






# BMJ Open Characteristics of quality improvement interventions to improve physical healthcare in mental health settings: a scoping review protocol

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## ABSTRACT

**Introduction** Mental health concerns globally impact millions of people, resulting in significant financial impact and adverse health outcomes. People living with mental health concerns are at higher risk of developing physical health issues, which can lead to a shortened life expectancy. Barriers to physical healthcare, such as limited service capacity, low help seeking and stigma, contribute to health disadvantage. Quality improvement (QI) interventions can address these challenges by addressing staff-level and service-level factors to improve the focus on physical healthcare in mental health settings. The aim of this scoping review is to describe studies of QI interventions to improve physical healthcare in mental health settings.

**Methods and analysis** The proposed scoping review will be conducted in accordance with guidance for scoping reviews from the Joanna Briggs Institute Manual and in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews. A systematic review search for peer-reviewed and published articles will be conducted across eight databases: PubMed, MEDLINE (Ovid), Web of Science, CINAHL (EBSCOhost), ProQuest Central, PsycINFO (Ovid), Scopus and Embase (Elsevier). Two independent reviewers will screen the titles, abstracts and full text using Covidence. Any disagreement will be resolved through discussion or with a third reviewer. Data collection will be facilitated using Microsoft Excel. The details of included studies will be extracted by two authors independently.

**Ethics and dissemination** No ethical approval is required for the scoping review. The results of this review will be presented at conferences and published in a peer-reviewed scientific journal. This review will also inform the development of a QI strategy to influence mental health staff practices in the provision of physical healthcare in Australian mental health settings.

## INTRODUCTION

Mental health concerns are a significant worldwide public health issue, affecting millions of people from many cultural and socioeconomic backgrounds.<sup>1</sup> The prevalence of these conditions continues to increase globally, which has serious

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This scoping review will follow the Joanna Briggs Institute methodological framework to ensure a systematic and transparent review process, enhancing the reliability and validity of findings.
- ⇒ The search will be conducted across eight databases to identify a comprehensive range of relevant studies, contributing to the development of a comprehensive overview of findings.
- ⇒ Two independent reviewers will screen the title, abstract and full text of the included studies in order to enhance the reliability of the scoping review.
- ⇒ Articles published after the year 2000 will be included in accordance with the year to publish the Medical Research Council framework was published, and the review language will be limited to English.
- ⇒ Grey literature will not be included in the scoping review.

implications for those who are impacted and their communities.<sup>2-4</sup> Mental health concerns also have a significant financial impact on both individuals and society due to treatment expenditures and decreased productivity.<sup>5</sup> Moreover, people living with mental health concerns often experience physical health issues, such as cardiac disorders and metabolic diseases.<sup>6</sup> The risk of developing cardiometabolic diseases is significantly higher in people living with mental health concerns than in the general population (1.4–2.0 times higher), which contributes to a shorter life expectancy of 10–20 years less.<sup>6,7</sup> These negative health outcomes are associated with the adverse effects of psychiatric medications and greater exposure to known risk factors for physical health issues, such as smoking, poor nutritional intake and lower levels of exercise.<sup>8</sup> Additionally, evidence indicates that having physical co-occurring conditions makes it harder to recover from

mental health concerns.<sup>9</sup> Therefore, physical health has been identified as a priority area for attention by mental health services to enhance the overall outcomes for this population.<sup>6</sup> Overall, it is important that the physical health of those experiencing mental health concerns is screened and assessed by health professionals working within mental health settings, so they can provide physical healthcare and referral resources to this population.

There are a range of barriers that hinder access to quality physical healthcare for those living with mental health concerns.<sup>10</sup> The fragmentation and 'siloeing' of physical healthcare provision as separate from mental healthcare reduces access to adequate medical services, contributing to poor physical health outcomes for people living with mental health concerns.<sup>11</sup> These inequalities can be found in primary and secondary care provisions, leading to decreased rates of monitoring and management to improve physical health.<sup>12</sup> The problem is further compounded by low help seeking due to stigma from health professionals, creating obstacles for those living with mental health concerns in reporting physical health issues, and difficulties in effectively accessing services.<sup>6</sup> Stigma contributes to diagnostic overshadowing, where physical symptoms are mistakenly attributed to existing mental health concerns, leading to overlooked health issues and misdiagnosis.<sup>13</sup> Additionally, mental health professionals often lack knowledge of physical health issues, healthcare and referral service resources,<sup>11 14</sup> leading to low confidence in delivering physical healthcare to people living with mental health concerns.<sup>15</sup> Clancy *et al*<sup>16</sup> recommended that mental health services should address the physical health issues of people living with mental health concerns as part of routine care; however, health system challenges need to be overcome to improve the quality of care in this area. For example, resource restraints in mental health settings, encompassing primary, secondary and tertiary care, limit workforce capacity and capability in addressing physical healthcare needs of people living with mental health concerns.<sup>16</sup> Improving healthcare processes and professional training can support the mental health workforce to address the physical healthcare needs of their clients.<sup>6</sup>

Quality improvement (QI) is an integrated, interdisciplinary strategy for improving outcomes and experiences of people with health concerns, system performance and professional development, focusing on iterative change, learning and adaptation.<sup>17</sup> QI has been used for almost a hundred years and is becoming more important globally in mental healthcare delivery.<sup>18</sup> For example, QI has been used to improve outcomes and experiences for parents and infants by improving the screening, diagnosis and treatment of perinatal mood and anxiety disorders.<sup>19</sup> Moreover, QI refers to systematic efforts towards improving the overall quality of mental healthcare, including its efficacy, efficiency and safety.<sup>20</sup> QI specifically targets the gap between research findings and practical implementation to improve outcomes for people living with mental health concerns and treatment quality

by enhancing the organisation and delivery of mental health services.<sup>21</sup> Therefore, a QI intervention may be used to introduce innovations designed to improve systems and workforce capability to address the physical health of people living with mental health concerns. The UK Medical Research Council (MRC) framework, first published in 2000, provides guidelines for complex interventions, which has high influence and has been widely used.<sup>22</sup> QI interventions in health services can be categorised as complex interventions because they have many components that target numerous factors producing health service change.<sup>23</sup> Therefore, this scoping review will consider the QI intervention studies published after 2000, aligning with the MRC framework to ensure their methodologies and approaches are consistent with current practices.

A systematic review published in 2017 by Forman-Hoffman *et al*<sup>21</sup> included 19 studies of QI interventions which targeted mental health professionals. While this review focused on QI within the provision of mental healthcare, it was limited to child and youth settings and was focused on improving the implementation of evidence-based practices.<sup>21</sup> A number of workforce-related factors were identified, and results indicated that quality monitoring and financial incentives (such as pay-for-performance models) enhanced health outcomes.<sup>24</sup> However, studies included in this review reported significant variations in QI outcome assessment across the different studies in identifying the impact of interventions. For example, Beidas *et al*<sup>25</sup> rated community therapists' role-play performance, knowledge and training satisfaction to identify the efficacy of training and consultation. Glisson *et al*<sup>26</sup> measured the impact of the intervention on clinician work attitudes towards providing mental health services. Additionally, Garner *et al*<sup>24</sup> measured the impact of the intervention on therapist-level treatment implementation. Consequently, there is a lack of reviews specifically targeted to illustrate characteristics of QI interventions used to improve the provision of physical healthcare in mental health settings. Therefore, there is a need for a comprehensive scoping of the literature to inform the design of QI interventions for improving physical healthcare interventions within mental health settings.

An initial search of the literature identified several primary QI intervention studies designed to influence health professionals' behaviour in addressing the physical health of people living with mental health concerns. For example, Castillo *et al* conducted a QI project to enhance metabolic syndrome screening rates using an adaptive leadership framework aimed at changing the organisational behaviour plan and enhancing the metabolic screening services of people living with mental health concerns.<sup>27</sup> Metabolic screening was the targeted behaviour due to its value in improving the health of the general population as well as being important for those experiencing mental health concerns due to increased rates of metabolic syndrome.<sup>27</sup> The QI project involved

regular training and one-on-one education for health professionals in order to provide a standardised framework for discussing metabolic screening.<sup>27</sup> Consumer outcomes were measured, but the assessment process of health professionals' behaviour changes concerning their knowledge and beliefs from the educational intervention, their confidence and willingness to implement the interventions, and other personal traits such as motivation and competency were not assessed.<sup>28</sup> According to the Consolidated Framework for Implementation Research, there is a significant lack of systematic evaluation processes to show how characteristics of health professionals change after educational intervention.<sup>28</sup> Therefore, a scoping review is needed to systematically map and describe the key features of QI intervention studies designed to impact health professionals' behaviours concerning the physical health of people living with mental health concerns.

A preliminary search was conducted across CINAHL (EBSCOhost), PubMed, Web of Science, MEDLINE (Ovid), Open Science Framework and JBI Evidence Synthesis, and no previous, current or in-progress systematic reviews or scoping reviews on the topic were identified. The primary aim of this scoping review is to describe studies of QI interventions designed to impact the behaviours of health professionals regarding the physical health of people receiving treatment in mental health settings. The specific objective is to identify: (1) key areas targeted by physical health QI interventions, (2) their implementation strategies and (3) methods used to evaluate these interventions. The findings of this scoping review will provide valuable insights to health professionals and policymakers regarding the physical health-care QI interventions in mental health settings.

### Review question

The review will aim to answer three research questions:

1. What have QI intervention studies targeted to improve the physical healthcare of people living with mental health concerns?
2. How have these QI interventions been implemented, including the design and implementation strategies used?
3. What evaluation methods have been used to measure the effectiveness of these QI interventions, and what are their strengths and limitations?

### METHODS AND ANALYSIS

The proposed scoping review will be conducted in accordance with guidance for scoping reviews from the Joanna Briggs Institute (JBI) Manual<sup>29</sup> and in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR).<sup>30</sup> See online supplemental appendix 1 for the PRISMA-ScR checklist. This scoping review has also been registered with the Open Science Framework (<https://osf.io/ec6wx>). This scoping review is planned to start at

the end of June 2024 and be finalised at the end of August 2024.

### Patient and public involvement

Patients and the general public have not been involved in conceptualisation of this study protocol as it examines pre-existing research; however, this topic of research is aligned with codesigned priorities published by the ALIVE National Centre for Mental Health Research Translation (<https://alivenetwork.com.au/our-massive-online-public-co-design-project/>), with which two members of the authorship team are affiliated; particularly the codesigned priority *holistic care*, and implementation actions *addressing physical health in all settings* and *alternatives to medication only approaches*. Additionally, the scoping review team includes a senior author who identifies as having lived experience of mental health issues and is employed in a peer role in a mental health service. The results of this study will be disseminated through Griffith University's Lived Experience Network and via presentations at consumer and community forums.

### Eligibility criteria

#### Inclusion criteria

##### Participants

This review will consider the studies of QI interventions aimed at improving physical healthcare in mental health settings. Participants are considered the health professionals, including but not limited to medical practitioners and allied health professionals working in mental health settings across primary, secondary and tertiary care. Additionally, studies that only report outcomes for the recipients of care (ie, people living with mental health concerns) will be included if these studies clearly demonstrate the involvement of health professionals in the QI intervention.

##### Concept

QI approaches include service development, service innovations, knowledge translation and clinical improvement initiatives. This review will consider QI intervention studies designed to improve physical healthcare in mental health settings, which may aim to influence health professionals' knowledge, skills, attitudes and behaviours in addressing the physical health of people living with mental health concerns. The scope of QI intervention extends to various components of care, such as monitoring for physical health risk factors or general physical health conditions, and interventions such as coordination of care, or other therapeutic, educational or behavioural interventions to address these risk factors or physical health conditions. QI interventions involving the introduction of new staff will be included if the study included evaluation of impact on existing health professionals. There is no restriction on the types of evaluation instruments used in assessing the impact of these QI interventions.

##### Context

This scoping review will include studies from any country published in English focusing on QI interventions

implemented in any mental healthcare context, spanning across primary, secondary and tertiary care settings.<sup>31</sup> These could include mental health organisations, centres or clinics, as well as privately or publicly funded hospital and health services.

### Exclusion criteria

Because we are interested in longer term changes to practice, studies involving brief QI interventions (eg, staff training) that do not measure and report on processes and outcomes over at least 2 weeks will be excluded. Policy documents and 'grey literature' will be excluded.

### Study designs

This scoping review will examine a variety of primary peer-reviewed studies, including those that use quantitative, qualitative and mixed methods. Studies will include, but are not limited to, randomised controlled trials, case studies, feasibility studies and observational studies.

### Search strategy

The search for eligible studies will focus on peer-reviewed and published articles encompassing quantitative, qualitative and mixed-methods study designs. The language will be limited to English. This review will also include studies published after the year 2000 to align with the MRC framework published in that year.<sup>22</sup> The search process will be conducted in the following eight databases: PubMed, MEDLINE (Ovid), Web of Science, CINAHL (EBSCOhost), ProQuest Central, PsycINFO (Ovid), Scopus and Embase (Elsevier). There are three phases in the search strategy. First, the keywords for our research topic were formulated using the Participant, Concept and Context framework. The identified keywords were used to search across PubMed, CINAHL (EBSCOhost), Embase (Elsevier) and Web of Science databases to identify further articles related to the research topic, and more relevant keywords were extracted from these articles to finalise the search strategy. The keywords contained in the titles and abstracts of articles that meet the inclusion criteria, and the index terms used to describe the articles were used to develop a full search strategy for PubMed (see online supplemental appendix 2: Search strategy). The search strategy, including all identified keywords and index terms, will be adapted for each included database and/or information source. Finally, we will conduct a search within the citation and reference lists of all articles that have been incorporated during the full-text review phase to identify any supplementary research studies. The initial search for this scoping review was conducted in November 2023, with the final search slated to commence at the end of June 2024.

### Study selection

After the initial search, all identified citations will be entered into Covidence (a platform by Veritas Health Innovation, Melbourne, Australia) and duplicates will be removed. Two independent reviewers will then screen the titles and abstracts based on the review's inclusion criteria. If there is any disagreement about including these studies in this step, they will be included in full text screening. Additionally, studies

that appear to involve QI interventions will be retrieved in full text and imported into the Covidence. The full texts of these selected articles will undergo a detailed assessment by two independent reviewers. Any studies that do not meet the criteria will be excluded, and the reasons for their exclusion will be recorded and reported in the scoping review report. If there are disagreements between the reviewers at each stage of the study selection process, they will resolve them through discussion or with a third reviewer. The results of the search and the study inclusion process will be reported in full in the final scoping review and reported using a PRISMA-ScR flow diagram.<sup>30</sup>

### Data charting

Quantitative and qualitative data will be extracted from studies included in the scoping review by two authors independently using Microsoft Excel. The data extraction table will include the following specific details: first author name, title of publication, year of publication, commencement year, specific country in which the study was conducted, full citation, type of study, objective of the study, target population, participant sample/s, QI intervention characteristics, implementation strategies and processes, underlying framework/theory, study duration, data collection methods, data analysis method/framework and outcomes. A draft extraction form is provided (see online supplemental appendix 3: Draft data extraction instrument). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included evidence source, and modifications will be detailed in the scoping review. Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer. The authors of papers will be contacted to request missing or additional data, where required.

### Data synthesis

The extracted data will be descriptively presented to address each research question. Using tables or diagrams that support the goals of the scoping review, the extracted data will be presented in tabular or diagrammatic style. There will be a comprehensive table with information on the research that includes pertinent information related to the research questions. The review will include a textual narrative providing a summary of findings and a critical discussion to complement the tabular data. If possible, the outcomes and effectiveness of the QI interventions will be compared across studies to establish best practices. The full scoping review will adhere to the PRISMA-ScR guidance for reporting.<sup>30</sup> Additional adjustments to the data display may be made based on the content analysis of the included research.

## DISCUSSION

The primary objective of this scoping review is to comprehensively describe QI interventions aimed at enhancing physical healthcare within mental health settings, with

a particular emphasis on interventions targeting health professionals. A thorough search revealed no existing or ongoing scoping or systematic reviews addressing the specific focus of this review. The overarching goal is to characterise the areas targeted by QI interventions, implementation strategies and evaluation methods employed to assess their effectiveness in improving physical healthcare for people living with mental health concerns. The review protocol adheres to the standardised guidance from the JBI Manual, ensuring systematic methodology and the reliability and validity of the findings. A thorough search across eight databases will be conducted, aligning with defined eligibility criteria. Additionally, the screening process and data extraction involve two independent reviewers to enhance transparency and reliability and minimise bias. However, it is essential to note that the inclusion criteria limit the articles to those written in English and published after 2000, with the exclusion of grey literature. Despite these restrictions, the scoping review remains focused on addressing the critical imperative of integrated physical and mental healthcare within mental health settings, providing valuable insights for health professionals and policymakers to enhance the physical well-being of people living with mental health concerns.

## ETHICS AND DISSEMINATION

Ethical approval is not required for the scoping review because only published articles will be included in the review. The results of this review will be presented at conferences and published in a peer-reviewed scientific journal. This review is part of a broader project that will inform the development and implementation of a QI strategy to influence mental health staff practices in the provision of physical healthcare in Australian mental health settings.

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**Contributors** The lead author (DH) led the study conceptualisation, protocol development and writing of the protocol manuscript, and will lead the conduct of the review. DH was also responsible for the overall content as guarantor. JC, VS, GL and AJW have supervised the lead author throughout the process of study conceptualisation and protocol development and will support the conduct of the review. All authors contributed to the editing of the protocol manuscript.

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