



It's Alive!

The birth & the life so far of the Cochrane Living Systematic Review

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Cochrane

Project Transform

Living systematic reviews

Anneliese Synnot
Cochrane Australia, Monash University

Trusted evidence.
Informed decisions.
Better health.





Context

- **Increasing volume of primary evidence (75 trials a day)**
- **Substantial time to produce SRs (mean 20 months)**
- **Traditional reviews non-responsive (median time publication to inclusion in SR: 2.5 – 6.5 years)**
- **SRs quickly become obsolete (median 5.4 years before conclusions change)**



Project Transform

OPEN ACCESS Freely available online



Policy Forum

Living Systematic Reviews: An Emerging Opportunity to Narrow the Evidence-Practice Gap

Julian H. Elliott^{1,2*}, Tari Turner^{2,3}, Ornella Clavisi⁴, James Thomas⁵, Julian P. T. Higgins^{6,7}, Chris Mavergames⁸, Russell L. Gruen^{4,9}

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The Bridge from Evidence to Practice

Summary

Elliott 2014 PLoS Med 11(2)

What is a living systematic review?

We define an LSR as a systematic review that is continually updated, incorporating relevant new evidence as it becomes available. In practice, this means continual surveillance for new research evidence through ongoing or frequent searches and the inclusion of relevant new information into the review in a timely manner so that the findings of the systematic review remain current.



Project Transform

What is a living systematic review?

A living SR is:

a systematic review

that is continually updated,

incorporating new evidence

as it becomes available





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What is a living systematic review?

A living SR is:

a systematic review

that is continually updated,
incorporating new evidence
as it becomes available





What is a living systematic review?

A living SR is:

a systematic review

- Not rapid, scoping etc ?
- Just interventional RCTs?
- Same methods as trad' SR?





Project Transform

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Project Transform

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What is a living systematic review?

A living SR is:

continually updated

- How frequently searched?
- How frequently screened?
- More than trad' Cochrane updates?
- Is each update a stand-alone source?



Project Transform

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Project Transform

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Project Transform

What is a living systematic review?

A living SR is:

incorporates new evidence

- How is it incorporated?





What is a living systematic review?

A living SR is:

incorporates new evidence

- What is new evidence?
- New data on existing trials?
- Grey literature (pre-prints)?
- Completely new drug?





**Guidance for the
production and
publication of Cochrane
living systematic
reviews: Cochrane
Reviews in living mode**

Version December 2019



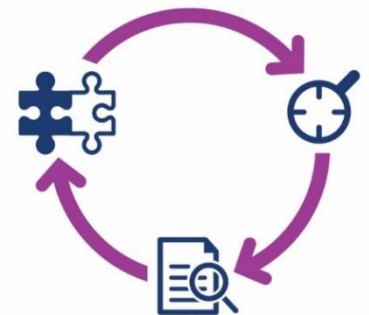
Trusted evidence.
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Better health.



Features of Cochrane LSR approach

- Applies to any review type (e.g. RCTs, qualitative)
- Retains core systematic review methods
- LSR-specific methods pre-specified in protocol
- Explicit and a priori commitment to frequent search & updating
- Starts with a standard ‘baseline’ review

- Searches = monthly
- Tell reader ‘what’s happening’ = monthly
- Re-publish the review = informed by the evidence



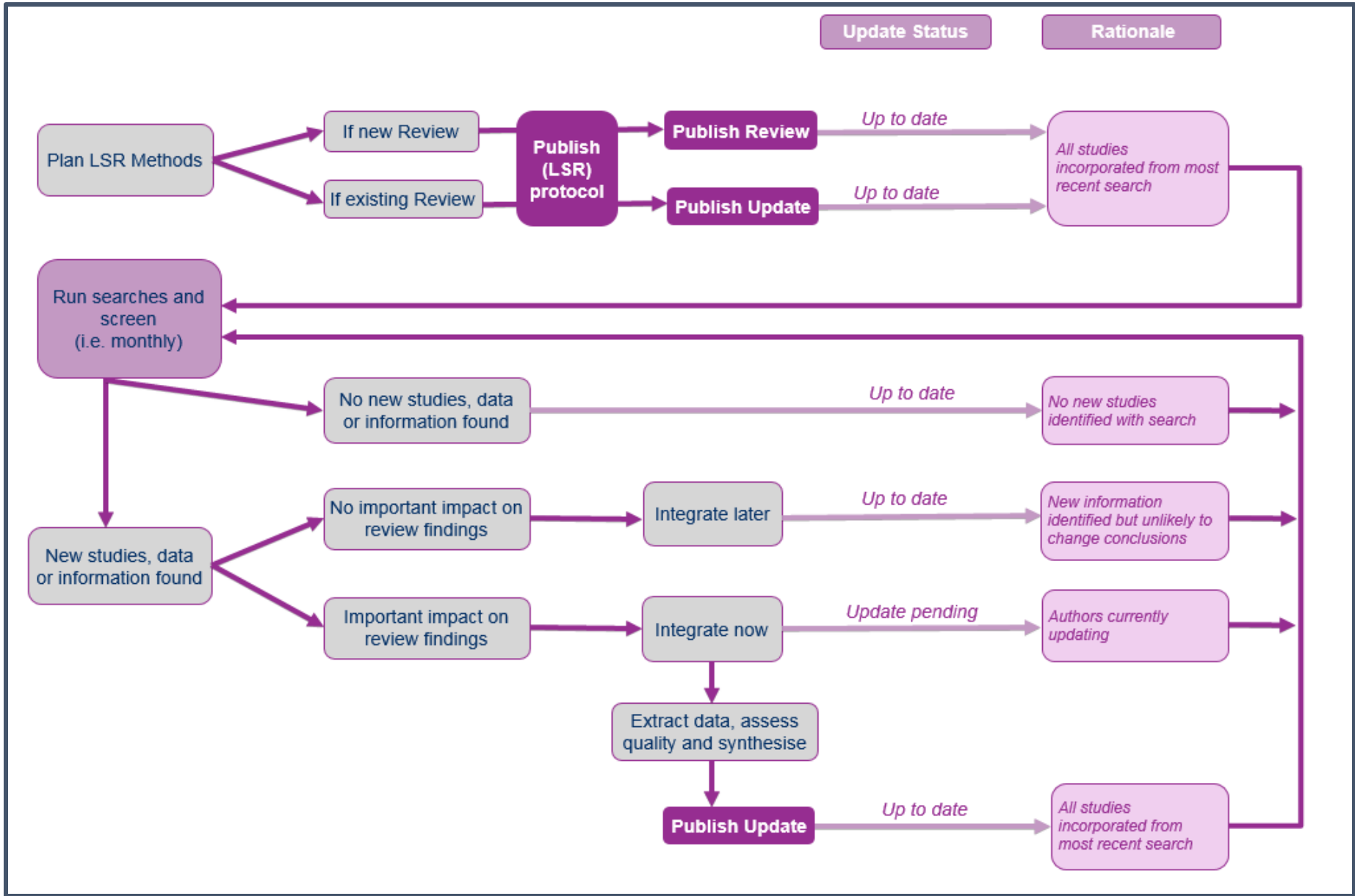


LSR Publication model

Conclusions

The evidence for effective interventions to increase eating of fruit and vegetables by children aged five and under remains sparse. Child-feeding interventions appear to increase the eating of vegetables by children (by 4.03 grams), but this conclusion is based on very low-quality evidence and is very likely to change when future research is undertaken.

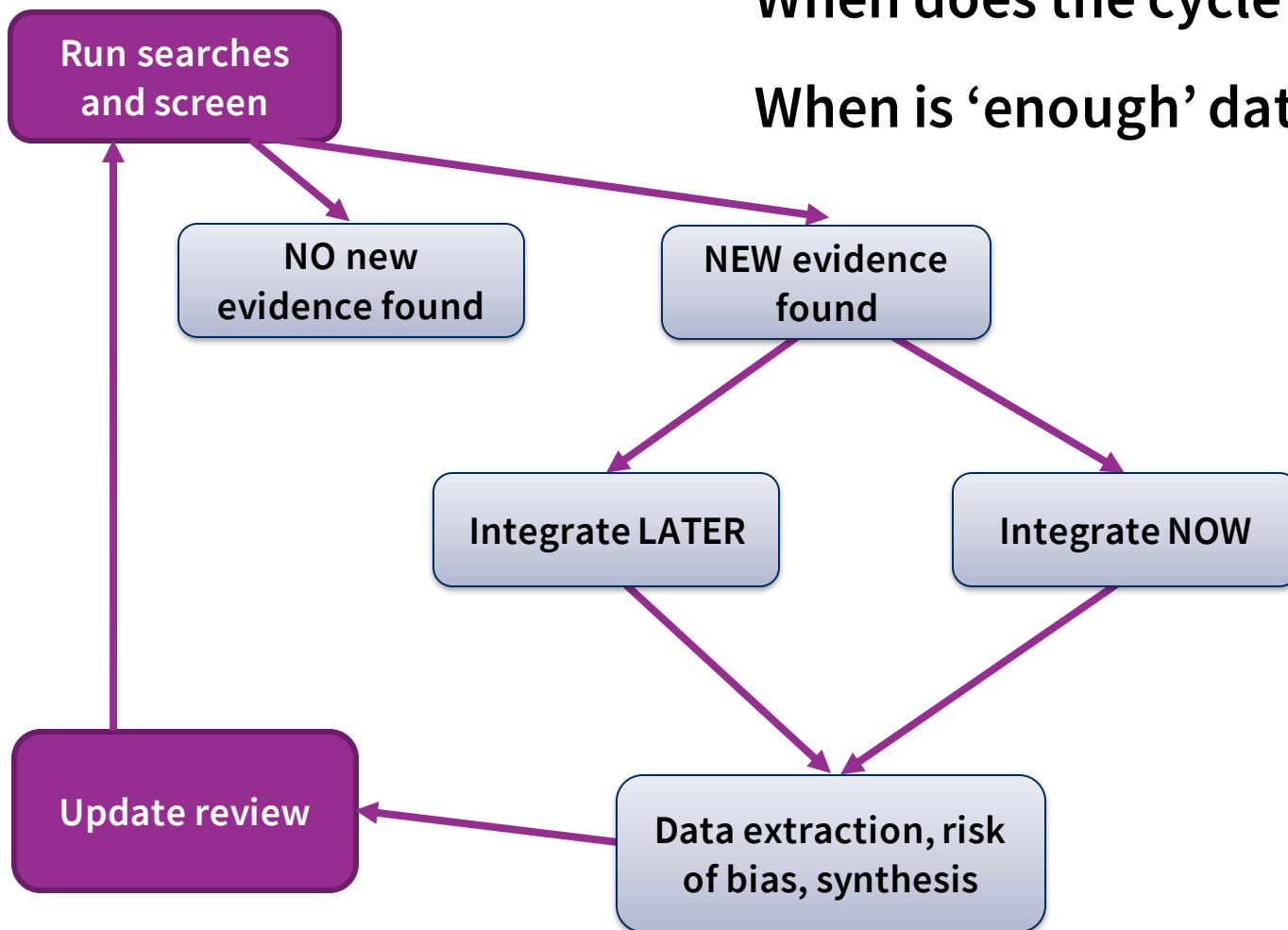
This is a living systematic review. Living systematic reviews offer a new approach to review updating, in which the review is continually updated, incorporating relevant new evidence as it becomes available. Please refer to the Cochrane Database of Systematic Reviews for the current status of this review.



Basic LSR process

When does the cycle stop ?

When is 'enough' data ?







Cochrane's LSR outputs (BC)

Review title	Authors	CRG	Publicat'n
Three LSR on prevention and treatment on VTE	Elie Akl, (Lebanon)	GNOC	2017-2018
Delayed antibiotics in respiratory infections	Geoffrey Spurling (Australia)	ARI	Sept 2017
Interventions to increase fruit and vegetable consumption in children	Rebecca Hodder, (Australia)	Heart	Sept-Oct 2017
Systemic pharmacological treatments for chronic plaque psoriasis: a network meta-analysis	Emilie Sbidian (France)	Skin	2020
Conservative treatments for osteoarthritis (2 x protocols)	R Buchbinder		
Chemotherapy for NSCLC	R Ferrara		



Series: Living Systematic Review

Living systematic review: 1. Introduction—the why, what, when, and how

Julian H. Elliott ^{a, b}  , Anneliese Synnot ^{a, c}, Tari Turner ^a, Mark Simmonds ^d, Elie A. Akl ^{e, f, g}, Steve McDonald ^a, Georgia Salanti ^h, Joerg Meerpohl ⁱ, Harriet MacLehose ^j, John Hilton ^j, David Tovey ^j, Ian Shemilt ^k, James Thomas ^k

Living Systematic Review Network

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Systematic Reviews

<https://doi.org/10.1016/j.jclinep>

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Research | [Open Access](#) | Published: 14 December 2019

Feasibility and acceptability of living systematic reviews: results from a mixed-methods evaluation

[Tanya Millard](#) , [Anneliese Synnot](#), [Julian Elliott](#), [Sally Green](#), [Steve McDonald](#) & [Tari Turner](#)

Systematic Reviews **8**, Article number: 325 (2019) | [Cite this article](#)

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Learning from LSRs so far

- Different work-load (frequent, small tasks)
- Different work-flows
(need for excellent project management)
- Different academic credits, author recognition
- Different publishing models
- Different funding options



Learning from LSRs so far

- **Difficult** work-load (frequent, small tasks)
- **Difficult** work-flows
(need for excellent project management)
- **Difficult** academic credits, author recognition
- **Difficult** publishing models
- **Difficult** funding options



When to consider an LSR

Could or should all SRs become living?

- ✓ The review question is a priority for decision making
- ✓ Certainty in the existing evidence is low or very low
- ✓ There is likely to be new research evidence
- ✓ (In pilots = Capacity and resources within author and editorial team to maintain an LSR)



Further reading

Elliott JH et al. (2014) Living Systematic Reviews: An Emerging Opportunity to Narrow the Evidence-Practice Gap. *PLOS Medicine* 11(2): e1001603. doi.org/10.1371/journal.pmed.1001603

Mendeley library on Living Systematic Reviews:
<https://www.mendeley.com/community/living-systematic-reviews-interest-group/>

Cochrane LSR community:
<https://community.cochrane.org/review-production/production-resources/living-systematic-reviews>



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