



# Finding systematic reviews on pain: building the KSR Pain Evidence database

Kate Misso<sup>1</sup>, Lisa Stirk<sup>1</sup>, Marie Westwood<sup>1</sup>, Sohan Deshpande<sup>1</sup>, Jeanette Kleijnen<sup>1</sup>, Antony McLellan<sup>1</sup> & Jos Kleijnen<sup>1,2</sup>

<sup>1</sup>Kleijnen Systematic Reviews Ltd, York

<sup>2</sup>Maastricht University, the Netherlands

Contact author: [kate@systematic-reviews.com](mailto:kate@systematic-reviews.com)

Kleijnen Systematic Reviews Ltd

## BACKGROUND

Despite advances in the conduct, reporting and indexing of systematic reviews (SRs) publications, challenges remain for clinicians in understanding reported results, interpreting the essential “bottom line” and applying this to clinical practice and patient care. There is presently no current, comprehensive source of appraised SRs for end-users. KSR Pain Evidence aims to do that and much more as a single source of value-added critical appraisals of the best SR evidence in pain management. Relevant randomised controlled trials from PubMed are also included.

## OBJECTIVE

To identify SRs on pain management from a comprehensive range of resources, in order to build a database of critically appraised SRs with clinical bottom lines. To extend the process to appraise SRs on other topics, including diabetes, dementia and lung disease.

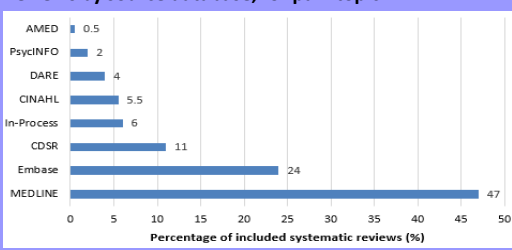
## METHODS

Embase, Medline, In-Process Citations, Daily Update, CDSR, PsycINFO, AMED, DARE and CINAHL were searched to retrieve SRs on pain and pain relief. A highly sensitive SR filter was designed for this purpose to maximise recall of candidate references. Searches were limited from 2010 onwards. 26,505 results were retrieved and deduplicated using EndNote X6 (up to 03.09.15). Experienced Information Specialists sifted 13,156 results to remove non-SR records, reviews of reviews, reviews of guidelines and non-pain records. Reviewers critically appraised reviews, using an adaption of the ROBIS tool.<sup>1</sup> For each review, an overall risk of bias summary and clinical bottom line statement were written. As of August 2015, the KSR Pain Evidence database comprises 2,922 completed critical appraisals.

## RESULTS

Embase contributed 36% of retrieved records (prior to deduplication), 27% of appraised records, and 24% of included reviews. 76% of considered SR records were retrieved from CINAHL, Medline and Embase (Figure 1). 53% of included SRs came from sources other than Medline (Ovid). Medline and Embase (Ovid) together only identified 71% of included reviews. CDSR, Medline and DARE together retrieved 62% of includes.

Figure 1: Percentage contribution of included systematic reviews by source database, for pain topic

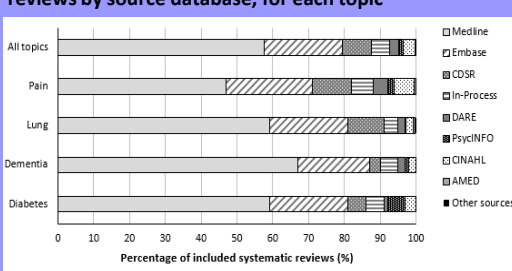


The screening inclusion rate for the topic of pain was 22%. Replication of this process in three other topics demonstrated a similar inclusion rate across all databases (21-25%). The most useful databases for each topic varied slightly across topics (see Figure 2).

## CONCLUSIONS

Comprehensive searches of multiple sources, in combination with a sensitive search strategy, are essential to ensure robust retrieval of SRs on pain. Relying only on Medline could miss 53% of SRs, HTAs and meta-analyses about pain. Searching CDSR, Medline and DARE identified 62% on included reviews, therefore it was worthwhile to include other sources to retrieve a further 38% yield.

Figure 2: Percentage contribution of included systematic reviews by source database, for each topic



The process of undertaking sensitive and comprehensive searches of multiple databases, screening results and critically appraising publications using a newly developed, validated tool, has significant time and resource implications for clinicians. KSR Pain Evidence has been developed to bring together critical appraisals of SRs, identified by systematic searches of a wide range of resources, and presented in a concise and clinically relevant format.

In addition to KSR Pain Evidence, this project has been expanded to include SRs on diabetes, dementia and lung disease. Work is underway to add ophthalmology, mental health, cancer, infectious diseases, oral health and child health. In due course, the database will include reviews on all topics.

## FURTHER INFORMATION

This work is funded entirely by Kleijnen Systematic Reviews Ltd. To find out more about KSR Pain Evidence and register for a free trial, please email [info@evidentiapublishing.com](mailto:info@evidentiapublishing.com) or visit <http://evidentiapublishing.com/ksrpainevidence> For additional information, please visit: <http://www.systematic-reviews.com/ksr-evidence/>

## REFERENCES

[1] Whiting P, Savovic J, Higgins JP, Caldwell DM, Reeves BC, Shea B, et al. ROBIS: A new tool to assess risk of bias in systematic reviews was developed. J Clin Epidemiol 2015. Also see: <http://www.robis-tool.info/>