics is provided in Table 2. Data collection will be conducted by two reviewers independently extracting data from all included studies, and disagreement will be discussed among the research team. To ensure the accuracy of the process, the form will be tested on a sample of studies and revised if needed. The scoping review manuscript will acknowledge any modifications to the following form.

Table 2: Data collection form

Characteristics	Details
Source details	Authors
	Year
	Document type (published or grey literature)
	Country
	Purpose
	Methods

Healthcare context	Model of care (including funding, governance, and team composition), if applicable
	Geographical region, if applicable
Results extracted	Framework, if applicable
	Domains of performance, if applicable
	Indicators
	Description of indicators
	Data source
	Total number of indicators extracted

Stage 5: Data summary and synthesis of results

A table synthesising the indicators identified in the review will be classified based on relevant domains from two frameworks: the primary care measurement framework proposed by the World Health Organization and the Quintuple Aim framework proposed by the Institute for Health Improvement. If indicators are not explicitly classified into related domains of performance in the studies, they will be deductively categorized into domains from those frameworks with input from the research team. The WHO framework classifies indicators according to service delivery processes (e.g. selection and planning of services, community linkages) and outputs (e.g. access, comprehensiveness, continuity, coordination, efficiency, equity) as well as health system outcomes to monitor PHC performance.[17] Outcomes will be further classified according to the Quintuple Aim five key outcomes (population health, patient experience, cost reduction, care team well-being, and health equity) of a high performing health system.[18] The data source (e.g. administrative data, electronic medical records, survey) proposed for each indicator will also be extracted. The final format of the table will depend on the gathered data.

The meaning and implication of the findings captured in this scoping review will be reported considering the stated objectives in consultation with the research team. The PRISMA-ScR instrument for reporting scoping review results will be used to guide the publication of results.[23]

Stage 6: Stakeholder consultation

During the development of the scoping review, there will be regular consultations with the research team. The consultations will be held mainly through videoconference. The purpose of the first

consultation will be to collect feedback on the scoping review protocol regarding the search strategy and to refine our research question. It is also an occasion to gather additional sources of information about potential studies to include in the review. The next consultation will allow us to inform and validate preliminary findings from stage five of the scoping review and discuss the dissemination strategy. A final consultation will take place to inform the synthesis of the results and their implications.

PATIENT AND PUBLIC INVOLVEMENT:

A patient-partner is included in our team and participated in commenting the protocol. She will participate in team meetings and consulted at various stages of the review to inform the interpretation of results and knowledge dissemination strategy.

DISSEMINATION AND ETHICS:

This review does not require ethics approval, since it involves reviewing and collecting data from published and/or publicly available articles. This study is expected to be completed by June 2023. The dissemination strategy includes a peer-review publication of the scoping review results, as well as presentations at primary care conferences and to key stakeholders.

The results of the review will inform the development and measurement of a core set of stakeholder-informed indicators to guide ongoing performance measurement and quality improvement of interprofessional primary care teams. It will also help stimulate a discussion around which actions of the interdisciplinary team could positively and negatively impact the results of these indicators.

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FOOTNOTES

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Appendix 1 Proposed search strategies

Concepts	Search terms
Performance Indicator	(((Indicator* or outcome* or measur* or reporting or parameter* or norm* or criteria or standard* or scale*) adj3 (performance or quality)) or QI or PQI) or (Quality Indicators, Health Care/ or "Quality of Health Care"/ or Quality Improvement/ or Quality Control/ or Medical Audit/ or Guideline Adherence/ or Benchmarking/ or Clinical Audit/ or Standard of Care/ or Outcome and Process Assessment, Health Care/)
Framework	(Framework* or conceptual* model*) or (Models, Theoretical/ or Concept Formation/)
Interprofessional Teams	(Interprofessional or interdisciplinary or cross-disciplinary or multidisciplinary or multiprofessional or cooperation or teamwork or team-based) or (Cooperative Behavior/ or Interprofessional Relations/ Interdisciplinary Communication/)
Primary Care	(Family practice or medical practice or general practice or family medicine or primary care or primary health care or health care delivery or patient-centered medical home or gp or gps or primary care practitioner or (family adj (physician* or doctor*))) or (Primary Health Care/ or Family Practice/ or "Delivery of Health Care, Integrated"/ or Group Practice/ or Health Personnel/ or Physicians, Family/)

MEDLINE

1. (((Indicator* or outcome* or measur* or reporting or parameter* or norm* or criteria or standard* or scale*) adj3 (performance or quality)) or QI or PQI).ab,kf,kw,ti.

2. (Quality Indicators, Health Care/ or "Quality of Health Care"/ or Quality Improvement/ or Quality Control/ or Medical Audit/ or Guideline Adherence/ or Benchmarking/ or Clinical Audit/ or Standard of Care/ or Outcome and Process Assessment, Health Care/)

3. 1 or 2

4. (Framework* or conceptual* model*).ab,kf,kw,ti.

5. (Models, Theoretical/ or Concept Formation/)

6. 4 or 5

7. (Interprofessional or interdisciplinary or cross-disciplinary or multidisciplinary or multiprofessional or cooperation or teamwork or team-based).ab,kf,kw,ti.

8. (Cooperative Behavior/ or Interprofessional Relations/ Interdisciplinary Communication/)

9. 7 or 8

10. (Family practice or medical practice or general practice or family medicine or primary care or primary health care or health care delivery or patient-centered medical home or gp or gps or primary care practitioner or (family adj (physician* or doctor*))).ab,kf,kw,ti.

11. (Primary Health Care/ or Family Practice/ or "Delivery of Health Care, Integrated"/ or Group Practice/ or Health Personnel/ or Physicians, Family/)

12. 10 or 11

13. 3 and 6 and 9 and 12

14. limit 13 to ((english or french) and yr="2000 -Current")

EMBASE

1. (((indicator* or outcome* or measur* or reporting or parameter* or norm* or criteria or standard* or scale* or metric*) adj3 (performan* or quality)) or QI or PQI or KPI).ab,kf,kw,ti.

2. health care quality/ or benchmarking/ or clinical effectiveness/ or clinical indicator/ or patient safety indicator/ or performance measurement system/ or quality control/ or clinical audit/ or outcome assessment/

3. 1 or 2

4. (Framework* or conceptual* model*).ab,kf,kw,ti.

5. conceptual framework/ or theoretical model/

6. 4 or 5

7. (interprofession* or inter profession* or interdisciplin* or inter disciplin* or crossprofession* or cross profession* or crossdisciplin* or cross disciplin* or multiprofession* or multi profession* or multidisciplin* or multi disciplin* or transprofession* or trans profession* or transdisciplin* or trans disciplin* or cooperat* or teamwork or team work or team based).ab,kf,kw,ti.

8. cooperation/ or teamwork/ or interdisciplinary communication/ or multidisciplinary team/ or collaborative care team/

9. 7 or 8

10. (family practi* or medical practi* or general practi* or family medic* or primary care or primary health care or patient-centered medical home* or gp or gps or family physician* or family doctor*).ab,kf,kw,ti.

11. primary health care/ or primary medical care/ or group practice/ or general practice/ or health care personnel/

12. 10 or 11

13. 3 and 6 and 9 and 12

14. limit 13 to ((english or french) and yr="2000 -Current")

CINAHL (EBSCO)

Opérateurs de restriction - Date de publication: 20000101-20231231
Opérateurs d'expansion - Appliquer des sujets équivalents
Recherche détaillée par Language: - french
Recherche détaillée par Language: - english
Modes de recherche - Booléen/Phrase

1. TI ((((indicator* OR outcome* OR measur* OR reporting OR parameter* OR norm* OR criteria OR standard* OR scale* OR metric*) N3 (performance OR quality)) or QI or PQI or KPI)) OR AB ((((indicator* OR outcome* OR measur* OR reporting OR parameter* OR norm* OR criteria OR standard* OR scale* OR metric*) N3 (performance OR quality)) or QI or PQI or KPI)) OR MW ((((indicator* OR outcome* OR measur* OR reporting OR parameter* OR norm* OR criteria OR standard* OR scale* OR metric*) N3 (performance OR quality)) or QI or PQI or KPI))

2. (MH "Process Assessment (Health Care)") OR (MH "Guideline Adherence") OR (MH "Quality of Health Care") OR (MH "Quality Assessment") OR (MH "Clinical Indicators") OR (MH "Benchmarking") OR (MH "Quality Improvement") OR (MH "Patient-Reported Outcomes") OR (MH "Outcomes (Health Care)")

3. 1 or 2

4. TI (Framework* OR conceptual* model*) OR AB (Framework* OR conceptual* model*) OR MW (Framework* OR conceptual* model*)

5. (MH "Models, Theoretical") OR (MH "Conceptual Framework")

6. 4 or 5

7. TI ((interprofession* OR inter profession* OR interdisciplin* OR inter disciplin* OR crossprofession* OR cross profession* OR crossdisciplin* OR cross disciplin* OR multiprofession* OR multi profession* OR multidisciplin* OR multi disciplin* OR transprofession* OR trans profession* OR transdisciplin* OR trans disciplin* OR cooperat* OR teamwork OR team work OR team based)) OR AB ((interprofession* OR inter profession* OR interdisciplin* OR inter disciplin* OR crossprofession* OR cross profession* OR crossdisciplin* OR cross disciplin* OR multiprofession* OR multi profession* OR multidisciplin* OR multi disciplin* OR transprofession* OR trans profession* OR transdisciplin* OR trans disciplin* OR cooperat* OR teamwork OR team work OR team based)) OR MW ((interprofession* OR inter profession* OR interdisciplin* OR inter disciplin* OR crossprofession* OR cross profession* OR crossdisciplin* OR cross disciplin* OR multiprofession* OR multi profession* OR multidisciplin* OR multi disciplin* OR transprofession* OR trans profession* OR transdisciplin* OR trans disciplin* OR cooperat* OR teamwork OR team work OR team based))

8. (MH "Teamwork") OR (MH "Multidisciplinary Care Team") OR (MH "Interprofessional Relations")

9. 7 or 8

10. TI ((family practi* OR medical practi* OR general practi* OR family medic* OR primary care OR primary health care OR patient-centered medical home* OR gp OR gps OR family physician* OR family doctor)) OR AB ((family practi* OR medical practi* OR general practi* OR family medic* OR primary care OR primary health care OR patient-centered medical home* OR gp OR gps OR family physician* OR family doctor)) OR MW ((family practi* OR medical practi* OR general practi* OR family medic* OR primary care OR primary health care OR patient-centered medical home* OR gp OR gps OR family physician* OR family doctor))

11. (MH "Primary Health Care") OR (MH "Family Practice") OR (MH "Patient Centered Care") OR (MH "Health Personnel") OR (MH "Physicians, Family")

12. 10 or 11

13. 3 and 6 and 9 and 12