


THE ECOSYSTEM OF EVIDENCE

Navigating the future
of the ecosystem of evidence

Artificial intelligence and digital transformation
in research and healthcare

11th EBHC International Conference
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#EBHC2026

# Machine Learning for updating living evidence and gap maps

## What do current reporting practices reveal?

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30th 1996-2026 GIMBE EVIDENCE FOR HEALTH



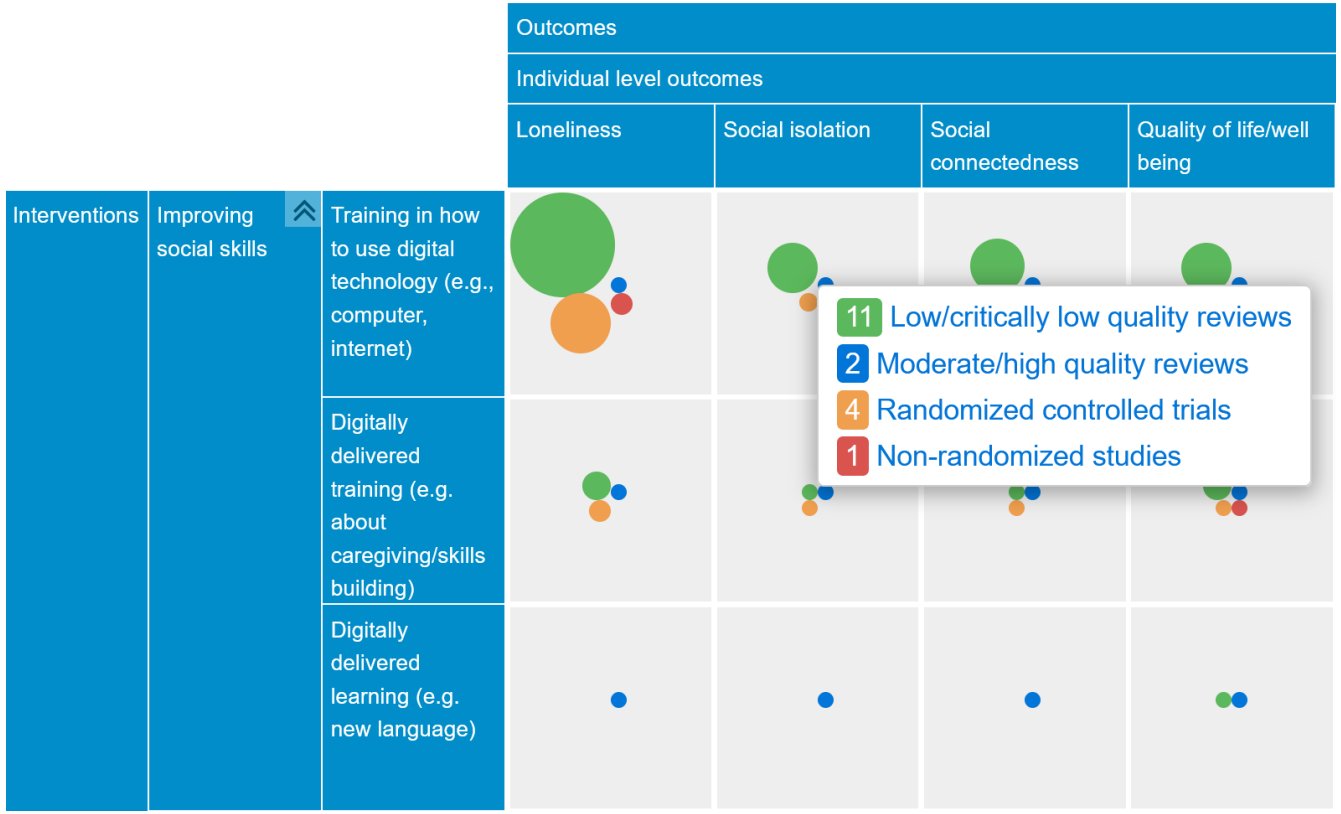
# Background and aims

- **Evidence maps are uniquely positioned for automation** (Haddaway et al. 2018; Scheelbeek et al. 2024)
- Evidence and gap maps are increasingly interactive (Fredlund et al. 2024)
- Yet, methodological work so far focused on living systematic reviews (e.g. PRISMA-LSR: Akl et al. 2024)
- Mapping Reviews are increasingly the first stage a living evidence architecture

# Background and aims

- type of evidence synthesis output
- provides an overview of evidence addressing a research question
- transparent and reproducible processes to search, screen, classify and visualise relevant studies
- **continually updated**
- **highlights areas well studied and areas where research is needed**

(Shemilt et al. Forthcoming)



# Background and aims

## 1: What are the living mode parameters (based on PRISMA-LSR)?

1.1 What planned update schedule do L-EGMs report for key update tasks?

1.2 What is the current status (living, retired) of each L-EGM and how do L-EGMs report plans for retirement?

## 2: How and when is automation used?

2.1: For which tasks do L-EGMs report the use of automation or semiautomation?

2.2: What tools or approaches are used?

## 3: What evidence synthesis types are cited to guide the conduct and/or reporting of the L-EGMs?

# Methods

**Protocol**
- Scoping review
- Inclusion of EGMs

**Search**
- Gray literature
- Use of tools to create maps as search terms

**Data extraction**
- Piloted data extraction tool

**Descriptive analysis**

ELSEVIER

Check for updates

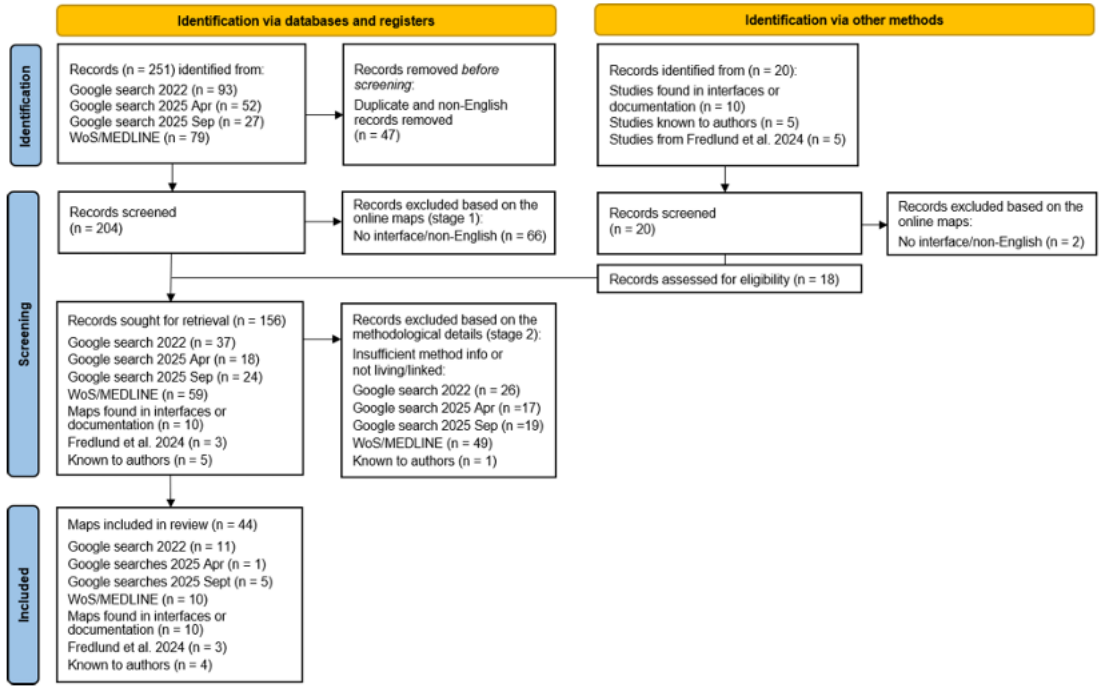
Journal of Clinical Epidemiology 194 (2026) 112211

ORIGINAL RESEARCH

## Living evidence and gap maps: a scoping review of automation and living mode parameters reported in 44 digital interfaces and their documentation

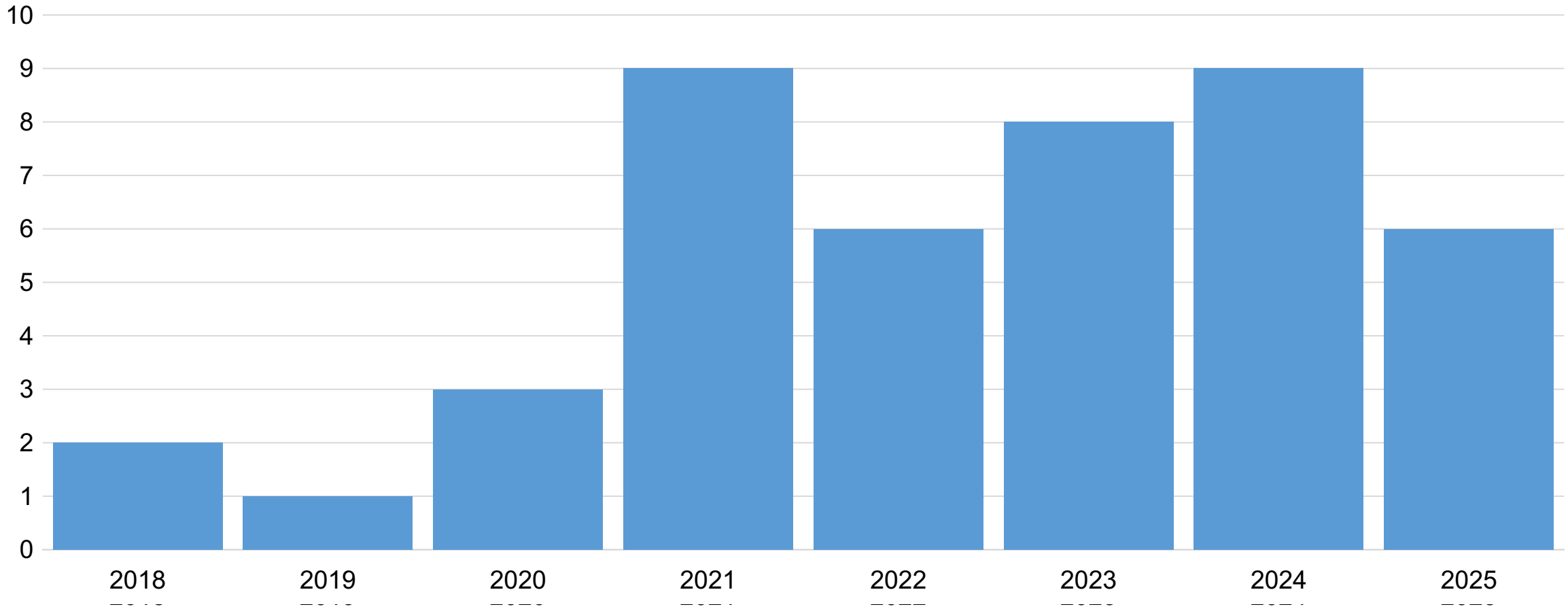
Tomasz Kozakiewicz[a,*], Ruth Wong[b], Zak Ghouze[c], Melissa Bond[c], Fiona Campbell[d]

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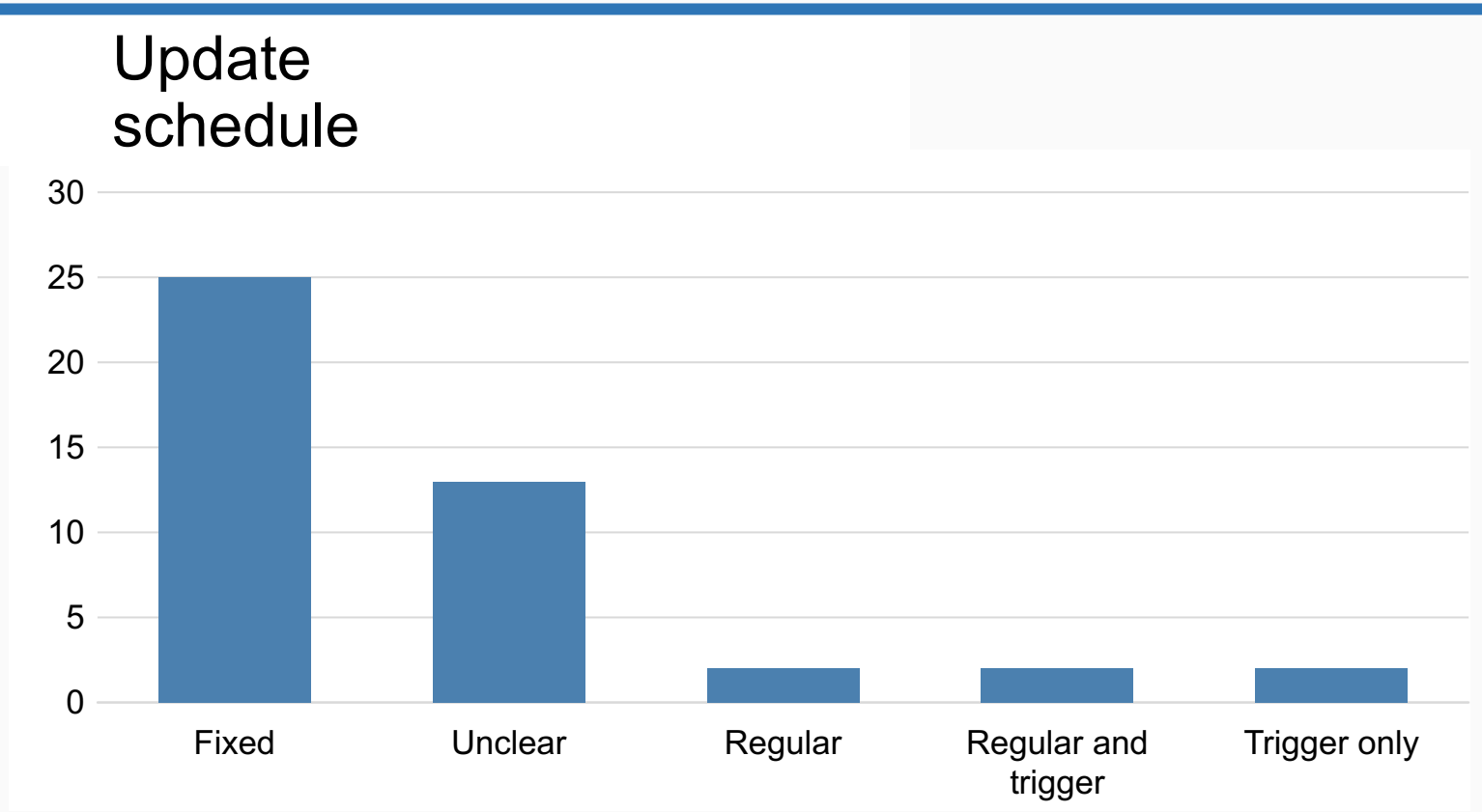


# Results

L-EGMs by Publication Year



# Living mode parameters




median of 1 month, IQR: ~11 months, min: 1 day, max: 24

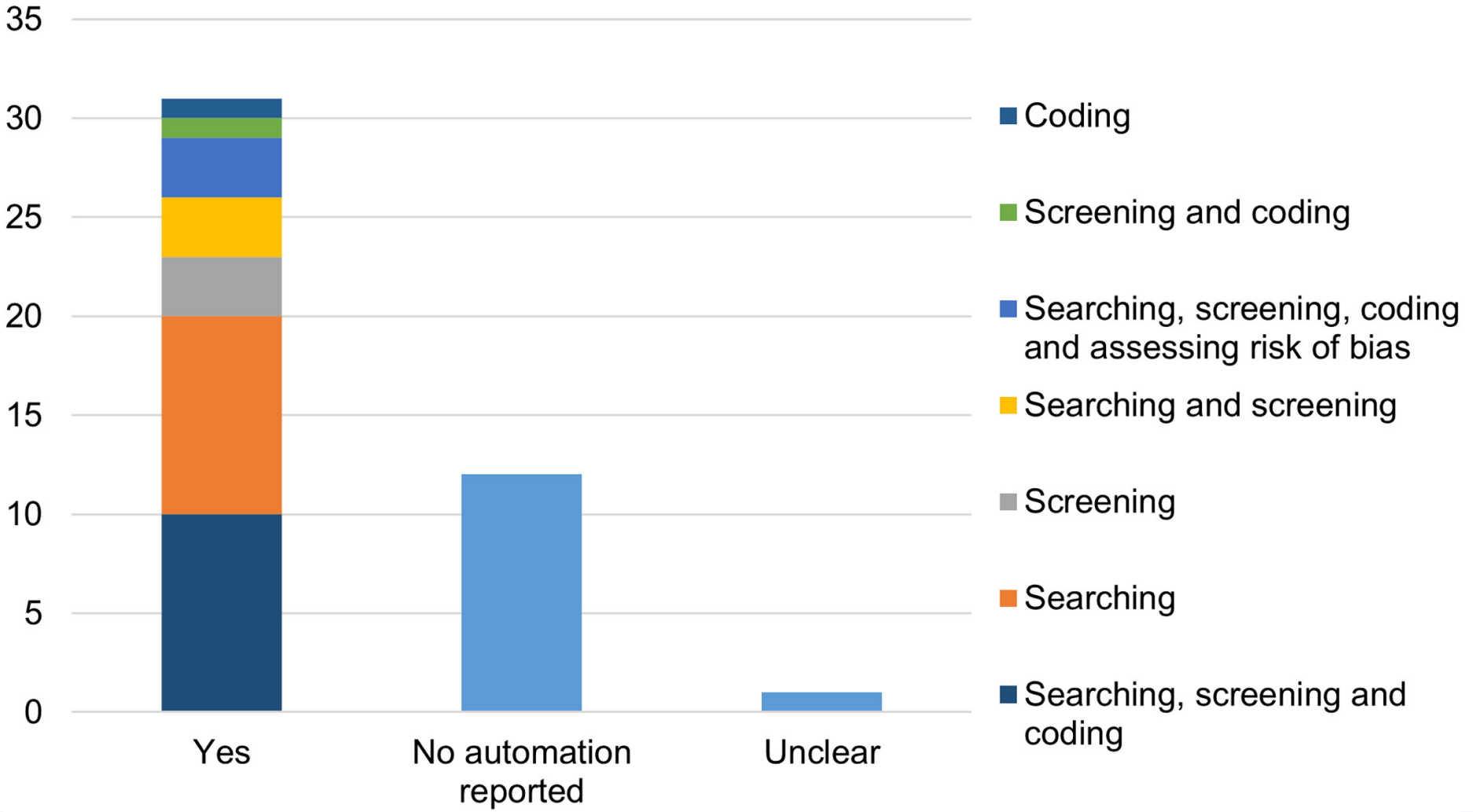
## Retirement plan

| | Map count |
|---|---|
| Yes | 6 (14%) |
| No | 38 (86%) |

## Living status

| | Map count |
|---|---|
| Yes | 17 (39%) |
| No | 27 (61%) |

# Use of Automation



# Limits and conclusions

Living EGMs

- Lack of adherence to PRISMA LSR standards
- Digital interfaces



- **Longitudinal study**

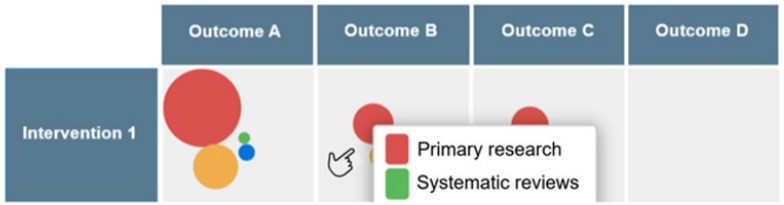
# Limits and conclusions

## Living evidence and gap maps (L-EGMs): their automation and living mode parameters

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### BACKGROUND

L-EGMs are continually updated summaries of evidence and gaps to inform decision-making




### METHOD

A scoping review of L-EGMs with an online presence

MEDLINE Web of Science
evidence map
AND
(living or update*)

Google
EPPI-Mapper
OR
EPPI-Vis

### FINDINGS

**44** L-EGMs included

**1** Monthly updates (median)

**31** L-EGMs use automation, of which:

- **26 machine learning**
- 7 screening + coding
- 6 searching only
- 5 screening only
- 3 searching + screening + coding
- 3 screening + coding + RoB
- 2 searching + screening

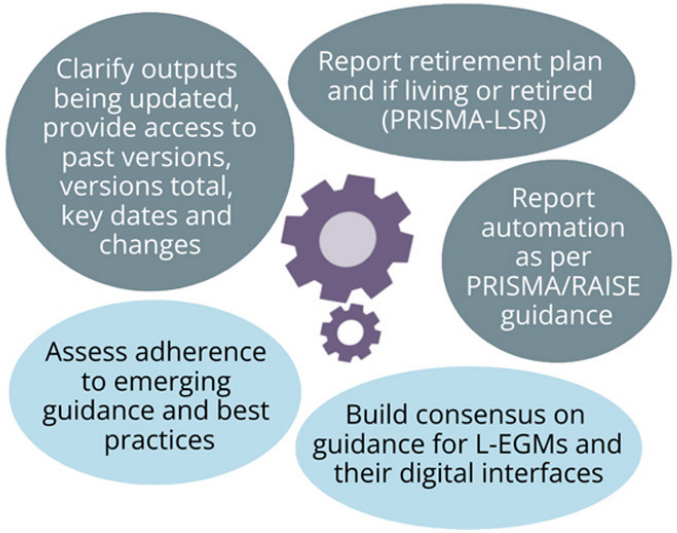
**11** report automation performance

**6** report retirement plans

**17** report their living status

### IMPLICATIONS

L-EGMs creators can follow guidance




Research is needed by methodologists

Kozakiewicz T, Wong R, Ghouze Z, Bond M, Campbell F. Living evidence and gap maps (L-EGMs): their automation and living mode parameters. Journal of Clinical Epidemiology. 2026.

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# Thank you

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