

Searching skills of palliative care clinicians

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Why searching skills?

Many reasons why we might need information.

- Unfamiliar clinical situation
- Staying up to date with new evidence
- Getting involved with research or teaching
- Patients and families with questions.....

Search mediates retrieval

Why this study?

Part of a series of studies on access to information

- Review of currency and performance of Palliative Care Search Filter
- Looking at where palliative care clinicians look for information
- Understanding searching competence in bibliographic databases



What do we know about searching?

- Expanding literature base
- Clinicians report lack of time and lack of expertise
- Information skills often not retained post graduation
- Log query studies show short strings and little use of Boolean operators



Aims

- To analyse content and structure of searches created by palliative care clinicians
- To quantify the effectiveness of each search
- To compare searcher competence/confidence with performance
- To compare retrieval of clinician searches with Palliative Care Search Filter

Methods: Clinician Searches

- Two groups created & stored search in PubMed
 - Enrolled in postgraduate palliative care topic at FU (n=19)
 - Delegates at PCA Conference September 2011 (n=18)
- ‘..create a search which you believe will retrieve as many articles as possible relevant to palliative care generally..’
- Search reviewed by health librarian for technical errors and conceptual limitations(eg Boolean logic, typos, truncations, limits, synonyms etc)
- Survey on self-assessed confidence and competence

Methods: Retrieval Performance

- Created Palliative Care Citation Set
 - National Advisory Group confirmed a set of 25 systematic reviews as relevant to palliative care
 - Included studies retrieval on Medline included (n=663)
- Tested how many of these citations were retrieved by running each search independently and combining with citation set using AND

Results: Search Construction

- 37 searches constructed and analysed
- 134 search terms used across all searches
- 4/37 impaired by typographical errors
- 10 limited their search by AND to a specific domain or element (eg spirituality)
- Of most concern... 8/37 (22%) used AND not OR in combining synonyms for palliative care

Examples of Common Errors

Incorrect use of Boolean operators	Palliative care AND hospice AND terminal care AND end of life AND quality of life AND holistic care AND total care AND dying AND death AND symptom control AND psychological issues AND bereavement AND grief AND family care
Inappropriate search syntax for PubMed	Palliative care/sense of identity
Unnecessary use of limits in creating a broad, sensitive search	Palliative care Limits: English, All Child: 0-18 years, All Adult: 19+ years, published in the last 3 years
Spelling errors	life limiting illnes', 'psycosocial*', and 'palliaitve care'

Results: Retrieval Efficiency

- Mean number of 663 items retrieved by clinicians was 166 (25%)
- Range retrieved items: 0 - 623
- Only 8/37 retrieved more than 50% of the test set
- Palliative Care Search Filter retrieved 451 items



Results: Confidence and competence

- 70% of clinicians used PubMed sometimes or always
- Over half were confident in their PubMed searching skills
- 28/37 (76%) believed they would find more than 50% of the articles
- In reality... only 8/37 (22%) found more than half

Results: Not just retrieval

- Several searches actually were very sensitive and retrieved significant numbers of the citation set

One search retrieved 623/663 (94%)

BUT it was not very precise. When you ran this search in PubMed it retrieves 4, 490,734 items.

WHY? It included patient as a term.

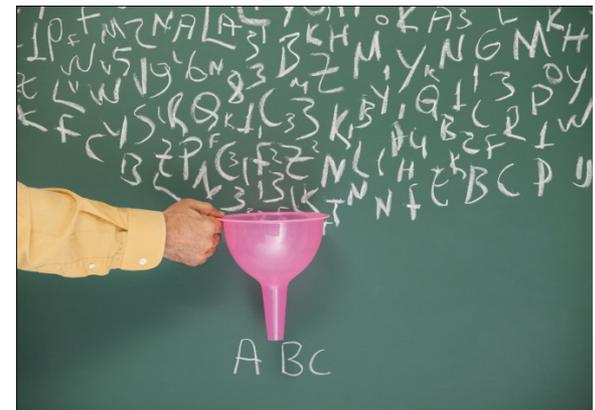
#	Search strategy	No. PubMed citations retrieved	No. (%) of test set citations retrieved
1	Terminal disease OR terminal care OR end of life care OR palliative care OR death OR dying OR patient OR palliation OR terminal illness	4,490,734	623 (94%)
2	Palliative OR end of life OR terminal OR end stage OR hospice OR life limiting OR euthanasia OR death OR dying OR bereavement OR grieving OR grief OR morphine OR payne OR higginson OR currow OR kristjanson OR opioid OR saunders OR balfour mount OR subcutaneous infusion	1,063,288	490 (74%)
3	Palliative care OR end of life care OR terminal care OR death OR death management OR hospice care OR domicillary palliative care OR institutional palliative care OR terminal care OR endstage chronic disease care OR end stage terminal illness care	553,517	464 (70%)

Discussion

- Clinicians may not be finding relevant literature even when confident they have found it. Overconfidence can be an issue.
- Searching is a technical skill. It may not be realistic to expect everyone to have these skills. However, there are many opportunities to improve your skills.
- Searching resources, such as the Palliative Care Search Filter, can be an effective option for managing the palliative care evidence base.
- Retrieval systems are becoming more sophisticated

Conclusion

- Being able to find evidence is important
- Being aware that retrieval is affected by your search construction is important
- Using searching resources such as the Palliative Care Search Filter may be an efficient and effective way to access palliative care evidence



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