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

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Types and characteristics of documents reporting biomedical research
There are a huge variety of study methodologies available depending upon the type of biomedical research being undertaken. Some of the main study types include:

* Clinical trials (e.g. randomised, pragmatic, early phase, non-randomised)
* Observational studies (e.g. cohort, case-control, cross-sectional)
* Economic evaluations
* Qualitative research studies
* Research protocols & plans
* Animal pre-clinical studies
* Systematic reviews

They all have specific requirements for the types of information that should be reported when the study results are written up.
Increasingly biomedical research is reported in many different ways.

‘Reporting’ is most often associated with formally published reports of research but transparent and accurate reporting is just as important when making research study reports available on organisational websites, article pre-print services, institutional repositories etc. and also when sharing research data and methods.

**Traditional routes**
- Formal publication e.g. journal articles
- Laboratory notebooks
- Project reports e.g. departmental/organisational

**Newer routes**
- Pre-print servers
- Institutional repositories
- Data sharing services
- Study registries
Systematic reviews: brief overview
“Systematic reviews aim to identify, evaluate and summarise the findings of all relevant individual studies, thereby making the available evidence more accessible to decision-makers...Systematic reviews adhere to a strict scientific design based on explicit, pre-specified and reproducible methods. Because of this, when carried out well, they provide reliable estimates about the effects of interventions so that conclusions are defensible”

Systematic review: key steps

- Formulation of a clear question
- Eligibility criteria for studies
- Search for potentially relevant studies
- Selection of studies into the review
- Extraction of data
- Assessment of methodological quality of included studies (risk of bias)
- Synthesis of findings (possibly using meta-analysis)
- Presentation of data and results
- Interpretation and drawing conclusions

Each step is important in ensuring the results are reliable and reproducible.
Systematic review: key components

A research article is the ‘end product’ of one process...

...and the ‘raw material’ of other processes
Systematic reviews rely on the robustness of the methods and results of primary research and on how primary studies are reported.