Librarians can help address reporting concerns in the biomedical literature particularly, for systematic reviews – here's how!

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Agencia de Evaluación de Tecnologías Sanitarias de Andalucía (AETSA)
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How can librarians help to promote reporting guidelines and encourage their use?

How can librarians help?

- As librarians we aim to support biomedical researchers in designing, conducting and publishing research of the highest standard possible
- Daily contact with clinicians and researchers
- We can use our skills to raise awareness, encourage, and support researchers to improve research reporting

- Used to identifying and delivering new services in response to changing demands
- Used to liaising with range of departments and faculty in our institutions

Some simple actions targeting widely documented reporting issues could go a long way to helping to address international concerns

Some simple general actions include:

Promotion

- Display EQUATOR Network leaflets/posters
- Display specific reporting guideline checklists e.g. CONSORT
- Include details about reporting guidelines in library bulletins, LibGuides
- Link to EQUATOR Network website resources or to individual reporting guidelines from your library web pages

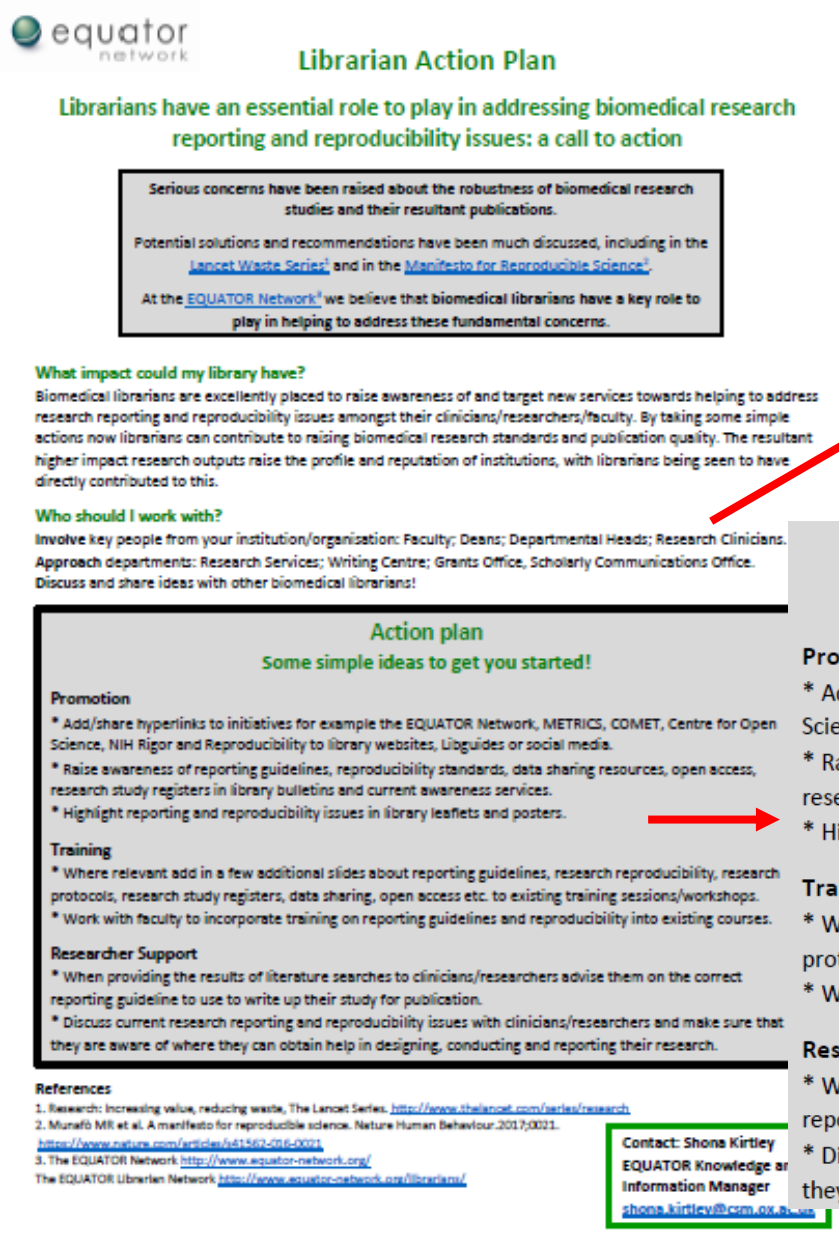
Education

- Include information about reporting guidelines in induction sessions
- Hold research reporting workshops

Researcher support

- When supporting the work of clinicians and researchers mention relevant reporting guidelines and how to locate them
- When presenting the results of literature searches to researchers alert them to the appropriate guideline for reporting their study

Librarian action plan: simple ideas



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Librarian Action Plan

Librarians have an essential role to play in addressing biomedical research reporting and reproducibility issues: a call to action

Serious concerns have been raised about the robustness of biomedical research studies and their resultant publications.

Potential solutions and recommendations have been much discussed, including in the Lancet Waste Series[1] and in the Manifesto for Reproducible Science[2].

At the EQUATOR Network[3] we believe that **biomedical librarians have a key role to play in helping to address these fundamental concerns.**

What impact could my library have?

Biomedical librarians are excellently placed to raise awareness of and target new services towards helping to address research reporting and reproducibility issues amongst their clinicians/researchers/faculty. By taking some simple actions now librarians can contribute to raising biomedical research standards and publication quality. The resultant higher impact research outputs raise the profile and reputation of institutions, with librarians being seen to have directly contributed to this.

Who should I work with?

Involve key people from your institution/organisation: Faculty; Deans; Departmental Heads; Research Clinicians.
Approach departments: Research Services; Writing Centre; Grants Office, Scholarly Communications Office.
Discuss and share ideas with other biomedical librarians!

Action plan

Some simple ideas to get you started!

Promotion

* Add/share hyperlinks to initiatives for example the EQUATOR Network, METRICS, COMET, Centre for Open Science, NIH Rigor and Reproducibility to library websites, Libguides or social media.
* Raise awareness of reporting guidelines, reproducibility standards, data sharing resources, open access, research study registers in library bulletins and current awareness services.
* Highlight reporting and reproducibility issues in library leaflets and posters.

Training

* Where relevant add in a few additional slides about reporting guidelines, research reproducibility, research protocols, research study registers, data sharing, open access etc. to existing training sessions/workshops.
* Work with faculty to incorporate training on reporting guidelines and reproducibility into existing courses.

Researcher Support

* When providing the results of literature searches to clinicians/researchers advise them on the correct reporting guideline to use to write up their study for publication.
* Discuss current research reporting and reproducibility issues with clinicians/researchers and make sure that they are aware of where they can obtain help in designing, conducting and reporting their research.

References

1. Research: Increasing value, reducing waste, The Lancet Series. http://www.thelancet.com/series/research
2. Munafò MR et al. A manifesto for reproducible science. Nature Human Behaviour.2017;0021.
https://www.nature.com/articles/s41562-016-0021
3. The EQUATOR Network http://www.equator-network.org/
The EQUATOR Librarian Network http://www.equator-network.org/librarians/

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Librarian targeted action plan

Librarians have an essential role to play in addressing biomedical research reporting and reproducibility issues
Can you help?

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Potential solutions and recommendations have been much discussed, including in the Lancet Waste Series[1] and in the Manifesto for Reproducible Science[2].

At the EQUATOR Network[3] we believe that biomedical librarians have a key role to play in helping to address these fundamental concerns.

Take action to support the Lancet Waste Series and the Manifesto for Reproducible Science Ideas for targeted library actions	Action supports Lancet Waste Series	Action supports Manifesto for Reproducible Science
Research protocols * Highlight the importance of protocols, guidelines for writing protocols (e.g. SPIRIT) and encourage researchers to make their protocols publicly accessible. ***Suggested actions*** ***Promotion:*** highlight and link to guidelines and initiatives on library websites, Libguides, leaflets, bulletins, social media. ***Training:*** hold/incorporate into existing workshop/training session. ***Researcher support:*** mention to researchers/faculty during consultations. * Help researchers to identify ongoing studies investigating the same or a similar research topic to avoid duplication. ***Suggested actions*** ***Researcher support:*** establish a literature search service specifically targeting development of study protocols or analysis plans.	✓ ✓	
Research study registration * Promote research study registers for example for clinical trials (e.g. clinicaltrials.gov) or systematic reviews (e.g. PROSPERO), the benefits of registering studies, and the requirements for reporting on study completion. ***Suggested actions*** ***Promotion:*** highlight and link to guidelines and initiatives on library websites, Libguides, leaflets, bulletins, social media. ***Training:*** hold/incorporate into existing workshop/training session. ***Researcher support:*** mention to researchers/faculty during consultations; insist on study registration before providing help with literature searches.	✓	✓
Research design and conduct * Highlight resources supporting research study design, standards for conducting research and research ethics, including guidance and courses (e.g. IRB, NIH). ***Suggested actions*** ***Promotion:*** handouts; include links on library website, bulletins, on social media, Libguide. ***Researcher support:*** discuss with researchers during consultations. ***Training:*** initiate joint workshop with the local Research Ethics Committee or Research Services Department. * Support training in statistics and research methods ***Suggested actions*** ***Promotion:*** prepare handouts; Libguide. ***Training:*** work with faculty to organise specific joint workshops/training sessions. ***Researcher support:*** provide/sign post to research methods support; discuss with researchers/faculty during consultations.	✓	✓

Librarian targeted action plan

Research reporting * Promote reporting guidelines (e.g. CONSORT, PRISMA, STROBE), how to find them and how they can be easily used for planning and writing research papers. ***Suggested actions*** ***Promotion:*** new leaflet/poster; Libguide; inclusion of hyperlinks on library website, in bulletins, social media. ***Training:*** hold reporting/publication workshops; work with faculty to ensure that reporting guidelines are included in course content. ***Researcher support:*** mention to researchers/faculty during consultations; when providing the results of literature searches advise researchers on the appropriate reporting guideline to use to write up their study; work with institutional Writing Centres/Scholarly Communications Managers to raise awareness.	✓	✓
Literature searching * Promote involvement of methodologists, including librarians, in the planning and design of proposed studies (lit search, documentation and reporting). ***Suggested actions*** ***Researcher support:*** work with faculty and Research Services/Grants Offices to promote the involvement of and demonstrate the value of librarians being involved in the research team from study inception and the range of support they can provide to researchers and Research Services Departments.		✓
* Promote librarian-led identification of existing evidence in support of grant applications and before new research is instigated (ensuring new research addresses uncertainties rather than duplicating previous work). ***Suggested actions*** ***Researcher support:*** work with faculty and Research Services/Grants Offices to support grant applications and the planning and design of proposed studies.	✓	✓
Supporting systematic reviews * Encourage researchers to obtain the protocols (if available) for included studies to check the protocol corresponds to the content of the published paper. ***Suggested actions*** ***Training:*** workshop/training session. ***Researcher support:*** mention to researchers/faculty during consultations.	✓	
Open access / institutional repositories / scholarly communication * Recommend open access journals to researchers and provide advice on open data initiatives, software etc. ***Suggested actions*** ***Promotion:*** Libguide; add links to website, bulletins, social media. ***Training:*** hold joint workshop with Research Data/Scholarly Communications Manager. ***Researcher support:*** highlight to researchers/faculty during consultations.	✓	✓
* Advocate the registering, archiving and deposit of final research reports (and unpublished research materials) in online institutional repositories. ***Suggested actions*** ***Promotion:*** posters; Libguide; links in bulletins, social media. ***Researcher support:*** work with institutional Research Data/Scholarly Communications Teams.	✓	
* Highlight the issue of retractions as researchers are often unaware of retraction notices posted on publisher websites or in bibliographic databases. ***Suggested actions*** ***Promotion:*** launch a current awareness service specifically highlighting retracted papers.	✓	
* Promote the role of initiatives such as PubMed Commons in driving up research standards, including the reporting and reproducibility of literature searches. ***Suggested actions*** ***Training:*** include in workshop/training session. ***Researcher support:*** discuss with researchers/faculty during consultations.		✓

References

1. Research: Increasing value, reducing waste, The Lancet Series. http://www.thelancet.com/series/research
2. Munafò MR et al. A manifesto for reproducible science. Nature Human Behaviour.2017;0021. https://www.nature.com/articles/s41562-016-0021
3. The EQUATOR Network http://www.equator-network.org/

The EQUATOR Librarian Network http://www.equator-network.org/librarians/

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How can librarians help to promote reporting guidelines and encourage their use particularly for systematic reviews?

- Promote librarian involvement in systematic reviews and highlight the evidence around the value librarians can add

ELSEVIER

Journal of Clinical Epidemiology 68 (2015) 617–626

Librarian co-authors correlated with higher quality reported search strategies in general internal medicine systematic reviews

Melissa L. Rethlefsen[a,*], Ann M. Farrell[b], Leah C. Osterhaus Trzasko[b], Tara J. Brigham[c]

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[b]Mayo Clinic Libraries, Mayo Clinic, 200 1st St SW, Rochester, MN, 55905, USA
[c]Mayo Clinic Libraries, Mayo Clinic, 4500 San Pablo Road, Jacksonville, FL 32224, USA

PLOS ONE

Impact of librarians on reporting of the literature searching component of pediatric systematic reviews*

Deborah Meert, MLIS; Nazi Torabi, MLIS; John Costella, DDS, MSc, MLIS

See end of article for authors' affiliations.

DOI: http://dx.doi.org/10.3163/1536-5050.104.4.004

RESEARCH ARTICLE

Use of Recommended Search Strategies in Systematic Reviews and the Impact of Librarian Involvement: A Cross-Sectional Survey of Recent Authors

Jonathan B. Koffel*

Bio-Medical Library, University of Minnesota, Minneapolis, Minnesota, United States of America

How can librarians help to promote reporting guidelines and encourage their use particularly for systematic reviews?

- When approached by clinicians/researchers about conducting literature searches encourage the registration of their review on PROSPERO
  - Helps to avoid unplanned duplication and to enable comparison of reported review methods with what was planned in the protocol

University of York
Centre for Reviews and Dissemination

NHS
National Institute for Health Research

Disorganized Systematic Reviews and Meta-analyses: Time to Systematize the Conduct and Publication of These Study Overviews?

Irbaz Bin Riaz, MD, Muhammad Shahzeb Khan, MBBS, Haris Riaz, MD, Robert J. Goldberg, PhD

"...there was an abundance of redundant and disorganized meta-analyses, creating confusion…The registration of systematic reviews should be mandatory in prospective registries, such as PROSPERO, and the PRISMA checklist should be updated…"

How can librarians help to promote reporting guidelines and encourage their use particularly for systematic reviews?

- Raise awareness amongst clinicians/researchers of the documented issues in the medical literature regarding poorly designed and conducted reviews (including selective, unclear, misleading or incomplete reporting), highlight the consequences and discuss how you can help them to avoid these issues

- Highlight to clinicians/researchers that standards exist for both the conduct and the reporting of systematic reviews including for literature searches and that as librarians we can support them in meeting these standards

- Discuss PRISMA-P, the main PRISMA Statement and encourage researchers to report their study fully including a full description of the intervention(s), statistical analysis, study design etc.

How can librarians help to promote reporting guidelines and encourage their use particularly for systematic reviews?

- Stress the importance of a comprehensive literature search and to devoting enough time to search strategy development and testing
- When presenting the results of the literature search to the clinician/researcher make sure you also include a copy of or links to the PRISMA Statement and checklist to help them to write up their review
- Reassure researchers that where a librarian is involved in conducting the literature search that they will be able to help complete / comply with the relevant PRISMA items and flowchart requirements
- Incorporate slides about reporting guidelines into existing training sessions or work with faculty to develop new joint teaching sessions

As librarians we need to…

- Take the lead in raising awareness of the issues and promoting reporting guidelines
- Encourage clinicians and researchers to change their practice by providing enhanced library research support services
- Work with clinicians and faculty at our institutions to expand the teaching curriculum to include research reporting

Biomedical librarians do have an important role to play in addressing concerns about reporting and we can make a real difference by directly and positively impacting the quality, reliability and usability of future biomedical research.

What impact could my library have?

- You can demonstrate that your library is:
  - introducing new services in the context of responding to important international concerns documented in the medical literature
  - collaborating widely across the institution including with faculty, and staff in departments such as Research Services, Funding/Grants Offices, Scholarly Communications Offices
  - playing a fundamental role in improving the rigour, completeness, transparency, quality and reproducibility of the biomedical research output of your institution/organisation
  - contributing to raising the profile and reputation of your institution as a result of improved higher impact research output

Ultimately you will raise the profile of your library and reassure clinicians, researchers and institutional/organisational management that the library, its staff and the services provided are proactive, up-to-date and focussed on addressing real need.

Examples highlighting the importance of librarian involvement

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Reproducibility of Search Strategies Is Poor in Systematic Reviews Published in High-Impact Pediatrics, Cardiology and Surgery Journals: A Cross-Sectional Study

Jonathan B. Koffel[1©]*, Melissa L. Rethlefsen[2©]

Database selection in systematic reviews: an insight through clinical neurology

Matt Vassar, Vadim Yerokhin, Philip Marcus Sinnett, Matthew Weiher, Halie Muckelrath, Branden Carr, Laura Varney & Gregory Cook

Oklahoma State University Center for Health Sciences, Tulsa, OK, USA

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Evaluating the information retrieval quality and methodological accuracy of Systematic Reviews and Meta-analysis on congenital malformations (2004-2014)

Alicia F. Gómez-Sánchez[1], Mar González-Cantalejo[2], Gaétan Kerdelhué[3], Pablo Iriarte[4] and Rebeca Isabel-Gómez[5]

Reporting guidelines: what are librarians already doing?

Video case studies

Patricia Ayala, Research Services Librarian, Gerstein Science Information Centre, University of Toronto

Systematic or scoping reviews for research & publication (i.e. not for coursework or thesis/dissertation)

1. Knowledge Synthesis Service

A librarian will join your team and:

- Create, validate and translate the search strategies
- Advise on databases to search
- Document the search strategies
- Write the search methodology section
- Suggest keywords when submitting manuscript)s) for publication
- Respond to peer reviewers' comment as appropriate
- Be included as a coauthor on publication(s)

Video case studies

Melissa Rethlefsen, Deputy Director, Spencer S. Eccles Health Sciences Library, University of Utah

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