Evidence Agent Academy

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Australian
A year of medical research

• $100 Billion
• 27,000 trials
• 4,000 systematic reviews

A year of medical research

- 5.5 year half-life
- 57% require update
- 4,000 systematic reviews
- 7% published out dated

A year of medical research

• Only ~20-40% of clinical questions have up-to-date answers
Faster synthesis
Less specialized training

More evidence translated

Shorter translation lag
More evidence
Better Care
Tsafnat et. al (Systematic Reviews, 2014)

question formulation
find previous SR
write the protocol
dev. search strategy
search
de-duplication
screen abstracts
obtain full text
screen full text
snowballing
extract data
synthesize data
check disagreement
secondary search
meta analysis
writerup

Decide on the research question of the review
Search for SR that answers the same question
Provide an objective, reproducible, sound methodology for peer review
Decide on databases and keywords to find all relevant trials.
aim to find all relevant citations even if many irrelevant ones included
Remove identical citations.
Based on titles and abstracts, remove definitely-irrelevant trials.
Download, request copies from authors, inter-library loans, etc.
Exclude irrelevant trials.
Follow citations from included trials to find additional trials
Extract outcome numbers and associate with trial arm.
Convert extracted data to common representation (usually average and SD).
Resolve disagreements between reviewers
Repeat the search to find new literature published since the initial search
Combine the results of all trials
Produce the final report and submit for publication.
Search training

Appraisal training

Extraction training

Meta-Analysis training

Software agents

- Computer programs
- Act on behalf of a user
- Autonomous
Evidence Agent Studio

Search Query
(asthma and RCT)

Abstrakr Model
(in: X out: Y → M)

Extract
(Inhaler Education, FEV-1)
THANK YOU

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