



**UHL Clinical
Librarian Service**

"bringing you the evidence"

Critical appraisal of search strategies - a pragmatic approach

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Disclaimer



- Pragmatic = dealing with things sensibly and realistically in a way that is based on practical rather than theoretical considerations.
- Do shout out if I talk to fast (I find this an interesting topic, so always a risk of speedy talking). Also if I use any UK abbreviations. I am very happy to slow down and to clarify anything.





This session may cover similar areas to other sessions during this conference

- CEC 5: PRESSing your search strategies and AMSTARing your systematic reviews: have a go session. - Alison Bethel and Morwenna Rogers
- Quality and reporting of literature search strategies in systematic reviews published by London School of Hygiene & Tropical Medicine affiliated authors: an assessment using PRISMA, AMSTAR and PRESS criteria - Jane Falconer and Kim Coles
- Please accept our apologies for this! We were not aware of this duplication when we put in our abstract and do not know in detail what will have been said at the other, very excellent, sessions! Try and look at this as “reinforcement of prior learning”.





This workshop is based on several things

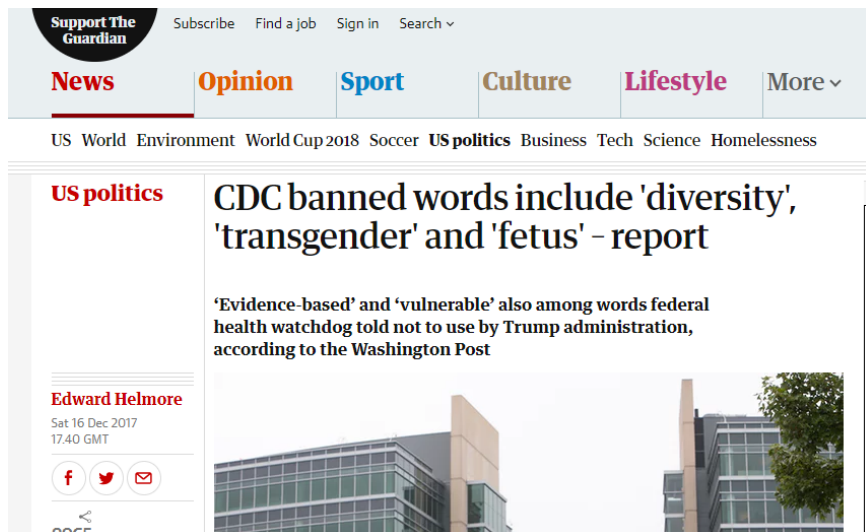


- 16 years of CL experience
- The combined knowledge and experience of everyone in the room
- And...





Some excellent evidence (used rather pragmatically – big apologies to the authors, and no apologies to Donald Trump)



- PRESS Peer Review of Electronic Search Strategies: 2015 Guideline Explanation and Elaboration (PRESS E&E) January 2016 Jessie McGowan Margaret Sampson Douglas M. Salzwedel Elise Cogo Vicki Foerster Carol Lefebvre

- [https://www.cadth.ca/sites/default/files/pdf/CP0015 PRESS Update Report 2016.pdf](https://www.cadth.ca/sites/default/files/pdf/CP0015_PRESS_Update_Report_2016.pdf)

- <https://www.theguardian.com/us-news/2017/dec/16/cdc-banned-words-fetus-transgender-diversity>





It does happen in real life...

The use of diagnostics filters on the Medline search should be carefully considered as it is not recommended by Cochrane. However, if filters are to be used despite this it would be more consistent to use them across all the datasets searched where appropriate. Limiting by study type, e.g. RCTs, quasi RCTs and prospective cohort studies, is an alternate option given that these are the types of study being considered for this review.

The search strategies used for the clinical trial registries were brief and could have included a wider range of terms.

Medline Search – Line 4 The information specialist may wish to consider additional terms, for example, terms relating to lungs (which are also affected by CFRD).

Medline Search – Line 13 They may also wish to consider adding in subject headings for all terms searched, for example, insulin.

Medline Search – Line 15 Synonyms are used where appropriate although further use may be relevant, for example, plain English for post-prandial (after eating).

Feedback from Cochrane Diagnostic Test Accuracy Information Specialist, also got it from Information Specialist for Cystic Fibrosis and Genetic Disorders

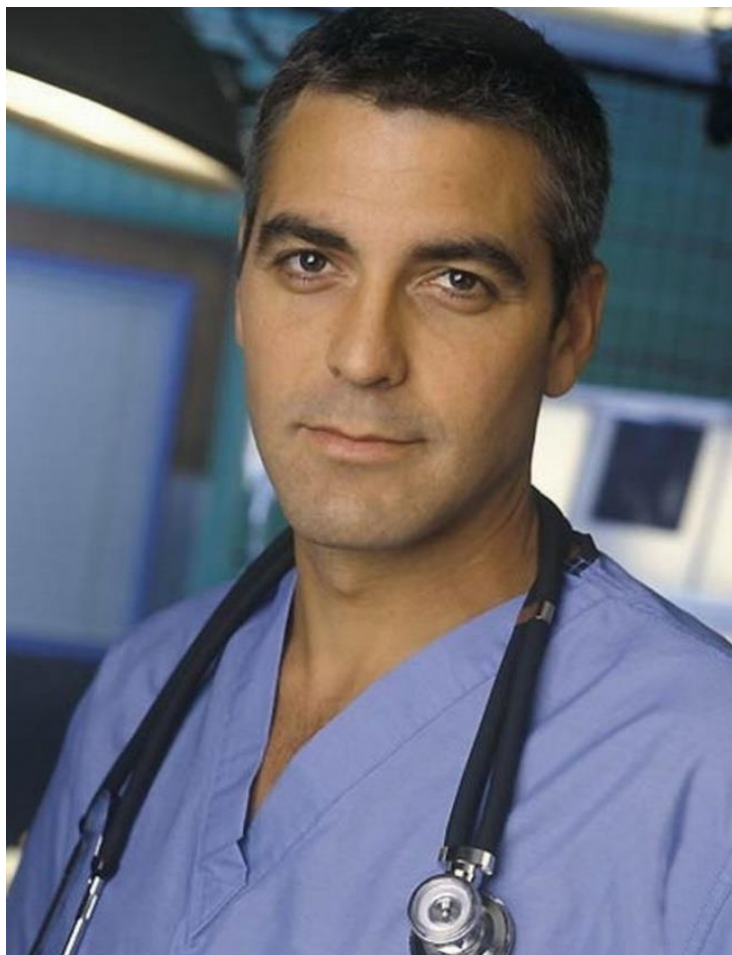
Ahmed M, Fox R, Shinkins B, Sutton S, Tziaferi V, Gaillard EA. [Continuous glucose monitoring systems for the diagnosis of cystic fibrosis-related diabetes.](#)

Cochrane Database of Systematic Reviews 2018, Issue 2. Art. No.: CD012953. DOI: 10.1002/14651858.CD012953





So what are we going to do?



- Consider - are all searches the same i.e. does the context make a difference to the complexity of the search you perform and the resources you use?
- What sorts of searches do you do – what are they needed for, who asks you the questions, how soon do they need the information?
- We are going to use PRESS which is designed for looking at SR searches, but we will use it to look at some other searches too





Lets use PRESS!

- **Interventions to increase influenza vaccination rates of those 60 years and older in the community**
- It was designed for SRs but will it work for other styles of searches too?





Interventions to increase influenza vaccination rates of those 60 years and older in the community

<http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD005188.pub4/full>

- Appendix 1. MEDLINE (Ovid) search strategy
- 1 Influenza, Human/
2 exp Influenza A virus/
3 exp Influenzavirus B/
4 Influenzavirus C/
5 (influenza or flu or h1n1).tw.
6 or/1-5
7 exp Immunization/
8 exp Vaccines/
9 (immuni* or vaccin*).tw.
10 or/7-9
11 6 and 10
12 Influenza Vaccines/
13 11 or 12
14 exp aged/ or middle aged/
15 ((old* or age*) adj3 (people* or person* or adult* or women* or men* or citizen* or residen*)).tw.
16 (pension* or retire* or elderly or senior* or geriatric*).tw.
17 long-term care/ or nursing care/ or palliative care/
18 homes for the aged/ or nursing homes/
19 nursing home*.tw.
20 Hospitals/
21 residential facilities/ or assisted living facilities/
22 Health Services for the Aged/
23 (institution* adj3 elderly*).tw.
24 (aged care or hospice* or old people* home*).tw.
25 ("50 years or older" or "55 years or older" or "60 years or older" or "65 years or older" or "70 years or older" or "75 years or older" or "80 years or older").tw.
26 ("older than 50" or "older than 55" or "older than 60" or "older than 65" or "older than 70" or "older than 75" or "older than 80").tw.
27 or/14-26
28 13 and 27

- A Cochrane Review from May 2018





Why did they use .tw. Rather than .ti, ab. or .mp.

- The explanation below applies to Ovid not all databases – so handy tip to check this out before you use it! In Pubmed tw includes title, abstract, MESH, subheadings, pub types, substance names, personal names, secondary source ID and more!

Alternatively, the code **.tw.** (text word) can be used to simultaneously search the title and abstract,

For example:
chd.tw.





MP is default if you don't select map to subject heading in Ovid

[Basic Search](#) | [Find Citation](#) | [Search Tools](#) | [Search Fields](#) | **Advanced Search** | [Multi-Field Search](#)

▼ Selected Resources

Ovid Resources: [Ovid MEDLINE\(R\)](#) 1950 to April Week 2 2010

Keyword Author Title Journal

coronary heart disease

Search

▼ **Limits** *(Click to close)*

Map Term to Subject Heading

Figure 24: To search as keyword, make sure the Map Term box is not ticked

The field shortcut **.mp.** is then automatically applied, as shown in Figure. This command (meaning 'multiple posting') simultaneously searches the title, original title, abstract, substance word and subject heading word fields.





In your pack are several other searches

- I will allocate you all a first search to evaluate.
- When you have completed that search, please do another, and then another after that until I tell you that your time is up and we will feedback our thoughts what the checklist helped us to notice in each of the searches.
- Pip and I will circulate and offer any help we can.





Best Bet Search on Lidocaine

- <https://bestbets.org/bets/bet.php?id=2946>

Lidocaine with propofol to reduce pain on injection

Report By: Janos Baombe - *Consultant in Emergency Medicine*
Search checked by: Laura Howard - *Clinical Research Fellow*
Institution: Manchester Royal Infirmary, Manchester, UK
Date Submitted: 26th July 2017
Last Modified: 26th July 2017
Status: ● Green (complete)

Three Part Question

In [adult patients requiring conscious sedation with propofol], does [pre-treatment with intravenous lidocaine] [reduce pain on injection]?

Clinical Scenario

A 30-year-old male attends the Emergency Department with a dislocated shoulder, confirmed by plain film x-rays. This requires manipulation and reduction under conscious sedation. You prepare your drugs, drawing up propofol. The patient however mentions that he had experienced some severe pain on the injection site during a previous sedation with a propofol. You remember one of your colleagues mentioning lidocaine use to prevent pain on propofol injection and wonder if there is any evidence for its use.

Search Strategy

Ovid MEDLINE 1946 to present

```
{[Propofol.exp,mp,ti,ab] AND [(lidocaine.exp, mp, ti, ab) OR (lignocaine.mp)]} AND {(conscious sedation.exp, mp, ti, ab) OR (sedation.exp,mp,ti,ab) OR (procedural sedation.mp)}
```

Limits: Humans and English language

106 Results

EMBASE

```
{[(Propofol.exp,mp,ti,ab)] AND [(lidocaine.ti,ab,mp,exp) OR (lignocaine.mp)]} AND {(sedation.exp,ab,ti,mp) OR (conscious sedation.exp) OR (procedural sedation.mp)}
```

Limits: Humans and English language

975 Results





Not everyone is terribly clear about what they have done ■ ■

- <https://cks.nice.org.uk/influenza-seasonal#!searchstrategyforpublication>
- In Ovid you don't have to search for hyphenated versions, it does it for you.

<input type="checkbox"/>	1	post partum.mp.	11443
<input type="checkbox"/>	2	post-partum.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	11443
<input type="checkbox"/>	3	breast feeding.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	39291
<input type="checkbox"/>	4	breast-feeding.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	39291





Annane D, Bellissant E, Bollaert PE, Briegel J, Keh D, Kupfer Y. Corticosteroids for treating sepsis. Cochrane Database of Systematic Reviews 2015, Issue 12. Art. No.: CD002243. DOI:

<http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD002243.pub3/full>

Appendix 2. Search strategy for MEDLINE (Ovid SP)

- 1. exp Sepsis/
- 2. exp Shock, Septic/
- 3. (sepsis or septic shock).mp.
- 4. 1 or 2 or 3
- 5. exp Adrenal Cortex Hormones/
- 6. (corticosteroid* or steroid*).mp.
- 7. 6 or 5
- 8. 4 and 7
- 9. ((randomized controlled trial or controlled clinical trial).pt. or randomized.ab. or placebo.ab. or clinical trials as topic.sh. or randomly.ab. or trial.ti.) not (animals not (humans and animals)).sh.
- 10. 8 and 9





- Appendix 1. MEDLINE (Ovid SP) search strategy - Borthwick EMJ, Hill CJ, Rabindranath KS, Maxwell AP, McAuley DF, Blackwood B. High-volume haemofiltration for sepsis in adults. Cochrane Database of Systematic Reviews 2017, Issue 1. Art. No.: CD008075. DOI: 10.1002/14651858.CD008075.pub3
- #1 (Volume adj10 (ultrafiltrat* or h?emofiltrat*)).mp.
- #2 (HVHF or HVHF).ti,ab.
- #3 exp Hemodiafiltration/
- #4 exp Hemofiltration/ or exp Ultrafiltration/
- #5 (Extracorporeal adj10 ultrafiltration).mp.
- #6 (h?emofiltrat* or h?emodiafiltrat* or ultrafiltrat*).mp.
- #7 (purification adj5 therap*).mp.
- #8 (Blood adj5 purificat*).mp.
- #9 (purificat* adj3 therap*).mp.
- #10 or/1-9
- #11 exp Sepsis/ or exp Shock, Septic/
- #12 Systemic Inflammatory Response Syndrome/
- #13 Multiple Organ Failure/
- #14 (multi?organ adj5 failure).mp.
- #15 SIRS.mp.
- #16 (sepsis* or septic* or SIRS).mp.
- #17 or/11-16
- #18 #10 and #17
- #19 randomised controlled trial.pt.
- #20 controlled clinical trial.pt.
- #21 randomized.ab.
- #22 placebo.ab.
- #23 drug therapy.fs.
- #24 randomly.ab.
- #25 trial.ab.
- #26 groups.ab.
- #27 or/19-26
- #28 humans.sh.
- #29 #27 and #28
- #30 #18 and #29





Do you use NOT and how to use it safely.

- Demonstration search on the left from Cochrane Handbook for Systematic Reviews of Interventions from 2011 on Tamoxifen for breast cancer, limits to human or human and animal studies only:

- NOT risks from Cochrane Handbook:
- “The ‘NOT’ operator should be avoided where possible to avoid the danger of inadvertently removing from the search set records that are relevant. For example, when searching for records indexed as female, ‘NOT male’ would remove any record that was about both males and females.”
- <http://handbook-5-1.cochrane.org/>

1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	randomized.ab.
4	placebo.ab.
5	drug therapy.fs.
6	randomly.ab.
7	trial.ab.
8	groups.ab.
9	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10	animals.sh. not (humans.sh. and animals.sh.)
11.	9 not 10
12.	exp Breast Neoplasms/
13.	(breast adj6 cancer\$.)mp.
14.	(breast adj6 neoplasm\$.)mp.
15.	(breast adj6 carcinoma\$.)mp.
16.	(breast adj6 tumour\$.)mp.
17.	(breast adj6 tumor\$.)mp.
18.	12 or 13 or 14 or 15 or 16 or 17
19.	exp Tamoxifen/
20.	tamoxifen.mp.
21.	19 or 20
22.	11 and 18 and 21

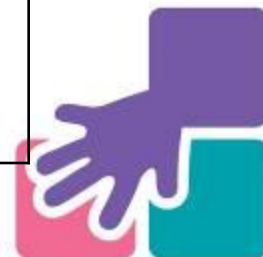




Patient benefit of dog-assisted interventions in health care: a systematic review Lindquist 2017 ■

- <https://bmccomplementalalternmed.biomedcentral.com/articles/10.1186/s12906-017-1844-7>
- **Search methods for identification of studies**
- Studies were identified by searching the electronic databases PubMed, AMED, CINAHL and Scopus from their inception date through January 2017. Some of the included studies were identified outside standard database searches (e.g. hand searching reference lists from included articles and systematic reviews).
- We searched for various terms of DAI and outcomes. The search was conducted as presented in Table 1.

<i>Dog OR canine</i>	
AND	
<i>Animal-assist* OR Dog-assist* OR Pet-assist* OR Canine-assist* OR animal-therap* OR dog-therap* OR pet-therap* OR canine-therap* OR "animal visitation" OR "dog visitation" OR "pet visitation" OR "canine visitation" OR animal-physiotherap* OR dog-physiotherap* OR pet-physiotherap* OR canine-physiotherap* OR therapy-dog OR visiting-dog</i>	
AND	
<i>Effect OR effectiveness OR benefit OR quality of life OR economics OR cost-effectiveness OR ethics OR outcome</i>	





Shoulders of Giants and Google





Thank You and Questions?

