

# Seeking ISPOR Abstracts: Is Searching Embase Enough?

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## Background

- Systematic literature reviews (SLRs) traditionally search for studies in electronic databases, such as MEDLINE and Embase, and grey literature in the form of recent, relevant conference abstracts.
- While Embase routinely indexes many conferences abstracts, there are concerns that it may not contain all such records, owing to delays in indexing. If so, hand-searching of conference websites or scientific journals for conference abstracts may be a more reliable way to identify this information.
- To investigate this issue, we compared yields for International Society for Pharmacoeconomics and Outcomes Research (ISPOR) European Union (EU) meeting abstracts on three platforms: Embase, published abstracts in the *Value in Health* journal, as well as the ISPOR website.

## Objectives

- To compare searches of Embase with those of other sources with respect to their yields of abstracts presented at ISPOR EU meetings on diseases reported on very frequently (COVID-19), less frequently (prostate cancer), or rarely (cystic fibrosis)

## Methods

- Searches for the ISPOR EU meetings in 2020 and 2021 were performed in Embase (via Ovid), *Value in Health* journal (via Science Direct), and ISPOR websites for three conditions.
- Search terms and strings were developed for "prostate cancer," "COVID-19," and "cystic fibrosis." (Table 1).
- For Embase, a search for all ISPOR abstracts was performed and exported to EndNote, where abstracts were identified using the search function. This was found to retrieve more abstracts than by using the search string "ISPOR Europe.cf.cg.cn."
- Due to indexing timelines in Ovid, the search was run from 2020 to 2022 to pick up the 2020 and the 2021 meetings.
- Since initial testing of Boolean searches with more than three combined terms on the ISPOR website often resulted in spurious numbers, we searched each term separately. For example, running "coronavirus OR COVID OR COVID19" resulted in 10 hits. However, running "coronavirus OR COVID OR COVID19 OR COV2" resulted in zero hits.
- Embase and *Value in Health* hits were exported to EndNote for removal of duplicates and comparisons.

Table 1. Terms Searched in Each Database

Terms	Embase* (Ovid algorithm)	Value in Health	ISPOR website
Prostate cancer	((prostate or prostatic) adj4 (cancer or neoplas\$ or carcinoma or tumor or tumors or tumours or tumours)).ti,ab	Prostate	Prostate
Cystic fibrosis	exp cystic fibrosis/ or (cystic fibrosis or pancreas fibrosis or mucoviscidosis or mucoviscoidosis or fibrocystic disease or pancreatic cystic disease or pancreas cystic disease).ti,ab	Cystic fibrosis; mucoviscidos*	Cystic fibrosis; mucoviscidos*
COVID-19	exp coronavirus disease 2019/ or (covid or covid19 or covid-19 or coronavirus or SARS-CoV2 or SARS-CoV-2 or severe acute respiratory syndrome CoV-2 infection).ti,ab.	COVID; COVID-19; COVID19; CoV-2; COV2; coronavirus	COVID; COVID-19; COVID19; CoV-2; CoV2; coronavirus

\* Embase searches also included filters for year: year="2020-Current"

Abbreviation: ISPOR = International Society for Pharmacoeconomics and Outcomes Research

- The number of hits retrieved were compared across the search platforms for each indication separately.

Figure 1. Process for comparing search platforms

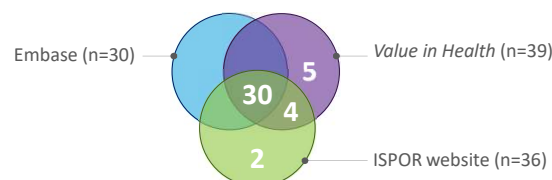


## Results

### Prostate Cancer

- More hits were obtained from the searches in *Value in Health* (n=39) compared with Embase (n=30) and the ISPOR website (n=36). All Embase hits were identified in *Value in Health* and ISPOR website searches. In addition to the three abstracts in the *Value in Health* search, there were another four discrepancies between the platforms when compared with the ISPOR website search (Figure 2).

Figure 2. Study Overlap between Platforms for Prostate Cancer

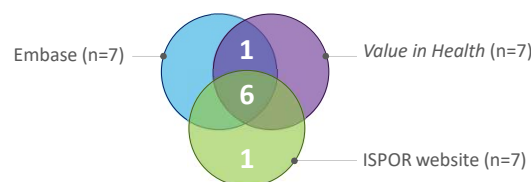


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### Cystic Fibrosis

- The same number of abstracts were identified in each platform (n=7). Embase and *Value in Health* identified the same abstracts, but these had two discrepancies compared with the ISPOR website (Figure 3).

Figure 3. Study Overlap between Platforms for Cystic Fibrosis

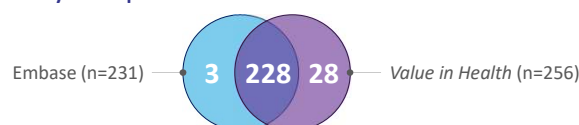


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### COVID-19

- For COVID-19, more hits were obtained from the searches in the ISPOR website compared with *Value in Health* and Embase. There were 31 discrepancies between Embase and *Value in Health*. As the ISPOR website does not support exporting to a reference manager, duplicates across the searches for the different "COVID-19" terms were difficult to quantify, and comparison with the other platforms was not performed. (Figure 4).

Figure 4. Study Overlap between Embase and Value in Health for COVID-19



## Discussion

- This research supports concerns that Embase does not contain all conference abstracts. The number of hits obtained for each search platform varied for each area of research and appears to depend on the volume of data available.
- We observed that rarely reported diseases resulted in fewer discrepancies compared with more frequently reported diseases.
- Searches of the *Value in Health* and ISPOR websites are more time-consuming than searching Embase as they require more steps (e.g., running several searches for synonyms, exporting to EndNote, deduplication)
- There were several limitations associated with this research:
  - For the comparison of hits for COVID-19, the extent of the discrepancy between the ISPOR website and the other platforms was not quantified.
  - The ISPOR website and *Value in Health* did not allow for searches of the same complexity as for Embase.
  - Sensitivity of search engines also adds to the complexity of comparing these approaches.
  - A more precise search strategy can be run in Embase than in *Value in Health* and the ISPOR websites

## Conclusions

- The findings demonstrate discrepancies in abstract retrieval between Embase, *Value in Health*, and the ISPOR website for ISPOR EU; if possible, several platforms should be searched for completeness. This assessment was based on three medical conditions, and further research is needed to establish whether the results for other disease topics and conferences would display similar trends.