



THE JOANNA  
BRIGGS INSTITUTE



7th SCIENCES  
SEARCH UNIT  
NURSING  
UNIDADE DE INVESTIGAÇÃO  
EM CIÊNCIAS DA SAÚDE  
ENFERMAGEM

<http://joannabriggs.org/>

e s c o l a superior de  
e n f e r m a g e m  
d e c o i m b r a

Phi Xi Chapter



**Portugal Centre for Evidence Based Practice (PCEBP)**  
A Collaborating Centre of the Joanna Briggs Institute

# Systematic reviews impact on their own and students' skills

João Apóstolo  
apostolo@esenfc.pt

<http://www.esenfc.pt>

# Joanna Briggs Collaboration

Home / Joanna Briggs Colla



<http://joannabriggs.org/JBC.aspx>

# Overview

Presentation: 50 minutes; Discussion 30 minutes

- 1) Introduction to SR and the concept of aggregating data from qualitative and quantitative research
  - why we need it in the health care
  - How SR and synthesis of evidence can contribute to the education of health care staff
- 2) Introduction to systematic review as meta-analysis and meta-synthesis
- 3) How SR can be used to develop competencies of the staff
  - how we use it in my institution
  - experience that competencies have developed
- 4) PCEBP personal experience on developing SR

# Evidence-Based Practice (EBP)

- Pearson et al (2005) state that evidence-based practice is clinical decision-making that considers the best available evidence; the context in which the care is delivered; client preference; and the professional judgment of the health professional (p 209).



# Evidence-based Health Care



- Evidence based health care takes place when decisions that affect the care of patients are taken with *due weight accorded to all valid, relevant information* (Hicks, 1997)

# Evidence is...

- ‘...the available facts, circumstances etc supporting or otherwise a belief, proposition etc or indicating whether a thing is true or valid...’

(Pearsall and Trumble, 1995)

- “...any statement, record, testimony which tends to prove the existence of a fact in issue”

(Nygh and Butt 1997, p435)

## FAME

The following elements should be taken into consideration when applying the evidence - recommendations should be graded accordingly.

### **F – Feasibility; specifically:**

- ☐ What is the cost effectiveness of the practice?
- ☐ Is the resource/practice available?
- ☐ Is their sufficient experience/levels of competency available?

### **A – Appropriateness; specifically:**

- ☐ Is it culturally acceptable?
- ☐ Is it transferable/applicable to the population of interest?
- ☐ Is it easily adaptable to a variety of circumstances?

### **M – Meaningfulness; specifically:**

- ☐ Is it associated with positive experiences?
- ☐ Is it not associated with negative experiences?

### **E – Effectiveness; specifically:**

- ☐ Was there a beneficial effect?
- ☐ Is it safe? (i.e. is there a lack of harm associated with the practice?)

# The JBI Model of Evidence-Informed Healthcare



# Evidence-Based *or* Evidence-Informed?

## Evidence-Based:

“cook book” approach - resistance of professionals

## Evidence-Informed:

There is more to clinical-decision making than evidence alone. Evidence forms only one part of the process.

Evidence based healthcare considers **the best available evidence, patient preference, context and clinical judgement.**

# Evidence synthesis

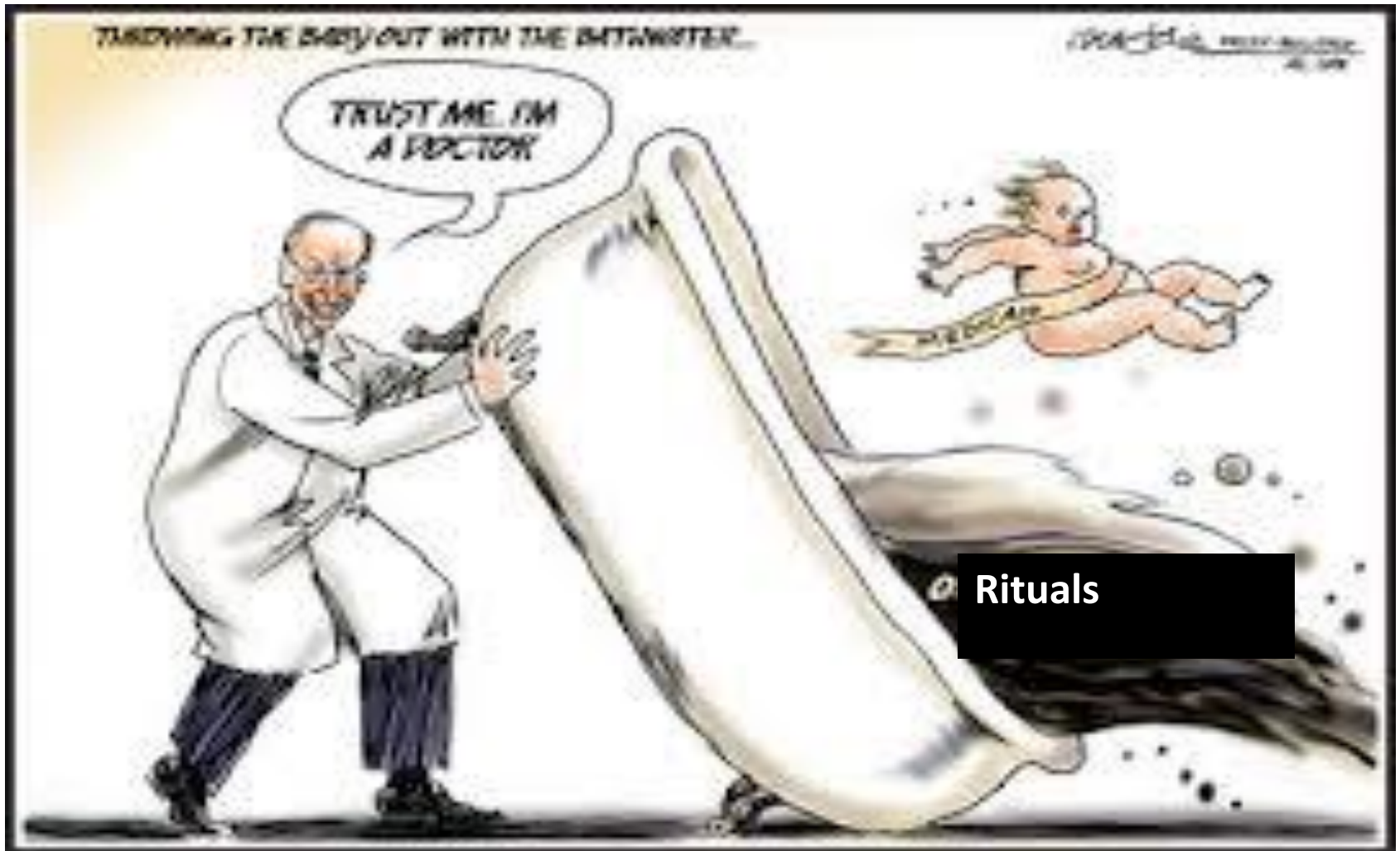
## Why we need it in the health care?





Rituals have a place

Don't throw the baby out with the bathwater





# THREE TRANSLATION GAPS (Alan Pearson, Zoe Jordan, and Zachary Munn, 2011)

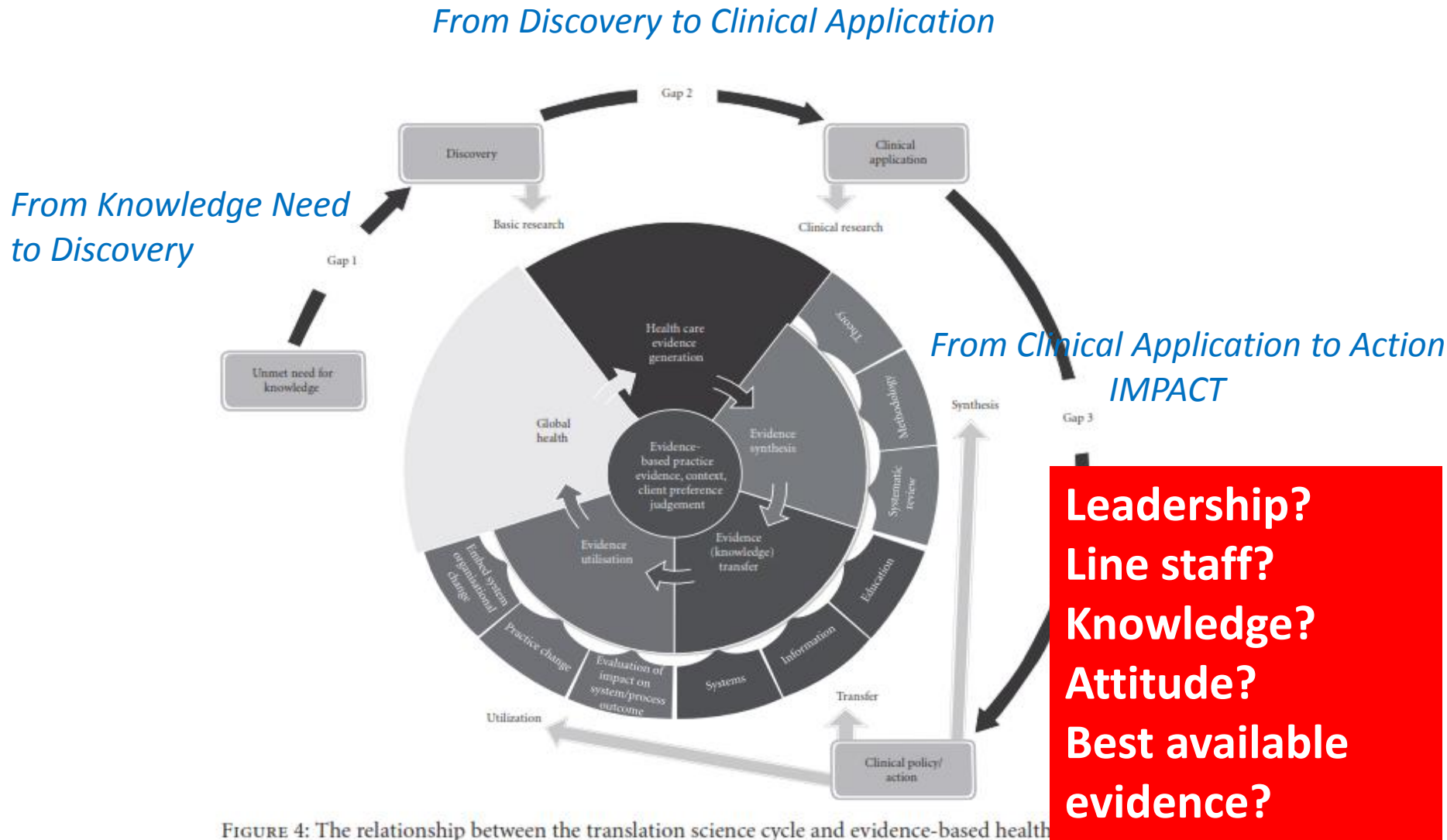


FIGURE 4: The relationship between the translation science cycle and evidence-based health



# EIP – Barriers



**Barriers to Evidence-Based Practice Implementation - Results of a Qualitative Study (Rapp et al., 2010)**

**Results** - The most significant obstacles emanated **from the behavior of supervisors and front-line staff.**

- **A lack of synergy profoundly impeded implementation.**

**It means - Organizations , Leadership and Line staff are crucial**



Health Services Research

# EIP – Barriers



**A systematic review of barriers to and facilitators of the use of evidence by policymakers (Oliver et al. 2014).**

- Thirteen systematic reviews were included.

**Results** - Most frequently reported barriers to evidence uptake:

- Poor access to good quality relevant research;
- Lack of timely research output.

It means - The best available evidence is not available

# How SR and synthesis of evidence can contribute to the education of health care staff



BECAUSE we need students, nurses and professors develop skills:  
Questions (clinical or research);  
Search answers to inform practice and education.



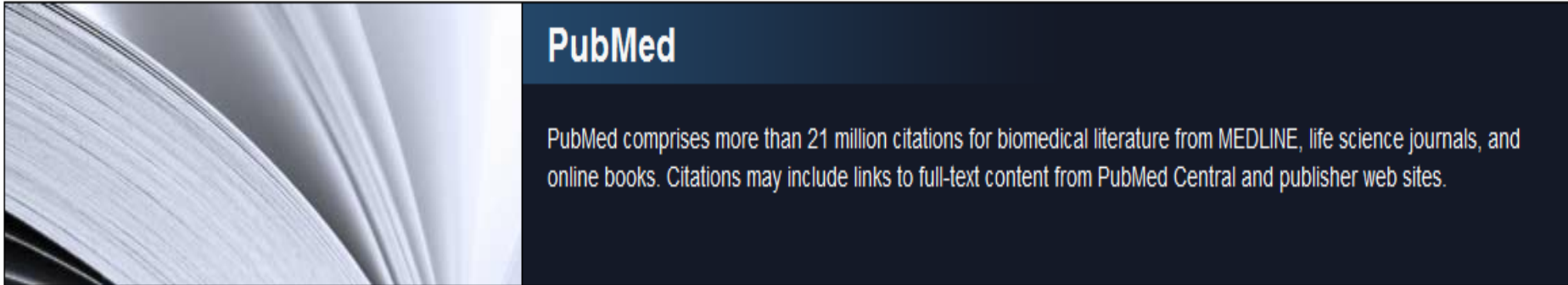


Why do we need to train reviewers to develop systematic reviews (evidence synthesis)?



**BECAUSE:**

# Source of knowledge



- PubMed comprises more than 21 million citations for biomedical literature from MEDLINE, life science journals, and online books.
- It was noticed that the only people reading research were other researchers



# Making Evidence Accessible to Busy Clinicians

- Systematic reviews (don't have time)
- Summaries
- Abstracts
- Practice sheets
- Evidence-based clinical guidelines

# Access to clinical decision support and tools/resources to facilitate evidence informed practice

- Resources such as:

Databases



Cochrane Library



Guidelines



Agency for Healthcare Research and Quality  
Advancing Excellence in Health Care

CDC Centers for Disease Control and Prevention



Comprehensive, bundled services (JBI COnect+ brought to you by OVID)



## JBI's content database contains :



JBI Database of  
Systematic Reviews  
and Implementation Reports

- **Evidence Summaries**- Literature reviews that summarize existing international literature on common healthcare interventions and activities
- **Evidence Based Recommended Practices**- Database of procedures, based on the best available evidence, that describe and/or recommend practice on various clinical topics
- **Best Practice Information Sheets**- Series of information guideline sheets produced specifically for practicing health professionals
- **Systematic Reviews**- Collection of comprehensive systematic reviews of international research literature completed by trained JBI reviewers
- **Consumer Information Sheets**- Standardized summaries, designed just for consumers of healthcare (patient/client, relatives, care providers)
- **Plus, Systematic Review Protocols and Technical Reports**

# Fornecida a melhor evidência disponível para que a prática possa ser informada.

## Guideline Summary NGC-8722

### Guideline Title

(1) Prevention of falls and fall injuries in the older adult. (2) Prevention of falls and fall injuries in the older adult. 2011 supplement.

### Bibliographic Source(s)

Registered Nurses' Association of Ontario (RNAO). Prevention of falls and fall injuries in the older adult. 2011 supplement. Toronto (ON): Registered Nurses' Association of Ontario; 2011.

Registered Nurses' Association of Ontario (RNAO). Prevention of falls and fall injuries in the older adult. 2011 supplement. Toronto (ON): Registered Nurses' Association of Ontario; 2011.



**Best Practice**  
Evidence based information sheets for health professionals

### Solutions, techniques and pressure in wound cleansing

**Recommendations**  
These recommendations are based on the best available clinical evidence at the time of the conduct of this review. However, there is an urgent need to support these findings with rigorous research as some of the conclusions are based on single studies with a limited sample size.

**Information Source**  
This Best Practice information sheet, which updates and supersedes the JBI information sheet of the same title published in 2003, has been derived from a systematic review conducted in 2004.<sup>1,2</sup> The primary references on which this information sheet is based are available in the systematic review report available from The Joanna Briggs Institute<sup>1</sup> [www.joannabriggs.edu.au](http://www.joannabriggs.edu.au)

**Solutions**  
Fourteen RCTs were eligible for inclusion of which four trials involved patients with lacerations, one trial each involved patients with traumatic wounds, open fractures or ulcers, and seven studies involved patients in the postoperative period. The studies evaluated patients in hospital emergency departments, wards and community settings. No trials were identified that used EUSol, hydrogen peroxide or chlorhexidine solutions.

**Tap water vs No cleansing**  
**Infection (n=5 trials)**  
Pooling the results of the five trials undertaken on postoperative patients showed no statistically significant difference in the infection rate between wounds that were cleansed with tap water compared with those not cleansed (OR 0.80; 95% CI 0.29-2.3).

**Grades of Recommendation**  
These Grades of Recommendation have been based upon the JBI developed Grades of Effectiveness.<sup>3</sup>

<b>Grade A</b>	Effectiveness established to a degree that merits application
<b>Grade B</b>	Effectiveness established to a degree that suggests application
<b>Grade C</b>	Effectiveness established to a degree that warrants consideration of applying the findings
<b>Grade D</b>	Effectiveness established to a limited degree
<b>Grade E</b>	Effectiveness not established

Solutions and pressure in wound cleansing Best Practice 10(2) 2006 | 1

## EVIDENCE-BASED CARE SHEET

### Fall Prevention in Hospitalized Patients

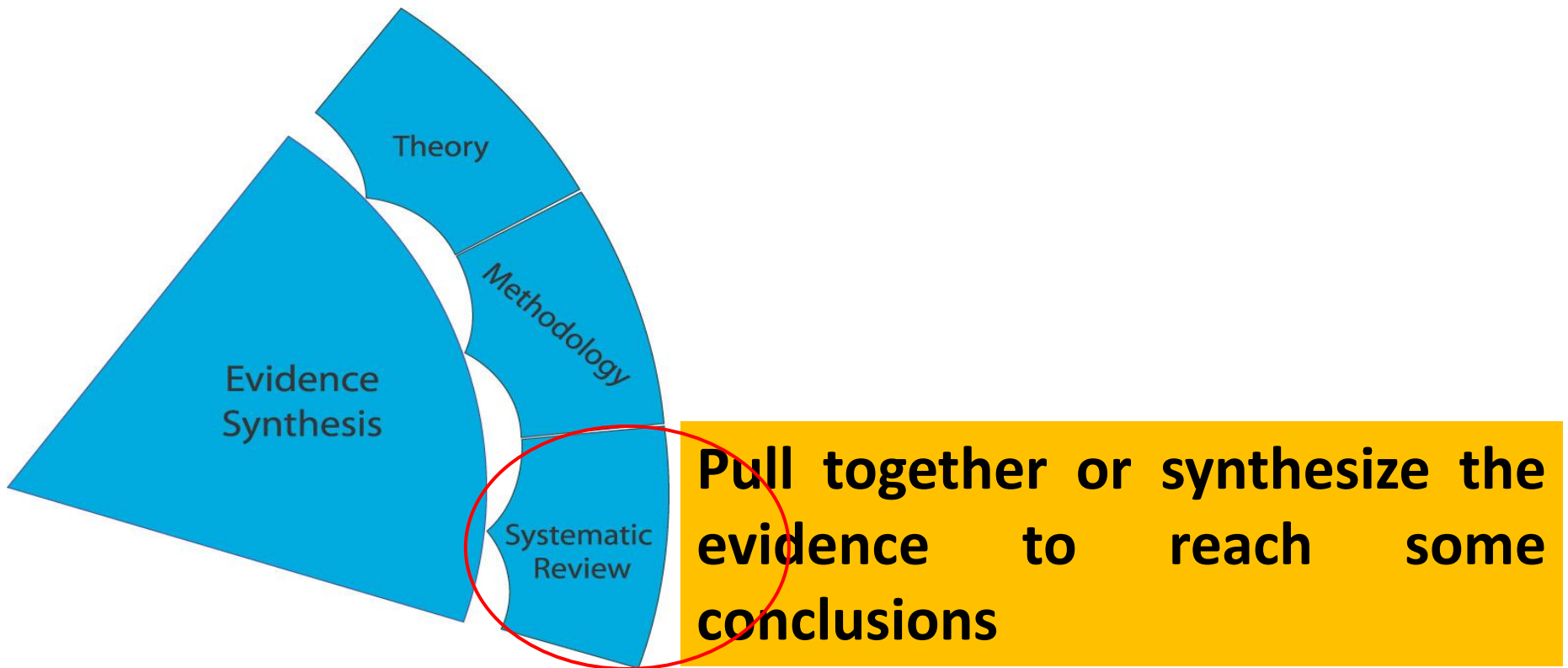
#### What We Know

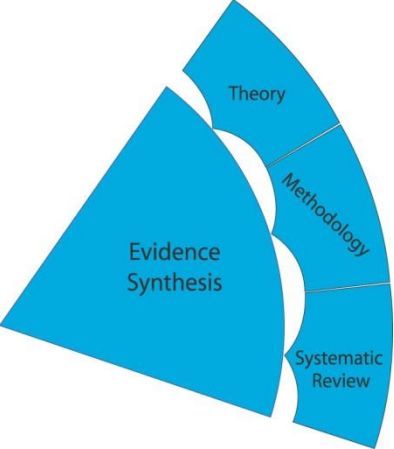
- Up to 12% of hospitalized patients fall at least once during their hospital stay; falls can lengthen hospital stays and result in poor quality of life, increased costs, admission to a long-term care facility, serious physical injuries, and death.<sup>(1,3,4,5)</sup>
  - Falls are the most common adverse events reported in hospitals in the United States.<sup>(6)</sup>
  - Inpatient falls lead to injury in up to 33% of cases and serious injury in up to 6%.<sup>(3,5,7)</sup>
- The causes of inpatient falls are multifactorial. Patients with multiple risk factors are at increased risk of falling.<sup>(1,3,4,5,11,12)</sup>
  - Risk factors for falling can be classified as intrinsic (e.g., older age, balance disorders, history of falls, decreased vision, altered cognitive status, or history of arthritis, heart attack, stroke, postural blood pressure changes, syncope, dizziness, or chronic lung disease), extrinsic (e.g., polypharmacy and use of certain medications known to increase fall risk [e.g., benzodiazepines, sedatives, neuroleptics, antidepressants, anticonvulsants, class I antiarrhythmics, and diuretics]), and environmental (e.g., inadequate lighting, slippery floors, lack of handrails, and inadequate nurse/patient staffing ratios).<sup>(1,3,4,5,6,7,10,11,12)</sup> (For more information, see *Evidence-Based Care Sheet ... Falls, Accidental Risk Assessment*)

—In a study of 124 patient units in 11 hospitals, investigators found that missed nursing care (e.g., failure to provide routine patient care related to ambulation, toilet assistance, patient assessment, responding to a call light) is associated with increased risk of patient falls and use lists the nursing association between staff

# Evidence synthesis

## Systematic Review





# Evidence synthesis

## Systematic Review

1. The synthesis of evidence of **effects**
2. The synthesis of **qualitative** evidence
3. The synthesis of **text and opinion**
4. The synthesis of **economic** evidence
5. The synthesis of evidence related to **descriptive studies** without comparators
6. The synthesis of evidence related to **prognosis**
7. The synthesis of evidence related to **diagnosis**
8. The synthesis of the findings from **surveys**
9. Methodology for **Mixed method** reviews
10. Methodology for **Umbrella/Overview reviews**
11. **Scoping** reviews



THE UNIVERSITY  
of ADELAIDE



The JOANNA BRIGGS  
INSTITUTE



The Joanna Briggs Institute  
Reviewers' Manual 2014

Methodology for JBI Mixed Methods  
Systematic Reviews

## A Mixed Methods Approach to Evidence Synthesis

<Lippincott, Williams and Wilkins publication blurb>

*Alan Pearson*

*Heath White*

*Fiona Bath-Hextall*

*Susan Salmond*

*Joao Apostolo*

*Pamela Kirkpatrick*

*Craig Lockwood*

- Combines both quantitative and qualitative findings and addresses multiple forms of evidence
- Regarding feasibility, appropriateness, meaningfulness, and effectiveness.
- Separate analyses and synthesis are performed on the corresponding data.



# Systematic Review

- Also called “Research Synthesis”
- Is an attempt to integrate empirical data for the purpose of:
  - uncovering the international evidence and
  - producing statements about **that evidence to guide decision making**
- Requires explicit and exhaustive reporting of the methods used in synthesis

# Systematic Review

- The notion of and methods for establishing credibility in systematic reviews has been extensively developed and debated
- **In terms of quantitative evidence:**
  - Emphasis on *reducing bias* and increasing *validity*
  - Degree of *credibility* established through critique and by applying *levels of evidence (quantitative design)*
- **In terms of qualitative evidence:**
  - Emphasis on *rigour of research design and transferability*
- Degree of *credibility* established through critique and by applying *levels of credibility ( Findings are: Unequivocal, Credible, Not Supported)*

# Meta-analysis or narrative

- Quantitative evidence
  - Questions of **Effectiveness**, Feasibility and/or Appropriateness
- Use of **statistical methods to combine** the results of various independent, similar studies
- More precise calculation of **one estimate of treatment effect** than **could be achieved** by **any of the individual**, contributing studies
- Only forms **a part** of the systematic review in which it appears

# Meta-synthesis

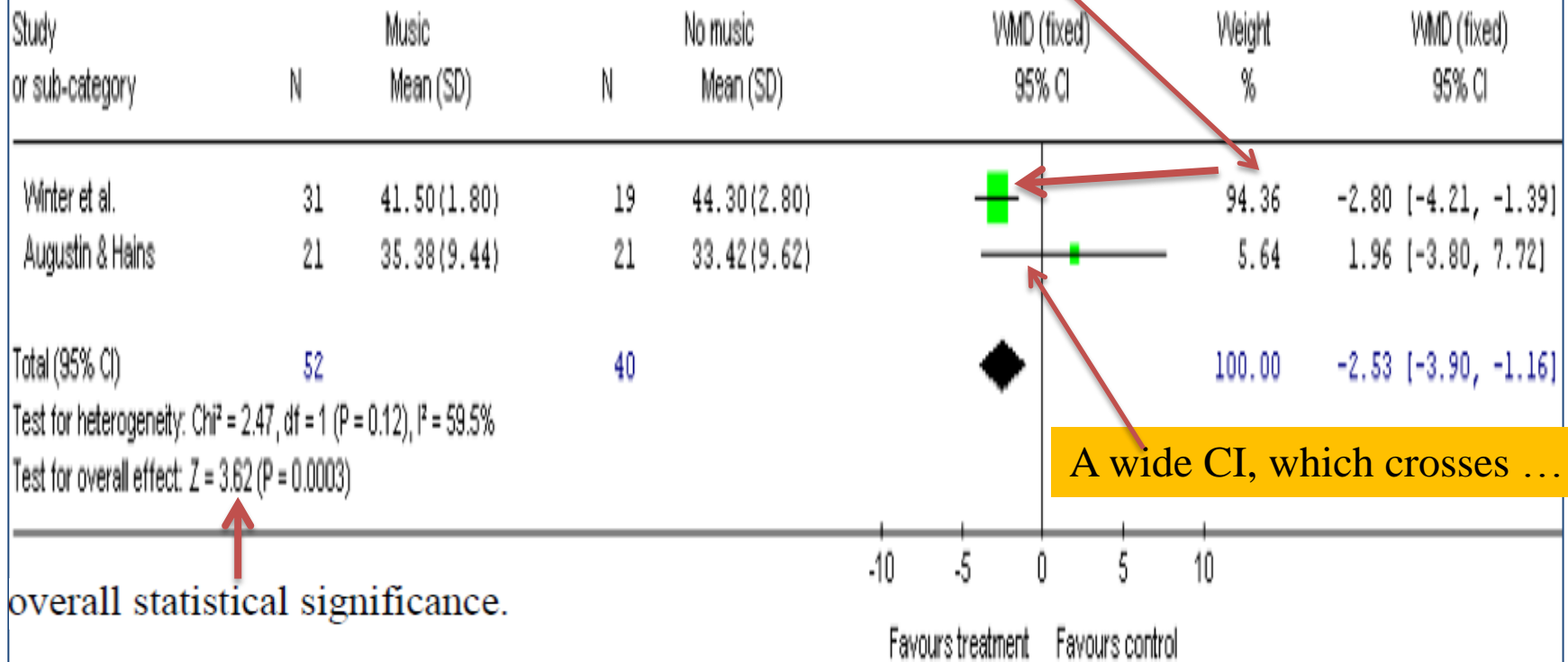
- Qualitative evidence
  - Questions of Meaningfulness, Feasibility and/or Appropriateness
- Qualitative analysis of a number of independent qualitative research studies and text
- Use of qualitative methods of combining the findings of individual studies
- Only forms a part of the systematic review in which it appears

# Quantitative RESULTS

- Single studies rarely, if ever, provide **definitive conclusions** regarding the effectiveness of an intervention
  - Narrative systematic review
  - Meta-analysis

Each study being allocated a weighted percentage. This can depend on the number of participants, the number of events, and the level of variance

Review: The effect of music on arousal  
 Comparison: 01 Music Vs No music  
 Outcome: 01 STAI - State Trait Anxiety Inventory



A wide CI, which crosses ...

# Heterogeneity

Three types of heterogeneity:

- Clinical heterogeneity
  - differences between studies in the characteristics of their **populations, interventions and outcomes**
- Methodological heterogeneity
  - differences between **studies in their study designs and quality**
- Statistical heterogeneity
  - variation of **effects between studies**



# I<sup>2</sup> Index

Suggestion:

- consider as low I<sup>2</sup> values of 25%,
- moderate I<sup>2</sup> values of 50%, and
- high heterogeneity I<sup>2</sup> values of 75% (Higgins et al 2003)

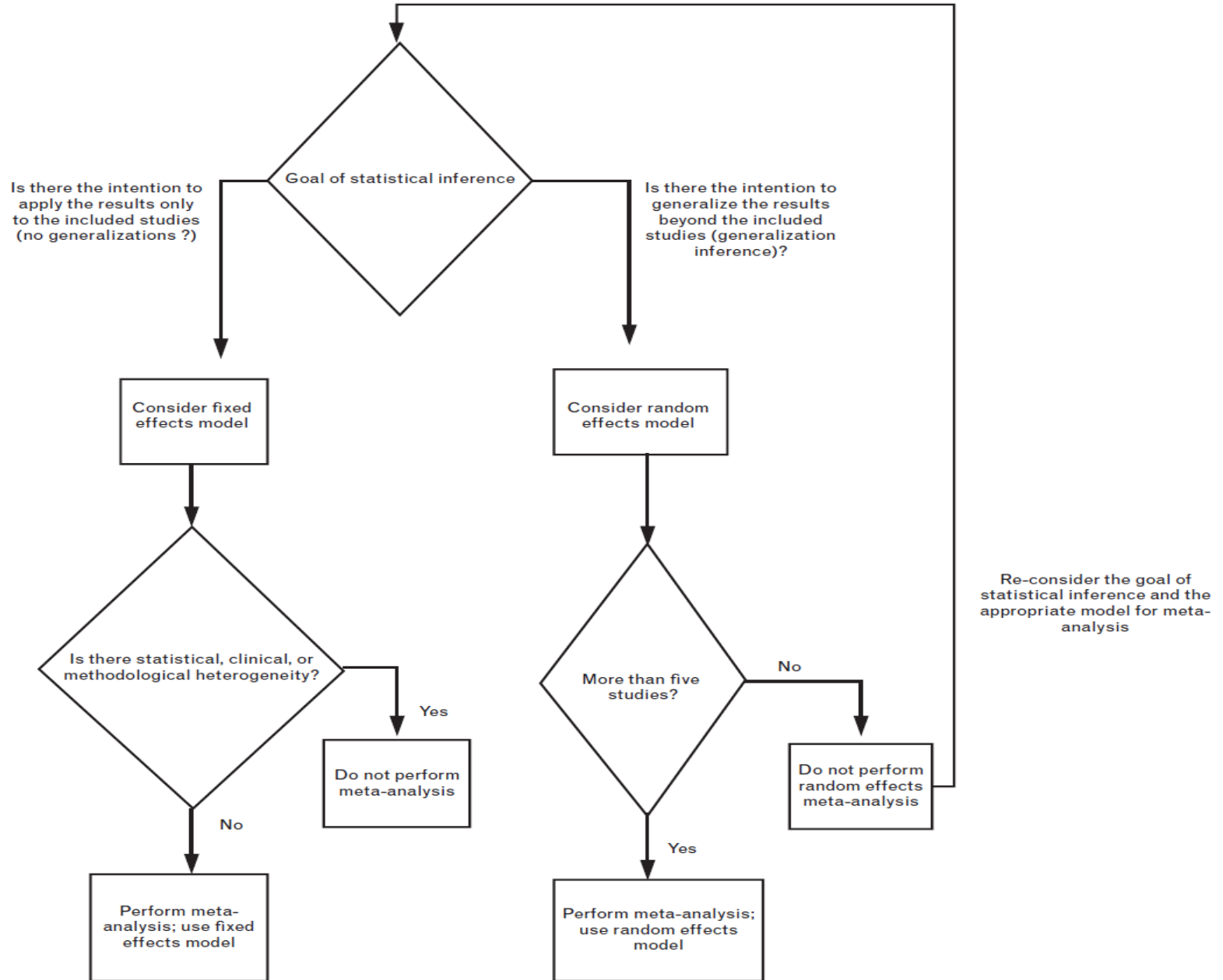
$$I^2 = \left( \frac{Q - df}{Q} \right) \times 100\%$$

# I<sup>2</sup> Index

- With a small number of studies (< 20) and/or average sample size (N <80) the statistical power for I<sup>2</sup> procedure is less than the recommended value of 80% (Huedo-Medina et al 2006).
- With a small number of studies (< 20), the interval around I<sup>2</sup> should be interpreted very cautiously (Huedo-Medina et al 2006).

# New Guidance Effectiveness Reviews: MA Statistical Models

(Tufanaru et al 2015, *International Journal of Evidence-Based Healthcare*)



# Qualitative RESULTS

## Meta-synthesis –

- Assemble conclusions;
- Categorise these conclusions into groups on the basis of similarity in meaning;
- Aggregate these to generate a set of statements
- These statements are referred to as synthesized findings –
- Can be used as a basis for evidence based practice

# METASYNTHESIS OF QUALITATIVE RESEARCH STUDIES



**META ETHNOGRAPHY**

**QARI  
METAGGREGATION**

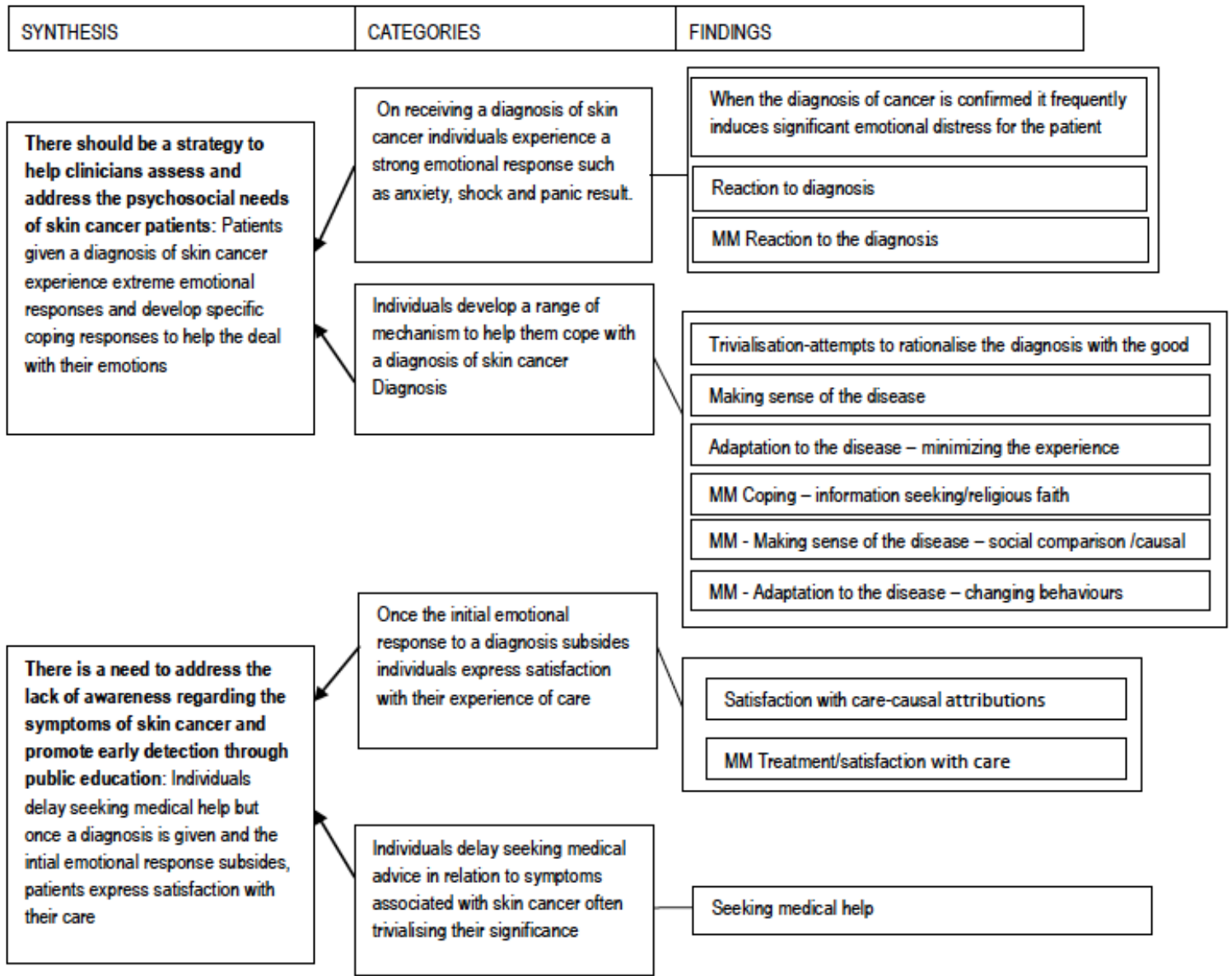
*FIRST ORDER ANALYSIS* ⇐

*SECOND ORDER INTERPRETATION* ⇐

⇒ *STEP 2: CATEGORIES*

*THIRD ORDER INTERPRETATION* ⇐

⇒ *STEP 3: SYNTHESISED FINDINGS*



# Joanna Briggs Collaboration

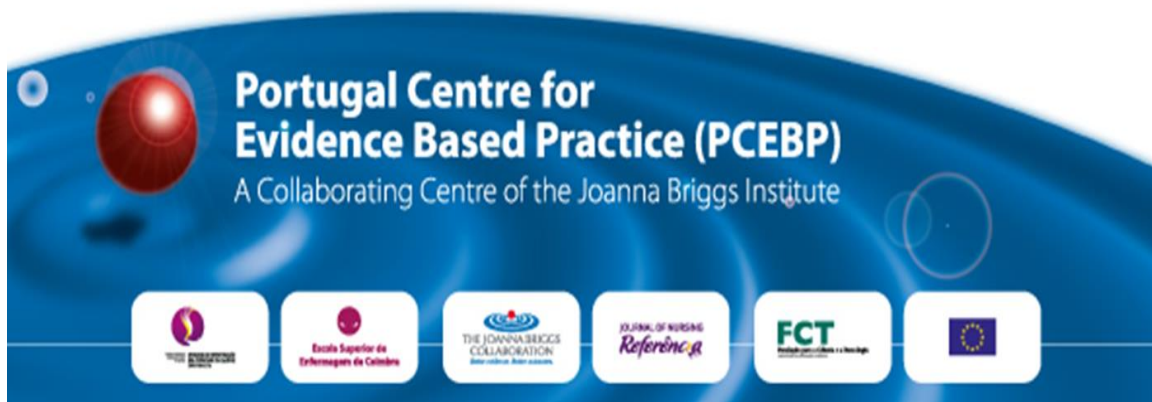
Home / [Joanna Briggs Co](#)



3) How SR can be used to develop competencies of the staff

- how we use it in my institution
- experience that competencies have developed

4) PCEBP personal experience on developing SR



- Seminars
- SRTP Programs
- Published SRL and ongoing protocols  
(Effect; Scoping; Comprehensive/Mixed Methods; Umbrella)



# S RTP Programs



- Seminars:
- professors/hospital staff
- improving teaching/quality of care; PhD program



# Examples of titles

- Effectiveness of haloperidol prophylaxis in critically ill patients with a high risk for delirium: a systematic review of quantitative evidence.
- Effectiveness of the use of bedrails in preventing falls among hospitalized older adults: systematic review protocol
- Effectiveness of heparin versus 0.9% saline flushing to maintain patency of central venous catheters in adults: a systematic review protocol of quantitative evidence.
- The use of non-pharmacological nursing interventions on the comfort of cancer patients: A comprehensive systematic review
- The use of non-pharmacological nursing interventions on the comfort of cancer patients: A comprehensive systematic review



Tusind tak



Questions?????

# Economic Evidence

## Methods, measures, benefits

Types of studies	Costs or measures	Benefits or Consequence measures	Comments
Cost Minimization Analysis (CMA)	Costs measured in monetary units (e.g.. Dollars)	Not measured	CMA is not a form of full economic analysis, the assumption is that benefits or consequences are the same, therefore the preferred option is the cheapest
Cost Effectiveness Analysis (CEA)	Costs measured in monetary units (e.g.. Dollars)	Benefits measured in natural units (e.g.. mmHg, cholesterol levels, symptom free days, years of life saved)	Results are expressed as dollars per case or per injury averted. Different incremental summary economic measures are reported (e.g.. Incremental cost-effectiveness ratio)
Cost Utility Analysis (CUA)	Costs measured in monetary units (e.g.. Dollars)	Benefits expressed in summary measures as combined quantity and quality measures (e.g.. QALY, DALY etc)	Two dimensions of effects measured (quality and length of life); results are expressed for example as cost per QALY
Cost Benefit Analysis (CBA)	Costs measured in monetary units (e.g.. Dollars)	Benefits measured in monetary units (e.g.. Dollars)	Benefits are difficult to measure monetarily, values used are Net Present Value (NPV) and Benefit Cost Ratio (BCR)

# Resultados de estudos económicos

Relativo ao custo

Relativo à eficácia clínica

Cost	Studies	No. of Studies	Clinical effectiveness	Decision
+	[Redacted]	[Redacted]	-	} Don't use
0			-	
+			0	
-	[Redacted]	[Redacted]	-	} Further analysis required Neutral
0			0	
+			1,3,5	
-	[Redacted]	[Redacted]	0	} Use
0			+	
-			2,6	

Não usar a intervenção

Necessária mais investigação

Usar a intervenção

Identificação dos estudos

Número de estudos



# Best Practice

Evidence-based information sheets for health professionals

The effectiveness of group visits for patients with heart failure on knowledge, quality of life, self-care, and hospitalizations

O que tem que ter uma recomendação

## Recommendations\*

- For patients with heart failure, clinicians could use group visits as a method of providing patient centered care that allows the clinician to see a large number of patients in a short time period while providing education and health management. **(Grade B)**

\*For a definition of JBI's 'Grades of Recommendation' please see the last page of this sheet

A população ( idade, sexo, condição clínica...)

Intervenção

## International rule!

Acta joined the ICMJE and EQUATOR network initiatives to improve presentation of study results, not only to an increase in potential publication but also for international dissemination of articles.

Therefore, the following international guides must be used:

\*Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups (published in the Int. Journal for Quality in Health Care, 2007).

<b>Studies or trials</b>	<b>Statements</b>
<u>Randomized clinical trial</u>	<u>CONSORT</u>
<u>Systematic reviews and meta-analyzes</u>	<u>PRISMA</u>
<u>Observational studies in epidemiology</u>	<u>STROBE</u>
<u>Qualitative studies</u>	<u>COREQ*</u>



# Revisão Sistemática segundo a abordagem JBI

- [Registrar título](#)
- [Protocolo e sua submissão](#)
- Realização da revisão com recurso ao JBI-SUMARI
- [Submissão do relatório final da revisão.](#)
- [PDF](#)



# JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses

Reviewer \_\_\_\_\_ Date \_\_\_\_\_  
 Author \_\_\_\_\_ Year \_\_\_\_\_ Record Number \_\_\_\_\_

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the likelihood of publication bias assessed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall appraisal:	Include <input type="checkbox"/>	Exclude <input type="checkbox"/>	Seek further info <input type="checkbox"/>	

---



---

# Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement

**Table 1. Checklist of Items to Include When Reporting a Systematic Review or Meta-Analysis**

Section/Topic	Item #	Checklist Item	Reported on Page #
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
<b>METHODS</b>			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I <sup>2</sup> ) for each meta-analysis.	
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
<b>RESULTS</b>			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	



**Table 2. Substantive Specific Changes Between the QUOROM Checklist and the PRISMA Checklist\***

Section/Topic	Item	QUOROM	PRISMA	Comment
Abstract		√	√	QUOROM and PRISMA ask authors to report an abstract. However, PRISMA is not specific about format.
Introduction	Objective		√	This new item (4) addresses the explicit question the review addresses using the PICO reporting system (which describes the participants, interventions, comparisons, and outcome[s] of the systematic review), together with the specification of the type of study design (PICOS); the item is linked to Items 6, 11, and 18 of the checklist.
Methods	Protocol		√	This new item (5) asks authors to report whether the review has a protocol and if so how it can be accessed.
Methods	Search	√	√	Although reporting the search is present in both QUOROM and PRISMA checklists, PRISMA asks authors to provide a full description of at least one electronic search strategy (Item 8). Without such information it is impossible to repeat the authors' search.
Methods	Assessment of risk of bias in included studies	√	√	Renamed from "quality assessment" in QUOROM. This item (12) is linked with reporting this information in the results (Item 19). The new concept of "outcome-level" assessment has been introduced.
Methods	Assessment of risk of bias across studies		√	This new item (15) asks authors to describe any assessments of risk of bias in the review, such as selective reporting within the included studies. This item is linked with reporting this information in the results (Item 22).
Discussion		√	√	Although both QUOROM and PRISMA checklists address the discussion section, PRISMA devotes three items (24–26) to the discussion. In PRISMA the main types of limitations are explicitly stated and their discussion required.
Funding			√	This new item (27) asks authors to provide information on any sources of funding for the systematic review.

\* A tick indicates the presence of the topic in QUOROM or PRISMA.

# Verificar se há revisões que tenham sintetizado a evidência

- Any entity considering doing a JBI review should first **check there are no existing systematic reviews on the topic** (e.g. check JBI, Cochrane, Medline and CRD as a minimum);

UNIVERSITY *of York*  
Centre for Reviews and Dissemination

- check that there are **no existing protocols on the topic** (e.g. check JBI, Cochrane and PROSPERO as a minimum);
- and check the **Title Registration Page** to ensure the title has not been registered by another entity in the preceding 6 months.

# UNIVERSITY of York

## Centre for Reviews and Dissemination

Home > Search PROSPERO

Home

Register a review

My PROSPERO records

My details

**Search PROSPERO**

Search PROSPERO

About PROSPERO

Inclusion criteria

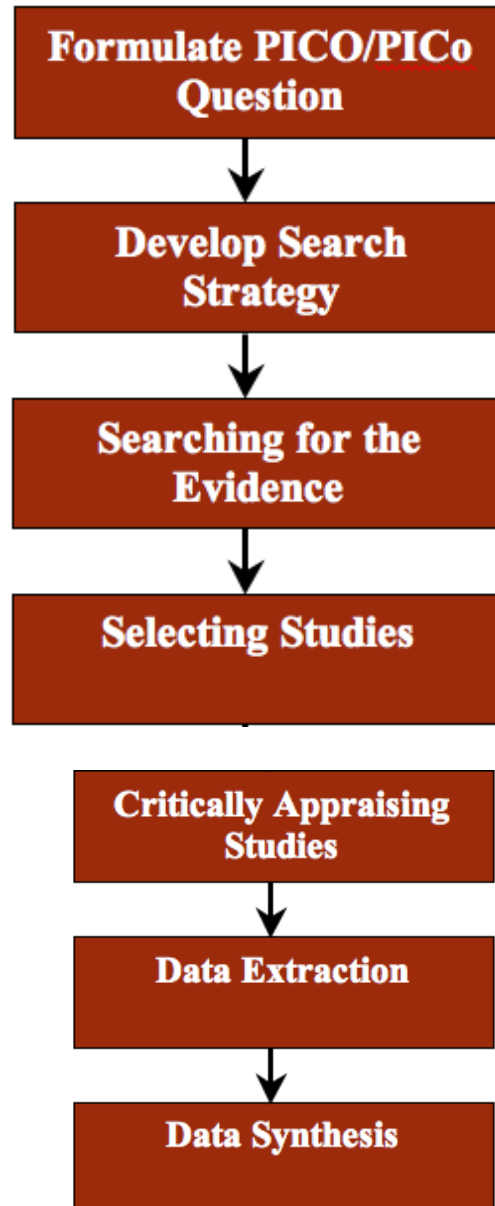
### Search

Combine these selections with

AND

<input type="text"/>	in	All fields
<input type="text"/>	in	Review title
<input type="text"/>	in	Review question
<input type="text"/>	in	Condition/Domain
<input type="text"/>	in	Participants/Population

# The JBI SRL





**S**UMARI

CReMS

**Q**ARI

**M**ASTARI

**N**OTARI

**A**CTUARI

# The JBI Software



System for the  
Unified  
Management,  
Assessment and  
Review of  
Information

JBI CReMS - JBI Comprehensive Review Management System

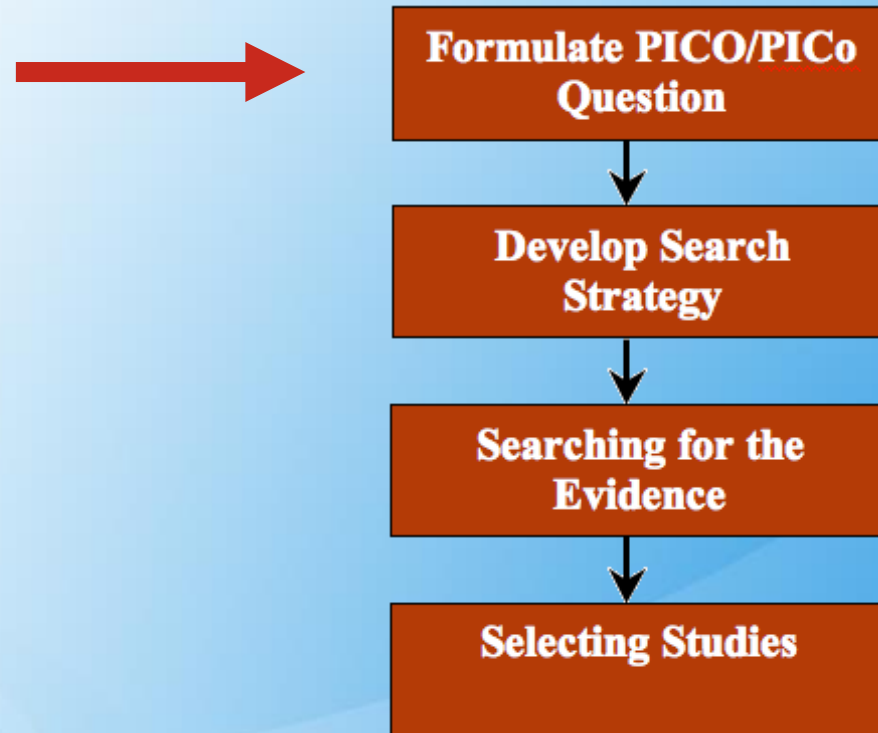
JBI QARI - JBI Qualitative Assessment and Review Instrument

JBI NOTARI - JBI Narrative, Opinion and Text Assessment and Review Instrument

JBI MASTARI - JBI Meta Analysis of Statistics Assessment and Review Instrument

JBI ACTUARI - JBI Analysis of Cost, Technology and Utilisation Assessment and Review Instrument.

# Developing a Review question and inclusion criteria



# Question Development

- Aim is to inform readers of the nature and detail of the review, and to provide guidance to the development of review criteria
- A good question supports the review, a poor question risks confounding the review
- A good question responds to identified priorities and needs

# Question Development

- Reviews of effects & economics:
  - **P**opulation
  - **I**ntervention
  - **C**omparator
  - **O**utcome
- Reviews of qualitative & Textual data:
  - **P**opulation
  - Phenomena of **I**nterest
  - **C**ontext

Scoping: PCC (Population, Concept, Context)

# Questions of the effects of interventions

- Population:
  - The most important characteristics, including:
    - demographic factors of the population (e.g. age, gender, ethnicity)
    - socioeconomic factors
    - the setting (e.g. hospital, community etc)

# Questions of the effects of interventions

- Intervention and Comparator
  - **Primary intervention** of interest (treatment group)
  - **Comparator** (control group)
    - **Passive** (placebo, no treatment, standard care, or a waiting list control)
    - **Active** (variation of the intervention, a drug, or kind of therapy)



# Questions of the effects of interventions

- **Outcomes**

- Identify the **primary** outcome/s in order to reach a clinically relevant conclusion
- **Secondary** outcomes may be required
- Outcomes: (e.g. mortality; strokes or myocardial infarction; symptoms; quality of life; demands on caregivers; restrictions on lifestyle; cost and resource use...)
- 
- Consider how outcomes may be measured: (e.g. blood pressure, number of strokes; disability scales...).

# Example: Question of the effects

- Are antiseptic washes more effective than non-antiseptic washes at preventing nosocomial infections in patients undergoing surgery?

# Example: Question of the effects

Intervention

Active  
Comparison

- Are **antiseptic washes** more effective than **non-antiseptic washes** at preventing **nosocomial infections** in **patients undergoing surgery**?

Outcome

Population

# Example Qualitative

- What are caregivers experiences of providing home-based care to persons with HIV/AIDS in Africa?

# Example Qualitative

Population

Phenomena of  
interest

- What are **caregivers** experiences of providing home-based care to persons with HIV/AIDS in **Africa**?

Context

# Example Scoping

- What non-pharmacological interventions have been implemented and evaluated to provide comfort in patients with incurable and advanced disease in palliative care?

PCC (Population, Concept, Context)

# Example Scoping

## Population

-Patients with 18 years of age or older, assisted by palliative care teams.

## Concept

-Non-pharmacological interventions implemented and evaluated in palliative care, to provide comfort.

## Context

-Palliative Care. This will include, exclusively, home care, hospices or palliative care units.

Make some stronger statements explaining the rationale for the scoping review in more concrete terms. This is one of the hardest things about scoping reviews

Scoping reviews don't have immediately obvious value unless it's clearly stated.

This is where topic expertise comes.

- State what the scoping review will achieve by mapping the evidence in a certain way

What are the 'big questions' in field of non-pharmacological interventions for the care of patients in palliative care?

It appears that this review is intended as a basis for a future potential systematic review, so what evidence needs to be examined and mapped to provide directions for this review?

What is it about the state of the evidence that means that a review of effectiveness or experience cannot/should not be undertaken yet? Is the evidence disparate?

(e.g. includes a diverse and heterogeneous mix of interventions/populations/approaches/terminology etc) so moving straight to a systematic review would be hard.

Or are there important questions about the nature of the evidence that need to be answered before a precise question of effectiveness can be pitched?

– it's easy to say why a systematic review of effectiveness is useful and necessary – they tell us what the most effective intervention is.

Having this objective stated up front in the protocol will help your team immensely when it comes to selecting studies, extracting data, and mapping the evidence and explaining what it means



# PICO / PICo / PCC

- Constructing a well-built clinical question is a fundamental skill
- Divide your question following the **PICO/PICo/PCC** model
- The question **operationalizes the review** by forming the basis for inclusion and exclusion criteria

# Aim

## **The effectiveness of cleansing solutions for wound treatment: a systematic review**

Paulo Queirós, RN, PhD<sup>1</sup>

Eduardo Santos, RN<sup>1</sup>

João Apóstolo, RN, PhD<sup>1</sup>

Daniela Cardoso, RN<sup>1</sup>

Madalena Cunha, RN, PhD<sup>2</sup>

Manuel Rodrigues, RN, PhD, Aggregation<sup>1</sup>

**EX:** The objective of this review is to identify and synthesize the best available evidence on the effectiveness of cleansing solutions for wound treatment in clinical practice.

# Review Questions

EX: More specifically, the review focuses on the following questions:

- Does the effectiveness of different cleansing solutions influence infection and wound healing rates?
- Which cleansing solution is more effective for reducing wound infection rates?
- Which cleansing solution is more effective for increasing wound healing rates?
- Is the effectiveness of cleansing solutions affected by wound aetiology?

# *Group Work 1*

- Write a PICO question
- Reporting back

# Protocol (RS)

- Background
- Objectivos
- Questão de Revisão
- Critérios para considerar estudos para a revisão
  - Tipo de participantes
  - Tipo de intervenções
  - Tipo de medidas de resultados
  - Tipo de estudos
- Estratégia de pesquisa
- Métodos da revisão
  - Avaliação da qualidade metodológica
  - Extracção de dados
  - Síntese dos dados
- Referências

# Background (RS)

## Questions to consider:

- Does the background cover all the population, phenomenon of interest and the context for the systematic review (PICO)?
- Are operational definitions provided?
- Are the inclusion criteria putted into context?
- Do systematic reviews already exist on the topic?
- Why is this review important?

# Background (RS)

- Justify the conduct of the review
- Approximately 1000 words
- The background section should conclude with **a statement that:**
  - A preliminary search for existing systematic reviews on the topic have been conducted (state the databases searched e.g. JBI Library, Cochrane Library, CINAHL, PubMed, PROSPERO where relevant).
  - If there is an existing systematic review, it should be specified how the proposed review will differ.



## ***Inclusion/Exclusion criteria***

The protocol describes the criteria that will be used to select the literature. It is important to be precise in defining the inclusion criteria, as the reader of the review report needs to know the focus and limitations of the review. Inclusion criteria address:

- The types of studies to be included (for example, randomized controlled trials, pseudo-randomized controlled trials; or interpretive studies);
- The intervention, activity or phenomenon of interest (and, in an effectiveness review, a comparator);
- The outcome(s) of interest;
- The specific study population(s);
- Language of publication (for example, English only; or English, German, Spanish and Japanese, etc);
- The time period (for example, study reports published or made available 2000–2011)

The exclusion criteria should either be explicitly stated or inherently apparent in the inclusion criteria.

Exemple - The effectiveness of cleansing solutions for wound treatment in clinical practice

<http://joannabriggslibrary.org/index.php/jbisr/article/view/527/1227>



Version 5.0

The Joanna Briggs Institute

# CReMS

Comprehensive Review Management System

CReMS is a module of the SUMMARI software package



copyright © 2004 The Joanna Briggs Institute

THE JOANNA BRIGGS INSTITUTE™

Displaying welcome screen...

# CReMS

The screenshot shows the CReMS software interface. The title bar reads "CReMS- Version 5.0: Anti-thrombolytic drugs for the treatment and management of deep vein thrombosis: a systematic review ...". The menu bar includes "File", "Studies", "Modules", "Export", and "Help". The "Studies" menu is open, showing options like "Import Studies", "Add Study", and "Online". Below the menu bar, there are tabs for "Review Summary", "Protocol", "Studies", "Report Builder", and "Report View". The main window displays a table of citations with the following columns: System ID, Author(s), Year, Title, Journal, Volume, Issue, Page(s), Qari, Notari, Mastari, Actuari, Reference, and Delete. The table contains five rows of citation data.

# of Citations: 5

System ID	Author(s)	Year	Title	Journal	Volume	Issue	Page(s)	Qari	Notari	Mastari	Actuari	Reference	Delete
43323	Cooke, H.	2006	Organiz...				166	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43325	Martin, ...	2004	Evaluati...	Alzheim...	5	3	217-229	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43327	Nobili, ...	2004	The effe...	Alzheim...	18	2	75-82	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43328	Norton, ...	2010	Predicto...	Aging M...	14	3	303-9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43330	Raglio, ...	2008	Efficacy ...	Alzheim...	22	2	158-62	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Guardar referências no Endnote em formato “author-date” e em xml.
- Importar os estudos (REF.)

## The effectiveness of monophasic cardioversion compared with biphasic cardioversion in reverting ventricular tachycardia in adults

Zuben Florence RN BN GradDipNsc<sup>1</sup> and Craig Lockwood <sup>2</sup>

<sup>1</sup>Research Fellow, The Joanna Briggs Institute. Contact: 08 8303 6480

<sup>2</sup> JBI Research Unit. Contact: craig.lockwood@adelaide.edu.au 33642

### Executive summary

### Background

Transient delivery of electrical current causes a momentary depolarization of most cardiac cells. This allows the sinus node to resume normal pacemaker activity. In the presence of reentrant-induced dysrhythmia, such as paroxysmal supraventricular tachycardia (PSVT) and ventricular tachycardia (VT), electrical cardioversion interrupts the self-perpetuating circuit and restores a sinus rhythm. Electrical cardioversion is much less effective in treating arrhythmia caused by increased automaticity (eg, digitalis-induced tachycardia, catecholamine-induced arrhythmia).

### Objectives

The overall objective of this systematic review is to determine the effectiveness of monophasic cardioversion in comparison to biphasic cardioversion in reverting ventricular tachycardia in adults

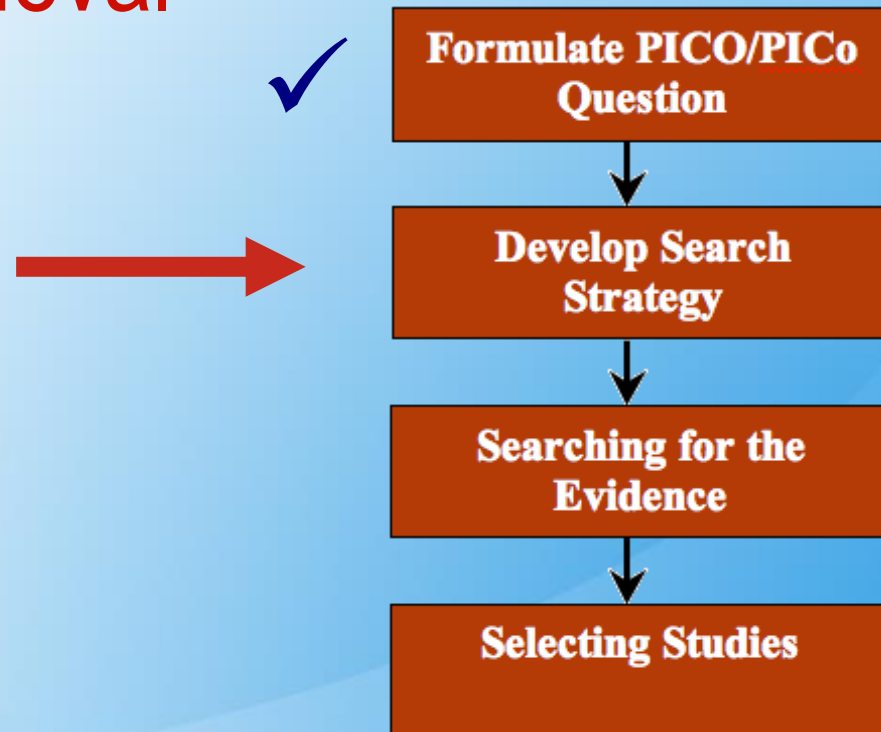
### Inclusion criteria

### *Types of participants*

This review will consider studies that include adult hospitalised patients requiring cardioversion

Virar a página

# Developing a Search Strategy: A guide to evidence based information retrieval



# Developing a search strategy is a real skill





# Search Strategy

- Features of search strategy
  - Sensitivity – ability to identify all the relevant studies
  - Specificity – ability to exclude irrelevant studies, also known as precision
- Inverse relationship between sensitivity and specificity – means that a large number of articles retrieved may not be relevant to the review question
  - High sensitivity will tend to have low specificity

# Search Strategy Steps



- Initial Search
  - initial search of MEDLINE, CINAHL, followed by analysis of text words in the title and abstract
- Second Search
  - all identified key words and index terms across all databases
- Third Search
  - references of identified studies, unpublished studies, grey literature, government and societal websites, experts etc

# Search strategy

JBI Database of Systematic Reviews & Implementation Reports

2014;12(10) 121 - 151

---

## **The effectiveness of cleansing solutions for wound treatment: a systematic review**

Paulo Queirós, RN, PhD<sup>1</sup>

Eduardo Santos, RN<sup>1</sup>

João Apóstolo, RN, PhD<sup>1</sup>

Daniela Cardoso, RN<sup>1</sup>

Madalena Cunha, RN, PhD<sup>2</sup>

Manuel Rodrigues, RN, PhD, Aggregation<sup>1</sup>

- Studies published in English, Spanish and Portuguese published from January 1990 to January 2013 were considered for inclusion in this review

# Included Databases

## For published studies

- CINAHL Plus with Full Text, MedicLatina, Academic Search Complete, MEDLINE with Full Text, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, Nursing & Allied Health Collection: Comprehensive (via EBSCO);
- LILACS;
- Elsevier - Science Direct (via b-on – Online Knowledge Library);
- Embase;
- Scopus;
- JBI Library;
- ACP online;
- BioMed Central;
- Health Technology Assessment database;
- Scielo - Scientific Electronic Library Online.

## For unpublished studies

- 'Grey Literature Report' from New York Academy of Medicine;
- Mednar;
- Scirus.com website;
- National Library of Australia's Trove service;
- ProQuest – Nursing and Allied Health Source Dissertations;
- Banco de teses da CAPES ([www.capes.gov.br](http://www.capes.gov.br));
- RCAAP – Repositório Científico de Acesso Aberto de Portugal.

## MEDLINE

Search Formula	Limiters	Results
(TI wound*) AND (AB infect* OR AB heal* OR AB clean*) AND (AB irrigat* OR AB bath* OR AB shower* OR AB water* OR AB "sodium chloride" OR AB detergent* OR AB povidone-iodine OR AB hydrotherapy OR AB chlorhexidine)	Published Date from: 19900101-20131231; Language: English, Portuguese, Spanish	789

## Scopus

Search Formula	Results
(TITLE(wound*) AND TITLE-ABS-KEY(infect* OR heal* OR clean*) AND TITLE-ABS-KEY(irrigat* OR bath* OR shower* OR water* OR "sodium chloride" OR detergent* OR povidone-iodine OR hydrotherapy OR chlorhexidine OR polihexanide)) AND SUBJAREA(mult OR agri OR bioc OR immu OR neur OR phar OR mult OR medi OR nurs OR vete OR dent OR heal) AND PUBYEAR > 1989 AND (LIMIT-TO(LANGUAGE, "English") OR LIMIT-TO(LANGUAGE, "Spanish") OR LIMIT-TO(LANGUAGE, "Portuguese"))	1840

### **'Grey Literature Report' from New York Academy of Medicine**

Search Formula	Limiters	Results
Words in the Full text wound* AND (infect* OR heal* OR clean*)	Published Date from: 1990-2013	0

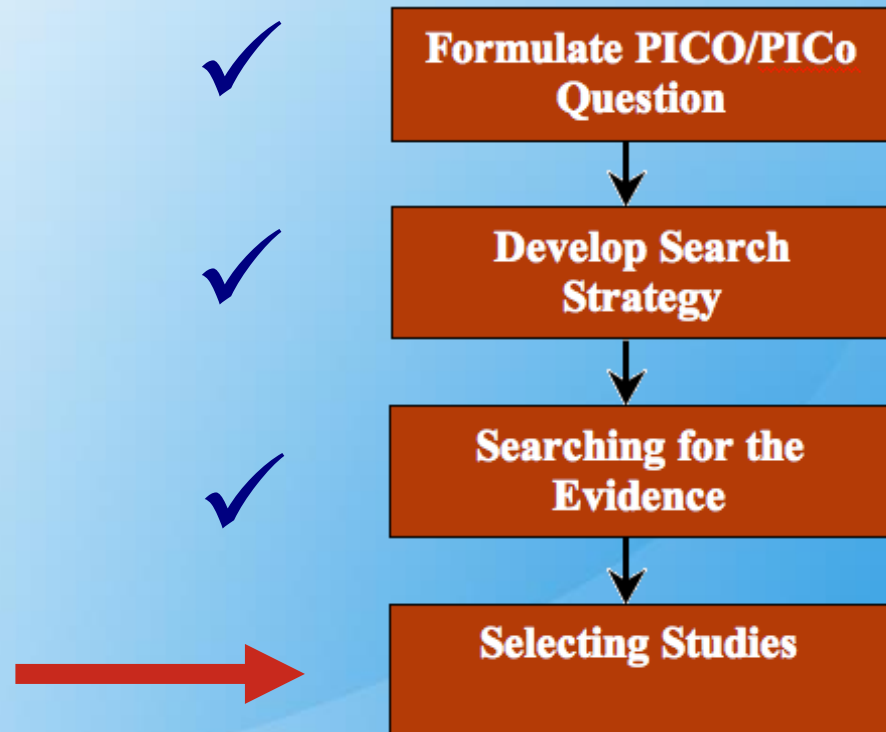
### **ACP Hospitalist**

Search Formula	Results
with all of the words » "wound cleansing"	18

### **ACP Internist**

Search Formula	Results
with all of the words » "wound cleansing"	10

# Selecting Studies





# Selection Process

- Aims to select only those studies that address the review question and that **match the inclusion** criteria documented in your protocol
- **Scan titles and abstracts**
- If uncertain? - Retrieve - **scan full text**
- The selection should be:
  - Transparent
  - Reproducible

# Example

- Is the article published in the **stated years**?
- Does the population studied **meet the criteria**?
  - E.g. adults or children or both?
- Does the study look at the **interventions** or **phenomena** stated in the research question
  - E.g. oral or I.V. administration
- Is it the correct **study design**?
  - E.g. RCT or meta-analysis

# Inclusion Criteria

<b>Participants</b>	Patients aged 18 years or more in any setting, excluding malnourished patients, and with chronic and acute wounds, excluding obstetric wounds
<b>Intervention</b>	Any cleansing or antiseptic solution or chemicals
<b>Outcome</b>	Primary outcome: infection rate Secondary outcome: healing rate
<b>Types of studies</b>	Any experimental study design, including randomized controlled trials, non-randomized controlled trials, or other quasi-experimental studies, including before and after studies.

## The effectiveness of cleansing solutions for wound treatment: a systematic review

Paulo Queirós RN PhD<sup>1</sup>

Eduardo Sanj

João Apóstol

Daniela Card

Madalena Cu

Manuel Rodri

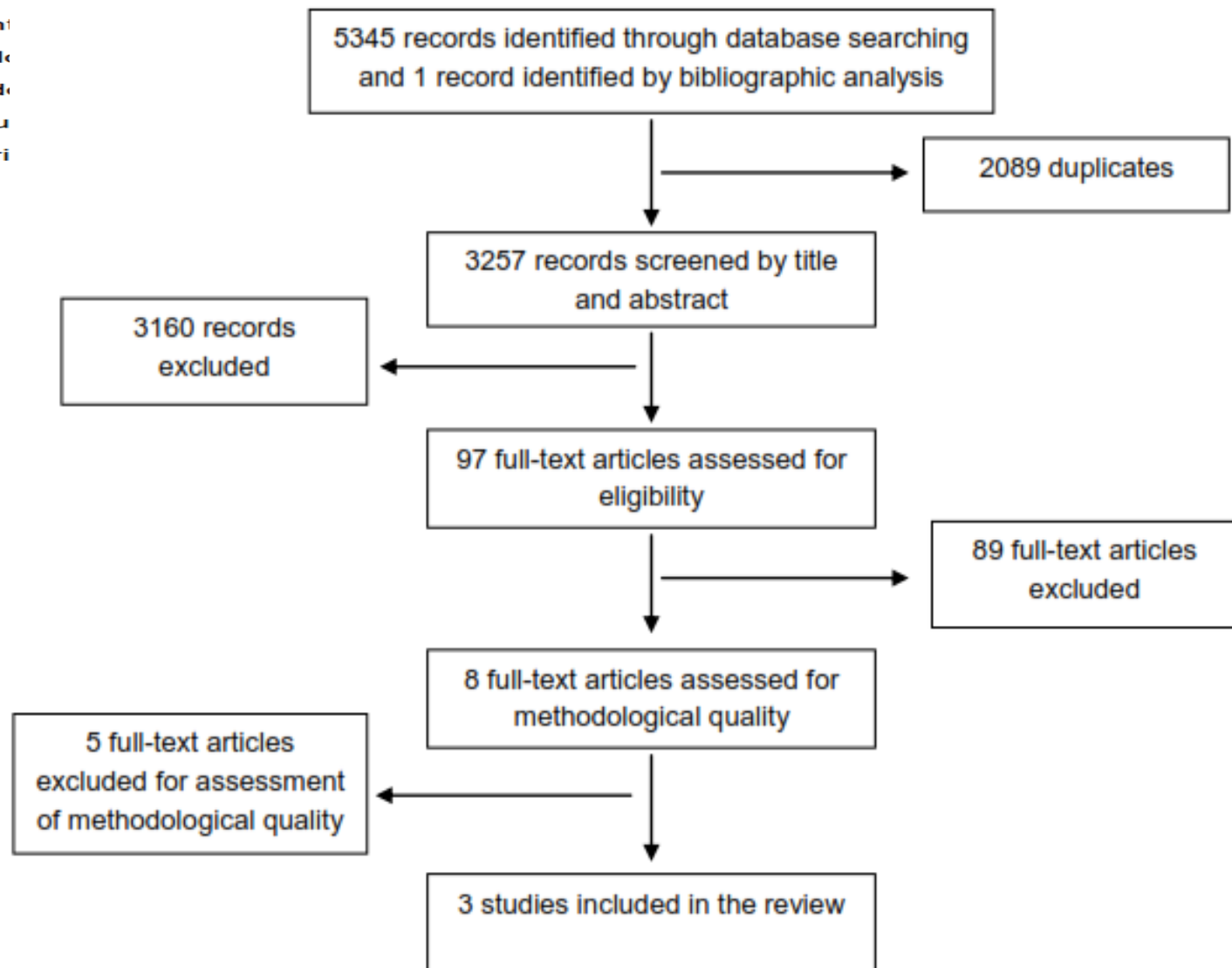
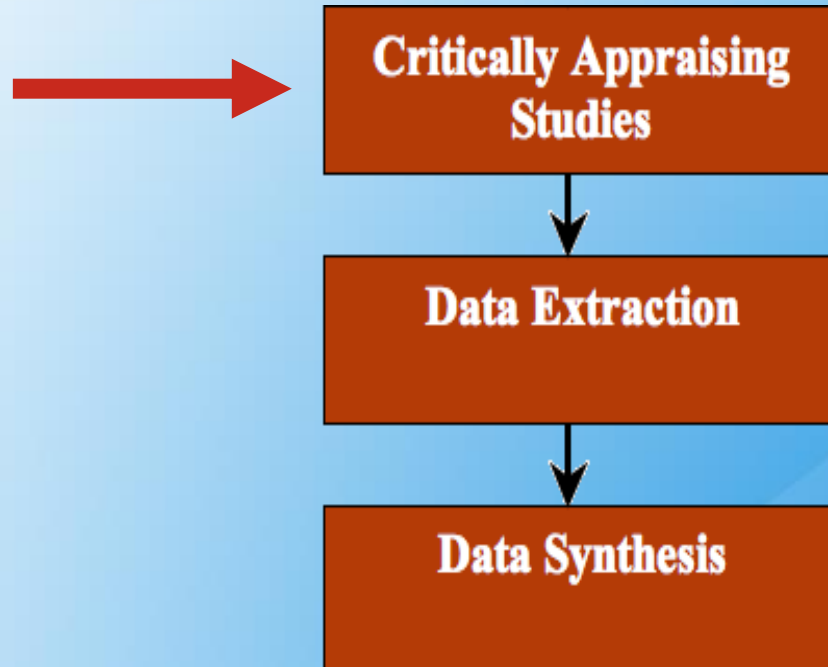
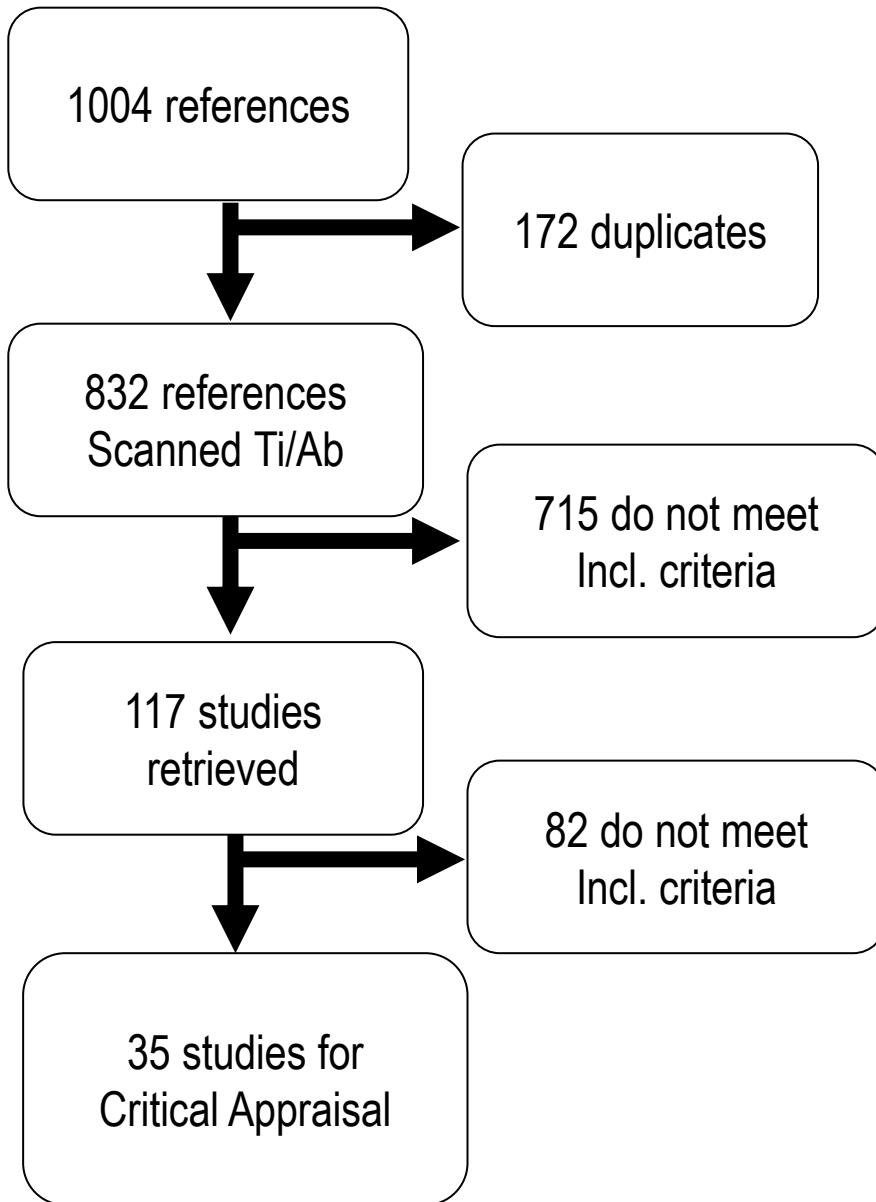


Figure 1: Flowchart for the search and study selection process

# The Critical Appraisal of Studies





# Why Critically Appraise?

- Combining results of poor quality research may lead to biased or misleading estimates of effectiveness

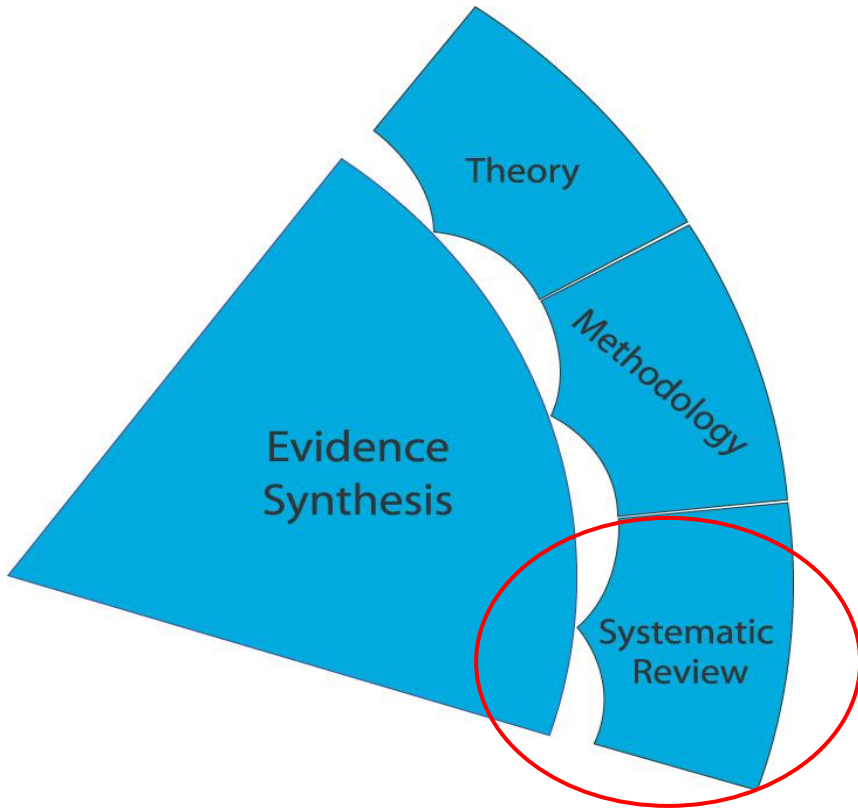
# The Aims of Critical Appraisal

- To establish validity
  - to establish the risk of bias



# Evidence synthesis

## Systematic Review



**CRITICAL  
APRAISAL**  
To establish validity  
(Quality)

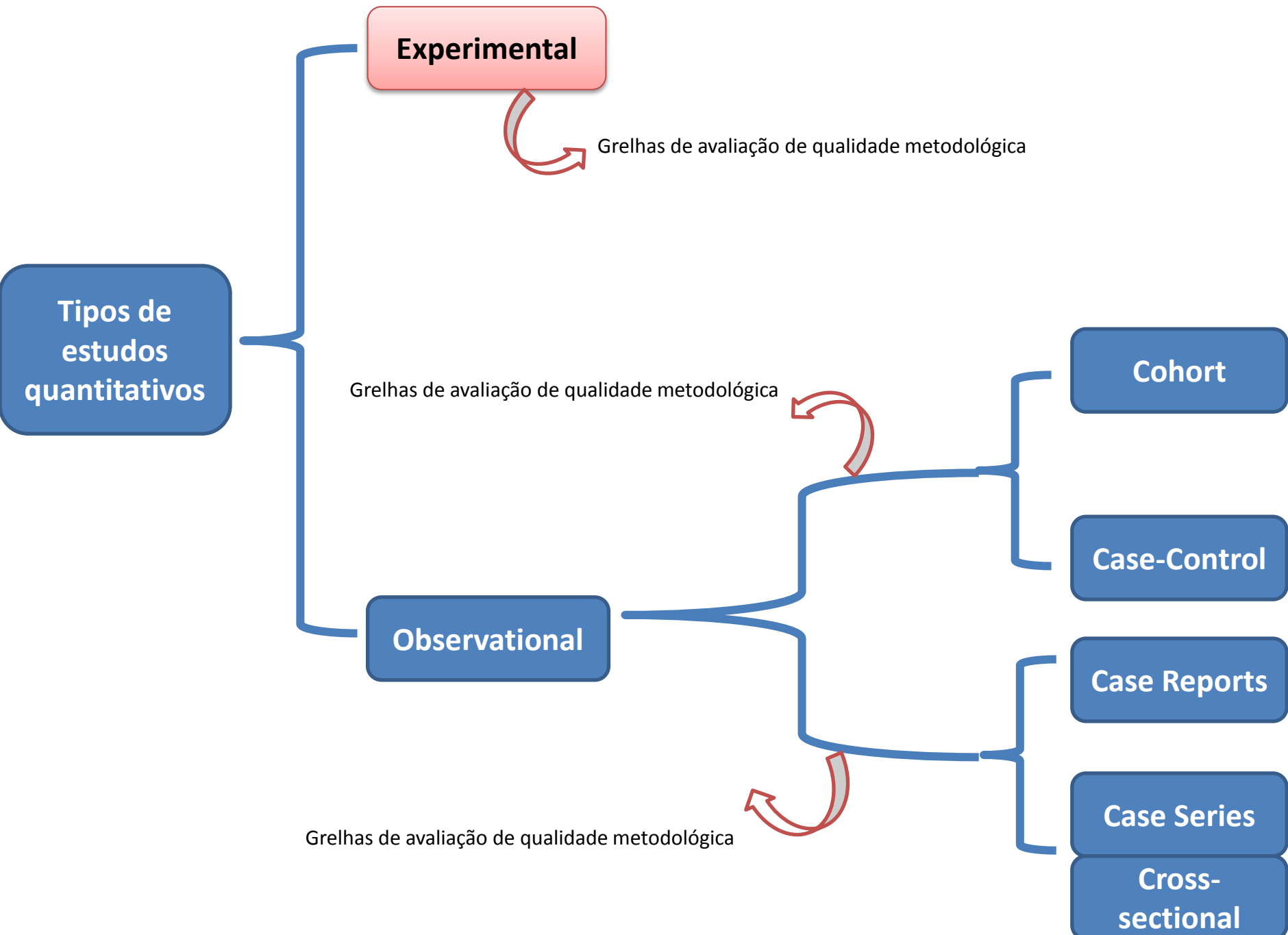
# Sources of Bias

Bias, or systematic error, may impact on experimental research from a variety of avenues.

- Selection
- Performance
- Detection
- Attrition

# Assessing the Risk of Bias

Type of bias	Quality assessment	Population	
		Allocation	
Selection	Allocation concealment	Treatment	Control
Performance (Differences in the intervention)	Blinding (Avoided by blinding of investigators and/or participants to group)	Exposed to intervention	Not exposed
Detection (Outcome/ measurement)	Blinding (Avoided by blinding of outcome assessor)	Population	Population
Attrition (Withdrawals and exclusions between groups)	ITT follow up (Avoided by accurate reporting of losses and reasons for withdrawal) (Use of ITT analysis)	Follow up	Follow up



# CASP CHECKLISTS

<http://www.casp-uk.net/#!/casp-tools-checklists/c18f8>

- **CASP Checklists (click to download)**
- **[CASP Systematic Review Checklist](#)**
- **[CASP Qualitative Checklist](#)**
- **[CASP Randomised Controlled Trial Checklist](#)**
- **[CASP Case Control Checklist](#)**
- **[CASP Cohort Study Checklist](#)**
- **[CASP Clinical Prediction Rule Checklist](#)**
- **[CASP Diagnostic Checklist](#)**
- **[CASP Economic Evaluation Checklist](#)**

# MAStARI – Assessment

## RCT/Pseudo-randomised trial



Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

### MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

- Select
- Detail
- Assessment
- Extraction
- Results
- Meta-Analysis

Assessment for : Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)

Type: Primary

User: j.apostolo

Design: Randomised Control Trial / Pseudo-randomised Trial

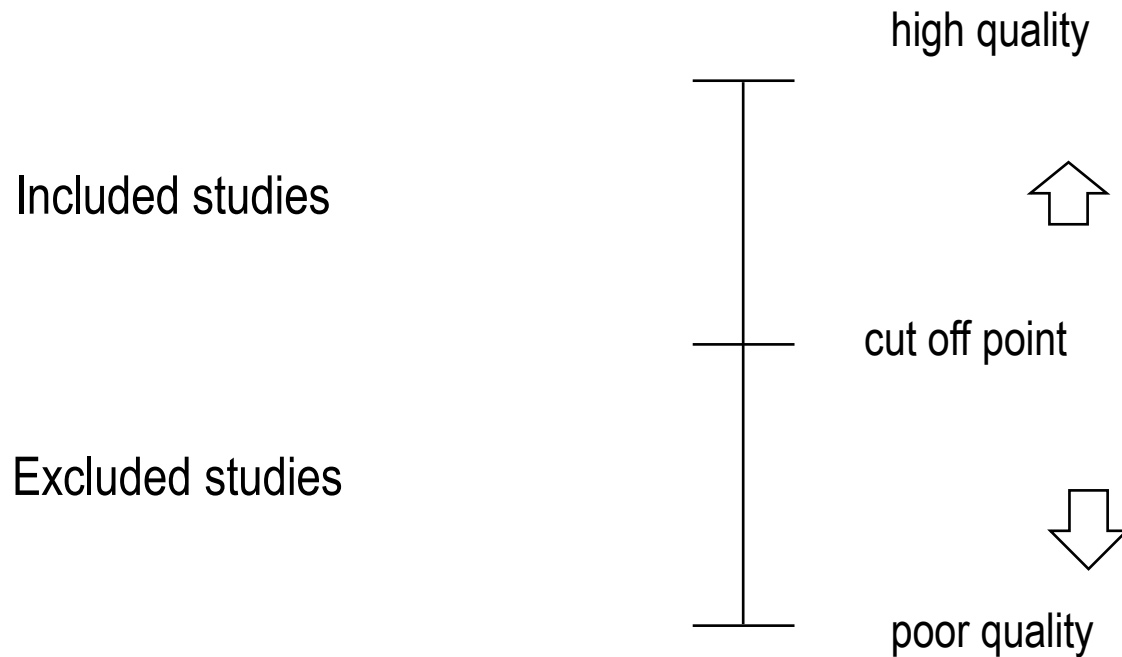
Criteria	Yes	No	Unclear	Not Applicable	Comment
1) Was the assignment to treatment groups truly random?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2) Were participants blinded to treatment allocation?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3) Was allocation to treatment groups concealed from the allocator?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
4) Were the outcomes of people who withdrew described and included in the analysis ?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
5) Were those assessing outcomes blind to the treatment allocation?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
6) Were the control and treatment groups comparable at entry?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
7) Were groups treated identically other than for the named interventions?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
8) Were outcomes measured in the same way for all groups?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9) Were outcomes measured in a reliable way?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
10) Was appropriate statistical analysis used?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Include Yes

Reason

Update Undo Cancel

# Assessing Study Quality as a Basis for Inclusion in a Review



You may decide 6/10 or 8/10. You may exclude any study which fails question 1 and you're not convinced the randomization process was adequate



**The effectiveness of cleansing solutions for wound treatment: a systematic review**

Paulo Queirós, RN, PhD<sup>1</sup>

Eduardo Santos, RN<sup>1</sup>

João Apóstolo, RN, PhD<sup>1</sup>

Daniela Cardoso, RN<sup>1</sup>

Madalena Cunha, RN, PhD<sup>2</sup>

Manuel Rodrigues, RN, PhD, Aggregation<sup>1</sup>

Number of studies included	Number of studies excluded
3	5

**Table 2: Randomized controlled trial/pseudo-randomized trial**

Citation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
[8] Moscati et al., 2007	U	N	Y	N	U	Y	Y	Y	Y	Y
[17] Griffiths et al., 2001	U	Y	Y	Y	Y	U	Y	Y	Y	Y
[27] Walker and Smith, 2013	U	U	U	N	Y	Y	Y	Y	Y	Y
%	0.00	33.3 3	66.6 7	33.3 3	66.6 7	66.6 7	100. 00	100. 00	100. 00	100. 00

Y = yes; N = no; U = unclear

# MAStARI – Assessment

## Cohort and Case-control studies

Criteria	Yes	No	Unclear	Not Applicable
1) Is sample representative of patients in the population as a whole?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Are the patients at a similar point in the course of their condition/illness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Has bias been minimised in relation to selection of cases and of controls?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Are confounding factors identified and strategies to deal with them stated?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Are outcomes assessed using objective criteria?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Was follow up carried out over a sufficient time period?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Were the outcomes of people who withdrew described and included in the analysis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Were outcomes measured in a reliable way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) Was appropriate statistical analysis used?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# MAStARI – Assessment

## Descriptive/case series studies

Criteria	Yes	No	Unclear	Not Applicable
1) Was study based on a random or pseudo-random sample?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Were the criteria for inclusion in the sample clearly defined?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Were confounding factors identified and strategies to deal with them stated?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Were outcomes assessed using objective criteria?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) If comparisons are being made, was there sufficient descriptions of the groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Was follow up carried out over a sufficient time period?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Were the outcomes of people who withdrew described and included in the analysis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Were outcomes measured in a reliable way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) Was appropriate statistical analysis used?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As the word 'pseudo' suggests, pseudo-random numbers are not random in the way you might expect, at least not if you're used to dice rolls or lottery tickets. Essentially, PRNGs are algorithms that use mathematical formulae or simply **precalculated tables** to produce sequences of numbers that appear random

# MAStARI Data Extraction Instrument

Author	<input type="text"/>	Record Number	<input type="text"/>
Journal	<input type="text"/>		
Year	<input type="text"/>		
Reviewer	<input type="text"/>		
<b>Method</b>	<hr/> <hr/>		
<b>Setting</b>	<hr/> <hr/>		
<b>Participants</b> (male or female)	<hr/> <hr/>		
<b>Number of Participants</b>			
Group A	<input type="text"/>	Group B	<input type="text"/>
		Group C	<input type="text"/>
<b>Interventions</b>			
Intervention A	<hr/> <hr/> <hr/>		
Intervention B	<hr/> <hr/> <hr/>		

**Outcome Measures**

Outcome Description	Scale/Measure

**Results****Dichotomous Data**

Outcome	Treatment Group Number/total number	Control Group Number/total number

**Continuous Data**

Outcome	Treatment Group Mean & SD (number)	Control Group Mean & SD (number)

**Authors Conclusion**

---

---

---

---

---

**Reviewers Conclusion**

---

---

---

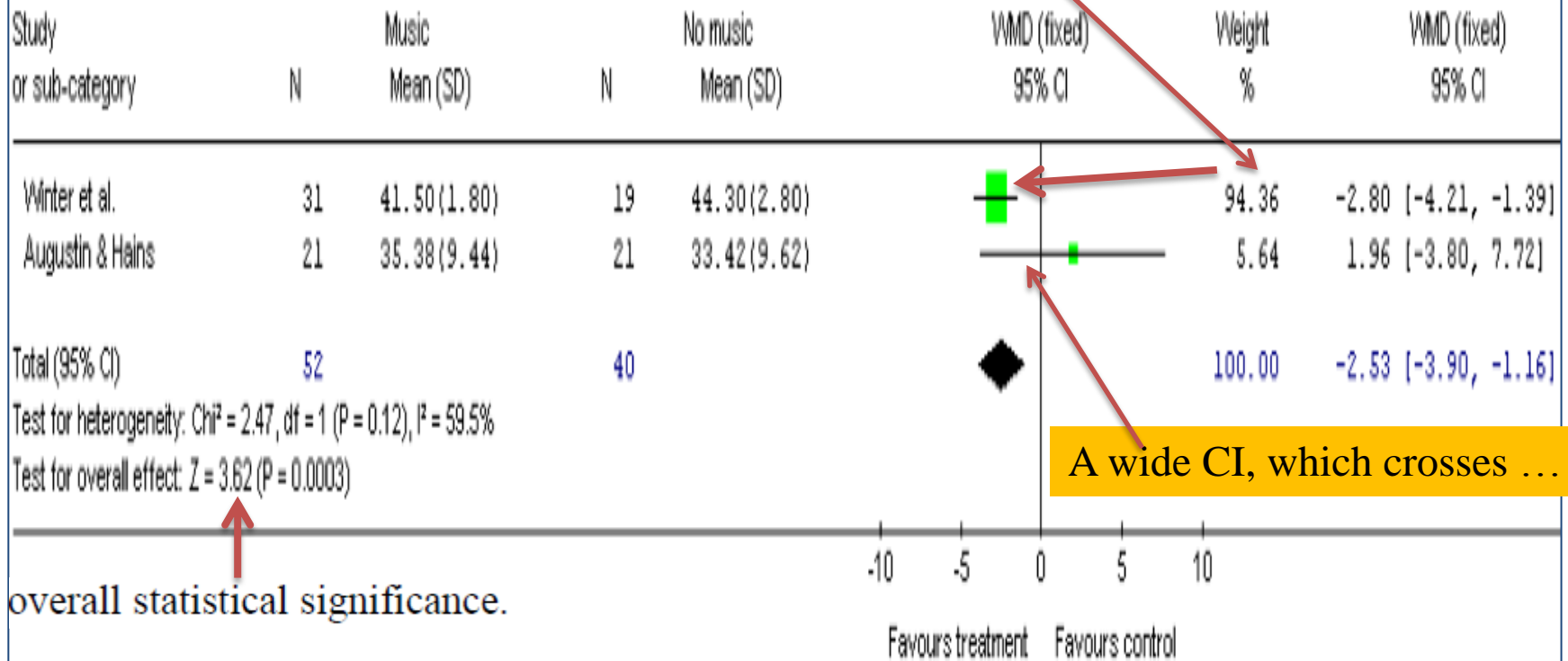
# When meta-analysis can be used

- Meta analysis can be used if studies:
  - have the same population
  - use the same intervention administered in the same way.
  - measure the same outcomes
- Homogeneity
  - studies are sufficiently similar to estimate an average effect.

Each study being allocated a weighted percentage. This can depend on the number of participants, the number of events, and the level of variance

Review: The effect of music on arousal  
 Comparison: 01 Music Vs No music  
 Outcome: 01 STAI - State Trait Anxiety Inventory

Pode-se ponderar retirar um estudo da meta-análise que tenha muito peso. Optar de seguida e justificar ou apresentar os dois gráficos. Discutir caso mantenha o estudo com muito peso



A wide CI, which crosses ...



# Tests of Heterogeneity

- Measure extent to which observed study outcomes differ from calculated study outcome
- Visually inspect Forest Plot. Size of CI
- $\chi^2$  Test for homogeneity
- We don't want this to be less than 0.05

# Quantifying inconsistency $I^2 = \left( \frac{Q - df}{Q} \right) \times 100\%$

- 0% to 40%: might not be important;
- 30% to 60%: may represent moderate heterogeneity\*;
- 50% to 90%: may represent substantial heterogeneity\*;
- 75% to 100%: considerable heterogeneity\*.

Q is the chi-squared statistic and df is its degrees of freedom (Higgins 2002, Higgins 2003).

\*The importance of the observed value of  $I^2$  depends on (i) magnitude and direction of effects and (ii) strength of evidence for heterogeneity (e.g. P value from the chi-squared test, or a confidence interval for  $I^2$ ).

**Fixed**  
(não há heterogeneidade)

WMD – Escalas iguais

Effect	Fixed
Meta-analytical method	WMD
Confidence Interval	WMD
Preferred meta-view	SMD (Cohens)
	SMD (Hedge's)

SMD (Cohens) – Escalas diferentes

SMD (Hedge's) – Escalas diferentes

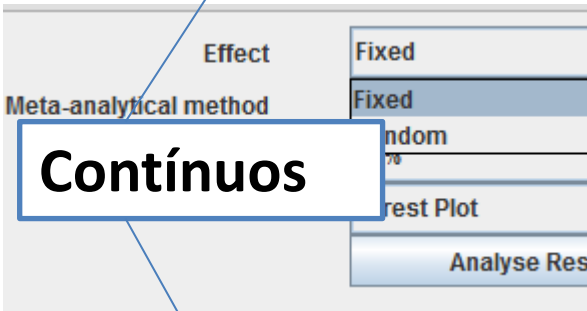
**Contínuos**

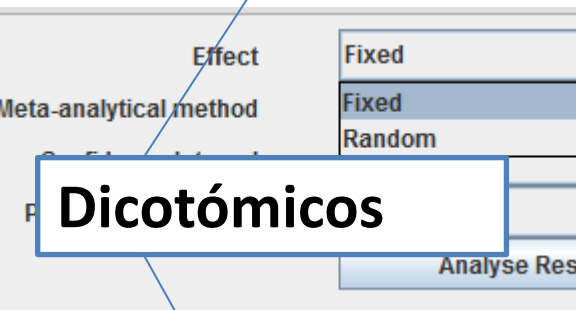
Produzem resultados semelhantes mas o Hedge's é preferível porque inclui um ajuste para corrigir o bias de amostras pequenas

**Random**  
(há heterogeneidade)

WMD (Der Simonian & Laird) – escalas iguais

SMD (Der Simonian & Laird) – escalas diferentes





**Fixed**  
(não há heterogeneidade)

RR (Mantel-Haenszel)

M-H é geralmente o preferido na meta-análise, porque é o mais robusto

OR (Mantel-Haenszel)

Peto OR

Peto OR: apropriado quando as taxas de eventos são muito baixas e tamanhos de efeito não são excessivamente grandes. Pode ser imprecisa, se o efeito dos tratamentos é grande, e quando os tamanhos de amostra entre os grupos de tratamento e controle são desequilibrados.

**Random**  
(há heterogeneidade)

RR (Der Simonian & Laird)

OR (Der Simonian & Laird)

# MAStARI - Intervention



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

Select

Detail

Assessment

Extraction

Results

Meta-Analysis

### Intervention A description for: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)

Drop down menu will display existing Interventions for the currently selected review.

Upon selecting an existing intervention, the abbreviation is automatically shown in the box on the right.

New intervention and abbreviation can be inserted using the fields below.

Existing descriptions	<input type="text" value="Reminiscence"/>	Select new Intervention if you want to add a new Intervention
New description:	<input type="text" value="Reminiscence"/>	
New Abbreviation:	<input type="text" value="Re"/>	

< Back

Save Details

# MAStARI – Continuous Results



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

**MAStARI - Meta Analysis of Statistics Assessment and Review Instrument**

Reviews

Study

Logout

About

Select

Detail

Assessment

Extraction

Results

Meta-Analysis

Continuous Results for: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)

Intervention	Result		
	Mean	SD	N
Re	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>V</b>			
Co	<input type="text"/>	<input type="text"/>	<input type="text"/>

[< back](#)

[DBL Data Entry](#)

[Delete Results](#)

**Table 2.** Evolution of Experimental and Control Groups of Nursing Home Elders on Cognition and Depressive Symptoms

Outcomes	Groups	Baseline		Postintervention		Paired <i>t</i> -test (baseline/postintervention)		Mean difference (baseline) /postintervention)		Repeated measures	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i> <sup>a</sup>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Cognition (MoCA)	EG	17.22	5.04	19.00	5.82	-2.388	.013	1.78	3.58	8.581	.005
	CG	16.88	4.68	15.88	4.82	1.659	.055	-1.00	3.01		
Depressive symptoms (GDS-15)	EG	6.17	4.36	5.61	3.70	1.084	.145	0.57	2.50	1.090	.302
	CG	6.88	3.88	7.08	3.59	-0.397	.348	-0.20	2.52		

Note EG = experimental group; CG = control group; MoCA = Montreal Cognitive Assessment; GDS-15 = Geriatric Depression Scale-15.

<sup>a</sup>One-tailed.



# MAStARI – Dichotomous Results

 THE JOANNA BRIGGS INSTITUTE  JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

**MAStARI - Meta Analysis of Statistics Assessment and Review Instrument**

Reviews Study Logout About

Select  
Detail  
Assessment  
Extraction  
Results  
Meta-Analysis

Dichotomous Results for: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)

Intervention	Result	
	n	N
Re	<input type="text"/>	<input type="text"/>
<b>v</b>		
Co	<input type="text"/>	<input type="text"/>

< back DBL Data Entry Delete Results

**N** – the total number of participants in the group

**n** – the number of participants having the outcome of interest

# MAStARI

No quadro resumo dos artigos consegue-se ver em que fase o artigo está. Se já foi avaliado, se foi incluído ou excluído.



## MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

### Studies in "The effectiveness of nonpharmacological nursing interventions in elderly with depressive disorders: a systematic review"

This page is used to manage the retrieved Studies. From this page, Studies can be selected to perform assessment and extraction and to develop Findings. The drop down box can be used to filter studies as new, included, excluded, extracted or finished.

All

# of Citations: 4

Author	Title	Journal	Year	Status	Assessment	Actions
<a href="#">Jing-Jy Wang</a>	The effects of reminiscence on depressive symptoms and mood status of older institutionalized adults in Taiwan	INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY	2005	Extraction	Complete	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Jing-Jy Wang, Ya-Chuan Hsu, Su-Fen Cheng</a>	The effects of reminiscence in promoting mental health of Taiwanese elderly	International Journal of Nursing Studies	2005	Extraction	Complete	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">ddd</a>	ddd	ddd	2012	Included	Complete	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">rrrrr</a>	rrrrr	rrrrr	2011	New	Awaiting Final	<a href="#">Edit</a> <a href="#">Delete</a>

1  records per page

# MAStARI - Extraction

Select

Detail

Assessment

Extraction

Results

Meta-Analysis

**Extraction Details: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005) - Randomised Control Trial / Pseudo-randomised Trial**  
**Study Information**

\* denotes field which will appear in report appendix

Method \*

Setting

Participants \*

# Participants Group A:  Group B:

Interventions Interventions A: \*

Interventions B: \*

Authors Conclusion

Reviewers Comments \*

Complete

# MAStARI - Results



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

Select  
Detail

Assessment  
Extraction  
Results  
Meta-Analysis

**Results For: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)  
Randomised Control Trial / Pseudo-randomised Trial**

Review Outcome	Intervention A	Intervention B	
<a href="#">Depression</a>	<a href="#">Re</a>	<a href="#">Co</a>	<a href="#">Results</a> <a href="#">Delete Outcome</a>
<a href="#">depression Y/N</a>	<a href="#">Re</a>	<a href="#">Co</a>	<a href="#">Results</a> <a href="#">Delete Outcome</a>
<a href="#">Add Review Outcome</a>			

Version 5.0 Copyright © Joanna Briggs Institute 2011.

# MAStARI - Outcome

Como criar um outcome?



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

Select

Detail

Assessment

Extraction

Results

Meta-Analysis

**Outcome title for: Wang, Jing-Jy, Hsu, Ya-Chuan, Cheng, Su-Fen - International Journal of Nursing Studies (2005)**

Drop down menu will display existing Titles from studies of the currently selected review.

Select an existing title to maintain consistency.

A new title can be inserted using the field below.

Existing titles	Depression ▾	Select new title if you want to add a new outcome
New Title	<input type="text" value="Depression"/>	
Data Type	Dichotomous <input type="radio"/> Continuous <input checked="" type="radio"/>	
Description	<p>Depressive symptoms were characterized as sadness, low mood, pessimism, self-criticism and self-blame, retardation or agitation, slow thinking, poor concentration, and appetite and sleep disturbances.</p>	
Measure/Scale	<p>Geriatric Depression Scale short form Chinese version (GDS-SF) by Chan (1996). GDS-SF contains 15 items related to psychophysiological indicators of depression.</p>	
New Subgroup:	<input type="text"/>	
Existing Subgroup:	-- ▾ <input type="button" value="Delete"/>	

# MAStARI – Subgroup analysis



MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews

Study

Logout

About

Select  
Detail  
Assessment  
Extraction  
Results  
Meta-Analysis

Filter Results

Filter by outcome  
Filter by comparison  
Filter by studies

Software speed

SUMARI v5.0

Select study

Statistics

Effect

Fixed

WMD

95%

Forest Plot

Analyse Results

Choose Subgroup:

unassigned     Presentation     Analysis  
 RCT             Presentation     Analysis

OK

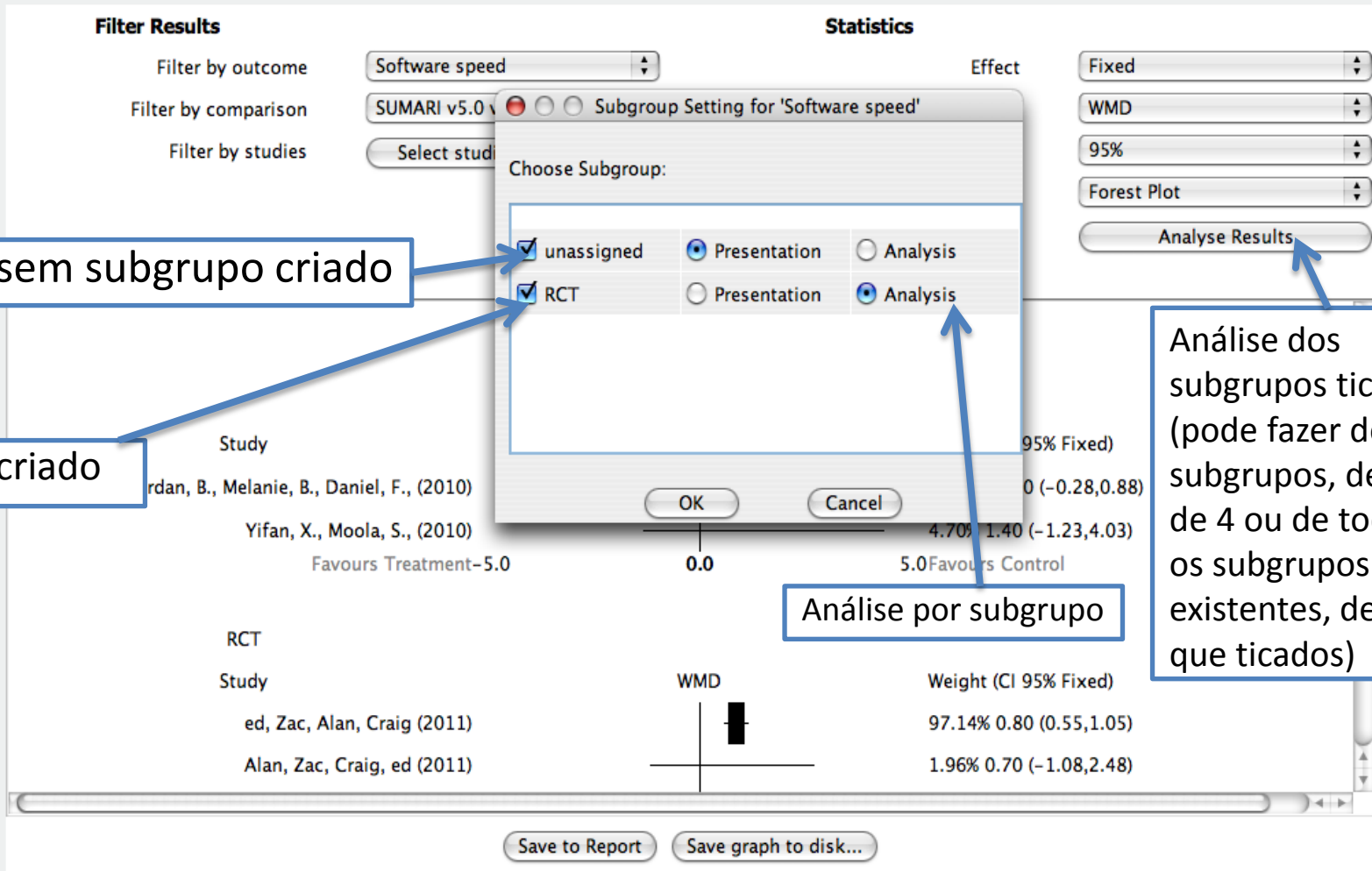
Cancel

Estudos sem subgrupo criado

subgrupo criado

Análise por subgrupo

Análise dos subgrupos ticados (pode fazer de 2 subgrupos, de 3, de 4 ou de todos os subgrupos existentes, desde que ticados)



**Síntese de estudos  
qualitativos  
JBI-QARI**

# Qualitative Methodologies

Action/Description	Subjectivity Structures of Consciousness	Analytical
Ethnography	Phenomenology	Conceptual/Analytical
Grounded Theory	Ethnomethodology	Historical
Action Research	Hermeneutic	Discourse Analysis
Case Studies	Phenomenography	Biographical/textual/narrative
Descriptive		Cultural/media analysis
Programme Evaluation		Deconstructive analysis



# Congruity between Paradigm, Methodology and Methods

# Quality - Qualitative studies

Analogous criteria for paradigmatic assumptions

<b>Quantitative</b>	<b>Qualitative</b>
<b>Reliability</b> Confiabilidade (Reprodutividade das medidas)	<b>Dependability</b> Confiança/Segurança (Consistência da Qualidade - <u>grelha</u> ) Ontology; Epistemology; Methodology
<b>Internal Validity</b>	<b>Credibility</b> Findings: Unequivocal, credible, unsupported).
<b>External Validity</b>	<b>Transferability</b>

# QARI – Assessment (final)

Criteria	Primary	Secondary	Yes	No	Unclear	Not Applicable
1) There is congruity between the stated philosophical perspective and the research methodology.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) There is congruity between the research methodology and the research question or objectives.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) There is congruity between the research methodology and the methods used to collect data.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) There is congruity between the research methodology and the representation and analysis of data.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) There is congruity between the research methodology and the interpretation of results.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) There is a statement locating the researcher culturally or theoretically.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) The influence of the researcher on the research, and vice-versa, is addressed.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Participants, and their voices, are adequately represented.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# METASYNTHESIS OF QUALITATIVE RESEARCH STUDIES



**META ETHNOGRAPHY**

**QARI  
METAGGREGATION**

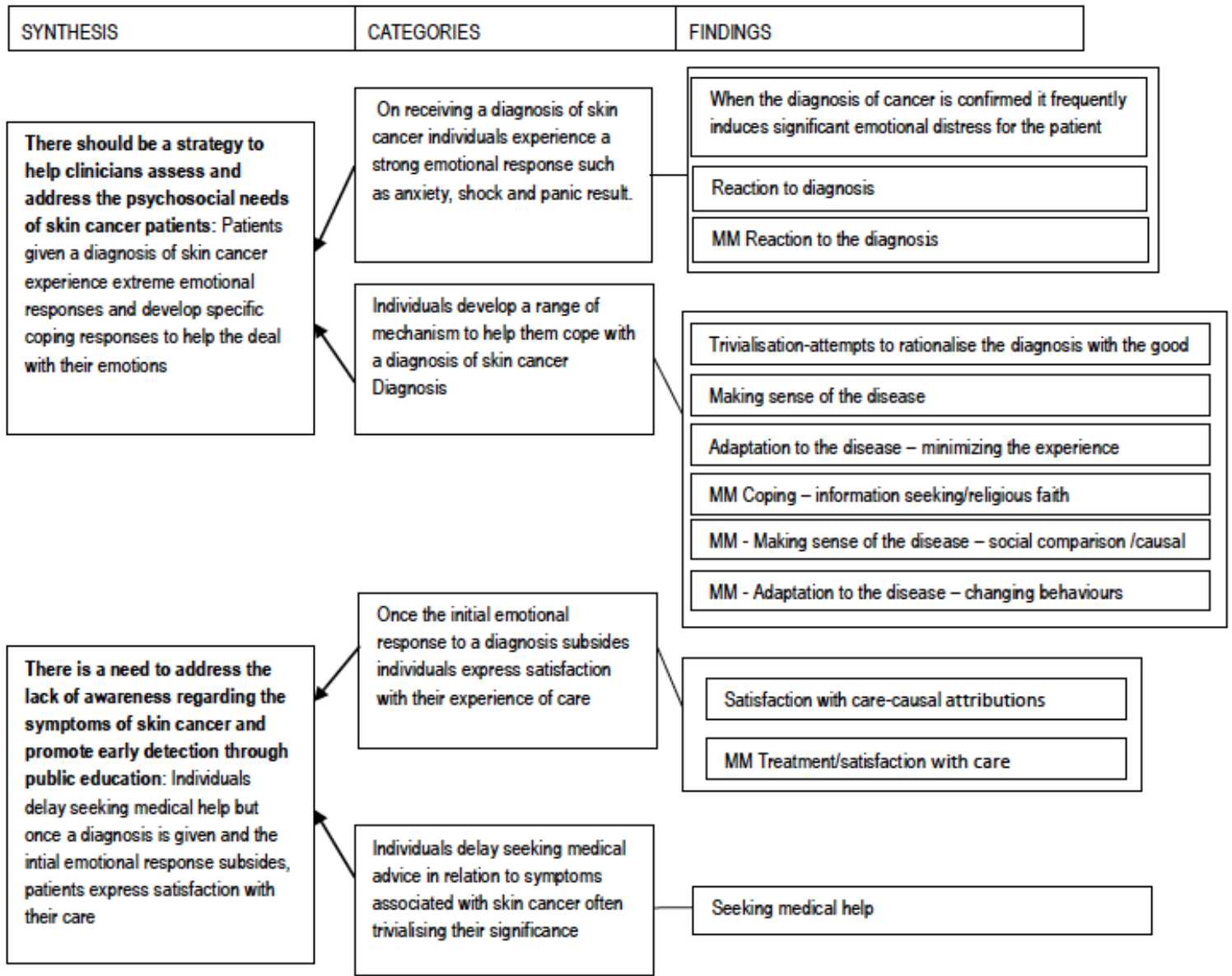
*FIRST ORDER ANALYSIS* ⇐

*SECOND ORDER INTERPRETATION* ⇐

⇒ *STEP 2: CATEGORIES*

*THIRD ORDER INTERPRETATION* ⇐

⇒ *STEP 3: SYNTHESISED FINDINGS*



# Recommendations arising

- There is a real need to increase knowledge of skin cancer so that people do not delay in seeking medical help as early diagnosis can dramatically improve both prognosis and the patient experience since early lesions are treated more simply compared with larger or neglected lesions.
- Health professionals caring for these patients need to understand the psychosocial concerns of this patient group in order to design services appropriately and to provide patients with the support they need and information that they can easily understand.

## Levels of Credibility- Qualitative

Unequivocal - relates to evidence beyond reasonable doubt

Credible - those that are, albeit interpretations, plausible in light of data and theoretical framework.

Not Supported - when 1 nor 2 apply and when most notably findings are not supported by the data

- Should not be included in synthesis to inform practice

# Levels of Evidence and Grades of Recommendation

- Following the GRADE guidance JBI has developed its own unique Levels of Evidence and Grades of recommendation.

GRADE: (Grading of Recommendations Assessment, Development and Evaluation)

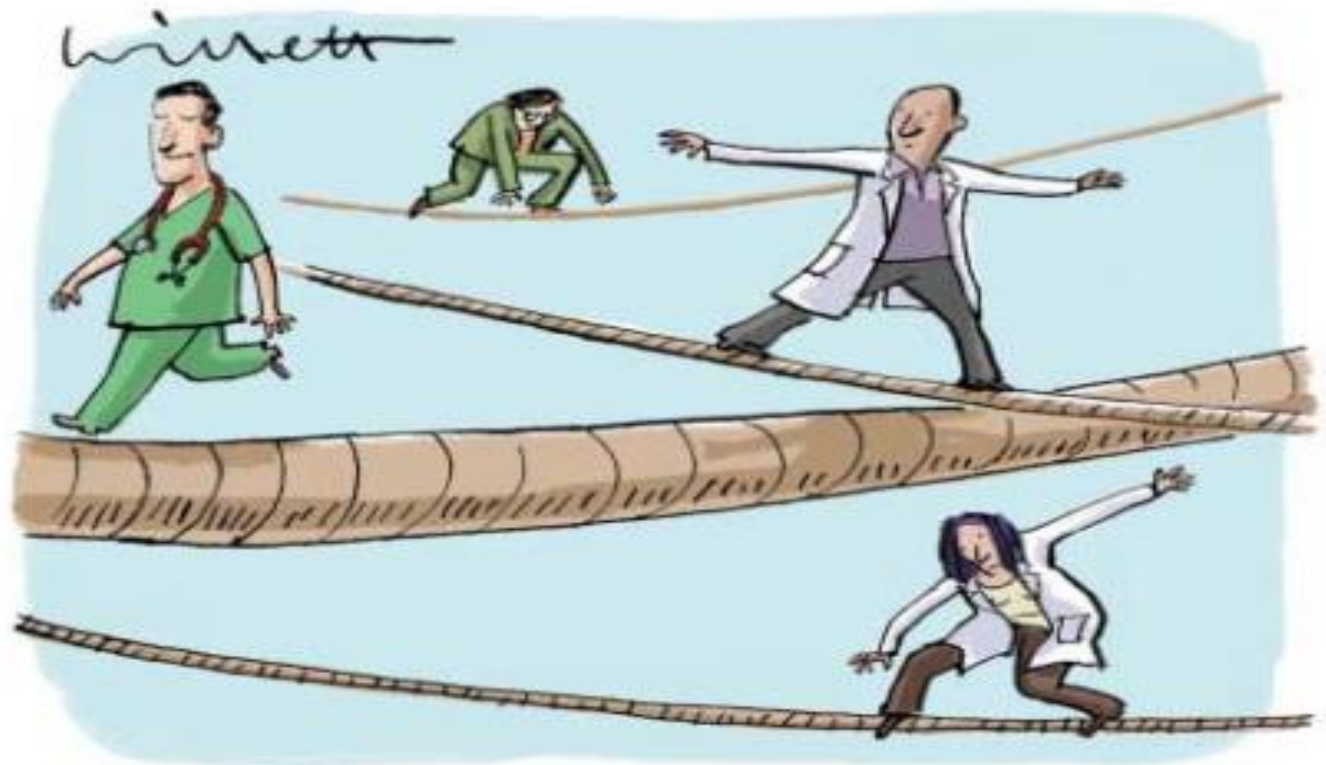
## Grading quality

GRADE Working Group

Clinical guidelines are only as good as the evidence that makes them. Making it easier for users to

## Summary

Users of clinical practice guidelines need to know how much confidence to place in the recommendations. Systematic reviews and meta-analyses can reduce errors in clinical judgments. We have developed a system for grading the strength of recommendations for a wide range of interventions. This summary presents a summary of our approach to guideline development. Judgments about the benefits and harms of an intervention require consideration of the quality of the evidence, the balance of benefits and harms, the quality of the evidence, and the values and preferences of patients. It is also important to consider costs (resource utilisation) before making a recommendation. Inconsistencies among systems for





# Levels of Evidence

- According to study design allows to assign a Pre-Ranking
  - Except the levels of evidence for costs – They are not based purely on study design.
- Should not be used as a definitive measure of the best available evidence.
- Should not act as a substitute for critical appraisal and clinical reasoning

# Levels of Evidence - Effectiveness

## Level 1 – Experimental Designs

Level 1.a – Systematic review of Randomized Controlled Trials (RCTs)

Level 1.b – Systematic review of RCTs and other study designs

Level 1.c – RCT

Level 1.d – Pseudo-RCTs

## Level 2 – Quasi- experimental Designs

Level 2.a – Systematic review of quasi-experimental studies

Level 2.b – Systematic review of quasi-experimental and other lower study designs

Level 2.c – Quasi-experimental prospectively controlled study

Level 2.d – Pre-test – post-test or historic/retrospective control group study

## Level 3 – Observational – Analytic Designs

Level 3.a – Systematic review of comparable cohort studies

Level 3.b – Systematic review of comparable cohort and other lower study designs

Level 3.c – Cohort study with control group

Level 3.d – Case – controlled study

Level 3.e – Observational study without a control group

## Level 4 – Observational – Descriptive Studies

Level 4.a – Systematic review of descriptive studies

Level 4.b – Cross-sectional study

Level 4.c – Case series

Level 4.d – Case study

## Level 5 – Expert Opinion and Bench

Level 5.a – Systematic review of expert opinion

# Levels of Evidence - Diagnosis

Level 1 – Studies of Test Accuracy among consecutive patients

Level 1.a – Systematic review of studies of test accuracy among consecutive patients

Level 1.b – Study of test accuracy among consecutive patients

Level 2 – Studies of Test Accuracy among non-consecutive patients

Level 2.a – Systematic review of studies of test accuracy among non-consecutive patients

Level 2.b – Study of test accuracy among non-consecutive patients

Level 3 – Diagnostic Case control studies

Level 3.a – Systematic review of diagnostic case control studies

Level 3.b – Diagnostic case-control study

Level 4 – Diagnostic yield studies

Level 4.a – Systematic review of diagnostic yield studies

The likelihood that a test or procedure will provide the information needed to establish a diagnosis

Level 4.b – Individual diagnostic yield study

Level 5 – Expert Opinion and Bench Research

Level 5.a – Systematic review of expert opinion

Level 5.b – Expert consensus

Level 5.c – Bench research/ single expert opinion

# Levels of Evidence - Prognosis

## Level 1 – Inception Cohort Studies

Level 1.a – Systematic review of inception cohort studies

Level 1.b – Inception cohort study (initial diagnosis and followed)

## Level 2 – Studies of All or none

Level 2.a – Systematic review of all or none studies

Level 2.b – All or none studies

## Level 3 – Cohort studies

Level 3.a – Systematic review of cohort studies (or control arm of RCT)

Level 3.b – Cohort study (or control arm of RCT)

## Level 4 – Case series/Case Controlled/ Historically Controlled studies

Level 4.a – Systematic review of Case series/Case Controlled/ Historically Controlled studies

Level 4.b – Individual Case series/Case Controlled/ Historically Controlled study

## Level 5 – Expert Opinion and Bench Research

Level 5.a – Systematic review of expert opinion

Level 5.b – Expert consensus

Level 5.c – Bench research/ single expert opinion

## Levels of Evidence - Meaningfulness

Level 1	Qualitative or mixed-methods systematic review
Level 2	Qualitative or mixed-methods synthesis
Level 3	Single qualitative study
Level 4	Systematic review of expert opinion
Level 5	Expert opinion

# Levels of Evidence - Economic Evaluations

## Level 1

Decision model with assumptions and variables informed by systematic review and tailored to fit the decision making context.

## Level 2

Systematic review of economic evaluations conducted in a setting similar to the decision makers.

## Level 3

Synthesis/review of economic evaluations undertaken in a setting similar to that in which the decision is to be made and which are of high quality (comprehensive and credible measurement of costs and health outcomes, sufficient time period covered, discounting, and sensitivity testing).

## Level 4

Economic evaluation of high quality (comprehensive and credible measurement of costs and health outcomes, sufficient time period covered, discounting and sensitivity testing) and conducted in setting similar to the decision making context.

## Level 5

Synthesis / review of economic evaluations of moderate and/or poor quality (insufficient coverage of costs and health effects, no discounting, no sensitivity testing, time period covered insufficient).

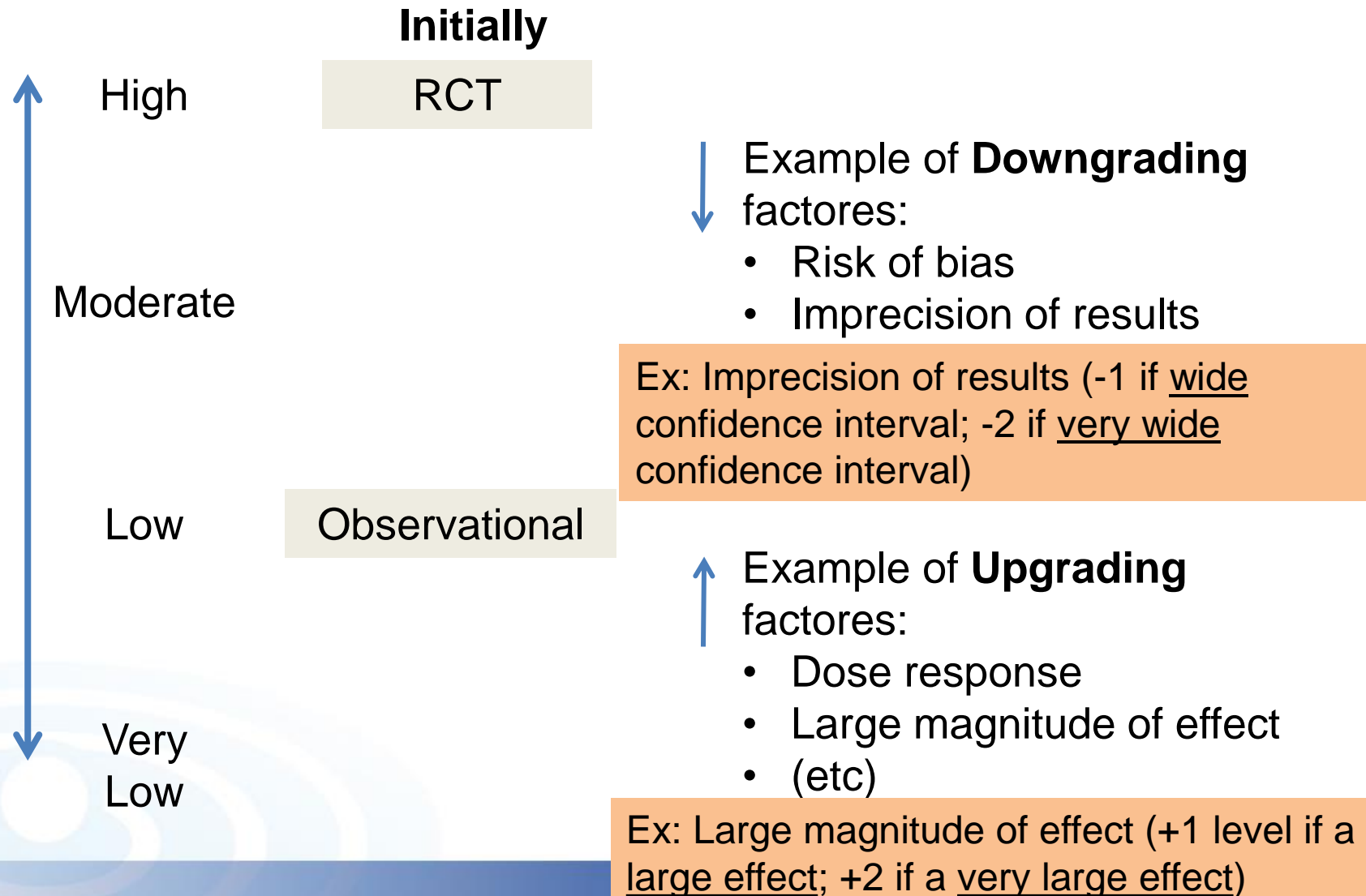
## Level 6

Single economic evaluation of moderate or poor quality (see directly above level 5 description of studies).

# **Levels of Evidence**

**Quality  
(Cut-off point)**

# GRADE quality of the evidence - Quantitative





# GRADE quality of the evidence - Qualitative



Example of **Downgrading** factors:

- **Dependability (consistência)** (5 items - critical appraisal)
- **Credibility** (Findings: Unequivocal, credible, unsupported).

# Quality of Evidence (Qualitative)

- Dependability (5 items - critical appraisal)

Ontology; Epistemology; Methodology

Criteria	Primary	Secondary	Yes	No	Unclear	Not Applicable
1) There is congruity between the stated philosophical perspective and the research methodology.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) There is congruity between the research methodology and the research question or objectives.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) There is congruity between the research methodology and the methods used to collect data.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) There is congruity between the research methodology and the representation and analysis of data.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) There is congruity between the research methodology and the interpretation of results.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) There is a statement locating the researcher culturally or theoretically.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) The influence of the researcher on the research, and vice-versa, is addressed.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Participants, and their voices, are adequately represented.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.	Yes	Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Quality of Evidence (**Text opinion**)

## - Dependability - 5 items - critical appraisal

Assessment for : Pearson A - Journal (2012)

Type: Primary

User: alan

Criteria	Yes	No	Unclear	Not applicable	Comment
1) Is the source of the opinion clearly identified?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2) Does the source of the opinion have standing in the field of expertise?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3) Are the interests of patients/clients the central focus of the opinion?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4) Is the opinion's basis in logic/experience clearly argued?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
5) Is the argument developed analytical?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
6) Is there reference to the extant literature/evidence and any incongruency with it logically defended?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
7) Is the opinion supported by peers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Include

Reason

# Quality of the evidence (**Dependability**)

## Qualitative and text opinion

- If 4-5 of the questions are yes, the synthesized finding **remains** at the level it is currently.
- If 2-3 of these responses are yes, it moves **down one level**
  - (i.e. from High to Moderate).
- If 0-1 of these responses are yes, it moves **down two levels**
  - (from High to Low, or Moderate to Very Low).

# Systematic reviews should be accompanied by a Summary of Findings table

Can be created using the software program GRADEPro

<http://tech.cochrane.org/revman/other-resources/gradepro/download>

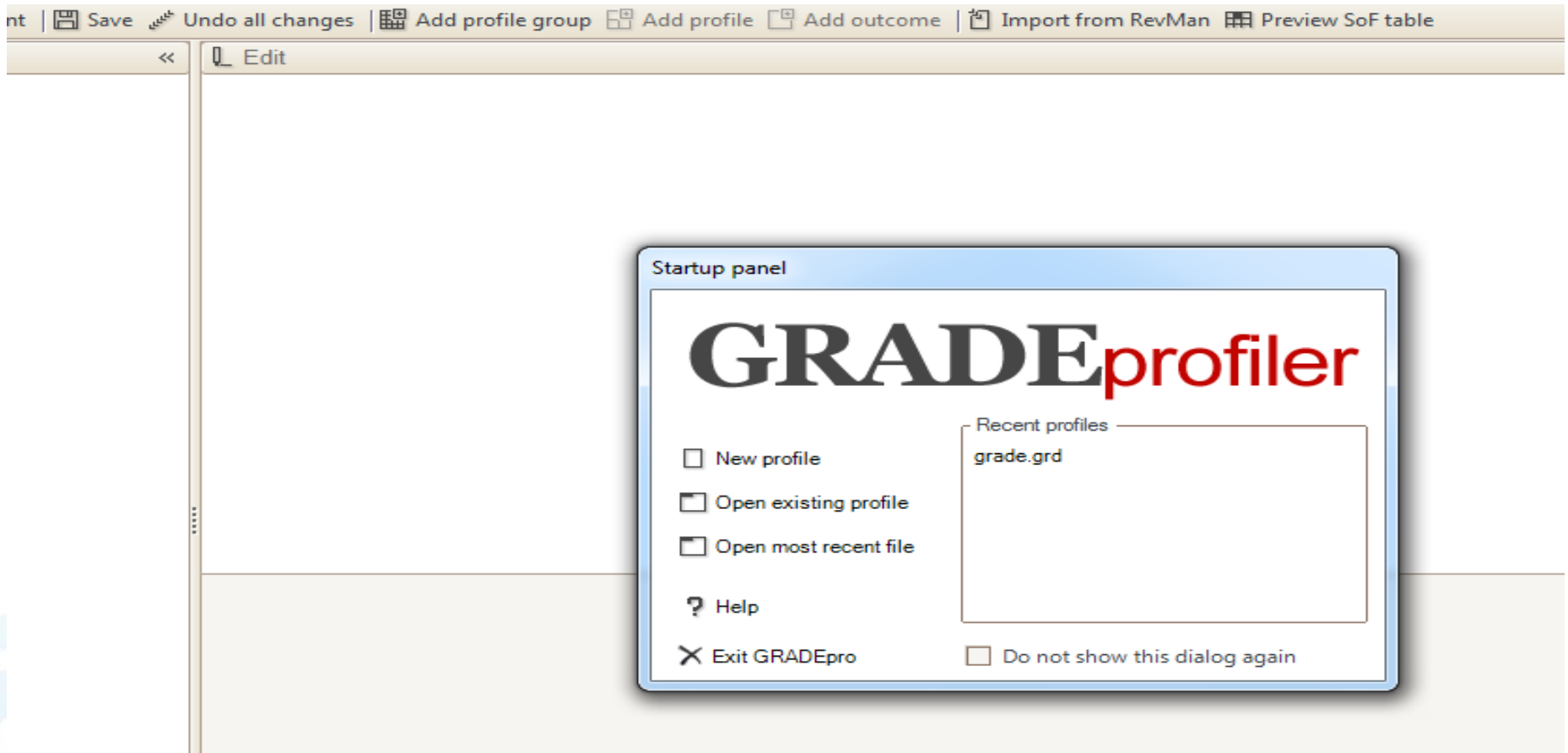


Table 1: Summary of Findings Template

Title					
Bibliography: (review name)					
Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Continuous aerobic exercise	Risk difference with High intensity interval training (95% CI)
<b>Outcome 1 - Most critical outcome (i.e. Mortality)</b> Measurement (i.e. all-cause mortality <sup>1</sup> )	0 (0)	⊕⊕⊖⊖ <b>LOW</b> <sup>2,4</sup>		<b>Study population</b>	
				See comment	-
				<b>Moderate</b>	
					-
<b>Outcome 2</b> Measurement	i.e. 247 (4 studies) 4-16 weeks	⊕⊕⊖⊖ <b>LOW</b> <sup>2,4</sup>			
<b>Outcome 3</b> Measurement		⊕⊕⊖⊖ <b>LOW</b> <sup>2,4</sup> due to risk of bias, inconsistency			

\*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk ratio;

GRADE Working Group grades of evidence

**High quality:** Further research is very unlikely to change our confidence in the estimate of effect.

**Moderate quality:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

**Low quality:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

**Very low quality:** We are very uncertain about the estimate.

Example footnotes:

<sup>1</sup> No studies assessed mortality

<sup>2</sup> Change score in the control (continuous) group

<sup>3</sup> Methodological limitations across studies, particularly in terms of blinding.

<sup>4</sup> Statistical heterogeneity

**Table 1: ConQual Summary of Findings Example**

(High; Moderate; Low ; Very Low)

Systematic review title: The patient experience of high technology medical imaging: a systematic review of the qualitative evidence

Population: Persons who had undergone high technology medical imaging

Phenomena of interest: The meaningfulness of a patients experience of undergoing diagnostic imaging using high technology

Context: Male and Female Adult Patients presenting to a medical imaging department

Synthesized Finding	Type of research	Dependability	Credibility	ConQual Score	Comments
People undergoing imaging often expect a health issue to be found during their scan, which can then lead to anxiety and worry	Qualitative <b>High</b>	Downgrade 1 level* <b>-1=moderate</b> (2–3 yes)	Downgrade 1 level ** <b>-1=Low</b> (Credible)	Low	*Downgraded one level due to dependability of primary studies **Downgraded one level due to equivocal findings

ConQual: Type of study+dependability+Credibility



# Grades of Recommendation

- Grades of Recommendation are used to assist healthcare professionals when implementing evidence into practice.
- The new JBI grades of recommendation has a binary system for recommendations, with only the two options:

- 'strong' (A)

- 'weak' (B)



The New JBI Levels of Evidence and Grades of Recommendation are now being used for all JBI documents as of the 1st of March 2014.

## JBI Grades of Recommendation

Grade

**A**

A recomendação "forte" (**A**) para uma determinada estratégia/intervenção, sempre que:

1. é evidente que os efeitos desejáveis compensam os efeitos indesejáveis da estratégia/intervenção;
2. quando há evidência de qualidade adequada a apoiar a sua utilização;
3. há um benefício e nenhum impacto sobre o uso dos recursos, e
4. valores, preferências e a experiência do paciente foram tidas em conta.

Grade

**B**

A recomendação "fraco" (**B**) para uma estratégia/intervenção sempre que:

1. efeitos desejáveis parecem compensar os efeitos indesejáveis da estratégia/intervenção, embora não seja tão claro;
2. há evidências que suportam a sua utilização, embora não sejam de alta qualidade;
3. há um benefício sem impacto ou impacto mínimo sobre o uso dos

# JBI-NOTARI

## Text, Expert Opinion and Discourse as Evidence for Policy and Practice

Narrative, opinion, expertise and discourse often represent the best available evidence in areas where research is limited, or where the knowledge that is needed is generally generated through policy-making or other processes rather than through formal research

This kind of knowledge cannot be ignored as legitimate sources of evidence for policy and practice

he seven appraisal Criteria are:

**1. Is the source of the opinion clearly identified?**

The reviewer needs to be satisfied that the author(s) is named.

**2. Does the source of the opinion have standing in the field of expertise?**

The qualifications, current appointment and current affiliations with specific groups need to be stated in the publication and the reviewer needs to be satisfied that the author(s) has some standing within the field.

**3. Are the interests of patients the central focus of the opinion?**

Is the focus on achieving the best health outcomes or on advantaging a particular professional or other group? What is the author's purpose?

Who is the author's intended audience?

**4. Is the opinion's basis in logic/experience clearly argued?**

Questions to pose here include: What are the main points in the conclusions or recommendations? What arguments does the author use to support the main points? Is the argument logical? Have important terms been clearly defined? Do the arguments support the main points?

**5. Is the Argument developed analytically**

Is the opinion the result of an analytical process drawing on experience or the literature?

**6. Is there reference to the extant literature/evidence and any incongruency with it logically defended?**

What extant literature does the author present to support the arguments? Are incongruence addressed and justified?

**7. Is the opinion supported by peers?**

Does the text present and refute opposing points of view?

Based on the standard approach promoted by the Cochrane Collaboration and adopted by the Joanna Briggs Institute, two reviewers are expected to independently critically appraise data, and to then confer.

# NOTARI - Assessment



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

Assessment for : ap - fvmvc (2012)

Type: Primary

User: j.apostolo

Criteria	Yes	No	Unclear	Not applicable	Comment
1) Is the source of the opinion clearly identified?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2) Does the source of the opinion have standing in the field of expertise?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3) Are the interests of patients/clients the central focus of the opinion?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4) Is the opinion's basis in logic/experience clearly argued?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
5) Is the argument developed analytical?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
6) Is there reference to the extant literature/evidence and any incongruency with it logically defended?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
7) Is the opinion supported by peers?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Include

Reason

Update

Undo

Cancel

# NOTARI – Assessment (final)



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

### Assessment for : ap - fvmvc (2012)

Type: Final

User: j.apostolo

Criteria	Primary	Secondary	Yes	No	Unclear	Not applicable	Comment
1) Is the source of the opinion clearly identified?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2) Does the source of the opinion have standing in the field of expertise?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3) Are the interests of patients/clients the central focus of the opinion?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4) Is the opinion's basis in logic/experience clearly argued?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
5) Is the argument developed analytical?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
6) Is there reference to the extant literature/evidence and any incongruency with it logically defended?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
7) Is the opinion supported by peers?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Include Yes

Reason

Update

Undo

Cancel

# NOTARI - Extraction



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

### Extraction Details: ddd - xxxx (1222)

\* denotes field which will appear in report appendix

Type of Text:	<input type="text" value="guideline/expert opinion/news paper articular/best practice inf sheet"/>
Those Represented: *	<input type="text" value="elders with urinary catheter (a quem o doc se refere/qual a população em estudo)"/>
Stated Allegiance/Position:	<input type="text" value="catheter must be silver coated (ideia ou conclusão principal do texto)"/>
Setting:	<input type="text" value="nursing home (LOCAL CONTEXTO onde está a pop em estudo)"/>
Geographical:	<input type="text" value="portugal (localização do autor - setting metropolitano; cidade, região, rural urbano)"/>
Cultural:	<input type="text" value="periodo de tempo, grupos socio económicos, emprego, estilo de vida"/>
Logic of Argument: *	<input type="text" value="avaliação da clareza da apresentação e da lógica do argumento/nted/ and clearly pr"/>
Data Analysis:	<input type="text" value="analytical and logical"/>
Authors Conclusion: *	<input type="text" value="main findings"/>
Reviewers Comments: *	<input type="text" value="pontos fortes e fracos da publicação"/>
Complete	<input type="text" value="Yes"/>

Update

Undo

Cancel

# NOTARI - Extraction



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

### Extraction Details: ap - fvmvc (2012)

\* denotes field which will appear in report appendix

Type of Text:	<input type="text" value="opinion"/>
Those Represented: *	<input type="text" value="HUC"/>
Stated Allegiance/Position:	<input type="text" value="ideia principal"/>
Setting:	<input type="text" value="hospital"/>
Geographical:	<input type="text" value="cbr"/>
Cultural:	<input type="text" value="elders in the hospital"/>
Logic of Argument: *	<input type="text" value="argumento lógico. outra evidência suporta estas conclusões"/>
Data Analysis:	<input type="text" value="analytical and logical"/>
Authors Conclusion: *	<input type="text" value="main finding"/>
Reviewers Comments: *	<input type="text" value="summary of the strengths and weaknesses of the paper"/>
Complete	<input type="text" value="Yes"/>

Update

Undo

Cancel

# NOTARI – Extraction (Conclusions)



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

Conclusions for: ap - fvfmvc (2012)

Conclusion

summary of the conclusion as determined by the reviewer

Illustration from Publication  
(Include Page Reference)

short quotation or précis from the text that supports the conclusion. Include Page Reference (pag 3)

Evidence

Credible

Category

conclusion  
conclusions 5

Include

Yes

Update

Undo

Cancel

Version 5.0 Copyright © Joanna Briggs Institute 2011.



# NOTARI – Extraction (Conclusions)



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Select

Detail

Assessment

Extraction

Conclusions

Conclusions for : ddd - xxxx (1222)

All Conclusions

Conclusion	Illustration from Publication	Evidence	Actions
<a href="#">silver cather must be used</a>	bla bla bla p.2	Unequivocal	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">long time is bad</a>	jjjjjj p.34	Credible	<a href="#">Edit</a> <a href="#">Delete</a>

1  records per page

Version 5.0 Copyright © Joanna Briggs Institute 2011.

# NOTARI – Category details



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

NOTARI – Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

Conclusions

Categories

## Category Details

This page allows the editing of a Category.

Name

Name to the category

Summary

the meaning of the category name

Synthesis:  [Add new synthesis](#)

Update

Undo

Cancel

# NOTARI – Categories page



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

[Reviews](#)

[Publication](#)

[Categories](#)

[Synthesis](#)

[Logout](#)

[About](#)

[Conclusions](#)  
[Categories](#)

### Categories for: fff

This page allows categories to be managed.

Name	Summary	Actions
<a href="#">Name to the category</a>	the meaning of the category name	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">conclusions 5</a>	buytgg	<a href="#">Edit</a> <a href="#">Delete</a>

1  records per page

[Add](#)

Version 5.0 Copyright © Joanna Briggs Institute 2011.

# NOTARI – Synthesis details



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

[Reviews](#)

[Publication](#)

[Categories](#)

[Synthesis](#)

[Logout](#)

[About](#)

## Synthesis Details

This page allows the addition of a synthesis.

name of the synthesized finding

Name

details

Summary

[Insert](#)

[Undo](#)

[Cancel](#)

Version 5.0 Copyright © Joanna Briggs Institute 2011.

# NOTARI – Synthesis



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

NOTARI - Narrative, Opinion and Text Assessment and Review Instrument

Reviews

Publication

Categories

Synthesis

Logout

About

## Synthesis

This is the NOTARI - view displaying the syntheses for the Review: " fff "

Note that only those syntheses that have had valid categories allocated to them are shown here.

Conclusion	Category	Synthesised Finding
<a href="#">conclusion (C)</a> <a href="#">conclusions 2 (C)</a>	<a href="#">conclusions 5</a>	<a href="#">conclusion hghj</a>
<a href="#">conclusion (C)</a> <a href="#">conclusions 2 (C)</a>	<a href="#">Name to the category</a>	<a href="#">name of the synthesized finding details</a>

Add Synthesis

Export

Print

**JBI-ACTUARI**

# Types of studies

Types of studies	Costs or measures	Benefits or Consequence measures	Comments
Cost Minimization Analysis (CMA)	Costs measured in monetary units (e.g.. Dollars)	Not measured	CMA is not a form of full economic analysis, the assumption is that benefits or consequences are the same, therefore the preferred option is the cheapest
Cost Effectiveness Analysis (CEA)	Costs measured in monetary units (e.g.. Dollars)	Benefits measured in natural units (e.g.. mmHg, cholesterol levels, symptom free days, years of life saved)	Results are expressed as dollars per case or per injury averted. Different incremental summary economic measures are reported (e.g.. Incremental cost-effectiveness ratio)
Cost Utility Analysis (CUA)	Costs measured in monetary units (e.g.. Dollars)	Benefits expressed in summary measures as combined quantity and quality measures (e.g.. QALY, DALY etc)	Two dimensions of effects measured (quality and length of life); results are expressed for example as cost per QALY
Cost Benefit Analysis (CBA)	Costs measured in monetary units (e.g.. Dollars)	Benefits measured in monetary units (e.g.. Dollars)	Benefits are difficult to measure monetarily, values used are Net Present Value (NPV) and Benefit Cost Ratio (BCR)

## Types of Studies

This section should flow naturally from the criteria that have been established to this point, and particularly from the objective and questions the review seeks to address. For JBI reviews of health economic evaluation evidence, there are specific study designs of interest to specific economic questions. These include:

**Cost-Minimisation studies:** intended to identify the least costly intervention where multiple interventions have demonstrated similar benefit

**Cost-Effectiveness studies:** where interventions achieve similar outcomes but have unknown or potentially different resource implications

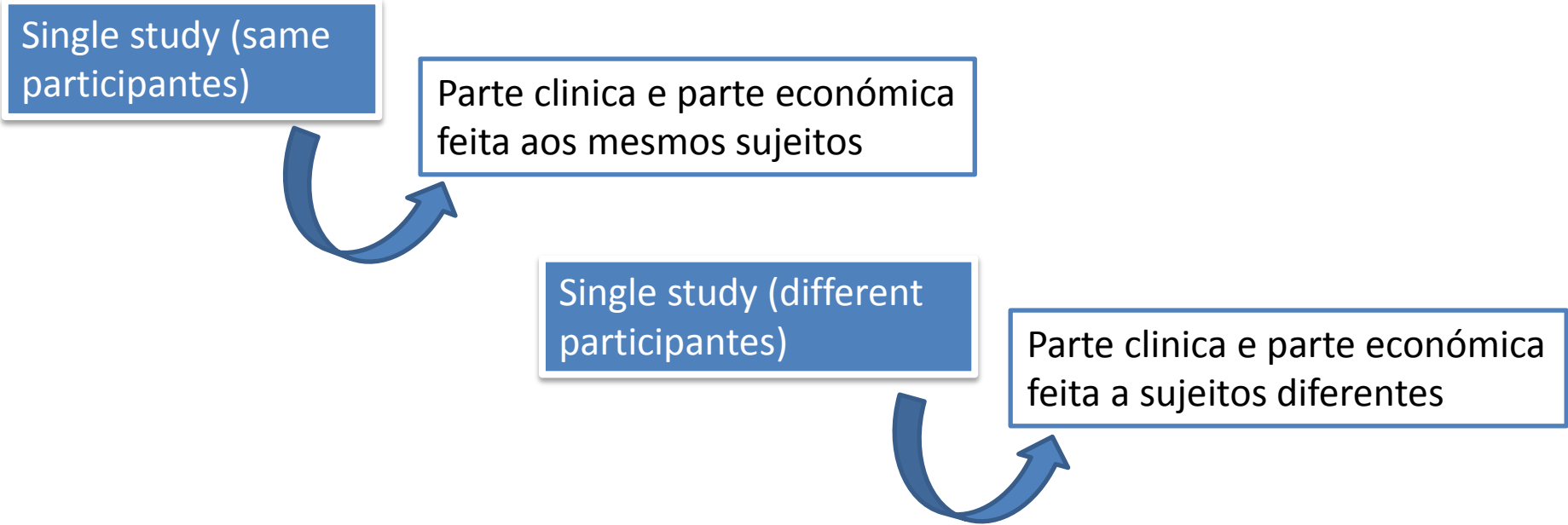
**Cost-Utility studies:** seek to establish benefit as measured by quantity and quality of life (QALY's)

**Cost-Benefit studies:** seek to identify a specific monetary ration (gain/loss or cost/benefit) for an intervention



### Source of effectiveness data extraction field

There are four options for sources of effectiveness data available in JBI ACTUARI . They refer to the original location of the information from which the effectiveness of the intervention compared to the comparator was derived: Single Study (same participants); Single Study (different participants); Multiple Studies (meta-analysis); Multiple Studies (no meta-analysis). Selection of a particular type of source document determines which data extraction fields become available in JBI ACTUARI in the next phase of extraction.



# ACTUARI - Assessment



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## ACTUARI - Analysis of Cost, Technology and Utilisation Assessment and Review Instrument

Reviews

Study

Logout

About

Select  
Details  
Assessment  
Extraction  
Results

Assessment for : ap - nhj (2012)

Type: Primary

User: j.apostolo

Criteria	Yes	No	Unclear	Not applicable	Comment
1) Is there a well defined question?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2) Is there comprehensive description of alternatives?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3) Are all important and relevant costs and outcomes for each alternative identified?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4) Has clinical effectiveness been established?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
5) Are costs and outcomes measured accurately?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
6) Are costs and outcomes valued credibly?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
7) Are costs and outcomes adjusted for differential timing?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
8) Is there an incremental analysis of costs and consequences?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
9) Were sensitivity analyses conducted to investigate uncertainty in estimates of cost or consequences?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
10) Do study results include all issues of concern to users?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
11) Are the results generalisable to the setting of interest in the review?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Include

Reason

Update

Undo

Cancel

# ACTUARI – Assessment (final)



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

## ACTUARI - Analysis of Cost, Technology and Utilisation Assessment and Review Instrument

Reviews

Study

Logout

About

Select

Details

Assessment

Extraction

Results

Assessment for : ap - nhj (2012)

Type: Final

User: j.apostolo

Criteria	Primary	Secondary	Yes	No	Unclear	Not applicable	Comment
1) Is there a well defined question?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
2) Is there comprehensive description of alternatives?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
3) Are all important and relevant costs and outcomes for each alternative identified?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
4) Has clinical effectiveness been established?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
5) Are costs and outcomes measured accurately?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
6) Are costs and outcomes valued credibly?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
7) Are costs and outcomes adjusted for differential timing?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
8) Is there an incremental analysis of costs and consequences?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
9) Were sensitivity analyses conducted to investigate uncertainty in estimates of cost or consequences?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
10) Do study results include all issues of concern to users?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
11) Are the results generalisable to the setting of interest in the review?	Yes	Yes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Include

Reason

Update

Undo

Cancel

# ACTUARI – Extraction

## First level extraction



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

ACTUARI - Analysis of Cost, Technology and Utilisation Assessment and Review Instrument

Reviews

Study

Logout

About

Select  
Details  
Assessment  
Extraction  
Results

### Extraction Details: ap - nhj (2012)

\* denotes field which will appear in report appendix

Economic Evaluation Method: \*

Select one  
Cost Minimisation  
Cost Effectiveness  
Cost Utility  
Cost Benefit

Método de artigo primário

Interventions: \*

Comparator:

Setting:

Geographical:

Participants: \*

Source of effectiveness data:

-- PLEASE SELECT --

Authors Conclusion: \*

Reviewers Comments: \*

Complete

Yes

Update

Undo

Cancel

# ACTUARI – Extraction

## First level extraction



THE JOANNA BRIGGS INSTITUTE



JBI SUMARI™

Brought to you by The Joanna Briggs Institute and Wolters Kluwer Health - Ovid

**ACTUARI - Analysis of Cost, Technology and Utilisation Assessment and Review Instrument**

Reviews

Study

Logout

About

Select  
Details  
Assessment  
Extraction  
Results

### Extraction Details: ap - nhj (2012)

\* denotes field which will appear in report appendix

Economic Evaluation Method: *	<input type="text" value="Cost Minimisation"/>
Interventions: *	<input type="text" value="reminiscence"/>
Comparator:	<input type="text" value="usual care"/>
Setting:	<input type="text" value="Nursing homes"/>
Geographical:	<input type="text" value="coimbra"/>
Participants: *	<input type="text" value="elders"/>
Source of effectiveness data:	<input type="text" value="Single study(same participants)"/>
Authors Conclusion: *	<input type="text" value="nvn"/>
Reviewers Comments: *	<input type="text" value="bvgf"/>
Complete	<input type="text" value="Yes"/>

Se a extração (nesta fase) está completa ou não

# ACTUARI – Extraction

## First level extraction

### Extraction Details: Jones - Chest (2008)

\* denotes field which will appear in report appendix

Economic Evaluation Method: *	<input type="text" value="Cost Effectiveness"/>
Interventions: *	<input type="text" value="TAD"/>
Comparator:	<input type="text" value="Gauze"/>
Setting:	<input type="text" value="hospital"/>
Geographical:	<input type="text" value="USA"/>
Participants: *	<input type="text" value="adults in tertiary care facility"/>
Source of effectiveness data:	<input type="text" value="Single study(same participants)"/>
Authors Conclusion: *	<input type="text" value="TAD is clinically effective"/>
Reviewers Comments: *	<input type="text" value="TAD was as effective, but not more effective than gauze"/>
Complete	<input type="text" value="Yes"/>

the next relates to any linkages between data collected on effectiveness and cost – for example, were the effectiveness data and costs data collected on the same or different participants?

# ACTUARI – Extraction

## First level extraction

### Source of effectiveness data

- There are four options available to select from the scroll down menu in this field. They refer to the original location of the information from which the effectiveness of the intervention compared to the comparator was derived:

1 grelha de extração

Single Study (same participants);

Single Study (different participants);

1 grelha de extração

Multiple Studies (meta-analysis);

Multiple Studies (no meta-analysis).

4 tipologias de extração diferentes na fase seguinte

- **Selection of a particular type of source document determines which data extraction fields become available in the next phase of extraction.**

# ACTUARI – Extraction

## Second level extraction

New Outcome for: Weeks - Chest (2009) - [Edit Extraction Details](#)

### Clinical Effectiveness results

Study design:

Study date:

Sample size:

Analysis used:

Clinical outcome results:

### Economic Effectiveness results

Date/s of economic data:

Link between effectiveness and cost data:

Measure of benefits used in economic evaluation:

Direct costs:

Indirect costs:

Currency:

Sensitivity analysis:  [any sensitivity analysis conducted as part of the primary study](#)

Estimated benefits used in EE:

Cost results:

Synthesis of costs and results:

### Outcome category

Clinical effectiveness  
 +   0   -  
 + ○ A ○ B ○ C  
 Cost 0 ○ D ○ E ○ F  
 - ○ G ○ H ○ I

Key	
Effectiveness	Cost
+ Better	Higher
0 Equal	Equal
- Poorer	Lower

[Update outcome](#)

A sensitivity analysis would be conducted to determine whether the economic model and its conclusions are robust to changes in the underlying assumptions of the model. Details of sensitivity analysis should be reported.



## **Clinical effectiveness results data extraction fields**

This section relates to evidence on the clinical effectiveness of the intervention versus the comparator, or control group. The five fields in this section are designed for numbers and free text relating to the study design, for instance: randomised controlled study, cohort study; the study date (in years); sample size (in numbers, combining both treatment and comparator groups if relevant); type of analysis used (eg. intention to treat analysis); and the clinical outcome results (survival, survival at 1 year, survival at 5 years, stroke avoided, fracture avoided, pain intensity, frequency of vomiting, frequency of pain etc). .

## **Economic effectiveness results data extraction field**

There are ten fields in the economic effectiveness results section. The first relates to the date (year) when the economic data were collected; the next relates to any linkages between data collected on effectiveness and cost – for example, were the effectiveness data and costs data collected on the same or different participants?

For the modelling data extraction field state the economic model used in the economic evaluation study. The 'Modelling' field can be used to describe any economic evaluation models that were part of the economic evaluation.

The third field requires a list of the measurements of benefits that were used in the economic evaluation.

The fourth, fifth and sixth data extraction fields relate to costs examined in the study: direct costs of the intervention/program being evaluated, indirect costs and the currency used to measure the costs.

For currency data extraction field quote the currency as reported in the original study, for example AUD \$, US \$, EUR. State whether any conversions were undertaken.

For statistical analysis of costs data extraction field report descriptive statistics methods used and results, statistical parametric tests used and results including levels of significance, statistical nonparametrical tests used, data transformation methods used.

The seventh field relates to the results of any sensitivity analysis conducted as part of the study. A sensitivity analysis would be conducted to determine whether the economic model and its conclusions are robust to changes in the underlying assumptions of the model. Details of sensitivity analysis should be reported.

The eighth field relates to listing the estimated benefits to using the intervention instead of the comparator, for example the incremental lives saved, or the incremental life-years gained, or the the incremental quality-adjusted life years gained.

The ninth field requires a summary of the cost results findings, and the tenth is a summary of the synthesis of the costs and results.

For a summary of costs report the following: total intervention cost, total comparator cost, average costs and incremental costs, results of statistical analysis of costs, results of sensitivity analysis of costs, discounted and not discounted values for costs.

For a summary of synthesis of costs and benefits report how the costs and benefits were combined, for example as cost per life saved, or cost per QALY.

Once these fields have been completed, the final step in data extraction is also the foundational step in data synthesis.

# ACTUARI – Extraction

## Second level extraction – Single study

Reviews Study Logout About

Select  
Details  
Assessment  
Extraction  
Results

New Outcome for: ap - nhj (2012) - [Edit Extraction Details](#)

Single study(same participants)

### Clinical Effectiveness results

Study design:

Study date:

Sample size:

Analysis used:

Clinical outcome results:  ×

### Economic Effectiveness results

Date/s of economic data:

Link between effectiveness and cost data:

Measure of benefits used in economic evaluation:

Direct costs:

Indirect costs:

Currency:

Sensitivity analysis:

Estimated benefits used in EE:

Cost results:

Synthesis of costs and results:

### Outcome category

Clinical effectiveness  
+ 0 -  
+  A  B  C  
Cost 0  D  E  F  
-  G  H  I

Key	
Effectiveness	Cost
+ Better	Higher
0 Equal	Equal
- Poorer	Lower

[Update outcome](#)

# ACTUARI – Extraction

## Second level extraction – Multiple studies

ACTUARI - Analysis of Cost, Technology and Utilisation Assessment and Review Instrument

Reviews

Study

Logout

About

Select  
Details  
Assessment  
Extraction  
Results

New Outcome for: bkk - jhv (2011) - [Edit Extraction Details](#)

### Clinical Effectiveness results

Study designs: RCTs  
Year range of primary studies: 2008-2012  
Analysis used: WMD  
Clinical outcome results: nr

### Economic Effectiveness results

Date/s of economic data: 3  
Modelling used: 3  
Measure of benefits used in economic evaluation: 3  
Direct costs: 3  
Indirect costs: 3  
Currency: usd  
Statistical analysis of costs: 3  
Sensitivity analysis: nr  
Estimated benefits used in EE: nr  
Cost results: nr  
Synthesis of costs and results: nr

### Outcome category

Clinical effectiveness  
+ 0 -  
+  A  B  C  
Cost 0  D  E  F  
-  G  H  I

Key	
Effectiveness	Cost
+ Better	Lower
0 Equal	Equal
- Poorer	Higher

[Update outcome](#)

# ACTUARI – Extraction

## Second level extraction – Outcome category

The outcome category is included in the detailed extraction, but is not actually an extraction of data. This is where you as a reviewer will, on the basis of your knowledge of a paper give an indication of where it sits in terms of costs and clinical effectiveness. You can come back to this screen and edit/update your decision at a later date.

### Outcome category

In comparing the clinical effectiveness of two alternatives there are three possibilities:

- (i) the intervention of interest is better or more effective (ie a '+') than the comparator,
- (ii) the intervention is equally effective (ie a '0') or
- (iii) the intervention is less effective (ie a '-').

Outcome category		
Clinical effectiveness		
+	0	-
+ <input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C
Cost 0 <input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F
- <input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I
<input type="button" value="Update outcome"/>		

Key	
Effectiveness	Cost
+ Better	Higher
0 Equal	Equal
- Poorer	Lower

Similarly, in terms of cost, there are three possibilities:

- (i) the intervention is more expensive (ie a '+'),
- (ii) the intervention and comparator's costs are the same (ie a '0'), or
- (iii) the intervention is less expensive (ie a '-').

Note that each of the comparisons between intervention and comparator can only be classed as one of nine options (A – I). For example, an intervention that was shown to be more effective and less expensive would be scored as 'G', whereas an intervention that was less effective and of equal cost would be scored as 'F'.

# ACTUARI decision matrix summary of economic evidence

Relativo ao custo

Relativo à eficácia clínica

Cost	Studies	No. of Studies	Clinical effectiveness	Decision
+	[Shaded]	[Shaded]	-	} Don't use
0			-	
+			0	
-	[Shaded]	[Shaded]	-	Further analysis required Neutral
0			0	
+			0	
+	1,3,5	3	+	Further analysis required
-	[Shaded]	[Shaded]	0	} Use
0			+	
-			+	
-	2,6	2	+	

Não usar a intervenção

Necessária mais investigação

Usar a intervenção

Identificação dos estudos

Número de estudos

From the data extraction, particularly the outcome specific data per included paper, reviewers are able to generate a matrix, which lists the comparison of interest, the score from the three by three matrix for each study ('the dominance rating') and the study citation. Discuss the matrix.





# FAME

- Evidence of feasibility – “the extent to which an activity is practical and practicable. Clinical feasibility is about whether or not an activity or intervention is physically, culturally or financially practical or possible within a given context”.  
**(Praticável /possível num contexto )**
- Evidence of appropriateness – “the extent to which an intervention or activity fits with or is apt in a situation. Clinical appropriateness is about how an activity or intervention relates to the context in which care is given.” **(Apropriada ao contexto de cuidados)**
- Evidence of meaningfulness – “the extent to which an intervention or activity is positively experienced by the patient. Meaningfulness relates to the personal experience, opinions, values, thoughts, beliefs and interpretations of patients or clients.” **(se faz sentido e positivamente experienciada por aqueles doentes)**
- Evidence of effectiveness – “is the extent to which an intervention, when used appropriately, achieves the intended effect. Clinical effectiveness is about the **relationship between an intervention and clinical or health outcomes.**” (Pearson et al 2005:210)

link <http://joannabriggs.org/jbi-approach.html#tabbed-nav=Grades-of-Recommendation>

**Grades of Recommendation are used to assist healthcare professionals when implementing evidence into practice.**

The Joanna Briggs Institute and collaborating entities currently assign a Grade of Recommendation to all recommendations made in its resources, including Evidence Summaries, Systematic Reviews and Best Practice Information Sheets. These Grades are intended to be used alongside the supporting document outlining their use.

### JBI Grades of Recommendation

#### Grade A

A 'strong' recommendation for a certain health management strategy where:

1. it is clear that desirable effects outweigh undesirable effects of the strategy;
2. where there is evidence of adequate quality supporting its use;
3. there is a benefit or no impact on resource use, and
4. values, preferences and the patient experience have been taken into account.

#### Grade B

A 'weak' recommendation for a certain health management strategy where:

1. desirable effects appear to outweigh undesirable effects of the strategy, although this is not as clear;
2. where there is evidence supporting its use, although this may not be of high quality;
3. there is a benefit, no impact or minimal impact on resource use, and
4. values, preferences and the patient experience may or may not have been taken into account.