The W's of systematic reviews

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Training Course in Sexual and Reproductive Health Research
Geneva Workshop 2011
14 June 2011

Who writes systematic reviews

Systematic reviews

- What is a systematic review? Are all reviews created equally?
- Who reads them?
- Why should anyone do this?
- Where do you start?

What is a (systematic) review

A high-level overview of primary research on a particular research question that tries to identify, select, synthesize and appraise all high quality research evidence relevant to that question in order to answer it

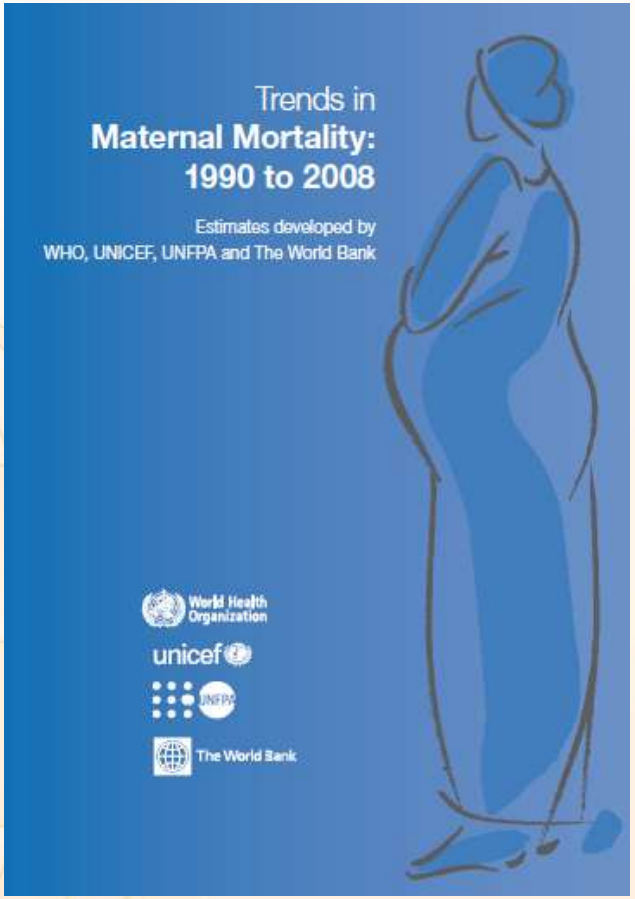
http://en.wikipedia.org/wiki/Systematic_review#cite_note-CEBM_about-0

Cochrane definition

- a clearly stated set of objectives with pre-defined eligibility criteria for studies;
- an explicit, reproducible methodology;
- a systematic search that attempts to identify all studies that would meet the eligibility criteria;
- an assessment of the validity of the findings of the included studies, for example through the assessment of risk of bias; and
- a systematic presentation, and synthesis, of the characteristics and findings of the included studies.

What is it REALLY????

For the reader: A shortcut




Articles

National, regional, and worldwide estimates of stillbirth rates in 2009 with trends since 1995: a systematic analysis

Summary

Introduction

The target audience

- Who are they?
- Why are they looking at a systematic review?


[interns]

What is a systematic review *supposed* to accomplish?

- Informed evidence base

Where to start?

- **Defining your question**
  - What is the best drug to use for prevention of eclampsia?
  - What policies affect access to care

Why you need to ask this question?

- Providing background to your study
- To answer a clinical question
- To provide guidance/recommendations

How do you plan to answer this question?

- **Defining your outcomes of interest**

The systematic search

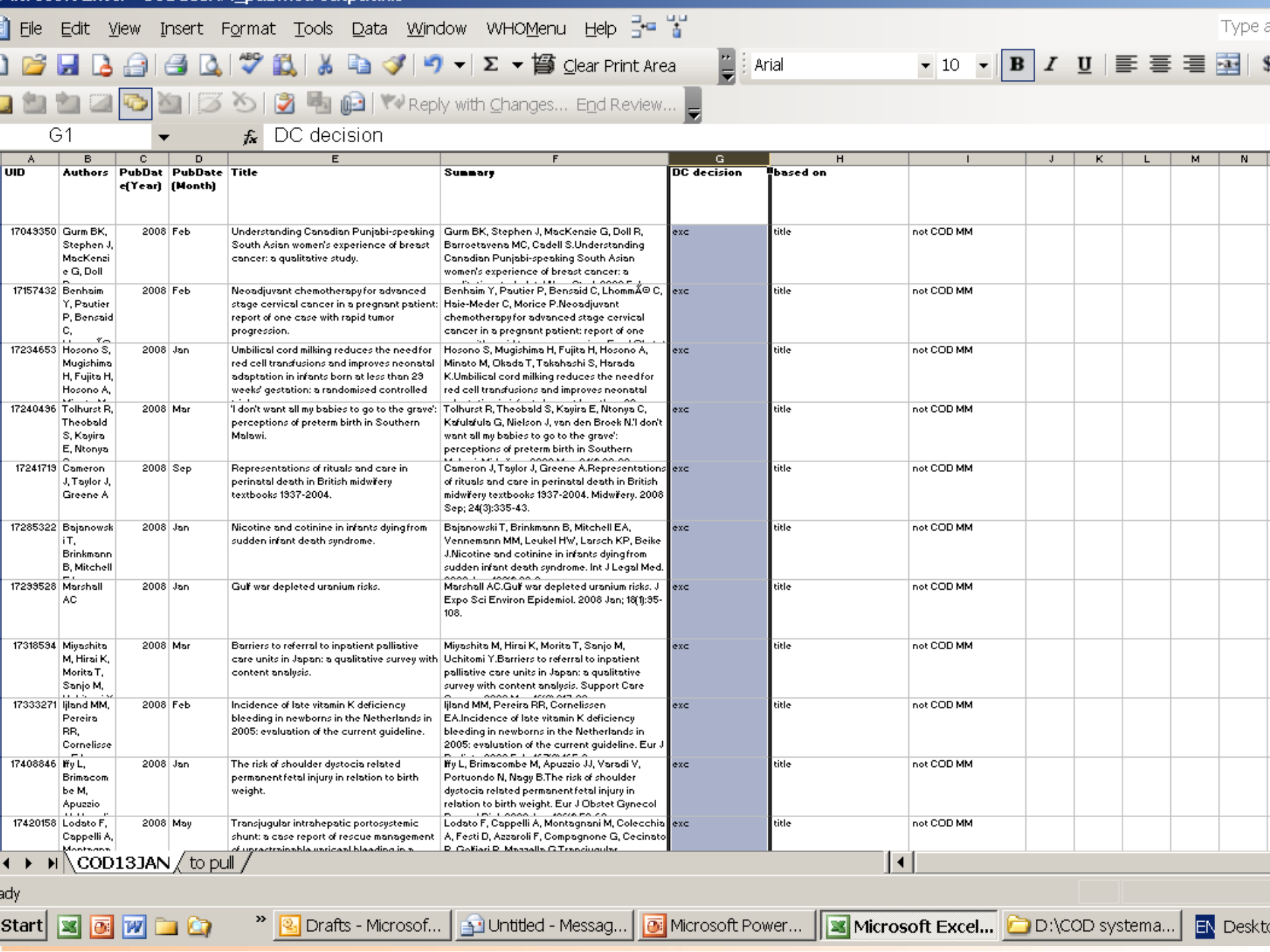
- **Scope of the search**
  - Pubmed
  - Medline
  - Embase
  - Grey literature
- **Languages**
- **transparency**

10000+ references now what?

- **Cutting through to the substance**
  - Title
  - Abstract
  - Full text
- **Remembering to manage your references**
- **transparency**

FLINK

- http://www.ncbi.nlm.nih.gov/Structure/flink/docs/flink_about.html.
- FLink allows PubMed search results to be saved as a CSV, or comma-separated value, file which can be imported into a program like Excel.
- The columns in a CSV file will depend on the database you accessed through FLink. For PubMed, thecolumns will include:
  - .UID (PMID)
  - Authors
  - PubDate(Year)
  - PubDate(Month
  - Title of article Summary (which includes the following information in a single cell: Authors, title, journal name, year, month (if applicable), volume, issue, pages)



UID	Authors	PubDate(Year)	PubDate (Month)	Title	Summary	DC decision	based on							
17043350	Gurm BK, Stephen J, MacKenzie G, Doll	2008	Feb	Understanding Canadian Punjabi-speaking South Asian women's experience of breast cancer: a qualitative study.	Gurm BK, Stephen J, MacKenzie G, Doll R, Barroetavena MC, Cadell S.Understanding Canadian Punjabi-speaking South Asian women's experience of breast cancer: a	exc	title	not COD MM						
17157432	Benhaim Y, Pautier P, Bensaid C,	2008	Feb	Neoadjuvant chemotherapy for advanced stage cervical cancer in a pregnant patient: report of one case with rapid tumor progression.	Benhaim Y, Pautier P, Bensaid C, LhommÃ© C, Haie-Meder C, Morice P.Neoadjuvant chemotherapy for advanced stage cervical cancer in a pregnant patient: report of one	exc	title	not COD MM						
17234653	Hosono S, Mugishima H, Fujita H, Hosono A,	2008	Jan	Umbilical cord milking reduces the need for red cell transfusions and improves neonatal adaptation in infants born at less than 29 weeks' gestation: a randomised controlled	Hosono S, Mugishima H, Fujita H, Hosono A, Minato M, Okada T, Takahashi S, Harada K.Umbilical cord milking reduces the need for red cell transfusions and improves neonatal	exc	title	not COD MM						
17240436	Tolhurst R, Theobald S, Kayira E, Ntonya	2008	Mar	'I don't want all my babies to go to the grave': perceptions of preterm birth in Southern Malawi.	Tolhurst R, Theobald S, Kayira E, Ntonya C, Kafulafula G, Nielson J, van den Broek N.'I don't want all my babies to go to the grave': perceptions of preterm birth in Southern	exc	title	not COD MM						
17241713	Cameron J, Taylor J, Greene A	2008	Sep	Representations of rituals and care in perinatal death in British midwifery textbooks 1937-2004.	Cameron J, Taylor J, Greene A.Representations of rituals and care in perinatal death in British midwifery textbooks 1937-2004. Midwifery. 2008 Sep; 24(3):335-43.	exc	title	not COD MM						
17265322	Bajanowski T, Brinkmann B, Mitchell	2008	Jan	Nicotine and cotinine in infants dying from sudden infant death syndrome.	Bajanowski T, Brinkmann B, Mitchell EA, Vennemann MM, Leukel HW, Larsch KP, Beike J.Nicotine and cotinine in infants dying from sudden infant death syndrome. Int J Legal Med.	exc	title	not COD MM						
17239528	Marshall AC	2008	Jan	Gulf war depleted uranium risks.	Marshall AC.Gulf war depleted uranium risks. J Expo Sci Environ Epidemiol. 2008 Jan; 18(1):35-108.	exc	title	not COD MM						
17318534	Miyashita M, Hirai K, Morita T, Sanjo M,	2008	Mar	Barriers to referral to inpatient palliative care units in Japan: a qualitative survey with content analysis.	Miyashita M, Hirai K, Morita T, Sanjo M, Uchitomi Y.Barriers to referral to inpatient palliative care units in Japan: a qualitative survey with content analysis. Support Care	exc	title	not COD MM						
17333271	Ijland MM, Pereira RR, Cornelisse	2008	Feb	Incidence of late vitamin K deficiency bleeding in newborns in the Netherlands in 2005: evaluation of the current guideline.	Ijland MM, Pereira RR, Cornelissen EA.Incidence of late vitamin K deficiency bleeding in newborns in the Netherlands in 2005: evaluation of the current guideline. Eur J	exc	title	not COD MM						
17408846	Ilfy L, Brimacombe M, Apuzzio	2008	Jan	The risk of shoulder dystocia related permanent fetal injury in relation to birth weight.	Ilfy L, Brimacombe M, Apuzzio JJ, Varadi V, Portuondo N, Nagy B.The risk of shoulder dystocia related permanent fetal injury in relation to birth weight. Eur J Obstet Gynecol	exc	title	not COD MM						
17420158	Lodato F, Cappelli A,	2008	May	Transjugular intrahepatic portosystemic shunt: a case report of rescue management	Lodato F, Cappelli A, Montagnani M, Colecchia A, Festi D, Azzaroli F, Compagnone G, Cecinato	exc	title	not COD MM						

Data collection

- **Extraction**
  - Pencil and paper
  - Computerized databases

Data extraction

#	Question	Response codes
1	Paper identification number	# |__|__|__|__|
2	Name of data extractor	
	STUDY IDENTIFIERS	
3	Date of extraction (dd/mm/yy)	|_1_|5__|0__|4__|1__|_1_| d d m m y y
4	Last name of the first author	Mlyneck
5	Name of country	Slovenia
6	Is the study published?	(1) YES (2) NO
7	Year of publication	2010
8	Language of paper	(1) English (2) French (3) German (4) Chinese (5) Spanish (6) Russian (7) Portuguese (8) Other czech
9	Region or sub-region of the study (for example: Northwest province, etc).	Describe: country

Looking at bias

Schachtel 1989 *(Continued)*

Item	Authors' judgement	Description
Adequate sequence generation?	Yes	"...computer-generated randomization code..."
Allocation concealment?	Unclear	"...computer-generated randomization code..."
Blinding? All outcomes	Yes	"...double-blinded conditions..."
Incomplete outcome data addressed? All outcomes	Yes	4 women were excluded from the efficacy analysis "...because they had remedicated but had failed to indicate the time of remedication" 4/115 = 3% so unlikely to affect results.
Free of selective reporting?	Unclear	We did not assess the trial protocol.
Free of other bias?	Unclear	Reported as balanced according to: age, height, weight, number of previous episiotomies, parity. No other information, so unclear.

Smith 1975

Methods	RCT. 3 groups (1-paracetamol; 2-paracetamol+propoxylene HCl; 3-placebo).
Participants	Women with moderate to severe episiotomy pain. N = 225.
Interventions	Intervention: paracetamol - 1000 mg (N = 75). Comparison: placebo (N = 75).
Outcomes	• Pain intensity (4 = very severe; 3 = severe; 2 = moderately severe; 1 = slight; 0 = none). • Pain relief (5 = complete; 4 = more than half gone; 3 = less than half gone; 2 = unchanged; 1 = worse). • Overall evaluation reflecting investigators impression (excellent; good; fair; no effect). • Need for additional pain relief (treatment failure).
Notes	Outcomes assessed at 0, ½, 1, 2, 3 and 4 hours. For the review we took 4-hour assessment.
Risk of bias	

Item	Authors' judgement	Description

Discussion points

- **What do you want people to take away?**
  - Remember the audience

Implications for practice/policy/research

- **Did you find something that should change standard of care?**
- **If so, what needs to be done to make sure people have access?**
- **What if the results are conflicting?**
  - Closing the research gaps

Don't forget the little people

- Acknowledgements
- contributions


LOOK INSIDE!
Cochrane Handbook for
Systematic Reviews
of Interventions