

The NICE OECD Countries Geographic Search Filters: Finding Evidence About OECD Countries from MEDLINE and Embase (Ovid) Effectively and Efficiently

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Abstract

Introduction

Evidence about OECD countries is often required for research topics. Previously, there were no validated search filters for OECD countries. This meant that geographic restrictions were not routinely applied to database search strategies for research topics about OECD countries. As a result, the searches for such topics were inefficient because relevant evidence had to be manually selected from evidence about all countries.

Information specialists from the United Kingdom's (UK) National Institute for Health and Care Excellence (NICE) undertook a project to create search filters with the aim of improving literature searches for research topics that require evidence about OECD countries. The objectives were to develop validated geographic search filters that find evidence about OECD countries from MEDLINE and Embase (Ovid) effectively and efficiently.

Methods

The filters consist of a set of subject headings for non-OECD country subject headings that is applied to a separate set of OECD country subject headings with the NOT Boolean operator. The filters work by excluding database records that have only non-OECD subject headings and retaining all the remaining records to find OECD country evidence. They must be applied to search strategies with the NOT Boolean operator.

To validate the filters, two gold standard (GS) sets were created using OECD country references which had informed 30 NICE guidelines. The MEDLINE GS set contained 2,065 references and the Embase GS set contained 2,023 references.

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The filters were validated by calculating their recall against the references in their respective GS sets.

A case study was then conducted to evaluate the filters' efficiency by calculating their number-needed-to-read (NNR) in 'real-life' searches. The original MEDLINE and Embase search strategies for three NICE guideline reviews that were based on OECD countries evidence were re-run (NG103, NG140, NG146). The recall and NNR of the original strategies for retrieving the included references for the reviews was calculated. The OECD countries filters were then applied to the strategies and their recall and NNR was compared to original search strategies.

Results

Both filters achieved 99.95% recall against the GS sets. The filters each missed one reference that concerned both an OECD country (Canada) and non-OECD countries (low-and-middle-income-countries).

In the case study, both filters achieved 100% recall for all the included references from the three NICE guideline reviews. For NG103, the MEDLINE filter reduced NNR from 256 to 232 and from 373 to 341 by the Embase filter. For NG140, the MEDLINE filter reduced NNR from 38 to 27 and from 101 to 76 by the Embase filter. For NG146, the MEDLINE filter reduced NNR from 631 to 591 and from 989 to 925 by the Embase filter.

Discussion

The NICE OECD countries filters are the first validated filters for finding evidence about OECD countries. They can save time for research topics about OECD countries because they find most evidence about OECD countries from MEDLINE and Embase while reducing search result volumes.