



Using Cochrane reviews to identify research gaps in the perinatal evidence

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Collaboration

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The WOMBAT Collaboration



Promotes and supports high quality randomised controlled trials in the perinatal area by:

- Identifying research gaps
- Supporting multicentre trials
- Providing education and training

Funded by a NHMRC enabling grant
5 regional centres across Australia

www.wombatcollaboration.net.

Dissemination of research gaps from Cochrane perinatal reviews



- Difficult to simply scan multiple Cochrane reviews for their research implications
- A summary of research implications is hard to understand without a summary of findings
- So we put together a brief summary of findings followed by the research gaps
- And arranged these into umbrellas
- Will update with each issue of C. Lib

Over 500 relevant Cochrane reviews (17% of Cochrane Library)



- Nearly **300** pregnancy and childbirth
- Over **200** neonatal
- Small numbers from other review groups
- plus 150 protocols

Process



**Coded into 50 umbrellas e.g.
*Infection in newborns,
Maternal mental health***

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At least one suggestion for
research per review (e.g. 160 for
infection in newborns)

= plenty to keep researchers
busy!

Faces indicate the review findings



😊 Likely to be effective (20%)

😐 Both benefits and risks balanced (5%)

? Uncertain or limited effect (70%)

😞 Likely to be ineffective or potentially harmful (5%)

Example



? Intravenous immunoglobulin for suspected or subsequently proven infection in neonates (Ohlsson 2004b)

- Need well-designed trials of targeted IVIG preparations— such a trial is ongoing in the UK, Australia, NZ and Europe (INIS).
- Other potentially more effective interventions to prevent or treat neonatal infections should also be explored

Beyond “Further research required”



Cochrane Handbook (of Interventions)

- Consider PICO framework
- Distinguish ‘what research’ from ‘how’ (e.g. standard outcomes)

Most perinatal CRs comply – but there could be more consistency and detail

DUETS - Handbook needs guidelines on how research recommendations should be structured

NICE – advice on formulating recommendations

What a structure might include



SUGGESTION FOR A NEW TRIAL

- PICO e.g. Long term outcomes - which ones, how long?
- Size – sample size calculation and associated assumptions (v 'large')
- Anticipated recruitment difficulties (and influence on projected sample size)
- Design – detail beyond 'well designed/ high quality'

ONGOING RESEARCH

Flagging ongoing or unpublished trials that address the gap

Flagging any longterm follow-up or associated studies

More on research gap structure



- Priority/importance (v 'urgently needed/not warranted') – who decides?
- Can this always be judged at review level e.g. IVIG?
- Implementation issues
- Qualitative research – e.g. acceptability of interventions
- Costs and resource use?

Need to address: Triallists



- Sample sizes and recruitment
- Longer follow-up
- Measurement (e.g. pain - results from 11 studies unable to be used in one CR)
- Standard outcomes and definitions
- Resource use

Need to address: Cochrane



- Cochrane reviews not yet done (breastfeeding, ventilation)
- Some reviews need updating - 'landmark' trials not included
- Providing more detail (how large, which interventions/comparisons, which outcomes)
- Relative importance of research gaps?

Cochrane as a source of research gaps



13 recent Australian perinatal trials –
matched with

- 5 Cochrane reviews
- 4 Cochrane research suggestions (e.g. hypotension)

Mismatch due to:

Lack of Cochrane review coverage (e.g. fish
oil for infants)

?

How will research gaps be used?



To check

- Research question has not already been answered
- For ongoing relevant research
- Research possibilities across an area
- Detail such as nature of intervention and comparators
- Methods/logistics
- Importance/potential impact?

To assist researchers to plan and conduct useful research

Conclusions



- Large amount of research needs to be done
- Umbrellas and structuring will make gaps more accessible
- Need a balance between useful detail and writing a trial protocol
- Many important/worthwhile research suggestions will be missing
- Need to use other sources (such as trial registries)

Challenge: turning research gaps into trials and other research initiatives



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