Living Evidence to Inform Health Decisions Framework (LE-IHD)

A practical interactive framework based tool to guide the incorporation of Living Evidence in the development of knowledge transfer products

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Potential Conflicts Disclosure

Academic collaborations and memberships

• Active member of the GRADE working group / Former member of the GRADE Guidance Group
• Active member of the Guidelines International Network G-I-N
• Active member of the Cochrane Collaboration
• Author and editor of Cochrane Review Groups
• Active member of the Campbell-Cochrane Economic Methods Group

Commercial and contractual relationships

• Leader and PI of the Living Evidence to Inform Health Decisions Program
• Senior Researcher at Sant Pau’s Institute of Research (IIB Sant Pau)
• Senior Methodologist in Health Research at different EU and LATAM health technology assessment agencies
Background

Living evidence and COVID-19

Proliferation of "not" LE synthesis (LSR, LNMA)

Random sample 165 "living" (October 2022)
- 13.5% two or more updated reports in 24 months
- Lack of methodological standards for living synthesis

Multiple and new challenges

Design and evaluate a model strategy that allows health system organizations to generate, use and apply LE methods and tools to support health decisions to be based on the most recent evidence.
## Development of the strategy

<table>
<thead>
<tr>
<th>Capacity needs</th>
<th>Actions addressing the needs</th>
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<tbody>
<tr>
<td>Need of guidance</td>
<td>Definition of a framework to apply the living evidence model in the development of KT products</td>
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<tr>
<td>Need of training</td>
<td>Operational living evidence synthesis (LES) courses (self-instructor modules and tutorials workshops)</td>
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<tr>
<td>Need of skill development</td>
<td>Mentorship approach for the development of a LES &quot;learning by doing&quot;</td>
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Aims

1. Design and assess a framework to incorporate the LE-synthesis as part of KT product development for the resolution of key relevant questions.

2. Develop a framework-based friendly interactive tool that supports the whole LE-synthesis process for any kind of KT product.
Methods

Framework Development

- Review of methodological papers
- Researchers brainstorming meetings
- 1st draft LE-IHD framework
- User testing and feedback
- Expert advisors' evaluation and feedback
- Final version of the LE-IHD framework
- 2nd draft LE-IHD framework
- Expert advisors' evaluation and feedback
Methods

Framework Assessment

- HTA agencies and CPG developing groups
- Leader and technical team members

Development of the evidence syntheses of key questions as part of CPG, HTA "Learning by doing"

LE-IHD framework
Results
Results

Review of methodological papers

Table 1: Characteristics of included papers

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Year</th>
<th>Country</th>
<th>Study Design</th>
<th>Methodological Rigor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 1</td>
<td>Smith &amp; Johnson</td>
<td>2019</td>
<td>USA</td>
<td>Cross-sectional</td>
<td>High</td>
</tr>
<tr>
<td>Paper 2</td>
<td>Brown &amp; White</td>
<td>2020</td>
<td>UK</td>
<td>Case-control</td>
<td>Medium</td>
</tr>
<tr>
<td>Paper 3</td>
<td>Lee &amp; Kim</td>
<td>2018</td>
<td>South Korea</td>
<td>Cohort</td>
<td>Low</td>
</tr>
</tbody>
</table>

Abstract

Background: The aim of this study was to... (Abstract content)

Methods: The methodology was... (Methodology content)

Results: The findings revealed that...

Discussion: These findings suggest...

Conclusion: In conclusion, the study...

References: (List of references)

Appendix: Additional data and materials for...

The study was supported by...
Steve McDonald
Senior Research Fellow, Monash University, Australia. Co-Director of Cochrane Australia.

Tari Turner
Associate Professor (Research), Monash University, Australia. Director, Evidence and Methods, National COVID-19 Clinical Evidence Taskforce. Executive Committee, Australian Living Evidence Consortium.

Philippe Ravaud
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Emma McFarlane
Technical Adviser NICE Surveillance programme, London U.K.

Holger Schünemann
Professor of the Department of Health Research Methods, Evidence, and Impact, McMaster University in Hamilton, Canada. Director of Cochrane Canada. Director of the McMaster GRADE Centre.

Elie Akl
Associate Professor, Department of Epidemiology and Population Health, American University of Beirut; Director of Clinical Epidemiology Unit at the Clinical Research Institute, American University of Beirut; and Co-Director of the Center for Systematic Reviews of Health Policy and Systems Research (SPARK)
Defining whether the problem and available evidence justify the living evidence approach

Planning the baseline synthesis and the living process

Evidence monitoring, updating evidence synthesis and integration into KT products

Final draft of the LE-IHD framework
Framework Assessment

CPG developing organizations, HTA agencies and tertiary hospitals running institutional HTA programs
Results

Topics included in interviews for framework assessment

Random sample of participants N=16/34
Results

• Validated "LE-IHD framework"
  ✓ The framework was overall useful to implement LE processes, supporting the establishment of the question of interest, the living process, and the monitoring, through its guided methodology and centralized platform

• LE-IHD framework-based interactive tool

• Living evidence synthesis Handbook (integrated to the tool)

• Templates for LES protocol, baseline report and updates report
Results

Framework-based interactive tool
Framework-based interactive tool

Projects of Cochrane Iberoamérica

Projects

- Guía de Práctica Clínica (GPO) para el tratamiento de niños diagnosticados con gastroenteritis aguda
- Biologics in COPD
Framework-based interactive tool
Framework-based interactive tool
Framework-based interactive tool

Incorporation of new evidence: Planning the new evidence asessment and its incorporation into the existing synthesis

The process of integrating new evidence and the relevance of the criteria used for its implementation has important implications for the way evidence teams work. The LE process involves incorporating new studies more frequently than a standard review.

The flowchart below shows the process to follow when new eligible studies with relevant results on the outcomes of interest are identified.

It is suggested that when a high evidence flow is anticipated, a fixed schedule is used for evidence integration. When this is not the case, evidence can be integrated when newly identified evidence has the potential to impact the review conclusions. Several situations can be considered to achieve this, such as changes in the magnitude of the effect size, in the precision of the effect size estimates for primary or secondary outcomes, or in the direction of the effect. As well, the introduction of previously unreported interventions, populations, serious adverse events, a change in the quality of the evidence, or a change in the GRADE certainty can also trigger an impact on the review conclusions.

Other factors such as policy relevance, the existence of important ongoing studies identified in registries, and feasibility (financial and personnel resources), may impact the decision of updating the...
What is the most appropriate baseline evidence synthesis from the current evidence?
How will the new evidence be integrated into the existing evidence synthesis?
Framework-based interactive tool

The format allows the collection of the necessary information to generate a report of results each time this step is carried out for the identification of new evidence.

GO TO MONITORING SELECTION

Monitoring N° 1 for the question PICO 0  
27/10/2022

- Monitoring results: Results of the follow-up and monitoring process
- Evidence incorporation: Is it justified to incorporate the new evidence into the existing synthesis?
- Transfer product: Integration into transfer products
- Revisiting parameters: Revisit the PICO and the "living evidence" parameters
When to integrate the updated synthesis results into the transfer product?
Framework-based interactive tool
Limitations

- Proposed process for working with panelists for updating KT product recommendations was only possible to test in three of the cases.

- The framework was developed for both interventions and diagnostic tests questions; but only the approach for interventions has been tested and evaluated.

- A reduced number of organizations used and evaluated the framework.

An ongoing study involving an additional nine organizations (12 LES projects)
Conclusions

• LE-IHD framework development followed an iterative process that is trustworthy for users.

• The evaluation study identified key aspects to incorporate into the tool and improve usability by KT products development groups.

• The interactive framework has proven useful.
  ✓ facilitates planning of evidence syntheses
  ✓ supports the monitoring process tasks and records storage
  ✓ allows the development of multiple living evidence synthesis projects within the same organization
Research Group

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Questions?

https://livingevidenceihd.com/