

BMJ Open Scoping review protocol: education initiatives for medical psychiatry collaborative care

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► Additional File 1. Search Strategy.

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ABSTRACT

Introduction The collaborative care model is an approach providing care to those with mental health and addictions disorders in the primary care setting. There is a robust evidence base demonstrating its clinical and cost-effectiveness in comparison with usual care; however, the transitioning to this new paradigm of care has been difficult. While there are efforts to train and prepare healthcare professionals, not much is known about the current state of collaborative care training programmes. The objective of this scoping review is to understand how widespread these collaborative care education initiatives are, how they are implemented and their impacts.

Methods and analysis The scoping review methodology uses the established review methodology by Arksey and O'Malley. The search strategy was developed by a medical librarian and will be applied in eight different databases spanning multiple disciplines. A two-stage screening process consisting of a title and abstract scan and a full-text review will be used to determine the eligibility of articles. To be included, articles must report on an existing collaborative care education initiative for healthcare providers. All articles will be independently assessed for eligibility by pairs of reviewers, and all eligible articles will be abstracted and charted in duplicate using a standardised form. The extracted data will undergo a 'narrative review' or a descriptive analysis of the contextual or process-oriented data and simple quantitative analysis using descriptive statistics.

Ethics and dissemination Research ethics approval is not required for this scoping review. The results of this scoping review will inform the development of a collaborative care training initiative emerging from the Medical Psychiatry Alliance, a four-institution philanthropic partnership in Ontario, Canada. The results will also be presented at relevant national and international conferences and published in a peer-reviewed journal.

BACKGROUND

There is a growing disparity of unmet needs for mental health services^{1 2} as the current supply of psychiatrists and current practice patterns create substantial barriers hindering access to psychiatric assessment and treatment.^{3–6} In recent years, primary

Strengths and limitations of this study

- The results of this review will establish a baseline understanding of the delivery of education initiatives for collaborative care—a timely and important topic required to support the transition to a more integrated delivery of mental health and addiction care.
- This protocol outlines a rigorous study design that includes the use of an established scoping review methodology, a multidisciplinary search strategy developed iteratively in consultation with an experienced medical librarian and a study selection and data extraction process that is carried out in tandem with validation from content experts.
- A limitation of the review is the potential to miss relevant articles given that education is not always separated from the implementation of collaborative care; however, the reference lists of included articles, relevant literature reviews and key reports will be hand-searched to identify articles missed by the search strategy.
- No formal quality assessment will be conducted as this review aims to provide a snapshot of the landscape of collaborative care education initiatives by being inclusive of all types of information available.
- While the review will be non-discriminant towards article types and methodologies, the findings will be limited to articles written in English.

care has increasingly become the first contact point for those seeking mental health treatment^{7 8}; however, individuals seeking care in these settings often receive suboptimal care as providers are not properly equipped or trained to manage complex physical and mental health conditions.⁹ The disconnect with mental health services contributes to the treatment gap, making it difficult for individuals to receive the proper care, especially for those with comorbidity or multimorbidity. This inattention may further exacerbate their condition or lead to premature death due to their physical health conditions.^{10–12}

Backed by a growing and robust evidence base, there is a case for integrating mental healthcare into the primary care setting through a collaborative care model. Several meta-analyses^{13–17} have demonstrated that collaborative care models can be more effective in treating mental health disorders than usual care. The collaborative care model has also demonstrated its value by improving quality of life for comorbid patients for no or modest additional cost.¹⁸

Collaborative care is often used interchangeably with other terms (eg, mental health integration, integrated care and integrated mental health) to describe a range of models of care that consist of healthcare professionals working in partnership in a primary care setting to deliver mental healthcare; however, the degree of integration of the two disciplines vary depending on model.¹⁹ Recently, an American Psychiatric Association/American Psychosomatic Medicine (APA/APM) working group to provide clarity and a standardised evidence-based integrated care model. Derived from the seminal research by Katon *et al*²⁰ and Wagner's Chronic Care Model,²¹ the APA/APM Collaborative Care Model²² defines collaborative care as the provision of care that is: (1) team driven, (2) population focused, (3) measurement guided and (4) evidence based. The focal point is the collaborative care team that consists of a multidisciplinary group of professionals (eg, psychiatric nurse practitioner, social worker, licenced counsellor or therapist, psychologist or psychiatrist, care managers and office support staff) thereby extending beyond the 'physician as treatment team' in providing and supporting care and implementing and revising the treatment plan. The new definition was developed to support informed decision making by policymakers, healthcare providers, service delivery organisations and the public and to help standardise future training in this area.

Despite the increasing recognition and implementation of the collaborative care model, there remain difficulties in implementation as there is a lack of adequately prepared workforce.²³ The transition from a traditional care delivery model is a challenge as there are many new processes and systems-level differences between integrated behavioural health and traditional primary care settings that new team members must navigate.^{24 25} Many programmes have been developed and implemented to provide training to provide individuals with the necessary skills, knowledge, competencies and attitudes to support the collaborative model of care.^{23–25} A variety of training approaches have been implemented, including training by internal or external experts, onsite or offsite sessions, onboarding processes for new employees, training manuals, shadowing processes and peer mentoring.^{23 25} However, there have been calls for increased prelicensure training to take the burden off of such workplace training programmes that can be expensive and resource intensive.²³ Furthermore, a recent editorial²⁶ has identified the need to move beyond competency-based training in integrated care and called for integration of theoretical

frameworks, namely adaptive expertise, to better prepare future healthcare professionals for managing complexity within integrated care settings.

While there have been tremendous efforts in the development of the collaborative care model and the training supports, not much is known about the current scope of integrated care education, how it is delivered, to whom, in what contexts, the content of the training and whether it is effective. There is a need to collect all the knowledge and experiences from existing training programmes, to continually improve current process of these programmes and to support the development of new programmes. The objective of this scoping review is to gain an understanding of the current landscape of integrated care education.

METHODS

The purpose of this review is to gain an understanding of the extent to which collaborative care education programs have been implemented and the factors which contributed or deterred to program success. The findings from this review will be used by the Medical Psychiatry Alliance — a four-institution, Ministry of Health and Long-Term Care, and philanthropic partnership in Ontario, Canada — to inform the development of their collaborative care training initiative. Various knowledge synthesis approaches were considered for this review; however, the scoping review methodology is most appropriate especially since the complex area of collaborative care education has not been reviewed comprehensively before.^{27 28} To the authors' knowledge, there has been no prior attempt to establish a baseline of knowledge regarding collaborative care education initiatives. Given this knowledge gap and that literature may be diffuse due to the multidisciplinary nature of collaborative care, scoping reviews are ideal in taking stock of the volume and nature of the literature.²⁸ Using this form of knowledge synthesis allows for the broad exploration of collaborative care education to map key concepts, evidence types and gaps in research in a defined field; furthermore, scoping review makes use of a wide array of knowledge exhibited through empirical research and anecdotal accounts.^{29–31}

The methodology for this review draws on Arksey and O'Malley's seminal framework²⁹ for scoping reviews as the foundation and more recent advancements to the methodology.^{30 32} As recommended by Colquhoun *et al*,³³ this protocol follows the relevant aspects of the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) guidelines³⁴ to ensure rigour in reporting the methodology in the interim, while PRISMA guidelines are developed for scoping reviews.³⁵ Scoping reviews share a similar process as systematic reviews since they both are rigorous and transparent in identifying eligible literature but are divergent in purpose as scoping reviews aim to map the body of literature rather than sum up the best available research on a specific question.³⁶ Scoping reviews are often seen as a precursor to

systematic reviews as it allows researchers to determine the value and probable scope of a full systematic review and meta-analysis.^{29 37 38}

Stage 1: identifying the research question

The objective of this review is to understand the current state of collaborative care education initiatives by identifying existing initiatives (eg, training programmes and interventions) reported in both academic and grey literature. By identifying the past and current education initiatives, this review seeks to establish a foundational understanding of how these programmes were implemented and glean the critical success factors and recommendations of these experiences. To meet these objectives, this review asks the following questions:

- ▶ What educational interventions exist within integrated collaborative care programmes in hospital, community and primary care settings?
- ▶ What aspects of collaborative care are taught in the educational interventions?
- ▶ How well do the interventions incorporate the core collaborative care principles as outlined in the APA/APM document?
- ▶ How were the interventions delivered? What were the critical success factors and lessons learnt?

While the primary focus of this review is to take an inventory of existing programmes and their processes, this review will also provide a narrative view on the extent to which these initiatives have been evaluated and provide a descriptive review of the effectiveness of current efforts in educating the health professions about collaborative care. The review will ask ‘What aspects of collaborative care programs have been evaluated’ and ‘What were the outcomes of the evaluations (eg, user perceptions, attitudinal changes, changes in knowledge and competency, behaviour change, organisational and clinical impact)?’

Stage 2: identifying relevant studies

The search strategy was iteratively developed by the research team in collaboration with an experienced medical librarian (SB) and implemented on July 2016 in eight electronic databases: Medline, Medline In-Process, PsycINFO, Embase, CINAHL, ERIC, Scopus and ISI Web of Science. These databases were selected to capture a comprehensive sample of literature from health sciences, psychiatry, education and other disciplines. The search query was first developed for Medline. Medline (Ovid) was selected as the first database to query because the Ovid interface facilitates fine-tuning at a level that PubMed does not; moreover, an added advantage to using Medline is its use of the National Library of Medicine’s controlled vocabulary, MeSH, to index citations.³⁹ Any chance in missing articles from PubMed were reduced by searching Ovid Medline ‘In-Process & Other Non-Indexed Citation’ database to capture the most recent literature possible. The Ovid interface is also a shared platform that allows for quicker translation and querying of other Ovid-based databases (Medline In-Process, PsycINFO and Embase).

The search strategy consisted of subject headings, keywords and related terms for primary care, integrated care, education and mental health services, personnel and conditions. Depending on the database, some subject terms were ‘exploded’, which allowed us to capture all relevant search topics under a given term (eg, using ‘exp mental disorders/’ in Medline will catch all possible mental health diagnoses and conditions). Terms and concepts were combined using Boolean logic and operators including adjacencies. The searches were limited to articles in English and published after 1995—when the collaborative care model was first introduced.^{20 22} The search terms were then translated for use in the other databases. Applying the same search string to ISI Web of Science (interdisciplinary) required some modifications and a different approach to reduce the noise in the results. Specifically, the research categories and subject area limiters were used to reduce the yield to a manageable volume while maintaining the specificity required for this review. The first 100 search results from each database were reviewed by the research team to ensure validity of the search strategy (see online additional file 1 for full strategy).

The results from the search were imported into Mendeley desktop reference manager where the citations were collated and deduplicated. The research team was granted access to the citations and articles using the Mendeley web-based collaboration function. The citations were then copied and pasted into a spreadsheet for use in the subsequent eligibility screening and charting processes.

Stage 3: study selection

A two-stage screening process consisting of a title and abstract scan and a full-text review will be used to determine the eligibility of articles. Both stages will follow the same process, where every article will be independently reviewed in pairs and the results will be documented on the spreadsheet. At the end of each round, the ratings will be compared and resolved by the two reviewers or a third reviewer when consensus is not achieved. Any ambiguities regarding the eligibility of a citation (or article) will be flagged and discussed.

The citations will be assessed for relevance based on a title and abstract scan. To be relevant for full-text review, the title and abstract must: focus on providers from different specialities, disciplines or sectors working together to offer complementary services or support in delivering care; be about delivering mental health and addictions care; and describe an existing education intervention. This review is inclusive of all types of literature, thus including commentary articles, case studies and empirical studies employing all types of methodologies (ie, qualitative, quantitative and mixed methods) and study designs. Viewpoint articles on how education programmes should be implemented outside of the context of an existing programme are excluded.

The criteria will be piloted by the reviewers to refine and establish a common understanding of the inclusion criteria. After a training session, 20% of the Medline citations will be independently reviewed by four reviewers to establish inter-rater reliability (IRR). The results of the review will be compared, and the IRR will be calculated. The threshold for IRR is set at an average Cohen's K of 0.70 indicating substantial agreement.⁴⁰ The pilot will be run again if the threshold was not met. If met, the remaining articles will then be divided and assigned to two sets of pairs for independent review. These adjustments to the inclusion–exclusion process are appropriate as they provide the team with opportunities to become familiar with the data and to reduce workload.^{30–32} This protocol made an additional adjustment by adding the IRR to establish agreement between reviewers and provide more context to the study selection process. Regardless of the IRR outcome, a meeting about the process will be held to compare the results, resolve the disagreements and troubleshoot the challenges that arose during the title–abstract review process.

Relevant articles identified in the title and abstract scan will undergo a full-text review to confirm the article's eligibility for the review. The full-text review follows the same process as the title and abstract scan. To be included, the article must be about a collaborative care education initiative for healthcare providers. The full-text review form asked reviewers to assess each article using the following questions:

1. Does the article describe/discuss the provision of care related to mental health in a primary care setting?
2. Does the article describe an education intervention/programme?
3. Does the education intervention focus on delivering team-based care?

Step 4: charting the data

A standardised charting form will be developed by the research team to allow the investigators to categorise or 'chart' the data. The high-level domains for the charting form consist of article details, study details (if applicable), initiative details and implementation factors. The specifics of each domain are outlined in [table 1](#). There will be a training session to trial the charting form and ensure there is a common understanding of the categories and how to use the form. The full-text reviewers will be asked if there are any additional variables emerging from the full-text review to consider for charting. The form will be piloted on 5–10 articles by the team. This will consist of independent charting by the reviewers and validation by the senior investigators. A final round of feedback on the form will be solicited prior to the charting process. The charting will also consist of independent charting by the reviewers and validation by the senior investigators. The charters will be encouraged to provide constant feedback on

emerging themes not captured in the charting form. The form will be revised as required.

Stage 5: collating, summarising and reporting the results

The extracted data will first undergo a simple quantitative analysis using descriptive statistics (eg, frequencies and central tendency measures) to provide numerical summaries of the education initiatives and article or study characteristics.²⁹ Multiple articles stemming from a single initiative will be grouped and treated as a unit of analysis. The data will also undergo a 'narrative review' or a descriptive analysis of the contextual or process-oriented data where all data will be thematically analysed independently by two reviewers to identify emerging themes found within each of the subdomains outlined in [table 1](#). The results will be compared and consolidated by consensus between the two reviewers. The resulting themes will be reviewed by content experts to ensure validity and credibility. The themes will be reported to highlight the similarities, patterns, differences and outliers found in the literature.

The results from empirical studies (ie, qualitative, quantitative and mixed methods) will be classified into learner and clinical outcomes based on the Kirkpatrick-Barr framework⁴¹ for interprofessional learner outcomes. This framework was selected because of its focus on interprofessional collaboration that can be applicable to the multidisciplinary setting. Thematic analysis will also be used to identify commonalities within each of the levels of the following outcome typology:

- ▶ Level 1: learners' reaction—participant views of the learning experience and satisfaction with the programme;
- ▶ Level 2a: modification of attitudes/perceptions—changes in reciprocal attitudes or perceptions between participant groups, towards patients/clients and their condition, circumstances, care and treatment;
- ▶ Level 2b: acquisition of knowledge/skills—changes in knowledge and skills;
- ▶ Level 3: change in behaviour—changes in behaviour transferred from the learning environment to the workplace;
- ▶ Level 4a: change in organisational practice—changes in the organisation or delivery of care attributable to an education programme;
- ▶ Level 4b: benefits to patients/clients—improvements in the health and well-being of patients/clients as a direct result of an education programme.

Details of the education initiatives and study outcomes will be summarised in a table. The articles will not be assessed for quality as it is outside the scope of this review; however, details of the included articles (ie, article type and methodology) will be reported in a summary table to provide context of the maturity of the evidence.

Table 1 Data charting domains and elaboration of subdomains

Domain/ subdomains	Description
Article details	
Article type	Is the article an empirical study, case study or commentary?
Year	Article year
Country	Which country is this article from?
Study details (if applicable)	
Study design	If it is an empirical article, what was the study design? Report as described by authors.
Participants	Who were the study participants?
Intervention	What was the intervention? Report as described by the author.
Comparator	What was the comparator (if applicable)?
Study outcomes	What did the authors identify as the study outcomes?
Outcomes	What were the main results of the study?
Initiative details	
Name	What is the name of the programme (if applicable)?
Setting	Where does the education programme take place (eg, community, hospital and university)?
Participants	Who were the participants of the programme?
Programme delivery	How is the programme delivered (eg, seminar, lecture, course and in-service training)?
Instructors	Who are the facilitators/instructors?
Programme length	How long was the programme/intervention?
APA/APM Principles ²²	
1. <i>Team Driven</i>	Does the programme teach a team-based approach of multiprofessionals to provide and support care and monitor treatment plans?
2. <i>Specific population</i>	Does the programme focus on the provision of care and health outcomes of a defined population of patients?
3. <i>Measurement</i>	Does the programme focus on systematic, disease-specific, patient-reported outcome measures (eg, symptom rating scales) to drive clinical decision making?
4. <i>Evidence based</i>	Does the programme focus on the application of proven treatments within an individual clinical context to achieve measurement-based care outcomes?
Implementation factors	
Success	How did the authors define programme success?
Enablers	What factors that contributed to the success of the programme?
Barriers	What factors may have detracted from the success of the programme?
Recommendations	What were the author's recommendations based on their experiences?

APA/APM, American Psychiatric Association/American Psychosomatic Medicine.

ETHICS/DISSEMINATION

This protocol reports a comprehensive, rigorous and transparent methodology. This review contributes to the advancement of research on this subject and comment on the maturity of the body of literature by identifying gaps in knowledge and research. Through the publication of the results and dissemination at relevant conferences, the results of this review could guide the direction of future research. The results from this review may inform the design of new initiatives and the policies that support them; moreover, future implementations can learn from the experience of others to avoid potential barriers and

focus on enablers to increase the chances of success of their programmes—existing or new.

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Contributors NS led the design and conceptualisation of this work and drafted the protocol. AAJ, TB, AH, EH and BW were involved in the conceptualisation of the review design, specifically in establishing the inclusion and exclusion criteria. EH and BW drafted the background section of the protocol and provided feedback on the methodology and the manuscript. SMB developed the search strategy, conducted the search, provided feedback on the manuscript and copy-edited the manuscript. AF, SS and DW provided guidance to the conceptualisation and design

of the study and data analyses and have revised all drafts of this manuscript for important intellectual content and clarity. All authors give approval to the publishing of this protocol manuscript.

Competing interests None declared.

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