McMaster University | Health Forum

ONTARIO SPOR SUPPORT UNIT

Canadian Primary Care Research Network
Réseau canadien de recherche en soins primaires

Appendices

Rapid evidence profile

Approaches to and measures for evaluating interdisciplinary team-based primary care

15 January 2025

[MHF product code: REP 88]

Appendix 1: Methodological details

We use a standard protocol for preparing rapid evidence profiles (REP) to ensure that our approach to identifying research evidence is as systematic and transparent as possible in the time we were given to prepare the profile.

Identifying research evidence

For this REP, we searched Health Systems Evidence and PubMed for evidence syntheses.

In Health Systems Evidence, we used search filters for sector and document type. Under sector, we used a filter for 'primary care' and for document type we used a filter for overviews of evidence syntheses, evidence syntheses of effects, and evidence syntheses addressing other questions. We also used a key word search for: (evaluation OR evaluate OR metric OR indicator OR measure) AND (team*based OR interdisciplinary OR multidisciplinary). Results were restricted to those published between 2013 and 2025.

In PubMed, we limited the search to review published in the past 10 years and systematic reviews, using the search terms: ("Primary Health Care"[Mesh] OR primary*care) AND ("Patient Care Team"[Mesh]) AND ("Quality Indicators, Health Care"[Mesh] OR eval* OR metric OR measure OR outcome).

We ran a second search in PubMed on 26 November 2024, using the following search terms: ("primary care") AND (team) AND (evaluation OR evaluate OR indicator OR metric OR measure) combined with filters for the last ten years and for systematic reviews.

Each source for these documents is assigned to one team member who conducts hand searches (when a source contains a smaller number of documents) or keyword searches to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the REP, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment. Excluded documents are listed in Appendix 4.

During this process we include published, pre-print, and grey literature, but we did not undertake a specific search for grey literature. We do not exclude documents based on the language of a document. However, we are not able to extract key findings from documents that are written in languages other than Chinese, English, French, or Spanish. We provide any documents that do not have content available in these languages in an appendix containing documents excluded at the final

stages of reviewing. We excluded documents that did not directly address the research questions and the relevant organizing framework.

Assessing relevance and quality of evidence

We assess the relevance of each included evidence document as being of high, moderate, or low relevance to the question.

Two reviewers independently appraise the methodological quality of evidence syntheses that are deemed to be highly relevant using the first version of the AMSTAR tool. Two reviewers independently appraise each synthesis, and disagreements are resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. High-quality evidence syntheses are those with scores of eight or higher out of a possible 11, medium-quality evidence syntheses are those with scores between four and seven, and low-quality evidence syntheses are those with scores less than four. It is important to note that the AMSTAR tool was developed to assess evidence syntheses focused on clinical interventions, so not all criteria apply to those pertaining to health-system arrangements or implementation strategies. Furthermore, we apply the AMSTAR criteria to evidence syntheses addressing all types of questions, not just those addressing questions about effectiveness, and some of these evidence syntheses addressing other types of questions are syntheses of qualitative studies. While AMSTAR does not account for some of the key attributes of syntheses of qualitative studies, such as whether and how citizens and subject matter experts were involved, researchers' competency, and how reflexivity was approached, it remains the best general quality-assessment tool of which we're aware. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, an evidence synthesis that scores 8/8 is generally of comparable quality to another scoring 11/11; both ratings are considered 'high scores.' A high score signals that readers of the evidence synthesis can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the evidence synthesis should be discarded, merely that less confidence can be placed in its findings and that it needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1): S8.)

Identifying experiences from other countries and from Canadian provinces and territories

For each REP, we work with the requestors to collectively decide on what countries (and/or states or provinces) to examine based on the question posed. For other countries, we search relevant government and agency websites responsible for the provision and evaluation of healthcare, specifically interdisciplinary team-based care. In Canada, a similar approach was used, searching the websites of the ministries of health and related organizations responsible for system evaluation to identify evaluation frameworks/approaches for models of team-based care that have been implemented in provinces and territories. While we do not exclude content based on language, where information is not available in English, Chinese, French, or Spanish, we attempt to use site-specific translation functions or Google Translate. A full list of websites and organizations searched is available upon request.

Preparing the profile

Each included document is cited in the reference list at the end of the REP. For all included evidence syntheses and jurisdictional scans, we prepare a small number of bullet points that provide a summary of the key findings, which are used to summarize key messages in the text.

We then draft a summary that highlights the key findings from all highly relevant documents (alongside their date of last search and methodological quality).

Appendix 2: Details about each identified evidence synthesis

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice)
  ▪ Nurses
• Where
  ▪ Multi-site (e.g., hub and spoke model)
• Approaches to evaluate team-based primary care
  ○ Other patient feedback (e.g., patient surveys, interviews, focus groups)
  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
  ▪ Outcomes assessments
• Measures to evaluate team-based primary care
• Outcomes (equity-driven quadruple aim)
  ▪ Patient experiences
	Primary-care teams (PCTs) significantly enhanced patients' mental and psychological health outcomes while also improving their perceptions of care, including greater satisfaction, a stronger sense of improvement, and a more patient-centred approach (1)
	• The study reviewed the characteristics of PCTs and their impact on the quality of care for patients with multi-morbidity, focusing on clinical outcomes, patient experiences, and care processes
	• The study included 17 studies with patients primarily diagnosed with multimorbidity, including conditions such as depression comorbid with hypertension, diabetes, or coronary heart disease, and other chronic diseases
	• PCTs tailored for individuals with multi-morbidity can be classified into three general models: 1) upward collaborative teams, which involve primary care providers and specialists; 2) downward teams, combining primary care workers with lay health workers; and 3) traditional teams, consisting of primary-care physicians and care managers
	• The article identifies several approaches to evaluate team-based primary care, including patient feedback and clinical outcomes (i.e., depression severity scores, blood pressure control, hospitalization rates, HbA1C levels), as well as satisfaction of care and patient-centredness
		High	No	7/10	October 2021	No	• None identified

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Nurses
	Existing instruments to evaluate interprofessional team-based primary care primarily consist of self-report surveys and observational checklists, addressing constructs such as communication, shared goals, and respectful interactions, but highlights the need for more objective tools, patient-centred metrics, and instruments validated specifically for primary-	High	No	2/9	NA	No	• None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Nurse practitioners ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Pharmacists ▪ Social workers ○ Where ▪ Multi-site (e.g., hub and spoke model) • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences	care settings to effectively assess team functioning and care outcomes (2) • The study identified 48 instruments to measure interprofessional team-based primary care, with most being surveys (n=44) and a few observational checklists (n=4); the majority of these instruments were not developed specifically for primary care and often require adaptation for this setting • Studies were conducted in outpatient clinics (n=11), with other studies being conducted in acute inpatient (n=15) or unspecified healthcare settings (n=19) • Internal consistency was the most common reliability measure, often assessed with Cronbach's alpha; most instruments had some reliability testing (39 of 48) and validity testing (29 of 48)						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim)	A comprehensive set of self-report instruments designed to measure team-level factors influences the success of Continuous Quality Improvement (CQI) in primary care, emphasizing the importance of team context, processes, and proximal outcomes while highlighting the need for consistent definitions and validated measures to enhance the effectiveness and evaluation of teamwork in improving primary-care outcomes (3) • The article highlights the importance of a positive team climate, including trust, cohesion, and shared goals, which directly impacts provider satisfaction and collaboration within CQI teams • The study identified and categorized 81 instruments measuring team-level factors into three domains: teamwork context, team processes, and proximal team outcomes, with 40 instruments included within the final analysis of the paper • Team behaviours such as collaborative problem-solving, communication, and conflict resolution are central to CQI success but underutilized in evaluations	High	No	5/9	February 2012	No	• None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Provider experiences	• Self-report instruments were widely used to evaluate perceptions of teamwork and effectiveness						
• Features of models of team-based primary care o Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurses o Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) • Approaches to evaluate team-based primary care o Other patient feedback (e.g., patient surveys, interviews, focus groups) o Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Outcomes assessments ▪ Costing studies • Measures to evaluate team-based primary care o Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs ▪ Provider experiences	Included studies examined associations with health service utilization, process of care, and physician costs/productivity to determine the impact of new primary healthcare teams and payment models supporting those teams (4) • Healthcare reforms examined in the synthesis included the formation of new group/team-based practices, implementation of new payment models for these practices, or both • Outcomes used to examine impacts of reforms include health service utilization, processes of care, and physician costs/productivity • Methods utilized to evaluate the outcomes in included studies were assessing independent associations between predictors (i.e., reform model) and performance outcomes, or assessing the impact of an intervention (i.e., enrollment in a Family Medicine Group) compared to a control group	High	No	8/10	2015	No	• Not reported
• Features of models of team-based primary care o Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners)	Practitioners and researchers should select a teamwork survey that aligns with the research theory, adapts to context-specific needs, balances generalizability with precision, and meets psychometric validity criteria for reliability and confidence (5) • This study identified survey instruments used to assess dimensions of teamwork	High	No	1/9	April 2015	No	• None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

	• Measures of communication, coordination, respect, and use of members' expertise consistently appeared in studies, even with their different foci and team types; this consistency suggests that these are viewed as core dimensions of teamwork
	• This article provides guidance on selecting the best teamwork survey for researchers and practitioners
	  ○ The survey must align conceptually with the theory being studied in the research context
	  ○ Existing surveys may need adaptation and validation for new settings, as teamwork theories vary across contexts, such as intensive care units versus primary care clinics
	  ○ There is a trade-off between generalizability and precision
	  ○ While generalizable surveys are useful across diverse settings, they may not capture specific causal processes between teamwork and performance
	  ○ The survey must meet psychometric validity criteria to ensure reliability and user confidence
	  ○ The field may benefit from the use of existing psychometrically valid surveys across studies						

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Pharmacists
• Approaches to evaluate team-based primary care
  ○ Administrative database surveys
  ▪ Outcome assessments
• Measures to evaluate team-bases primary care
  ○ Outcomes (equity-driven quadruple aim)
  ▪ Patient experiences
	The interprofessional collaboration between primary care and pharmacists was evaluated using both disease-centred and non-disease-centred patient outcomes, with the effect of pharmacists' integration differing depending on the measured outcome (6)
	• The review assessed interprofessional collaboration in primary care involving a pharmacist through patient-related outcomes
	• Both disease-centred and non-disease-centred patient outcomes were evaluated to evaluate pharmacist integration into primary care
	  ○ Disease-centred outcomes included blood pressure, dyslipidemia, diabetes, CV risk, and depression
	  ○ Non-disease-centred outcomes included adherence to treatment, quality of life, prevention, and satisfaction
		High	No	6/10	November 2022	No	• None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	• The effect of pharmacist intervention varied depending on the outcome measure (disease-centred versus non-disease-centred)						

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Pharmacists
  ○ Supports for the team
  ▪ Patient navigator/care coordinator
• Approaches to evaluate team-based primary care
  ○ Administrative database studies
  ▪ Outcome assessments
  ▪ Costing studies
• Measures to evaluate team-bases primary care
  ○ Outcomes (equity-driven quadruple aim)
  ▪ Costs
	Integrating pharmacists into primary-care teams was assessed using health system indicators including primary/secondary care visits, medication and hospital use, and medication and healthcare utilization costs (7)
	• The review investigated the impacts of integrating pharmacists into primary-care teams on healthcare utilization and costs
	• The included studies were mainly RCTs and observational studies that integrated pharmacists into several different aspects of primary care, including delivering non-dispensing services and providing face-to-face individual patient medical and healthcare information
	• Integration of pharmacists was evaluated by looking at the number of primary and secondary care visits, medication, hospital, and emergency department use, as well as medication, care, hospital, and emergency department visit costs
		High	No	6/10	June 2018	No	• None identified

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice)
  ▪ Nurse practitioners
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians)
	Shared care models integrating primary and speciality care in the management of long-term conditions were found to take on several different approaches, and were evaluated through a variety of process, clinical, and cost outcomes (8)
	• The conditions addressed through shared care models included in the evidence synthesis included diabetes, hypertension, respiratory conditions, vascular conditions, musculoskeletal conditions, comorbidity, and cancer
	• A taxonomy of shared care models for chronic disease includes:
	  ○ community clinics, defined as specialist attended or ran clinics in a primary-care setting with primary-care personnel support
	  ○ basic model that sets up a specific and regular communication system between specialty and primary care, often facilitated through an
		High	No	6/11	2015	Yes	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ▪ Costing studies	administrator who organizes appointments, follow ups and other care related coordination ○ liaison meetings during which specialists and primary care providers meet to discuss care plans and ongoing treatment ○ shared care record card provides a more formal arrangement for sharing information, using agreed upon data sets entered into a record card carried by the patient across visits ○ computer-assisted shared care and electronic mail using a data set agreed on that is circulated between the two sectors via computer systems, often including a centrally coordinated and computerized registration and recall of patients. • Evaluation measures included 1) clinical outcomes such as mental health (e.g., depression and anxiety symptoms); 2) patient-reported outcome measures (e.g., quality of life, unmet care needs, functional measures, burden of illness, pain, or condition-specific outcomes); 3) hospital admissions; 4) prescribing and adherence; 5) proportion of patients satisfied with care; 6) patient health behaviours; and 7) costs. • Additionally, 26 of the included studies examined measures related to the process of care and 12 included studies analyzed measures of service utilization (e.g., disease-related visits for the shared group)						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurse practitioners ▪ Nurses ▪ Pharmacists ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model)	Several validated teamwork survey instruments exist for healthcare, and researchers should prioritize adapting these tools over creating new ones while ensuring alignment with their study's context and objectives (5) • In total, 39 peer-reviewed articles reporting on the development or use of a survey measuring teamwork were included • The surveys were developed to evaluate healthcare teams deemed to be "bounded" – consisting of clearly defined individuals with stable membership – or "larger workgroups" – defined as having more fluid structures, including primary-care networks or multidisciplinary care teams that may work together at different times depending on patient needs	High	No	1/9	2012	No	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Approaches to evaluate team-based primary care
  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
  ▪ Practice activities
  ▪ Outcomes assessments
  ○ Provider feedback (e.g., patient surveys, interviews, focus groups)
	• Although not the focus of the analysis, many of the teams analyzed included a combination of nurses and physicians, and in some cases included other providers such as pharmacists
	• Dimensions of surveys evaluating teamwork of bounded and larger workgroup teams included:
	  ○ behavioural processes such as teamwork quality, communication, coordination, use of members' expertise, shared decision-making, active conflict management, and effort
	  ○ emergent states, both affective such as respect, group cohesion, social support, and psychological safety, as well as cognitive, including role responsibility and shared objectives
	• The analysis reveals the importance of carefully selecting or adapting teamwork surveys to align with the theoretical framework and specific context of the healthcare setting, which is crucial for evaluating team-based primary care models
	• Although the review does not specify healthcare teams that are specifically team-based primary care models, it suggests primary care evaluators should focus on selecting instruments that capture the nuanced interactions and roles specific to the primary-care teams under investigation, ensuring conceptual consistency and psychometric validity while addressing administrative feasibility						

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Nurse practitioners
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians)
  ▪ Pharmacists
	Patient-centred medical home measures often prioritize physician-centred access and care coordination, overlook the contributions of associate care providers (i.e., registered nurses, medical assistants, clerks, clinical pharmacists, social workers, and dietitians), and report results at a practice or primary-care provider (i.e., physicians, nurse practitioners, and physician assistants) level rather than considering team-based performance, making it challenging to understand how associate care provider delivered care influences patient outcomes and overall team effectiveness (9)
	• This systematic review aimed to determine how current patient-centred medical home measures reflect associate care providers provided care
		High	No	1/9	August 2014	No	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Information and communication technologies used to provide or support care • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Provider experiences	• The findings highlighted how access and care coordination measures often focus solely on physicians or primary care providers, neglecting the role of associate care providers ○ Access measures included the subcategories of appointments (e.g., same-day or urgent access, time spent waiting for appointments, etc.), communication (e.g., access via phone during or after office hours, electronic communication, and translation services), and continuity with a provider ○ It was stated that measuring the presence of associate care providers is not enough to understand their role in the patient-centred medical home because it does not capture the functions they perform or their integration in the team						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists	While team-based collaboration in primary care varied in terms of team composition and collaborative activities, teams with a mix of specialists and complementary disciplines, including nurses and family physicians, were particularly effective (10) • The study focused on identifying team composition, collaborative activities, consistency across disciplines, and impacts on clinical outcomes • The findings highlighted positive or neutral outcomes observed in all studies comparing collaborative models to non-collaborative approaches • Collaboration types like shared consultations and co-located teams showed promising results, though no clear link was found between collaboration characteristics and clinical outcomes due to differences in study variables and lack of outcome comparisons in some cases • The review identified five domains for evaluating collaboration in team-based primary care: (1)	High	No	4/9	October 2016	No	• Place of residence • Personal character-istics associated with discriminat-ion (e.g., age, disability)

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Where ▪ Co-location ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Equity considerations for evaluation (based on the PROGRESS+ framework) ○ Place of residence ○ Personal characteristics associated with discrimination (e.g., age, disability) • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs	interdependence (reliance among team members); (2) newly created professional activities (e.g., shared consultations); (3) collective ownership of goals (goal setting through team meetings); (4) role flexibility (non-hierarchical roles); and (5) reflection (team awareness and improvement) • Collaborative activities were categorized into types such as co-located teams (working in the same location with face-to-face communication), non-hierarchical collaboration (equal decision-making among members), shared consultations (patients seen by multiple professionals simultaneously), and referral/counter-referral systems (teamwork through patient referrals) • Teams were also evaluated based on their composition and key roles, including clinical leaders (e.g., general practitioners), case managers (often nurses ensuring coordination and follow-ups), and expert consultants (specialists providing targeted expertise in areas like mental health or geriatrics) ○ These three roles were identified as most relevant in primary care						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Pharmacists ○ Where ▪ Co-location ○ Supports for the team ▪ Information and communication	Fully integrating non-dispensing pharmacists into primary-care teams enhances patient-centred services by improving outcomes like process measures and proxies such as medication errors, but for disease-specific services, where standardized protocols are followed, integration shows no added benefit and may even have a slight negative association with outcomes like blood pressure (11)	Medium	No	7/10	June 2016	No	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

technologies used to provide or support care
• Approaches to evaluate team-based primary care
  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
• Measures to evaluate team-based primary care
  ○ Outcomes (equity-driven quadruple aim)
  ▪ Patient experiences
  ▪ Population health outcomes
	• This review focused on the impact of the degree of non-dispensing pharmacists' integration on medication-related health outcomes in primary care
	• The review stressed that full integration of non-dispensing pharmacists should be encouraged to maximize clinical pharmacy services effectiveness, especially for patients with complex needs (e.g., multiple medications, comorbidities)
	• The review examined five domains to evaluate team-based primary care: (1) organizational (e.g., permanent roles for team members): (2) informational (shared access to patient records); (3) clinical (involvement in multidisciplinary teams and activities like counseling and prescribing): (4) functional (shared administrative support or joint education); and (5) normative (alignment on shared goals and protocols)
	• Teams were scored on their degree of integration: no integration (0–2 domains positive), partial integration (3–4 domains positive), or full integration (all 5 domains positive), with metrics such as prescribing authority, shared workflows, and direct collaboration considered
	• The review stressed evaluation of team processes (e.g., communication quality and integration levels) to understand how well primary-care teams function in delivering coordinated care						

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Nurse practitioners
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians)
  ▪ Pharmacists
  ▪ Social workers
  ○ Where
	An evidence synthesis evaluating multidisciplinary collaborative care teams used cardiovascular risk factors in patients with diabetes as the key outcome of interest (12)
	• Multidisciplinary collaborative teams examined in studies included in the evidence synthesis included general practitioners, nurses, allied health professionals (e.g., dietitians, pharmacists and psychologists) and social workers, although studies varied greatly in terms of the exact composition of professionals and the arrangements they worked under
	• Nurses, followed by primary-care physicians, dietitians, and pharmacists were the most common team members
	• Cardiovascular risk factors analyzed included systolic blood pressure, diastolic blood pressure, glycated
		Medium	No	8/11	2013	Yes	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Outcomes assessments	haemoglobin, low-density lipoprotein, and high-density lipoprotein						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care	Interviews with healthcare providers and patients highlight the use of user perceptions for evaluating multidisciplinary teams consisting of primary-care physicians and other healthcare professionals for diabetes care (13) • The review evaluated the use of multidisciplinary teams for diabetes care through the perspectives of both healthcare providers and diabetic patients • The included studies consisted of focus groups and semi-structured interviews relating to perceptions of care teams consisting of primary-care physicians and other healthcare professionals ○ The studies evaluated multidisciplinary teams in both primary care and community clinic settings • Perceptions of healthcare professionals on multidisciplinary teams centred around the core themes of team dynamics, cooperation, and accessibility to services for patients • Perceptions of patients centred around the core themes of healthcare professionals' relationship with patients, accessibility to services for patients, and satisfaction with care compared to usual care	Medium	No	5/9	September 2019	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Provider experiences							
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ○ Supports for the team ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Equity considerations for evaluation (based on the PROGRESS+ framework) ○ Socio-economic status ○ Personal characteristics associated with discrimination (e.g., age, disability) • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) • Measures to evaluate team-based primary care	Although persistent pain affects a large portion of the population and primary care could offer an ideal setting for treatment, studies on multidisciplinary pain management programs are scarce, diverse in terms of intervention characteristics (i.e., in terms of study designs and outcome measures), and of generally low quality, pointing to the need for more research on protocols (i.e., that are effective, structured, and for long-term treatment) in primary care (14) • The review aimed to identify studies on multidisciplinary programs for persistent pain in primary care • The review pointed to the value of assessing how teams are composed (e.g., the diversity of roles like psychologists, physical therapists, and physicians), how care is delivered (e.g., group or individual sessions), and how well physical, psychological, and social approaches are integrated • Practical ways to measure team performance include tracking attendance (i.e., patients having high adherence to intervention protocols), evaluating patient satisfaction and collaboration, and considering professional training or the use of digital tools • The review also emphasized the importance of looking at resource use, including the frequency of healthcare visits and overall cost-effectiveness, to better understand team-based care	Medium	No	6/10	June 2023	No	• Socio-economic status • Personal character-istics associated with discriminat-ion (e.g., age, disability)

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences							
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) • Equity considerations for evaluation (based on the PROGRESS+ framework) ○ Personal characteristics associated with discrimination (e.g., age, disability) • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Costing studies • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) • Costs	Cost-effectiveness of multidisciplinary pain management services were analyzed with a focus on patient-reported outcomes and health resource costs (15) • Pain management services defined as "health services targeting at least two of the social, physical, psychological and/or occupational aspects provided by one or more healthcare professionals" were evaluated for cost-effectiveness • Patient-reported outcomes (e.g., pain intensity, functional disability, quality of life, return to work) and health resource utilization were examined ○ Resource use costs were evaluating using the top-down approach of dividing the total budget of the intervention by number of patients, or a bottom-up approach using questionnaires to collect data from patients on their resource use ○ Productivity loss was also measured • Services were delivered in primary care, secondary care, or a combined setting • Staff involved in the interventions included physiotherapists, nurses, psychologists, social workers, occupational therapists, specialists in physical medicine, and physicians • The preferred statistical method to analyse cost-related data was non-parametric bootstrapping	Medium	No	N/A	2019	No	• Personal character-istics associated with discriminat-ion (e.g., age, disability)

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
  ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice)
  ▪ Nurse practitioners
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians)
  ▪ Pharmacists
  ▪ Social workers
  ○ Where
  ▪ Co-location
  ▪ Multi-site (e.g., hub and spoke model)
  ○ Supports for the team
  ▪ Patient navigator/care coordinator
• Approaches to evaluate team-based primary care
  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
  ▪ Outcomes assessments
• Costing studies
	A review of team-based care models evaluated the models based on hospital admissions, readmissions, length of stay, accident and emergency use, and costs (16)
	• The healthcare outcomes were evaluated at a system level in the hospital setting
	• The models focused on case management, chronic care, discharge management, complex interventions, multidisciplinary teams, and self-management
	• Most models used nurse-led interventions, with support or supervision from additional providers including GPs, allied health professionals (e.g., physiotherapists and dieticians), pharmacists, and social workers
	• Several models utilized case managers or care coordinators to facilitate the continuity of care across health and social care sectors, as well as providers
	• Studies evaluating these models included data from administrative databases, generally at the system-level
		Medium	No	6/10	2015	No	• None reported

• Features of models of team-based primary care
  ○ Providers engaged in the team
  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
	Interprofessional collaboration improves care quality, enhances patient-centred and coordinated care, and highlights the need for systemic integration of interprofessional education and collaboration to support patient health (17)	Low	No	6/11	February 2021	No	• None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Nurses ▪ Pharmacists • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes	• This study reviewed interprofessional collaboration (IPC) interventions on chronicity management and their impact on clinical and process outcomes • The review included 23 studies, published between 1995 and 2017, involved 8,772 patients, and primarily examined the impact of IPC on patients with cardiovascular diseases, multi-chronic conditions, and chronic kidney disease • Nurses were the most represented professionals in the intervention teams, followed by primary-care physicians and pharmacists • Most studies were conducted in outpatient clinics, with fewer in hospitals or pharmacies • Intensive education and psychosocial support were occasionally highlighted as key intervention components • Pharmacists play a key role in managing cardiovascular risk factors, assessing medication adherence, and providing lifestyle advice; their frequent interactions with patients with chronic conditions address challenges in accessing primary-care physicians						
• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists	Complex integrated care models can evaluate outcomes using guidelines and protocols involving clinical outcomes, team coordination, quality of care, services, caregiver outcomes, and costs (18) • This study assessed the effectiveness of chronic care organizational models in primary-care settings • The four categories of identified models were complex integrated care models (e.g., Chronic Care Model framework), case/care management, pharmacist role, and community health worker role • Guidelines and protocols to evaluate and ensure the success of models included domains of: ○ complex care integrated: coordination and care quality ○ case management: coordination, quality of care, risk stratification, and multiple contact modalities ○ pharmacist role: coordination, quality of care ○ community health: self-management, patient education, and multiple contact modalities	Low	No	5/10	2020	No	• None reported

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Information and communication technologies used to provide or support care • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ▪ Costing studies ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Costs ▪ Provider experiences	○ models that included multiple domains and measures were most successful • Measures used to evaluate the success of models included: ○ patient clinical outcomes: blood pressure, lipid, mortality, and body mass index ○ patient-reported outcomes: quality of life, satisfaction, treatment adherence ○ services: emergency department visit, hospitalization ○ costs ○ caregiver outcomes						

Appendix 3: Details from the jurisdictional scan about measures/approaches for evaluating interdisciplinary team-based primary care

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
Canadian provinces and territories			

British Columbia	• Department of Family Practice – University of British Columbia	• Approaches to evaluate team-based primary care
		  ○ Other patient feedback (e.g., patient surveys, interviews, focus groups)
		  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
		  ▪ Practice activities
		  ○ Provider feedback (e.g., patient surveys, interviews, focus groups)
		• Measures to evaluate team-based primary care
		  ○ Implementation-process outcomes
		  ▪ Number of teams
		  ▪ Geographic spread
		  ▪ Provider attachment
		  ○ Outcomes (equity-driven quadruple aim)
		  ▪ Patient experiences
		  ▪ Population health outcomes
		  ▪ Costs
		  ▪ Provider experiences
			• At the request of the Ministry of Health for British Columbia, the Innovation Support Unit in the Department of Family Practice has developed the Team-based care Evaluation Adoption Model Framework to support the coordination and planning of primary and community care
			• The framework includes a 10-dimension evaluation model that outlines both key concepts of team-based care as well as the adoption model for team-based care
			• The 10 dimensions include:
			  ○ relationship-centred care – quality and continuity of a therapeutic relationship between healthcare providers and patients, including continuity of care, cultural safety, and patient, family, and relationship centredness
			  ○ patient experience – the subjective experience of the patient and their family with the care team and clinic facilities and includes aspects such as perception of access to care, relationships with and trust in providers, respect and dignity, as well as empowerment and activation
			  ○ provider experience – the subjective experience of individual providers in the team about their work including interactions with the work environment, their individual role within the team, and their work-life balance
			  ○ team function – the structure and operation of a team including the interactions of team members and the additional support that contribute to comprehensive, coordinated care including training, communication, and information systems
			  ○ quality of care process – continuous quality improvement in primary-care teams and the provision of comprehensive services and safe, high-quality care for the management and control of disease
			  ○ capacity and access – accessibility and capacity of primary-care teams and the ability of a practice to provide comprehensive and coordinated care including the ideals of advanced and timely access through extended hours and same-day access to urgent care as well as virtual access to care
			  ○ team-based primary and community care foundations – the micro (clinical level) and macro (jurisdictional level) foundational aspects such as the opportunities for interdisciplinary education, strategies to support workforce capacity, provision of clinic-level infrastructure, and appropriate funding for equipment, supplies, facilities, and information systems
			  ○ governance and accountability – the development of a shared long-term vision that facilitates the alignment of evidence-based policy planning to support and strengthen primary-care services, including appropriate leadership and

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			management structures, evidence-based research and evaluation, engagement of stakeholders, and focused investments ○ health of the population – assessment of broader health systems use measures, determinants of health and health outcomes for a broad population, including the populations attachment and the extent to which services are responsive to the needs of the community that the team is intended to serve ○ health-care costs – the tracking and analysis of costs associated with individual patients as well as broader systems-level costs that are influenced by the move to team-based primary care • With funding from the B.C. Ministry of Health, the Innovation Support Unit is developing and conducting a team-based primary care evaluation based on this framework to explore changes across patient experience, provider experience, team function, capacity, and access and attachment • The evaluation will be conducted with 15 team-based primary-care clinics ranging in type of health centre and geographic locations and will include three data collection methods: 1) a patient survey of patient perceptions of access, patient-centred care and team function; 2) a team survey to assess provider experience and team function; and 3) clinic report to gather data on types of provider and staff, attachment numbers, access, and team capacity
	• Team-Based Care BC	• Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care	• A team-based care advisory group made up of a coalition of organizations across the province has developed a range of tools to support the coordination and implementation of team-based primary care across B.C. • The website hosts a range of resources, some of which are relevant to evaluation, namely: ○ Team effectiveness tool, which modifies a tool from Saskatchewan to gather information on team values, communication, roles and existing supports ○ Team-based care pathway developed in partnership with Health Quality BC, which lays out a pathway of resources and tools to implement team-based primary care, the fifth step of which is team evaluation, including: ▪ the above-mentioned team-effectiveness tool ▪ a measurement plan worksheet to help identify what measures to collect, how to measure, and how to analyze and display results ▪ national interprofessional competency framework and B.C. health quality matrix
Alberta	• Alberta Health Services	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice)	• Alberta primary-care networks follow a team-based healthcare model, whereby doctors and healthcare professionals including nurses, mental health therapists, social workers, and others work collaboratively to provide integrated care for all primary healthcare needs • An evaluation framework was developed in 2013 for primary-care networks that lays out a logic model for how primary-care networks are expected to improve population health and wellbeing

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Physician assistants ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ▪ Costing studies ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs ▪ Provider experiences	○ The evaluation framework includes the system-level, model-level, and delivery-site-level considerations ○ A set of core evaluation questions were developed from the evaluation framework, but these are not specific measurements or indicators ○ The evaluation also includes five evaluation activities that comprise a comprehensive approach to evaluation, including: ▪ contract management (e.g., requirements that family care clinics report on) • expenditures including operating costs, salaries, and equipment • health human resource parameters including vacancies, retention, and difficult-to-fill positions • service volume counts ▪ performance monitoring (e.g., assessing performance of individual primary-care delivery sites) • these are included below as part of the primary-care networks indicator set ▪ assessment of system and model enablers identified in the logic model • conducted by interviews with key stakeholders, including staff at delivery sites and use of assessment criteria ▪ applied evaluation • relies on numerous approaches including administrative data, data from electronic health records, surveys of patients and providers, chart audits, and interviews and focus groups to answer critical questions about the primary-care network model as a whole ▪ formal independent evaluation conducted by an outside body • Routine evaluation of primary-care networks (referred to as performance monitoring in the framework) includes a set of seven indicators that primary-care networks provide to Alberta Health in their annual reports • Indicators include: ○ time to third next appointment in calendar days (e.g., number of days between the day a patient makes a request for an appointment and the third open appointment in the schedule) ○ patient experience (number of patients rating the care they received as excellent or very good during a survey) ○ compliance with screening of patients as recommended by the Alberta Screening and Prevention Program ○ completion of self-assessment and performance improvement plan by the governance committee ○ completion of performance assessment of primary-care network administrative lead and other staff members

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			○ proportion of member physician clinics in primary-care networks that conducted team effectiveness survey during the year ○ percentage of participating physicians and providers using CII/CPAR compatible electronic medical records.
Saskatchewan	• Saskatchewan Health Authority • Saskatchewan Ministry of Health	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Administrative staff • Equity considerations for evaluation (based on the PROGRESS+ framework) ○ Place of residence ○ Race, ethnicity, culture, language • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Provider experiences	• Saskatchewan Health Authority published a developmental evaluation of the Saskatchewan Health Networks (HNs) Regina-East and South East 6 in 2021 • The evaluation aimed to assess the following components: ○ Health Network structure ○ implementation approaches and processes ○ level of engagement with providers ○ team functioning ○ patient experience ○ impact of health networks on health and healthcare • Characteristics of a developmental evaluation include: ○ focus on learning and improvement ○ real-time feedback to support future development ○ the evaluator is a team partner rather than an external assessor ○ systems thinking is emphasized in data collection and analysis ○ flexibility of the evaluation plan to emerging situations • This evaluation uses theory-based evaluation, which aims to include understanding of contextual factors within the analysis rather than treating them as confounding variables • A complex-adaptive systems approach recognizes that the system is composed of different factors, and the interactions between them • Methods used include: ○ a literature review ○ review of internal health network documentation ○ engagement sessions with physicians, patients, and First Nations and Métis communities ○ Interviews with 51 stakeholders including leadership, primary healthcare executive directors, medical health officers, directors, managers, healthcare staff (nurse practitioners, nurses, continuing care aides, physiotherapists, occupational therapists, schedulers, assessor coordinators, community, population and public health staff, and mental health workers), and physicians • In the Plan for 2020–21, a key performance measure for Health Networks is the implementation of daily interdisciplinary team meetings to assess patient needs and ensure they are being met • The Patient and Family Advisor program engages patients and families to evaluate health systems, policies, and programs

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages

Manitoba	• Manitoba Health	• Features of models of team-based primary care
		  ○ Providers engaged in the team
		  ▪ Primary-care physicians (e.g., family physicians, general practitioners)
		  ▪ Nurse practitioners
		  ▪ Nurses
		  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians)
		  ▪ Midwives
		  ▪ Pharmacists
		  ▪ Social workers
		• Approaches to evaluate team-based primary care
		  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
		  ▪ Practice activities
		  ○ Provider feedback (e.g., patient surveys, interviews, focus groups)
		• Measures to evaluate team-based primary care
		  ○ Implementation-process outcomes
		  ○ Provider attachment
			• The Government of Manitoba published primary care interprofessional team toolkits in 2015 and 2018, which includes a section on evaluation and monitoring
			• The government recommends quarterly and annual patient-provider attachment measurement, clinic change log recording and reporting, process evaluation, and provider focus groups in order to track ongoing clinical support, address urgent and emergent issues with staff and clinic, facilitate change within the agreement (physicians added, removed, changes to attachment number, baseline), provide performance reviews, and constant communication with site

Ontario	• Health Quality Ontario (now Ontario Health)	• Features of models of team-based primary care
		  ○ Providers engaged in the team
		• Approaches to evaluate team-based primary care
		  ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)
		  ▪ Practice activities
		• Measures to evaluate team-based primary care
		  ○ Implementation-process outcomes
		  ○ Provider attachment
			• The primary care performance measurement framework for Ontario (published in 2014) briefly describes measuring access to an interprofessional primary-care team, which includes assessing the percentage of patients who report accessing interprofessional healthcare providers at the place they usually receive care, by type of provider, and the percentage of primary care practices or organizations that report having various types of healthcare providers (by provider type)
			• The report noted that these measures are not currently available at the time of reporting identified in an evaluation conducted by The Conference Board of Canada of the Family Health Team initiative in Ontario from 2014; the evaluation used a range of approaches including a facility survey (completed by staff of the family health team and administrators), a provider survey, a patient survey, site visits and patient focus groups.
			• The domains of measurement used were developed based on the Starfield framework and include:
			  ○ access (weekend service, evening service, same day or next day care, telephone-based care, timeliness of care, use of family health team as place of first contact, wait times)
			  ○ prevention and health promotion (health promotion services received, disease prevention services received)

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			○ coordination (patient access to medical records, provider access to medical records, continuity of care from different providers, coordination of care with specialists) ○ patient and family centredness (continuity of professionals, sufficient time with care providers, provider's knowledge of patient and their medical history, provider's knowledge of family members, provider's knowledge of neighbourhood health risks, patient involvement in care, provision of home visits, cultural competence) ○ patient involvement in chronic disease management (patient understanding of health conditions and available treatment options, patient confidence in medical decisions, provision of treatment plan and follow-ups for chronic conditions)
Quebec	• Santé Quebec	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Physician trainees ▪ Nurses ▪ Nurse practitioners ▪ Nursing assistant ▪ Pharmacists ▪ Social workers ▪ Allied health professional ○ Supports for the team ▪ Information and communication technologies used to provide or support care • Equity considerations for evaluation ○ Socio-economic status • Approaches to evaluate team-based care ○ Administrative database studies ○ Practice activities	• Family Medicine Groups (FMGs) are groups of family doctors and other health and social services professionals who work in close collaboration to provide care ○ The aim of FMGs are to provide patients with a family doctor to access health and social services more easily and allows doctors and other healthcare professionals to: ▪ ensure better patient management and follow-up ▪ improve quality of care ▪ improve access to care • Funding and professional support for family medicine groups outlines the annual review from 2022 ○ Data for the assessment of weighted registered patient numbers and attendance rates ▪ Data on vulnerable patients, births, pregnancy monitoring, disadvantaged patients, complex needs/home monitoring ▪ Rules are determined for the calculation of indicators (number of weighted registered patients and attendance rate) based on a reference period
New Brunswick	• New Brunswick Medicare	• Features of models of team-based primary care ○ Providers engaged in the team ○ Primary-care physicians (e.g., family physicians, general practitioners) ○ Nurse practitioners ○ Nurses ○ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) • Approaches to evaluate team-based primary care ○ Other patient feedback	• Family Medicine New Brunswick is a collaborative practice model implemented in 2017 which may include physicians, nurse practitioners, nurses, and allied health professionals • New Brunswick Primary Health Care Action Plan (2024) focuses on the benefits of collaborative team-based practices • Performance indicators for evaluating primary healthcare are briefly outlined ○ Attachment to a primary healthcare provider ○ Timely access to care ▪ New Brunswick standard: access within five calendar days of needing an appointment ▪ Availability of after-hours and weekend access to a patient's provider

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		▪ Patient surveys • Measures to evaluate team-based primary care ○ Provider attachment ○ Outcomes ▪ Patient experiences	• A 2022 consultation with provider groups and system stakeholders, in conjunction with a national literature review and past provincial strategies, resulted in principles to guide the direction of primary health ○ Primary Health & Primary Care Surveys are conducted annually by the New Brunswick Health Council ○ 2023 survey: key indicators include attachment, accessibility, use of other healthcare services, barriers to care, chronic health conditions, and management • New Brunswick Health Council publishes quarterly health plan progress on its website for each of its five action areas, including access to primary care • The progress report has status categories as progress indicators – complete, in progress, or not started
Nova Scotia	• Nova Scotia Health Authority	• Features of models of team-based primary care ○ Providers engaged in the team • Approaches to evaluate team-based primary care ○ Real-time patient feedback ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ▪ Costing studies ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ▪ Number of teams ▪ Geographic spread ▪ Provider attachment ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs ▪ Provider experiences	• In 2019, Nova Scotia Health Authority conducted an extensive system-level evaluation of its primary healthcare • The evaluation was informed by the Nova Scotia Health PHC System-Level Evaluation Framework, developed through a process of stakeholder input and guided by key documents and guiding frameworks • This work identified 28 indicators covering all the aspects of this framework including: inputs and enablers, functions and activities, and outputs and outcomes; the indicators come from readily available data sources and surveillance systems • The indicators measuring team-based primary care incorporate indicators at the input and outputs levels of the framework including, among others detailed in the executive summary and technical report: ○ enablers and input – governance and leadership: governance model distribution of Collaborative Family Practice Teams (CFPTs) identifying the different governance models including turnkey, co-leadership or blended models ○ enablers and input – workforce: identifying the number of CFPTs available in Nova Scotia ○ enablers and input – workforce: difference between available and required PHC human resources ○ enablers and input – workforce: population with a regular healthcare provider ○ output – workforce: family physicians working in collaborative family practice teams • In the technical report, the government identifies for each indicator its type, function, description, method of calculation, data sources, data limitations, methods for reporting, significance, and results • For example, enablers and input – workforce: CFPTs requires counting the different types of providers with a specific ratio per 10,000 citizens identified by the government ○ The working definition requires the collaborative team-based practice to include at least three healthcare providers, two of which from different professions

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			○ The method of calculation requires counting the groups providing primary care working collaboratively ○ Data sources would be provided by Nova Scotia Health with provincial level reporting • The technical report can be used to support identifying the domains, measures for, and approaches used to evaluate team-based care
PEI	• Health PEI	• Approaches to evaluate team-based primary care ○ Administrative database studies • Measures to evaluate team-based primary care ○ Implementation process outcomes ▪ Number of teams ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Provider experiences	• The Health PEI Strategic Plan: 2021–24 prioritized a transition toward team-based care to provide integrated, coordinated care • The development of the strategic plan was based on: ○ Input from Islanders through extensive consultations ○ Evidence-informed information such as health trends, current healthcare issues, best practices, PEI health system data, and data from many provincial, national, and international sources ○ Achievements and challenges identified from the previous strategic plan ▪ For example, implementation of the two-year primary care road map (2021) that informed this five-year strategy ○ Strategic Performance Indicators (SPIs) indicate progress toward achieving strategic goals relating to 'quality, equitable and patient-focused care': ▪ percent of low acuity emergency department visits ▪ number of patients with ambulatory care sensitive conditions (ACSC) admitted to hospital ▪ wait times (community programs, community mental health, psychiatry) ▪ hospital wait times are publicly available ▪ percent of Alternate Level of Care (ALC) days ▪ average Length of Stay (ALOS) in the Frain Senior Program for discharged clients (in years) ▪ rate of home care client and long-term care resident utilization of inpatient and emergency department services ▪ evaluated measures have not been reported on (i.e., outcomes) but framework is in place • Two-year Primary Care Road Map (2021) highlighted team-based care as a priority area for action ○ Example measures of success for team-based care provided: ▪ number of new primary-care teams ▪ ratings of workplace psychological safety from healthcare providers
Newfoundland and Labrador	• Department of Health and Community Services	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners)	• The Government of Newfoundland and Labrador published a Health Policy Framework for the Family Care Teams as part of their work in transforming primary care and solo community-based practices into interdisciplinary team-based care • The work of Family Care Teams engages Indigenous governments and organizations and links academic institutions, municipalities, health networks, and provincial health authority programs

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Physician assistants ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Equity considerations for evaluation (based on the PROGRESS+ framework) ○ Place of residence ○ Race, ethnicity, culture, language ○ Occupation ○ Gender and sex ○ Religion ○ Education ○ Socio-economic status ○ Social capital ○ Personal characteristics associated with discrimination (e.g., age, disability) ○ Features of relationships (e.g., for dependents) • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ▪ Costing studies	• The Family Care Teams is composed of a wide interdisciplinary team including family physicians, nurses, clinical and social navigators, practice improvement leaders, allied health professionals, pharmacists, social works, psychologists, and others • The monitoring and evaluation of the Family Care Teams is under the Department of Health and Community Services and the NL Health Services supported by: ○ Strategic Health Network (SHN) is a forum that is responsible for the implementation, oversights, and evaluation of integrated Family Care Teams providing team-based care ○ The Chief Medical Officer of Health in NL has the primary responsibility for monitoring the health system's performance and the implementation of the Family Care Teams • The suggested indicators for performance monitoring are CIHI's Pan-Canadian PHC Indicators and developing new indicators for the province ○ A dashboard for the metrics should be published publicly • Includes a measure for cultural safety within and across Family Care Teams • Includes metrics for social determinants of health at individual and population health levels • The Government of Newfoundland and Labrador developed a primary healthcare framework for 2015–2025 that ensures collaborative team-based primary care that ensures the engagement from the community and addresses social determinants of health ○ The framework identifies the key goals and objectives of the primary healthcare reform in NL and attaches to those key questions that are fundamental to evaluation; NL highlighted the value of reporting back on these evaluations to the public ○ The indicators answering those questions are reported on the actions, outputs, and short- and long-term outcomes ○ One of the questions that the government intends to answer is "Does Newfoundland and Labrador have a collaborative team-based approach to primary health care?" (p.37); however, the indicators used to answer it were not included in the document ○ Some of the included indicators were provider attachment and provider supply

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ▪ Number of teams ▪ Geographic spread ▪ Provider attachment ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs ▪ Provider experiences	
Yukon	• Government of the Yukon	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) ○ Supports for the team ▪ Patient navigator/care coordinator ▪ Physician assistants ▪ Administrative staff ▪ Information and communication technologies used to provide or support care • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care	• The 2020 report Putting People First – Yukon Health and Social Program and Services Comprehensive Review, stated that the organization-wide continuous measurement of patient outcome and experiences is a key feature for high-performing health and social systems • The virtual care action plan is not specific to team-based primary care, but its outcomes may be transferable: ○ number of electronic health records ○ virtual tools ○ patient portal results (health records, lab results)

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences	
Northwest territories	• Government of the Northwest Territories	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs ▪ Provider experiences	• Partnering Together for Person-and-Family Centric Care: The Northwest Territories Stepped Care 2.0 Final Report stated that program effectiveness tracking was essential for improving person- and family-centric care in the Northwest Territories: ○ electronic tracking can streamline data collection for outcomes including program effectiveness, engagement, training activities, and next steps ○ indicators should be incorporated into monthly tracking ○ opportunities for continuous feedback should be implemented
Nunavut	• Canadian Institute of Health Information	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners	• The Canadian Institute for Health Information provides statistics of Nunavut Health Indicators that may be used to support assessment of team-based primary care, this includes: ○ data on people with a regular doctor ○ number of repeat hospital stays for mental illness ○ social determinants of health (heavy drinking, obesity, smoking, and physical activity) ○ avoidable deaths

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers ○ Where ▪ Co-location ▪ Multi-site (e.g., hub and spoke model) • Approaches to evaluate team-based primary care ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments • Costing studies	• The Government of Nunavut provided a roadmap to strengthen the Nunavut nursing workforce 2021–2026, with suggestions for evaluations that may transfer to team-based primary care • Evaluations for workforce planning include: ○ develop and implement standardized tool for policy and procedure to identify workforce needs ○ conduct and analyze standardized exit interviews ○ conduct community population needs assessment to determine appropriate models and meet community needs • Evaluations for recruitment include: ○ assess the adequacy of existing health human resources service standards ○ monitor Department of Health service standards • Evaluations for professional development include: ○ develop standardized competency evaluation tools ○ conduct annual performance reviews ○ evaluate existing staff models to determine workforce expectations and demands
International jurisdictions			
Australia	• Department of Health and Aged Care	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Costs	• Australia has 31 Primary Health Networks (PHNs) that are funded by the Australian government to manage health regions with the goals of improving the efficiency and effectiveness of health services and increasing access and quality support for people, especially those at risk of poor health outcomes ○ Each region has a different model but all PHNs are guided by the national priorities of the government and work in collaboration with Local Hospital Networks ○ PHNs do not provide health services themselves but rather commission health and support services to improve efficiency • PHNs provide ongoing support to primary-care providers (i.e., general practitioners, nurses, pharmacists, other health workers) and administrative staff in several ways, including developing workforce education and training, designing health promotion programs, supporting health data management and data sharing, and increasing cultural awareness and health literacy of the community ○ Support is provided on site, face-to-face, by phone or email, through educational or networking events, or via online or printed newsletters and guidelines • The performance of PHNs is assessed by the government every 12 months using a performance framework that evaluates the key priority areas for PHNs and organizational, local and national indicators (e.g., childhood immunisation rates, unnecessary hospitalisation) ○ A number of PHNs are also audited every year • In 2018, the PHN program was evaluated by the Department of Health using stakeholder interviews, most of which confirmed that the overarching objectives of

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			the PHN program were sound and that PHNs were well-aligned with other reforms in primary healthcare • Australia's Practice Incentive Program and Workforce Incentive Program both promote multidisciplinary patient-centred primary care and were reviewed by an expert advisory panel throughout 2023–24 who looked at existing data on current practice and international data on best-practice blended funding models; they also consulted with key stakeholders (e.g., patients, researchers, healthcare providers, primary peak organization) ○ The expert panel consisted of experts from primary care, First Nations, health systems, and health economics ○ The panel's work consisted of: ▪ an effectiveness review of General Practice Incentives and the current Practice Incentive Program and Workforce Incentive Program by KPMG ▪ a national and international evidence review conducted by the University of New South Wales ○ A consultation of stakeholders in August and September 2024 through a series of meetings, webinars, and department stakeholder committees ○ The recommendations from the panel's review aim to guide general practice funding reform that will ensure high-quality patient care in the future
New Zealand	• Health New Zealand – Te Whatu Ora	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Pharmacists ▪ Social workers ○ Supports for the team ▪ Patient navigator/care coordinator • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ▪ Number of teams ▪ Geographic spread ▪ Provider attachment	• Health New Zealand provides support to comprehensive primary and community care teams in improving equity and access to primary care within communities, in accordance with the interim New Zealand Health Plan • Health New Zealand has proposed to fund additional roles to expand the skill mix available to primary and community care teams, including kaiāwhina, pharmacists, physiotherapists, care coordinators and, in some rural areas, paramedics • Evaluations on the implementation and impact of New Zealand's Primary Health Care Strategy are conducted by Health New Zealand independently, with a strong formative component, and considering consumer and community responses • The first evaluation report was published in May 2005 and was based on interviews with over 160 participants, with results showing positive responses to the Strategy's goals, some preference for target funding, improved access to care for key populations as a result of fee reductions, improved community representation on primary health organization boards, and some concerns about the sustainability of the Strategy

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Costs	
United Kingdom	• NHS England • Care Quality Commission	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Physician trainees ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Midwives ▪ Pharmacists ▪ Social workers • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Provider experiences	• Primary-care networks are groups of general practitioners who work together alongside other health and care providers to deliver a wide range of services to local populations ○ They were particularly designed to support general practices in the face of growing challenges in primary care • Integrated Care Systems (the overarching body) are responsible for the performance of local primary-care networks • Metrics on primary-care networks are collected through: ○ NHS Digital data collects information about participation in primary-care networks, namely number of staff and types of staff, as well as on participation in the primary-care network directed enhanced service requirements such as: ▪ adherence to new standard contract hours ▪ the mix of services provided ▪ the types of appointment that are available to patients (e.g., face to face, virtual) ▪ the proposed staffing and skill mix • Data is collected via automated systems and in some cases is input by hand if the organization has not yet been set up for automated collection • Data is also collected under the quality and outcomes framework, which contains five main domains (clinical, public health, public health – additional services, public health – vaccination and immunization, and quality improvement) • Indicators for the quality and outcomes framework relevant to team-based primary care include: ○ participation in continuous quality improvement activity focused on workforce and well-being ○ participation in network activity to regularly share and discuss learning from quality improvement activities • Other indicators focus specifically on patient health outcomes and care provision for particular conditions (e.g., atrial fibrillation, coronary heart disease, cholesterol and lipid management), as well as for the provision of particular public health services (e.g., cancer prevention screening, vaccinations) • The Care Quality Commission is also partly responsible for reporting on primary care evaluations from primary-care networks • Six types of evidence categories are used to evaluate, including: ○ people's experience of health and care services (e.g., phone calls, emails and forms received by the care quality commission, interviews with people and local

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			organizations who represent them, patient survey results, feedback from the public who use services obtained by community and voluntary groups or local authorities) ○ feedback from staff and leaders (e.g., results from staff surveys, individual interviews, focus groups with staff, interviews with leaders, whistleblowing) ○ feedback from partners (e.g., interviews and engagement events) ○ observations carried out by inspectors and specialist professional advisors ○ processes such as the national clinical audit, findings from safety incidents, access times for treatment and care, and case note reviews of people's care or clinical records ○ outcomes reported in patient-level data sets, national clinical audits, and patient-reported outcome measures programme • To assess quality, the Care Quality Commission look at evidence to support the quality states that have been listed • A range of quality statements have been prioritized for primary care; however, these generally fall into care being safe, effective, caring, responsive, and well-led
	• Scottish Government – Healthcare Quality and Improvement Directorate • Public Health Scotland	• Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data) ▪ Practice activities ▪ Outcomes assessments ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ○ Outcomes (equity-driven quadruple aim) ▪ Patient experiences ▪ Population health outcomes ▪ Provider experiences	• A significant push has been made since 2018 in Scotland to expand the use of multidisciplinary care teams and a range of evaluation tools have been identified that are supporting this approach • An overarching national monitoring and evaluation strategy for primary care has been established that includes: ○ a primary-care outcomes model (consisting of four logic models) ○ national indicators for primary care ○ where evidence and analysis for monitoring will come from • While the framework is not exclusively for multidisciplinary primary-care teams it is applicable • National outcomes and indicators include: ○ people are more informed (measured by the percentage of people responding to the health and care experience survey who agree or agree strongly) ○ people are more empowered (measured by the percentage of people responding to the health and social care experience survey who agree or agree strongly) ○ primary care services better contribute to population health (measured by increase in the percentage of people responding that they felt they were able to look after their own health) ○ patient experience is enhanced (measured by the percentage of people with positive experience of care at their GP practice and separately in out-of-hours care) ○ primary care workforce has expanded (number of full-time equivalent GP employed staff and number of NHS-employed staff working in primary and community care settings)

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
			○ improved physical and digital infrastructure (percentage of general medical services premises surveyed as being in good or excellent condition and percentage of GP practices, which have an updated clinical IT system) ○ primary care better addresses health inequalities (percentage of GP practices with access to a community links worker and/or money welfare advice services) • Sources include administrative and nationals survey data (i.e., Scottish Government health and care experience survey, primary care workforce survey, financial and management data, public opinion survey, professional body data and registration, routine and administrative data from Integrated Authorities) as well as ongoing primary research and evaluation of programs and projects related to primary care • In addition, Public Health Scotland undertakes a yearly provider survey with multidisciplinary teams, which includes closed questions related to: ○ staff member characteristics (job role, length of time in role, primary base, number of practices supported and employment status) ○ impact of COVID-19 on practice ○ engagement with learning and development in the practice ○ perceptions of the positive and negative aspects of their role ○ job satisfaction ○ working environment ○ ways of working within the practice setting ○ impact of their role
United States	• American Hospital Association • U.S. Centers for Disease Control and Prevention	• Features of models of team-based primary care ○ Providers engaged in the team ▪ Primary-care physicians (e.g., family physicians, general practitioners) ▪ Specialist physicians (e.g., those engaged specific referral networks for common areas of primary-care practice) ▪ Nurse practitioners ▪ Nurses ▪ Allied health professionals (e.g., physiotherapists, occupational therapists, psychologists, dieticians) ▪ Pharmacists ▪ Social workers • Approaches to evaluate team-based primary care ○ Other patient feedback (e.g., patient surveys, interviews, focus groups) ○ Administrative database studies (e.g., from locally held team-based health records or system-level data)	• The American Hospital Association published an issue brief in 2022 that describes measuring the value of team-based care, which involves process and culture, quality and outcomes, patient experience, and costs ○ For process and culture, they describe the need to assess training and coaching (percentage of staff trained in teaming with providers from different disciplines, percentage of employees team-trained during onboarding, and availability of coaching and education for providers to sustain change), care design (processes for patient care design, implementation of team-based rounds, and design and implementation of virtual systems for communication within the team), and uptake of team-based care (percentage of patients treated by interdisciplinary care teams, number of departments, units and/or clinics, provider satisfaction, and staff retention) ○ For quality, measures included care coordination (timeliness of intra-hospital transfer, percent of patients receiving follow-up visits, time taken to receive a service, completion of screenings, closed referrals, and time to complete medication reconciliation), standardized care procedures (adherence to evidence-based guidelines and utilization of handoff checklists), communication (frequency of structured handoffs, briefs and debriefs, communication and collaboration among care providers, and assessment of patient health literacy)

Jurisdiction	Organization/ Health Authority	Dimension(s) of the organizing framework that is/are discussed	Key messages
		▪ Practice activities ▪ Outcomes assessments ▪ Costing studies ○ Provider feedback (e.g., patient surveys, interviews, focus groups) • Measures to evaluate team-based primary care ○ Implementation-process outcomes ○ Provider attachment	○ For outcomes, measures included biometrics, patient safety events, low-value tests or procedures, complication rates, trends in patient safety events, and healthcare utilization ○ For patient experience, measures included communication (scores on satisfaction with communication from providers, admission pre-briefs, post-discharge follow-up, shared decision-making, patient self-efficacy, and inclusion of patients) and overall satisfaction (surveys and feedback) ○ For costs, the measures included care utilization (avoidable readmission, utilization of emergency or urgent care services, safety and hospital-acquired infection issues, and chronic disease exacerbation) and costs avoided (admissions or readmission, low-value tests, high-cost medication use, and ICU length of stay) • The U.S. Centers for Disease Control and Prevention's division of heart disease and stroke prevention developed and updated their CDC Health Systems Scorecard Assessment Tool in 2022, which includes a section on evaluating multidisciplinary team for care management ○ The score card involves yes, no, or not available type questions, where three points are assigned to 'yes' • The types of questions asked include the use of a multidisciplinary team, who it includes (at least a nurse or pharmacist), use of care team huddles, referrals to specialized clinics, involvement of primary care providers, use of collaborative practice agreements with pharmacists or community health workers, and provision of collaborative drug therapy management or medication therapy management

Appendix 4: Documents excluded at the final stages of reviewing

Document type	Hyperlinked title
Evidence syntheses	Behavior change interventions and policies influencing primary healthcare professionals' practice: An overview of reviews
	Impact of remuneration, extrinsic and intrinsic incentives on interprofessional primary care teams: Protocol for a rapid scoping review

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This rapid evidence profile was funded by the Canadian Primary Care Research Network and the Ontario SPOR SUPPORT Unit. The McMaster Health Forum receives both financial and in-kind support from McMaster University. The views expressed in the rapid evidence profile are the views of the authors and should not be taken to represent the views of either the Canadian Primary Care Research Network, Ontario SPOR SUPPORT Unit, or McMaster University.