












# BMJ Open Determinants of practice for providing decision coaching to facilitate informed values-based decision-making: protocol for a mixed-methods systematic review

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## ABSTRACT

**Introduction** Decision coaching is a non-directive approach to support patients to prepare for making health decisions. It is used to facilitate patients' involvement in informed values-based decision-making and use of evidence-based health information. A recent systematic review revealed low certainty evidence for its effectiveness with and without evidence-based information. However, there may be opportunities to improve the study and use of decision coaching in clinical practice by systematically investigating its determinants of practice. We aim to conduct a systematic review to identify and synthesise the determinants of practice for providing decision coaching to facilitate patient involvement in decision-making from multiple perspectives that influence its use.

**Methods and analysis** We will conduct a mixed-methods systematic review guided by the Cochrane Handbook of Systematic Reviews. We will include studies reporting determinants of practice influencing decision coaching with or without evidence-based patient information with adults making a health decision for themselves or a family member. Systematic literature searches will be conducted in Medline, EMBASE, Cochrane CENTRAL and PsycINFO via Ovid and CINAHL via EBSCO including quantitative, qualitative and mixed-methods study designs. Additionally, experts in the field will be contacted.

Two reviewers will independently screen and extract data. We will synthesise determinants using deductive and inductive qualitative content analysis and a coding frame developed specifically for this review based on a taxonomy of barriers and enablers of shared decision-making mapped onto the major domains of the Consolidated Framework for Implementation Research. We will assess the quality of included studies using the Mixed Methods Appraisal Tool.

**Ethics and dissemination** Ethical approval is not required as this systematic review involves only previously published literature. The results will be published in a peer-reviewed journal, presented at

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ We will use the rigorous methodology in accordance with the Cochrane handbook and the results will be reported as stated by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement.
- ⇒ All members of the team are involved in a coproduction approach throughout the conduct of the systematic review, from the development of the research question to the dissemination of findings.
- ⇒ The search algorithm was developed by an information specialist and peer reviewed by a second librarian according to the Peer Reviewed Electronic Search Strategy (PRESS) guidelines.
- ⇒ No language restriction will be applied in the selection of the studies.
- ⇒ A considerable amount of heterogeneity in the design and the quality of studies is expected which will be carefully considered in terms of the generalisability and the comparability of the results.

scientific conferences and disseminated to relevant consumer groups.

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## INTRODUCTION

Making health decisions about treatment or screening interventions is increasingly complex, as many options with different benefit-harm profiles are available. These options could present serious yet different impact on health outcomes and quality of life that patients may value differently.<sup>1-3</sup> In many cases, uncertainty exists about the harms and benefits of options, as the evidence is limited. In addition, individuals differ in how they trade-off the potential outcomes of the various options they face.<sup>1,2</sup> What is known is that patients want to be involved in decisions about their health.<sup>4,5</sup>



Shared decision-making occurs when health professionals and patients share information about all available options and their potential harms and benefits, and consider patients' values and preferences when making the decision.<sup>6,7</sup> In the last decades, many efforts have been made to implement shared decision-making into routine care in different countries, yet a large gap remains between full implementation and current clinical practice.<sup>8</sup> Interventions to facilitate shared decision-making and improve decision quality, targeting patients or health professionals or both, include patient decision aids (PDA), question prompt sheets, decision coaching and training.<sup>9</sup> Some interventions are designed to prepare patients and health professionals for the consultations, while others are designed to be used during the consultation. Currently, there is low certainty evidence that these interventions increase shared decision-making in clinical practice.<sup>9</sup>

PDA provide current evidence-based information in a comprehensive, transparent and balanced manner for patients facing a health decision.<sup>10-12</sup> They explicitly state the decision that needs to be made, provide evidence-based information about the condition, present the options including probabilities of benefits and harms that might occur and the scientific uncertainties underlying the evidence. PDAs often include exercises for value clarification to weigh harms and benefits and, therefore, clarify patients' preferences for the outcomes of the various options.<sup>12</sup>

Decision coaching is a non-directive approach to help patients to prepare for making health decisions.<sup>13</sup> Trained health professionals provide decision coaching to patients who are making a health decision to develop the patient's skills in (1) thinking about the options, (2) preparing for discussing the decision in a consultation with his or her health professional and (3) implementing the chosen option.<sup>14,15</sup> Therefore, it might facilitate shared decision-making and use of evidence-based PDAs. Systematic reviews on shared decision-making interventions have shown that decision coaching is important to empower patients and enhance their autonomy.<sup>9,14,16</sup>

Single studies have demonstrated the effectiveness and feasibility of decision coaching.<sup>17-19</sup> When paired with a PDA, decision coaching improved patients' understanding of, and participation in, their care, enhanced informed decisions and reduced costs.<sup>12-14,16</sup> A recently published systematic review of 28 randomised controlled trials (RCTs) synthesising the effectiveness of decision coaching yielded low certainty evidence on knowledge when combined with evidence-based information, including PDA.<sup>15</sup> It was not possible to establish strong conclusions for other outcomes such as preparation for decision-making, decision self-confidence, feeling informed, clear values or feeling supported. No adverse effects (eg, decision regret, anxiety) were identified. In addition, in a realist review, Zhao *et al* highlighted the lack of systematic studies investigating the factors that could facilitate or hinder the implementation of decision coaching.<sup>20</sup>

Despite the low certainty of the evidence for decision coaching, the results are promising and there are no identified harms. In fact, there may be opportunities to improve the research studies evaluating decision coaching and its use in clinical practice by considering the determinants of practice influencing its use. Determinants of practice are defined as potential barriers or enablers for the implementation of new practices. Process evaluations have revealed various barriers and enablers of decision coaching at the level of patients, decision coaches, health professionals and health system<sup>17,18</sup> (see table 1). Process evaluations are single studies (not a synthesis) and can often accompany RCTs to further understand the outcomes. While RCTs focus on the summative evaluation (efficacy or effectiveness), a process evaluation focuses on the formative aspects of an intervention,<sup>21</sup> which offers more information on the implementation process, how different structures and resources were used, the role, participation and reasoning of different actors, contextual factors and how all these might have impacted the outcomes.<sup>22</sup>

While determinants of practice of implementing shared decision-making have been widely

**Table 1** Examples of determinants of practice for providing decision coaching at the level of patient and/or family, decision coach, health professional and health system

Level	Barriers	Enablers
Patient and/or family	▶ Extra effort that has to be made by patients for additional consultations with the decision coach and health team	▶ Increase of the patients' satisfaction and knowledge stimulates them to receive coaching
Decision coach	▶ Lack of time ▶ Challenges integrating decision coaching into work routines	▶ Positive attitudes towards the role ▶ Feeling prepared and confident in the new role ▶ Appreciation of this role by patients
Health professional	▶ Insufficient educational preparation of health professionals for the interventions resulting in poor competences of and commitment to the concept of shared decision-making and decision coaching	▶ Well-prepared patients that lead to time savings during physician consultations
Health system	▶ Disincentives such as quality indicators prescribing or recommending specific treatments	

described,<sup>1 22–29</sup> determinants of practice of implementing decision coaching as an intervention to facilitate shared decision-making have not yet been systematically investigated.

### Objective

We aim to conduct a systematic review to identify and synthesise the determinants of practice for providing decision coaching and the contexts within which it is used to facilitate patient involvement in decision-making from multiple perspectives.

## METHODS AND ANALYSIS

### Design

We will conduct a mixed-methods systematic review guided by the Cochrane' Handbook of Systematic Reviews.<sup>30</sup> Qualitative, quantitative and mixed-methods data will be synthesised through a convergent integrated approach for mixed-methods systematic reviews.<sup>31</sup> Our protocol is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) reporting guidelines (see online supplemental file 1) and registered in PROSPERO (Registration No. CRD42022338299).

### Patient and public involvement

We will follow a coproduction approach throughout the conduct of the systematic review, from the development of the research question to the dissemination of findings. We aimed to build a diverse research team in which different roles (patient partners (JG), practitioners (KC and JF) and researchers (BB-H, JK, KBL, SK, ACR, DS, AS and JZ), genders, countries (Australia (KC), Canada (DS, KBL and JG), China (JZ), Denmark (JF), Germany (BB-H, JK, ACR and AS) and Norway (SK)) and career stages (trainees (JK, SK and JZ), early-career (BB-H, KBL and ACR), senior researchers (AS, DS and JF)) have been considered. Our patient partner with lived experience of decision-making for healthcare conditions for herself and family members and partnering has experience in systematic reviews including those about decision support interventions (JG). The team's practitioners include advanced practice nurses who use decision coaching in their clinical practice (KC and JF). The team includes researchers with a profound expertise in the field of decision coaching (BB-H, JF, JK, SK, KBL, ACR, DS, AS and JZ), implementation research (BB-H, KBL and DS) and the conduct of systematic reviews (JF, SK, KBL, ACR, DS and JZ).

### Conceptual model

We will use Pel-Littel *et al*'s recently published taxonomy of barriers and enablers for the implementation of shared decision-making to guide the data extraction, synthesis and interpretation steps of our review.<sup>27</sup> We have selected this taxonomy as it is a derivative of Joseph-Williams *et al*'s systematically developed taxonomy for patient reported barriers and enablers of shared decision-making aiming

to inform implementation work alongside efforts to address client, clinician and organisational aspects of shared decision-making.<sup>24</sup> It was extended with organisational factors (health organisations), social factors (health settings, interdisciplinary team) and policy factors (health system, health government) and includes barriers and enablers from different perspectives (eg, patients and health professionals).

Subsequently, we will link our results to the Consolidated Framework for Implementation Research 2.0 (CFIR 2.0).<sup>32</sup> This is a comprehensive implementation framework describing determinants of implementation, which provides a comprehensive taxonomy of specific constructs related to 5 major domains, subdivided into 40 constructs, which could have an impact on implementation: the innovation itself, inner setting (setting in which the innovation is implemented), outer setting (setting in which the inner setting exists, eg, hospital system, state), individuals and implementation process. The CFIR 2.0 is suitable for our review as it comprises all socioecological levels of implementation: individuals, organisation, community, system and policy.

### Inclusion criteria

We used the PICOS (Population, Intervention, Comparison, Outcomes and Setting) framework to guide our eligibility criteria.

### Population

People aged 18 and older making a decision for themselves or others, health professionals, health administrators, health decision-makers, government policy-maker or other stakeholders (including researchers, not for profit organisations), who report determinants of practice for providing decision coaching with or without evidence-based information.

### Types of interventions

We will include decision coaching with adults preparing to make a health decision for themselves or an adult family member (substitute decision-maker) combined with or without evidence-based patient information such as PDAs. Consistent with the Cochrane Review decision coaching definition and eligibility criteria of Jull *et al*,<sup>15</sup> the interventions to be included will fulfil the following criteria (1) delivered person to person (ie, not automated), whether face to face, by telephone or via the internet; (2) delivered by a health professional who is trained in decision coaching or uses a protocol; (3) helped patients prepare to make a health decision (diagnostic, treatment or screening) with or without an evidence-based patient information (eg, PDA) and (4) comprised non-directive support in preparation for decision-making.

We will exclude articles that describe health professionals who are making the decision with, or on behalf of, the patient; are not trained in decision coaching or does not use a protocol; those who provide genetic counselling; are recommending a specific treatment; or are not



described as having direct interests in providing decision coaching (eg, family members/substitute decision-maker of the person making the decision). We will also exclude articles that describe automated support or decision coaching for groups. Further, we will exclude studies evaluating hypothetical decisions, decisions about advanced care planning, decisions about participation in research and lifestyle changes in the absence of a health condition.

#### Types of comparisons

We will include any study with or without a comparison group.

#### Types of outcomes

Studies reporting determinants of practice for providing decision coaching in the results section of the manuscripts will be included. Any supplemental materials that present results will also be consulted. Studies only reporting efficacy outcome measures of decision coaching and/or shared decision-making such as decisional conflict<sup>33</sup> will be excluded.

#### Types of studies

We will include any study design reporting original data related to the development, piloting, evaluation and implementation of decision coaching, including process evaluations. Knowledge syntheses, commentaries, editorials, unpublished studies and non-peer-reviewed studies will be excluded, but their reference lists will be searched for additional primary studies. No language or year restrictions will be applied.

#### Information sources and search strategy

With the guidance of an academic librarian (LS), we have designed a search strategy which was peer reviewed by a second librarian according to the Peer Reviewed Electronic Search Strategy (PRESS) guidelines.<sup>34</sup> We will conduct the search in the following databases: Medline, EMBASE, Cochrane CENTRAL and PsycINFO (all via Ovid) and CINAHL via EBSCO from database inception to current search dates. Our search strategy will be based on Jull *et al's*<sup>15</sup> systematic review on the effectiveness of decision coaching supplemented with a focus on determinants of practices (eg, barriers and enablers) including all study designs (see online supplemental file 2). We will follow the guidance for searching using PRISMA-S.

In addition, we will contact experts in the field and authors of included studies to further inquire about studies that may have been missed, for example, the International Patient Decision Aid Standards Collaboration list serve, International Shared Decision Making Society list serve, conference proceedings and the Shared Decision-Making Facebook Group. We will also search PROSPERO, JBI, Open Science and ClinicalTrials.gov (international prospective register of systematic reviews) databases for any ongoing studies on this topic.

#### Study selection

The systematic review management tool Covidence ([www.covidence.org](http://www.covidence.org)) will be used to manage the two-stage screening-process. First, two reviewers will independently screen titles and abstracts for relevance by indicating whether they are included or excluded based on the PICOS eligibility criteria. Only titles and abstracts rated as excluded by both reviewers will be excluded. Reviewers will not know whether they are reviewing as the first or second. At the full text level, all articles will be screened for eligibility by two reviewers. Discrepant ratings will be resolved by consensus to determine which articles are included or excluded. Consensus will be reached by discussion or through the consultation of a third author. The study selection process will be documented in a PRISMA flow diagram.<sup>35</sup>

#### Data collection

Two reviewers will independently extract study data using a pretested data extraction form based on a taxonomy of shared decision-making barriers and enablers. The form will include study information (title, authors, country of origin, language, study year, year of publication, journal), study characteristics (objectives, study design, data collection methods, participant types, setting, phase of complex intervention research according to the Medical Research Council (MRC) Framework<sup>36</sup>, characteristics of the intervention (who delivered the intervention, framework for decision coaching intervention development, framework for decision coaching implementation, framework/taxonomy used (if any) for determining or analysing barriers and enablers), results (barriers and enablers) and from whose perspective (patient, family, health professional, decision coach, third party observer). Inconsistencies in the extracted data will be discussed among reviewers until consensus is reached, or through the consultation of a third author.

#### Analysis

We expect heterogeneity of study designs, settings, interventions and participants, and hence suspect it will not be appropriate to pool quantitative data. We will follow a convergent integrated approach of data synthesis and integration.<sup>31</sup> We will group study results regardless of its design by findings addressing the same phenomenon. Relevant quantitative data will be qualitatized via narrative interpretation into textual descriptions. If a narrative interpretation of data is required and ambiguities in the interpretation occur, we will contact the authors for clarification.

We will synthesise barriers and enablers using deductive and inductive content analysis<sup>37</sup> using our shared decision-making coding frame, which will be considered by the MRC framework of complex interventions which comprises development, piloting, evaluation and implementation.<sup>36</sup> Relevant text sequences from included articles will be extracted. The analysis will

be carried out in the following four steps by at least two coders.

In step 1, the extracted data segments will be deductively coded into one of the predefined categories in our shared decision-making coding frame. We will also include an 'other' category for data that falls outside of these predefined categories.

In step 2, we will inductively analyse the categorised data (step 1) into emerging themes and subthemes specifically related to decision coaching (data-driven development of categories).

In step 3, the finalised coding guide will be applied on the entire dataset. In this step, coders will decide whether a reported factor will be categorised as a barrier or enabler or both.

In step 4, the results will be summarised by category. We will rank order the reported barriers and enablers according to the frequency of studies that reported them. In the case that one study presents the same barrier and enabler several times, the barrier or enabler will be counted once. The analysis will consider the different perspectives. When a study reported multiple perspectives (eg, patient and health professionals), and different participant types reported the same barrier or enabler, we will count the factor once for each participant type.

In the case of multiple publications reporting the same study, for example, reporting different perspectives (patients, clinicians, observers); study designs (RCTs, process evaluations), we are going to count it as one study about the same intervention.

If it is unclear whether the factor is a barrier or enabler, we will contact study authors for confirmation.

In step 5, in order to link our results to the field of implementation science and to derive potential implementation strategies, we will map our coding frame to the major domains of the Consolidated Framework for Implementation Science 2.0.<sup>32</sup> For example, the barrier of 'extra effort that has to be made by patients for additional consultations with the decision coach and health team' identified in [table 1](#) would be mapped on the individual's domain of the CFIR.

### Quality assessment

Two independent reviewers will assess the methodological quality of all included studies with the Mixed Method appraisal tool (MMAT).<sup>38</sup> The MMAT is used to appraise the methodological quality of studies with diverse designs (qualitative, quantitative and mixed-methods research) included in systematic mixed studies reviews. The MMAT tool includes 2 screening questions and 19 items corresponding to 5 methodological domains: qualitative research, RCTs, non-randomised study, quantitative descriptive studies and mixed-methods studies. The reliability of the MMAT varied by criterion, from fair to perfect.<sup>39</sup> If consensus could not be reached, a third author will be

consulted. In cases of unclear reporting, the related items will be rated as unclear. A summary of the results of the methodological quality of the included studies will be presented in the final report.

### DISCUSSION

This systematic review aims to synthesise determinants of practice for decision providing coaching to facilitate patient involvement in informed values-based decision-making. The findings from this review will contribute to an enhanced understanding of the determinants of practice influencing the implementation of decision coaching and help to refine programme theories of such complex interventions. To overcome barriers and successfully implement future decision coaching, it will be crucial to consider determinants of practice from the beginning of intervention development. The early consideration of these determinants will help to develop interventions with implementation strategies that can be properly evaluated, widely adopted and maintained in real world settings.<sup>36</sup>

There remains a need for effective interventions facilitating the use of shared decision-making. One way to prepare patients for consultation and to empower them to participate in decision-making is decision coaching. However, the current evidence of the efficacy and effectiveness of decision coaching is low.<sup>15</sup> One reason for this is the high degree of heterogeneity in the design and evaluation of these complex interventions. Thus, we need to understand the contribution of different programme components towards its effectiveness and its influencing factors. Considering the logic of complex interventions, a successful implementation is a prerequisite for its effectiveness. The results of this systematic review could also inform the design of future evaluation and implementation studies, including process evaluations, of decision coaching evaluated in research studies and used in practice.

However, as previously mentioned, we expect a considerable amount of heterogeneity in the design and the quality of studies. We will have to carefully consider the impact of heterogeneity on the generalisability and the comparability of the results.

### Ethics and dissemination

Given that this systematic review involves collecting and analysing previously published literature, ethical approval is not required. The results of this systematic review will be published in a peer-reviewed journal, presented in scientific conferences and disseminated within relevant consumer groups, for example, through the decision coaching webpage <https://decisionaid.ohri.ca>.

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### Additional file 1:

## PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol\*

Section and topic	Item No	Checklist item	Reported on page
<b>ADMINISTRATIVE INFORMATION</b>			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	Title page
	1b	If the protocol is for an update of a previous systematic review, identify as such	n.a.
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	Abstract, p.8
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	Title page
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	See contributor statement; p.15-16
Amendments	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	n.a.
Support:			
Sources	5a	Indicate sources of financial or other support for the review	See Funding Statement, p.16
Sponsor	5b	Provide name for the review funder and/or sponsor	Project DEAL
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	See Funding Statement, p.16
<b>INTRODUCTION</b>			
Rationale	6	Describe the rationale for the review in the context of what is already known	Introduction section, p.5-7
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	Objective section, p.7
<b>METHODS</b>			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	Inclusion criteria section, p.9-11
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	Information sources and search strategy section, p.11
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	Additional file 2
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	Study selection section, p.11
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	Study selection section, p.11



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Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	Data collection process section, p.12
Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	Data collection process section, p.12
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	Inclusion criteria section, p.10
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	Quality assessment section, p. 14
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	Analysis section, p.12-13
	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 (such as $I^2$ , Kendall's $\tau$ )	Analysis section, p.12-13
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	Analysis section, p.12-13
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	Analysis section, p.12-13
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	n.a.
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	n.a. because there is currently no consensus about how to describe the body of evidence regarding mixed methods in systematic reviews

**\* It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

*From: Shamseer L, Moher D, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart L, PRISMA-P Group. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. BMJ. 2015 Jan 2;349(jan02 1):g7647.*

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## **Additional file 2 - Search strategy:**

Search Methods Section

Date: July 20, 2022

Prepared by Lindsey Sikora

### **Methods**

#### *Database searching*

The following databases were searched by a health sciences librarian (LS): Medline and Medline in Process via Ovid (1946 – July 19, 2022) and Embase Classic + Embase via Ovid (1947 – July 19, 2022), Cochrane CENTRAL via Ovid (June 2022), APA PsycInfo via Ovid (1806 – Week 2, July 2022), and CINAHL via EBSCOHost (1947 – July 20, 2022). A search strategy was developed in Medline and then translated into the other databases as appropriate (see Appendix I). The Medline search was peer reviewed using the PRESS tool by another information specialist (Valentina Ly). All databases were searched from dates of inception to October 28, 2021. All references were entered into an Endnote file for processing (n = 10720), and then were uploaded into Covidence for duplicate removal, and then screening.

*Acknowledgements: A special thanks to Valentina Ly (Research Librarian, Health Sciences, Medicine and STEM) at the University of Ottawa for her PRESS of the search strategy.*

#### **Database searches (numbers for PRISMA flowchart):**

Medline in Process and Medline (via Ovid): n = 3101

Embase (via Ovid): n = 4011

Cochrane CENTRAL (via Ovid): n = 611

APA PsycInfo (via Ovid): n = 968

CINAHL (via EBSCOHost): n = 2029

Total: n = 10720

Duplicates: n = 2265

Total with duplicates removed: n = 8455

## Appendix I – Search strategies

### Medline

- 1 decision making, shared/
- 2 ((shared or sharing or informed or collaborative) adj2 (decision\* or choice\* or decide\*)).tw,kw,kf.
- 3 \*Clinical Decision-Making/
- 4 \*decision making/
- 5 decision support techniques/
- 6 (decision adj (aid or aids or support\*)).tw,kw,kf.
- 7 decisionmaking.tw,kf,kw.
- 8 or/1-7
- 9 Mentoring/
- 10 Directive Counseling/ or "Referral and Consultation"/
- 11 \*Counseling/
- 12 (coach\* or facilitat\* or guidance or counsel\* or prepar\*).ti,ab.
- 13 or/9-12
- 14 Patient Participation/ or Patient Navigation/
- 15 Patient-Centered Care/
- 16 ((patient or patients or child\* or family or families or relative or relatives or caregiver\* or care giver\* or carer or carers or parent or parents or clinician\* or physician\* or doctor or doctors or provider\* or nurse\* or professional\*) adj2 (participat\* or collaborat\* or involv\* or partner\* or consult\*)).tw,kf,kw.
- 17 "patient centered".tw,kw,kf.
- 18 "patient centred".tw,kf,kw.
- 19 or/14-18
- 20 8 and 13 and 19

### Embase

- 1 shared decision making/
- 2 family decision making/
- 3 patient decision making/
- 4 ((shared or sharing or informed or collaborative) adj2 (decision\* or choice\* or decide\*)).tw.
- 5 (decision adj (aid or aids or support\*)).tw.
- 6 decisionmaking.tw.
- 7 or/1-6
- 8 mentoring/
- 9 directive counseling/ or e-counseling/ or family counseling/ or parent counseling/ or patient counseling/ or patient guidance/
- 10 (coach\* or facilitat\* or guidance or counsel\* or prepar\*).tw.
- 11 or/8-10
- 12 patient participation/
- 13 patient care/
- 14 ((patient or patients or child\* or family or families or relative or relatives or caregiver\* or care giver\* or carer or carers or parent or parents or clinician\* or physician\* or doctor or doctors

or provider\* or nurse\* or professional\*) adj2 (participat\* or collaborat\* or involv\* or partner\* or consult\*).tw.

15 "patient centered".tw.

16 "patient centred".tw.

17 or/12-16

18 7 and 11 and 17

### APA PsycInfo

1. decision making/

2. ((shared or sharing or informed or collaborative) adj2 (decision\* or choice\* or decide\*).tw.

3. (decision adj (aid or aids or support\*).tw.

4. decisionmaking.tw.

5. or/1-4

6. mentor/

7. counseling/

8. (coach\* or facilitat\* or guidance or counsel\* or prepar\*).tw.

9. or/6-8

10. client participation/

11. patient centered care/

12. ((patient or patients or child\* or family or families or relative or relatives or caregiver\* or care giver\* or carer or carers or parent or parents or clinician\* or physician\* or doctor or doctors or provider\* or nurse\* or professional\*) adj2 (participat\* or collaborat\* or involv\* or partner\* or consult\*).tw.

13. "patient centered".tw.

14. "patient centred".tw.

15. or/10-14

16. 5 and 9 and 15

### CENTRAL

1 decision making, shared/

2 ((shared or sharing or informed or collaborative) adj2 (decision\* or choice\* or decide\*).tw,kw,kf.

3 Clinical Decision-Making/

4 decision making/

5 decision support techniques/

6 (decision adj (aid or aids or support\*).tw,kw,kf.

7 decisionmaking.tw,kf,kw.

8 or/1-7

9 Mentoring/

10 Directive Counseling/ or "Referral and Consultation"/

11 Counseling/

12 (coach\* or facilitat\* or guidance or counsel\* or prepar\*).ti,ab.

13 or/9-12

14 Patient Participation/ or Patient Navigation/

15 Patient-Centered Care/



- 16 ((patient or patients or child\* or family or families or relative or relatives or caregiver\* or care giver\* or carer or carers or parent or parents or clinician\* or physician\* or doctor or doctors or provider\* or nurse\* or professional\*) adj2 (participat\* or collaborat\* or involv\* or partner\* or consult\*)).tw,kf,kw.  
 17 "patient centered".tw,kw,kf.  
 18 "patient centred".tw,kf,kw.  
 19 or/14-18  
 20 8 and 13 and 19

## CINAHL

Search Terms	Search Options
S1	(MH "Decision Making, Shared") OR (MH "Decision Making, Patient+")
S2	TI ( ((shared or sharing or informed or collaborative) N2 (decision* or choice* or decide*)) ) OR AB ( ((shared or sharing or informed or collaborative) N2 (decision* or choice* or decide*)) )
S3	(MH "Decision Support Techniques")
S4	TI ( (decision N1 (aid or aids or support*)) ) OR AB ( (decision N1 (aid or aids or support*)) )
S5	TI decisionmaking OR AB decisionmaking
S6	S1 OR S2 OR S3 OR S4 OR S5
S7	(MH "Mentorship")
S8	(MH "Counseling+")
S9	TI ( (coach* or facilitat* or guidance or counsel* or prepar*) ) OR AB ( (coach* or facilitat* or guidance or counsel* or prepar*) )
S10	S7 OR S8 OR S9
S11	(MH "Consumer Participation")
S12	(MH "Patient Navigation") OR (MH "Patient Centered Care")
S13	TI ( ((patient or patients or child* or family or families or relative or relatives or caregiver* or care giver* or carer or carers or parent or parents or clinician* or physician* or doctor or doctors or provider* or nurse* or professional*) N2 (participat* or collaborat* or involv* or partner* or consult*)) ) OR AB ( ((patient or patients or child* or family or families or relative or relatives or caregiver* or care giver* or carer or carers or parent or parents or clinician* or physician* or ...
S14	TI "patient centered" OR AB "patient centered"
S15	TI "patient centred" OR AB "patient centred"
S16	S11 OR S12 OR S13 OR S14 OR S15

S17 S6 AND S10 AND S16

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