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Quality indicators for substance use disorder care: a scoping review protocol

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ABSTRACT

Introduction Substance use disorders (SUDs) are a major public health challenge, affecting millions of individuals globally and contributing to substantial morbidity and mortality. Individuals with SUDs face numerous barriers to accessing high-quality healthcare, leaving vulnerable populations susceptible to the undertreatment of SUDs. Despite the availability of clinical practice guidelines and effective interventions for SUD, there is a notable gap in the implementation and adherence to evidence-based care.

Measuring the quality of care (QoC) is a critical initial step toward enhancing the treatment and services provided to individuals with SUDs. While quality indicators (QIs) for SUD care have been established in various regions, including the USA, Canada and the UK, the application of QIs for the routine measurement of QoC for SUDs is not common. Identifying and characterising the areas of low QoC in SUD management can highlight critical targets for quality improvement initiatives. However, QoC measurement in SUD care is complex, with potentially redundant indicators derived from different sources, each with its own definitions, criteria and data requirements. This scoping review aims to explore the range of QIs that are currently available to assess the QoC for individuals with SUDs.

Methods The review will follow the Arksey and O'Malley framework and incorporate methods proposed by the Joanna Briggs Institute (JBI) and Levac *et al*. Reporting will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping review guidelines (PRISMA). Stage 1: the research question will be identified, clarifying the purpose of the scoping review. Stage 2: six academic databases (Cochrane Library, Embase, CINAHL, Medline, APA PsycINFO and Scopus) and grey literature sources will be searched for studies reporting QIs and published from 1990 until 2023. Stage 3: study screening and selection will be completed by two reviewers independently to review titles, abstracts and full texts based on study inclusion criteria. Stage 4: a pilot data charting form has been developed to capture information from each study, including study design, population details, setting, methodology for QI development and reported QIs. Stage 5: data synthesis and consultation will employ thematic analysis and frequency counts to categorise identified QIs within established domains for quality of healthcare. Any discrepancies in data extraction or thematic synthesis will be identified and resolved using a third reviewer when necessary. A consultation exercise using a modified Delphi process will engage experts to prioritise identified QIs, aligning with JBI recommendations for stakeholder involvement in scoping reviews.

Patients and public involvement Patients and the public will not be directly involved in the design or conduct of this scoping review. However, stakeholder consultation, including individuals with lived experience of SUDs, will be incorporated during the Delphi process to prioritise identified QIs for SUD care.

Ethics and dissemination Ethics approval is not necessary for stages 1–4 of this scoping review as it will not involve primary data collection. Ethics approval will be obtained from the University of Calgary Health Research Ethics Board prior to the commencement of stakeholder consultation (Stage 5) in January 2025. This scoping review was preregistered on the Open Science Framework. The results of this scoping review will be disseminated through peer-reviewed publications and conference presentations. Findings will be shared with local clinicians through presentations and with the research and clinical community at relevant conferences. This study represents a necessary first step towards establishing routine QoC measurement for SUDs. Results will be used in a stakeholder consensus exercise aimed at identifying key QIs for SUD care in Alberta, Canada, that will guide the

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This review will comprehensively summarise all available quality indicators (QIs) for substance use disorders (SUDs) care.
⇒ This study will involve a rigorous search of academic and grey literature, including international substance use and healthcare quality organisations.
⇒ This review will use search terms related to substances of significant public health concern (eg, alcohol, cannabis, opioids, benzodiazepines, methamphetamine and cocaine) and thus may not capture QIs for other, less common SUDs.
⇒ While the study includes a comprehensive search strategy, it is possible that some QIs may not be captured due to limitations in search terms and database indexing. Additionally, some QIs may not be captured within the academic literature, and although we are employing a broad grey literature search as well, some sources (such as organisations or quality stewards) for indicators may be missed.

future development of continuous QoC measurement using population-based data.

INTRODUCTION

One in five Canadians meets the criteria for a substance use disorder (SUD) in their lifetime, and SUDs are a leading cause of preventable morbidity and mortality.[1] Alcohol, cannabis, opioids, prescription drugs (including sedatives and stimulants) and cocaine are the most common psychoactive substances used in Canada.[2–8] While there are effective treatments for SUDs, the current quality of care (QoC) for people with SUDs requires significant improvement, as evidenced by poor patient outcomes,[9] negative experiences of patients receiving SUD care[10] and high healthcare costs.[11 12] The QoC received by people living with SUDs has a significant impact on their disease trajectory and resilience.

Treatment options for individuals with SUDs have evolved significantly over the past several decades,[13] driven by advancements in pharmacological treatments, such as effective therapies for people with opiate use disorders (ie, methadone and buprenorphine) and the depot formulation of naltrexone for persons with alcohol dependence,[14 15] the expansion of SUD services[16] and the integration of psychosocial interventions.[17] Despite these improvements, many persons living with SUDs still do not receive adequate care due to existing barriers, such as stigma, discrimination and a lack of resources,[18 19] and continue to experience poor health outcomes. Individuals affected by SUDs experience a reduced life expectancy and a higher rate of comorbid physical health issues.[20] SUDs are also commonly comorbid or concurrent with other mental health disorders.[21 22] For those with access to care, poor health outcomes often persist, underscoring both the complexity of SUDs and the need for improvement in the quality and accessibility of SUD care.

Individuals with SUDs face numerous barriers to accessing high-quality care, which manifest at patient, provider and systemic levels.[23] Vulnerable populations and minority groups are also susceptible to the undertreatment of SUDs, exacerbating existing disparities in health outcomes.[24] In addition to undertreatment, these groups face systemic challenges, such as discrimination, racism and stigmatising attitudes within healthcare settings, further compounding inequities in care access and quality substance use care.[25 26] Addressing the multifaceted issues contributing to the suboptimal QoC in SUD treatment will require comprehensive solutions that engage patients, healthcare providers and the broader healthcare system. Additionally, the development and implementation of rigorous, evidence-based strategies are essential to overcoming barriers to high QoC and improving access and equity to appropriate treatment for all individuals affected by SUDs.

Like other health conditions, the measurement of QoC for SUDs is a first step towards improving care. QoC can be assessed using quantitative measures known as quality indicators (QIs). QIs encompass various categories of measures, such as structure, process and outcome measures—collectively capturing the six distinct domains of quality healthcare: safety, efficiency, effectiveness, patient-centredness, equity and timeliness.[27] QIs for SUDs include general measures, that is, measures of QoC for any substance and substance-specific measures. Several organisations have proposed and published QIs for SUDs for the evaluation of SUD care to facilitate benchmarking of performance and quality improvement.[28–33] The emergence and standardisation of QIs gained prominence in the early 1990s as part of a broader shift towards evidence-based healthcare quality paradigms, marking this a critical first step for improved healthcare delivery and outcomes.[34] Examples of QIs for SUDs include measures of processes of care such as the proportion of individuals with SUDs with a follow-up visit within 7 days of SUD programme discharge and the proportion of individuals with SUDs receiving appropriate treatment for SUDs.[35 36]

To guide future efforts to measure and improve the QoC for SUDs in Alberta and elsewhere in Canada, this protocol reports the planned methods for a scoping review to identify all available QIs for the measurement of SUD care. Results will be used to develop a quality standard (a suite of QIs measuring key aspects of overall, high QoC for a condition) for SUD and ultimately inform policies and interventions to enhance the QoC for people with SUDs.

SCOPING REVIEW METHODS AND ANALYSIS

QIs have been developed for SUDs, although these vary widely in terms of source, intended setting and purpose and quality domain addressed. We will, therefore, undertake a scoping review to identify all SUD QIs. A scoping review was selected because of the wide scope of the review encompassing QIs across several substances (eg, cocaine, alcohol, opioids, cannabis, benzodiazepines and methamphetamine) and the nature of evidence, largely expert consensus or developed by healthcare quality or other organisations, comes from a variety of sources not limited to the research literature. The final protocol has been preregistered with the Open Science Framework (https://osf.io/75tfx). A scoping review will enable a broad search to ensure all available resources are captured.

Stage 1: identifying the research question

The review will follow the framework established by Arksey and O'Malley,[37] including methods proposed by the Joanna Briggs Institute (JBI)[38 39] and reported as per the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (see online supplemental file 1).[40 41] The study is planned to begin in January 2025 and conclude in December 2025. The review will be guided by the research question, developed iteratively with the research team.

What QIs or measures are available for evaluating the QoC for people living with SUDs?

Relevant studies in which QIs are reported or used to measure QoC for SUDs generally or specifically across several potentially harmful substances (cocaine, alcohol, opioids, cannabis, benzodiazepines and methamphetamine) will be identified from academic and grey literature data sources. Following the JBI's population, concept and context framework,[39] this review will encompass QIs from diverse healthcare contexts, including primary care, specialty outpatient clinics and hospital-based inpatient settings. The population will be limited to adults (ie, non-paediatric populations) affected by substance use.

Stage 2: identifying relevant literature

In collaboration with the research team, other knowledge users and a research librarian, the search strategy will be developed around two themes: QIs (eg, QI, performance indicators) and substances associated with significant public health concerns (eg, SUDs, addictions and common psychoactive drugs used in Canada). These themes were selected to ensure the comprehensiveness and relevance of the included studies. Terms will be searched as both keywords in the title and/or abstract and subject headings (eg, Medical Subject Headings (MeSH) and EMTREE) as appropriate.

Electronic database search

The following electronic databases will be searched: Cochrane Library (CDSR and central registry), Embase (Ovid), CINAHL (EBSCO), Medline (Ovid), APA PsycINFO (Ovid) and Scopus (Elsevier). A health sciences librarian with expertise in scoping reviews will collaborate with other team members to guide the development of the search strategies (see online supplemental file 2). Studies will be uploaded to Covidence systematic review software for deduplication and to aid in study screening.

We will include both empirical research studies and relevant grey literature sources (eg, conference abstracts, governmental and non-governmental reports, quality steward organisation indicator reports and descriptions), which define or evaluate QIs for SUD care. We will search CADTH Grey Matters, Open Grey and Grey Literature Report databases, as well as specific international organisational and governmental websites, including but not limited to: Turning Research into Practice, Canadian Institute for Health Information, Public Health Agency of Canada, Health Canada and the National Institutes of Health.

We will additionally search the reference lists of included studies/reports and include any additional eligible studies/reports not captured in the above searches.

Stage 3: study selection and screening

Study selection

Two reviewers will independently review titles and abstracts for inclusion based on established eligibility criteria. Where abstracts are not available, summaries or tables of contents may be used and authors contacted for additional details. Studies included by both reviewers will move on to full-text screening, which will also be done in duplicate by two reviewers. Where disagreements related to inclusion arise between reviewers at either title/abstract or full-text screening stages, differences will be resolved by consensus, and a third reviewer will be consulted to resolve any discrepancies. We will use the Covidence online platform for study screening.

Eligibility criteria

Studies that (1) define a QI or quality standard; (2) are described as targeting healthcare for SUDs and (3) describe the development or evaluation of QIs for measuring the QoC for SUDs, whether generally (for any potentially harmful substance) or focusing on common psychoactive substances in Canada (excluding nicotine): cocaine, sedatives, methamphetamine, opioids, cannabis and alcohol.[8] We will exclude studies that (1) were published before 1990, (2) studies not published in the proficiency and native language of the research team (English or French), (3) those focusing on QIs intended for a paediatric population and (4) those reporting QIs for substances other than those identified above (eg, nicotine). With respect to sedatives, we will specifically focus on benzodiazepines based on input from our team's clinical experts and patterns of sedative prescription drug misuse in Canada.

This approach aligns with the categorisation commonly found in SUD research, where QIs are often substance-specific due to the unique challenges and treatment modalities associated with each substance. We will limit studies to those published from 1990 to the current date, reflecting the time period when quality measurement and improvement methodologies were introduced and developed in healthcare settings, and ensure that QIs for SUDs that are captured are relevant to current clinical practice. By capturing both general quality measures for SUDs and concentrating on those for specific potentially harmful substances, we aim to provide a comprehensive overview of available measures for evaluating QoC for SUD. The inclusion and exclusion criteria will be piloted with two reviewers to ensure agreement between reviewers.

All primary study designs (including quantitative and qualitative) will be included. Editorials, commentaries and opinion pieces will be excluded. Protocols will also be excluded.

Stage 4: data charting

Data charting will be completed using Microsoft Excel and will capture information from each study, including study design, population details, settings, methodology for QI development and reported QIs, including methods for calculation and data requirements (where available). A draft data charting form will be developed with input from the study team and piloted between two reviewers using a sample of five studies to ensure consistency and alignment with study objectives; the form will be modified iteratively to ensure that relevant data are captured. Data will be charted independently by two reviewers, who will

meet regularly to review progress and ensure that data charting is capturing information necessary to address the review question.

The draft data charting form is anticipated to include:

1. General information (title, source, date and country).
2. Target population details.
   - SUD.
   - Definition of the disorder.
   - Healthcare setting.
3. QIs.
   - Name(s) of the indicators.
   - Definitions.
   - Method(s) for development.
   - Method(s) for calculation.

Stage 5: synthesis of results and consultation

Data will be synthesised by one reviewer using frequency counts to describe QIs and qualitative thematic content analysis to map QIs based on QoC frameworks and quality domains.[39] A second reviewer will check the data synthesis to ensure it is complete and accurate.

Existing QIs specific to SUD care, either generally (for any substance) or across specifically targeted substances—cocaine, benzodiazepines, opioids, methamphetamine, cannabis and alcohol—will be collated and synthesised into categories according to the six domains of quality healthcare: safety, efficiency, patient-centredness, equity, timeliness[27] and across three QI types (structure, process and outcomes). Given that numerous QIs may be common across various SUD care standards, any overlapping indicators (ie, indicators from different sources that measure the same aspect of care) will be consolidated. QIs will then be mapped into the six major categories reflecting the key domains of healthcare quality to provide a comprehensive overview of the current state of SUD care quality measurement.

To ensure that expert and stakeholder perspectives are integrated in the review process to validate findings and inform future research, consultation is recommended in the scoping review methodology.[38] Using a two-step online modified Delphi procedure,[42] we will solicit input on available QIs for substance use care and select QIs from those identified in the scoping review to prioritise for measuring QoC in Alberta, Canada. *The Delphi panel* will consist of approximately 25 members selected to ensure balanced representation from diverse stakeholder groups in Alberta, including (a) individuals with SUDs and their families; (b) healthcare and service providers and (c) researchers and decision-makers. Background information on QIs and instructions on the rating will be provided, and participants will be asked to rank QIs in importance and usefulness and have the opportunity to provide feedback in open-ended responses. We will produce a final list of approximately 15–20 QIs that we anticipate being feasible for measurement using provincial administrative data in a future study, including a range of indicator types and quality domains. We will also ask participants to provide input on gaps in existing measures to prioritise for future QI development.

ETHICS AND DISSEMINATION

Ethics approval is not necessary for Stages 1–4 of this scoping review as it will not involve primary data collection. Ethics board approval will be obtained from the University of Calgary prior to the commencement of stakeholder consultation (in Stage 5). This scoping review was preregistered on the Open Science Framework.[43] The results of this scoping review will be disseminated through peer-reviewed publications and conference presentations. Findings will also be shared locally through presentations within the clinical community. This study represents a necessary first step towards establishing routine QoC measurement for SUDs. Results will be used in a stakeholder consensus exercise aimed at identifying key QIs for SUD care in Alberta, Canada, that will guide the development of future QoC measurement for SUD using population-based data.

Contributors JK and DPS were responsible for study conception (planning). DPS is the Principal Investigator and acts as the guarantor for this study, ensuring full responsibility for the integrity of the work, including the study design, data collection, analysis, interpretation and the decision to publish the manuscript. All authors contributed to the study design (planning). T-ADR, DPS and JK are responsible for methodology (conducting the work). JA, JK, T-ADR and DPS were responsible for writing the original draft, reviewing and editing (reporting). DL, as the research librarian, contributed to the construction of the methodology and played a critical role in ensuring the robustness of the search strategy. DL, JA, AB, YA, DC, MPD, SMG, DH, GM and SV made substantial contributions to the conception and design of the work. They also contributed to revising it critically for important intellectual content and provided final approval of the version to be published. All authors critically reviewed the protocol prior to submission.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, conduct, reporting or dissemination plans of this research. Refer to the Methods section for further details.

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