



THE ECOSYSTEM OF EVIDENCE

Lessons learned in the pandemic
era and future challenges

10th International Conference for EBHC Teachers and Developers
10th Conference of the International Society for EBHC
Tasmania, 25th - 28th October 2023

#EBHC2023

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

Elliott JH, Turner T, et al. Living systematic reviews: an emerging opportunity to narrow the evidence-practice gap. PLoS Med. 2014



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GIMBE
EVIDENCE FOR HEALTH

Background

Living evidence and COVID -19



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

Random sample 165 "living" (October 2022)

- *13,5% two or more updtaded reports in 24 months*
- *Lack of methodological standards for living synthesis*

Multiple and new challenges

Auladell-Rispau A, Rojas-Reyes MX. et al. Methodological approaches for developing and reporting living evidence synthesis: a study protocol. Open Res Eur. 2022 Mar 21



LIVING EVIDENCE

TO INFORM HEALTH DECISIONS

Knowledge
transfer

Capacity
building



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.



Background

Development of the strategy

Capacity needs

Actions addressing the needs

Need of guidance

Definition of a framework to apply the living evidence model in the development of KT products

Need of training

Operational living evidence synthesis (LES) courses (self-instructor modules and tutorials workshops)

Need of skill development

Mentorship approach for the development of a LES
"learning by doing"

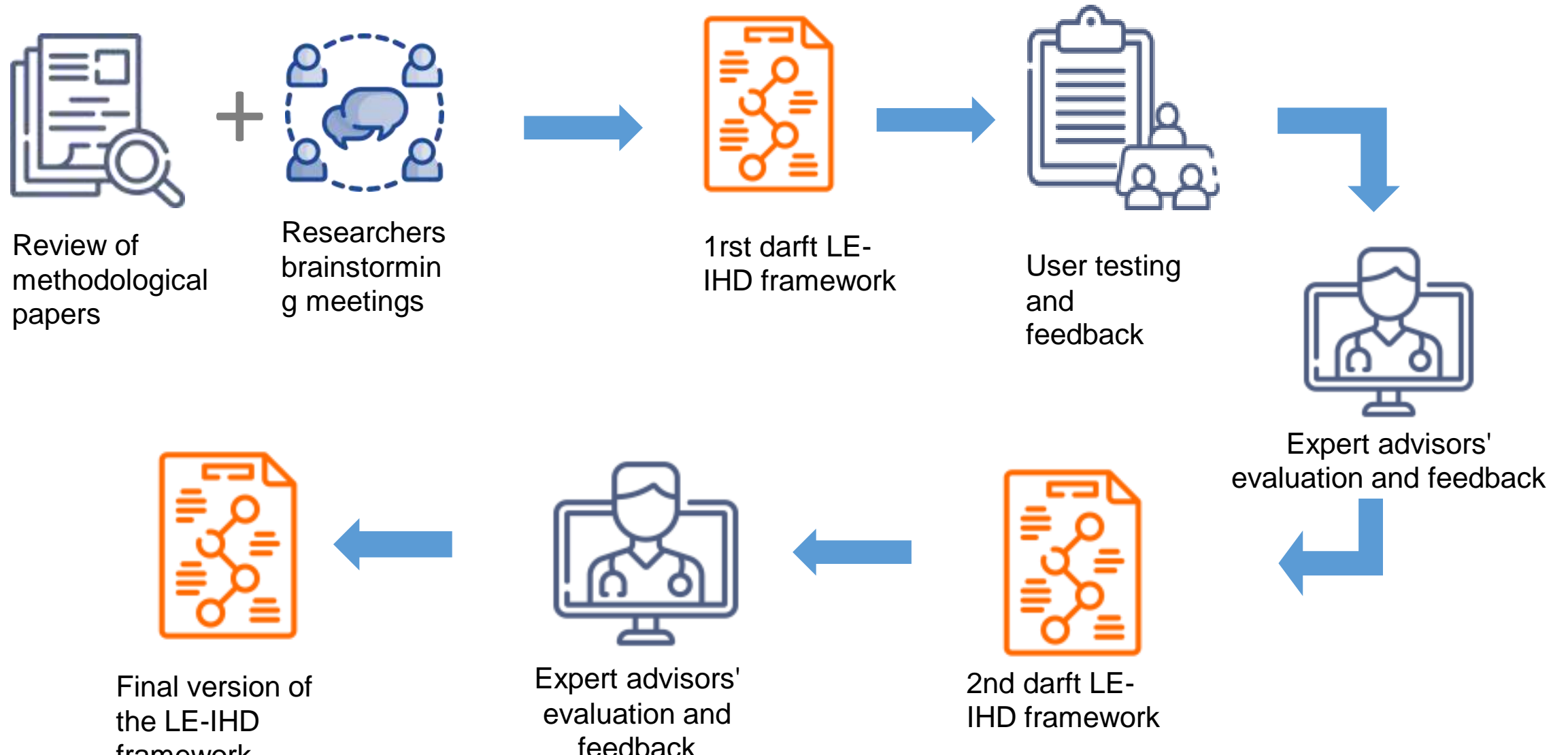
Aims

- 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



Methods

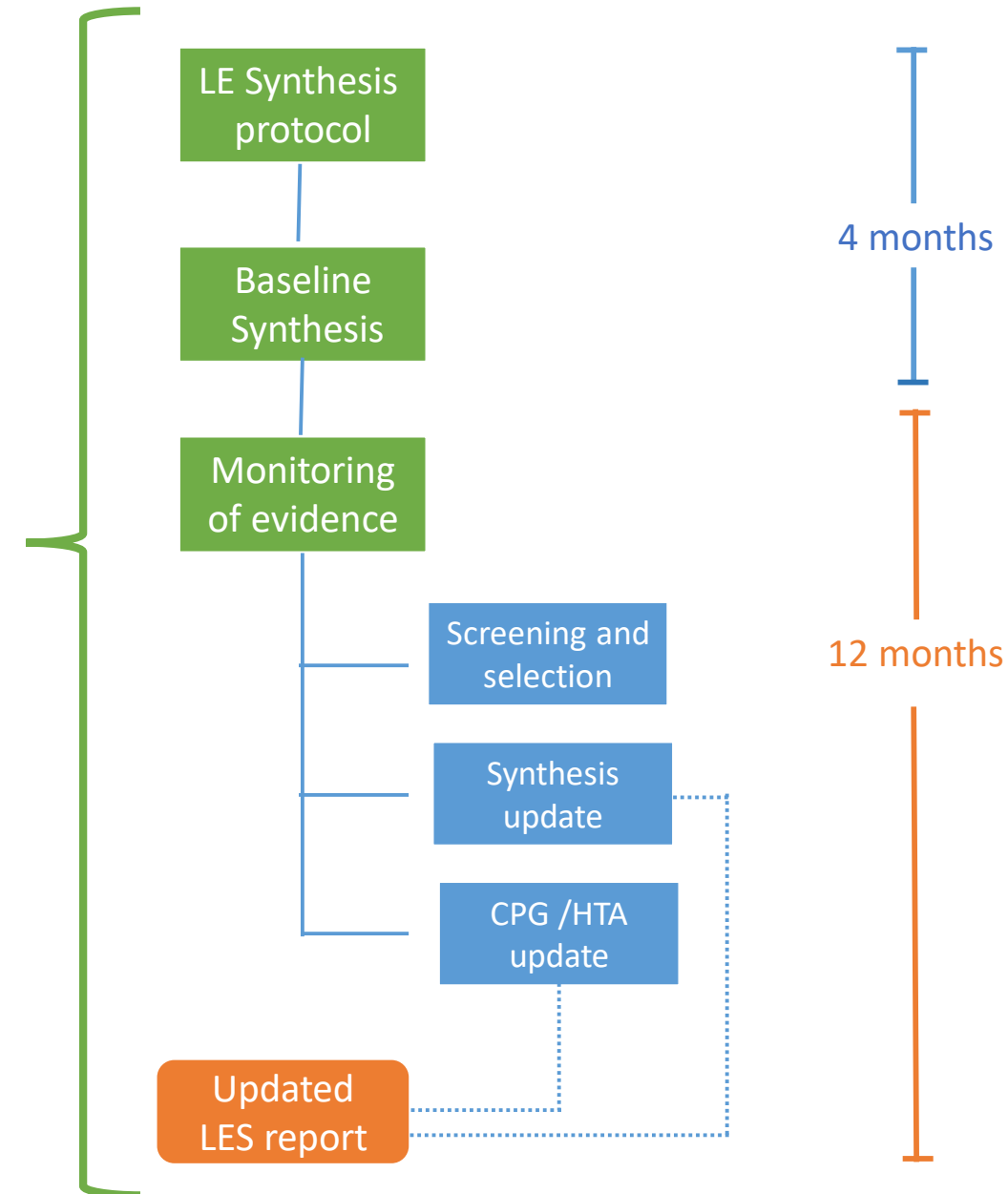
Framework Assessment

- 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





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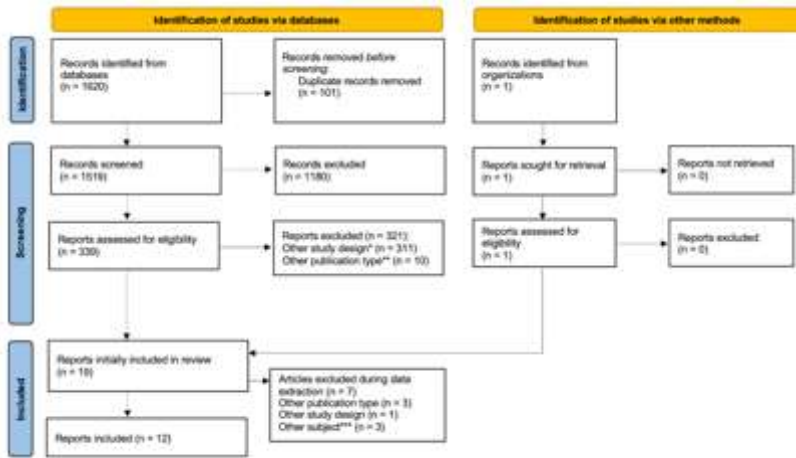
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Results

Results



Review of
methodological
papers



Method

Abstract

Background

Methods:

Results:

Conclusions:

Keywords:

Update content

Consider the inclusion of information related to the entire process planned above as part of the methods section of any report

Consider recording and reporting the date of searches and dates of all other surveillance tasks (e.g., screening, data extraction, and RoB assessment).

Plan to record the results of all searches during the living mode for their inclusion in the adapted PRISMA flow chart, including:

- Identified references
- Deduplicated references
- Included references at all

Table 7. Checklist of items to be considered when planning the conduction and report of living evidence syntheses

Checklist of items to be considered when planning the conduction and report of LE syntheses	Verification
Verifying the justification for the question to be included/maintained in living mode	
Is the problem addressed in the research question relevant for health decision-making?	<input type="checkbox"/>
Is there an important level of uncertainty in the evidence for critical and important outcomes (e.g., low or very low certainty of evidence)?	<input type="checkbox"/>
Is it probable that new evidence that may impact the conclusions will emerge?	<input type="checkbox"/>
Are there (in your group) enough resources (financial, personnel, and time) available to maintain an LE approach for this question?	<input type="checkbox"/>
Planning the living evidence (process and steps)	
Search strategy and evidence surveillance	
Include in the search strategy all relevant sources for the topic and for the living approach (e.g., bibliographic databases, trial registries, and web-based repositories)	<input type="checkbox"/>
Define the frequency for:	
• Searching major bibliographic sources (e.g., bibliographic databases and trial registries)	<input type="checkbox"/>
• Searching other sources (e.g., repositories, gray literature)	<input type="checkbox"/>
• Screening search results	
Assign a qualified person/role in charge of:	
• Creating and maintaining the search strategy (e.g., an information specialist)	<input type="checkbox"/>
• Performing the screening of search results	<input type="checkbox"/>
• Assessing the eligibility of new evidence	
• Performing the RoB assessment of new eligible studies	<input type="checkbox"/>
Define and describe the use or the "nonuse" of technological enablers for synthesis tasks (e.g., searching, screening, eligibility assessment, data extraction, and RoB assessment)	
Incorporation of new evidence	
For the incorporation of new eligible studies into the synthesis, define and/or describe:	
• The frequency (e.g., fixed interval schedule; as soon as new evidence emerges) according to the evidence flow and resources (feasibility)	<input type="checkbox"/>
• The criteria (e.g., impact of new evidence on conclusions)	<input type="checkbox"/>
• The process (e.g., who, when, and how the decision will be made)	<input type="checkbox"/>
• The statistical approach and/or methods to be used for updating the MA	<input type="checkbox"/>
Assign a qualified person/role in charge to assess the certainty of new evidence (i.e., after integration of new studies) for important outcomes (e.g., who will conduct the GRADE assessment)	
Revisiting living parameters	
For reviewing the following aspects during the living mode (search strategy; PICO components; outcome measures and author team required to continue performing the LE related tasks; searches, screening, selection)	
• Define the frequency	<input type="checkbox"/>
• Describe the process to be followed	<input type="checkbox"/>
Assign a qualified person/team/role in charge of revisiting living parameters and making the decisions	
For transitioning the question out of the "living mode":	
• Define the criteria/thresholds	<input type="checkbox"/>
• Determine the frequency with which this review will be carried out	<input type="checkbox"/>
Planning the updates communications and publication	
Update content	
Consider the inclusion of information related to the entire process planned above as part of the methods section of any report	<input type="checkbox"/>
Consider recording and reporting the date of searches and dates of all other surveillance tasks (e.g., screening, data extraction, and RoB assessment).	<input type="checkbox"/>
Plan to record the results of all searches during the living mode for their inclusion in the adapted PRISMA flow chart, including:	
• Identified references	<input type="checkbox"/>
• Deduplicated references	<input type="checkbox"/>
• Included references at all	<input type="checkbox"/>



International
expert
advisers



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Final draft of
the LE-IHD
framework

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

Results

Framework Assessment

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

NICE National Institute for
Health and Care Excellence
Surveillance programme

 **JRC**
EUROPEAN COMMISSION
The JRC in Ispra (Italy)

 **IACS** Instituto Aragonés de
Ciencias de la Salud

 **Servicio Navarro de Salud**
Osasunbidea

Salut/ Agència de Qualitat i Avaluació
Sanitàries de Catalunya

 **Vall
d'Hebron**
Direcció de Qualitat, Processos i
Innovació

 **SaludMadrid**

 **Hospital Universitario
Ramón y Cajal**
 Comunidad de Madrid

 **HOSPITAL DE LA
SANTA CREU I
SANT PAU**
UNIVERSITAT AUTÒNOMA DE BARCELONA

Results

Topics included in interviews for framework assesment



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

The screenshot displays the 'Projects of Cochrane Iberoamérica' page on the Living Evidence website. The page features a navigation bar with links for 'About us', 'Handbook', 'Contact us', and 'Organizations'. A breadcrumb trail shows 'Home > Organizations > Projects of Cochrane Iberoamérica'. The main heading is 'Projects of Cochrane Iberoamérica' with an '+ ADD A PROJECT' button. Below this, a list of projects is shown, each with a title and icons for settings and deletion. The first project is 'Guía de Práctica Clínica (GPC) para el tratamiento de niños diagnosticados con gastroenteritis aguda' and the second is 'Biologics in COPD'. At the bottom right, there is a pagination control showing 'Items per page: 5' and '1-2 of 2' items.

LIVING EVIDENCE TO INFORM HEALTH DECISIONS

[About us](#) [Handbook](#) [Contact us](#) [Organizations](#)

[Home >](#) [Organizations >](#) [Projects of Cochrane Iberoamérica](#)

Projects of Cochrane Iberoamérica

[+ ADD A PROJECT](#)

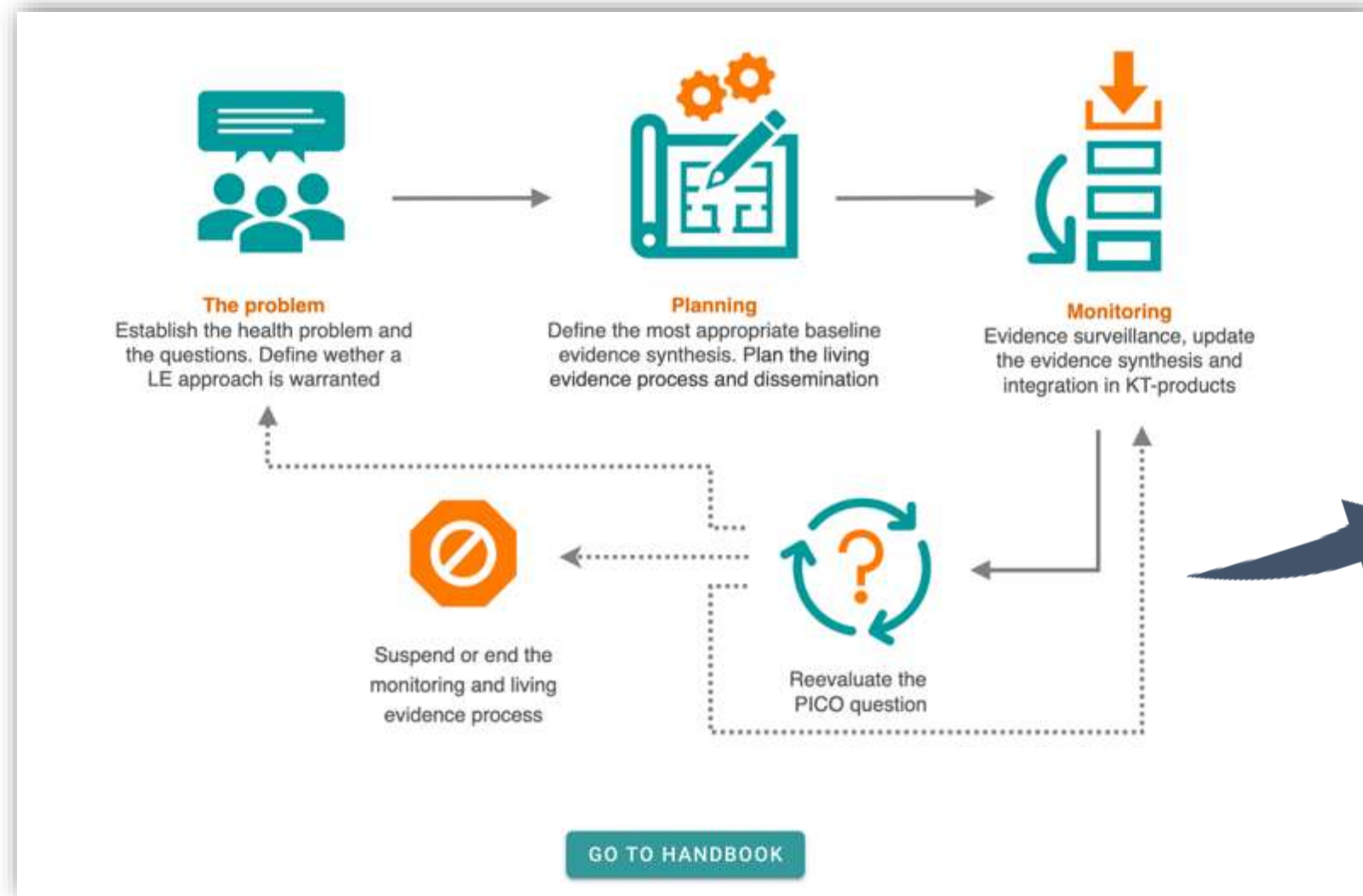
Projects

- Guía de Práctica Clínica (GPC) para el tratamiento de niños diagnosticados con gastroenteritis aguda
- Biologics in COPD

Items per page: 5 1-2 of 2

2023 — Living Evidence to Inform Health Decisions

Framework-based interactive tool



GRADE **DECIDE**

iSoF

EPISTEMONIKOS
FOUNDATION
LOVE

covidence

Framework-based interactive tool

The screenshot displays the user interface of the Living Evidence framework-based interactive tool. At the top left is the logo for "LIVING EVIDENCE TO INFORM HEALTH DECISIONS". To the right of the logo are navigation links: "About us", "Handbook", "Contact us", and "Organizations". A user profile icon is located in the top right corner. Below the header is a breadcrumb trail: "Home > Organizations > Projects of Cochrane Iberoamérica > Project". A teal sidebar on the left contains a "Setup" icon and a list of sections: "A The Problem" and "B Planning". Under "B Planning", the following items are listed: "Baseline synthesis", "Surveillance", "Incorporation of new evidence", "Updating of the evidence synthesis", "Revisiting the 'living' parameters", and "Incorporating the new evidence into the knowledge transfer". The main content area shows a list of seven framework components, each with a dropdown arrow, a brief description, and a question mark icon:

- Baseline synthesis. Planning the baseline evidence synthesis for main outcomes
- Surveillance. Planning evidence identification and surveillance
- Incorporation of new evidence. Planning the new evidence assessment and its incorporation into the existing synthesis
- Updating of the evidence synthesis. Planning how the existing evidence will be updated when new eligible evidence emerges
- Revisiting the "living" parameters.
- Incorporating the new evidence into the knowledge transfer product.
- Dissemination. How will the results of the periodic updates be disseminated?

At the bottom of the page, an orange footer contains the text: "2023 – Living Evidence to Inform Health Decisions".

Framework-based interactive tool

The screenshot displays the Living Evidence framework-based interactive tool. The interface includes a top navigation bar with links for 'About us', 'Handbook', 'Contact us', and 'Organizations'. A left sidebar contains a menu with sections: 'Setup', 'A The Problem', and 'B Planning'. Under 'B Planning', several items are listed, including 'Incorporation of new evidence', which is currently selected. A modal window is open over the main content area, titled 'Incorporation of new evidence. Planning the new evidence as assessment and its incorporation into the existing synthesis'. The modal contains three paragraphs of text explaining the process of integrating new evidence and the factors that influence the decision to update the review conclusions. The background content is dimmed, showing a 'Project' header and a table with question marks in the 'Outcomes' column.

Incorporation of new evidence. Planning the new evidence as assessment 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.

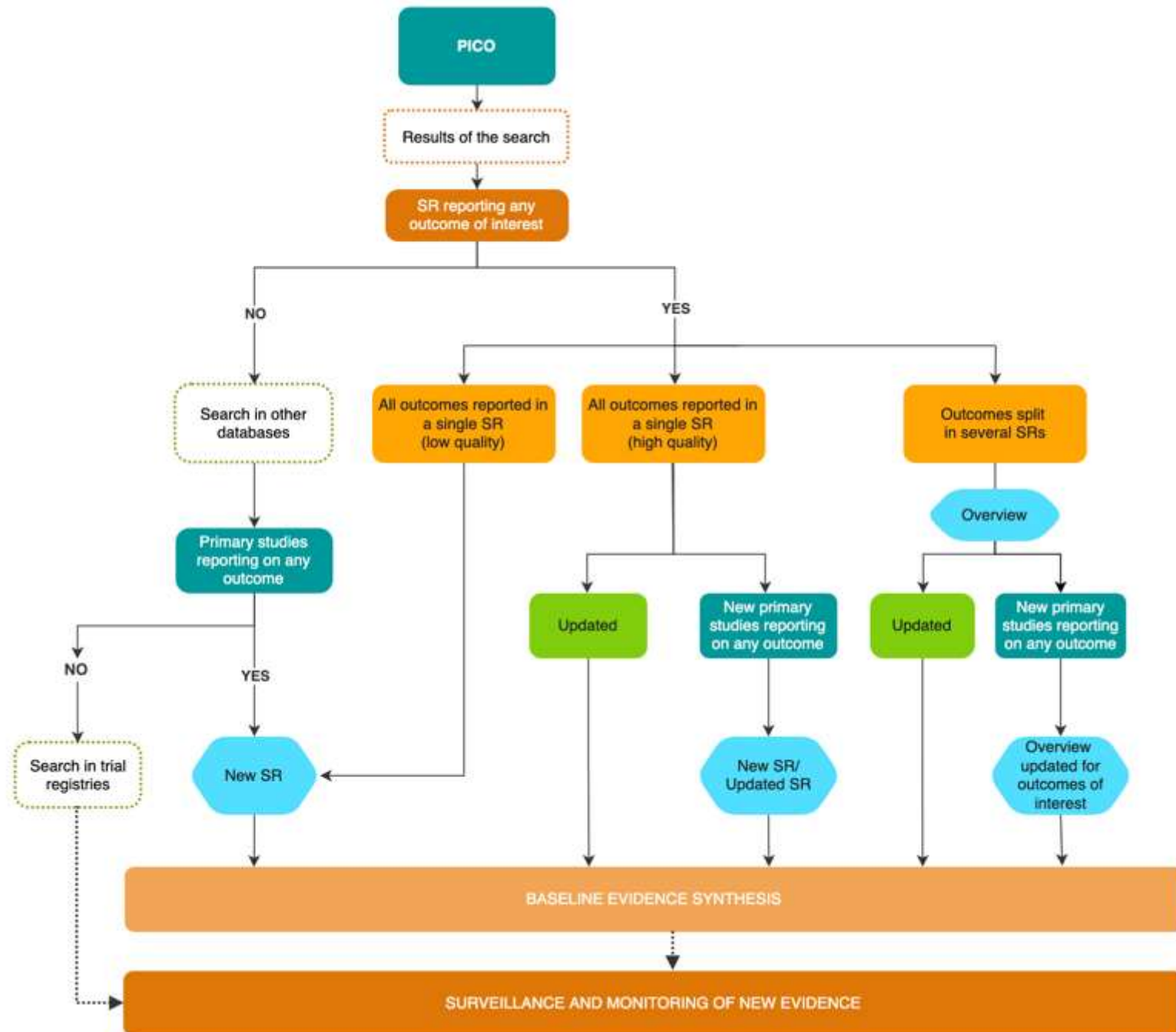
The flowchart below shows the process to follow when new eligible studies with relevant results on the outcomes of interest are identified.

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.

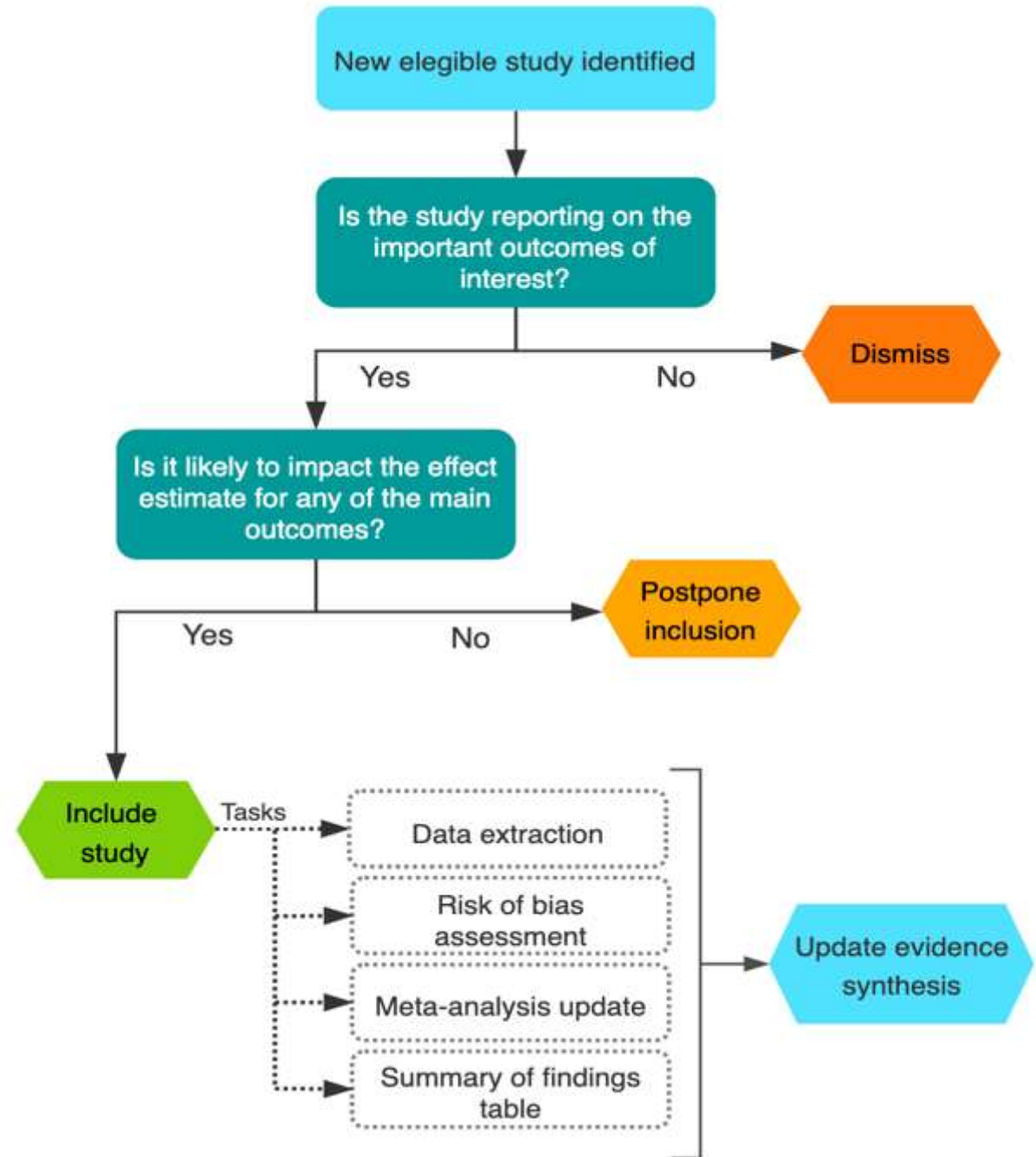
Other factors such as policy relevance, the existence of important ongoing studies identified in registries, and feasibility (financial and personnel resources), may impact the decision of updating the

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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 screenshot displays the user interface of the Living Evidence framework-based interactive tool. At the top left is the logo for "LIVING EVIDENCE" with the tagline "RESEARCH INTO RESEARCH". To the right of the logo are navigation links: "About us", "Handbook", "Contact us", and "Organizations". A user profile icon is located in the top right corner.

A teal sidebar on the left contains a navigation menu with the following items: "Setup" (with a gear icon), "A The Problem", "B Planning", "C Monitoring" (highlighted in white), "Monitoring results", "Evidence incorporation", "Transfer product", and "Revisiting parameters".

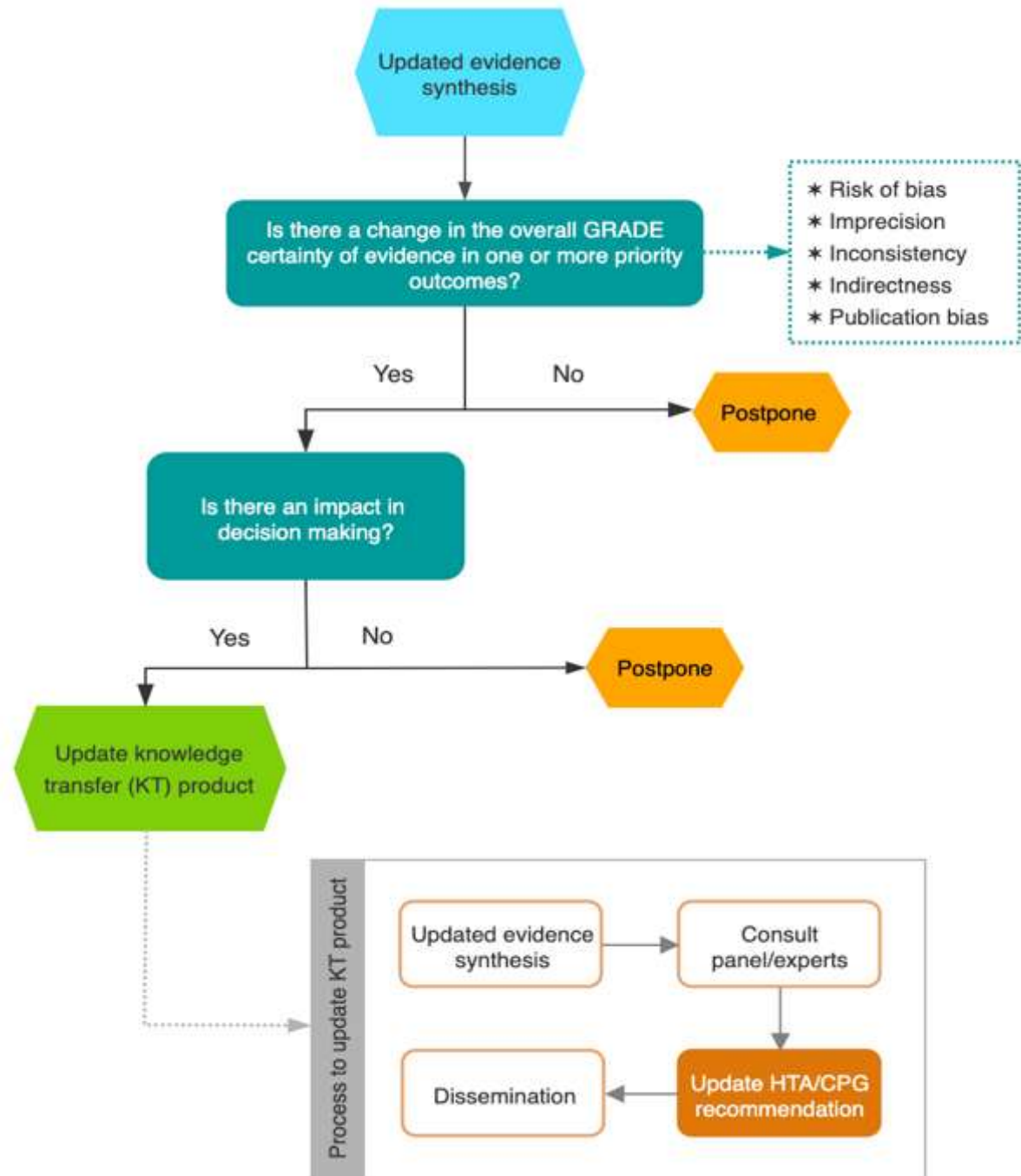
The main content area features a breadcrumb trail: "Home > Organizations > Projects of Ejemplo Living Evidence > Project". Below the breadcrumb, a text block states: "The format allows the collection of the necessary information to generate a report of results each time this step is carried out for the identification of new evidence."

A link labeled "GO TO MONITORING SELECTION" with a left-pointing arrow is positioned below the text. Underneath, a light blue box displays a checked status icon, the text "Monitoring N° 1 for the question PICO 0", and the date "27/10/2022".

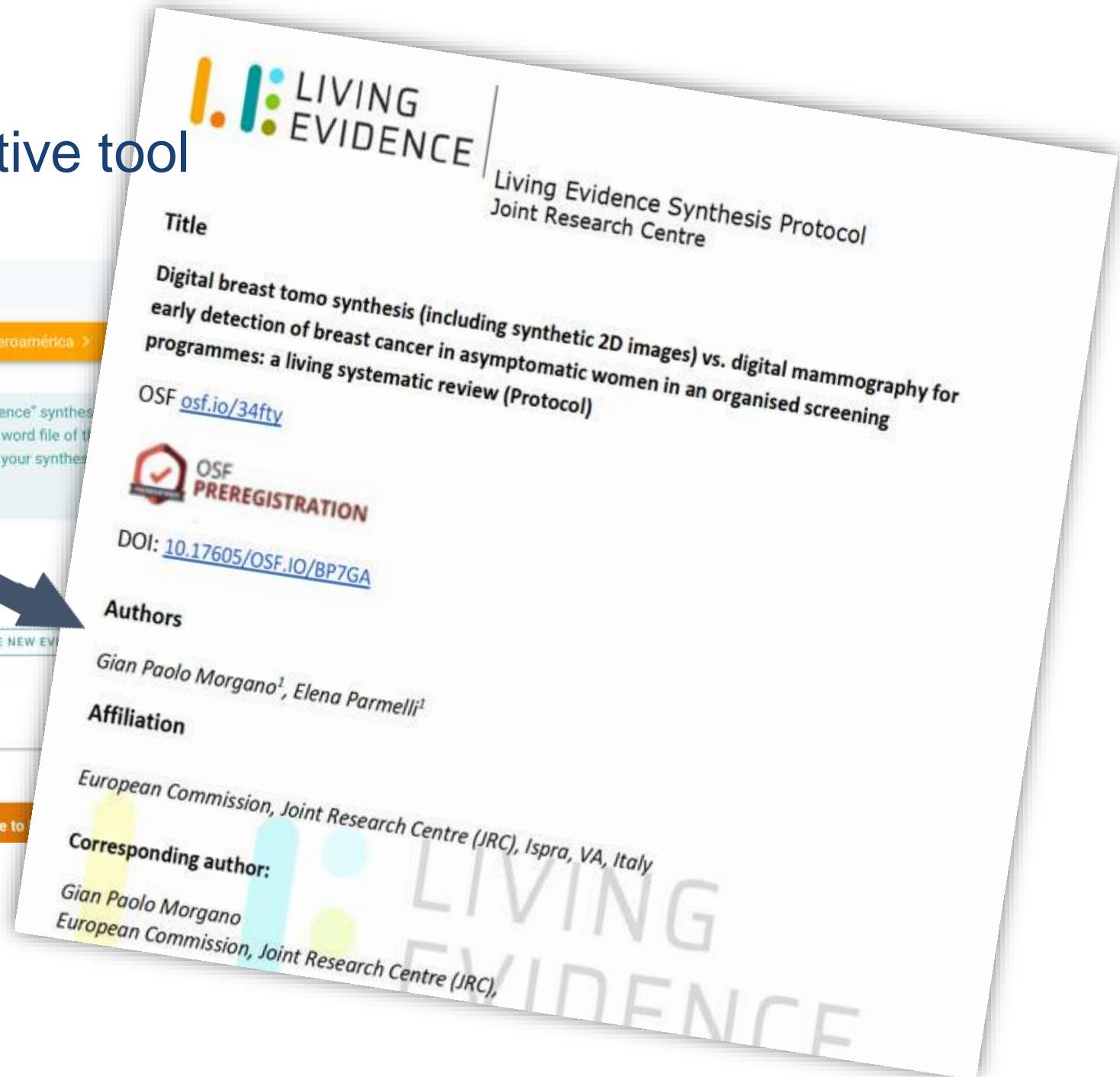
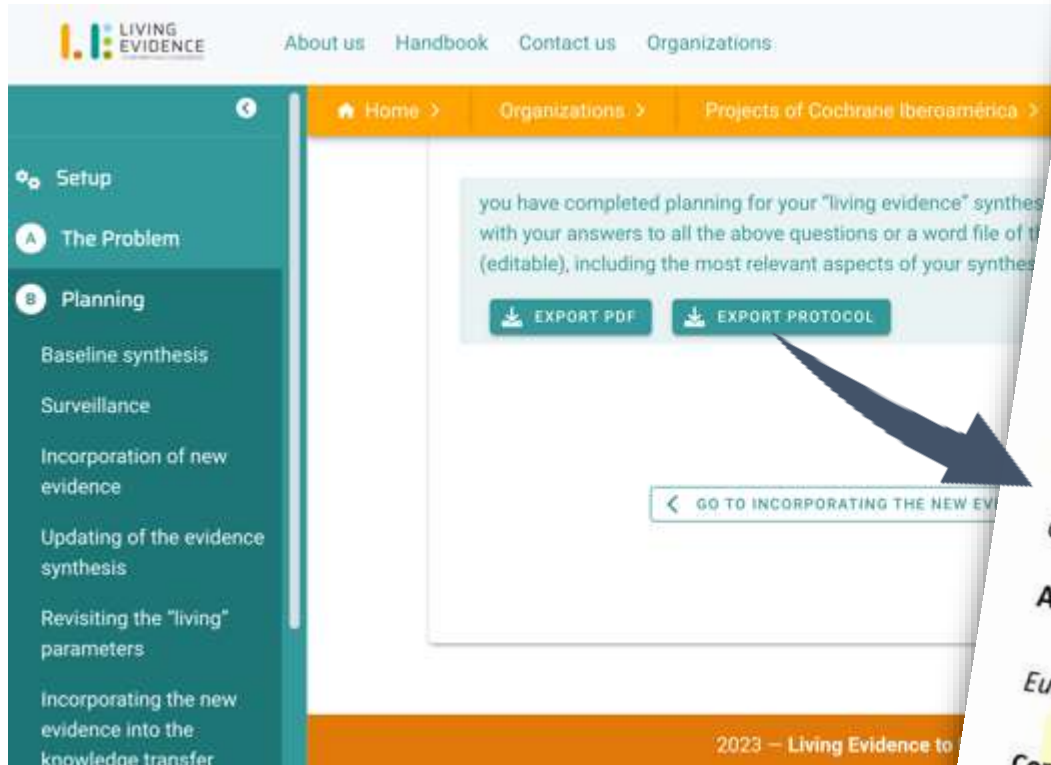
Below this box is a list of four expandable sections, each with a downward arrow and a question mark icon:

- 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?

