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## Implementation of the Recovery Concept Into Canadian Mental Health Services: A Protocol For A Mixed Studies Systematic Review

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8 **Implementation Of The Recovery Concept Into Canadian Mental Health Services: A Protocol**  
9 **For A Mixed Studies Systematic Review**  
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## ABSTRACT

**Introduction:** Recovery is integral to mental health planning in G-8 countries including Canada. A recovery-oriented approach to care aims to promote personal empowerment, illness self-management, and a life beyond services for people with serious mental illness (SMI), while reducing the staggering financial burden associated with mental illness. Although there is a growing body of literature on recovery-oriented services, no synthesis of research on the implementation of recovery into mental health services exists.

**Objectives:** A mixed studies systematic review will be conducted on recovery-oriented services for adults with SMI. Seven databases including PubMed, Ovid Medline, Ovid Embase, Ovid PsycInfo, CINAHL (Current Index to Nursing and Allied Health Literature), the Cochrane Library and Scopus will be searched for peer-reviewed empirical studies published from 1998 to December 2016.

**Methods:** Systematic reviews, and studies using quantitative, qualitative and mixed methodologies will be included. Secondary searches will be conducted in reference lists of all selected full text articles; and citation-tracking will be performed on articles related to those included in the review. Hand searches will also be performed in the tables of contents of three recovery-focused journals for the most recent 5 years. International experts in the field will be contacted for comments and advice. Data extraction will include identification and methodological synthesis of each study; definition of recovery; information on recovery implementation; facilitators and barriers; and study outcomes. A quality assessment will be conducted on each study. The data will be synthesized and a stepwise thematic analysis performed.

### Strengths and limitations of this study

- Studies included in this knowledge synthesis will have been conducted in inpatient, outpatient and community-based mental health settings, and will cover a broad range of research methodologies. The synthesis will reveal how recovery is understood; challenges involved in implementation; and, overall, to what extent transformation to recovery oriented services and systems is occurring.
- The selection of recovery-oriented studies with an implementation focus is unique, and will allow us to draw on 5 powerful conceptual models from implementation science that provide theory-informed elements to guide data analysis and synthesis as well as the reporting of results.

- Knowledge from the synthesis will be compiled into comprehensive and usable formats for organizational and government stakeholders, providing practical guidelines for recovery-based service reform and future evaluation.
- Limiting the search to published, peer-reviewed studies, while important for considerations of quality and methodological rigor, may overlook possible research on recovery-oriented services reported elsewhere.

Key words : mental health service, recovery-orientation, mental disorders, implementation, protocol, systematic review

#### **Ethics and dissemination:**

Ethics approval is not required for this knowledge synthesis. Findings will be disseminated through multiple knowledge translation activities including: a) symposiums; b) presentations in national and international conferences, and to local stakeholders; c) publications in peer-reviewed open access journals, d) posts on the organizational websites of participating organizations.

## **INTRODUCTION**

### **Rationale**

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3 Recovery is the focus of national mental health plans in G-8 countries<sup>1-3</sup> including Canada's first  
4 mental health strategy, *Changing Directions, Changing Lives*<sup>4</sup>, and several provincial strategies<sup>5-</sup>  
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8<sup>8</sup>. The rationale for transformation to recovery-oriented services in mental health is compelling.  
9  
10 While traditional mental health services have underlined professional control<sup>9-13</sup>, reinforcing  
11 patient dependency, self-stigma and hopelessness<sup>14-17</sup>, recovery approaches focus on individual  
12 empowerment, strong collaborative relationships between mental health service providers and  
13 service users, and community integration<sup>18-24</sup>. In promoting a life beyond services, recovery also  
14 meets a key ethical obligation to honor the personhood and citizenship of people with mental  
15 illness<sup>25</sup>.  
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25 Recovery knowledge and evidence have burgeoned over the past two decades.  
26 Research exists on personal recovery<sup>26-32</sup>, recovery-oriented services<sup>33-40</sup>, and provider  
27 competencies<sup>41-45</sup>. Conceptual frameworks and standardized measures have been  
28 produced<sup>35,46-49</sup>. Other studies have linked the recovery approach to recognized theories, such  
29 as empowerment theory<sup>50,51</sup>, the strengths model<sup>52</sup>, capabilities theory<sup>53-55</sup>, positive  
30 psychology<sup>56-58</sup>, person-centered practice<sup>59,60</sup> and co-production<sup>61,62</sup>. Practice guidelines for  
31 recovery-oriented service provision are available<sup>63-69</sup>, as well. In terms of the empirical  
32 literature, studies on particular agencies and programs have identified potential determinants  
33 of recovery orientation in services: for example a flexible and innovative organizational culture,  
34 results-oriented leadership and larger budgets<sup>70</sup> were found to be associated with recovery-  
35 oriented services, as were provider socio-professional characteristics such as greater age,  
36 higher educational levels and more professional experience<sup>71,72</sup>. Another recent study found  
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3 that increasing the recovery orientation of teamwork on mental health teams<sup>73</sup> was associated  
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5 with provider and consumer perceptions that services were recovery-oriented.  
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8 While two recent systematic reviews have been conducted on the recovery-oriented  
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10 practices of mental health service providers<sup>74,75</sup>, no known review has been published, to date,  
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12 on implementation of the recovery concept into mental health services. Our review synthesizes  
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14 research on the nature of recovery-oriented services, implementation challenges and overall  
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16 system transformation. Work on the project initiated in August 2016, and should come to  
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18 completion in spring 2018.  
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23 This project is important and timely, as mental illness affects millions of people  
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25 worldwide. According to recent World Health Organization statistics<sup>76</sup>, 350 million people are  
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27 impacted by depression; 60 million people by bipolar disorder, and 21 million affected by  
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29 schizophrenia. A recovery-oriented approach to healthcare is expected to reduce dependency  
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31 and reduce the cost of mental healthcare, which in Canada has risen to more than \$50 billion  
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33 per year<sup>4,77,78</sup>. The project responds to a critical knowledge gap identified by knowledge users  
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35 across Canada, who are responsible for implementing provincial level policy as well as shifting  
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37 organizational practices to recovery.  
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## 42 Objectives

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44 The goal of this paper is to present the design for a systematic review that will evaluate  
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46 and synthesize published literature on the implementation of the recovery approach into  
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48 mental health services for adults with SMI (schizophrenia, bipolar disorder, major depression).  
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50 Each selected study will be assessed in terms of the following questions: (a) How is recovery  
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52 defined in this study?; (b) How is the recovery approach implemented in this study? (c) What  
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3 facilitators and barriers emerged in implementing recovery in this study? (d) What outcomes  
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5 are reported in this study?  
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## 8 **METHODS**

### 10 **Eligibility criteria**

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12 The design and methodology for the present review are reported following the Preferred  
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14 Reporting Items for Systematic review and Meta-Analysis Protocols (PRISMA-P) guidelines<sup>79</sup>.

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16 Population: The review concerns studies of services for adults (18 yrs. +) with a primary  
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18 diagnosis of schizophrenia, bipolar disorder or major depression, following the DSM-V  
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20 classification for mental disorders.  
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24 Intervention: Studies will be included if they describe and evaluate the implementation of any  
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26 intervention based on recovery principles that aims at transforming the orientation of mental  
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28 health services, or organizations to a recovery approach.  
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32 Comparators: Studies will be eligible for inclusion whether or not they include comparison  
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34 groups.  
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38 Outcomes: Selected studies should report outcomes related to the transformation of a mental  
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40 health service, or organization, to a recovery-orientation. Outcomes might include change in  
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42 organizational culture; more integrated service networks and partnerships; increased  
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44 knowledge, skills and/or attitudinal change among mental health providers; more use of  
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46 evidence based recovery-oriented best practices; greater consumer/provider collaboration,  
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48 consumer self-management, and evaluation.  
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52 Study design: This will be a mixed studies review (MSR)<sup>80,81</sup>. The MSR integrates qualitative,  
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54 quantitative and mixed methods studies, providing a rich, detailed understanding of complex  
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3 health interventions and programs<sup>82</sup>. Studies representing a full range of methodologies will be  
4 included: systematic reviews and meta-analyses, randomized control trials (RCTs) and clinical  
5 trials, observational, mixed method and qualitative studies.  
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10 Time period: We would expect to find very few pertinent studies prior to 1998, when recovery  
11 was first defined in an international policy document<sup>83</sup>. Thus, the precise time frame for the  
12 review is 1998 to December 2016.  
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17 Setting: Research settings may include inpatient, outpatient or community-based mental health  
18 services.  
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22 Exclusion criteria: Non-research studies (e.g. editorials, letters, conference abstracts), as well as  
23 unpublished (grey) literature, dissertations, and book or book-length studies, will be excluded,  
24 as well as conceptual papers and review articles. Studies on services for addiction populations  
25 will also be excluded, as recovery is conceptualized differently in the addictions field. Language  
26 restrictions will not apply.  
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### 34 **Information sources**

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36 Our final search strategy will be developed in consultation with an experienced research  
37 librarian on the project and will combine a broad, systematic search of the literature. Electronic  
38 search will be conducted on the following databases: PubMed, Ovid Medline, Ovid Embase,  
39 Ovid PsycInfo, CINAHL (Current Index to Nursing and Allied Health Literature), the Cochrane  
40 Library and Scopus. We will supplement our results by conducting the following secondary  
41 searches: (a) Reference lists of all selected full text articles will be scanned for additional  
42 relevant studies; (b) Citation-tracking will be performed on included articles; (c) Hand searches  
43 of tables of contents for the past 5 years will be conducted in the following key journals:  
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3 *Psychiatric Rehabilitation Journal; Psychiatric Services; and Community Mental Health Journal.*

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5 Additional journals will be added if warranted; and (d) Known experts in the field will be  
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7 contacted for comments and advice. We will also stay alert to serendipitous discovery that may  
8  
9 increase results.  
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### 12 13 **Pilot Search strategy**

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15 Using the Ovid Medline database, a research librarian and co-investigator on the project  
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17 conducted a pilot search (Appendix 1) which generated 5164 records. For this preliminary  
18  
19 scoping phase, the search strategy was designed to focus on 3 main components: *mental*  
20  
21 *health, recovery and services*. Medical Subject Heading (MeSH) and synonyms (keywords) were  
22  
23 combined for each of the components. While keywords will remain consistent throughout the  
24  
25 searches, subject headings will be revised to reflect database specific preferences. Search  
26  
27 strategies will be further revised as new subject headings and keywords are revealed.  
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### 32 33 **Study records**

### 34 35 **Data management**

36  
37 Electronic search results will be downloaded into EndNote reference manager software,  
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39 duplicates will be removed where possible, and the remaining references will be uploaded to  
40  
41 the Distiller Systematic Review software for the screening and data extraction stages. Distiller  
42  
43 software stores references, manages and monitors the screening and data extraction process  
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45 with customized forms and automated flowcharts, and provides an audit trail for the review.  
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### 50 51 **Screening and Selection process**

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53 For the first selection, two team members working independently will read titles and  
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55 abstracts of each paper identified in the electronic search and assess them for relevance based  
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3 on the inclusion and exclusion criteria. Second, the team members will read the full text of  
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5 each selected article in order to confirm its inclusion in the study. Disagreements related to the  
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7 inclusion of any paper will be discussed and resolved, involving a third team member if  
8  
9 necessary. To ensure high inter-rater reliability, training exercises will be conducted prior to  
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11 initiating the screening process. Team members will meet on a weekly basis to follow up on the  
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13 screening process and discuss unanticipated problems.  
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### 17 **Data items and data extraction process**

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19 In order to minimize bias, two research team members will independently extract the data.  
20  
21 Sample elements for data extraction appear below in Table 1. The categories on the extraction  
22  
23 grid include methodological elements based on the PICO mnemonic (PICO= population,  
24  
25 intervention, comparison, outcome<sup>84</sup>) for quantitative studies. For qualitative studies,  
26  
27 identification of data elements will correspond to the 4 research questions, and will also be  
28  
29 guided by the 5 implementation frameworks<sup>85-89</sup> which, taken together, provide myriad  
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31 implementation processes at different conceptual levels. For example, the 5 dimensions in the  
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33 Damschroder Consolidated Framework for Advancing Implementation Science<sup>86</sup> include  
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35 structural, intervention, individual, and “inner”/“outer” setting characteristics that describe the  
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37 implementation process at the organizational level. Whereas Powell et al<sup>88</sup> provide 68  
38  
39 implementation strategies within 6 processes (planning, educating, financing, restructuring,  
40  
41 quality management and policy) involved in clinical practice. Study limitations and gaps in  
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43 knowledge will also be recorded<sup>90</sup>. The data extraction form will be pre-tested by the two  
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45 reviewers and revised as needed. Distiller SR software will be used to manage the data  
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47 extraction process.  
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**Table 1: Sample elements for data extraction by research question**

<b>Study ID/ Methods:</b>	<b>Meaning of Recovery (O1)</b>	<b>Recovery Implementation (O2)</b>	<b>Barriers/ Facilitators (O3)</b>	<b>Recovery Outcomes (O4)</b>
I.D. #; location Objective Study design Participants Interventions/ comparisons Data collection Data analysis/ triangulation Quality appraisal	Definitions Conceptualizations	Consolidated framework for advancing implementation science (Damschroder et al <sup>91</sup> )  68 strategies for implementation of clinical innovations (Powell et al <sup>92</sup> )	Consolidated framework (Damschroder et al)	Theoretical domains framework (Cane et al <sup>85</sup> )  Behavior change technique taxonomy (Michie et al <sup>87</sup> )  Conclusions Study limitations/ gaps/ contradictions/ further questions

### Quality assessment

Systematic reviews will be assessed for quality based on the Assessing Methodological Quality of Systematic Reviews tool (AMSTAR) protocol. The AMSTAR is an 11-item questionnaire that assesses study design, literature searched, and scientific quality of reviews; a rating system is included. For primary research studies, quality assessment will be determined using criteria developed by Kmet (2004)<sup>93</sup>. This tool includes a 14-item checklist for quality criteria in quantitative studies, and a 10-item checklist for qualitative studies. A rating system (yes-2; partial -1; and no-0) is provided, as well as a calculation for summary scores. While some controversy exists on whether qualitative research should be assessed using standard quality criteria<sup>94</sup>, we will include a quality appraisal for qualitative, as well as quantitative, studies in order to better assess the strengths and weaknesses of the evidence<sup>95</sup>. The selected studies will be independently assessed for quality by two reviewers. Discrepancies will be solved in consultation with the principal investigator.

### Data Synthesis

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2  
3 No single unifying framework exists for synthesizing quantitative and qualitative  
4 evidence for healthcare policy-makers and managers<sup>96</sup>. Our experience with recovery research  
5 suggests that much of the pertinent literature for review will be qualitative. Thus, our overall  
6 approach will be to convert all the evidence into qualitative form. The quantitative data will be  
7 transformed into qualitative form by extracting key concepts and findings within the elements  
8 geared to our research questions, as described above. Analytic procedures and synthesis will  
9 follow a 3-stage process: (a) organization of studies into logical categories according to their  
10 design, and methodology; and coding using NVivo 11 software; (b) within-study analysis,  
11 according to the study questions; (c) cross-study synthesis of the data using an adaptation of  
12 the stepwise thematic analysis developed by Lucas et al<sup>95</sup>, according to the following  
13 procedures: (1) two reviewers will independently review data collated under each of the  
14 research questions; (2) codes produced by each researcher will be compared, and a  
15 consolidated list of themes produced for each research question; (3) themes occurring under  
16 each question will be clustered around common dimensions; (4) results of the thematic analysis  
17 will be presented to the research team at a consensus meeting.

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20 Specific measures will be taken to enhance the trustworthiness of the data. As  
21 suggested by Lucas et al, directly reported participant data (e.g. verbatim quotations, or scores  
22 on attitudinal scales), and author interpretations, will be reported separately in order to retain  
23 the richness or “thickness” of the data. Detailed descriptions, contextual material, and the  
24 quality assessment of each paper will also help readers make judgments about the reliability  
25 and validity of the data. Summary tables will include counts of the papers contributing data on  
26 each theme<sup>94</sup>.

## Dissemination

Knowledge translation will involve collaboration with our international consultants, and knowledge users, who include decision makers and managers, service providers, people with lived experience and families. Four output documents will be developed, including: 1) a critical appraisal of findings from the synthesis on recovery implementation; 2) a compendium of case studies on successful recovery implementation initiatives (sensitive to gender, race, culture); 3) a recovery implementation manual for decision makers and managers; and 4) a toolkit of recovery-enhancing practices, i.e. strategies for individual behavior change targeted at service providers and service users. Each document will be submitted to the entire team for revision and editing.

The results of the synthesis project will be widely disseminated. Knowledge translation activities will include: (a) creation of an Advisory Committee composed of the research team, Knowledge Users and international expert advisors. Quarterly telephone meetings with the Advisory to review emerging findings and provide feedback; (b) ongoing consultation/feedback between knowledge users and the research team during preparation of the 4 project outputs; (c) posting of information and updates on the websites of the organizations of knowledge users on the project, including those for people with lived experience and families; (d) organization of a one-day end-of-project symposium for dissemination of project outputs, including workshops for recording feedback and recommendations; (e) dissemination of project outputs through organizational websites; and through national and international networks (free access); (f) submission of articles to peer-reviewed, open access journals; (g) presentations at national/international conferences;

## Conclusion

The recovery approach emerged through the lived experiences of people with enduring mental health problems as they utilized the formal mental health care system. Recovery-oriented services are viewed as a more person-centered and promising approach for treating mental illness. Until now, there has been little access to knowledge concerning how mainstream mental health services are being transformed to a recovery-orientation, and with what results. Our synthesis will establish the state of knowledge and evidence on implementing recovery, and will make this knowledge available to a wide range of mental health stakeholders through dissemination activities and the publication of concrete practice tools. Results may also support the development of new recovery interventions, on which future outcome research should be considered.

## Contributors:

MP is the guarantor. ES, JS and MP drafted the manuscript. All authors contributed to the development of the protocol, selection criteria, and data extraction criteria. MP and JS developed the search strategy. All authors read, provided feedback and approved the final manuscript.

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**Competing interests:** None

For peer review only

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For peer review only

## Appendix 1

Pilot search strategy for Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid MEDLINE(R) and Ovid OLDMEDLINE(R) 1946 to Present

### # Searches

- 1 recovery oriented.ti,ab,kw.
- 2 exp Mental Health Services/
- 3 recover\*.ti,ab,kw.
- 4 2 and 3
- 5 Mental Health/  
mental disorders/ or adjustment disorders/ or exp anxiety disorders/ or exp delirium,  
6 dementia, amnesic, cognitive disorders/ or exp dissociative disorders/ or exp mood disorders/  
7 or exp neurotic disorders/ or exp personality disorders/ or exp "schizophrenia and disorders  
with psychotic features"/
- 8 ((Mental or psychiatric or psychologic\*) adj2 (health or illness\* or disorder\* or disease\* or  
9 problem\* or issue or issues or well being)).ti,ab,kw.  
((adjustment or anxiety or obsessive or compulsive or panic or phobic or stress or dissociative  
10 or mood or depressive or affective or personality or psychotic or paranoid) adj2 (disorder\* or  
11 disease\*)).ti,ab,kw.
- 12 (agoraphobi\* or astheni\* or phobia\* or delirium or dementia\* or depression or schizophreni\*  
or schizoid).ti,ab,kw.
- 13 5 or 6 or 7 or 8 or 9
- 14 exp health services/ or service\*.ti,ab,kw.
- 15 10 and 11
- 16 exp "Outcome and Process Assessment (Health Care)"/
- 17 exp delivery of health care/
- 18 Resource Allocation/
- 19 exp "Organization and Administration"/
- 20 exp "Quality of Health Care"/
- 21 exp professional competence/
- 22 exp Inservice Training/

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4 20 exp patient care management/

5 ((service\* or organization\* or organisation\* or unit or units or department\* or program\* or  
6 clinic or clinics or ward or wards or staff or workforce or setting) adj4 (leader\* or innovate\*

7 21 or objective\* or change\* or transform\* or structure\* or opportunit\* or strength\* or model\* or  
8 priorit\* or policy or policies or procedure\* or ration\* or allocat\* or reform\* or commit\* or  
9 needs or improve\* or assess\* or responsive\* or evaluat\* or plan\*)).ti,ab,kw.

10 22 ((treatment or therapy) adj2 planning).ti,ab,kw.

11 23 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

12 24 exp Patient-Centered Care/

13 25 exp Self Care/ or exp Self Concept/

14 26 ((self or personal) adj2 (identity or concept or assess\* or manage\* or disclos\* or efficacy or  
15 evaluat\*)).ti,ab,kw.

16 27 ((patient or client or consumer\*) adj4 (centered or centred or focus\* or engage\* or  
17 involve\*)).ti,ab,kw.

18 28 ((shared or joint) adj2 decision\*).ti,ab,kw.

19 29 exp Interpersonal Relations/

20 30 "Quality of Life"/ or quality of life.mp.

21 31 Social Support/ or Social Adjustment/

22 32 (social adj2 (support or integration or inclusion or adjustment)).ti,ab,kw.

23 (connected\* or hope\* or optimis\* or trust or identity or meaning or empower\* or spiritual\* or  
24 giving back or stigma\* or values or goal or goals or belonging or purpose or choice or  
25 citizenship or discriminat\* or inequalit\* or valued or roles).ti,ab,kw.

26 34 (partnership\* or collaborat\* or interpersonal or multidisciplinary or cooperat\* or co-operat\*  
27 or team\* or group or joint).ti,ab,kw.

28 35 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34

29 36 exp Data Collection/

30 37 exp Psychological Tests/

31 38 (measur\* or test\* or scale\* or metric\* or psychometric\* or questionnaire\* or instrument\* or  
32 data).ti,ab,kw.

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42 41 and recover\*.mp.  
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# BMJ Open

## Protocol for a mixed studies systematic review on the implementation of the recovery approach in adult mental health services

Journal:	<i>BMJ Open</i>
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<b>Primary Subject Heading</b>:	Mental health
Secondary Subject Heading:	Evidence based practice, Health services research
Keywords:	MENTAL HEALTH, Adult psychiatry < PSYCHIATRY, Recovery, HEALTH SERVICES

SCHOLARONE™  
Manuscripts

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6 38**ABSTRACT**7  
8 39 **Introduction:**  
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10 Recovery is integral to mental health planning in G-8 countries including Canada. A recovery-  
11 oriented approach to care aims to promote personal empowerment, illness self-management,  
12 and a life beyond services for people with serious mental illness (SMI), while reducing the  
13 staggering financial burden associated with mental illness. Although there is a growing body of  
14 literature on recovery-oriented services, no synthesis of research on the implementation of  
15 recovery into mental health services exists.  
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18 46  
19 47 **Method and analysis:**  
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21 A mixed studies systematic review will be conducted on recovery-oriented services for adults  
22 with SMI. Seven databases including PubMed, Ovid Medline, Ovid Embase, Ovid PsycInfo,  
23 CINAHL (Current Index to Nursing and Allied Health Literature), the Cochrane Library and  
24 Scopus will be searched for peer-reviewed empirical studies published from 1998 to December  
25 2016. Systematic reviews, and studies using quantitative, qualitative and mixed methodologies  
26 will be included. Secondary searches will be conducted in reference lists of all selected full text  
27 articles; and citation-tracking will be performed on articles related to those included in the  
28 review. Hand searches will also be performed in the tables of contents of three recovery-  
29 focused journals for the most recent 5 years. International experts in the field will be contacted  
30 for comments and advice. Data extraction will include identification and methodological  
31 synthesis of each study; definition of recovery; information on recovery implementation;  
32 facilitators and barriers; and study outcomes. A quality assessment will be conducted on each  
33 study. The data will be synthesized and a stepwise thematic analysis performed.  
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39 62 **Ethics and dissemination:**  
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41 Ethics approval is not required for this knowledge synthesis. Findings will be disseminated  
42 through multiple knowledge translation activities including: a) a one-day symposium; b)  
43 presentations in national and international conferences, and to local stakeholders; c)  
44 publications in peer-reviewed open access journals, d) posts on the organizational websites of  
45 participating knowledge users.  
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## 74 Strengths and limitations of this study

- 75     ▪ Studies included in this knowledge synthesis will have been conducted in inpatient,  
76     outpatient and community-based mental health settings, and will cover a broad range of  
77     research methodologies. The synthesis will reveal how recovery is understood;  
78     challenges involved in implementation; and, overall, to what extent transformation to  
79     recovery oriented services and systems is occurring.
- 80     ▪ The selection of recovery-oriented studies with an implementation focus is unique, and  
81     will allow us to draw on one powerful conceptual models from implementation science  
82     that provide theory-informed elements to guide data analysis and synthesis as well as  
83     the reporting of results.
- 84     ▪ Knowledge from the synthesis will be compiled into comprehensive and usable formats  
85     for organizational and government stakeholders, providing practical guidelines for  
86     recovery-based service reform and future evaluation.
- 87     ▪ Limiting the search to published, peer-reviewed studies, while important for  
88     considerations of quality and methodological rigor, may overlook possible research on  
89     recovery-oriented services reported elsewhere.

## 90 INTRODUCTION

### 91 Rationale

92 Recovery is the focus of national mental health plans in G-8 countries<sup>1-3</sup>, including Canada's first  
93 mental health strategy, *Changing Directions, Changing Lives*<sup>4</sup>, and several provincial strategies<sup>5-</sup>  
94 <sup>8</sup>. The rationale for transformation to recovery-oriented services in mental health is compelling.  
95 While traditional mental health services have underlined professional control<sup>9-13</sup>, reinforcing  
96 patient dependency, self-stigma and hopelessness<sup>14-17</sup>, recovery approaches focus on individual  
97 empowerment, strong collaborative relationships between mental health service providers and  
98 service users, and community integration<sup>18-24</sup>. In promoting a life beyond services, recovery also  
99 meets a **key** ethical obligation to honor the personhood and citizenship of people with mental  
100 illness<sup>25</sup>.

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3 101 Recovery knowledge and evidence have burgeoned over the past two decades.  
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6 102 Research exists on personal recovery<sup>26-32</sup>, recovery-oriented services<sup>33-40</sup>, and provider  
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8 103 competencies<sup>41-45</sup>. Conceptual frameworks and standardized measures have been  
9  
10 104 produced<sup>35,46-49</sup>. Other studies have linked the recovery approach to recognized theories, such  
11  
12 105 as empowerment theory<sup>50,51</sup>, the strengths model<sup>52</sup>, capabilities theory<sup>53-55</sup>, positive  
13  
14 106 psychology<sup>56-58</sup>, person-centered practice<sup>59,60</sup> and co-production<sup>61,62</sup>. Practice guidelines for  
15  
16 107 recovery-oriented service provision are available<sup>63-69</sup>, as well. In terms of the empirical  
17  
18 108 literature, studies on particular agencies and programs have identified potential determinants  
19  
20 109 of recovery orientation in services: for example a flexible and innovative organizational culture,  
21  
22 110 results-oriented leadership and larger budgets<sup>70</sup> were found to be associated with recovery-  
23  
24 111 oriented services, as were provider socio-professional characteristics such as greater age,  
25  
26 112 higher educational levels and more professional experience<sup>71,72</sup>. Another recent study found  
27  
28 113 that increasing the recovery orientation of teamwork on mental health teams<sup>73</sup> was associated  
29  
30 114 with provider and consumer perceptions that services were recovery-oriented.  
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40 115 While two recent systematic reviews have been conducted on the recovery-oriented  
41  
42 116 practices of mental health service providers<sup>74,75</sup>, no known review has been published, to date,  
43  
44 117 on the implementation of the recovery approaches into mental health services. Our review  
45  
46 118 synthesizes research on the nature of recovery-oriented services, implementation challenges  
47  
48 119 and overall system transformation. Work on the project initiated in August 2016, and should  
49  
50 120 come to completion in spring 2018.  
51  
52

53 121 This project is important and timely, as mental illness affects millions of people  
54  
55 122 worldwide. According to recent World Health Organization statistics<sup>76</sup>, 350 million people are  
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3 123 impacted by depression; 60 million people by bipolar disorder, and 21 million affected by  
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5  
6 124 schizophrenia. A recovery-oriented approach to healthcare is expected to reduce dependency  
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8  
9 125 and reduce the cost of mental healthcare, which in Canada has risen to more than \$50 billion  
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11 126 per year<sup>4,77,78</sup>. The project responds to a critical knowledge gap identified by knowledge users  
12  
13  
14 127 across Canada, who are responsible for implementing provincial level policy as well as shifting  
15  
16 128 mental health organizations and services to a recovery orientation.

## 18 129 **Objectives**

20  
21 130 The overall goal of this review is to systematically search, assess, and synthesize,  
22  
23 131 implementation studies on mental health recovery from the international mental health  
24  
25  
26 132 literature in order to inform, and facilitate, the transformation of Canadian mental health  
27  
28  
29 133 systems and adult services to a recovery orientation. The following six research questions,  
30  
31 134 guided by the Consolidated Framework for Advancing Implementation Science (CFIR)<sup>79</sup> will be  
32  
33 135 applied to each selected study: (1) How was recovery defined in this study?; (2) How was the  
34  
35  
36 136 recovery approach implemented in this study (Intervention)? (3) What elements from the  
37  
38  
39 137 external environment (Outer setting), or internal environment (Inner setting), influenced  
40  
41 138 implementation in this study?; (4) What were the characteristics of participants in this study?  
42  
43 139 (Characteristics of individuals); (5) What processes were involved in effecting the  
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45  
46 140 implementation?; and 6) What was the extent and effectiveness of implementation in this  
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48  
49 141 study?

## 51 142

## 53 143 **METHODS**

### 55 144 **Eligibility criteria**

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3 145 The design and methodology for the present review are reported following the Preferred  
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6 146 Reporting Items for Systematic review and Meta-Analysis Protocols (PRISMA-P) guidelines<sup>80</sup>  
7  
8 147 (Appendix 1).  
9

10  
11 148 Population: The review concerns studies of services for adults (18 yrs. +) with a primary  
12  
13 149 diagnosis of schizophrenia, bipolar disorder or major depression, following the DSM-V  
14  
15 150 classification for mental disorders.  
16

17  
18 151 Intervention: Studies will be included if they describe and evaluate the implementation of any  
19  
20 152 intervention based on recovery principles that aims at transforming the orientation of mental  
21  
22 153 health services, or organizations to a recovery approach.  
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25  
26 154 Comparators: Studies will be eligible for inclusion whether or not they include comparison  
27  
28 155 groups.  
29

30  
31 156 Outcomes: Selected studies should report outcomes related to the transformation of a mental  
32  
33 157 health service, or organization, to a recovery-orientation. Outcomes might include change in  
34  
35 158 organizational culture; more integrated service networks and partnerships; increased  
36  
37 159 knowledge, skills and/or attitudinal change among mental health providers; more use of  
38  
39 160 evidence based recovery-oriented best practices; greater consumer/provider collaboration,  
40  
41 161 consumer self-management, and evaluation.  
42  
43

44  
45 162 Study design: This will be a mixed studies review (MSR)<sup>81,82</sup>. The MSR integrates qualitative,  
46  
47 163 quantitative and mixed methods studies, providing a rich, detailed understanding of complex  
48  
49 164 health interventions and programs<sup>83</sup>. Studies representing a full range of methodologies will be  
50  
51 165 included: systematic reviews and meta-analyses, randomized control trials (RCTs) and clinical  
52  
53 166 trials, observational, mixed method and qualitative studies.  
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3 167 Time period: We would expect to find very few pertinent studies prior to 1998, when recovery  
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5  
6 168 was first defined in an international policy document<sup>84</sup>. Thus, the precise time frame for the  
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8  
9 169 review is 1998 to December 2016.

10  
11 170 Setting: Research settings may include inpatient, outpatient or community-based mental health  
12  
13  
14 171 services.

15  
16 172 Exclusion criteria: Non-research studies (e.g. editorials, letters, conference abstracts), as well as  
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18  
19 173 unpublished (grey) literature, dissertations, and book or book-length studies, will be excluded,  
20  
21 174 as well as conceptual papers and review articles. Studies on services for addiction populations  
22  
23  
24 175 will also be excluded, as recovery is conceptualized differently in the addictions field. Language  
25  
26 176 restrictions will not apply.

### 27 28 177 **Information sources**

29  
30  
31 178 Our final search strategy will be developed in consultation with an experienced research  
32  
33  
34 179 librarian on the project and will combine a broad, systematic search of the literature. Electronic  
35  
36 180 search will be conducted on the following databases: PubMed, Ovid Medline, Ovid Embase,  
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38  
39 181 Ovid PsycInfo, CINAHL (Current Index to Nursing and Allied Health Literature), the Cochrane  
40  
41 182 Library and Scopus. We will supplement our results by conducting the following secondary  
42  
43  
44 183 searches: (a) Reference lists of all selected full text articles will be scanned for additional  
45  
46 184 relevant studies; (b) Citation-tracking will be performed on included articles; (c) Hand searches  
47  
48  
49 185 of tables of contents for the past 5 years will be conducted in the following key journals:  
50  
51 186 *Psychiatric Rehabilitation Journal*; *Psychiatric Services*; and *Community Mental Health Journal*.  
52  
53  
54 187 Additional journals will be added if warranted; and (d) Known experts in the field will be  
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3 188 contacted for comments and advice. We will also stay alert to serendipitous discovery that may  
4  
5  
6 189 increase results.  
7

### 8 190 **Pilot Search strategy**

9  
10 191 Using the Ovid Medline database, a research librarian and co-investigator on the project  
11  
12 192 conducted a pilot search (Appendix 2) which generated 5164 records. For this preliminary  
13  
14 193 scoping phase, the search strategy was designed to focus on 3 main components: *mental*  
15  
16 194 *health, recovery* and *services*. Medical Subject Heading (MeSH) and synonyms (keywords) were  
17  
18 195 combined for each of the components. Terms related to recovery were chosen to reflect the  
19  
20 196 consumer-survivor understanding of recovery<sup>48,85,86</sup> While keywords will remain consistent  
21  
22 197 throughout the searches, subject headings will be revised to reflect database specific  
23  
24 198 preferences. Search strategies will be further revised as new subject headings and keywords are  
25  
26 199 revealed.  
27  
28  
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31  
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### 33 200 **STUDY RECORDS**

#### 34 201 **Data management**

35  
36 202 Electronic search results will be downloaded into EndNote reference manager software,  
37  
38 203 duplicates will be removed where possible, and the remaining references will be uploaded to  
39  
40 204 the Distiller Systematic Review software for the screening and data extraction stages. Distiller  
41  
42 205 software stores references, manages and monitors the screening and data extraction process  
43  
44 206 with customized forms and automated flowcharts, and provides an audit trail for the review.  
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#### 51 207 **Screening and Selection process**

52  
53 208 For the first selection, two team members working independently will read titles and  
54  
55 209 abstracts of each paper identified in the electronic search and assess them for relevance based  
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3 210 on the inclusion and exclusion criteria. Second, the team members will read the full text of  
4  
5  
6 211 each selected article in order to confirm its inclusion in the study. Disagreements related to the  
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8  
9 212 inclusion of any paper will be discussed and resolved, involving a third team member if  
10  
11 213 necessary. To ensure high inter-rater reliability, training exercises will be conducted prior to  
12  
13 214 initiating the screening process. Team members will meet on a weekly basis to follow up on the  
14  
15  
16 215 screening process and discuss unanticipated problems.

### 17 18 216 **Data items and data extraction process**

19  
20  
21 217 In order to minimize bias, two research team members will independently extract the data.  
22  
23 218 Sample elements for data extraction appear below in Table 1. The categories on the extraction  
24  
25  
26 219 grid include methodological elements based on the PICO mnemonic (PICO= population,  
27  
28 220 intervention, comparison, outcome<sup>87</sup>). As well, elements corresponding to the 6 research  
29  
30  
31 221 questions will be extracted and organized using the CFIR<sup>79</sup>, a multilevel five-dimension  
32  
33 222 determinant framework<sup>88</sup> that constitutes a highly useful tool for identifying barriers and  
34  
35  
36 223 facilitators influencing implementation outcomes. Study limitations and gaps in knowledge will  
37  
38 224 also be recorded<sup>93</sup>. The data extraction form will be pre-tested by the two reviewers and  
39  
40  
41 225 revised as needed. Distiller SR software will be used to manage the data extraction process.

### 42 43 226 **Table 1: Sample elements for data extraction**

44  
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Study ID/ Methods	Recovery Definition & Intervention	Characteristics of the Setting		Characteristics of Individuals	Process	Implementation Outcomes
		Outer	Inner			
I.D. #; location Objective Study design Participants Interventions/ comparisons Data collection Data analysis/ triangulation Quality appraisal	-Recovery definition/ conceptualization  -Intervention Characteristics source adaptability trialability complexity design& packaging costs	-Needs & resources -External links -Political pressures -Policy & incentives	-Structure -Dialogue -Culture -Tension for change -Values & Norms -Priorities - Incentives & rewards	-Knowledge & beliefs -Identification with organization -Other personal attributes	-Advance planning -« Buy-in ») opinion leaders implementation leaders champions -Execution -Feedback	-extent of successful implementation of intervention  -Conclusions -Study limitations/ gaps/ -Contradictions/ further questions

233

## 234 Quality assessment

235 Systematic reviews require that selected studies are assessed for quality<sup>96</sup>. We will the  
 236 Assessing Methodological Quality of Systematic Reviews tool (AMSTAR) protocol for the  
 237 assessment of systematic reviews. The AMSTAR is an 11-item questionnaire that assesses study  
 238 design, literature searched, and scientific quality of reviews; a rating system is included. For  
 239 primary research studies, quality assessment will be determined using criteria developed by  
 240 Kmet (2004)<sup>97</sup>. This tool includes a 14-item checklist for quality criteria in quantitative studies,  
 241 and a 10-item checklist for qualitative studies. A rating system (yes-2; partial -1; and no-0) is  
 242 provided, as well as a calculation for summary scores. While some controversy exists on  
 243 whether qualitative research should be assessed using standard quality criteria<sup>98</sup>, we will  
 244 include a quality appraisal for qualitative, as well as quantitative, studies in order to better  
 245 assess the strengths and weaknesses of the evidence<sup>99</sup>. The Cochrane Collaboration tool will be  
 246 used for assessing the risk of bias in randomized control trials<sup>100</sup>. The selected studies will be

10

1  
2  
3 247 independently assessed for quality by two reviewers. Discrepancies will be solved in  
4  
5  
6 248 consultation with the principal investigator.  
7

8 249 **DATA**  
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10 250 **Data Synthesis**  
11

12  
13 251 No single unifying framework exists for synthesizing quantitative and qualitative  
14  
15 252 evidence for healthcare policy-makers and managers<sup>101</sup>. Our experience with recovery research  
16  
17 253 suggests that much of the pertinent literature for review will be qualitative. Thus, our overall  
18  
19 254 approach will be to convert all the evidence into qualitative form. The quantitative data will be  
20  
21 255 transformed into qualitative form by extracting key concepts and findings within the elements  
22  
23 256 geared to our research questions, as described above. Analytic procedures and synthesis will  
24  
25 257 follow a 3-stage process: (a) organization of studies into logical categories according to their  
26  
27 258 design, and methodology; and coding using NVivo 11 software; (b) within-study analysis,  
28  
29 259 according to the study questions; (c) cross-study synthesis of the data using an adaptation of  
30  
31 260 the stepwise thematic analysis developed by Lucas et al<sup>99</sup>, according to the following  
32  
33 261 procedures: (1) two reviewers will independently review data collated under each of the  
34  
35 262 research questions; (2) codes produced by each researcher will be compared, and a  
36  
37 263 consolidated list of themes produced for each research question; (3) themes occurring under  
38  
39 264 each question will be clustered around common dimensions; (4) results of the thematic analysis  
40  
41 265 will be presented to the research team at a consensus meeting.  
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50  
51 266 Specific measures will be taken to enhance the trustworthiness of the data. As  
52  
53 267 suggested by Lucas et al, directly reported participant data (e.g. verbatim quotations, or scores  
54  
55 268 on attitudinal scales), and author interpretations, will be reported separately in order to retain  
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3 269 the richness or “thickness” of the data. Detailed descriptions, contextual material, and the  
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6 270 quality assessment of each paper will also help readers make judgments about the reliability  
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8  
9 271 and validity of the data. Summary tables will include counts of the papers contributing data on  
10  
11 272 each theme<sup>98</sup>.

### 273 **DISSEMINATION**

274 Knowledge translation will involve collaboration with our international consultants, and  
275 knowledge users, who include decision makers and managers, service providers, people with  
276 lived experience and families. Four output documents will be developed, including: 1) a critical  
277 appraisal of findings from the synthesis on recovery implementation; 2) a compendium of case  
278 studies on successful recovery implementation initiatives (sensitive to gender, race, culture); 3)  
279 a recovery implementation manual for decision makers and managers; and 4) a toolkit of  
280 recovery-enhancing approaches, i.e. strategies for individual behavior change targeted at  
281 service providers and service users. Each document will be submitted to the entire team for  
282 revision and editing.

283 The results of the synthesis project will be widely disseminated. Knowledge translation  
284 activities will include: (a) creation of an Advisory Committee composed of the research team,  
285 Knowledge Users and international expert advisors. Quarterly telephone meetings with the  
286 Advisory to review emerging findings and provide feedback; (b) ongoing consultation/feedback  
287 between knowledge users and the research team during preparation of the 4 project outputs;  
288 (c) posting of information and updates on the websites of the organizations of knowledge users  
289 on the project, including those for people with lived experience and families; (d) organization of  
290 a one-day end-of-project symposium for dissemination of project outputs, including workshops

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3 291 for recording feedback and recommendations; (e) dissemination of project outputs through  
4  
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6 292 organizational websites; and through national and international networks (free access); (f)  
7  
8 293 submission of articles to peer-reviewed, open access journals; (g) presentations at  
9  
10 294 national/international conferences;

## 13 295 **CONCLUSION**

16 296 The recovery approach emerged through the lived experiences of people with enduring  
17  
18 297 mental health problems as they utilized the formal mental health care system. Recovery-  
19  
20 298 oriented services are viewed as a more person-centered and promising approach for treating  
21  
22 299 mental illness. Until now, there has been little access to knowledge concerning how  
23  
24 300 mainstream mental health services are being transformed to a recovery-orientation, and with  
25  
26 301 what results. Our synthesis will establish the state of knowledge and evidence on implementing  
27  
28 302 recovery, and will make this knowledge available to a wide range of mental health stakeholders  
29  
30 303 through dissemination activities and the publication of concrete recovery implementation tools.  
31  
32 304 Results may also support the development of new recovery interventions, on which future  
33  
34 305 outcome research should be considered.  
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## 44 308 **Contributors:**

46 309 Myra Piat (MP) is the guarantor. Myra Piat (MP), Eleni Sofouli (ES) and Judith Sabetti (JS)  
47  
48 310 drafted the manuscript. Myra Piat (MP) Eleni Sofouli (ES), Judith Sabetti (JS), Catherine Briand  
49  
50 311 (CB), Brigitte Vachon (BV) and Janet Curran (JC) contributed to the development of the  
51  
52 312 selection criteria, and data extraction criteria. Angella Lambrou (AL) developed the preliminary  
53  
54 313 search strategy. Howard Chodos (HC) Catherine Briand (CB), Brigitte Vachon (BV) and Janet  
55  
56 314 Curran (JC) provided written feedback on the manuscript and Angella Lambrou (AL) Howard  
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58 315 Chodos (HC) Catherine Briand (CB) Brigitte Vachon (BV) and Janet Curran (JC) approved the final  
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For peer review only

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## APPENDIX 1 PRISMA-P 2015 Checklist

This checklist has been adapted for use with systematic review protocol submissions to BioMed Central journals from Table 3 in Moher D et al: Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 2015 4:1

An Editorial from the Editors-in-Chief of *Systematic Reviews* details why this checklist was adapted - Moher D, Stewart L & Shekelle P: Implementing PRISMA-P: recommendations for prospective authors. *Systematic Reviews* 2016 5:15

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
<b>ADMINISTRATIVE INFORMATION</b>					
<b>Title</b>					
Identification	1a	Identify the report as a protocol of a systematic review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Registration</b>	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Authors</b>					
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5-34
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	278-280
<b>Amendments</b>	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Support</b>					
Sources	5a	Indicate sources of financial or other support for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	282
Sponsor	5b	Provide name for the review funder and/or sponsor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	282
Role of sponsor/funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>INTRODUCTION</b>					
<b>Rationale</b>	6	Describe the rationale for the review in the context of what is already known	<input checked="" type="checkbox"/>	<input type="checkbox"/>	66-103

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	104-116
<b>METHODS</b>					
Eligibility criteria	8	Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	119-151
Information sources	9	Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	153-165
Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	166-175
<b>STUDY RECORDS</b>					
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	117-182
Selection process	11b	State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	183-191
Data collection process	11c	Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	192-201
Data items	12	List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	203
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	203
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	216-217
<b>DATA</b>					
Synthesis	15a	Describe criteria under which study data will be quantitatively synthesized	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., $I^2$ , Kendall's tau)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
	15c	Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	221-236
<b>Meta-bias(es)</b>	16	Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Confidence in cumulative evidence</b>	17	Describe how the strength of the body of evidence will be assessed (e.g., GRADE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	205-219



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## APPENDIX 2

Pilot search strategy for Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid MEDLINE(R) and Ovid OLDMEDLINE(R) 1946 to Present

### # Searches

- 1 recovery oriented.ti,ab,kw.
- 2 exp Mental Health Services/
- 3 recover\*.ti,ab,kw.
- 4 2 and 3
- 5 Mental Health/  
mental disorders/ or adjustment disorders/ or exp anxiety disorders/ or exp delirium,  
6 dementia, amnesic, cognitive disorders/ or exp dissociative disorders/ or exp mood disorders/  
7 or exp neurotic disorders/ or exp personality disorders/ or exp "schizophrenia and disorders  
with psychotic features"/  
8 ((Mental or psychiatric or psychologic\*) adj2 (health or illness\* or disorder\* or disease\* or  
9 problem\* or issue or issues or well being)).ti,ab,kw.  
10 ((adjustment or anxiety or obsessive or compulsive or panic or phobic or stress or dissociative  
11 or mood or depressive or affective or personality or psychotic or paranoid) adj2 (disorder\* or  
12 disease\*)).ti,ab,kw.
- 13 (agoraphobi\* or astheni\* or phobia\* or delirium or dementia\* or depression or schizophreni\*  
14 or schizoid).ti,ab,kw.
- 15 5 or 6 or 7 or 8 or 9
- 16 exp health services/ or service\*.ti,ab,kw.
- 17 10 and 11
- 18 exp "Outcome and Process Assessment (Health Care)"/
- 19 exp delivery of health care/
- 20 Resource Allocation/
- 21 exp "Organization and Administration"/
- 22 exp "Quality of Health Care"/
- 23 exp professional competence/
- 24 exp Inservice Training/
- 25 exp patient care management/
- 26 ((service\* or organization\* or organisation\* or unit or units or department\* or program\* or

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3 clinic or clinics or ward or wards or staff or workforce or setting) adj4 (leader\* or innovate\*  
4 or objective\* or change\* or transform\* or structure\* or opportunit\* or strength\* or model\* or  
5 priorit\* or policy or policies or procedure\* or ration\* or allocat\* or reform\* or commit\* or  
6 needs or improve\* or assess\* or responsive\* or evaluat\* or plan\*).ti,ab,kw.  
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9 22 ((treatment or therapy) adj2 planning).ti,ab,kw.

10 23 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

11 24 exp Patient-Centered Care/  
12

13 25 exp Self Care/ or exp Self Concept/  
14

15 ((self or personal) adj2 (identity or concept or assess\* or manage\* or disclos\* or efficacy or  
16 evaluat\*).ti,ab,kw.  
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19 ((patient or client or consumer\*) adj4 (centered or centred or focus\* or engage\* or  
20 involve\*).ti,ab,kw.  
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23 28 ((shared or joint) adj2 decision\*).ti,ab,kw.  
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25 29 exp Interpersonal Relations/  
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27 30 "Quality of Life"/ or quality of life.mp.  
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29 31 Social Support/ or Social Adjustment/  
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31 32 (social adj2 (support or integration or inclusion or adjustment)).ti,ab,kw.  
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33 (connected\* or hope\* or optimis\* or trust or identity or meaning or empower\* or spiritual\* or  
34 giving back or stigma\* or values or goal or goals or belonging or purpose or choice or  
35 citizenship or discriminat\* or inequalit\* or valued or roles).ti,ab,kw.  
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37 34 (partnership\* or collaborat\* or interpersonal or multidisciplinary or cooperat\* or co-operat\*  
38 or team\* or group or joint).ti,ab,kw.  
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40 35 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34  
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42 36 exp Data Collection/  
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44 37 exp Psychological Tests/  
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46 38 (measur\* or test\* or scale\* or metric\* or psychometric\* or questionnaire\* or instrument\* or  
47 data).ti,ab,kw.  
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49 39 36 or 37 or 38  
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51 40 23 or 39  
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53 41 12 and 40  
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55 42 41 and recover\*.mp.  
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# BMJ Open

## Protocol for a mixed studies systematic review on the implementation of the recovery approach in adult mental health services

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2017-017080.R2
Article Type:	Protocol
Date Submitted by the Author:	18-Jul-2017
Complete List of Authors:	Piat, Myra; McGill University, Psychiatry; Douglas Mental Health University Institute, Sofouli, Eleni; Douglas Mental Health University Institute Sabetti, Judith; McGill University, School of Social Work Lambrou, Angella; McGill University Chodos, Howard; Mental Health Commission of Canada - Ottawa Briand, Catherine; Inst Univ Sante Mentale Montreal, Vachon, Brigitte ; Universite de Montreal Faculte de medecine Curran, Janet; Dalhousie University - Faculty of Health Professions
<b>Primary Subject Heading</b>:	Mental health
Secondary Subject Heading:	Evidence based practice, Health services research
Keywords:	MENTAL HEALTH, Adult psychiatry < PSYCHIATRY, Recovery, HEALTH SERVICES

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Manuscripts

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3 1 Protocol for a mixed studies systematic review on the implementation of the recovery approach  
4 2 in adult mental health services  
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37 **Word count: 3049**

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3 38 **ABSTRACT**  
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6 39 **Introduction:**  
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8 40 Recovery is integral to mental health planning in G-8 countries including Canada. A recovery-  
9 41 oriented approach to care aims to promote personal empowerment, illness self-management,  
10 42 and a life beyond services for people with serious mental illness (SMI), while reducing the  
11 43 financial burden associated with mental illness. Although there is a growing body of literature  
12 44 on recovery, no synthesis of research on the implementation of recovery into mental health  
13 45 services exists.  
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16 46  
17 47 **Objectives:**  
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19 48 The objective is to conduct a mixed studies systematic review on the operationalization of  
20 49 recovery into mental health services for adults with SMI. It will inform the transformation of  
21 50 Canadian services to a recovery-orientation, but may be applicable to other countries.  
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24 51 **Method and analysis:**  
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26 52 Seven databases including PubMed, Ovid Medline, Ovid Embase, Ovid PsycInfo, CINAHL, the  
27 53 Cochrane Library and Scopus will be searched for peer-reviewed empirical studies published  
28 54 from 1998 to December 2016. Systematic reviews, and studies using quantitative, qualitative  
29 55 and mixed methodologies will be included. Secondary searches will be conducted in reference  
30 56 lists of all selected full text articles. Hand searches will also be performed in the tables of  
31 57 contents of three recovery-focused journals for the last 5 years. International experts in the  
32 58 field will be contacted for comments and advice. Data extraction will include identification and  
33 59 methodological synthesis of each study; definition of recovery; information on recovery  
34 60 implementation; facilitators and barriers; and study outcomes. A quality assessment will be  
35 61 conducted on each study. The data will be synthesized and a stepwise thematic analysis  
36 62 performed.  
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43 64 **Ethics and dissemination:**  
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45 65 Ethics approval is not required for this knowledge synthesis. Findings will be disseminated  
46 66 through knowledge translation activities including: a) a one-day symposium; b) presentations in  
47 67 national and international conferences, and to local stakeholders; c) publications in peer-  
48 68 reviewed journals, d) posts on the organizational websites.  
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## 73 Strengths and limitations of this study

- 74     ▪ Studies included in this knowledge synthesis will have been conducted in inpatient,  
75     outpatient and community-based mental health settings, and will cover a broad range of  
76     research methodologies. The synthesis will reveal how recovery is understood;  
77     challenges involved in implementation; and, overall, to what extent transformation to  
78     recovery oriented services and systems is occurring.
- 79     ▪ The selection of recovery-oriented studies with an implementation focus is unique, and  
80     will allow us to draw on one powerful conceptual models from implementation science  
81     that provide theory-informed elements to guide data analysis and synthesis as well as  
82     the reporting of results.
- 83     ▪ Knowledge from the synthesis will be compiled into comprehensive and usable formats  
84     for organizational and government stakeholders, providing practical guidelines for  
85     recovery-based service reform and future evaluation.
- 86     ▪ Limiting the search to published, peer-reviewed studies, while important for  
87     considerations of quality and methodological rigor, may overlook possible research on  
88     recovery-oriented services reported elsewhere.

## 89 INTRODUCTION

### 90 Rationale

91 Recovery is the focus of national mental health plans in G-8 countries<sup>1-3</sup> including Canada's first  
92 mental health strategy, *Changing Directions, Changing Lives*<sup>4</sup>, and several provincial strategies<sup>5-</sup>  
93 <sup>8</sup>. The rationale for transformation to recovery-oriented services in mental health is compelling.  
94 While traditional mental health services have underlined professional control<sup>9-13</sup>, reinforcing  
95 patient dependency, self-stigma and hopelessness<sup>14-17</sup>, recovery approaches focus on individual  
96 empowerment, strong collaborative relationships between mental health service providers and  
97 service users, and community integration<sup>18-24</sup>. In promoting a life beyond services, recovery also  
98 meets a key ethical obligation to honor the personhood and citizenship of people with mental  
99 illness<sup>25</sup>.

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3 100 Recovery knowledge and evidence have burgeoned over the past two decades.  
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5  
6 101 Research exists on personal recovery<sup>26-32</sup>, recovery-oriented services<sup>33-40</sup>, and provider  
7  
8 102 competencies<sup>41-45</sup>. Conceptual frameworks and standardized measures have been  
9  
10 103 produced<sup>35,46-49</sup>. Other studies have linked the recovery approach to recognized theories, such  
11  
12 104 as empowerment theory<sup>50,51</sup>, the strengths model<sup>52</sup>, capabilities theory<sup>53-55</sup>, positive  
13  
14 105 psychology<sup>56-58</sup>, person-centered practice<sup>59,60</sup> and co-production<sup>61,62</sup>. Practice guidelines for  
15  
16 106 recovery-oriented service provision are available<sup>63-69</sup>, as well. In terms of the empirical  
17  
18 107 literature, studies on particular agencies and programs have identified potential determinants  
19  
20 108 of recovery orientation in services: for example a flexible and innovative organizational culture,  
21  
22 109 results-oriented leadership and larger budgets<sup>70</sup> were found to be associated with recovery-  
23  
24 110 oriented services, as were provider socio-professional characteristics such as greater age,  
25  
26 111 higher educational levels and more professional experience<sup>71,72</sup>. Another recent study found  
27  
28 112 that increasing the recovery orientation of teamwork on mental health teams<sup>73</sup> was associated  
29  
30 113 with provider and consumer perceptions that services were recovery-oriented.  
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40 114 While two recent systematic reviews have been conducted on the recovery-oriented  
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42 115 practices of mental health service providers<sup>74,75</sup>, no known review has been published, to date,  
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44 116 on the implementation of the recovery approaches into mental health services. Our review  
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46 117 synthesizes research on the nature of recovery-oriented services, implementation challenges  
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48 118 and overall system transformation. Work on the project was initiated in August 2016, and  
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50 119 should come to completion in spring 2018.  
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54 120 This project is important and timely, as mental illness affects millions of people  
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56 121 worldwide. According to recent World Health Organization statistics<sup>76</sup>, 350 million people are  
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3 122 impacted by depression; 60 million people by bipolar disorder, and 21 million affected by  
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6 123 schizophrenia. A recovery-oriented approach to healthcare is expected to reduce dependency  
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9 124 and reduce the cost of mental healthcare, which in Canada has risen to more than \$50 billion  
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11 125 per year<sup>4,77,78</sup>. The project responds to a critical knowledge gap identified by knowledge users  
12  
13 126 across Canada, who are responsible for implementing provincial level policy as well as shifting  
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15  
16 127 mental health organizations and services to a recovery orientation.  
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## 18 128 **Objectives**

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20  
21 129 The overall goal of this review is to systematically search, assess, and synthesize,  
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23 130 implementation studies on mental health recovery from the international mental health  
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25  
26 131 literature in order to inform, and facilitate, the transformation of Canadian mental health  
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28  
29 132 systems and adult services to a recovery orientation. The following six research questions,  
30  
31 133 guided by the Consolidated Framework for Advancing Implementation Science (CFIR)<sup>79</sup> will be  
32  
33 134 applied to each selected study: (1) How was recovery defined in this study?; (2) How was the  
34  
35  
36 135 recovery approach implemented in this study (Intervention)? (3) What elements from the  
37  
38  
39 136 external environment (Outer setting), or internal environment (Inner setting), influenced  
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41 137 implementation in this study?; (4) What were the characteristics of participants in this study?  
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43 138 (Characteristics of individuals); (5) What processes were involved in effecting the  
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45  
46 139 implementation?; and 6) What was the extent and effectiveness of implementation in this  
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49 140 study?  
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## 51 141

## 52 142 **METHODS**

### 53 143 **Eligibility criteria**

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3 144 The design and methodology for the present review are reported following the Preferred  
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6 145 Reporting Items for Systematic review and Meta-Analysis Protocols (PRISMA-P) guidelines<sup>80</sup>  
7  
8 146 (Appendix 1).

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10  
11 147 Population: The review concerns studies of services for adults (18 yrs. +) with a primary  
12  
13 148 diagnosis of schizophrenia, bipolar disorder or major depression, following the DSM-V  
14  
15 149 classification for mental disorders.

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18 150 Intervention: Studies will be included if they describe and evaluate the implementation of any  
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21 151 intervention based on recovery principles that aims at transforming the orientation of mental  
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23 152 health services, or organizations to a recovery approach.

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26 153 Comparators: Studies will be eligible for inclusion whether or not they include comparison  
27  
28 154 groups.

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30  
31 155 Outcomes: Selected studies should report outcomes related to the transformation of a mental  
32  
33 156 health service, or organization, to a recovery-orientation. Outcomes might include change in  
34  
35 157 organizational culture; more integrated service networks and partnerships; increased  
36  
37 158 knowledge, skills and/or attitudinal change among mental health providers; more use of  
38  
39 159 evidence based recovery-oriented best practices; greater consumer/provider collaboration,  
40  
41 160 consumer self-management, and evaluation.

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44 161 Study design: This will be a mixed studies review (MSR)<sup>81,82</sup>. The MSR integrates qualitative,  
45  
46 162 quantitative and mixed methods studies, providing a rich, detailed understanding of complex  
47  
48 163 health interventions and programs<sup>83</sup>. Studies representing a full range of methodologies will be  
49  
50 164 included: systematic reviews and meta-analyses, randomized control trials (RCTs) and clinical  
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53 165 trials, observational, mixed method and qualitative studies.  
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3 166 Time period: We would expect to find very few pertinent studies prior to 1998, when recovery  
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6 167 was first defined in an international policy document<sup>84</sup>. Thus, the precise time frame for the  
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8  
9 168 review is 1998 to December 2016.

10  
11 169 Setting: Research settings may include inpatient, outpatient or community-based mental health  
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14 170 services.

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16 171 Exclusion criteria: Non-research studies (e.g. editorials, letters, conference abstracts), as well as  
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19 172 unpublished (grey) literature, dissertations, and book or book-length studies, will be excluded,  
20  
21 173 as well as conceptual papers and review articles. Studies on services for addiction populations  
22  
23  
24 174 will also be excluded, as recovery is conceptualized differently in the addictions field. Language  
25  
26 175 restrictions will not apply.

## 27 28 176 **Information sources**

29  
30  
31 177 Our final search strategy will be developed in consultation with an experienced research  
32  
33  
34 178 librarian on the project and will combine a broad, systematic search of the literature. Electronic  
35  
36 179 search will be conducted on the following databases: PubMed, Ovid Medline, Ovid Embase,  
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39 180 Ovid PsycInfo, CINAHL (Current Index to Nursing and Allied Health Literature), the Cochrane  
40  
41 181 Library and Scopus. We will supplement our results by conducting the following secondary  
42  
43  
44 182 searches: (a) Reference lists of all selected full text articles will be scanned for additional  
45  
46 183 relevant studies; (b) Citation-tracking will be performed on included articles; (c) Hand searches  
47  
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49 184 of tables of contents for the past 5 years will be conducted in the following key journals:  
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51 185 *Psychiatric Rehabilitation Journal*; *Psychiatric Services*; and *Community Mental Health Journal*.  
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54 186 Additional journals will be added if warranted; and (d) Known experts in the field will be  
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3 187 contacted for comments and advice. We will also stay alert to serendipitous discovery that may  
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6 188 increase results.  
7

### 8 189 **Pilot Search strategy**

10 190 Using the Ovid Medline database, a research librarian and co-investigator on the project  
11  
12 191 conducted a pilot search (Appendix 2) which generated 5164 records. For this preliminary  
13  
14 192 scoping phase, the search strategy was designed to focus on 3 main components: *mental*  
15  
16 193 *health, recovery* and *services*. Medical Subject Heading (MeSH) and synonyms (keywords) were  
17  
18 194 combined for each of the components. Terms related to recovery were chosen to reflect the  
19  
20 195 consumer-survivor understanding of recovery<sup>48,85,86</sup> While keywords will remain consistent  
21  
22 196 throughout the searches, subject headings will be revised to reflect database specific  
23  
24 197 preferences. Search strategies will be further revised as new subject headings and keywords are  
25  
26 198 revealed.  
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### 33 199 **STUDY RECORDS**

#### 34 200 **Data management**

35  
36 201 Electronic search results will be downloaded into EndNote reference manager software,  
37  
38 202 duplicates will be removed where possible, and the remaining references will be uploaded to  
39  
40 203 the Distiller Systematic Review software for the screening and data extraction stages. Distiller  
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42 204 software stores references, manages and monitors the screening and data extraction process  
43  
44 205 with customized forms and automated flowcharts, and provides an audit trail for the review.  
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#### 51 206 **Screening and Selection process**

52  
53 207 For the first selection, two team members working independently will read titles and  
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55 208 abstracts of each paper identified in the electronic search and assess them for relevance based  
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3 209 on the inclusion and exclusion criteria. Second, the team members will read the full text of  
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6 210 each selected article in order to confirm its inclusion in the study. Disagreements related to the  
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9 211 inclusion of any paper will be discussed and resolved, involving a third team member if  
10  
11 212 necessary. To ensure high inter-rater reliability, training exercises will be conducted prior to  
12  
13 213 initiating the screening process. Team members will meet on a weekly basis to follow up on the  
14  
15 214 screening process and discuss unanticipated problems.

### 18 215 **Data items and data extraction process**

20  
21 216 In order to minimize bias, two research team members will independently extract the data.  
22  
23 217 Sample elements for data extraction appear below in Table 1. The categories on the extraction  
24  
25 218 grid include methodological elements based on the PICO mnemonic (PICO= population,  
26  
27 219 intervention, comparison, outcome<sup>87</sup>). As well, elements corresponding to the 6 research  
28  
29 220 questions will be extracted and organized using the CFIR<sup>79</sup>, a multilevel five-dimension  
30  
31 221 determinant framework<sup>88</sup> that constitutes a highly useful tool for identifying barriers and  
32  
33 222 facilitators influencing implementation outcomes. Study limitations and gaps in knowledge will  
34  
35 223 also be recorded<sup>89</sup>. The data extraction form will be pre-tested by the two reviewers and  
36  
37 224 revised as needed. Distiller SR software will be used to manage the data extraction process.

### 43 225 **Table 1: Sample elements for data extraction**

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Study ID/ Methods	Recovery Definition & Intervention	Characteristics of the Setting		Characteristics of Individuals	Process	Implementation Outcomes
		Outer	Inner			
I.D. #; location Objective Study design Participants Interventions/ comparisons Data collection Data analysis/ triangulation Quality appraisal	-Recovery definition/ conceptualization  -Intervention Characteristics source adaptability trialability complexity design& packaging costs	-Needs & resources -External links -Political pressures -Policy & incentives	-Structure -Dialogue -Culture -Tension for change -Values & Norms -Priorities - Incentives & rewards	-Knowledge & beliefs -Identification with organization -Other personal attributes	-Advance planning -« Buy-in ») opinion leaders implementation leaders champions -Execution -Feedback	-extent of successful implementation of intervention  -Conclusions -Study limitations/ gaps/ -Contradictions/ further questions

232

### 233 Quality assessment

234 Systematic reviews require that selected studies are assessed for quality<sup>90</sup>. We will use the  
 235 Assessing Methodological Quality of Systematic Reviews tool (AMSTAR) protocol for the  
 236 assessment of systematic reviews. The AMSTAR is an 11-item questionnaire that assesses study  
 237 design, literature searched, and scientific quality of reviews; a rating system is included. For  
 238 primary research studies, quality assessment will be determined using criteria developed by  
 239 Kmet (2004)<sup>91</sup>. This tool includes a 14-item checklist for quality criteria in quantitative studies,  
 240 and a 10-item checklist for qualitative studies. A rating system (yes-2; partial -1; and no-0) is  
 241 provided, as well as a calculation for summary scores. While some controversy exists on  
 242 whether qualitative research should be assessed using standard quality criteria<sup>92</sup>, we will  
 243 include a quality appraisal for qualitative, as well as quantitative, studies in order to better  
 244 assess the strengths and weaknesses of the evidence<sup>93</sup>. The Cochrane Collaboration tool will be  
 245 used for assessing the risk of bias in randomized control trials<sup>94</sup>. The selected studies will be

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3 246 independently assessed for quality by two reviewers. Discrepancies will be solved in  
4  
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6 247 consultation with the principal investigator.  
7

## 8 248 **DATA**

### 9 10 249 **Data Synthesis**

11  
12  
13 250 No single unifying framework exists for synthesizing quantitative and qualitative  
14  
15 251 evidence for healthcare policy-makers and managers<sup>95</sup>. Our experience with recovery research  
16  
17 252 suggests that much of the pertinent literature for review will be qualitative. Thus, our overall  
18  
19 253 approach will be to convert all the evidence into qualitative form. The quantitative data will be  
20  
21 254 transformed into qualitative form by extracting key concepts and findings within the elements  
22  
23 255 geared to our research questions, as described above. Analytic procedures and synthesis will  
24  
25 256 follow a 3-stage process: (a) organization of studies into logical categories according to their  
26  
27 257 design, and methodology; and coding using NVivo 11 software; (b) within-study analysis,  
28  
29 258 according to the study questions; (c) cross-study synthesis of the data using an adaptation of  
30  
31 259 the stepwise thematic analysis developed by Lucas et al<sup>93</sup>, according to the following  
32  
33 260 procedures: (1) two reviewers will independently review data collated under each of the  
34  
35 261 research questions; (2) codes produced by each researcher will be compared, and a  
36  
37 262 consolidated list of themes produced for each research question; (3) themes occurring under  
38  
39 263 each question will be clustered around common dimensions; (4) results of the thematic analysis  
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41 264 will be presented to the research team at a consensus meeting.  
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51 265 Specific measures will be taken to enhance the trustworthiness of the data. As  
52  
53 266 suggested by Lucas et al, directly reported participant data (e.g. verbatim quotations, or scores  
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55 267 on attitudinal scales), and author interpretations, will be reported separately in order to retain  
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3 268 the richness or “thickness” of the data. Detailed descriptions, contextual material, and the  
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6 269 quality assessment of each paper will also help readers make judgments about the reliability  
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8  
9 270 and validity of the data. Summary tables will include counts of the papers contributing data on  
10  
11 271 each theme<sup>92</sup>.

## 12 13 272 **DISSEMINATION**

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16 273 Knowledge translation will involve collaboration with our international consultants, and  
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18 274 knowledge users, who include decision makers and managers, service providers, people with  
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20  
21 275 lived experience and families. Four output documents will be developed, including: 1) a critical  
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23 276 appraisal of findings from the synthesis on recovery implementation; 2) a compendium of case  
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25  
26 277 studies on successful recovery implementation initiatives (sensitive to gender, race, culture); 3)  
27  
28 278 a recovery implementation manual for decision makers and managers; and 4) a toolkit of  
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31 279 recovery-enhancing approaches, i.e. strategies for individual behavior change targeted at  
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33  
34 280 service providers and service users. Each document will be submitted to the entire team for  
35  
36 281 revision and editing.

37  
38 282 The results of the synthesis project will be widely disseminated. Knowledge translation  
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41 283 activities will include: (a) creation of an Advisory Committee composed of the research team,  
42  
43 284 Knowledge Users and international expert advisors. Quarterly telephone meetings with the  
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46 285 Advisory to review emerging findings and provide feedback; (b) ongoing consultation/feedback  
47  
48  
49 286 between knowledge users and the research team during preparation of the 4 project outputs;  
50  
51 287 (c) posting of information and updates on the websites of the organizations of knowledge users  
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53  
54 288 on the project, including those for people with lived experience and families; (d) organization of  
55  
56 289 a one-day end-of-project symposium for dissemination of project outputs, including workshops

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3 290 for recording feedback and recommendations; (e) dissemination of project outputs through  
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6 291 organizational websites; and through national and international networks (free access); (f)  
7  
8 292 submission of articles to peer-reviewed, open access journals; (g) presentations at  
9  
10  
11 293 national/international conferences;

## 13 294 **CONCLUSION**

15  
16 295 The recovery approach emerged through the lived experiences of people with enduring  
17  
18 296 mental health problems as they utilized the formal mental health care system. Recovery-  
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21 297 oriented services are viewed as a more person-centered and promising approach for treating  
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23 298 mental illness. Until now, there has been little access to knowledge concerning how  
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26 299 mainstream mental health services are being transformed to a recovery-orientation, and with  
27  
28 300 what results. Our synthesis will establish the state of knowledge and evidence on implementing  
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30  
31 301 recovery, and will make this knowledge available to a wide range of mental health stakeholders  
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33 302 through dissemination activities and the publication of concrete recovery implementation tools.  
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36 303 Results may also support the development of new recovery interventions, on which future  
37  
38 304 outcome research should be considered.

## 41 305 42 306 43 307 **Contributors:**

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45  
46 308 Myra Piat (MP) is the guarantor. Myra Piat (MP), Eleni Sofouli (ES) and Judith Sabetti (JS)  
47  
48 309 drafted the manuscript. Myra Piat (MP) Eleni Sofouli (ES), Judith Sabetti (JS), Catherine Briand  
49  
50 310 (CB), Brigitte Vachon (BV) and Janet Curran (JC) contributed to the development of the  
51  
52 311 selection criteria, and data extraction criteria. Angella Lambrou (AL) developed the preliminary  
53  
54 312 search strategy. Howard Chodos (HC) Catherine Briand (CB), Brigitte Vachon (BV) and Janet  
55  
56 313 Curran (JC) provided written feedback on the manuscript and Angella Lambrou (AL) Howard  
57  
58 314 Chodos (HC) Catherine Briand (CB) Brigitte Vachon (BV) and Janet Curran (JC) approved the final  
59  
60 315 manuscript.



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For peer review only

## APPENDIX 1 PRISMA-P 2015 Checklist

This checklist has been adapted for use with systematic review protocol submissions to BioMed Central journals from Table 3 in Moher D et al: Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 2015 4:1

An Editorial from the Editors-in-Chief of *Systematic Reviews* details why this checklist was adapted - Moher D, Stewart L & Shekelle P: Implementing PRISMA-P: recommendations for prospective authors. *Systematic Reviews* 2016 5:15

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
<b>ADMINISTRATIVE INFORMATION</b>					
<b>Title</b>					
Identification	1a	Identify the report as a protocol of a systematic review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Registration</b>	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Authors</b>					
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5-34
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	278-280
<b>Amendments</b>	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Support</b>					
Sources	5a	Indicate sources of financial or other support for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	282
Sponsor	5b	Provide name for the review funder and/or sponsor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	282
Role of sponsor/funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>INTRODUCTION</b>					
<b>Rationale</b>	6	Describe the rationale for the review in the context of what is already known	<input checked="" type="checkbox"/>	<input type="checkbox"/>	66-103

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	104-116
<b>METHODS</b>					
Eligibility criteria	8	Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	119-151
Information sources	9	Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	153-165
Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	166-175
<b>STUDY RECORDS</b>					
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	117-182
Selection process	11b	State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	183-191
Data collection process	11c	Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	192-201
Data items	12	List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	203
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	203
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	216-217
<b>DATA</b>					
Synthesis	15a	Describe criteria under which study data will be quantitatively synthesized	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., $I^2$ , Kendall's tau)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
	15c	Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	221-236
<b>Meta-bias(es)</b>	16	Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Confidence in cumulative evidence</b>	17	Describe how the strength of the body of evidence will be assessed (e.g., GRADE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	205-219

**APPENDIX 2**

Pilot search strategy for Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid MEDLINE(R) and Ovid OLDMEDLINE(R) 1946 to Present

**# Searches**

- 1 recovery oriented.ti,ab,kw.
- 2 exp Mental Health Services/
- 3 recover\*.ti,ab,kw.
- 4 2 and 3
- 5 Mental Health/  
 6 mental disorders/ or adjustment disorders/ or exp anxiety disorders/ or exp delirium,  
 7 dementia, amnesic, cognitive disorders/ or exp dissociative disorders/ or exp mood disorders/  
 8 or exp neurotic disorders/ or exp personality disorders/ or exp "schizophrenia and disorders  
 9 with psychotic features"/  
 10 ((Mental or psychiatric or psychologic\*) adj2 (health or illness\* or disorder\* or disease\* or  
 11 problem\* or issue or issues or well being)).ti,ab,kw.  
 12 ((adjustment or anxiety or obsessive or compulsive or panic or phobic or stress or dissociative  
 13 or mood or depressive or affective or personality or psychotic or paranoid) adj2 (disorder\* or  
 14 disease\*)).ti,ab,kw.
- 15 (agoraphobi\* or astheni\* or phobia\* or delirium or dementia\* or depression or schizophreni\*  
 16 or schizoid).ti,ab,kw.
- 17 5 or 6 or 7 or 8 or 9
- 18 exp health services/ or service\*.ti,ab,kw.
- 19 10 and 11
- 20 exp "Outcome and Process Assessment (Health Care)"/
- 21 exp delivery of health care/
- 22 Resource Allocation/
- 23 exp "Organization and Administration"/
- 24 exp "Quality of Health Care"/
- 25 exp professional competence/
- 26 exp Inservice Training/
- 27 exp patient care management/
- 28 ((service\* or organization\* or organisation\* or unit or units or department\* or program\* or

1  
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3 clinic or clinics or ward or wards or staff or workforce or setting) adj4 (leader\* or innovate\*  
4 or objective\* or change\* or transform\* or structure\* or opportunit\* or strength\* or model\* or  
5 priorit\* or policy or policies or procedure\* or ration\* or allocat\* or reform\* or commit\* or  
6 needs or improve\* or assess\* or responsive\* or evaluat\* or plan\*).ti,ab,kw.  
7  
8

9 22 ((treatment or therapy) adj2 planning).ti,ab,kw.

10 23 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

11 24 exp Patient-Centered Care/  
12

13 25 exp Self Care/ or exp Self Concept/  
14

15 ((self or personal) adj2 (identity or concept or assess\* or manage\* or disclos\* or efficacy or  
16 evaluat\*).ti,ab,kw.  
17  
18

19 ((patient or client or consumer\*) adj4 (centered or centred or focus\* or engage\* or  
20 involve\*).ti,ab,kw.  
21  
22

23 28 ((shared or joint) adj2 decision\*).ti,ab,kw.  
24

25 29 exp Interpersonal Relations/  
26

27 30 "Quality of Life"/ or quality of life.mp.  
28

29 31 Social Support/ or Social Adjustment/  
30

31 32 (social adj2 (support or integration or inclusion or adjustment)).ti,ab,kw.  
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33 (connected\* or hope\* or optimis\* or trust or identity or meaning or empower\* or spiritual\* or  
34 giving back or stigma\* or values or goal or goals or belonging or purpose or choice or  
35 citizenship or discriminat\* or inequalit\* or valued or roles).ti,ab,kw.  
36

37 34 (partnership\* or collaborat\* or interpersonal or multidisciplinary or cooperat\* or co-operat\*  
38 or team\* or group or joint).ti,ab,kw.  
39

40 35 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34  
41

42 36 exp Data Collection/  
43

44 37 exp Psychological Tests/  
45

46 38 (measur\* or test\* or scale\* or metric\* or psychometric\* or questionnaire\* or instrument\* or  
47 data).ti,ab,kw.  
48

49 39 36 or 37 or 38  
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51 40 23 or 39  
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53 41 12 and 40  
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55 42 41 and recover\*.mp.  
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57 43 1 or 4 or 42  
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