BMJ Open

Evidence-based practice models and frameworks in the healthcare setting: a scoping review

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To cite: Dusin J, Melanson A, Mische-Lawson L. Evidence-based practice models and frameworks in the healthcare setting: a scoping review. *BMJ Open* 2023;**13**:e071188. doi:10.1136/bmjopen-2022-071188

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2022-071188).

Received 17 December 2022
Accepted 04 May 2023

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ABSTRACT

Objectives The aim of this scoping review was to identify and review current evidence-based practice (EBP) models and frameworks. Specifically, how EBP models and frameworks used in healthcare settings align with the original model of (1) asking the question, (2) acquiring the best evidence, (3) appraising the evidence, (4) applying the findings to clinical practice and (5) evaluating the outcomes of change, along with patient values and preferences and clinical skills.

Design A Scoping review.

Included sources and articles Published articles were identified through searches within electronic databases (MEDLINE, EMBASE, Scopus) from January 1990 to April 2022. The English language EBP models and frameworks included in the review all included the five main steps of EBP. Excluded were models and frameworks focused on one domain or strategy (eg, frameworks focused on applying findings).

Results Of the 20 097 articles found by our search, 19 models and frameworks met our inclusion criteria. The results showed a diverse collection of models and frameworks. Many models and frameworks were well developed and widely used, with supporting validation and updates. Some models and frameworks provided many tools and contextual instruction, while others provided only general process instruction. The models and frameworks reviewed demonstrated that the user must possess EBP expertise and knowledge for the step of assessing evidence. The models and frameworks varied greatly in the level of instruction to assess the evidence. Only seven models and frameworks integrated patient values and preferences into their processes.

Conclusion Many EBP models and frameworks currently exist that provide diverse instructions on the best way to use EBP. However, the inclusion of patient values and preferences needs to be better integrated into EBP models and frameworks. Also, the issues of EBP expertise and knowledge to assess evidence must be considered when choosing a model or framework.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Currently, no comprehensive review exists of evidence-based practice (EBP) models and frameworks.
⇒ Well-developed models and frameworks may have been excluded for not including all five steps of original model for EBP.
⇒ This review did not measure the quality of the models and frameworks based on validated studies.

INTRODUCTION

Evidence-based practice (EBP) grew from evidence-based medicine (EBM) to provide a process to review, translate and implement research with practice to improve patient care, treatment and outcomes. Guyatt[1] coined the term EBM in the early 1990s. Over the last 25 years, the field of EBM has continued to evolve and is now a cornerstone of healthcare and a core competency for all medical professionals.[2 3] At first, the term EBM was used only in medicine. However, the term EBP now applies to the principles of other health professions. This expansion of the concept of EBM increases its complexity.[4] The term EBP is used for this paper because it is universal across professions.

Early in the development of EBP, Sackett[5] created an innovative five-step model. This foundational medical model provided a concise overview of the process of EBP. The five steps are (1) asking the question, (2) acquiring the best evidence, (3) appraising the evidence, (4) applying the findings to clinical practice and (5) evaluating the outcomes of change. Other critical components of Sackett's model are considering patient value and preferences and clinical skills with the best available evidence.[5] The influence of this model has led to its integration and adaption into every field of healthcare. Historically, the foundation of EBP has focused on asking the question, acquiring the literature and appraising the evidence but has had difficulty integrating evidence into practice.[6] Although the five steps appear simple, each area includes a vast number of ways to review the literature (eg, Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), Newcastle-Ottawa Scale) and entire fields of study, such as implementation science, a field dedicated to implementing

EBP.[7 8] Implementation science can be traced to the 1960s with Everett Rogers' Diffusion of Innovation Theory and has grown alongside EBP over the last 25 years.[7 9]

One way to manage the complexity of EBP in healthcare is by developing EBP models and frameworks that establish strategies to determine resource needs, identify barriers and facilitators, and guide processes.[10] EBP models and frameworks provide insight into the complexity of transforming evidence into clinical practice.[11] They also allow organisations to determine readiness, willingness and potential outcomes for a hospital system.[12] EBP can differ from implementation science, as EBP models include all five of Sackett's steps of EBP, while the non-process models of implementation science typically focus on the final two steps.[5 10] There are published scoping reviews of implementation science,[13] however, no comprehensive review of EBP models and frameworks currently exists. Although there is overlap of EBP, implementation science and knowledge translation models and frameworks[10 14] the purpose of the scoping review was to explore how EBP models and frameworks used in healthcare settings align with the original EBP five-step model.

METHODS

A scoping review synthesises findings across various study types and provides a broad overview of the selected topic.[15] The Arksey and O'Malley method and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-ScR) procedures guided this review (see online supplemental PRISMA-ScR checklist).[15 16] The primary author established the research question and inclusion and exclusion criteria before conducting the review. An a priori protocol was not pre-registered. One research question guided the review: Which EBP models and frameworks align with Sackett's original model?

Eligibility criteria

To be included in the review, English language published EBP models and frameworks needed to include the five main steps of EBP (asking the question, acquiring the best evidence, appraising the evidence, applying the findings to clinical practice and assessing the outcomes of change) based on Sackett's model.[5] If the models or frameworks involved identifying problems or measured readiness for change, the criteria of 'asking the question' was met. Exclusions included models or frameworks focused on one domain or strategy (eg, frameworks focused on applying findings). Also, non-peer-reviewed abstracts, letters, editorials, opinion articles, and dissertations were excluded.

Search and selection

To identify potential studies, a medical librarian searched the databases from January 1990 to April 2022 in MEDLINE, EMBASE and Scopus in collaboration with the primary author. The search was limited to 1990 because the term EBP was coined in the early 90s. The search strategy employed the following keywords: 'Evidence-Based Practice' OR 'evidence based medicine' OR 'evidence-based medicine' OR 'evidence based nursing' OR 'evidence-based nursing' OR 'evidence based practice' OR 'evidence-based practice' OR 'evidence based medicine' OR 'evidence-based medicine' OR 'evidence based nursing' OR 'evidence-based nursing' OR 'evidence based practice' OR 'evidence-based practice' AND 'Hospitals' OR 'Hospital Medicine' OR 'Nursing' OR 'Advanced Practice Nursing' OR 'Academic Medical Centers' OR 'healthcare' OR 'hospital' OR 'healthcare' OR 'hospital' AND 'Models, Organizational' OR 'Models, Nursing' OR 'framework' OR 'theory' OR 'theories' OR 'model' OR 'framework' OR 'theory' OR 'theories' OR 'model'. Additionally, reference lists in publications included for full-text review were screened to identify eligible models and frameworks (see online supplemental appendix A for searches).

Selection of sources of evidence

Two authors (JD and AM) independently screened titles and abstracts and selected studies for potential inclusion in the study, applying the predefined inclusion and exclusion criteria. Both authors then read the full texts of these articles to assess eligibility for final inclusion. Disagreement between the authors regarding eligibility was resolved by consensus between the three authors (JD, AM and LM-L). During the selection process, many models and frameworks were found more than once. Once a model or framework article was identified, the seminal article was reviewed for inclusion. If models or frameworks had been changed or updated since the publication of their seminal article, the most current iteration published was reviewed for inclusion. Once a model or framework was identified and verified for inclusion, all other articles listing the model or framework were excluded. This scoping review intended to identify model or framework aligned with Sackett's model; therefore, analysing every article that used the included model or framework was unnecessary (see online supplemental appendix B for tracking form).

Data extraction and analysis

Data were collected on the following study characteristics: (1) authors, (2) publication year, (3) model or framework and (4) area(s) of focus in reference to Sackett's five-step model. After initial selection, models and frameworks were analysed for key features and alignment to the five-step EBP process. A data analysis form was developed to map detailed information (see online supplemental appendix C for full data capture form). Data analysis focused on identifying (1) the general themes of the model or frameworks, and (2) any knowledge gaps. Data extraction and analysis were done by the primary author (JD) and verified by one other author (AM).[15]

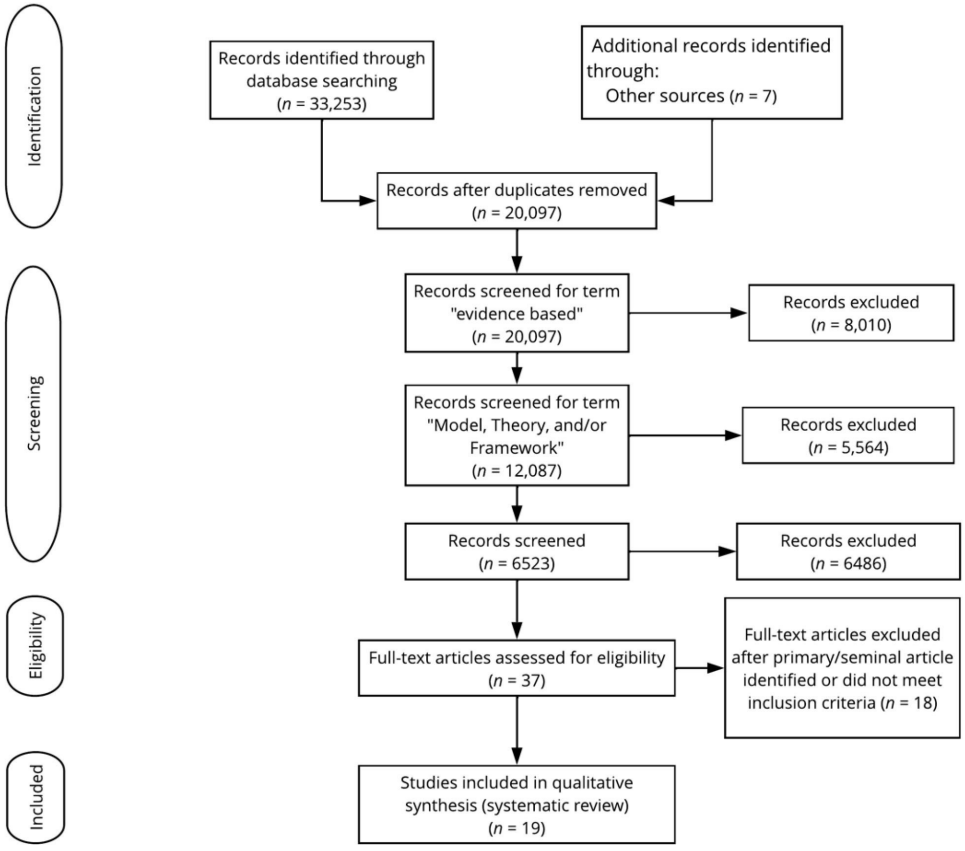

Figure 1 Retrieval and selection process.

Patient and public involvement

Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

RESULTS

The search identified 6523 potentially relevant references (see figure 1). Following a review of the titles and abstracts, the primary author completed a more detailed screening of 37 full papers. From these, 19 models and frameworks were included. Table 1 summarises the 19 models and frameworks. Of the 19 models and frameworks assessed and mapped, 15 had broad target audiences, including healthcare or public health organisations or health systems. Only five models and frameworks included a target audience of individual clinicians (eg, physicians and nurses).[17–22]

Asking the question

All 19 models and frameworks included a process for asking questions. Most focused on identifying problems that needed to be addressed on an organisational or hospital level. Five used the PICO (population, intervention, comparator, outcome) format to ask specific questions related to patient care.[19–25]

Acquiring the evidence

The models and frameworks gave basic instructions on acquiring literature, such as 'conduct systematic search' or 'acquire resource'.[20] Four recommended sources from previously generated evidence, such as guidelines and systematic reviews.[6 21 22 26] Although most models and frameworks did not provide specifics, others suggested this work be done through EBP mentors/experts.[20 21 25 27] Seven models included qualitative evidence in the use of evidence,[6 19 21 24 27–29] while only four models considered the use of patient preference and values as evidence.[21 22 24 27] Six models recommended internal data be used in acquiring information.[17 20–22 24 27]

Assessing the evidence

The models and frameworks varied greatly in the level of instruction provided in assessing the best evidence. All provided a general overview in assessing and grading the evidence. Four recommended this work be done by EBP mentors and experts.[20 25 27 30] Seven models developed specific tools to be used to assess the levels of evidence.[6 17 21 22 24 25 27]

Applying the evidence

The application of evidence also varied greatly for the different models and frameworks. Seven models recommended pilot programmes to implement change.[6 21–25 31] Five recommended the use of EBP mentors and experts

Table 1 Models and frameworks organised by integration of patient preferences and values

Name	Steps of model or framework		General themes	Knowledge gaps
Patient values incorporated into model				
Iowa Model[24]	1. Question development 2. Searches, appraises and synthesises the literature 3. If literature is lacking, conduct research	4.Develop, enact and appraise a pilot solution 5. If successful, implement across organisation 6. If unsuccessful, restart process	▶ Recommended for use at an organisational level ▶ Detailed flowchart guides decision-making process ▶ Identified decision points and feedback loops throughout the model ▶ Emphasised pilot project before initiating system-wide project ▶ Designed for interprofessional collaboration	▶ User must possess a level of knowledge and related skills to assess evidence
Monash Partners Learning Health Systems Framework[26]	1. Stakeholder-driven 2. Engage the people 3. Identify priorities 4. Research evidence 5. Evidence-based information 6. Evidence synthesis	7. Data-derived evidence 8. Data/information systems 9. Benchmarking 10. Implementation evidence 11. Implementation 12. Healthcare improvement	▶ A systems-level approach for sustainability and scalability that integrates research and data ▶ Implementation is data focused	▶ User must possess a level of knowledge and related skills for assessing literature (not specified)
ARCC[27]	1. Assess the healthcare organisation for readiness for change 2. Identify potential and actual barriers and facilitators 3. Identify EBP champions	4. Implement evidence into practice 5. Evaluate EBP outcomes	▶ Training programme with tools to assess literature and implement ▶ Focuses on mentors undergo training ▶ Identifies a network of supportive stakeholders ▶ Emphasis on organisation readiness ▶ Encompasses patient values, and clinical skill as evidence ▶ Control theory and cognitive behaviour theory guide model	▶ Limited direction on how patient values/preferences are integrated into the model
The Clinical Scholar Model[25]	1. Observation 2. Analysis 3. Synthesis	4. Application/ evaluation 5. Dissemination	▶ Development of point-of-care nurses who become clinical scholars committed to patient care, knowledge development, translation and implementation ▶ Includes the use of research, EBP and quality improvement ▶ Depends on EBP mentors and pilot programmes	▶ Skill development and tools dependent on utilising workshops to develop EBP mentors
JBI[22]	1. Global Health 2. Evidence generation 3. Evidence synthesis	4. Evidence (knowledge) transfer 5. Evidence implementation	▶ Utilises different types of evidence (SR, guidelines, expert opinion). ▶ Expert opinion includes patients ▶ Evidence dissemination important part of the model	▶ User must possess a level of knowledge and related skills to assess evidence
CETEP[23]	1. Define the clinical practice question 2. Assess the critical appraisal components 3. Plan the implementation	4. Implement the practice change 5. Evaluate the practice change	▶ Authors reviewed literature, models and additional components believed vital in developing, reviewing and revising patient care practices ▶ Incorporates evidence factors, patient factors and clinical setting ▶ Most robust questions involving patient preference ▶ Uses a pilot programme for implementation	▶ Resources available for assessing the literature discussed but determined to be health system specific

Continued

Table 1 Continued

Name	Steps of model or framework		General themes	Knowledge gaps
Johns Hopkins[21]	1. Practice question: EBP question is identified 2. Evidence: the team searches, appraises, rates the strength of evidence 3. Translation: feasibility, action plan and change implemented and evaluated		▶ Well-developed tool kit that provides guide for question development, evidence-rating scale and appraisal guide for various forms of evidence	▶ User must possess a level of knowledge and related skills to assess evidence
Patient values discussed, not incorporated into models/frameworks				
Stetler Model[17]	1. Question development includes project context 2. Identify the relevance of evidence sources and quality 3. Summarise evidence 4. Develop a plan 5. Identify/collect data outcomes to evaluate effectiveness of plan		▶ Designed to encourage critical thinking ▶ Allows for categorisation of evidence as external (eg, research) or internal (eg, organisation outcome data) ▶ Emphasises use by single practitioner but may include groups	▶ Focus single practitioner ▶ Patient value/preference not clearly integrated ▶ User must possess a level of knowledge and related skills to assess evidence
KTA[18]	1. Identify problems and begin searching for evidence 2. Adapt knowledge to local context 3. Identify barriers 4. Select, adapt, and implement	5. Monitor implanted knowledge 6. Evaluate outcomes related to knowledge use 7. Sustain appropriate knowledge use	▶ Adapts for use with individuals, teams and healthcare organisations ▶ Is grounded in planned action theory ▶ Breaks knowledge-to-action process into manageable sections ▶ Provides evidence in a way that influences clinical practice, stakeholders and end-users	▶ Patient values/preference not clearly integrated ▶ User must possess a level of knowledge and related skills for knowledge creation
EBMgt[19]	1. Asking; acquiring; appraising; aggregating; applying; and assessing 2. Predictors; barriers; training organisations; and research institutes		▶ Methodological differences between medical and management research ▶ Evidence focuses more on qualitative evidence to prove or disprove different models of organisation and management	▶ User must possess a level of knowledge and related skills for assessing literature ▶ Lack of specifics on patient value/preference discussed
St Luke's[31]	1. Area of interest 2. Collect the best evidence 3. Critically appraise the evidence	4. Integrate the evidence, clinical skill and patient preferences/values 5. Evaluate the practice change	▶ Hospital-level model adapted from Iowa Model ▶ Model success focuses on clear directions, aggressive timeline and the short-term commitment required of team members	▶ Provides a general overview of assessing literature without specifics direction or tools
The I3 Model for Advancing Quality Patient Centred Care[32]	1. Inquiry 2. Improvement 3. Innovation	4. Inquiry encompasses research 5. Improvement includes quality improvement projects 6. Innovation is discovery studies and best evidence projects	▶ Model focuses on options for EBP, quality improvement and research needs ▶ Each process includes a step to obtain pre-data or best evidence ▶ Incorporates the voice of the customer	▶ Tools provided for quality improvement but not assessing literature ▶ User must possess a level of knowledge and related skills for assessing literature
Model for Change to Evidence Based Practice[6]	1. Identify need to change practice 2. Approximate problem with outcomes 3. Summarise best scientific evidence 4. Develop plan for changing practice	5. Implement and evaluate change (pilot study) 6. Integrate and maintain change in practice 7. Monitor implementation	▶ The model is based on change theory ▶ Supports EBP changes derived from a combination of quantitative and qualitative data, clinical skill and contextual evidence ▶ Recommends the creation of team of stakeholders ▶ Piloted implementation	▶ Patient values/preference not clearly integrated into model
Patient values not discussed				

Continued

Table 1 Continued

Name	Steps of model or framework		General themes	Knowledge gaps
Evidence-Based Public Health[28]	1. Community assessment 2. Quantify the issue 3. Develop statement of the issue 4. Determine what is known evidence	5. Develop and prioritise programme and policy options 6. Develop an action plan 7. Evaluate the programme or policy	▶ Incorporates a framework with less emphasis on evidence hierarchy and more emphasis on knowledge translation ▶ Evidence: Qualitative and quantitative ▶ Matches question to research type	▶ Lack of consensus on evidence analysis and hierarchy ▶ Public health models different from medical focus is on health outcomes
ACE Star Model[29]	1. Discovery: Searching for new knowledge 2. Evidence Summary: Synthesise the body of research knowledge 3. Translation: Provide clinicians with a practice document 4. Integration: Changed through formal and informal channels 5. Evaluation: EBP outcomes are evaluated		▶ Promotes discovery of evidence through systematic reviews ▶ Promotes transition of evidence through guideline creation ▶ Includes use of qualitative evidence ▶ Expertise and patient preference are considered another form of evidence	▶ Patient values/preferences not clearly integrated into model (patient satisfaction measured) ▶ Simple overview of each step with limited resources discussed
An Evidence Implementation Model for Public Health Systems[33]	Not a linear model 1. Circle 1 Evidence implementation target 2. Circle 2 Actors involved in implementation	3. Circle 3 Knowledge transfer 4. Circle 4 Barriers and facilitators	▶ Includes setting measurable evidence implementation targets ▶ Includes all actors in all stages of knowledge transfer to increase shared aim and reduce barriers ▶ Model is broad with diverse implementation	▶ Provides a general overview without specifics ▶ Public health models different from medical models ▶ No specifics of how to assess literature
San Diego 8A's EBP Model[20]	1. Assessing a clinical or practice problem 2. Asking a clinical question in a PICO format 3. Acquiring existing sources of evidence 4. Appraising the levels of evidence	5.Applying the evidence to a practice change 6. Analysing the results of the change 7. Advancing the practice change through dissemination 8. Adopting the practice of sustainability over time	▶ Model was created to make it easier for nurses to complete EBP projects ▶ Derived primarily from previously published models ▶ Change theory part of the model ▶ Utilises mentors to implement	▶ No specifics on patient preference/value incorporation ▶ User must possess a level of knowledge and related skills for assessing literature (not specified)
Tyler Collaborative Model for EBP[30]	Phase one: unfreezing 1. Building relationships 2. Diagnosing the problem 3. Acquiring resources Phase two: moving 1. Choosing the solution 2. Gaining acceptance	Phase three: refreezing 1. Stabilisation	▶ Model focuses on barriers of nurses to implement EBP: ▶ Difficulty of practicing nurses to synthesise scientific evidence and lack of adequate administrative commitment to make evidence-based nursing a priority ▶ Model utilises EBP experts	▶ No mention of patient preference/value
The Practice Guidelines Development Cycle[42]	1. Select/frame clinical problem 2. Generate recommendations 3. Ratify recommendations 4. Formulate practice guideline	5. Independent review 6. Negotiate practice policies 7. Adopt guideline policies 8. Scheduled review	▶ Original EBP model developed to create clinical guidelines ▶ Framework recommends facilitator to assign tasks and manage advancement ▶ Appropriate structure needs to be in place for framework to succeed ▶ Cycle tolerates discordance between EBP and clinical guidelines and guidelines and institutional policies but requires documentation	▶ No mention of patient preference/value ▶ User must possess a level of knowledge and related skills for assessing literature (not specified)

EBP, evidence-based practice .

to assist in the implementation of evidence and quality improvement as a strategy of the models and frameworks.[20 24 25 27] Thirteen models and frameworks discussed patient values and preferences,[6 17–19 21–27 31 32] but only seven incorporated this topic into the model or framework,[21–27] and only five included tools and instructions.[21–25] Twelve of the 20 models discussed using clinical skill, but specifics of how this was incorporated was lacking in models and frameworks.[6 17–19 21–27 31]

Evaluating the outcomes of change

Evaluation varied among the models and frameworks, but most involved using implementation outcome measures to determine the project's success. Five models and frameworks provide tools and in-depth instruction for evaluation.[21 22 24–26] Monash Partners Learning Health Systems provided detailed instruction on using internal institutional data to determine success of application.[26] This framework uses internal and external data along with evidence in decision making as a benchmark for successful implementation.

DISCUSSION

EBP models and frameworks provide a process for transforming evidence into clinical practice and allow organisations to determine readiness and willingness for change in a complex hospital system.[12] The large number of models and frameworks complicates the process by confusing what the best tool is for healthcare organisations. This review examined many models and frameworks and assessed the characteristics and gaps that can better assist healthcare organisations to determine the right tool for themselves. This review identified 19 EBP models and frameworks that included the five main steps of EBP as described by Sackett.[5] The results showed that the themes of the models and frameworks are as diverse as the models and frameworks themselves. Some are well developed and widely used, with supporting validation and updates.[21 22 24 27] One such model, the Iowa EBP model, has received over 3900 requests for permission to use it and has been updated from its initial development and publication.[24] Other models provided tools and contextual instruction such as the Johns Hopkin's model which includes a large number of supporting tools for developing PICOs, instructions for grading literature and project implementation.[17 21 22 24 27] By contrast, the ACE Star model and the An Evidence Implementation Model for Public Health Systems only provide high level overview and general instructions compared with other models and frameworks.[19 29 33]

Gaps in the evidence

A consistent finding in research of clinician experience with EBP is the lack of expertise that is needed to assess the literature.[24 34 35] The models and frameworks reviewed demonstrated that the user must possess the knowledge and related skills for this step in the process. The models and frameworks varied greatly in the level of instruction to assess the evidence. Most provided a general overview in assessing and grading the evidence, though a few recommended that this work be done by EBP mentors and experts.[20 25 27] ARCC, JBI and Johns Hopkins provided robust tools and resources that would require administrative time and financial support.[21 22 27] Some models and frameworks offered vital resources or pointed to other resources for assessing evidence,[24] but most did not. While a few used mentors and experts to assist with assessing the literature, a majority did not address this persistent issue.

Sackett's five-step model included another important consideration when implementing EBP: patient values and preferences. One criticism of EBP is that it ignores patient values and preferences.[36] Over half of the models and frameworks reported the need to include patient values and preferences, but the tools, instruction or resources for including them were limited. The ARCC model integrates patient preferences and values into the model, but it is up to the EBP mentor to accomplish this task.[37] There are many tools for assessing evidence, but few models and frameworks provide this level of guidance for incorporating patient preference and values. The inclusion of patient and family values and preferences can be misunderstood, insincere, and even tokenistic but without it there is reduced chance of success of implementation of EBP.[38 39]

Strengths and limitations

Similar to other well-designed scoping reviews, the strengths of this review include a rigorous search conducted by a skilled librarian, literature evaluation by more than one person, and the utilisation of an established methodological framework (PRISMA-ScR).[14 15] Additionally, utilising the EBP five-step models as a point of alignment allows for a more comprehensive breakdown and established reference points for the reviewed models and frameworks. While scoping reviews have been completed on implementation science and knowledge translation models and framework, to our knowledge, this is the first scoping review of EBP models and frameworks.[13 14] Limitations of the study include that well-developed models and frameworks may have been excluded for not including all five steps.[40] For example, the Promoting Action on Research Implementation in Health Services (PARIHS) framework is a well-developed and validated implementation framework but did not include all five steps of an EBP model.[40] Also, some models and frameworks have been studied and validated over many years. It was beyond the scope of the review to measure the quality of the models and frameworks based on these other validated studies.

Implications and future research

Healthcare organisations can support EBP by choosing a model or framework that best suits their environment and providing clear guidance for implementing the best evidence. Some organisations may find the best fit with

the ARCC and the Clinical Scholars Model because of the emphasis on mentors or the Johns Hopkins model for its tools for grading the level of evidence.[21 25 27] In contrast, other organisations may find the Iowa model useful with its feedback loops throughout its process.[24]

Another implication of this study is the opportunity to better define and develop robust tools for patient and family values and preferences within EBP models and frameworks. Patient experiences are complex and require thorough exploration, so it is not overlooked, which is often the case.[39 41] The utilisation of EBP models and frameworks provide an opportunity to explore this area and provide the resources and understanding that are often lacking.[38] Though varying, models such as the Iowa Model, JBI and Johns Hopkins developed tools to incorporate patient and family values and preferences, but a majority of the models and frameworks did not.[21 22 24] An opportunity exists to create broad tools that can incorporate patient and family values and preferences into EBP to a similar extent as many of the models and frameworks used for developing tools for literature assessment and implementation.[21–25]

Future research should consider appraising the quality and use of the different EBP models and frameworks to determine success. Additionally, greater clarification on what is considered patient and family values and preferences and how they can be integrated into the different models and frameworks is needed.

CONCLUSION

This scoping review of 19 models and frameworks shows considerable variation regarding how the EBP models and frameworks integrate the five steps of EBP. Most of the included models and frameworks provided a narrow description of the steps needed to assess and implement EBP, while a few provided robust instruction and tools. The reviewed models and frameworks provided diverse instructions on the best way to use EBP. However, the inclusion of patient values and preferences needs to be better integrated into EBP models. Also, the issues of EBP expertise to assess evidence must be considered when selecting a model or framework.

Acknowledgements We thank Keri Swaggart for completing the database searches and the Medical Writing Center at Children's Mercy Kansas City for editing this manuscript.

Contributors All authors have read and approved the final manuscript. JD conceptualised the study design, screened the articles for eligibility, extracted data from included studies and contributed to the writing and revision of the manuscript. LM-L conceptualised the study design, provided critical feedback on the manuscript and revised the manuscript. AM screened the articles for eligibility, extracted data from the studies, provided critical feedback on the manuscript and revised the manuscript. JD is the guarantor of this work.

Funding The article processing charges related to the publication of this article were supported by The University of Kansas (KU) One University Open Access Author Fund sponsored jointly by the KU Provost, KU Vice Chancellor for Research, and KUMC Vice Chancellor for Research and managed jointly by the Libraries at the Medical Center and KU - Lawrence

Disclaimer No funding agencies had input into the content of this manuscript.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement No data are available.

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