Cochrane: the next decade

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EDITOR IN CHIEF
Plan

Why is evidence important?
Introduction to Cochrane
Challenges for systematic review producers
Cochrane Strategy to 2020
Looking forward for evidence informed health care
Conclusion
Plan

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Conclusion
Trust in medicine

Compassion
Competence
Shared power
Personal care
Realism
Trust in medicine

Compassion
Competence
Shared power
Personal care
Realism
Why is evidence important?

- Value for money
- Evidence
- Patient safety
- Clinical performance
Plan

Why is evidence important?

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What is Cochrane?

The Cochrane Collaboration is an international organisation that aims to help people make well-informed decisions about health care by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of healthcare interventions.

>28,000 people

>100 countries

Advocating for evidence informed decision making

Cochrane evidence used worldwide by wide range of stakeholders in diverse products and activities

Advancing the science of synthesis
Where are we now?
Where are we now: Access
Not just  The Cochrane Library
Not just The Cochrane Library

E-Textbooks, guidelines......
Where are we now: Access

OPEN ACCESS

Green OA model:

- All new and updated reviews free to access 12 months after publication
- Author retains copyright
- Reviews will be deposited in PubMed Central or equivalent
Where are we now?

**OPEN ACCESS**

Gold OA model:

Full OA “author pays” model

Creative Commons licence ie cc-by-nc

Green OA model:

All new and updated reviews will be free to access 12 months after publication

Author retains copyright

Reviews will be deposited in PubMed Central or equivalent
Open access

Green OA:
- 693 reviews
- 385 protocols

Gold OA:
- 15 reviews
- 1 protocol
Where are we now: Impact

4.1 Usage

Figure 1. Full-text and abstract downloads of Cochrane Reviews: January to June 2014

<table>
<thead>
<tr>
<th></th>
<th>Full text downloads</th>
<th>Abstracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-Jun 2013</td>
<td>2,915,978</td>
<td>6,825,812</td>
</tr>
<tr>
<td>Jan-Jun 2014</td>
<td>3,397,579</td>
<td>7,335,566</td>
</tr>
</tbody>
</table>
Impact
Impact

![Graph showing Total cites from 2010 to 2013 with a trend line indicating growth.](image-url)
Impact

Reviews published since 2011\textsuperscript{1}

- 76 reviews have been published in 3 guidelines
- 20 reviews in 4 guidelines
- 6 reviews in 5 guidelines
- 1 review in 6 guidelines
- 1 review in 7 guidelines

\textsuperscript{1}Ann Eisinga, UKCC figures
<table>
<thead>
<tr>
<th>Rank</th>
<th>Review Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spinal manipulative therapy for low-back pain</td>
</tr>
<tr>
<td>2</td>
<td>Daily oral iron supplementation during pregnancy</td>
</tr>
<tr>
<td>3</td>
<td>Colloids versus crystalloids for fluid resuscitation in critically ill patients</td>
</tr>
<tr>
<td>4</td>
<td>Statins for the primary prevention of cardiovascular disease</td>
</tr>
<tr>
<td>5</td>
<td>Vaccines for preventing influenza in healthy adults</td>
</tr>
<tr>
<td>6</td>
<td>Vitamin D supplementation for women during pregnancy</td>
</tr>
<tr>
<td>7</td>
<td>Early skin-to-skin contact for mothers and their healthy newborn infants</td>
</tr>
<tr>
<td>8</td>
<td>Vitamin C for preventing and treating the common cold</td>
</tr>
<tr>
<td>9</td>
<td>Interventions for preventing obesity in children</td>
</tr>
<tr>
<td>10</td>
<td>Interventions for visual field defects in patients with stroke</td>
</tr>
</tbody>
</table>
Two noteworthy reviews

◦ Tamiflu

◦ Avastin

◦ And one very nice email..
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Challenges

Reporting bias

Increased expectations of funders and users
◦ Complexity
◦ Timeliness

Open access

Knowledge translation / dissemination
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Our mission is to promote evidence-informed health decision-making by producing high-quality, relevant, accessible systematic reviews and other synthesized research evidence.
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PRODUCING EVIDENCE
MAKING OUR EVIDENCE ACCESSIBLE
ADVOCATING FOR EVIDENCE

BUILDING AND EFFECTIVE AND SUSTAINABLE ORGANISATION
### Parenteral anticoagulation for patients with cancer

**Patient or population:** patients with advanced cancer  
**Settings:** Outpatient  
**Intervention:** Parenteral anticoagulation

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Absolute risks* (95% CI)</th>
<th>Relative effect (95% CI)</th>
<th>No of Participants (studies)</th>
<th>Quality of evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mortality at 12 months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up: 1-7 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study population</td>
<td>663 per 1000 (530 to 630)</td>
<td>RR 0.87 (0.8 to 0.95)</td>
<td>1174 (5 studies)</td>
<td>☄☄☄☄��</td>
<td></td>
</tr>
<tr>
<td>Low risk population</td>
<td>577 per 1000 (490 to 665)</td>
<td>RR 0.87 (0.8 to 0.95)</td>
<td>1174 (5 studies)</td>
<td>☄☄☄☄高</td>
<td></td>
</tr>
<tr>
<td>High risk population</td>
<td>500 per 1000 (400 to 500)</td>
<td>RR 0.87 (0.8 to 0.95)</td>
<td>1174 (5 studies)</td>
<td>☄☄☄☄高</td>
<td></td>
</tr>
<tr>
<td><strong>Major bleeding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up: 1-7 years</td>
<td>15 per 1000 (4 to 132)</td>
<td>RR 1.5 (0.26 to 8.8)</td>
<td>814 (3 studies)</td>
<td>☄☄☄☄中</td>
<td></td>
</tr>
<tr>
<td>Minor bleeding</td>
<td>13 per 1000 (10 to 72)</td>
<td>RR 2.07 (0.78 to 5.51)</td>
<td>760 (3 studies)</td>
<td>☄☄☄☄中</td>
<td></td>
</tr>
<tr>
<td>DVT</td>
<td>9 per 1000 (1 to 44)</td>
<td>RR 0.61 (0.08 to 4.91)</td>
<td>458 (2 studies)</td>
<td>☄☄☄☄非常低</td>
<td></td>
</tr>
</tbody>
</table>

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1 The 95% confidence interval includes both no increased risk of bleeding as well as substantial increased risk of bleeding  
2 Only 2 events in the placebo group  
3 Only 2 trials reported DVT - reporting bias may be present
What are the key elements

Sorted by clinical outcomes that matter

Takes into consideration issues that increase/decrease our confidence in the results

Report “relative” and “absolute” effects

Move away from $p<0.05$ to “minimum important difference”
Making evidence accessible: translations
Making evidence accessible: translations
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What does future EBM look like?

Changing Reviews
◦ Methods and quality
◦ Enhanced reviews
◦ New review types

Different ways of producing reviews

Different ways to present and deliver reviews
Different forms of analysis

Reviews of complex interventions

Network meta-analysis

Qualitative synthesis

Economic analyses
Enhanced reviews

Greater inclusion of non randomised studies

Review enhancements: qualitative, economic evidence
New review types

New review types: more diagnosis, reviews of data from clinical study reports

New types of questions: prognosis, mixed methods, qualitative and economic
New models
New models

Neuraminidase inhibitors for preventing and treating influenza in healthy adults and children (Review)

Jefferson T, Jones MA, Doshi P, Del Mar CB, Heneghan CJ, Hama R, Thompson MJ

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in The Cochrane Library 2012, Issue 1

http://www.thecochranelibrary.com
The “living review”

Increased use of technology

Data sharing

Wiki reviews and crowd-sourcing
The “living review”

"How much of what you do would be different if we could achieve even a 1 log (90%) reduction in time to produce a review or a review update?"

Julian Elliott
The “living review”

The Living Review Project focuses on work in three areas:

- **Communities of practice** that support large and diverse expert, non-traditional and crowd sourced contribution of linked, open data.

- **Software tools** that make high quality evidence review processes simpler and more efficient.

- **Review and meta-analytical methods** that enable more efficient processes and more frequent updating.

Different vehicles

<table>
<thead>
<tr>
<th>Biologic</th>
<th>Control group risk</th>
<th>Biologic risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aatacept</td>
<td>207 per 1000</td>
<td>474 per 1000</td>
</tr>
<tr>
<td>Adalimumab</td>
<td>207 per 1000</td>
<td>631 per 1000</td>
</tr>
<tr>
<td>Anakinra</td>
<td>207 per 1000</td>
<td>271 per 1000</td>
</tr>
<tr>
<td>Etanercept</td>
<td>207 per 1000</td>
<td>607 per 1000</td>
</tr>
<tr>
<td>Infliximab</td>
<td>207 per 1000</td>
<td>447 per 1000</td>
</tr>
<tr>
<td>Rituximab</td>
<td>207 per 1000</td>
<td>604 per 1000</td>
</tr>
</tbody>
</table>
Different vehicles
Filtre par

Sujets de santé

- Anesthésie & lutte contre la douleur (2)
- Cancer (4)
- Consommateur et stratégies de communication (1)
- Cœur et circulation (2)
- Gastro-entérologie (11)
- Grossesse et accouchement (7)
- Gynécologie (1)
- Maladie infectieuse (48)
- Maladies du sang (5)
- Maladies génétiques (9)
- Maladies rares (3)
- Médecine complémentaire et alternative

Résultats de la recherche: 81

Trier par: pertinence

Résultats par page: 10

Les vaccins contre la varicelle et la grippe peuvent réduire la morbidité chez les patients atteints de cancers du sang

Les infections virales provoquent des maladies significatives et même le décès chez les patients atteints de cancers du sang. Dans la revue systématique actuelle des essais contrôlés randomisés (ECR), nous avons pour objectif d'évaluer l'efficacité et l'innocuité des vaccins viraux chez ces patients. Le principal critère de jugement préétabli était ...

Vaccins pour la prévention de la grippe chez les personnes asthmatiques

L'asthme est une pathologie qui affecte les voies respiratoires – les petits canaux par lesquels passe l'air entrant et sortant des poumons – et les symptômes sont généralement de la toux, une respiration sifflante, une sensation d'asphyxie et d'oppression thoracique. Les symptômes peuvent être occasionnels ou persistants. Lorsqu'une personne ...

Vaccins pour la prévention de la grippe chez les personnes atteintes de mucoviscidose

Les personnes atteintes de mucoviscidose ont des voies respiratoires ostéritées, ce qui les expose à des infections fréquentes des voies respiratoires. Les infections par des maladies virales comme la grippe peuvent aggraver la détérioration des poumons. Les médecins conseillent donc souvent aux personnes atteintes de mucoviscidose de se faire vacciner ...
Conclusion

Exciting times for evidence

Reporting bias

Complexity versus timeliness

Right question

Accessibility & utility
Köszönöm, hogy meghallgattak
dtovey@cochrane.org