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Helping users to make sense of the ever increasing volume and complexity of evidence: the KSR Evidence database of systematic reviews

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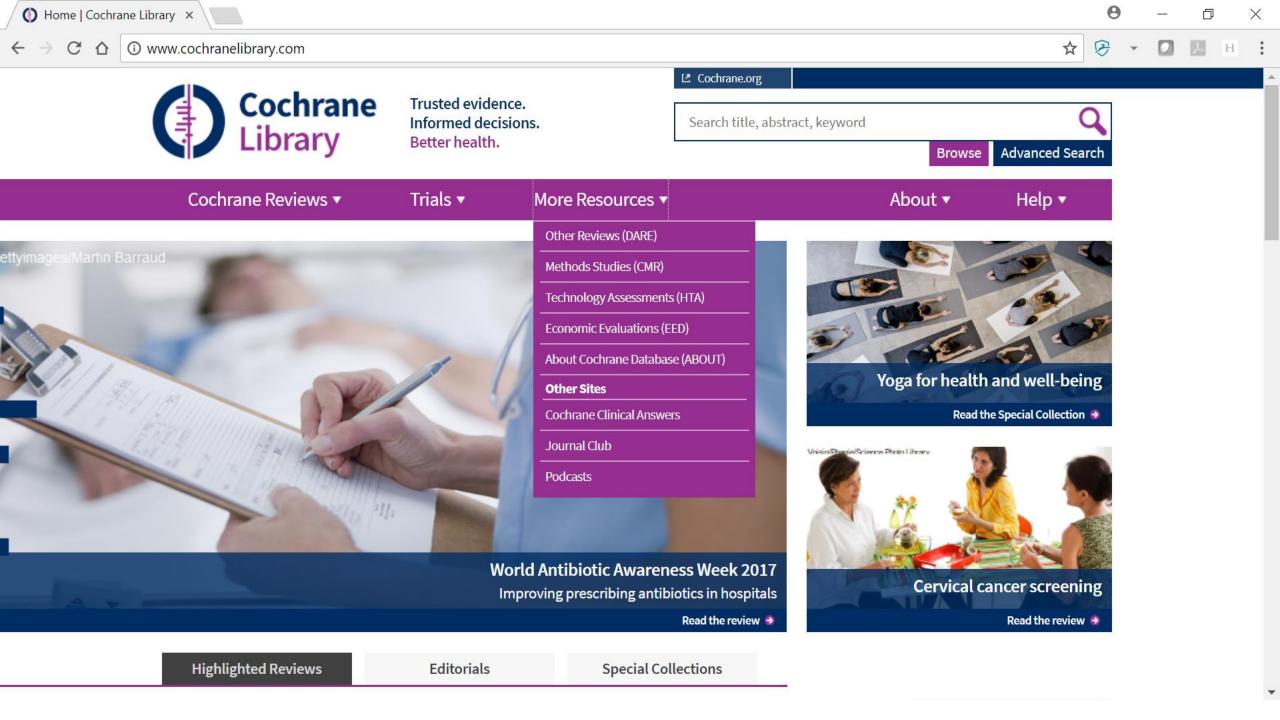
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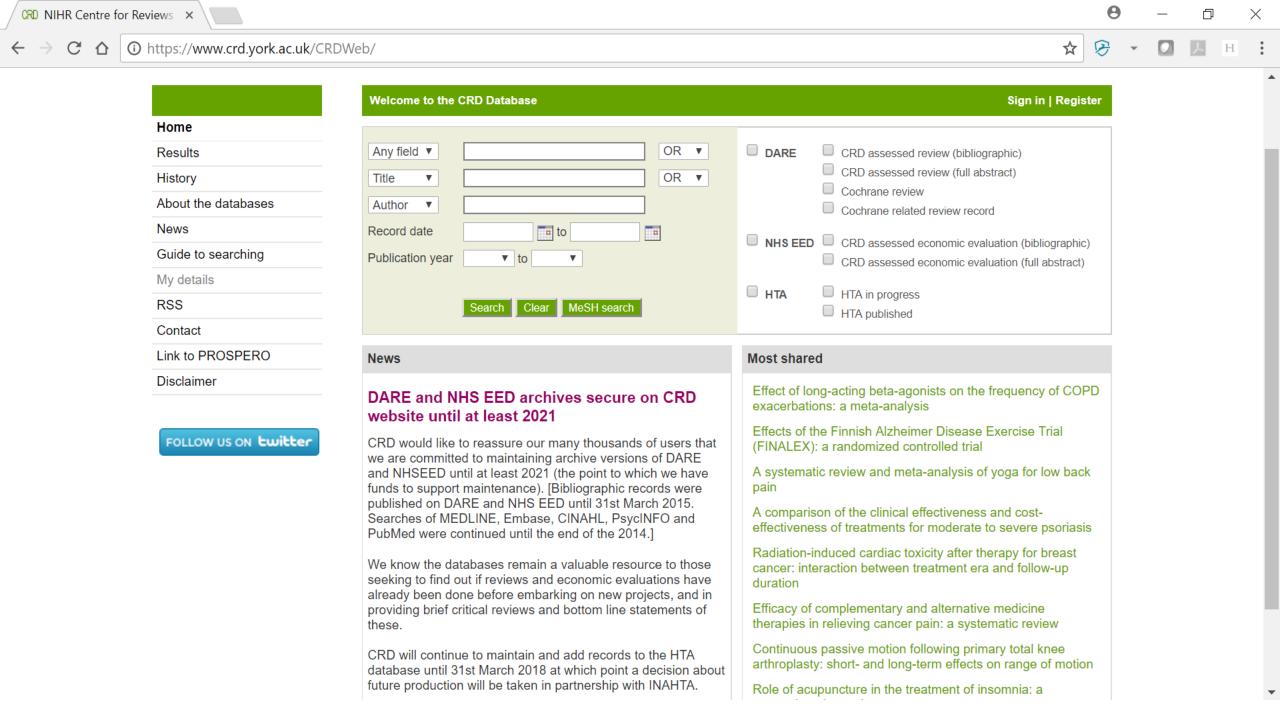


Sources of evidence from systematic reviews: 16,000 systematic reviews published each year in health care literature



- Cochrane Library
- DARE database
- JBI reviews
- Epistemonikos
- HTA agencies
- Guidelines
- New: KSR Evidence





1 https://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?AccessionNumber=12014021884&UserID=0





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Intra-articular and soft tissue injections, a systematic review of relative efficacy of various corticosteroids

Garg N, Perry L, Deodhar A

CRD summary

This review concluded that there was insufficient evidence on the comparative efficacy of different corticosteroid injections. A few trials favoured triamcinolone hexacetonide over the other corticosteroids. These conclusions reflect the evidence presented and appear to be reliable.

Authors' objectives

To determine the comparative efficacy of corticosteroid injections for intra-articular or periarticular soft tissue injections.

Searching

MEDLINE, Cochrane Database of Systematic Reviews, DARE, and Cochrane Central Register of Controlled Trials (CENTRAL) were searched in October or November 2013, for articles in English. Search terms and a search strategy were reported. Citation tracking and manual searches of bibliographies of relevant publications were conducted.

Study selection

Double-blind randomised controlled trials (RCTs) comparing corticosteroid injections, administered to peripheral joints or periarticular soft tissues, were eligible for inclusion. Trials had to include adults or children diagnosed with inflammatory arthritis, osteoarthritis, or a periarticular regional pain syndrome. Trials of spinal injections were excluded.

The included trials were published between 1979 and 2009. The most commonly evaluated corticosteroids were methylprednisolone acetate, triamcinolone, and betamethasone. Most injections were administered to the knees or shoulders. Patient characteristics and outcome measures varied across the trials.



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the knees or shoulders. Patient characteristics and outcome measures varied across the trials.

Two reviewers independently selected trials for inclusion. Any discrepancies were resolved by consensus.

Assessment of study quality

Two reviewers independently assessed trial quality by assigning yes or no ratings for: specific inclusion and exclusion criteria; valid patient randomisation; blinding of patients; blinding of injectors; blinding of assessors; and power analysis. The thresholds used to define the quality of the trials were not reported.

Data extraction

The outcomes were extracted independently by two reviewers. None of the outcomes were specified before study selection and data extraction.

Methods of synthesis

The data were synthesised in a narrative.

Results of the review

Seven RCTs were included, with 306 patients (range 23 to 85). All seven RCTs were rated as high quality. One did not report blinding of assessors, and one did not report a power analysis. Two trials did not report blinding of the injector. Follow-up ranged from two weeks to 24 months.

Compared with methylprednisolone or prednisolone-t-butyl acetate, for rheumatoid arthritis of the knee, triamcinolone hexacetonide demonstrated statistically significantly faster pain relief at day seven (one RCT; 30 patients). A similar result was shown when triamcinolone hexacetonide for knee osteoarthritis was compared with methylprednisolone at week three (one RCT; 57 patients). Another trial (24 patients) demonstrated significantly faster pain relief with methylprednisolone for rotator cuff tendonitis, compared with triamcinolone acetonide, at two weeks. All three trials demonstrated similar long-term efficacy of the corticosteroids for pain relief.

In trials of patients with knee arthritis, triamcinolone hexacetonide was found to have significantly better efficacy for pain relief than triamcinolone acetonide at 24 months (one RCT; 43 patients), and betamethasone at day 42 (one RCT; 23 patients). Occasional injection site pain, skin atrophy, and rise in blood glucose were the only adverse effects reported. Further results were reported.

Authors' conclusions

There was insufficient evidence on the comparative efficacy of different corticosteroid injections; a few trials favoured triamcinolone hexacetonide over other corticosteroids.

CRD commentary

The review question and inclusion criteria were clear. Various relevant databases were searched, but the English-language restriction means that some trials may have been missed. All the review processes were duplicated, reducing the risk of reviewer error and bias. The quality assessment criteria were relevant for RCTs, but some important issues were not considered, such as completeness of outcome data and





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betamethasone at day 42 (one RCT; 23 patients). Occasional injection site pain, skin atrophy, and rise in blood glucose were the only adverse effects reported. Further results were reported.

Authors' conclusions

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CRD commentary

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The authors' conclusions reflect the evidence presented and appear to be reliable.

Implications of the review for practice and research

Practice: The authors did not state any implications for clinical practice.

Research: The authors stated that trials were needed to investigate the comparative efficacy of the different corticosteroid injections for articular and periarticular pain. These trials should have specific outcome measures to facilitate evidence-based practice. Further systematic reviews were recommended to assess the adverse effects of different corticosteroid injections in specific populations, such as pregnant patients, patients with diabetes, and immune-compromised patients.

Funding

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Bibliographic details

Garg N, Perry L, Deodhar A. Intra-articular and soft tissue injections, a systematic review of relative efficacy of various corticosteroids. Clinical Rheumatology 2014: epub

PubMedID

24651914

DOI

10.1007/s10067-014-2572-8

Indexing Status

Subject indexing assigned by NLM

MeSH



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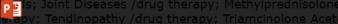




















Journal of Clinical Epidemiology

Journal of Clinical Epidemiology 69 (2016) 225-234

ROBIS: A new tool to assess risk of bias in systematic reviews was developed

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Table 1. Summary of phase 2 ROBIS domains, phase 3, and signaling questions

		Phas	se 2		Phase 3
	Study eligibility criteria	2. Identification and selection of studies	3. Data collection and study appraisal	4. Synthesis and findings	Risk of bias in the review
Signaling questions	1.1 Did the review adhere to predefined objectives and eligibility criteria?	2.1 Did the search include an appropriate range of databases/ electronic sources for published and unpublished reports?	3.1. Were efforts made to minimize error in data collection?	4.1. Did the synthesis include all studies that it should?	A. Did the interpretation of findings address all of the concerns identified in domains 1 to 4?
	1.2 Were the eligibility criteria appropriate for the review question?	2.2 Were methods additional to database searching used to identify relevant reports?	3.2. Were sufficient study characteristics available for both review authors and readers to be able to interpret the results?	4.2. Were all predefined analyses reported or departures explained?	B. Was the relevance of identified studies to the review's research question appropriately considered?
	1.3 Were eligibility criteria unambiguous?	2.3 Were the terms and structure of the search strategy likely to retrieve as many eligible studies as possible?	3.3. Were all relevant study results collected for use in the synthesis?	4.3. Was the synthesis appropriate given the nature and similarity in the research questions, study designs, and outcomes across included studies?	C. Did the reviewers avoid emphasizing results on the basis of their statistical significance?
	1.4 Were all restrictions in eligibility criteria based on study characteristics appropriate?	2.4 Were restrictions based on date, publication format, or language appropriate?	3.4. Was risk of bias (or methodologic quality) formally assessed using appropriate criteria?		
	1.5 Were any restrictions in eligibility criteria based on sources of information appropriate?	2.5 Were efforts made to minimize error in selection of studies?	3.5. Were efforts made to minimize error in risk of bias assessment?	4.5. Were the findings robust, for example, as demonstrated through funnel plot or sensitivity analyses? 4.6. Were biases in primary studies minimal or addressed in the synthesis?	
Judgment	Concerns regarding specification of study eligibility criteria	Concerns regarding methods used to identify and/or select studies	Concerns regarding methods used to collect data and appraise studies	Concerns regarding the synthesis	Risk of bias in the review





Difference between AMSTAR 2 and ROBIS

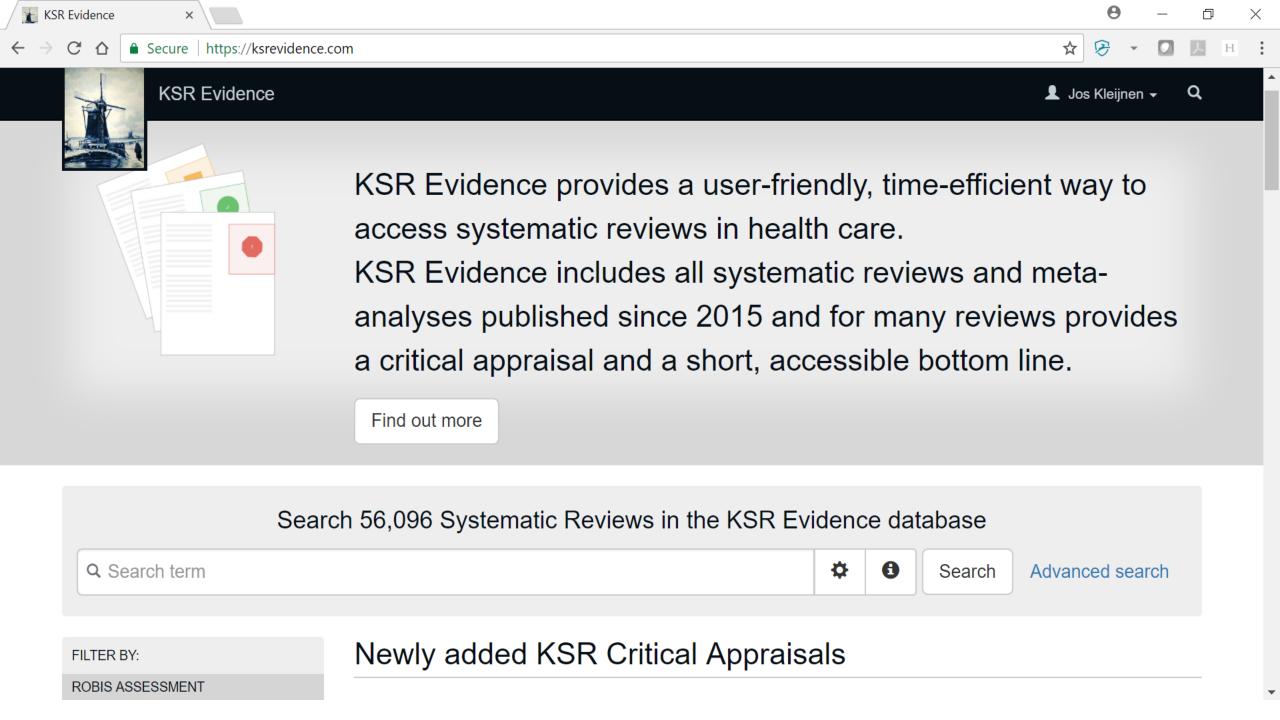


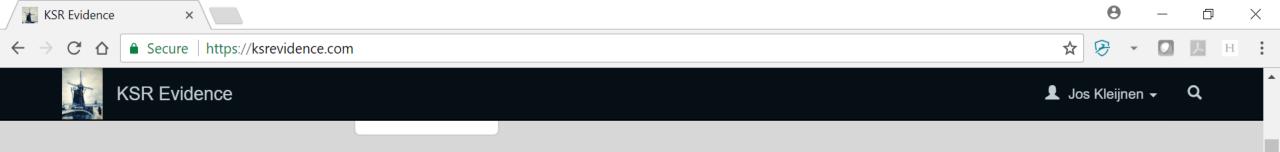
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AMSTAR 2 provides a broad assessment of quality, including flaws that may have arisen through poor conduct of the review (with uncertain impact on findings). In this respect it differs from another instrument, the Risk Of Bias In Systematic reviews (ROBIS).

ROBIS is a sophisticated three phase instrument that focuses specifically on the risk of bias introduced by the conduct of the review. It covers most types of research question, including diagnosis, prognosis, and aetiology.

In contrast, AMSTAR 2 is intended to be used for reviews of healthcare interventions. Inevitably there is overlap in the items considered by ROBIS and AMSTAR 2; indeed, two investigators (BCR, BJS) were involved in the development of both.





Search 56,096 Systematic Reviews in the KSR Evidence database

Q Search term





Search

Advanced search

FILTER BY:

ROBIS ASSESSMENT

- Low risk of bias (1433)
- Unclear risk of bias (261)
- High risk of bias (3158)
- ? Unassessed (51244)

PUBLICATION DATE

2018 (12)

2017 (10081)

2016 (14430)

2015 (15981)

2014 (4674)

Newly added KSR Critical Appraisals

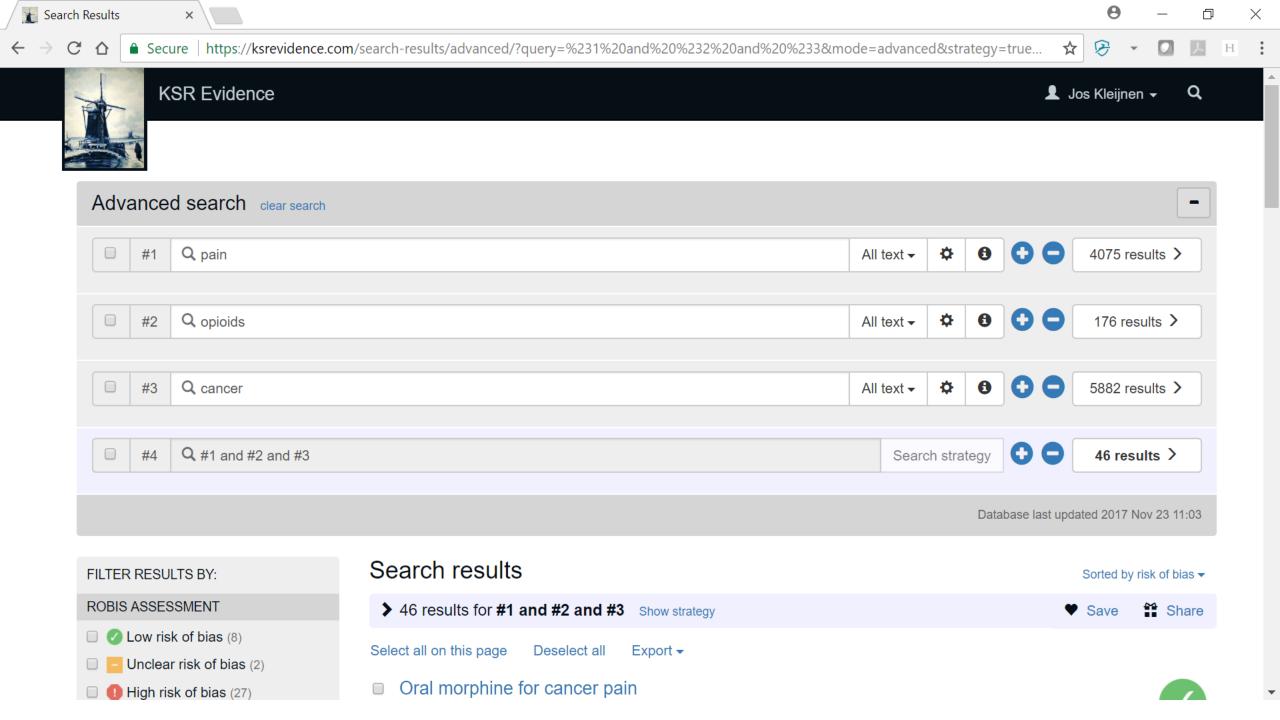
Trigonal versus extratrigonal botulinum toxin-A: a systematic review and meta-analysis of efficacy and adverse events

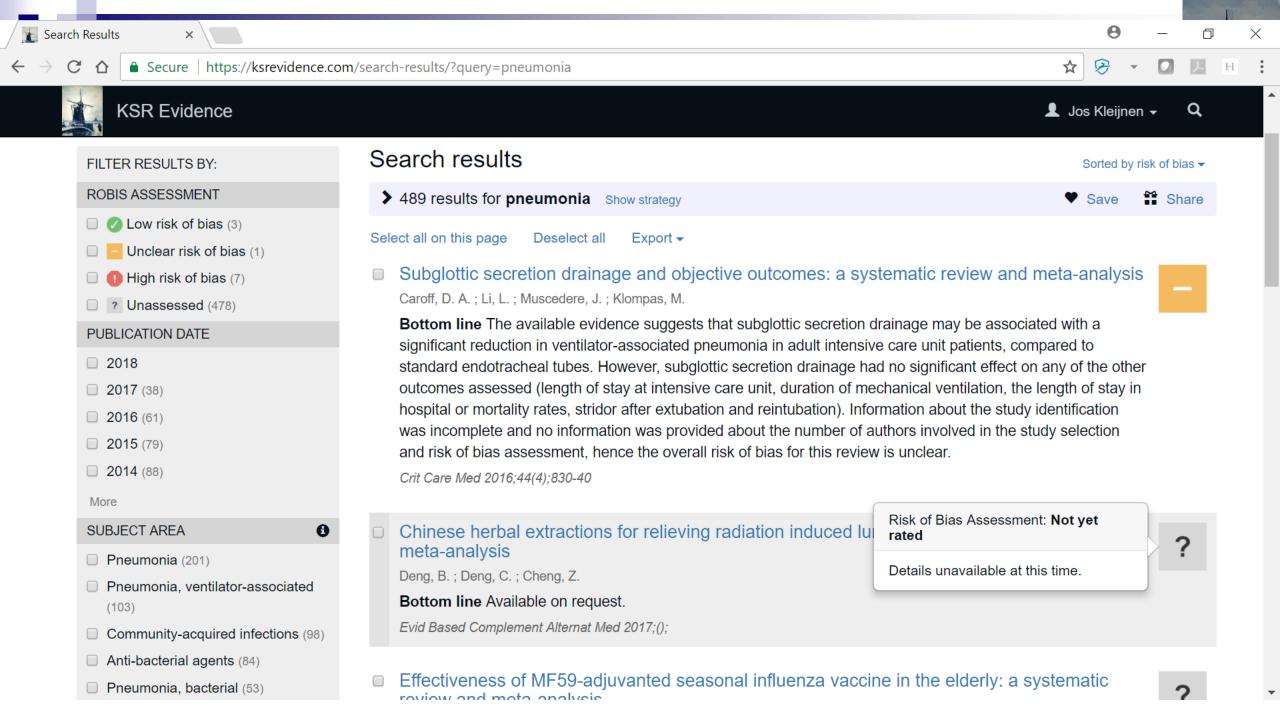


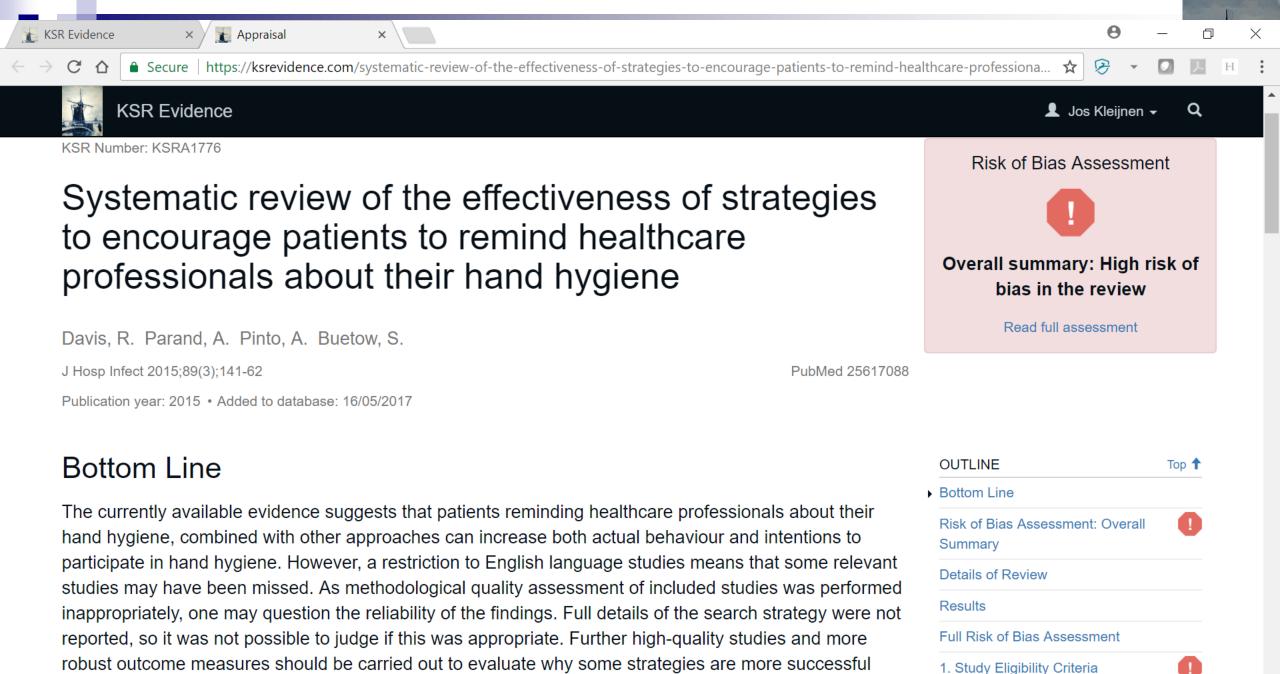
Davis, N. F.; Burke, J. P.; Redmond, E. J.; Elamin, S.; Brady, C. M.; Flood, H. D.

Bottom line The currently available evidence suggests that there is no significant difference in terms of frequency of adverse events and short-term efficacy rates between trigonal and extratrigonal injections. As the number of reviewers involved in the data extraction was not reported, reviewer error and bias could not be ruled out. As methodological quality assessment of the included studies was not performed, one may question the reliability of the findings. The findings should be reviewed with caution because of the relatively small number of studies included in the review and some outcomes were poorly defined in some studies, which may limit standardised comparisons between studies. Full details of the search strategy were not reported, so it was not possible to judge if this was appropriate. The ideal site for administering intravesical botulinum toxin-A remains controversial and more high-quality trials are required to establish the most effective site of injection for intravesical botulinum toxin-A.

Int Urogynecol J 2015;26(3);313-9

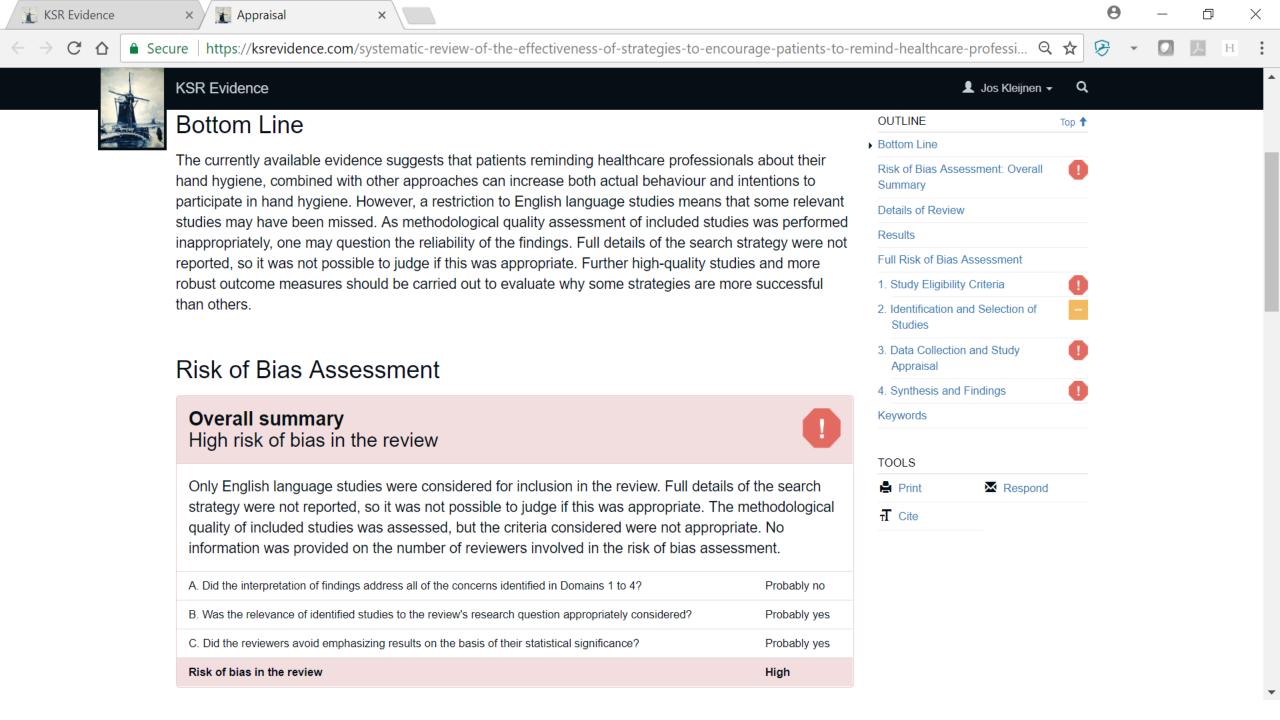






2 Identification and Selection of

than others.













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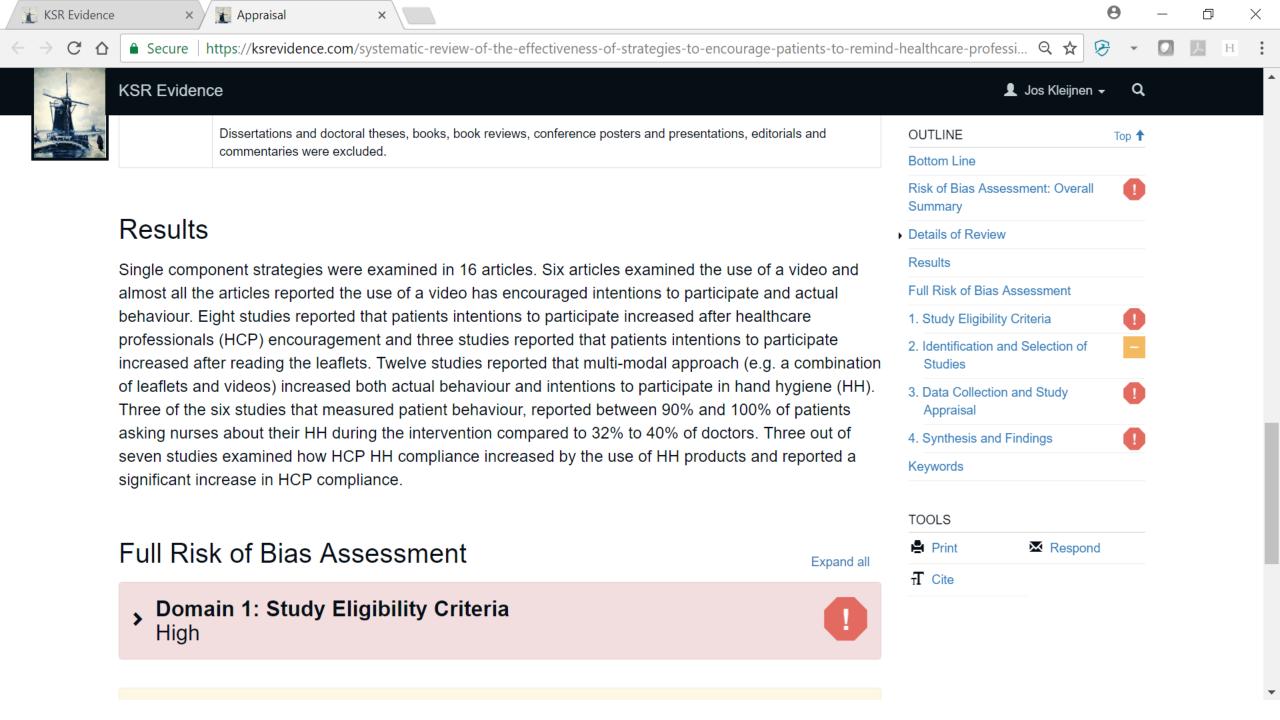


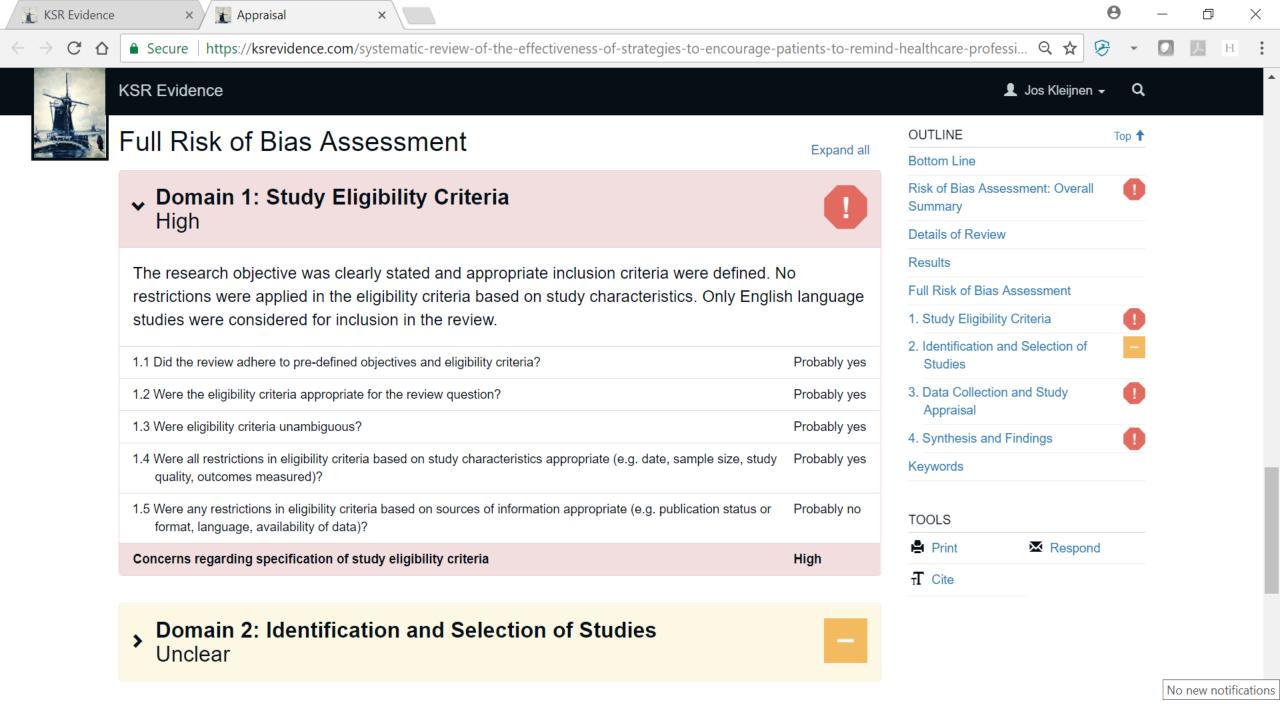
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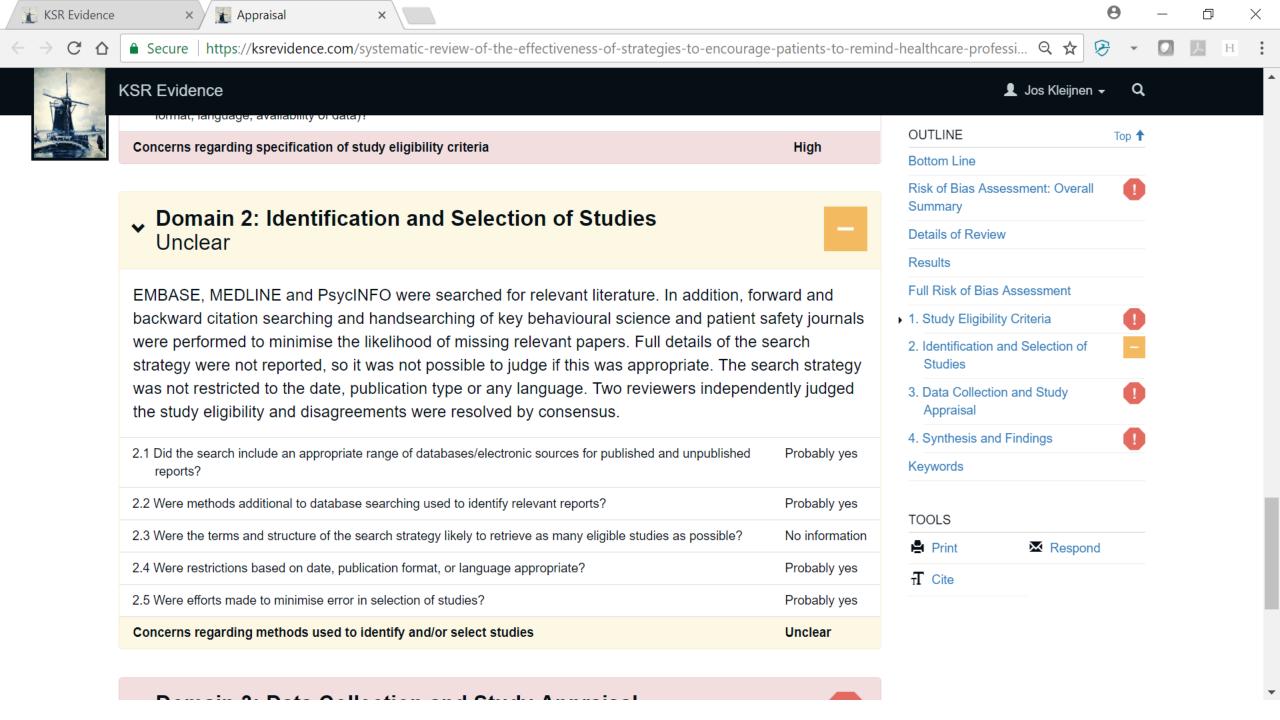
Details of Review

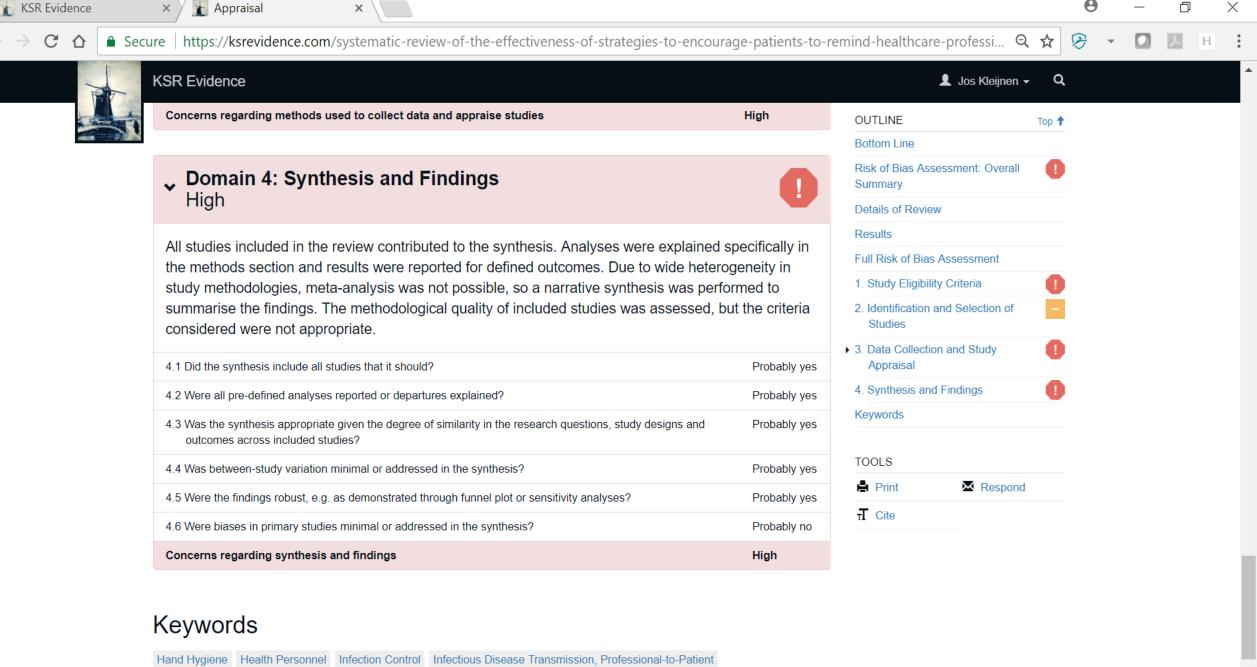
		Bottom Line
Number of studies	28	Risk of Bias Assess Summary
Number of participants	Unclear	▶ Details of Review
l act accush	A.,	Results
Last search date	August 2013	Full Risk of Bias Ass
Review type	Intervention	Study Eligibility C
Objective	To evaluate the effectiveness of strategies aimed at increasing patient involvement in reminding healthcare professionals about their hand hygiene.	Identification and Studies
		3. Data Collection a
Population	Healthcare professionals and patients (the term 'patient' was used broadly to encompass patients and members of the public that were being asked their views from the position of being a patient in hospital). Both 'lay' and 'expert'	Appraisal
	patients (defined as patients that worked in a clinical profession) were included.	4. Synthesis and Fir
Interventions	Strategies that had been developed and been implemented and tested on hospital wards.	Keywords
	Strategies that had been developed, but not implemented and tested on hospital wards.	TOOLS
Comparator	NA.	Print
Outcome	Increasing both actual behaviour and intentions to participate in hand hygiene.	τ T Cite
Study design	Empirical studies (randomised controlled trials, cohort and case-control studies).	
	Dissertations and doctoral theses, books, book reviews, conference posters and presentations, editorials and commentaries were excluded.	

OUTLINE	Тор
Bottom Line	
Risk of Bias Assessment: Overall Summary	
Details of Review	
Results	
Full Risk of Bias Assessment	
1. Study Eligibility Criteria	
Identification and Selection of Studies	
Data Collection and Study Appraisal	
4. Synthesis and Findings	
Keywords	
TOOLS	
₽ Print Respond	
⊤T Cite	









Patient Participation Reminder Systems



KSR Evidence



- Includes all systematic reviews in health care
- Not only intervention reviews but also diagnosis, prognosis, aetiology
- Also includes appraisals of Cochrane Reviews
- Aims to add references to all systematic reviews, and approximately 4,000 appraisals per year
- Higher impact reviews prioritised for full appraisal (but we have an in-house true random sample of 1,000 appraisals per year for methodological research)
- User request appraisals option for €25 admin fee → Guideline developers!
- Subscription based, starting January 2018
- Until then free login with username/email: ksrevidence and password: evidence
- www.ksrevidence.com