

# A study of librarian involvement in locally-created systematic reviews

Whitney A. Townsend, MLIS; Mark P. MacEachern, MLIS; Nandita S. Mani, PhD, MLIS, AHIP; Irina Zeylikovich, MSI.

University of Michigan Taubman Health Sciences Library **Andy Hickner, MSI.** 

University of Michigan Department of Internal Medicine

#### Overview

In addition to their role in searching and instructing users on finding and using evidence resources, librarians also have the opportunity to be intimately involved in the process of creating the evidence based literature that clinicians rely on to inform their practices. The Institute of Medicine and the Agency for Healthcare Research and Quality both recommend utilizing a health sciences librarian for the literature search component when conducting systematic reviews. Despite this recommendation, it is hypothesized that few non-Cochrane systematic review teams include a librarian in the development of their literature search strategies. This poster will analyze the systematic review publishing activities at a large academic health system over the past ten years in order to demonstrate historical and current librarian involvement.

### Methodology

Database: Scopus

Date range: 1/1/2003 – 12/31/2012

#### Search strategy:

((TITLE("systematic review" OR "meta-analysis" OR "meta analysis")) OR (INDEXTERMS("systematic review" OR "meta analysis" OR "meta-analysis as topic"))) AND ( EXCLUDE(DOCTYPE,"le" ) OR EXCLUDE(DOCTYPE,"ed" ) OR EXCLUDE(DOCTYPE,"sh" ) OR EXCLUDE(DOCTYPE,"no" ) ) AND ( EXCLUDE(DOCTYPE,"cp" ) )

All applicable affiliations (AF-ID field) related to the University of Michigan (Ann Arbor) (full details available upon request from the poster authors)

**Results:** 638 citations; 368 met systematic review criteria (61%) after review **Review process:** A team of five librarians divided the 638 citations among themselves, and reviewed the full text article for each citation. Study inclusion and coding was based on a predetermined criteria.

## Inclusion/Exclusion Criteria and Definitions

**Systematic Review -** Clearly "attempts to identify, appraise and synthesize all the empirical evidence that meets prespecified eligibility criteria to answer a given research question." Paper authors used explicit methods by conducting a structured literature search, identifying relevant studies, and analyzing the results of the studies. (Section 1.2 in the Cochrane Handbook for Systematic Reviews of Interventions.)

**Librarian Involvement -** Full papers were reviewed to identify librarian involvement (no librarian involvement, unnamed acknowledgement, named acknowledgement, co-author)

**Replicable Search** – Defined as a search strategy (included in the paper, or available as a supplement or from the authors) that can be easily replicated or copy-pasted into the appropriate indicated database with identical or near-identical results **Search Limits** – Authors indicated the use of traditional search limits (ex. English, human, date range)

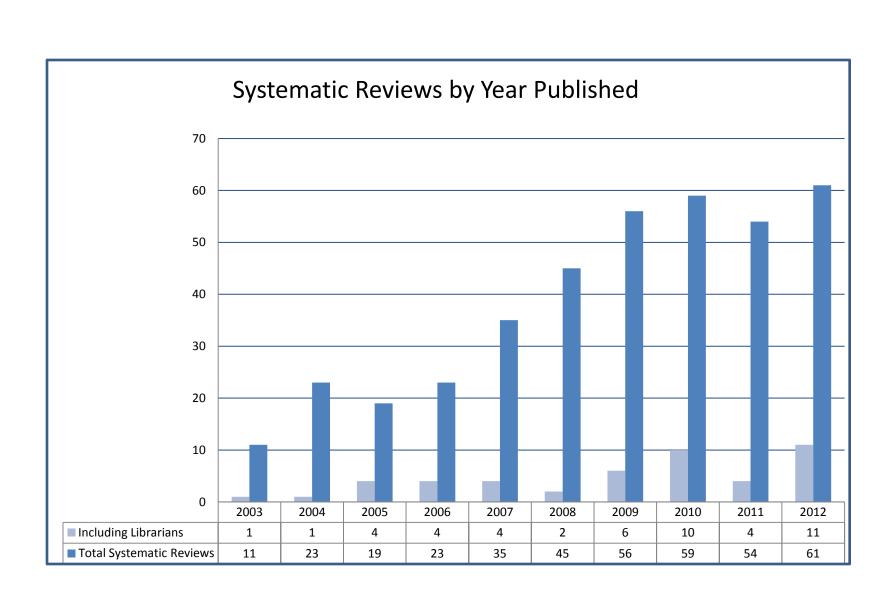
Databases Cited – Databases searched as written by the author (ex. PubMed, Medline, Ovid are not differentiated)

#### Results

## **Institutional Systematic Review Publishing**

386 total systematic reviews published by University of Michigan affiliated authors

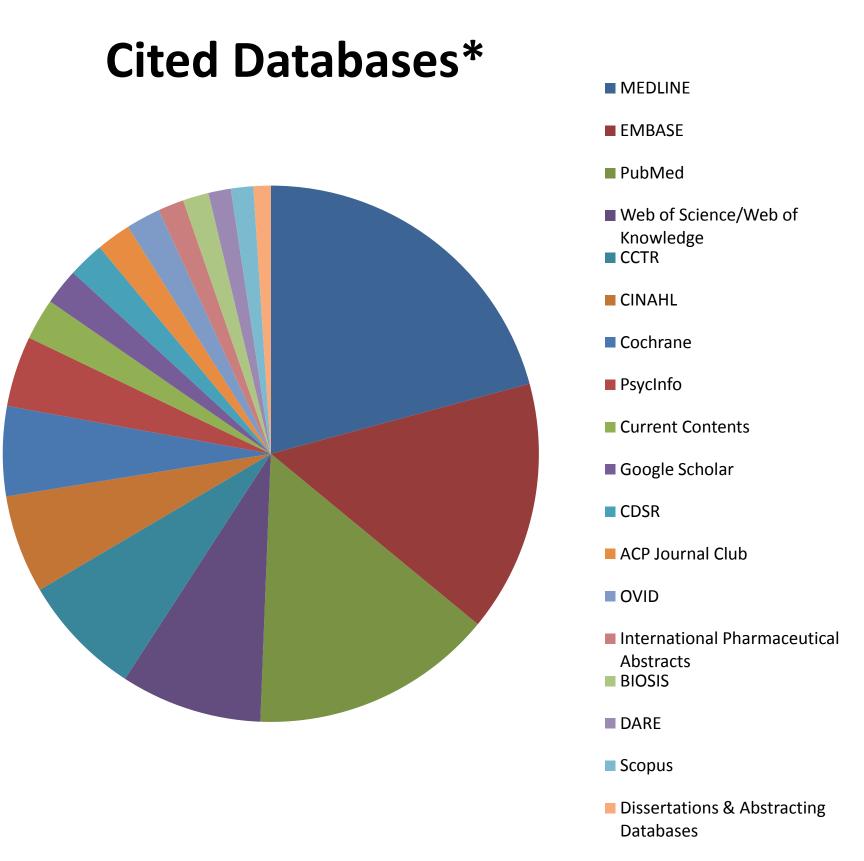
47 total systematic reviews indicated some level of librarian involvement (co-authorship or acknowledgement)

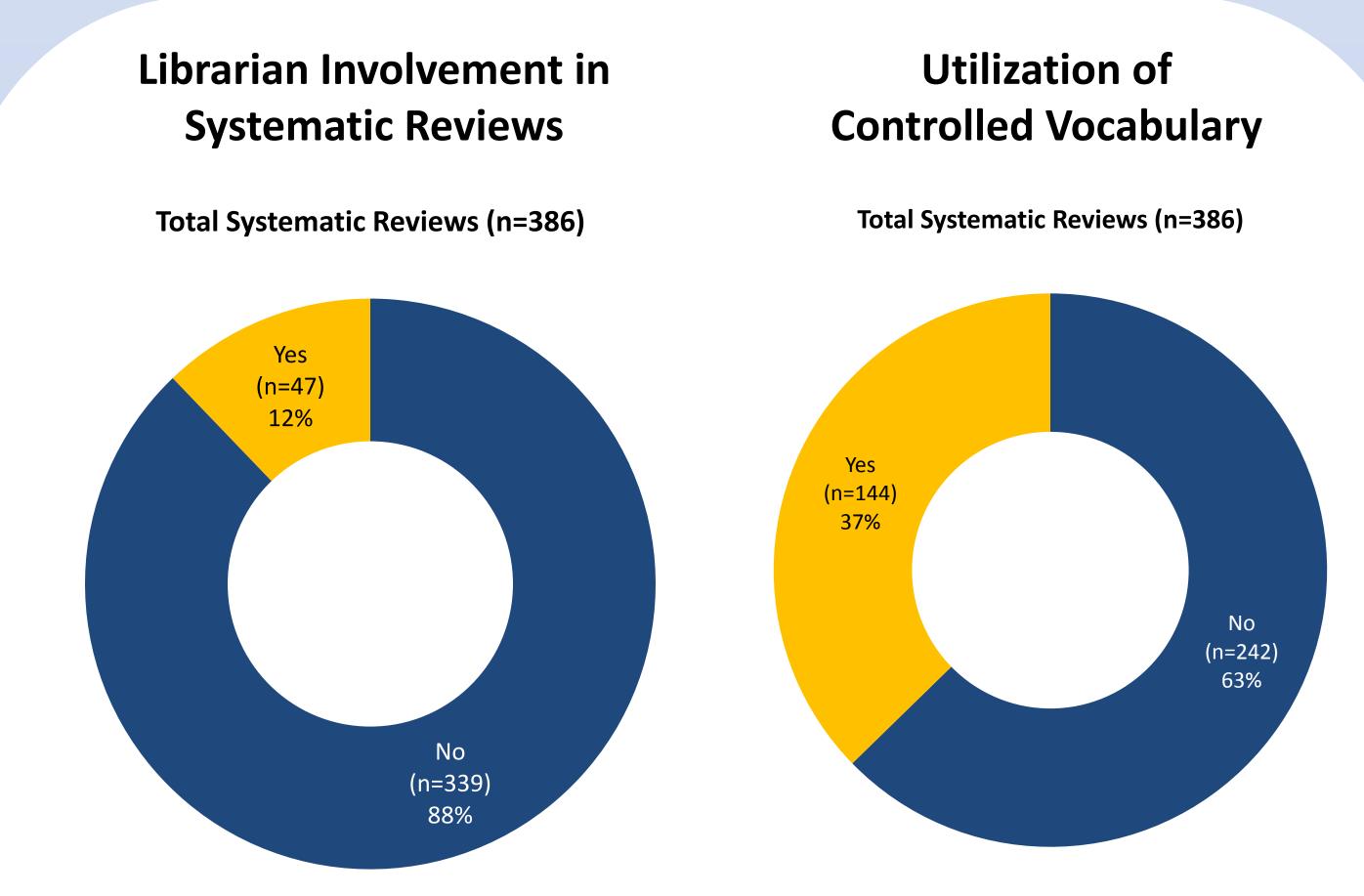


#### **Reporting of Literature Search Methodology**

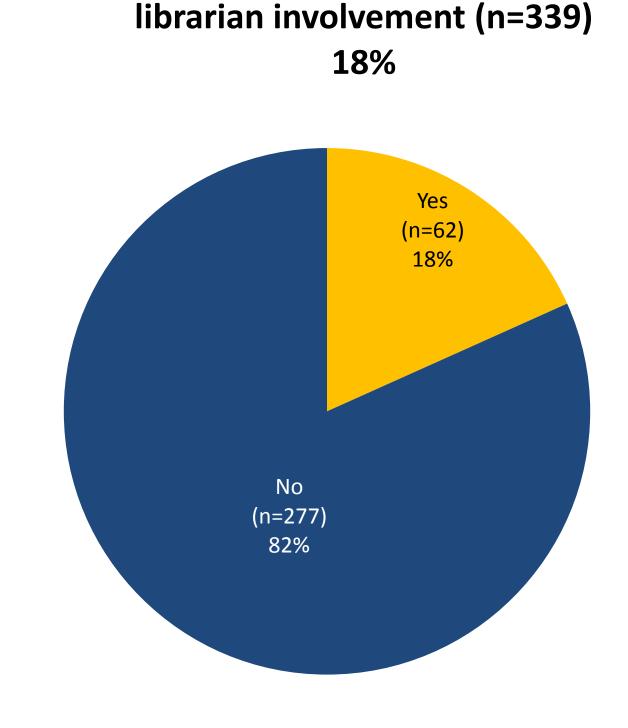
81 papers included a replicable search strategy (20.9%)

207 papers indicated utilizing search limits (54%)

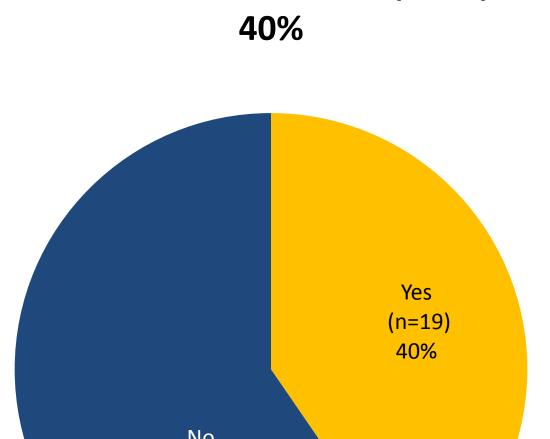




#### Librarian Involvement and Presence of Replicable Searches



Replicable search strategy: without



(n=28)

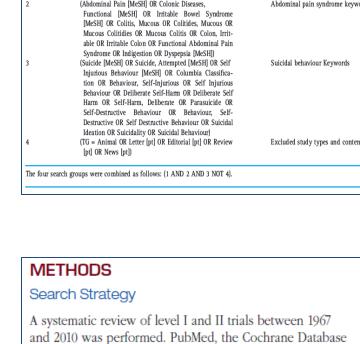
Replicable search strategy: with

librarian involvement (n=47)

# Samples\*\* \*\*studies are not cited on

\*\*studies are not cited on this poster to protect the anonymity of the paper authors. Full search results are available from the poster authors on request.

# Replicable search strategies



Selfdicidal

10. 5 or 6 or 7 or 8

11. 9 and 10

12. ((behavior or behaviour) and change)

13. (randomS or programS or studyS or studies or projectS)

14. 11 and 12 and 13

Materials and Methods

Data Sources

Studies were identified utilizing MEDLINE. References

the Cochrane Database

# Non replicable search strategies

A systematic review of level I and II thats between 170/
and 2010 was performed. PubMed, the Cochrane Database
of Systematic Reviews, EMBASE, and secondary references
were appraised for studies that met the inclusion criteria.
Reference lists of retrieved articles were screened for additional
publications. Specifically, the bibliographies of studies assessed
for inclusion in this review, as well as periodicals focusing on
the shoulder, were analyzed.
Study Selection
Publications included met strict selection criteria. Randomized
controlled trials (RCTs) directly comparing arthroscopic

were used as keywords in MEDLINE. Articles which exa ined SEMG only in LBP populations, or only in normal were excluded. Two articles that met the above crite were excluded as they did not study subjects with LBP. This search identified 44 articles on SEMG a LBP.

8. instruct\$

tional source of studies.

### Discussion

#### **Lessons Learned**

- A number of articles were inaccurately titled by the authors as systematic reviews.
   Although titled systematic reviews, most were actually narrative reviews. This finding suggests a need for further education on the definition of a true systematic review.
- While the IOM strongly recommends the presence of a librarian on the systematic review team, our study illustrates the potential for further librarian integration and collaboration into the systematic review process.
- Librarian involvement in systematic reviews more than doubled the presence of a replicable search strategy (as recommended by Cochrane and PRISMA guidelines) from 18% to 40%.
- Despite the presence of PRISMA and other reporting standards, the presentation of literature search methodologies in systematic reviews is inconsistent.

#### **Future Plans**

- To study the relationship between the level of librarian involvement and the presence of a replicable search strategy [co-author, named acknowledgement, unnamed acknowledgement]
- Identify and collaborate with local units that have high systematic review output
- Examine whether increased librarian involvement on local systematic review teams increases adherence to PRIMSA guidelines or other reporting standards

<sup>\*</sup>Databases that were cited less than 10 times were excluded from this chart