



# *Working with a Medical Librarian*

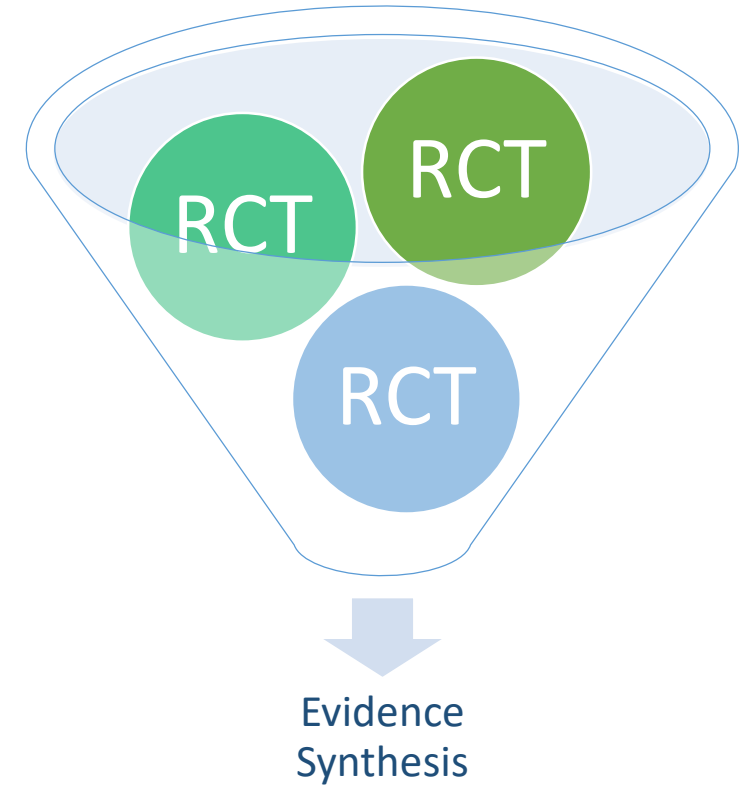
# Clinician-Librarian Collaboration

- Clinician published 17 Systematic Reviews/Meta-analyses, 4 Scoping Reviews with librarians as author
- Librarian included as author on 30+ Systematic Reviews/Scoping Reviews with WashU researchers
- Together – Scoping Reviews for GEAR Network 1.0, several Systematic Reviews
- Collaboration across institutions with a multi-librarian team for the GEAR Network scoping reviews increased consistency on 4 reviews<sup>1</sup>

1. *Acad Emerg Med* 2021; 28:19-35. PMID: 25766056.

# Lessons learned

- Collaborating with a librarian enables higher quality of search strategies and lower risk of bias, especially when included as author<sup>2,3</sup>
- Clarity on review type is necessary for smooth completion of the project



2. *J Clin Epidemiol* 2015; 68: 617-26. PMID: 25766056.

3. *Evid Based Library Inf Pract* 2019; 14: 4.

# Systematic Review vs. Scoping Review

## Evidence Synthesis

Seeks to systematically search for, appraise and synthesize research evidence, often adhering to guidelines on the conduct of a review<sup>4</sup>

Structured assessment of quality of evidence

Resulting data can be pooled as a meta-analysis

Aims to systematically identify and map the breadth of evidence available on a particular topic, field, concept, or issue within or across particular contexts.

Sources can vary (ie, primary research, reviews, non-empirical evidence).

Can clarify key concepts/definitions in the literature and identify key characteristics or factors related to a concept, including those related to methodological research.<sup>5</sup>

4. *Health Info Libr J.* 2009 Jun;26(2):91-108. PMID: 19490148.

5. *JB I Evid Synth.* 2022 Apr 1;20(4):950-952. PMID: 35249995.

# Systematic Review

vs.

# Scoping Review

## Examples

**Objective:** “... quantify whether low-dose ketamine is an effective and safe opioid alternative for acute pain reduction in adults in the ED setting.”<sup>6</sup>

**Objective:** “Identify and summarize the pooled diagnostic test characteristics (sensitivity, specificity, and likelihood ratios) for dementia screening instruments in the ED.”<sup>7</sup>

6. *Acad Emerg Med.* 2018 Oct;25(10):1086-1097. PMID: 30019434.

7. *Acad Emerg Med.* 2019 Feb;26(2):226-245. PMID: 30222232.

8. *Acad Emerg Med.* 2021 Jan;28(1):19-35. PMID: 33135274

9. *J Am Med Dir Assoc.* 2022 Aug;23(8):1313.e15-1313.e46. PMID: 35940681.

“The Geriatric Emergency Medicine Applied Research Falls core (GEAR-Falls) was created to identify existing research gaps and to prioritize future fall research foci.”<sup>8</sup>

**Conclusions and implications:** Research exploring Emergency Department communication with persons living with dementia is sparse and does not directly evaluate specific communication strategies. Defining barriers and facilitators of effective communication was the highest-ranked research priority...”<sup>9</sup>

# Systematic Review vs. Scoping Review

## Research question framework tools

### PICO

P = Patient, Problem,  
or Population

I = Intervention or  
exposure

C = Comparison  
intervention

O = Outcome

### PCC

P = Population

C = Concept(s)

C = Context

# Lessons learned

The level of detail in constructing and reporting the search strategy for each database platform requires librarian expertise

## Older Adults for Ovid Medline

exp Aged/or (elderly or elderlies or geriatric\* or senium\* or centenarian\* or nonagenarian\* or octogenarian\* or septuagenarian\* or sexagenarian\*).mp. or (senior\* adj1 citizen\*).mp. or ((older or frail\*) adj2 (hospitalized or hospitalised or elder\* or patient\* or person\* or inpatient\* or people or adult\*)).mp. or "aged adult".mp. or "aged adults".mp. or "aged patient".mp. or "aged patients".mp. or gerontolog\*.jw. or geriatric\*.jw. or ageing.jw. or aging.jw.

## Older Adults for Embase.com

'aged'/exp OR elderly:ti,ab,kw,de OR elderlies:ti,ab,kw OR centenarian\*:ti,ab,kw OR nonagenarian\*:ti,ab,kw OR octogenarian\*:ti,ab,kw OR septuagenarian\*:ti,ab,kw OR sexagenarian\*:ti,ab,kw OR geriatric\*:ti,ab,kw OR senium\*:ti,ab,kw OR ((senior\* NEAR/1 citizen\*):ti,ab,kw,de) OR (((older OR frail\*) NEAR/2 (hospitalized OR hospitalised OR elder\* OR patient\* OR person\* OR inpatient\* OR people OR adult\*)):ti,ab,kw) OR 'aged adult':ti,ab,kw OR 'aged adults':ti,ab,kw OR 'aged patient':ti,ab,kw OR 'aged patients':ti,ab,kw OR gerontolog\*:jt OR geriatric\*:jt OR ageing:jt OR aging:jt

# Lessons learned

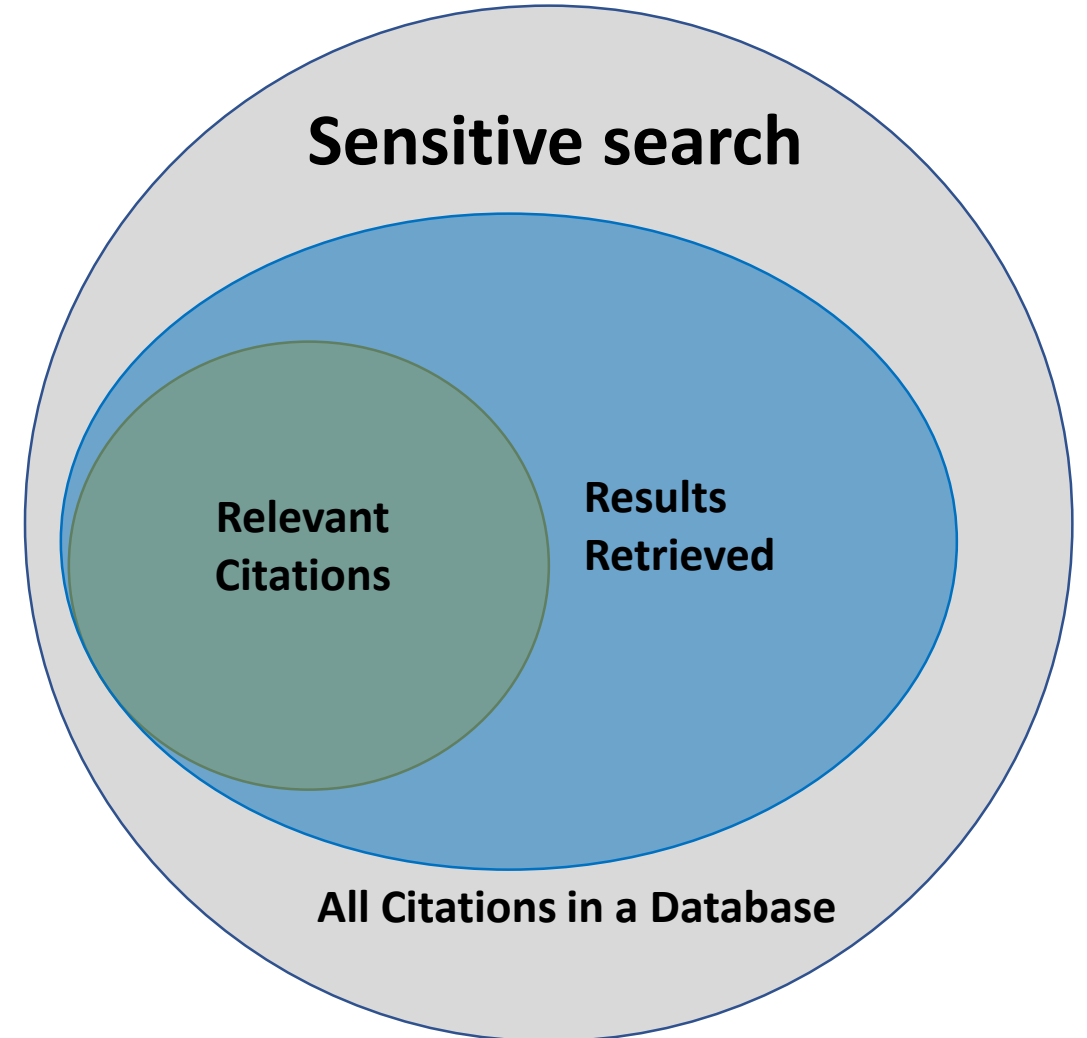
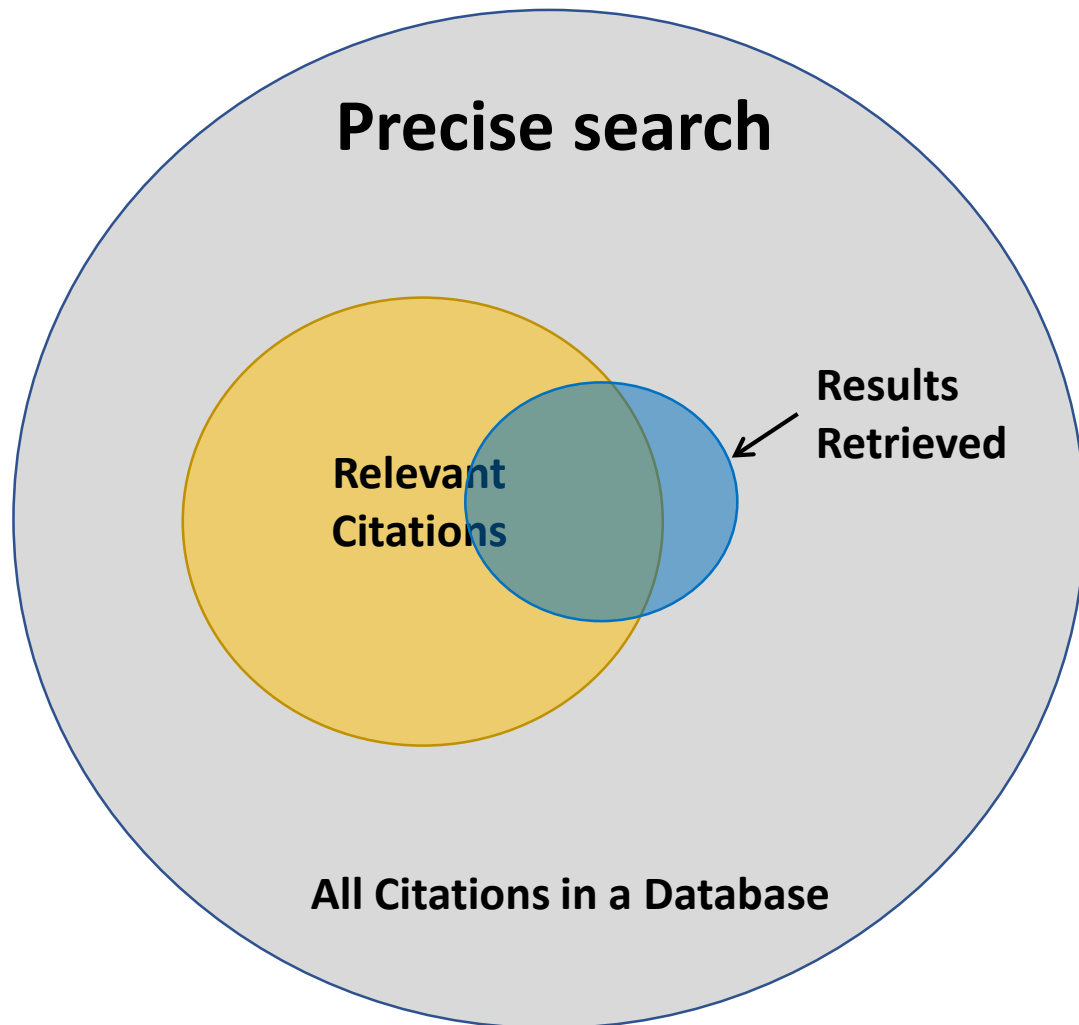
- Involving a librarian ensures proper reporting of the search for the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) checklist.
- Requirements from PRISMA became more detailed in 2021, including an extension for reporting the search so that it is reproducible.

## PRISMA checklist, items for reporting the search

- Describe what was searched and when
- Provide the full search strategy as run in each database so that it can be repeated
- Limits applied to the search strategy (e.g. date or language) with justification
- Describe any usage of validated search strategies and the validation process
- Describe any tools used for natural language processing, text frequency analysis, automatic cross-database translation
- Report any peer review process
- Describe search updates<sup>12</sup>

# Lessons learned

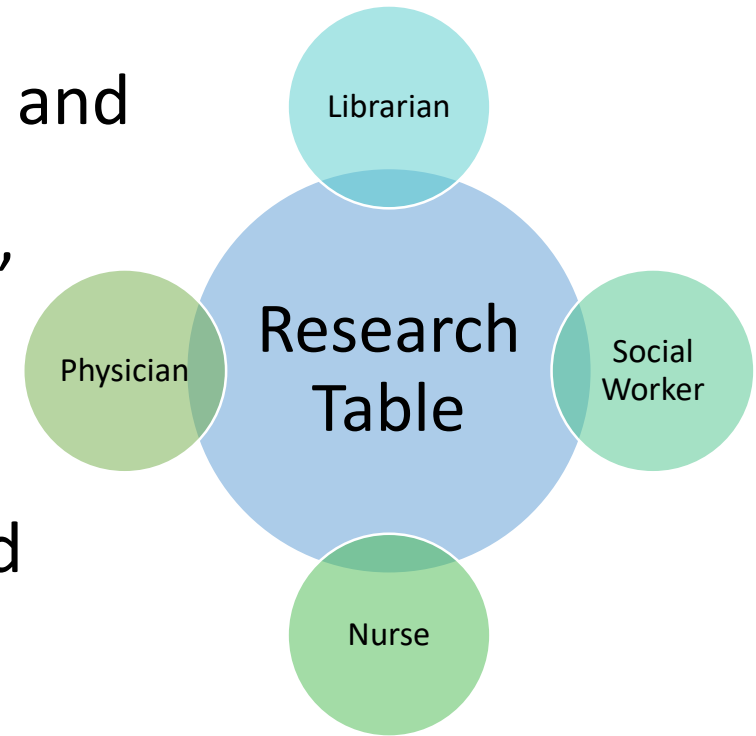
Expect a high number of search results for screening



# Lessons learned

It is possible to collaborate with librarians on non-review projects

- Validating a search filter for diagnostic sensitivity and specificity<sup>13</sup>
- The bibliometric construct for “clinical relevance” included article-level, author-level, and journal-level impact analyses<sup>14</sup>
- Education topics, citation sorting to find top-cited validation studies

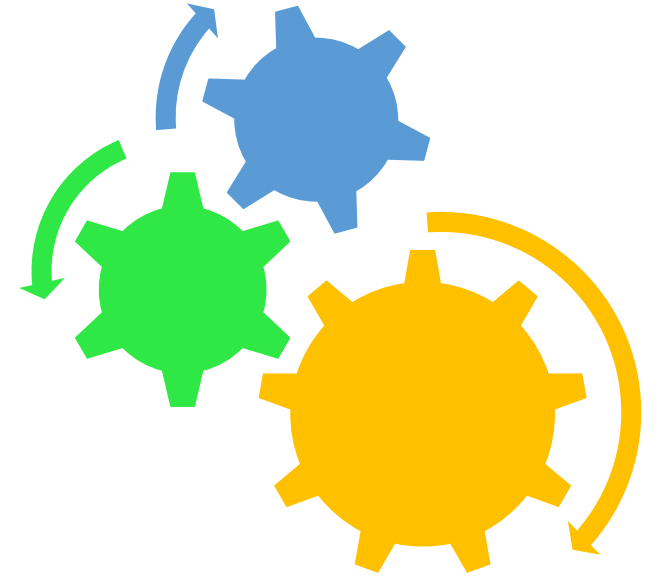


13. **Validating a search filter for diagnostic sensitivity and specificity**, Presented to Diagnostic Error in Medicine Conference, Chicago IL, September 2013, [https://digitalcommons.wustl.edu/becker\\_pubs/37/](https://digitalcommons.wustl.edu/becker_pubs/37/)

14. *Acad Emerg Med* 2013; 20:1004-12. PMID: 24127703.

# How to succeed as a clinician-librarian team

- Contact librarian when research question is solidified
  - Allow 1-2 months for the search after a search request, depending on librarian's workload
  - Contact earlier if help is needed for protocol
- Provide a clearly stated research question restated in PICO or PCC framework, and inclusion/exclusion criteria
- Give example studies that will be used in the analysis to help refine the search strategy



# How to succeed as a clinician-librarian team

- Peer-review of search strategy between medical librarians increasingly prevalent and usually additive<sup>15</sup>
- Keep lines of communication open throughout the process so that everyone is on the same page
- Don't hesitate to ask for more help! The librarian is typically available for citation management advice, etc.

