Rapid Synthesis

Identifying Primary-care Models that Include Psychologists to Address Mental Health and Substance-use Issues

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Rapid Synthesis:
Identifying Primary-care Models that Include Psychologists to Address Mental Health and Substance-use Issues
30-day response

24 February 2022

McMaster Health Forum

The McMaster Health Forum's goal is to generate action on the pressing health-system issues of our time, based on the best available research evidence and systematically elicited citizen values and stakeholder insights. We aim to strengthen health systems – locally, nationally, and internationally – and get the right programs, services and drugs to the people who need them.

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Timeline

Rapid syntheses can be requested in a three-, 10-, 30-, 60- or 90-business-day timeframe. This synthesis was prepared over a 30-business-day timeframe. An overview of what can be provided and what cannot be provided in each of the different timelines is provided on McMaster Health Forum's Rapid Response program webpage (www.mcmasterforum.org/find-evidence/rapid-response).

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Conflict of interest

The authors declare that they have no professional or commercial interests relevant to the rapid synthesis. The funder played no role in the identification, selection, assessment, synthesis or presentation of the research evidence profiled in the rapid synthesis.

Merit review

The rapid synthesis was reviewed by a small number of policymakers, stakeholders and researchers in order to ensure its scientific rigour and system relevance.

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KEY MESSAGES

Question

- What are the features and impacts of interdisciplinary primary-care models that include psychologists who provide care and support for people with mild to moderate mental health and substance-use issues?

Why the issue is important

- In any given year, one in five Canadians will experience a mental health or substance-use issue, which will have a significant impact on not only the individual, but also their families, communities, and the health system.
- Interprofessional collaboration is increasingly viewed as an effective approach to address mental health and substance-use issues with reported benefits including improved patient health status, satisfaction with care, treatment compliance, and increased performance motivation for healthcare providers.
- Incorporating mental health specialists, such as psychologists, into primary-care teams has been explored as one approach to enhancing interprofessional collaboration in mental health.

What we found

- We identified 14 systematic reviews and eight primary studies relevant to the question, which we have used to describe key features and impacts (based on the quadruple aim of improving patient and caregiver experience, improving population health, keeping costs manageable, and positive provider experiences) of primary-care models that include psychologists.
- We found a lack of evidence about primary-care models that integrate psychologists to provide support for substance-use issues and for outcomes related to provider experiences.
- The literature recommended collaborative-care models that engage mental health providers to liaise and coordinate with primary-care physicians for the treatment and management of patients with depression.
- Implementation of collaborative primary-care models was identified as needing to ensure sufficient understanding of the collaborative-care approach among team members, clearly define roles and responsibilities, define care pathways, and ensure effective communication between health professionals involved in the team.
- We also conducted a jurisdictional scan of all Canadian provinces and territories to identify primary-care models that incorporate psychologists into their mental health service provision.
- A 2017 $11 billion investment by the federal government specifically targeted at improving, in part, the availability and integration of multidisciplinary mental health and addiction services in provinces and territories over a 10-year period has led to the adoption of or changes to existing primary-care models.
- For example, we found that the Primary Care Networks in Alberta, Community Recovery Teams in Saskatchewan, Ontario Health Teams in Ontario, and Collaborative Teams Hubs in Newfoundland and Labrador are increasing access for physicians to mental health consultants such as psychologists, enhancing a team-based approach to patient care provision and coordination, and improving access to mental health services in primary care and/or community-based programs.
- The federal funding also supported; Community Recovery Teams in Saskatchewan that provide more intensive supports for people living with complex, persistent mental health challenges; mental health and wellness programs in Yukon that provide team-based coordinated care in local communities; and a Territorial Suicide Prevention and Crisis Support Network that is supporting the integration of primary health services with culturally appropriate mental health interventions.
- The governments of Ontario and Quebec have also made billion-dollar investments in recent years for the integration of mental health and substance-use services with primary care through education and hiring of mental health specialists.
- We also identified several programs that are integrating mental health care providers into primary care, including: an integrated primary-care program called B Well in British Columbia; Manitoba's Indigenous Cree communities project to integrate mental health services with primary care for Cree adults; the Nova Scotia Health Authority's Mental Health and Addictions Program that supports primary care and other providers in providing care for people experiencing mild or moderate mental health conditions; and the integrated primary-care clinics of the Horizon Health Network in New Brunswick.

QUESTION

What are the features and impacts of interdisciplinary primary-care models that include psychologists who provide care and support for people with mild to moderate mental health and substance-use issues?

WHY THE ISSUE IS IMPORTANT

Mental health has become one of the most pressing issues of our time. In any given year, one in five Canadians will experience a mental health or substance-use issue, which will have a significant impact on not only the individual, but also their families, communities, and the health system.(1) These impacts of mental health and substance-use issues are only expected to be exacerbated by Canada's growing and aging population. Interprofessional collaboration has been increasingly viewed as an effective approach to treating chronic conditions such as mental health issues, with reported benefits of improved patient health status, satisfaction with care, treatment compliance and increased performance motivation for healthcare providers.(2; 3) In the context of mental health and substance use, one approach that has been explored in recent years is to incorporate mental health specialists, such as psychologists, into primary care through interprofessional collaboration with primary-care providers. The way in which this approach to interdisciplinary care is implemented can vary based on the primary-care model used. This rapid synthesis explores interdisciplinary primary-care models that incorporate the use of psychologists to provide care for patients with mild and moderate mental health and substance-use issues.

Box 1: Background to the rapid synthesis

This rapid synthesis mobilizes both global and local research evidence about a question submitted to the McMaster Health Forum's Rapid Response program. Whenever possible, the rapid synthesis summarizes research evidence drawn from systematic reviews of the research literature and occasionally from single research studies. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies, and to synthesize data from the included studies. The rapid synthesis does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

Rapid syntheses can be requested in a three-, 10-, 30-, 60- or 90-business-day timeframe. An overview of what can be provided and what cannot be provided in each of these timelines is provided on the McMaster Health Forum's Rapid Response program webpage (www.mcmasterforum.org/find-evidence/rapid-response).

This rapid synthesis was prepared over a 30-business-day timeframe and involved four steps:

1) submission of a question from a policymaker or stakeholder (in this case, the British Columbia Ministry of Health);
2) identifying, selecting, appraising and synthesizing relevant research evidence about the question;
3) drafting the rapid synthesis in such a way as to present concisely and in accessible language the research evidence; and
4) finalizing the rapid synthesis based on the input of at least two merit reviewers.

WHAT WE FOUND

We identified 14 systematic reviews and eight primary studies relevant to the question. We also conducted a jurisdictional scan of all Canadian provinces and territories. We outline in narrative form below our key findings from the identified evidence and jurisdictional scan. Additional details on insights from the research evidence are provided in Table 1, and details from the jurisdictional scan can be found in Table 2. Other details from the identified evidence documents are provided in Appendix 1 and 2.

Key findings from the research evidence

The included systematic reviews and primary studies generally provided descriptions or recommendations of potential approaches for integrating mental health providers within primary care. Most of the included documents in Table 1 contain information relevant to features of the interventions and the quadruple aim outcomes of improving the patient and caregiver experience,(4) improving the health of the population,(5-9) and keeping costs manageable.(5; 11) We did not identify any relevant research evidence related to provider experiences. There was a lack of evidence relevant to addressing the integration of substance-use issues within

primary care. Many of the included evidence documents also provided implementation considerations, which we describe below.

Regarding improving the patient and caregiver experience, a primary study based in Ontario, Canada, examined patient experience with the quality of mental health care in Family Health Teams (a team-based primary-care model). The following key findings were identified in relation to accessibility, technical care, trusting relationships, and meeting diverse needs:(4)

- participants were easily able to access a range of mental health services with mental health professionals integrated into primary care;
- participants expressed different levels of awareness of the full range of services available through family health teams, including supports for mental health, in that some participants were informed while others were not;
- the length of appointments with physicians were perceived as inadequate;
- patients expressed desire for mental health screening and assessments to be routinely integrated into primary-care visits;
- variations exist within and across Family Health Teams in terms of the types of mental health providers and the types of therapeutic modalities used in therapy;
- those with psychiatry embedded in their primary-care team described the role of psychiatry as one that mainly provides medication consultation or management;
- regular follow-up was viewed as an essential component of care, yet few participants reported having experienced on-going follow-up; and
- trusting relationships with providers in primary care are essential for mental health care.

Most of the available research evidence assessed the impact of primary-care models on mental health outcomes. A high-quality systematic review explored the feasibility of collaborative care for depression in adults 60 years and older. The collaborative care model integrated mental health providers and primary-care providers in a system of care for depression management. The review found that as compared to usual care, collaborative-care interventions reduced depressive and suicidal symptoms, and patients receiving collaborative care were significantly more likely to report engaging in some form of depression treatment, such as any antidepressant medication and psychotherapy. At six and 12 months follow-up, compared to usual care, patients receiving collaborative-care interventions exhibited lower levels of depressive symptoms and thoughts of suicide, and were significantly more likely to report engagement and adherence to antidepressant medication treatment.(5) Additionally, a medium-quality systematic review and three primary studies assessed collaborative-care or team-based approaches with mental health providers embedded in primary care, and found similar improvements in mental health outcomes.(6-9)

Box 2: Identification, selection and synthesis of research evidence

We searched Health Systems Evidence (www.healthsystemsevidence.org) and PubMed (on 20 January 2022) for research evidence. We identified overviews of systematic reviews, systematic reviews and economic analyses or costing studies by searching Health Systems Evidence using the topic filters for three delivery arrangement categories under system arrangements (Skill mix – Role expansion or extension, Skill mix – Task shifting/substitution and Skill mix – Multidisciplinary teams) combined with the topic filter for primary care. In PubMed we searched for literature published since 2016 using the following combination of terms: [(primary care) AND (multidisciplinary OR interdisciplinary OR multi-disciplinary OR inter-disciplinary)) AND (team) AND (psych*) AND Canada.

We supplemented these searchers with hand searches of government resources from select jurisdictions and the provinces and territories in Canada.

The results from the searches were assessed by one reviewer for inclusion. A document was included if it fit within the scope of the questions posed for the rapid synthesis.

For each systematic review we included in the synthesis, we documented the focus of the review, key findings, last year the literature was searched (as an indicator of how recently it was conducted), methodological quality using the AMSTAR quality appraisal tool (see the appendix for more detail), and the proportion of the included studies that were conducted in Canada. For primary research (if included), we documented the focus of the study, methods used, a description of the sample, the jurisdiction(s) studied, key features of the intervention, and key findings. We then used this extracted information to develop a synthesis of the key findings from the included reviews and primary studies.

A high-quality systematic review and two primary studies assessed the cost-effectiveness and feasibility of collaborative-care interventions involving mental health and primary-care providers for the management of patients with varying degrees of depression.(5; 10; 11) The systematic review found that collaborative-care interventions were more cost-effective than usual care due to an increase in depression-free days among those receiving care.(5) One of the primary studies focused on telemedicine-based collaborative care compared to practice-based collaborative care, and suggested that telemedicine-based care was more cost-effective than the practice-based care model.(11)

A medium-quality overview of systematic reviews assessed the effectiveness of interprofessional collaboration in primary-care settings, and explored potential barriers and facilitators for collaboration. The findings showed that interprofessional collaboration in primary-care settings appears to be beneficial for professionals in which six reviews (of the total 58 included reviews) reported increased healthcare-professional satisfaction, and more positive experiences and perceptions of collaboration, such as improved communication, and better understanding of responsibility and roles. Additionally, it was reported that there is growing provider dissatisfaction in primary care from organizational factors, such as increased workload and pressure.(15) The same overview and another medium-quality systematic review also included insights about barriers and facilitators to interprofessional collaboration, which were mostly identified at the organizational and inter-individual (between professionals) levels, such as limitation of information technology to enable sharing and increasing education for care managers.(12; 15)

Four medium- and low-quality systematic reviews and one primary study identified implementation considerations for integrating mental health providers in primary care for treatment of patients with mental health issues. Key implementation barriers that were identified as needing to be considered to ensure effective implementation included insufficient understanding of the collaborative-care approach among team participants, unclear definitions and/or lack of awareness of team members' roles and competencies, lack of engagement with the collaborative approach among primary-care providers (e.g., due to competing priorities, time pressures, or lack of interest or comfort with diagnosing mental health issues), limitations of information technology for creating and sharing patient records, long-term funding and joint monitoring.(12; 13) Given this, it is unsurprising that many of the identified implementation facilitators focused on addressing these barriers, including providing systematic feedback on patient conditions, ensuring sufficient understanding of the collaborative-care approach among team members, clearly defining roles and responsibilities, defining care pathways, and ensuring effective communication between health professionals involved in the team.(6; 12; 14)

Two medium-quality systematic reviews and a primary study provided more specific recommendations to enhance collaboration amongst mental health providers and primary-care physicians within teams, which include:

- creating incentives for engagement in collaborative-care approaches;
- ensuring reimbursement for additional work by primary-care providers;
- providing systematic training programs to promote interdisciplinary collaboration between primary-care physicians, nurses and mental health providers; and
- ensuring that organizational training should support the developing interprofessional relations and collaboration.(12; 13; 16)

Key findings from the jurisdictional scan

Our jurisdictional scan identified several interdisciplinary primary-care models that include psychologists that have been or are currently being implemented in Canadian provinces and territories.

In 2017, the Government of Canada confirmed an investment of $11 billion over 10 years to specifically target the improvement of home and community care, and mental health and addiction services in provinces and territories. Bilateral agreements were established with the provinces and territories under the

understanding that these federal investments would support initiatives in the area of mental health and addictions that increase, in part, the availability of these services in communities, and the integration of multidisciplinary professional services. This investment led to the development and implementation of several team-based care models within provinces and territories.

In Alberta, the most used team-based primary-healthcare model, Primary Care Networks (PCNs), consists of partnerships between physicians and Alberta Health Services to provide interdisciplinary programming and services. Within this model, Alberta Health Services provides a Shared Mental Health Care Program that gives family physicians access to mental health consultants at the physician's practice. Meanwhile, in Saskatchewan, $4.2 million of funding from the federal government was used to implement Community Recovery Teams (CRTs) that use a holistic team-based approach to provide more intensive supports for people living with complex, persistent mental health challenges.

A project implemented in Manitoba's Indigenous Cree communities in July 2019 to integrate mental health services into primary care for adults included a psychiatric referral service that was established with funding from Health Canada. The psychiatric service offers consultation and follow-up care while liaising with the primary care and other affiliated health staff in the community when applicable. The clinicians are in the community one or two times a month and provide continuity in communication between the psychiatrists, primary-care providers, patients and families, other community services, and hospitals. Manitoba is also developing interprofessional teams of care providers called My Health Teams that will incorporate mental health services to provide networked primary care for specific geographic areas, communities or populations. Additionally, Access Centres currently provide front-line healthcare from physicians or nurse practitioners to assist with mental health, home care, employment, and income assistance programs.

The Ontario government introduced Ontario Health Teams (OHTs) in 2019 as a new way of organizing and delivering care to patients in their local communities by integrating healthcare services, including primary care and mental health and addictions services, through a team-based collaborative-care model. Ontario's $3.8 billion five-year action plan for mental health and addictions system involves on-going efforts to integrate mental health and addictions services with primary care. Healthcare integration is also seen at a more local level through Family Health Teams (FHTs) which provide integrated services with high success rates.

In British Columbia, the Burnaby Primary Care Networks launched B Well, an integrated primary-care program where patients receive referrals from primary-care providers to a team of seven Behavioural Health Coaches who work under the supervision of a Clinical Psychologist, while in New Brunswick, patients of a network of community-based primary-care facilities called the Horizon Health Network, can be referred by their primary-care provider to psychology services at select facilities and programs in the network.

In Québec, the provincial government announced in January 2022 that $1.15 billion will be invested into mental health services over five years, which includes hiring and integrating healthcare workers such as psychologists and psychiatrists into mental health services.

Nova Scotia's Blueprint for Mental Health and Addictions 2019-2021 highlights efforts to implement a standardized care model that involves increasing the number of mental health and addictions support workers available to support collaborative primary-care teams in addressing mental health issues early. The Nova Scotia Health Authority's Mental Health and Addictions Program supports primary healthcare and other providers in enabling people experiencing mild or moderate symptoms to manage their conditions. To increase supply of support workers, Nova Scotia increased investments in the psychology residency program by increasing the annual stipend by $7,500 and increasing the number of residents from nine to 10 per year.

Another model of care was identified from a 2020 report by the College of Family Physicians of Canada at Queens Family Health team in Liverpool, Nova Scotia. In this model, patients can be referred to short-term mental health services provided by a mental health counsellor (e.g., clinical therapist, social worker,

psychiatrist). These counsellors were given access to the patient's electronic medical records and to their primary-care providers.

A Hub and Spoke model was introduced in Newfoundland and Labrador in 2019 to deliver evidence-informed opioid-dependence treatment to residents in all four Regional Health Authorities through Specialized Collaborative Teams Hubs. These hubs consist of teams of prescribing practitioners (physicians or nurse practitioners), psychologists, social workers, pharmacists, and practice nurses. However, the province has had challenges since 2020 with implementing its model of care using Collaborative Team-based Care clinics (CTCs) due to a shortage of family doctors.

In Yukon, a territory-wide Hub and Spoke model of care was also used to organize the implementation of mental health and wellness programs that were funded by the federal investment and aimed to achieve greater inter-program and team-based care coordination, and improve access to services in residents' local communities.

Lastly, in 2017 the Government of Northwest Territories identified the need to adopt a collaborative, stepped-care model of mental health and addiction service provision that established referral pathways, information sharing, and discharge-planning processes. Federal funding was specifically allocated by Northwest Territories' Department of Health and Social Services to develop and implement a Territorial Suicide Prevention and Crisis Support Network that would work to spread evidence-based models of community mental health care and culturally appropriate interventions that are integrated with primary health services.

Table 1: Overview of evidence on primary-care models that include psychologists and provide care and support for people with mild to moderate mental health and substance-use issues

Outcomes based on quadruple aim metrics	Key findings and features from evidence of primary-care models that include psychologists
Improving the patient and caregiver experience	• The expansion of collaborative team–based care mainly through the creation of Family Health Teams in Ontario, Canada, brought physicians together with nurses, nurse practitioners, social workers, mental health counsellors, pharmacists, and other healthcare professionals into primary-care delivery • A 2021 primary study based in Ontario aimed to understand patients' experiences on the quality of care that they received for anxiety and depression through family health teams • The study collected responses through focus groups and individual interviews by recruiting participants through flyers in waiting rooms at 38 family health teams across three regions in Ontario, both rural and urban, and found the following: o With mental health professionals integrated into primary care, participants were easily able to access a range of mental health services o The length of appointments with physicians were perceived as inadequate o Regular follow-up is an essential component of care, yet few participants reported having experienced on-going follow-up o Trusting relationships with providers in primary care was essential for mental health care (4)
Improving health of populations	• A 2019 medium-quality systematic review examined whether and how mental and somatic comorbidities are considered in primary care-based stepped-care models for adults, and showed mixed results for the impact on quality of life, but significant improvements reported for mental health symptoms (7) o The current stepped-care model focuses on primary-care physicians involved in treatment decisions, case reviews, and prescription of medication, with psychologists or other mental health specialists frequently integrated into the care team as part of the treatment consultation or as a referral option o In addition, the care model involves modular treatment, collaboration between healthcare professionals, and digital approaches for both treatment and communication o The systematic review identified 39 studies, with the majority conducted in the United States and the Netherlands • A 2016 randomized clinical trial based in United Kingdom assessed the effectiveness of collaborative care compared with usual care in the management of patients with depression, in which collaborative care involved primary-care liaison, and found that collaborative care improves depressive symptoms up to 12 months after initiation of the intervention (9) o The collaborative-care intervention was delivered by a team of care managers that are all existing National Health Service (NHS) mental health workers working in a primary-care environment

Outcomes based on quadruple aim metrics	**Key findings and features from evidence of primary-care models that include psychologists**
	○ Care managers were supervised each week by specialist mental health workers including clinical psychologists, psychiatrists, or senior nurse psychotherapists, and discussions on participants were organized using a computerized patient case-management information system ○ During sessions with participants, care managers assessed participants' views of depression and their attitudes to and concordance with psychosocial and pharmacological treatments; negotiated shared treatment decisions with participants; assisted participants to manage antidepressant medication if prescribed; delivered a brief low-intensity psychosocial intervention in the form of behavioural activation; and provided participants with relapse-prevention advice ○ The usual care arm was general practitioner standard practice • A 2007 high-quality systematic review assessed collaborative-care interventions integrated within primary care for the treatment of depression in patients 60 years and older, and found that collaborative-care interventions were superior to usual care in terms of reducing depressive and suicidal symptoms, and patients were more likely to report engaging in some form of depression treatment, such as medication and psychotherapy (5) ○ The systematic review identified three randomized controlled trials, all assessing collaborative-care interventions that involve integrating mental health providers and primary-care providers in the target system of care for depression management
Reducing the per capita cost of healthcare	• A 2018 program evaluation assessed the cost-effectiveness of embedding a psychologist into an existing primary-care practice to facilitate the integration of care, and found that the integration of care may lead to reduced healthcare costs, with 10.8% savings in costs for patients with Blue Cross Blue Shield of Kansas City insurance (10) ○ The study evaluated a behavioural health organization that integrated services of licensed psychologists with primary-care practice in Kansas City, a midwestern metropolitan area in the United States ○ Data from patients with Blue Cross Blue Shield of Kansas City insurance (BCBSKC) with at least one encounter with the psychologist were compared to BCBSKC fully insured patients at large, as the control, to calculate cost savings • A 2015 randomized cost-effectiveness study based in Arkansas, United States assessed on-site versus off-site collaborative-care approaches for depression, and found that telemedicine-based collaborative care was more cost-effective than practice-based collaborative care (11) ○ Federally qualified health centres (FQHCs) are community-based healthcare services that receive funds from the United States' Department of Health and Human Services to provide primary-care services in underserved areas ○ New federal standards require FQHCs to qualify as patient-centred medical homes (PCMH), and PCMH recognition requires team-based care with an emphasis on care coordination, including for depression recognition and management

Outcomes based on quadruple aim metrics	Key findings and features from evidence of primary-care models that include psychologists
	○ Additionally, FQHCs can be eligible to receive bundled payments if depression is added to the list of clinical conditions in their care management ○ To qualify as a PCMH and receive bundled payments, FQHCs are considering outsourcing care management services, leading to the off-site approach of telemedicine-based collaborative care • A 2007 high-quality systematic review explored the cost-effective feasibility of collaborative-care interventions for the treatment of depression in patients 60 years and older, and found that collaborative-care interventions are more cost-effective than usual care due to a significant increase in depression-free days (5) ○ The systematic review identified three randomized controlled trials, all assessing collaborative-care interventions that involve integrating mental health providers and primary-care providers in the target system of care for depression management
Improving the work life of providers	• A 2019 medium-quality overview of systematic reviews assessed the effectiveness of interprofessional collaboration in primary-care settings and explored potential barriers and facilitators for collaboration between primary and mental health care providers (15) ○ Six reviews reported on outcomes related to providers, such as increased provider satisfaction and more positive experiences and perceptions of interprofessional collaboration, such as improved communication, and better understanding of responsibility and roles ○ Growing dissatisfaction amongst providers was reported due to organizational factors, such as increased workload and pressure • A 2016 medium-quality systematic review explored enablers and barriers to implementing a multi-professional, collaborative-care approach for caring for patients with anxiety and depression, including those at the healthcare provider and organizational level (12) ○ Some of the barriers identified from the included studies related to healthcare provider satisfaction, such as insufficient understanding of the collaborative-care approach among team participants, and lack of engagement with the approach among primary-care providers due to competing priorities, time pressures, or lack of interest or comfort with diagnosing mentally ill patients ○ The review suggested that improvements to enhance collaborative care and to increase provider satisfaction could be made through creating incentives for collaborative participation, ensuring reimbursement for additional work by primary-care providers, and increasing education for care managers

Table 2: Primary-care models in Canadian provinces and territories that include psychologists and provide care and support for people with mild to moderate mental health and substance-use issues

Province/territory	Description of primary care models that include psychologists
Pan-Canadian	• In 2017, the Government of Canada confirmed an investment of $11 billion over 10 years to specifically target the improvement of home and community care and mental health and addiction services in provinces and territories o Bilateral agreements were established with the provinces and territories under the understanding that these federal investments will support initiatives in the area of mental health and addictions that increase, in part, the availability of these services in communities, and the integration of multidisciplinary professional services
British Columbia	• In October 2020, the Burnaby Primary Care Networks launched B Well, an integrated primary-care program where patients receive referrals from primary-care providers to a team of seven Behavioural Health Coaches who work under the supervision of a clinical psychologist o The psychologist acts as a lead for the behavioural health team by providing supervision, education and consultation, while also providing assessments and treatment for patients who need specialized care
Alberta	• Alberta operates with three main primary healthcare models that all encompass a team-based approach, and the most common model is Primary Care Networks (PCNs) that were created through an agreement between physicians and Alberta Health Services, Alberta's provincewide health system to provide interdisciplinary programming and services o PCNs are comprised of groups of family physicians working with other healthcare professionals such as nurses, pharmacists, social workers, and mental health professionals • Alberta Health Services provides a Shared Mental Health Care Program, which helps family physicians to assess, treat, and manage their patients' mental and behavioural health concerns through regular consultation provided at the physician's practice, and access to mental health consultants (psychiatric registered nurses, social workers, psychologists, psychiatrists) • In 2011, the Government of Alberta and Alberta Health Services released their mental health strategy report, outlining priorities to improve the capacity of and access to quality addiction and mental health services within each primary-care network (PCN) based on community needs and resources, at the level appropriate within the primary health-care environment
Saskatchewan	• According to a February 2019 media release on the Saskatchewan government's website, a new Community Recovery Team in Saskatoon is providing more intensive supports for people living with complex, persistent mental health challenges o The Community Recovery Teams (CRTs) use a holistic team-based approach to help clients, and are comprised of a mental health nurse, clinical counsellor, social worker, occupational therapist, addiction counsellor, and sssessor coordinator o The launch of the Community Recovery Teams was supported by $4.2 million in targeted funding from the Canada-Saskatchewan Bilateral Funding Agreement
Manitoba	• A 2020 report by the College of Family Physicians of Canada described a project implemented in Manitoba in July 2019 about integrating mental health services to primary care for adults in Indigenous Cree communities that included a psychiatric referral service that was established with funding from Health Canada

Province/territory	Description of primary care models that include psychologists
	• The psychiatric service accepts referrals from physicians, nurses, mental health workers, and other community staff, and the psychiatry team offers consultation and follow-up care and liaises with the primary care and other affiliated health staff in the community as applicable o Mental wellness clinicians work within each community to provide support and monitor patients for treatment adherence and mental well-being o The clinicians are in the community one or two times a month and provide continuity in communication between the psychiatrists, primary-care providers, patients and families, other community services, and hospitals • Access Centres are present in Manitoba and provide front-line healthcare from physicians or nurse practitioners to assist with mental health, home care, employment, and income assistance programs • My Health Teams are under development and provide networked primary care for a geographic area, specific community or population o Mental Health services will be provided by My Health Teams
Ontario	• In December 2015, the previous Liberal government proposed *Patients First: A Proposal to Strengthen Patient-Centred Health Care in Ontario* that centred around expanding the role of Local Health Integration Networks (LHINs) in order to reduce gaps and strengthen patient-centred healthcare in the province, including through integration of mental health services into primary care o One of the proposal's four components was 'timely access to primary care, and seamless links between primary care and other services', which focused on the LHINs improving access to interprofessional teams for residents who need them • Ontario's $3.8 billion five-year action plan for mental health and addictions system involves on-going efforts to integrate mental health and addictions services with primary care, including: o Locations for consumption and treatment services that provide integrated primary care and mental health services o Rapid access addiction medicine (RAAM) clinics that provide immediate treatment and serve as a pathway to treatment between emergency departments and primary care, with new or expanded RAAM clinics in more than 30 communities across the province and 54 RAAMs currently in operation across Ontario • The current Ontario government introduced Ontario Health Teams (OHTs) in 2019 as a new way of organizing and delivering care to patients in their local communities by integrating healthcare services, including primary care and mental health and addictions services, through a team-based collaborative care model o At maturity, 50 OHTs are expected to cover 92% of the province's population • Family Health Teams (FHTs) also offer the integration of services at a more local level with high success rates, according to a 2020 report from the College of Family Physicians of Canada
Québec	• According to a news release from 25 January 2022, the government of Québec announced that $1.15 billion will be invested into mental health services over five years, which includes hiring and integrating healthcare workers such as psychologists and psychiatrists into mental health services • Information or examples of primary care models integrating psychologists were not found

Province/territory	Description of primary care models that include psychologists
New Brunswick	• Horizon Health Network is the largest regional health authority in New Brunswick and encompasses a network of community-based primary-care clinics, hospitals, public-health services, and addictions and mental health services throughout the province o Patients can be referred by their primary-care provider to psychology services at select facilities and programs in the network
Nova Scotia	• In Nova Scotia's Blueprint for Mental Health and Addictions 2019-2021, efforts are underway to develop a standardized care model that involves the integration of support workers into collaborative-care teams (with 16.8 social work full-time positions established as of June 2019) o Nova Scotia increased investments in the psychology residency program by increasing the annual stipend by $7,500 and increasing the number of residents from nine to 10 per year • A 2020 report by the College of Family Physicians of Canada described the model of care at Queens Family Health team in Liverpool, Nova Scotia, where patients could be referred to short-term mental health services provided by a mental health counsellor (e.g., clinical therapist, social worker, psychiatrist) within their primary-care clinic o The mental health counsellor had access to the patient's electronic medical record and to their primary-care providers o The Queens Family Health team reported that they can provide timely assessments with a trusted mental health worker within days or weeks, with patients seemingly more likely to accept an initial visit o The addition of a mental health counsellor provided patient access to the formal system and/or long-term psychiatric consultation • The Nova Scotia Health Authority's Mental Health and Addictions Program supports primary health-care and other providers in enabling people experiencing mild or moderate symptoms to manage their conditions
Prince Edward Island	• There are five primary-care networks covering PEI, some of which may integrate mental health workers • There are mental health walk-in clinics across PEI at which a 45-60 minute session with a registered mental health therapist is freely available without an appointment or referral needed • Community mental health facilities integrate mental health workers with group treatment education plans and other relevant services
Newfoundland and Labrador	• The province of Newfoundland and Labrador established primary healthcare clinics called Collaborative Team-based Care clinics (CTCs) in 2020 that consist of a team of primary-healthcare providers offering comprehensive care services, including allied care providers, but the province's shortage of family doctors has made it challenging to ensure a smooth implementation of this model of care o Specialized Collaborative Teams Hubs have also been established since 2019 in all four Regional Health Authorities using a Hub and Spoke model to deliver evidence-informed opioid-dependence treatment services to residents through teams of prescribing practitioners (physicians or nurse practitioners), psychologists, social workers, pharmacists, and practice nurses • Newfoundland and Labrador has a Primary Health Care Framework for 2015-2025 that recognizes the need to link individuals and families to a collaborative primary-care team so that they can access health and social services, including mental health services

Province/territory	Description of primary care models that include psychologists
	○ According to this Framework, dedicated central hubs or "Health Homes" where individuals and families can access these comprehensive services will coordinate access to a variety of healthcare providers, however, the structure of the collaborative primary-care model to be implemented in Newfoundland and Labrador has not been identified as yet
Yukon	• As of 21 August 2017, Canada's federal government and the Government of Yukon agreed on shared health priorities that includes aligning delivery models to increase capacity and address concurrent disorders (mental health and addiction), as well as to work more collaboratively with the primary-care system to better address individuals with complex health needs ○ The improved initiatives will look at enhancing integrated services for people with complex health needs at various access points across the existing primary-care, health, and social systems, including improved provider collaboration and connections between system-entry points • The Government of Yukon also established a Mental Wellness Strategy focused on strengthening partnerships to better coordinate mental wellness, trauma and substance-use treatment for residents through the implementation of mental health and wellness programs ○ These programs were organized into a territory-wide Hub and Spoke model of care that aimed to achieve greater inter-program and team-based care coordination, and improve access to services in residents' local communities
Northwest Territories	• As of 21 August 2017, Canada's federal government and the Government of Northwest Territories agreed on shared health priorities, including allocation of federal funding by Northwest Territories' Department of Health and Social Services to develop and implement a Territorial Suicide Prevention and Crisis Support Network, targeted towards all NWT residents affected by a suicide-related or other type of mental health crisis ○ The Territorial Suicide Prevention and Crisis Support Network will work to spread evidence-based models of community mental health care and culturally appropriate interventions that are integrated with primary health services ○ The Government of Northwest Territories also identified the need to adopt a collaborative, stepped-care model of mental health and addiction service provision in its 2017 agreement with the federal government, that established referral pathways, information sharing, and discharge planning processes
Nunavut	• *None identified*

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APPENDICES

The following tables provide detailed information about the systematic reviews and primary studies identified in the rapid synthesis. The ensuing information was extracted from the following sources:

- systematic reviews - the focus of the review, key findings, last year the literature was searched, and the proportion of studies conducted in Canada; and
- primary studies - the focus of the study, methods used, study sample, jurisdiction studied, key features of the intervention and the study findings (based on the outcomes reported in the study).

For the appendix table providing details about the systematic reviews, the fourth column presents a rating of the overall quality of each review. The quality of each review has been assessed using AMSTAR (A MeaSurement Tool to Assess Reviews), which rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered "high scores." A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8).

All of the information provided in the appendix tables was taken into account by the authors in describing the findings in the rapid synthesis.

Appendix 1: Summary of findings from systematic reviews and other types of reviews about primary-care models that include psychologists and provide care and support for people with mild to moderate mental health and substance-use issues

Type of review	Focus of systematic review	Key findings	Year of last search/ publication date	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic reviews	An overview of reviews on interprofessional collaboration in primary care: Effectiveness	This overview of systematic reviews assessed the effectiveness of interprofessional collaboration in primary-care settings, in terms of patient, healthcare professional, and cost outcomes, and to identify barriers and facilitators of interprofessional collaboration, including between primary and mental health care providers. For patient outcomes, there were 13 out of 15 systematic reviews that reported significant improvements in clinical outcomes for depression and anxiety. A review examining the connection between primary-care providers and mental health providers and/or services found that studies with positive clinical outcomes included care management, enhanced communication, and consultation liaison. Additionally, the integration of mental health services in primary-care settings showed improvements for patients with mental health disorders or alcohol-related substance abuse in symptom severity, treatment response, and remission when compared to usual care. From the results, interprofessional collaboration in primary-care settings appears to be beneficial for professional, organizational, and cost-related outcomes, although some outcomes were under-reported. Healthcare-professional outcomes reported were increased healthcare-professional satisfaction and more positive experiences and perceptions of collaboration (such as improved communication, better understanding of responsibility and roles). Growing general practitioner dissatisfaction in primary care from organizational factors (workload, pressure) was reported.	Literature last searched 31 January 2019	6/9 (AMSTAR rating from McMaster Health Forum)	Not specified
	Management of comorbid mental and somatic disorders in stepped-care approaches in primary care: a systematic review	The review examined whether current stepped-care models involved the treatment of somatic and/or mental comorbidities. Primary-care physicians were primarily involved with treatment decisions, case reviews, and prescription of medication. Psychologists or other mental health specialists were frequently integrated into the care team as part of the treatment consultation or as a referral option. The care model involved modular treatment, collaboration between healthcare professionals, and digital approaches for both treatment and communication. The results were mixed for the impact on quality of life, but significant improvements were reported in mental health. The authors suggested that clear care pathways, role definitions, and good communication between professionals involved are integral parts of stepped-care approaches in primary care.	Literature last searched October 2017	6/10 (AMSTAR rating from McMaster Health Forum)	1/39
	To assess patient outcomes associated with primary care behavioural health services, focusing on services	There were significant limitations in the methodological rigour of reviewed studies, so there were only robust findings for healthcare utilization. Primary Care Behavioural Health (PCBH), a delivery platform in which behavioural health services are integrated within primary care, is associated with positive outcomes. These include shorter wait-times for treatment, a higher likelihood of	Literature last searched June 2017	5/10 (AMSTAR rating from McMaster Health Forum)	Not specified

	delivered under normal clinic conditions Patient outcomes associated with primary-care behavioral health services: A systematic review	engaging in care, and patients attending more visits. There is emerging evidence that with PCBH, functioning, depression and anxiety improve over time. However, there was no evidence of greater improvement in patient health status if comparing PCBH to other active treatments. The limited accessible evidence indicates that patient satisfaction with PCBH services is high.			
	Enablers and barriers to implementing collaborative care for anxiety and depression: A systematic qualitative review	In this qualitative systematic review, enablers and barriers to implementing a multi-professional, collaborative-care approach for caring for patients with anxiety and depression were identified from 17 studies. The approach consisted of a team of a primary-care physician (PCP), case/care manager (CM), and/or a mental health specialist, a structured management plan, enhanced communication between the team members, and systematic patient follow-up. Barriers identified from the studies included insufficient understanding of the collaborative-care approach among team participants, lack of engagement with the approach among PCPs due to competing priorities, time pressures, or lack of interest or comfort with diagnosing mentally ill patients, and limitations of information technology to enable creation and sharing of patient records between CMs and PCPs. Enablers for implementation of collaborative care included co-location of the PCPs and CMs to increase regular face-to-face interaction and collaboration, professional and social skills of the CM, and systematic feedback on patients' conditions. The study concluded that improvements to enhance collaborative care could be made through creating incentives for collaborative participation, ensuring reimbursement for additional work by primary-care providers, and increasing education for care managers and face-to-face interactions between them and physicians.	Literature last searched October 2015	6/9 (AMSTAR rating from McMaster Health Forum)	1/17
	Systematic review and meta-analysis of collaborative-care interventions for depression in patients with cancer	This systematic review and meta-analysis synthesized randomized controlled trials (RCTs) of interventions for depression in cancer patients, and also incorporated an assessment of collaborative care in these interventions. The interventions included were characterized by collaboration between primary-care providers and psychiatry specialists with the assistance of a care manager. Only two new pharmacological RCTs and nine new psychological RCTs were identified for inclusion since the review was last conducted in 2005. However, there were significantly more collaborative-care RCTs identified which resulted in better standardized mean depression scores compared to usual care. The findings of the study suggest that integration of depression treatment into the cancer care setting may improve patient outcomes.	Literature last searched January 2015	8/10 (AMSTAR rating from McMaster Health Forum)	1/18
	Interprofessional collaboration in primary healthcare: A review of facilitators and barriers perceived by involved actors	This systematic review explored different health professionals' beliefs, values, and perceptions of shared roles and responsibilities between professional groups, and identified factors facilitating or impeding interprofessional collaboration involving other primary-care professionals in primary care. The included studies involved a variety of health professionals in collaboration with general practitioners, including mental health professionals, and those focused on mental health providers considered the extended roles of primary-care	Literature last searched July 2013	5/9 (AMSTAR rating from McMaster Health Forum)	3/44

		mental health workers from a disease-centred point of view, rather than a patient-centred approach. The main identified facilitator of interprofessional collaboration in primary care was the different professionals' common interest in collaboration, perceived opportunities to improve quality of care, and to develop new professional fields. The main barriers were the challenges of definition and awareness of one another's roles and competences, shared information, confidentiality and responsibility, team building and interprofessional training, long-term funding, and joint monitoring. The systematic review concluded that interprofessional organization and training should support collaboration development.			
	To determine the effectiveness of integrated treatment of co-occurring substance use and mental health disorders on drug use, alcohol use and psychiatric symptoms and functioning; to assess the effect of integrated treatment in different settings	Integrated treatment created non-significant improvements in psychiatric outcomes and alcohol use compared to treatment as usual. The comparison treatment, however, produced a statistically significant effect on the reduction of drug use. Notably, the effectiveness of integrated treatment varies between outpatient and residential settings. Due to the differences in treatment costs between these settings, these results have important policy implications.	Published May 2013	6/11 (AMSTAR rating from McMaster Health Forum)	Not specified
	Integrated models of care for medical inpatients with psychiatric disorders: A systematic review	This systematic review aimed to review different models of integrated care for medical inpatients with psychiatric disorders, and to examine the effects of integrated models of care on mental health, medical, and health service outcomes when compared with standard models of care. Integrated models of care are defined as models in which psychiatrists and general-medical physicians, either in isolation or in combination with other allied health staff, were integrated within a single team to provide care to an entire inpatient population. Two out of the four studies showed that integrated models of care improved psychiatric symptoms compared with those admitted to a general medical service. Two other studies demonstrated reductions in length of stay with integrated models of care compared with usual care.	Literature last searched May 2012		0/4
	To assess the effectiveness and cost-effectiveness of counselling for patients with mental health needs in primary care	The review focused on the effectiveness and cost-effectiveness of counselling from a trained counsellor. Counsellors were defined as any practitioner with formal counselling qualifications equivalent to the U.K. British Association for Counselling and Psychotherapy (BACP) accreditation levels (e.g., counsellors, community nurses, social workers, clinical psychologists, and primary-care professionals). The authors included nine studies that focused on counselling in primary care for 1,384 patients. The included studies focused on patients who had a defined diagnosis of a mental health problem and were referred for counselling in primary care.	Literature last searched May 2011	10/10 (AMSTAR rating from McMaster Health Forum)	0/9

		Overall, the authors concluded that counselling was associated with significantly greater clinical effectiveness in short-term mental health outcomes (i.e., mental health symptoms and social functioning) and increased patient satisfaction with counselling than usual physician care, but there were no advantages for long-term mental health outcomes nor were overall healthcare costs reduced. The review reported limited evidence that compared counselling with other psychological therapies or with antidepressant medication. Additionally, it was unclear to the authors on whether the results can be generalizable outside of the U.K.			
	Collaborative care interventions for depression in the elderly: A systematic review of randomized controlled trials	This review explored the components and feasibility of collaborative care interventions (CCIs) for the treatment of depression in patients 60 years and older. CCIs involve integrating mental health providers and primary-care providers in the target system of care for depression management. The review found that CCIs were superior to usual care in terms of reducing depressive and suicidal symptoms, improving depression treatment (including medication and psychotherapy) during follow-up periods, and being more cost-effective due to a significant increase in depression-free days. Interestingly, according to one included study, communication between mental health and primary-care providers about evaluation and treatment did not make a difference in care outcomes when comparing CCIs and usual care.	Literature last search August 2007	10/10 (AMSTAR rating from McMaster Health Forum)	0/3
	Improving long-term outcome of depression in primary care: A review of RCTs with psychological and supportive interventions	The focus of this systematic review was to identify improvement strategies of routine mental health treatment in primary care, in relation to reported effects and outcomes within at least six months follow-up. The review found four approaches, with varying degrees of clinical improvement outcomes. Approaches focused on training and providing education for primary care providers were well received, but lacked significant improvements in depression outcomes. Supporting primary care providers with other professionals, such as psychologists and psychiatrists, produced improved outcomes at six months follow-up, but did not prevent recurrence of depressive symptoms. One of the approaches that showed improved outcomes at six months follow-up explored the need for better coordinated care and for more systematic, active patient follow-up to monitor progress over time. These include the following: 1) practice support by nurses or care managers, in which nurses or care managers actively follow the patients, mainly by telephone, to support patients in adhering to their antidepressant medication, monitor their symptoms, and give feedback to their primary-care providers; and 2) practice-level quality-improvement strategies, such as management training packages for primary-care providers, nurses, psychologists and therapists.	Published March 2007	3/10 (AMSTAR rating from McMaster Health Forum)	0/7
	To assess the effects of on-site mental health workers delivering psychosocial interventions in primary-care settings	The review focused on the effects of mental health workers (i.e., counsellors, psychologists, psychiatrists, community psychiatric nurses, nurse therapists, practice nurses, social workers) who work in primary care with physicians. Only 11 of the 42 studies focused on psychologists, but the results of these studies were not pooled or analyzed. Overall, on-site mental health workers were associated with modest changes in primary-care physician behaviour such as reductions in consultation rates, psychotropic prescribing, and mental health	Literature last searched February 2007	8/11 (AMSTAR rating from McMaster Health Forum)	0/42

		referrals among patients. The impact of referral rates is inconsistent. The evidence does not support that the addition of mental health workers to primary-care teams reduces demand on primary-care providers or results in clinical behaviour change to the wider practice population. The authors concluded that evaluations with longer follow-up and qualitative studies to understand the dynamic of primary-care providers and on-site mental health workers are needed.			
	Collaborative care for depression: A cumulative meta-analysis and review of longer-term outcomes	The focus of this review was to quantify the short- (six months) and long-term (12, 18, and 24 months, and five years) effectiveness of collaborative care compared to standard primary care for patients with depression. In the review, collaborative care was defined as a multifaceted intervention involving a primary care-provider, case manager, and a mental health specialist working collaboratively in the primary-care setting. The review found that collaborative care had a significantly positive effect on depression outcomes at six months when compared to standard primary care. Evidence of long-term benefit was also found for up to five years. There was a direct positive relationship found between effectiveness of collaborative care on patient outcomes and medication compliance. Planned supervision and case managers with a mental health background also had positive relationships. However, adding brief psychotherapy was not found to significantly improve outcomes.	Literature last searched February 2006	3/11 (AMSTAR rating from McMaster Health Forum)	Not specified
	Models in the delivery of depression care: A systematic review of randomized and controlled intervention trials	This systematic review assessed the effective components of depression interventions in primary care of both general practice and community-based settings. Five key outcomes were identified: • Improved outcomes for patients with depression were associated with case management and tracking by a provider (other than the doctor) who provided some form of enhanced psychological therapy to patients and gave direct feedback to GPs • Monitoring and delivery of treatment for depression was best provided by mental health professionals or practice nurses rather than pharmacists • Patient preferences were found to improve the likelihood that patients would receive their preferred form of treatment or enter treatment • Training of GPs in depression care and the provision of practice guidelines were not significantly associated with improved outcomes for patients • Community-level interventions (e.g., group psychotherapy programs and self-referred educational workshops) seemed to offer a level of benefit similar to general-practice interventions	Literature last searched October 2005	4/10 (AMSTAR rating from McMaster Health Forum)	Not specified

Appendix 2: Summary of findings from primary studies about primary-care models that include psychologists and provide care and support for people with mild to moderate mental health and substance-use issues

Focus of study	Study characteristics	Sample description	Key features of the intervention(s)	Key findings
The study aimed to understand patients' experiences on the quality of care that they received for anxiety and depression in primary-care teams.	*Publication date:* 2021 *Jurisdiction studied:* Ontario, Canada *Methods used:* Qualitative study using constructivist grounded theory	Family health teams in Ontario embed mental health practitioners including social workers, psychologists, and other mental health workers into care delivery. Forty patients participated, with 31 participating in focus groups and nine completing individual interviews.	Participants were recruited by flyers in waiting rooms at 38 family health teams across three regions in Ontario, both rural and urban. Focus groups and individual interviews using a semi-structured interview guide were conducted.	Common themes emerged related to patient experience with quality of mental health care. Themes were grouped by accessibility, technical care, trusting relationships, and meeting diverse needs: • With mental health professionals integrated into primary care, participants were easily able to access a range of mental health services • There was a different level of awareness about the range of services available in FHTs • The length of appointments with physicians were perceived as inadequate • Desire for mental health screening and assessments routinely integrated into primary care • Variations existed within and across FHTs in terms of the types of mental health providers and the types of therapeutic modalities used in therapy • Those with psychiatry embedded in their primary-care team described psychiatry's role as one that mainly did medication consultation or management • Regular follow-up as an essential component of care, yet few participants reported having experienced on-going follow-up • Trusting relationships with providers in primary care were essential for mental health care • Need for mental health services that meet patients' diverse needs
To assess the cost-effectiveness of stepped care for the treatment of anxiety disorders in adults	*Publication date:* 13 August 2019 *Jurisdiction studied:* Australia *Methods used:* Model-based economic analysis	In Australia, anxiety disorders are the most prevalent mental disorders, accounting for the largest proportion of total treatment costs of high-prevalence mental disorders. They cost the health sector A$376 million dollars annually. Australia's Royal Australian and New Zealand College of Psychiatrists (RANZCP) clinical practice guidelines	A decision-tree model estimated the cost per disability-adjusted life year (DALY) adjusted over a 12-month period by adopting a health sector perspective and comparing a three-step stepped-care intervention to care as usual. The stepped-care intervention included an initial guided self-help phase, followed by face-to-face cognitive behavioural therapy, culminating with pharmacotherapy. Effect sizes	Stepped care was more cost-effective than care as usual for the treatment of adults with mild-to-moderate anxiety disorders from an Australian health sector perspective. There was an incremental cost-effective ratio of A$3,093 per disability-adjusted life year (DALY) averted. All of the uncertainty iterations were below the willingness-to-pay threshold of A$50,000 per DALY commonly used in Australia. "The evaluation was most sensitive to changes in diagnosis rates and effect sizes."

Focus of study	Study characteristics	Sample description	Key features of the intervention(s)	Key findings
		recommend stepped care as best practice for many disorders.	came from a randomized trial of stepped care and a longitudinal cohort study. Multivariate probabilistic analyses and univariate sensitivity analyses were conducted.	
To assess the cost-effectiveness of embedding a psychologist (i.e., behavioural health clinician) into an existing primary-care practice to facilitate the integration of care	*Publication date:* 30 April 2018 *Jurisdiction studied:* Kansas City, United States *Methods used:* Prospective, case-control program evaluation	In the United States, behavioural health services are increasingly integrated into primary care. This paper describes an example of a behavioural health organization that integrated services with primary-care practice in a Midwestern metropolitan area, Kansas City. Specifically, New Directions Behavioral Health collaborated with a large primary-care centre to integrate a licensed psychologist into their practice.	Data on patient claims were investigated 21 months prior to and 14 months after the psychologist started providing behavioural health services within the practice on a full-time basis. Data from patients with Blue Cross Blue Shield of Kansas City insurance (BCBSKC) with at least one encounter with the psychologist ($N = 239$) were compared to BCBSKC fully insured patients at large, as the control, to calculate cost savings.	Integrating behavioural health services into the primary-care practice was associated with $860.16 per member per year savings (10.8% savings in costs for BCBSKC patients) Thus, the integration of behavioural health services into primary care may lead to reduced healthcare costs.
To identify variables associated with perceived work role performance among mental health professionals in Quebec.	*Publication date:* 2017 *Jurisdiction studied:* Québec, Canada *Methods used:* Primary data collection through surveys and univariate, bivariate, and multivariate analyses	Reforms in Quebec between 2005 and 2015 adopted an integrated model of care between general hospitals, local community health centres and nursing homes to create 93 health and social-service centres. These centres coordinate with other service providers including psychiatric hospitals, community-based organizations, and medical clinics. These reforms required mental health professionals to be integrated into primary care teams (PCTs). Mental health professionals were already integrated into specialized service teams (SSTs).	Variables were measured using data collected from self-administered questionnaires completed by 315 mental health professionals. Variables associated with perceived work role performance were organized within five areas: individual characteristics, perceived team attributes, perceived team processes, perceived team emergent states, and geographical and organizational context. Variables associated with perceived work role performance were then compared between those working in mental health primary-care teams and specialized service teams.	This article discusses perceived work role performance for mental health professionals in interdisciplinary care teams (provider experiences of care) and discusses attributes associated with these improved experiences within primary care teams. Related to features of models discussed in the article, PCTs serve patients with common mental health disorders and have more limited expertise, often lacking psychiatrists and substance-use specialists. SSTs serve patients with serious or complex mental health disorders. Perceived work role performance in the total sample had: a strong link with recovery promotion and team interdependence (perceived team attributes); knowledge sharing, informational role self-efficacy, and team collaboration (perceived team processes); belief in the benefits of interdisciplinary collaboration (perceived team emergent states); and frequency of interactions with GPs (geographical and organizational

Focus of study	Study characteristics	Sample description	Key features of the intervention(s)	Key findings
				context) and, marginally, with participation in decision-making (perceived team processes). The authors highlight that these findings suggest a need for systematic training programs to promote interdisciplinary collaboration. Integration strategies (e.g., service agreements) could improve collaboration between mental health PCTs and SSTs and help mental health professionals perform more effectively within PCTs.
To study the clinical effectiveness and cost-effectiveness of collaborative care compared with usual care in the management of patients with moderate to severe depression	*Publication date:* February 2016 *Jurisdiction studied:* United Kingdom *Methods used:* Randomized clinical trial	A total of 581 adults aged ≥ 18 years in general practice with a current International Classification of Diseases, Tenth Edition depressive episode, excluding acutely suicidal people, those with psychosis, bipolar disorder or low mood associated with bereavement, those whose primary presentation was substance abuse, and those receiving psychological treatment.	Collaborative care: 14 weeks of six-to12 telephone contacts by care managers; mental health specialist supervision, including depression education, medication management, behavioural activation, relapse prevention and primary care liaison. Usual care was general practitioner standard practice.	The study found that collaborative care is effective for depression management in the United Kingdom. The results of the study are as follows: • Collaborative care improves depression up to 12 months after initiation of the intervention; • Collaborative care is preferred by patients over usual care; and • Collaborative care offers health gains at a relatively low cost, and is cost-effective compared with usual care
To compare the impact of NAVIGATE, a comprehensive, multidisciplinary, team-based treatment approach for first-episode psychosis designed for implementation in the U.S. healthcare system, with community care on quality of life	*Publication date:* October 2015 *Jurisdiction studied:* United States *Methods used:* Randomized clinical trial	A total of 404 individuals aged 15-40 were enrolled. All participants had experienced only one episode of psychosis (i.e., individuals with a psychotic episode followed by full symptom remission and relapse to another psychotic episode were excluded) and had taken ≤6 months of lifetime antipsychotics. All spoke English. Thirty-four community mental health treatment centres in 21 states were selected via national search.	The experimental treatment NAVIGATE includes four core interventions: personalized medication management; family psycho-education; resilience-focused individual therapy; and supported education and employment. Treatment was supported through existing funding mechanisms except for supported education and employment services (SEE), which is not supported in many locations. SEE services (five hours/week) were supported with research funds. Weekly team meetings facilitated communication and coordination. NAVIGATE sites received initial training in team-	NAVIGATE improved outcomes for patients over 24 months, with effects seen on length of time in treatment, quality of life, participation in work and school, and symptoms - outcomes of importance to service users, family members, and clinicians. The RAISE-ETP study demonstrates that diverse U.S. community clinics can implement a team-based model of first episode psychosis care, producing greater improvement in clinical and functional outcomes as compared to standard care.

Focus of study	Study characteristics	Sample description	Key features of the intervention(s)	Key findings
			based first-episode psychosis interventions and on-going expert consultation facilitated fidelity. The control condition, "Community Care", is psychosis treatment determined by clinician choice and service availability data.	
To assess the cost-effectiveness of on-site versus off-site collaborative care for depression in rural federally qualified health centres	*Publication date:* 17 February 2015 *Jurisdiction studied:* Arkansas' Mississippi Delta region and the Ozark Highlands, United States *Methods used:* Randomized comparative cost-effectiveness trial	As of the 2010 census, 19.3% of the American population lives in rural areas, placing them at risk of poor detection and treatment of mental illnesses. With collaborative care being shown to be highly effective for depression in urban areas, there is a shortage of mental health professionals in 85% of American rural counties. Federally qualified health centers (FQHCs) are in medically underserved areas, constituting a critical part of the healthcare safety net. In an effort to qualify as a patient-centred medical home (PCMH), FQHCs are considering outsourcing care management services, leading to the off-site approach – telemedicine-based collaborative care (TBCC).	A total of 19,285 patients were screened for depression of which 2,863 (14.8%) screened positive and 364 were enrolled. Data from telephone interviews were collected at baseline and at six, 12, and 18 months. Base case analysis used Arkansas FQHC healthcare costs whereas secondary analysis used national cost estimates. Effectiveness indicators included depression-free days and quality-adjusted life years (QALYs) derived from these days, a 12-item short-form survey, and the Quality of Well-Being (QWB) Scale. Nonparametric bootstrap (with replacement) methods generated an empirical joint distribution of incremental costs, QALYs, and acceptability curves.	It was found that the telemedicine-based collaborative care (TBCC) intervention resulted in more depression-free days and QALYs, but at a greater cost than the PBCC (practice-based collaborative care) intervention. The disease-specific (depression-free day) and generic (QALY) incremental cost-effectiveness ratios (ICERs) were below their respective ICER thresholds for implementation. The authors suggest that the TBCC intervention was more cost effective than the PBCC intervention.
To assess collaborative mental health care versus care as usual in a primary-care setting	*Publication date:* 13 January 2015 *Jurisdiction studied:* Netherlands *Methods used:* Cluster randomized controlled trial	In the Netherlands, a general practitioner can act as both the mental health provider and referring patients for mental health care that is more specialized. The Dutch government has strengthened the general practitioners' referral process and function to manage and limit the increasing number of people	The study enlisted 27 general practitioner practices in the Netherlands to provide either collaborative care, based on the attached mental health professional model, or usual care. In the collaborative care condition, a mental health care professional worked on site at the primary-care practice and was available to provide patients	The results of the study showed that the level of patients' psychopathology and quality of life significantly improved over time, and there were no significant differences between the collaborative-care model and usual care. There was no significant difference in patients' satisfaction with care in either condition. The collaborative care condition resulted in significantly higher satisfaction with services among general practitioners, shorter referral delay, reduced time in treatment, fewer appointments, and consequently lower treatment costs.

Focus of study	Study characteristics	Sample description	Key features of the intervention(s)	Key findings
		using mental health care services. This was done by specifying in the insurance guidelines that a specialist in non-acute care can start treatment only after receiving a formal written referral by a general practitioner. However, general practitioners are still facing increased workload, so various forms of collaborative mental health care have been introduced: 1) shifted out-patient clinic model; 2) consultation liaison model; and 3) attached mental health professional model.	a maximum of five appointments if they were referred by the general practitioner. If indicated, referral to specialized mental health services followed. In the usual care condition, general practitioners would refer patients to off-site specialized mental health services, if indicated by the patient. At baseline and at three, six, and 12 months, the study assessed the included 165 patients' psychopathology, quality of life, and patients' and general practitioners' satisfaction with the treatment provided. Delay in seeing a mental health provider, duration of treatment, number of appointments, and related treatment costs were assessed at 12 months.	

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