

# 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 review: purpose

**“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 Reviews. CRD's Guidance for undertaking reviews in health care. Centre for Reviews and Dissemination, University of York. 2008.

# Systematic review: key steps



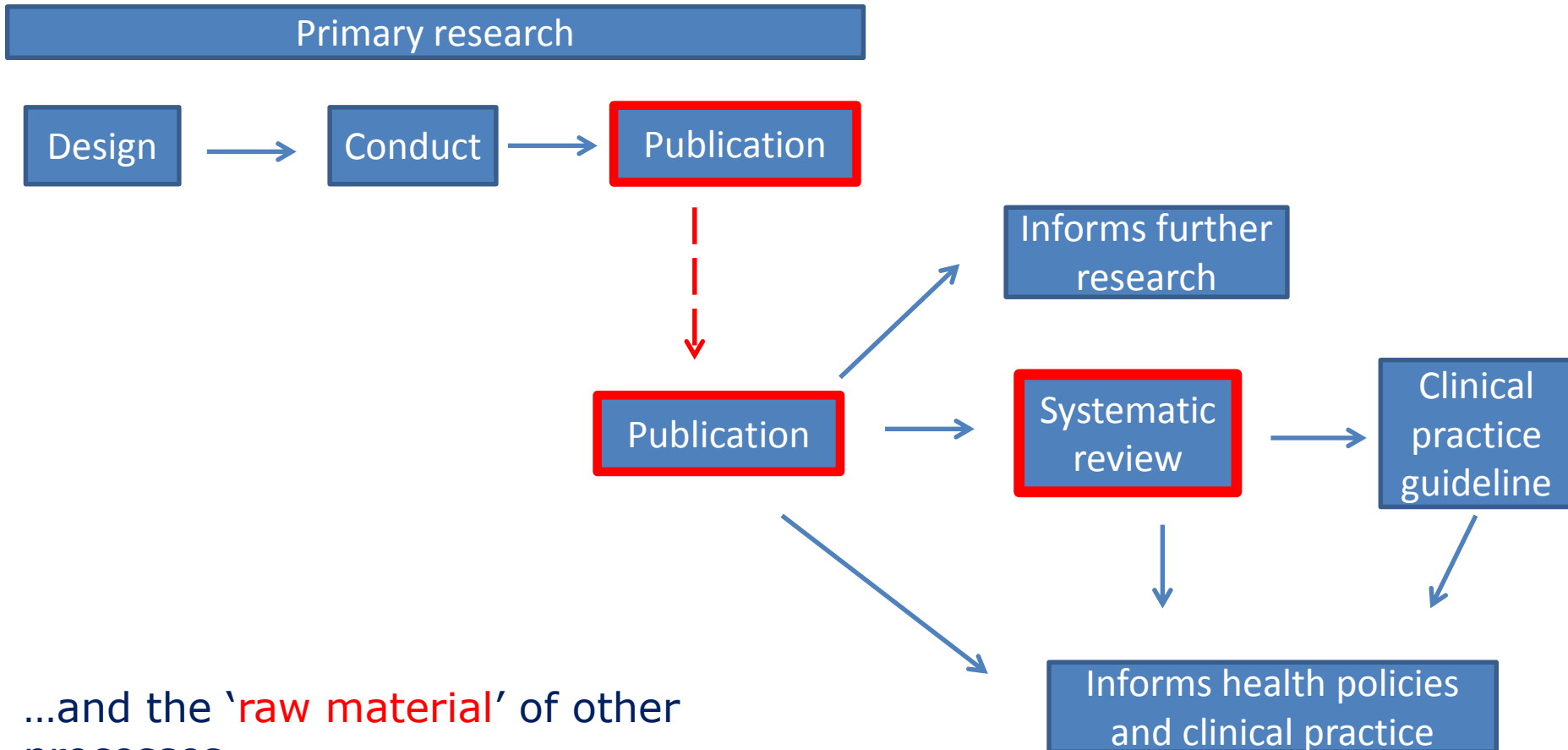
- \* Formulation of a clear question
- \* Eligibility criteria for studies
- \* Search for potentially relevant studies
- \* Selection of studies into the review
- \* Extraction of data
- \* Assessment of methodological quality of included studies (risk of bias)
- \* Synthesis of findings (possibly using 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 review: reliability

Systematic reviews rely on the robustness of the methods and results of primary research and on how primary studies are reported



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J Trop Pediatr. 2006 Feb;52(1):34-8. Epub 2005 Jul 13.

**Features of whey protein concentrate supplementation in children with rapidly progressive HIV infection.**

Moreno YF<sup>1</sup>, Sgarbieri VC, da Silva MN, Toro AA, Vilela MM.

Author information

**Abstract**  
HIV infection is associated with subnormal GSH levels. An increase in glutathione levels has been observed in HIV-infected adults under oral whey protein supplementation. We studied the features associated with a whey protein concentrate supplementation in children with rapidly progressive AIDS. A prospective double-blind clinical trial was carried out for 4 months with 18 vertically HIV-infected children (1.98-6.37 years), under antiretroviral therapy, who had received whey protein, maltodextrin (placebo) or none. Erythrocyte glutathione concentration, T lymphocyte counts (CD4+ and CD8+) and occurrence of associated co-infections were evaluated. Wilcoxon's and Fischer's Exact tests were used to assess differences between whey protein-supplemented and control (placebo and non-supplemented) groups. A significant median increase of 16.14 mg/dl (p = 0.018) in erythrocyte glutathione levels was observed in the whey protein-supplemented group; the TCD4/CD8 lymphocyte ratio showed a non significant increase and lower occurrence of associated co-infections was also observed. In conclusion, whey protein concentrate supplementation can stimulate glutathione synthesis and, possibly, decrease the occurrence of associated co-infections.

PMID: 16014759 [PubMed - indexed for MEDLINE]

**Guidelines for an integrated approach to nutritional care of HIV-infected children (6 month-14 years)**  
Preliminary version for country introduction

Authors:  
World Health Organization

**Handbook**  
Preliminary version for country introduction

**Publication details**  
Number of pages: 79 (Handbook), 15 (Guide for local adaptation), 32 (Chart booklet)  
Publication date: 2009  
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**Downloads**  
- Handbook pdf, 793kb  
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**Nutritional interventions for reducing morbidity and mortality in people with HIV**

Review Intervention

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