Publishing living evidence

Living Evidence Network “state of the science” webinar

3 July 2019

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Trusted evidence.
Informed decisions.
Better health.
Publishing living evidence: Cochrane perspective

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Declarations of interest

Employed by Cochrane
"It is surely a great criticism of our profession that we have not organised a critical summary, by specialty or subspecialty, adapted periodically, of all relevant randomised controlled trials."

Archie Cochrane, 1979
What’s different about Cochrane?

- From the outset, Cochrane has produced systematic reviews that have been updated or revised based on new evidence or feedback from readers, for example.
- Today, Cochrane Reviews are updated based on need.
Taking this a step further, Cochrane has started publishing information about whether the Cochrane Review is up to date, an update is in progress (update pending), or will not be updated (no update planned).
Each time a Cochrane Review is updated, it is a new citation version - that means, it has a new citation, new entry in PubMed, and a unique identifier (a new digital object identifier or DOI). Each is ‘linked’ to the previous version.

In contrast:
- Standard journal article
- F1000
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Delayed antibiotic prescriptions for respiratory infections

Cochrane Systematic Review - Intervention | Version published: 07 September 2017  see what's new
https://doi.org/10.1002/14651858.CD004417.pub5

Abstract  available in  English  |  Español  |  Français  |  简体中文

Background

Concerns exist regarding antibiotic prescribing for respiratory tract infections (RTIs) owing to adverse reactions, cost, and antibacterial resistance. One proposed strategy to reduce antibiotic prescribing is to provide prescriptions, but to advise delay in antibiotic use with the expectation that symptoms will resolve first. This is an update of a Cochrane Review originally published in 2007, and updated in 2010 and 2013.
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Future challenges for Cochrane with publishing living evidence
Delayed antibiotic prescriptions for respiratory infections

Cochrane Systematic Review - Intervention  |  Version published: 07 September 2017  |  see what's new

https://doi.org/10.1002/14651858.CD004417.pub5

✉ Geoffrey KP Spurling | Chris B Del Mar | Liz Dooley | Ruth Foxlee | Rebecca Farley

View authors' declarations of interest

Abstract  available in  English  |  Español  |  Français  |  简体中文

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Concerns exist regarding antibiotic prescribing for respiratory tract infections (RTIs) owing to adverse reactions, cost, and antibacterial resistance. One proposed strategy to reduce antibiotic prescribing is to provide prescriptions, but to advise delay in antibiotic use with the expectation that symptoms will resolve first. This is an update of a Cochrane Review originally published in 2007, and updated in 2010 and 2013.
Abstract

Anticoagulation may improve survival in patients with cancer through a speculated anti-tumour effect, in addition to the antithrombotic effect, although may increase the risk of bleeding.
What's new? Should I use it now or should I wait?


Wow! Frequent updates!

What does PubMed say?
Psychological therapies for the prevention of migraine in adults

Louise Sharpe, Joanne Dudeney, Amanda C de C Williams, Michael Nicholas, Ingrid McPhee, Andrew Baillie, Miriam Welgampola, Brian McGuire

2 July 2019
What should Cochrane do to address these challenges?
Linezolid for drug-resistant pulmonary tuberculosis
Cochrane Systematic Review - Intervention | Version published: 20 March 2019
https://doi.org/10.1002/14651858.CD012836.pub2

View article information

All studies incorporated from most recent search  Read more
Cochrane Review edition 1

v1.1: new search and no new studies

v1.2: new studies included and changes across text

Cochrane Review edition 2

v2.1: new studies excluded

v2.2: co-publication reference added and typo corrected

v2.3: new ongoing studies

New DOI for each version

PubMed: versioned per edition

PubMed: linked updates between editions

New DOI for each version
Versions, Updates, Amendments, Editions...
Living…

Image created by (clockwise from left): Arthur Shain., Vectors Market, Laurent Canivet, Adiren Coquet, mark, Gonza, Yukiva Koul, from the Noun Project
Summing up

- Introduction to Cochrane
- How Cochrane updates reviews
- Challenges for publishing living systematic reviews
- How Cochrane should address these?
- Any thoughts?
What is important to you?

Living Evidence Network

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IMPLEMENTING LIVING SYSTEMATIC REVIEWS OUTSIDE OF COCHRANE
INTRODUCTION TO F1000RESEARCH

PUBLISH FAST. OPENLY. WITHOUT RESTRICTIONS.

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- Transparent refereeing
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    - Articles can be ‘living’
- Indexed in PubMed, Scopus, etc
Factors influencing malignant mesothelioma survival: a retrospective review of the National Mesothelioma Virtual Bank cohort [version 3; peer review: 2 approved, 1 approved with reservations]

Indexed once it passes peer review:

https://f1000research.com/articles/7-1184
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- Emerald Open Research
  - For social science outputs related to the UN’s Sustainable Development Goals
  - Emerald Open Research

- ISF Open Research
  - For ISF-funded researchers
  - ISF Open Research

Contact us
IMPLEMENTING LIVING SYSTEMATIC REVIEWS
PLANNING

- What do we have?
- What can be repurposed/adapted?
- What needs to be built?
AREAS TO ADDRESS

- LSR
  - Workflows
    - Editors
    - Peer Review
    - Production
  - Editorial
    - PRISMA
      - LSR Pilot guidance
    - Changes to EM
    - Changes to article page
  - Technical aspects
WHAT DO WE HAVE?

- **Version system**
- **Persistent identifiers across versions**
WHAT CAN BE REPURPOSED

• Guidelines for Systematic Reviews
  • Reporting guidelines policy
    • Authors should upload to public repository after choosing the subject of their repository

• Workflows for articles with updates built in

Data availability

Underlying data

Open Science Framework: A systematic review of the agreement of recall, home-based records, facility records, BCG scar, and serology for ascertaining vaccination status in low and middle-income countries.
https://doi.org/10.17605/OSF.IO/S5UBY58

This project contains the following underlying data:
  - Supplemental Table 1: List of all articles used in analysis.

Extended data

Open Science Framework: A systematic review of the agreement of recall, home-based records, facility records, BCG scar, and serology for ascertaining vaccination status in low and middle-income countries.
https://doi.org/10.17605/OSF.IO/S5UBY58

This project contains the following extended data:
  - Search term syntax

Reporting guidelines

PRISMA checklist: https://doi.org/10.17605/OSF.IO/S5UBY58

Data are available under the terms of the Creative Commons Zero "No rights reserved" data waiver (CC0 1.0 Public domain dedication).
FROM REGISTERED REPORTS TO LSRS

Registered Report

- Design study
- Publish protocol (Stage 1 RR)
- Collect and analyse data
- Publish article (Stage 2 RR)

- Introduction
- Methods
- Discussion

Living Systematic Review

- Design and perform study
- Publish LSR Baseline
- Re-run search
- Publish LSR
- Re-run Search
- Publish LSR

- Introduction
- Methods
- Results
- Discussion

No new studies identified
New studies identified which affect previous conclusion
WHAT NEEDS TO BE BUILT?

- Automation
  - New payment for update reminders
  - Update reminders
- Workflows
  - Editors
  - Peer review
  - Production
- Design
  - Update box
  - LSR identifier
Therapeutic interventions for acute complete ruptures of the ulnar collateral ligament of the thumb: a living systematic review [version 6; peer review: 3 approved]

Mark Mikhail, Justin C. R. Wormald, Neal Thurley, Nicholas Riley, Benjamin J. F. Dean

Abstract

Background

The aim of this study was to evaluate the effectiveness of interventions for acute complete rupture of the ulnar collateral ligament (UCL) of the thumb in adults.

Methods

The following databases were searched: MEDLINE and EMBASE via OVID, CINAHL, and SPORTDiscus via EBSCO, from database inception to 1st December 2018. Inclusion criteria were: (i) randomised controlled clinical trials (RCTs) or study of intervention with a comparator; (ii) participants with diagnosis of acute complete rupture of the UCL of the thumb; (iii) participants aged 18 years of age or older at enrolment; and (iv) published in a peer-reviewed English-language journal.

Results

In total, six studies were identified for inclusion after screening. All studies had a high risk of bias. Three studies were retrospective comparative case series which compared two different surgical techniques (bone anchor versus pull out suture, suture versus pull out suture, suture versus steel wire). Of these studies, three were RCTs, two of which compared different rehabilitation regimes in patients managed surgically (plaster versus early mobilization, new spica versus standard spica). The remaining RCT compared two different rehabilitation regimes in a mixed group of surgically/non-surgically treated patients. The RCT comparing a standard spica with a new spica demonstrated a statistically significant improvement in outcomes with the new spica at all time points (range of motion, Dreiser index and VAS); this was also the only study to provide sufficient outcome data for further analysis.

Conclusions

There is no prospective evidence comparing surgery to non-operative treatment for acute complete ruptures of the ulnar collateral ligament of the thumb. There is weak evidence to suggest that early mobilisation may be beneficial following surgical repair. Further research is necessary to better define which patients benefit from which specific interventions.
Updates since Version 6

Latest search: 1 March 2019
Next search: 1 June 2019

Searches for this living systematic review are run and screened every 3 months. The current search (01/03/19) identified 1 new study. This study made no significant change to the results and conclusions. A new version of this article will be posted incorporating the new article and any relevant articles published by then following the next search.


Figures 2 and 3 have been updated to incorporate the new identified study.

Corresponding author: Benjamin J. F. Dean

Competing interests: No competing interests were disclosed.

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First version published: 01 Mar 2018, 7:714 (https://doi.org/10.12688/f1000research.15065.1)
LIVING METHODOLOGICAL SURVEY

- Applying a ‘living’ method to surveying living systematic reviews
- Aim is to review the methods and track the life cycle of LSRs
- We plan to use these findings to improve our workflows and guidelines

https://f1000research.com/articles/8-221
Towards a new model for producing evidence-based guidelines: a qualitative study of current approaches and opportunities for innovation among Australian guideline developers [version 1; peer review: awaiting peer review]

Steve McDonald, Julian H. Elliott, Sally Green, Tim Turner

FUNDERS Cochrane | National Health and Medical Research Council

PUBLISHED 24 Jun 2019
Any questions?
If you have any queries about submitting an LSR or anything else please get in contact:

James.Barker@f1000.com
Living Evidence Network

Join the LEN by emailing lsr@cochrane.org

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