Evidence Ecosystem concept and advances in evidence synthesis and dissemination

Trusted evidence.
Informed decisions.
Better health.

Chris Mavergames
Head of Informatics & Knowledge Management
Chief Information Officer
Cochrane Central Executive

Conflict of interest statement

I have no actual or potential conflict of interest in relation to this presentation.

I am an employee of Cochrane.

This talk will show …

…how explicit links between actors are needed – and are now possible - to close the loop between new evidence and improved care

...through a culture for sharing evidence combined with advances in methods and technology platforms

…for digitally structured data in a trustworthy "Evidence Ecosystem".

Outline

- Evidence Ecosystem concept
- Cochrane and innovations in evidence synthesis
- Examples of Ecosystem
- Summary

Ecosystem: African Savanna

African Savanna Ecosystem Illustration Key

The following organisms and environmental features are depicted in the African Savanna Community illustration.

1. Grass: producer
2. Jackalberry tree: producer
3. Acacia tree: producer
4. Warthog: primary consumer (herbivore)
5. Cattle (domestic): primary consumer
6. Zebra: primary consumer
7. Impala: primary consumer
8. Elephant: primary consumer
9. Giraffe: primary consumer
10. Hyena: secondary consumer (carnivore), scavenger
11. Leopard: secondary consumer (carnivore)
12. Lion: secondary consumer (carnivore)
13. Human (Maasai tribesman): omnivore
14. Aardvark: omnivore
15. Red-billed oxpecker: insectivore
16. Termite and termite mound: decomposer/detritivore
17. Bacteria: decomposer/detritivore
18. Fungi: decomposer/detritivore
19. White-backed vulture: scavenger
20. Rocks: environmental feature
21. Stream or pond: environmental feature

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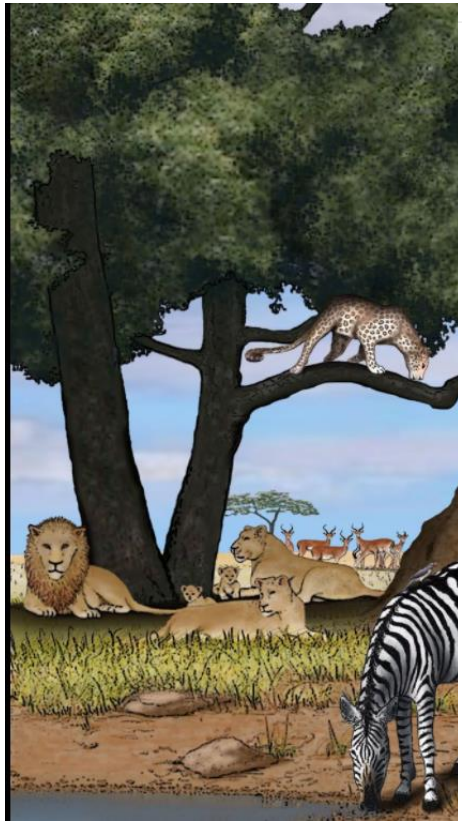
Ecosystem: African Savanna



Healthy, well-balanced ecosystems are made up of multiple, interacting food chains, called food webs. Carnivores (lions, hyenas, leopards) feed on herbivores (impalas, warthogs, cattle) that consume producers (grasses, plant matter). Scavengers (hyenas, vultures) and decomposers/detritivores (bacteria, fungi, termites) break down organic matter, making it available to producers and completing the food cycle (web). Humans are part of the savanna community and often compete with other organisms for food and space.

The following list defines and provides examples of the feeding (trophic) levels that comprise food webs:

- **Producer:** organism on the food chain that can produce its own energy and nutrients. Examples: grasses, Jackalberry tree, Acacia tree
- **Primary consumer/herbivore:** organism that eats mainly plants. Examples: cows, impalas, warthogs, zebras
- **Secondary consumer/carnivore:** organism that eats meat. Examples: leopard, lion
- Omnivore: organism that eats a variety of organisms, including plants, animals, and fungi. Examples: humans, aardvarks
- **Decomposer/detritivores:** organisms that break down dead plant and animal material and waste and release it as energy and nutrients in the ecosystem. Examples: bacteria, fungi, termites
- **Scavenger:** animal that eats dead or rotting animal flesh. Examples: vultures, hyenas
- **Insectivore:** organism that mostly eats insects. Example: Red-billed oxpecker

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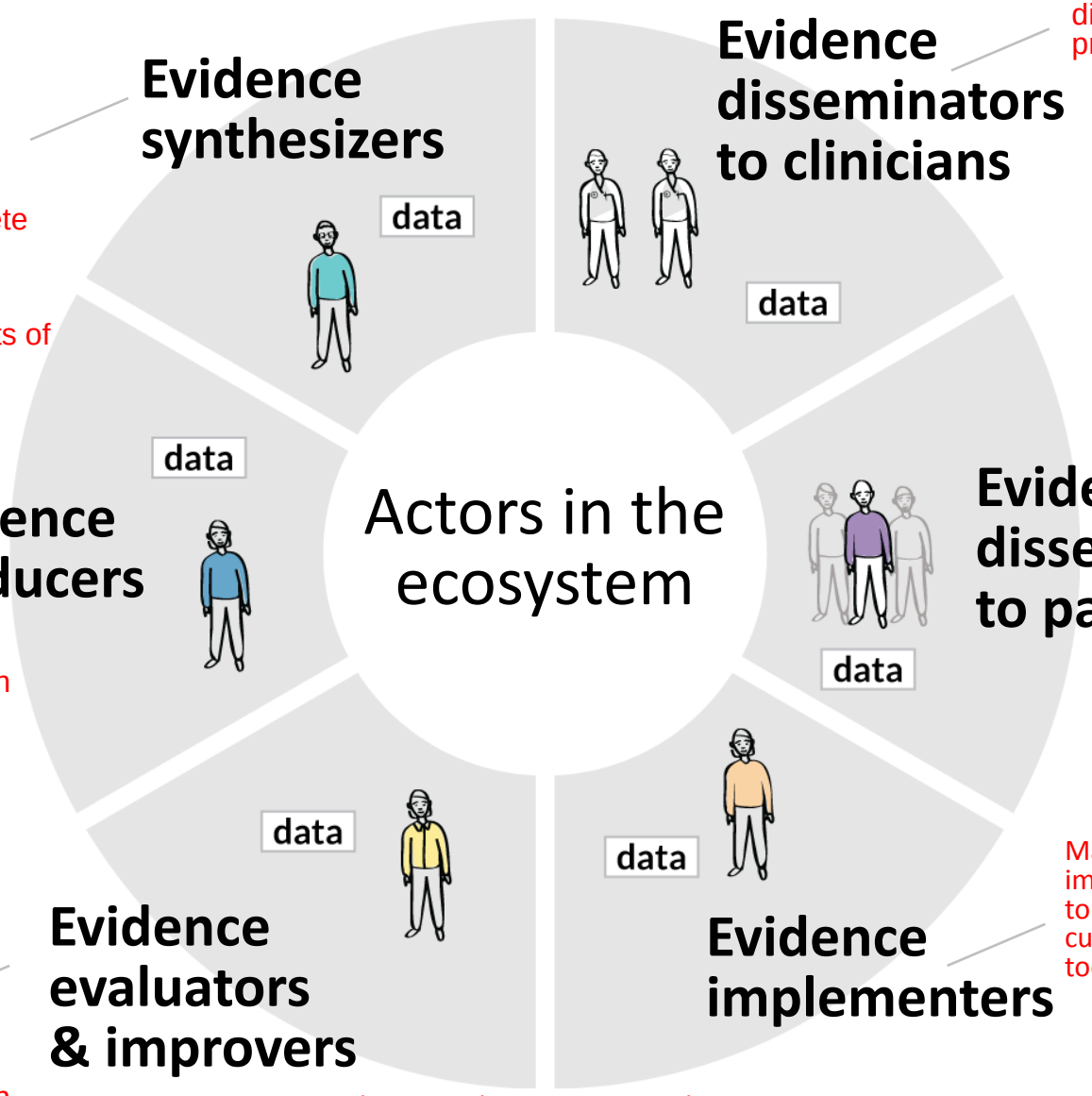
The Digital and Trustworthy Evidence Ecosystem

To increase value and reduce waste in research

Currently poor functioning evidence ecosystem with challenges at every step



Systematic reviews often irrelevant, incomplete and takes too long to produce and update, with lots of duplication

Guidelines are often outdated, costly, inefficiently disseminated in suboptimal presentation formats

Evidence dissemination to patients is limited, hard to share decisions with clinicians

Research evidence often unreliable, off target. Big data exciting but do they add value?

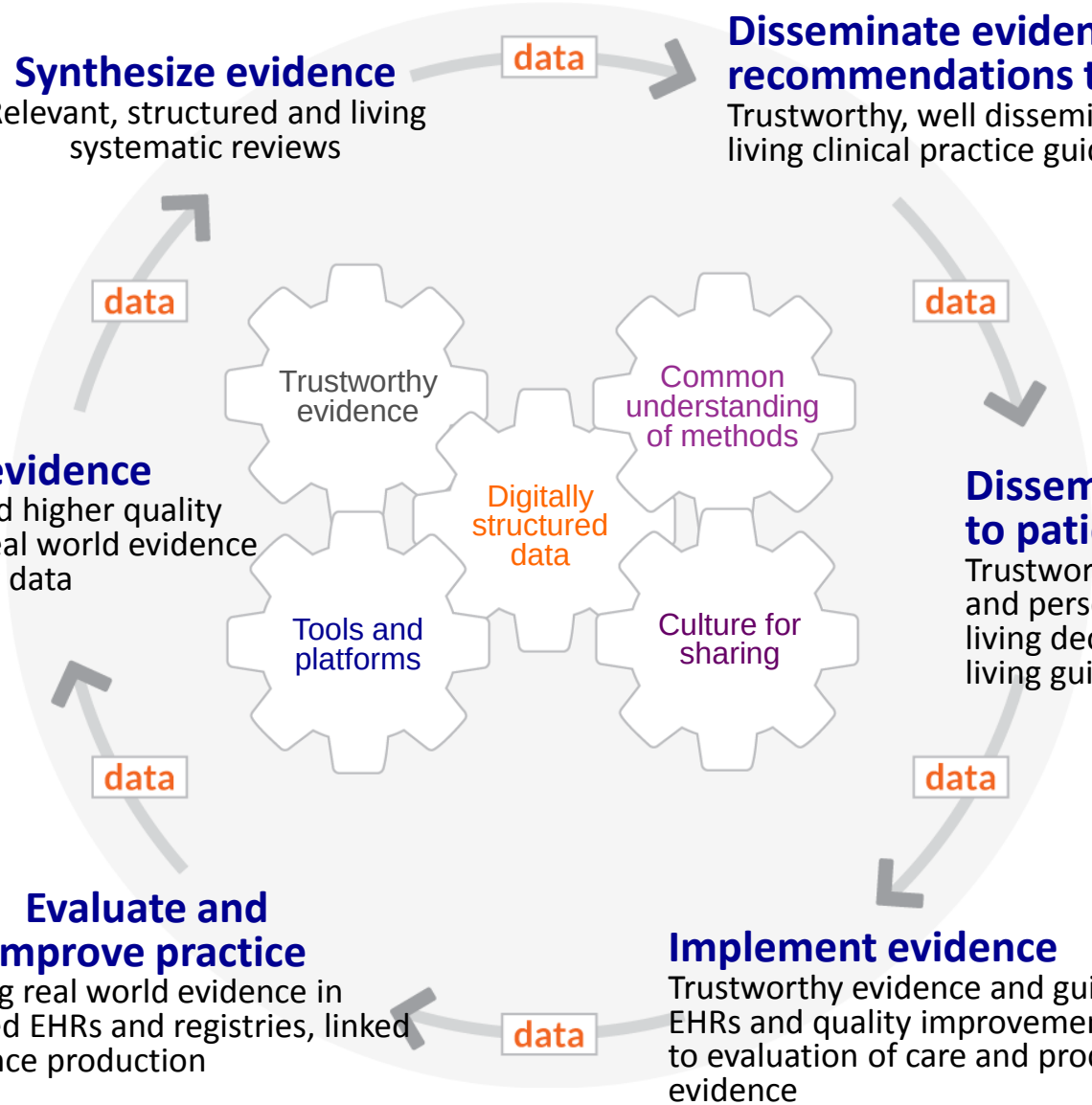
May not target most important gaps and fail to identify and use best current evidence, lack tools (e.g. CDS in EHR)

Data from registries etc of poor quality, unstructured and remain unpublished

Evidence implementation, evaluation and quality improvement lacks coordination, a hit- or-miss process

Overall:
No support or easy access to people, methods and tools in the ecosystem

The Digital and Trustworthy
Evidence Ecosystem



Synthesize evidence
Relevant, structured and living systematic reviews

Disseminate evidence and recommendations to clinicians
Trustworthy, well disseminated and living clinical practice guidelines

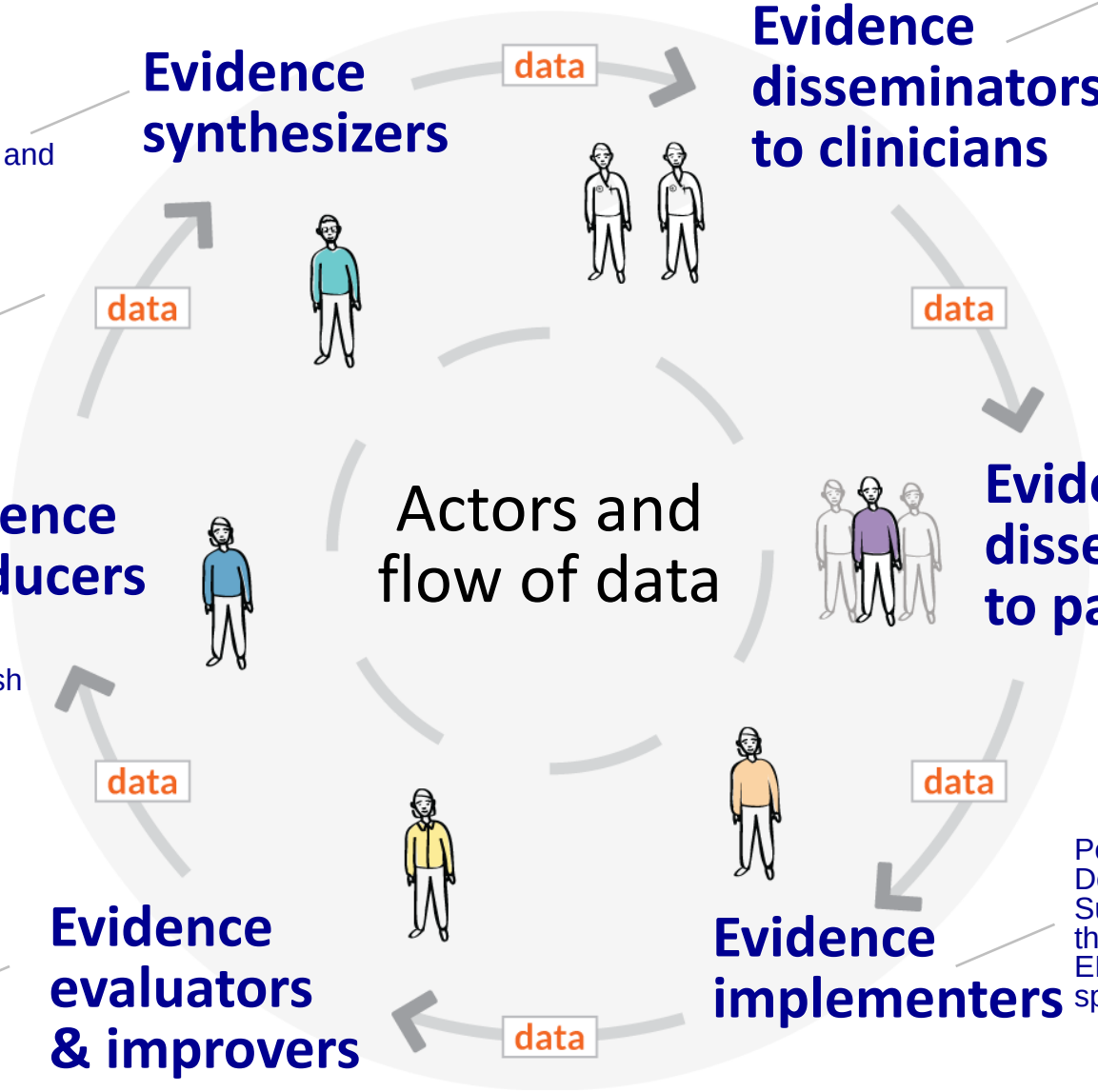
Disseminate evidence to patients
Trustworthy evidence for shared and personalized decisions, in living decision aids, linked to living guidelines

Implement evidence
Trustworthy evidence and guidelines for CDS in EHRs and quality improvement initiatives, linked to evaluation of care and production of new evidence

Evaluate and improve practice
Recording real world evidence in structured EHRs and registries, linked to evidence production

Produce evidence
More relevant and higher quality primary research, real world evidence and big data

Trustworthy and Digital Evidence Ecosystem with solutions



Analyze data, write and publish systematic reviews

Tools to analyze data, write and publish trustworthy guidelines

More relevant and higher quality primary research and big data

Decision Aids for the clinical encounter

Plan, conduct and publish primary research (trials and observational studies)

Personalized Decision Support Systems in the EHR linked to patient specific data

EHR, Registries, Quality Indicators, Shared Decisions

Overall:
Support and easy access to people, methods and tools in the ecosystem

The emerging "ecosystem" within Cochrane

How Cochrane is contributing to the larger ecosystem

Issues in Evidence synthesis

- Processes manual, duplication of effort, lengthy
- Human and machine effort not efficient
- Tools not yet fit for purpose and connected
- Lack of data provenance impedes re-use
- Outputs not optimised for use and impact

Bottom line: new approaches to gathering, synthesizing, and disseminating evidence are needed.

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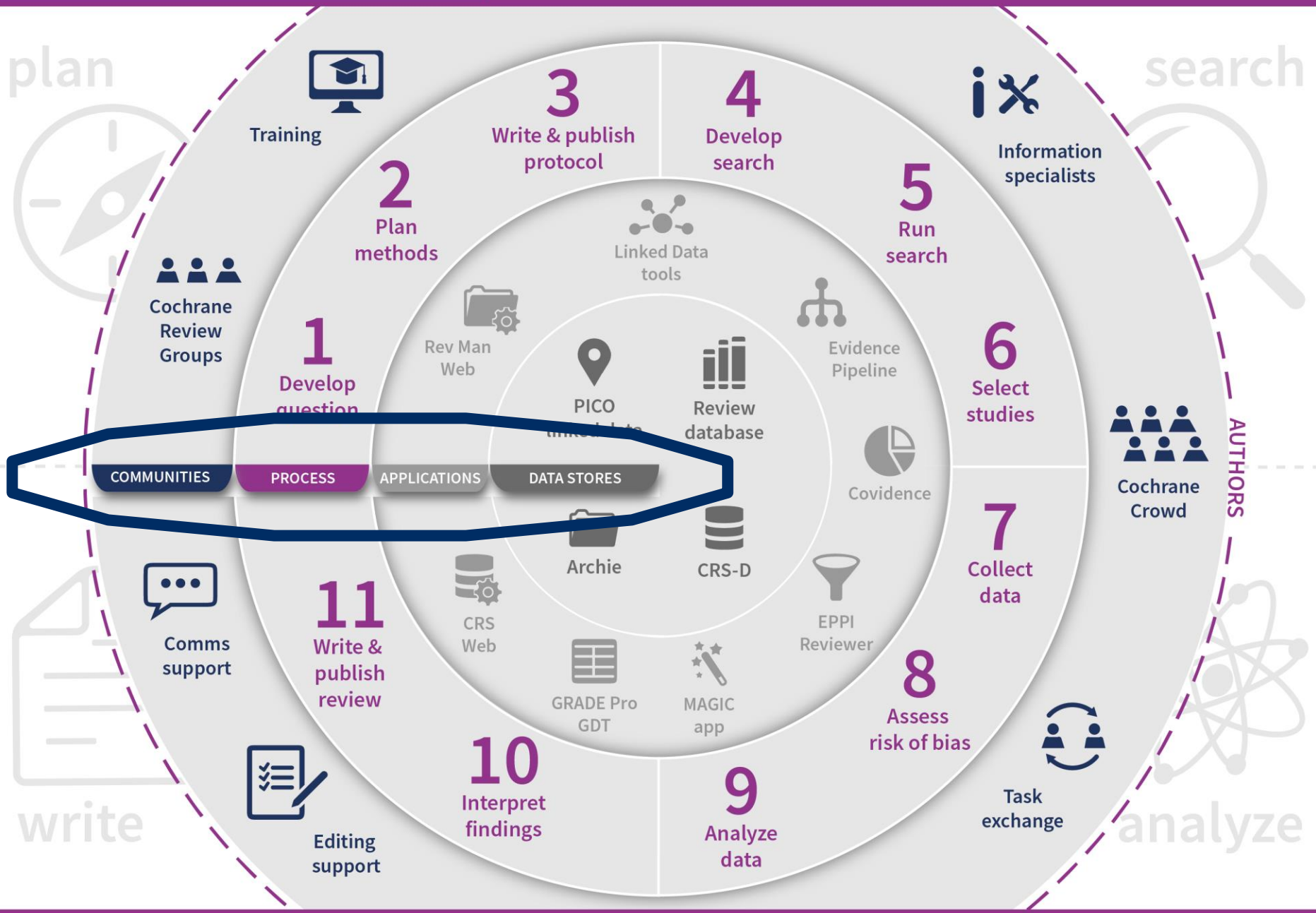
New Cochrane Review Ecosystem



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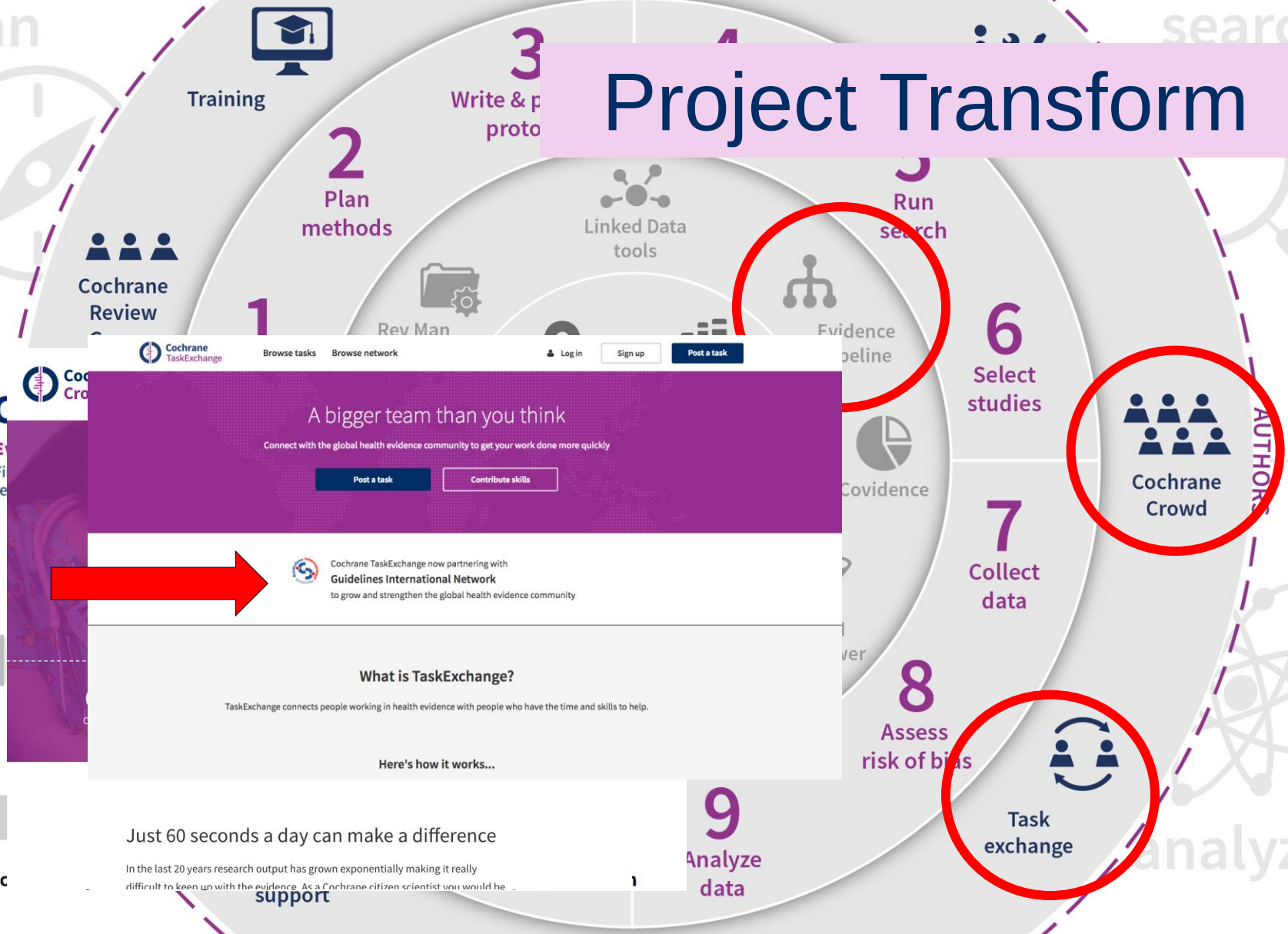
New Cochrane Review Ecosystem

Project Transform



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Project Transform

4 components:

- **Evidence Pipeline**: uses machine learning and text mining to make study identification more efficient and semi-automated – **including Centralized Search Service**
- **Cochrane Crowd**: uses crowdsourcing to get more people involved in tasks (crowd.cochrane.org)
- **Task Exchange**: Platform for brokering tasks (**taskexchange.cochrane.org**)
- **Living Systematic Reviews Network**: New models of updating and maintaining systematic reviews
- More info at **cochrane.org/transform**

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The Problem – Data deluge

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advanced search

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POLICY FORUM

Seventy-Five Trials and Eleven Systematic Reviews a Day: How Will We Ever Keep Up?

Hilda Bastian, Paul Glasziou, Iain Chalmers

Published: September 21, 2010 • http://dx.doi.org/10.1371/journal.pmed.1000326

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The Landscape

Where Are We Now?

How Close Are We to Archie Cochrane's Goal?

Where to Now?

Supporting Information

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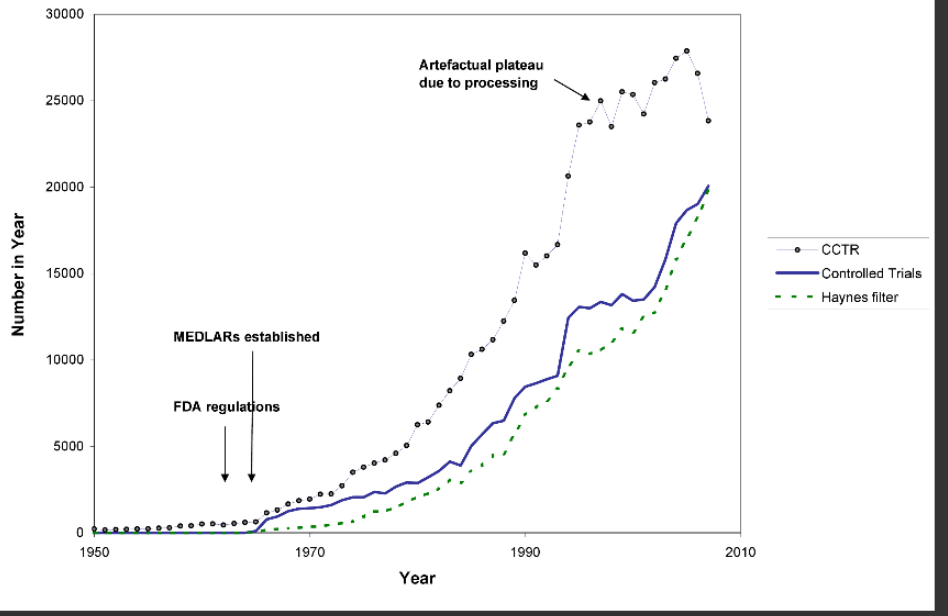
Reader Comments (7)

Figures

a Day: How Will We Ever Keep Up?



Centralized Search Service (CSS)

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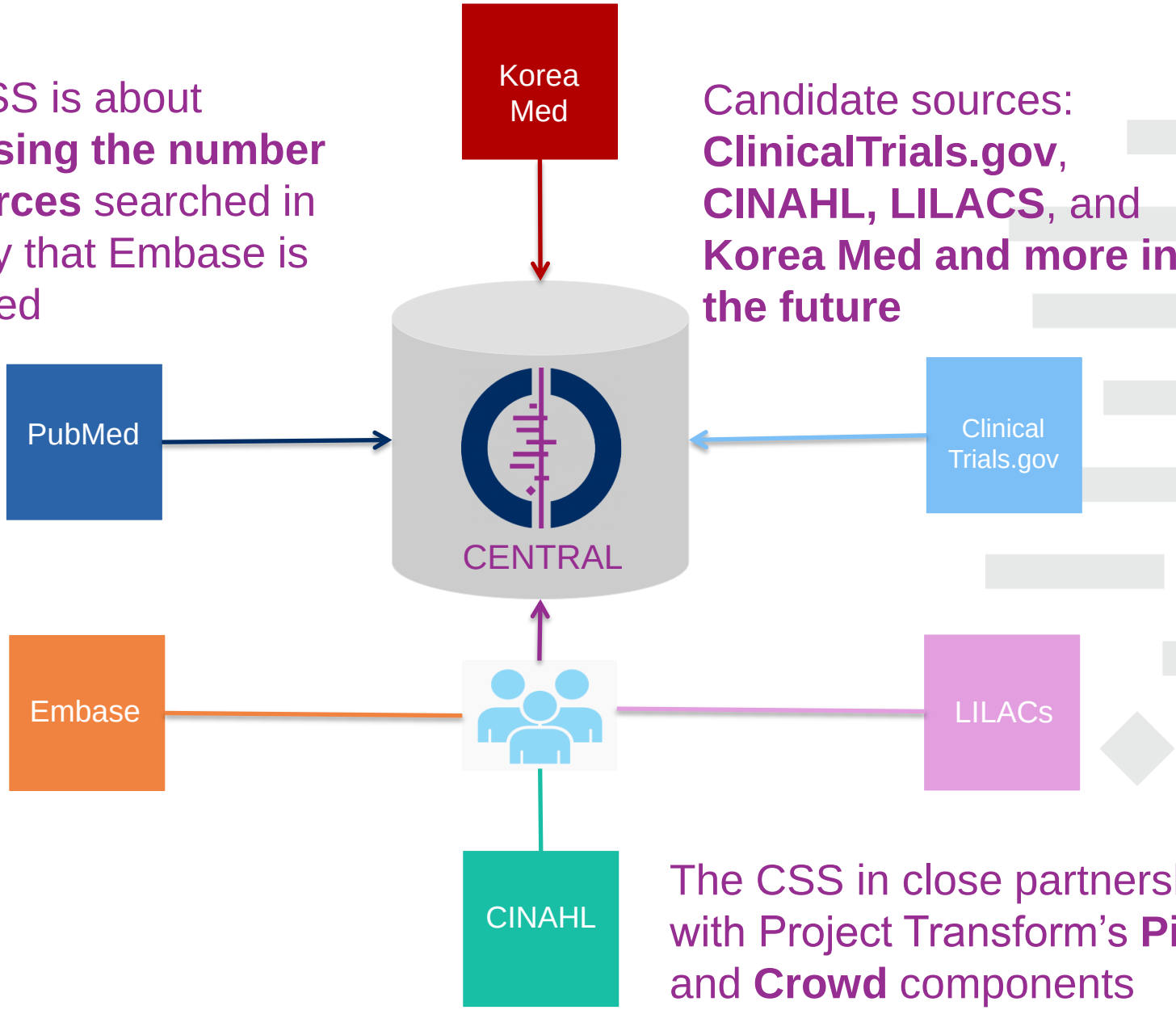
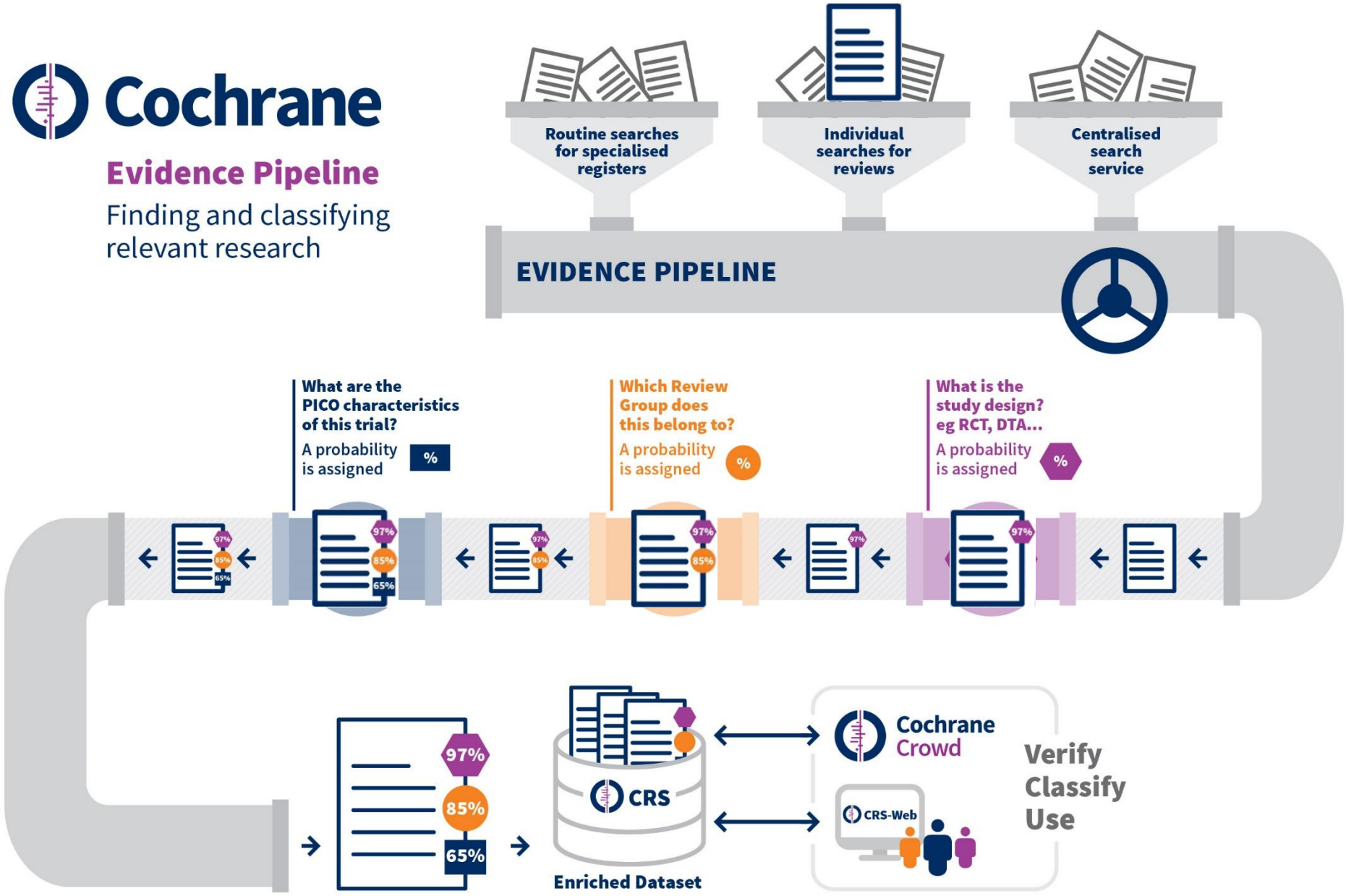
The CSS is about **increasing the number of sources** searched in the way that Embase is searched

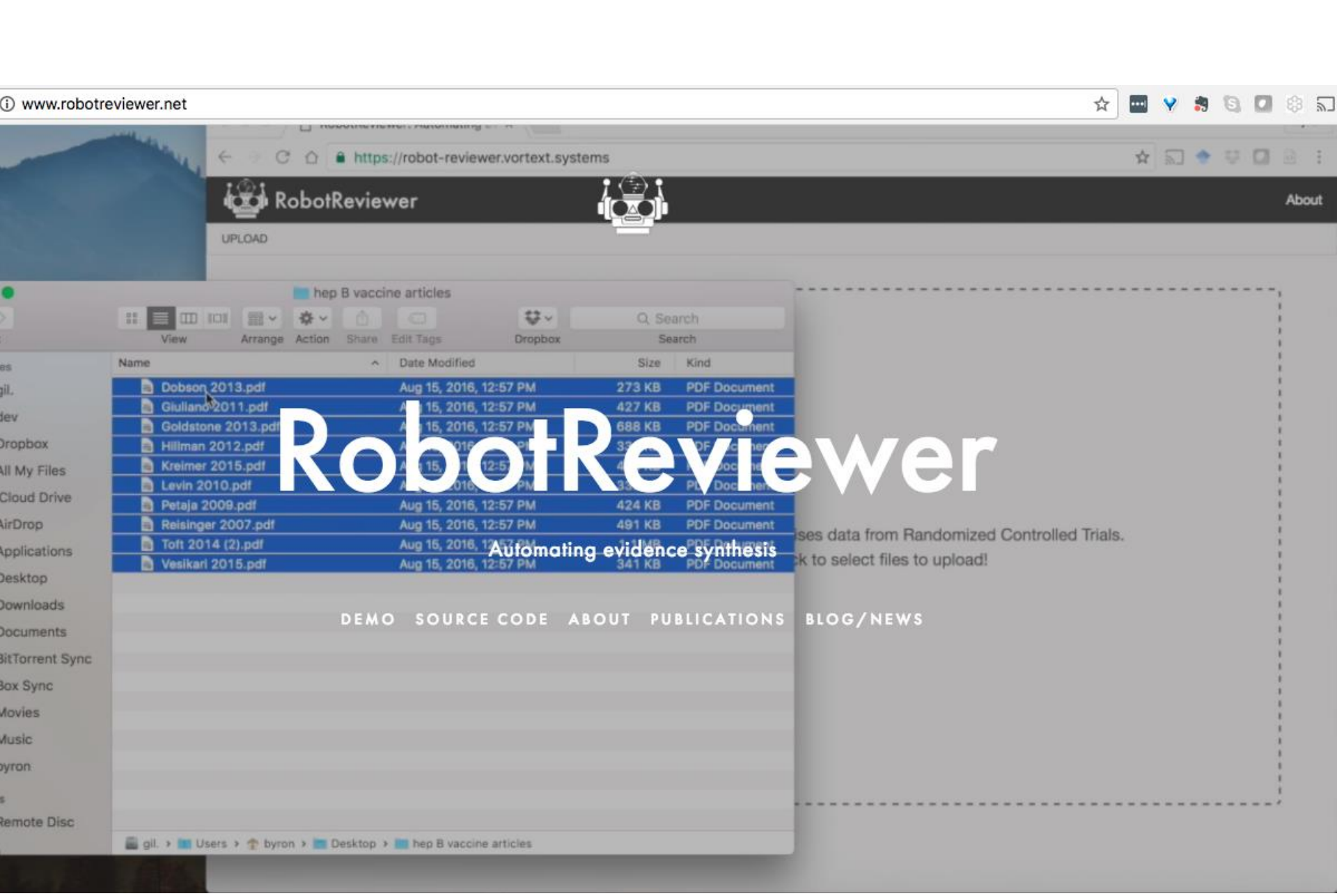
Candidate sources: **ClinicalTrials.gov**, **CINAHL, LILACS**, and **Korea Med and more in the future**



The CSS in close partnership with Project Transform's **Pipeline** and **Crowd** components



http://community.cochrane.org/tools/project-coordination-and-support/transform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Countries

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Classifications

Just 60 seconds a day can make a difference

crowd.cochrane.org/index.html#dashboardpage

My Dashboard

Chris Mavergames

Welcome, Chris.

RCT identification for Cochrane review CD008552

Interventions to increase fruit and vegetable consumption in children aged five years and under

Can you help us identify the randomised trials?
This task is for a specific Cochrane Review. It's for a very new type of Cochrane Review called a *Living Systematic Review* (oooh, exciting, I hear you say!).

If you screen *250 or more records, you will be acknowledged* in the review. Read the task FAQs to find out more.

7246	381	0	
Classifications made	RCTs found	My assessments	working on this task right now

Start screening | History and settings | Training records | FAQ | Quick reference

CT ID

Who should undergo a colonoscopy among patients with incidental colon uptake on PET-CT?.

OBJECTIVES: To investigate the optimal cut-off of the maximum standard uptake value (SUVmax) for the detection of colorectal neoplasms and to suggest those for whom further colonoscopy is recommended among patients with incidental colonic uptake on positron emission tomography-computed tomography (PET-CT). MATERIALS AND METHODS: In 306 patients who underwent colonoscopy within 3 months of receiving PET-CT between January and December 2009, measurements of the per-patient and per-lesion diagnostic performance of PET-CT for the detection of colonic neoplasms were obtained. Receiver operating characteristic (ROC) analysis was used to identify the SUVmax that provided a high probability of diagnosing malignancy and high-grade dysplasia. RESULTS: The per-patient and per-lesion PET-CT detection sensitivities for malignancies were 93.3% (28/30; 95% confidence interval (CI) 76.5% to 98.9%) and 93.5% (29/31, 95% CI 77.2% to 98.9%), respectively; the sensitivities for high-grade dysplasia were both 90.0% (9/10; 95% CI 54.1% to 99.5%). As a criterion to specifically detect both malignancy and high-grade dysplasia on focal uptake, a SUVmax greater than 2.5 yielded a 92.3% per-lesion sensitivity and a 42.9% per-lesion positive predictive value (PPV). In the ROC curve analysis, a cut-off value of SUVmax = 5.8 was established, at which the sensitivity, PPV and positive likelihood ratio for diagnosing malignancy and high-grade dysplasia were 71.8% (28/39; 95% CI 54.9% to 84.5%), 84.8% (28/33; 95% CI 67.3% to 94.3%) and 6.9, respectively. CONCLUSION: The optimal cut-off value to identify a malignancy or high-grade dysplasia was SUVmax = 5.8. However, to avoid missing a malignancy or high-grade dysplasia, a colonoscopy should be performed above a SUVmax = 2.5.

DTA

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Add a note

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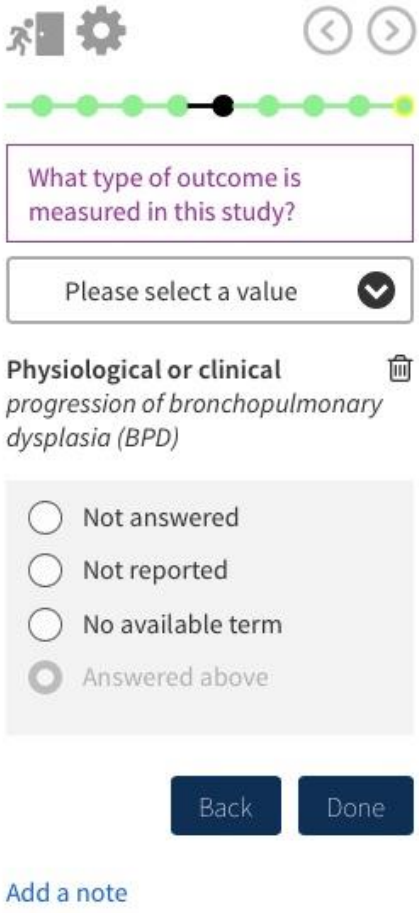
Crowd-Based Annotation

Using crowdsourcing to perform complex annotations as a series of micro-tasks

Early inhaled steroid use in extremely low birthweight infants: A randomised controlled trial. [201631]

Objective We hypothesised that a prophylactic inhaled steroid would prevent the progression of bronchopulmonary dysplasia (BPD) in extremely low birthweight infants (ELBWIs). Design This study was a multicentre, randomised, double-blinded, placebo-controlled trial. Setting This investigation was conducted in 12 level III neonatal intensive care units (NICUs). Patients A total of 211 ELBWIs requiring ventilator support were enrolled. Intervention Starting within 24 h of birth and continuing until 6 weeks of age or extubation, two doses of 50 mug fluticasone propionate (FP) or placebo were administered every 24 h. Main outcome measurement The primary outcome measure used to indicate the morbidity of severe BPD incidence was death or oxygen dependence at discharge from the NICU. The secondary measures were neurodevelopmental impairments (NDIs) at 18 months of postmenstrual age and 3 years of age. We performed subgroup analyses based on gestational week (GW) and the presence of chorioamnionitis (CAM). Results Infants were randomised into the FP (n=107) or placebo (n=104) groups. No significant differences were detected between the FP and placebo groups with respect to either the frequency of death or the oxygen dependence at discharge or NDIs. In subgroup analyses, the frequencies of death and oxygen dependence at discharge were significantly decreased in the FP group for infants born at 24-26 GWs and for infants with CAM, regardless of the GW at birth. Conclusions Inhaled steroids have no effect on the prevention of severe BPD or long-term NDI but might decrease the severity of BPD for ELBWIs with a risk factor. Trial registration number UMIN-CTR C000000405. Copyright Â© 2016 BMJ Publishing Group Ltd & Royal College of Paediatrics and Child Health.



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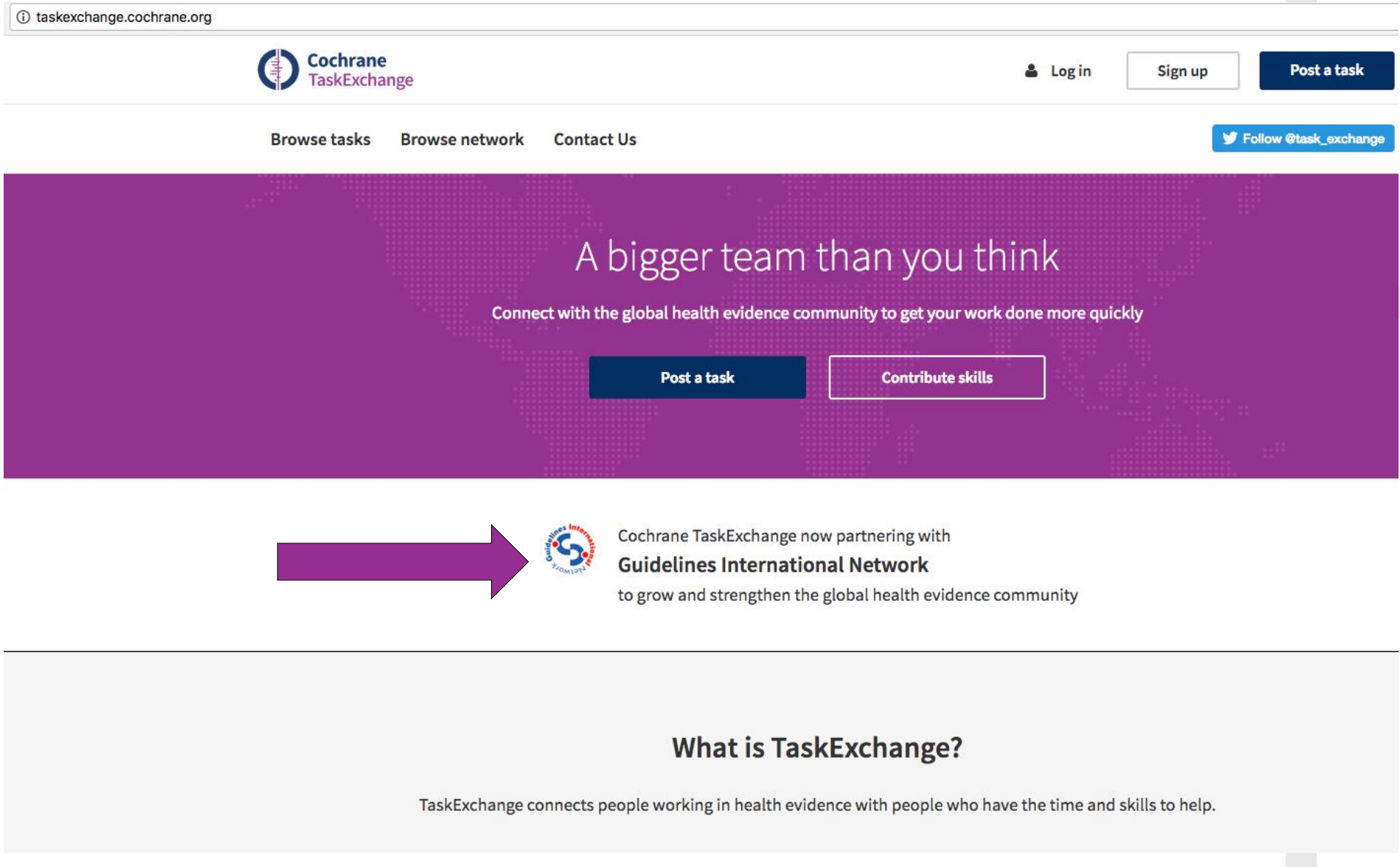
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Anna Sutherland

Needed 13 Oct '17

Acknowledgement

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Cochrane – Pain, Palliative and Supportive Care

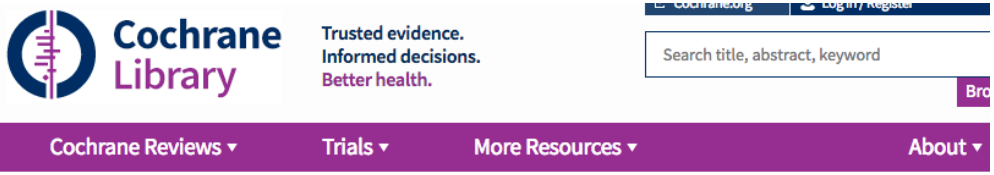
Cancer

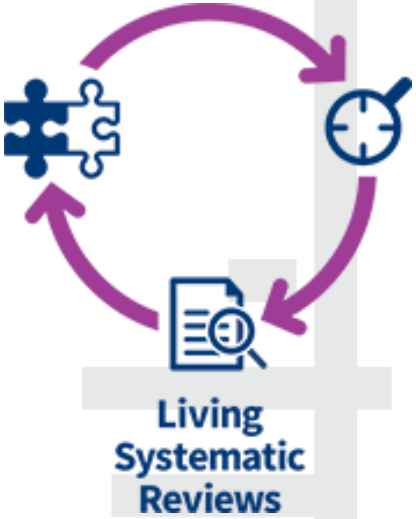
Checking if a Chinese Language article is a single arm study

Skills: Data Extraction

Please can someone with good Chinese help me to check if this is a single arm or RCT study? The paper is: Xia, Y.; Lu, X.; Du, R.;

First two Living SRs published





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Cochrane Database of Systematic Reviews

Delayed antibiotic prescriptions for respiratory infections

New search | Conclusions changed | Review | Intervention

Geoffrey KP Spurling, Chris B Del Mar, Liz Dooley, Ruth Foxlee, Rebecca Farl

First published: 7 September 2017

Editorial Group: Cochrane Acute Respiratory Infections Group

DOI: 10.1002/14651858.CD004417.pub5 View/save citation

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Abstract

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Cochrane Database of Systematic Reviews

Parenteral anticoagulation in ambulatory patients with cancer

Review | Intervention

Elie A Akl, Lara A Kahale, Rami A Ballout, Maddalena Barba, Victor E D Yosuico, Frederiek F van Doormaal, Saskia Middeldorp, Andrew Bryant, Holger Schünemann

First published: 10 December 2014

Editorial Group: Cochrane Gynaecological, Neuro-oncology and Orphan Cancer Group

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See clinical summaries based on this review

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Outline

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Figures (3)



Tables (1)

Table 1

Journal of Clinical Epidemiology
Volume 91, November 2017, Pages 31-37

Series: Living Systematic Review

Living systematic reviews: 2. Combining human and machine effort

James Thomas [a], Anna Noel-Storr [b], Iain Marshall [c], Byron Wallace [d], Steven McDonald [e], Chris Mavergames [f], Paul Glasziou [g], Ian Shemilt [a], Anneliese Synnot [e, h], Tari Turner [e], Julian Elliott [e, i]
Living Systematic Review Network

Show more

https://doi.org/10.1016/j.jclinepi.2017.08.011

Abstract

New approaches to evidence synthesis, which use human effort and machine automation in mutually reinforcing ways, can enhance the feasibility and sustainability of living systematic reviews. Human effort is a scarce and valuable resource, required when automation is impossible or undesirable, and includes contributions from online communities (“crowds”) as well as more conventional

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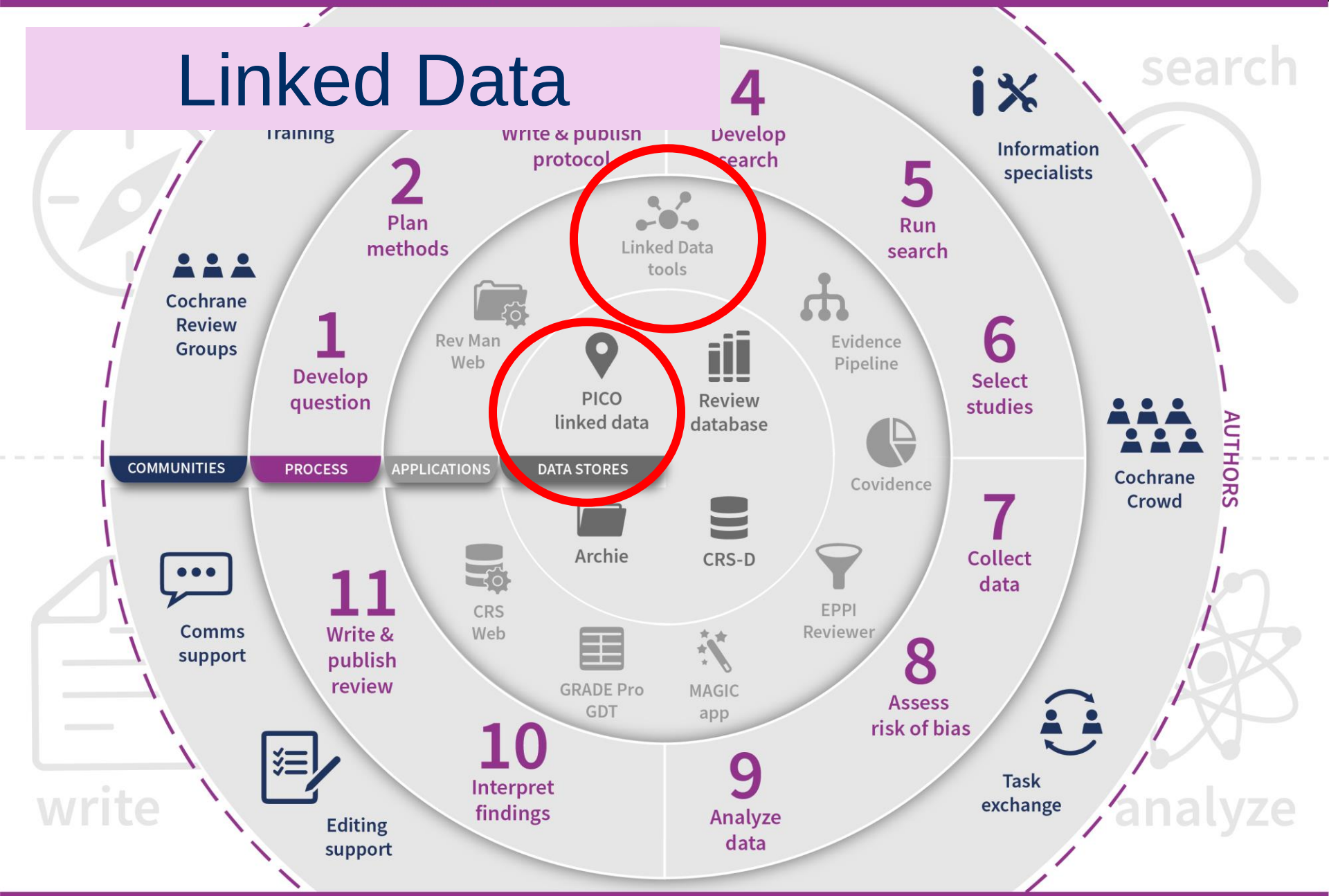
New Cochrane Review Ecosystem

Linked Data



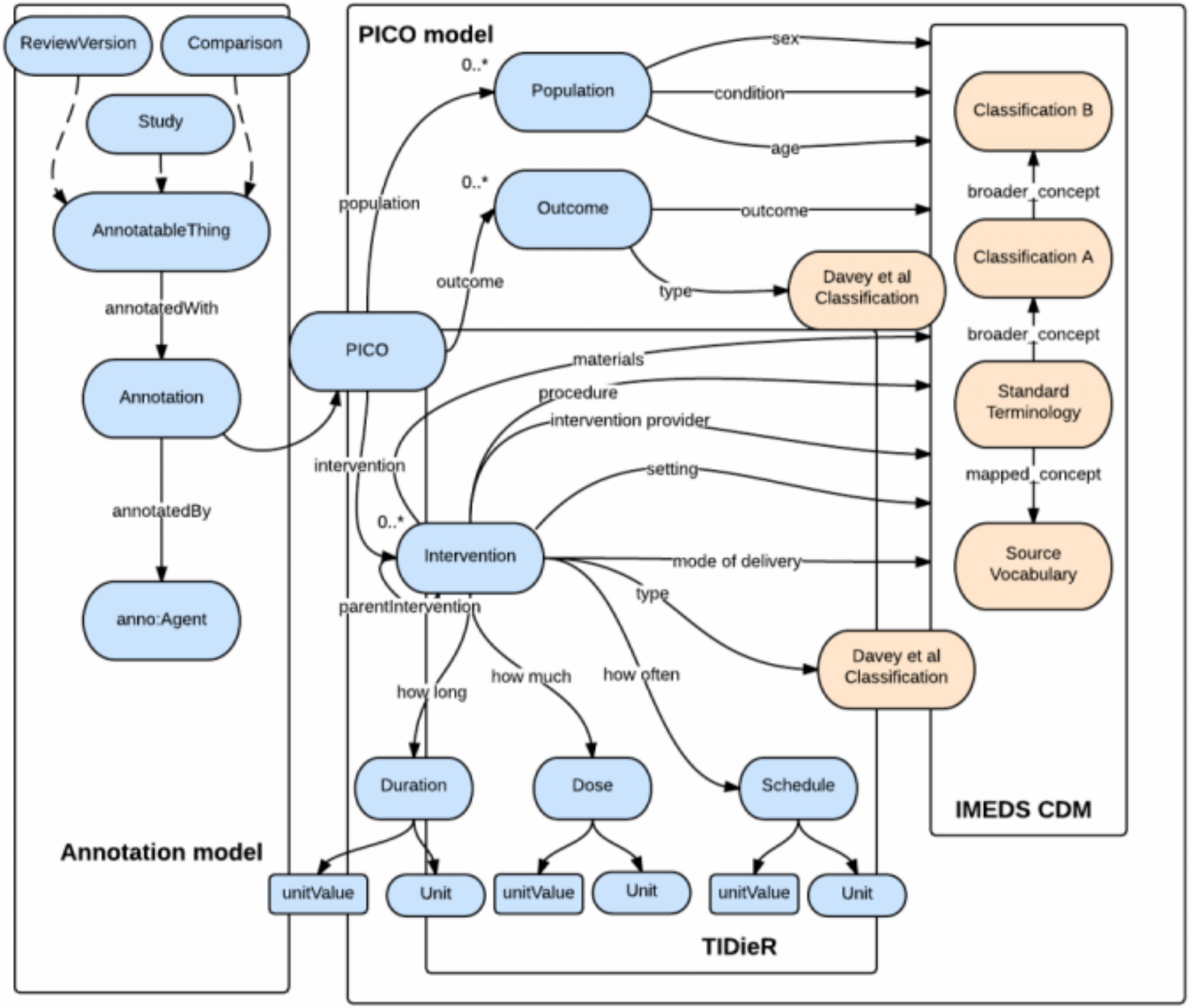
PICO annotation

Population/participants

Intervention

Comparator(s)

Outcomes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Classification B
broader_concept
Classification A
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Standard Terminology
mapped_concept
Source Vocabulary
IMEDS CDM

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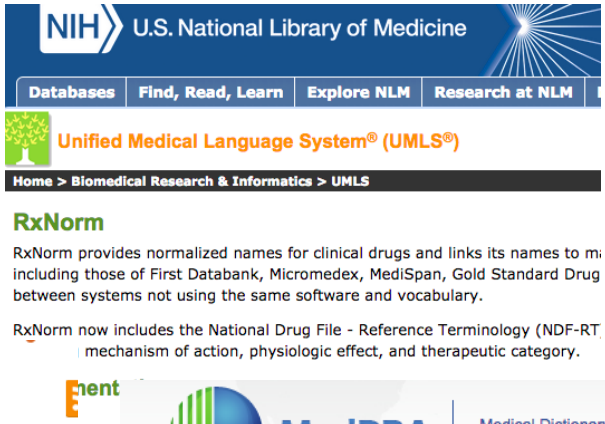
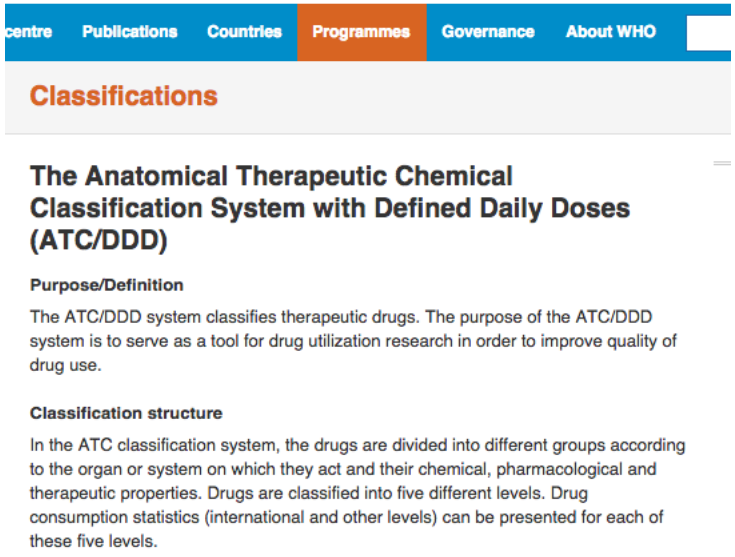
Controlled terminology sets (vocabularies)





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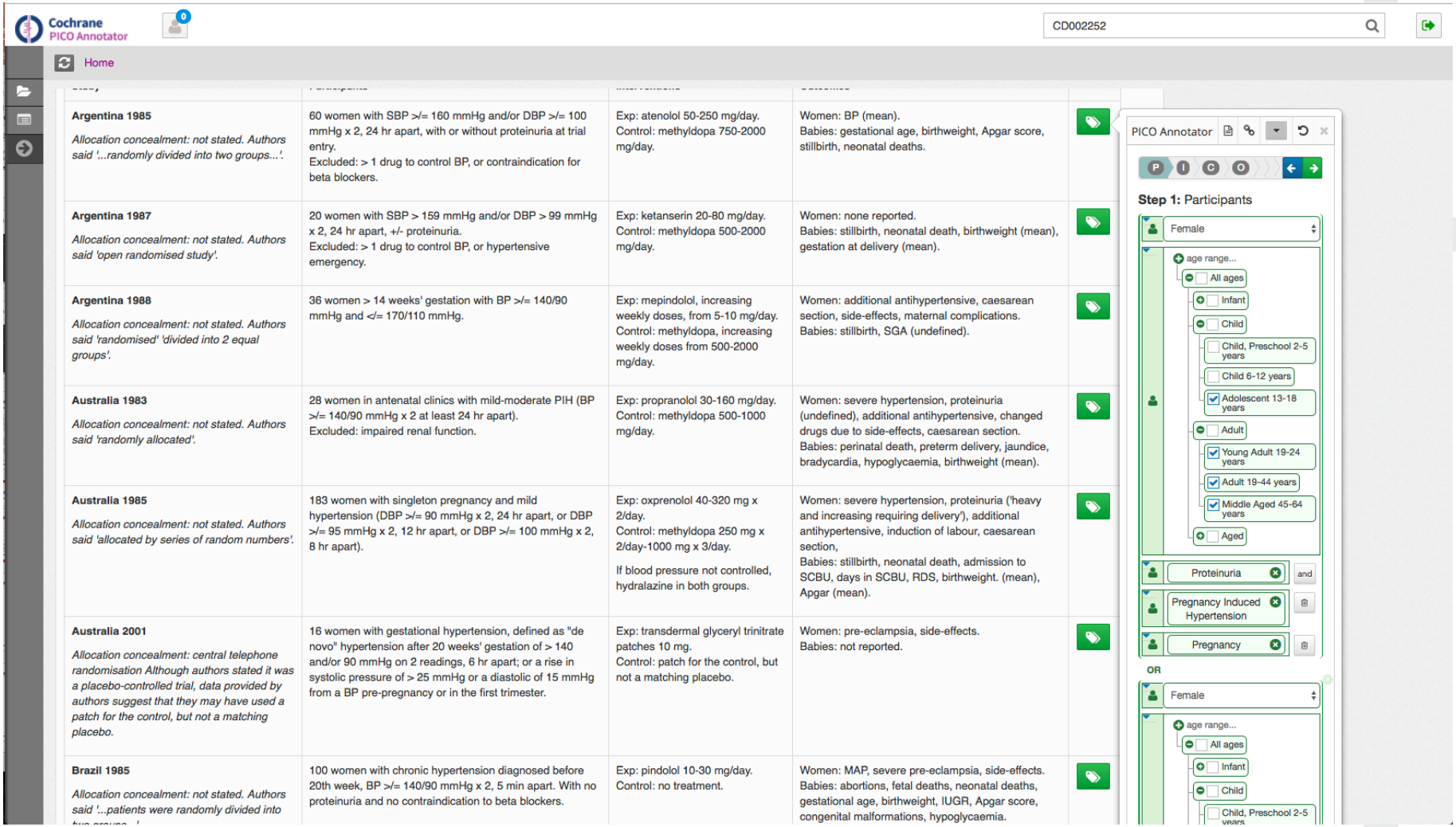
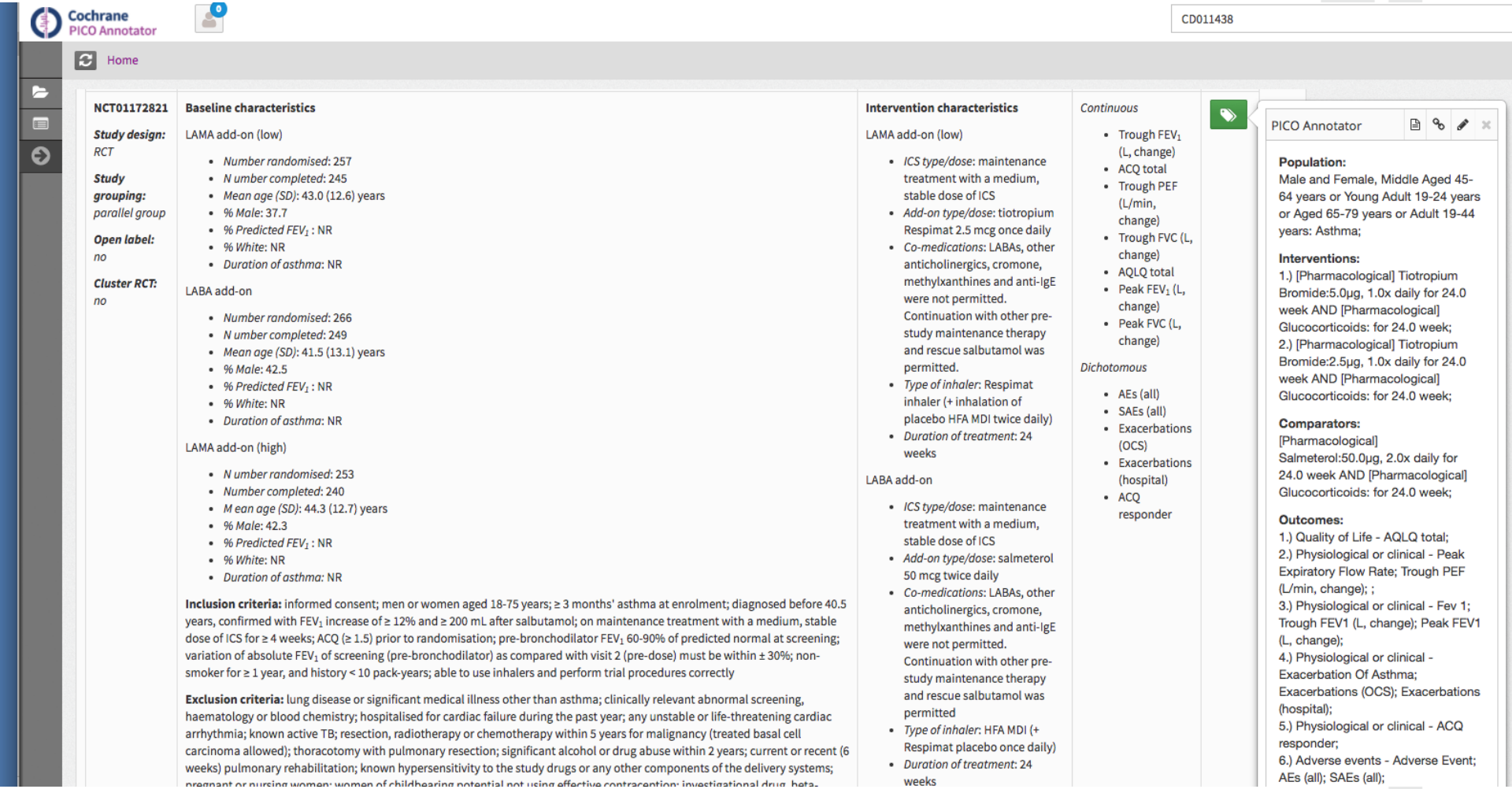
PICO Annotator



Argentina 1985 *Allocation concealment: not stated. Authors said '...randomly divided into two groups...'.*	60 women with SBP >/= 160 mmHg and/or DBP >/= 100 mmHg x 2, 24 hr apart, with or without proteinuria at trial entry. Excluded: > 1 drug to control BP, or contraindication for beta blockers.	Exp: atenolol 50-250 mg/day. Control: methyldopa 750-2000 mg/day.	Women: BP (mean). Babies: gestational age, birthweight, Apgar score, stillbirth, neonatal deaths.
Argentina 1987 *Allocation concealment: not stated. Authors said 'open randomised study'.*	20 women with SBP > 159 mmHg and/or DBP > 99 mmHg x 2, 24 hr apart, +/- proteinuria. Excluded: > 1 drug to control BP, or hypertensive emergency.	Exp: ketanserin 20-80 mg/day. Control: methyldopa 500-2000 mg/day.	Women: none reported. Babies: stillbirth, neonatal death, birthweight (mean), gestation at delivery (mean).
Argentina 1988 *Allocation concealment: not stated. Authors said 'randomised' 'divided into 2 equal groups'.*	36 women > 14 weeks' gestation with BP >/= 140/90 mmHg and </= 170/110 mmHg.	Exp: mepindolol, increasing weekly doses, from 5-10 mg/day. Control: methyldopa, increasing weekly doses from 500-2000 mg/day.	Women: additional antihypertensive, caesarean section, side-effects, maternal complications. Babies: stillbirth, SGA (undefined).
Australia 1983 *Allocation concealment: not stated. Authors said 'randomly allocated'.*	28 women in antenatal clinics with mild-moderate PIH (BP >/= 140/90 mmHg x 2 at least 24 hr apart). Excluded: impaired renal function.	Exp: propranolol 30-160 mg/day. Control: methyldopa 500-1000 mg/day.	Women: severe hypertension, proteinuria (undefined), additional antihypertensive, changed drugs due to side-effects, caesarean section. Babies: perinatal death, preterm delivery, jaundice, bradycardia, hypoglycaemia, birthweight (mean).
Australia 1985 *Allocation concealment: not stated. Authors said 'allocated by series of random numbers'.*	183 women with singleton pregnancy and mild hypertension (DBP >/= 90 mmHg x 2, 24 hr apart, or DBP >/= 95 mmHg x 2, 12 hr apart, or DBP >/= 100 mmHg x 2, 8 hr apart).	Exp: oxprenolol 40-320 mg x 2/day. Control: methyldopa 250 mg x 2/day-1000 mg x 3/day. If blood pressure not controlled, hydralazine in both groups.	Women: severe hypertension, proteinuria ('heavy and increasing requiring delivery'), additional antihypertensive, induction of labour, caesarean section, Babies: stillbirth, neonatal death, admission to SCBU, days in SCBU, RDS, birthweight. (mean), Apgar (mean).
Australia 2001 *Allocation concealment: central telephone randomisation Although authors stated it was a placebo-controlled trial, data provided by authors suggest that they may have used a patch for the control, but not a matching placebo.*	16 women with gestational hypertension, defined as "de novo" hypertension after 20 weeks' gestation of > 140 and/or 90 mmHg on 2 readings, 6 hr apart; or a rise in systolic pressure of > 25 mmHg or a diastolic of 15 mmHg from a BP pre-pregnancy or in the first trimester.	Exp: transdermal glyceryl trinitrate patches 10 mg. Control: patch for the control, but not a matching placebo.	Women: pre-eclampsia, side-effects. Babies: not reported.
Brazil 1985 *Allocation concealment: not stated. Authors said '...patients were randomly divided into*	100 women with chronic hypertension diagnosed before 20th week, BP >/= 140/90 mmHg x 2, 5 min apart. With no proteinuria and no contraindication to beta blockers.	Exp: pindolol 10-30 mg/day. Control: no treatment.	Women: MAP, severe pre-eclampsia, side-effects. Babies: abortions, fetal deaths, neonatal deaths, gestational age, birthweight, IUGR, Apgar score, congenital malformations, hypoglycaemia.

Multi-arm trials – Complex PICO



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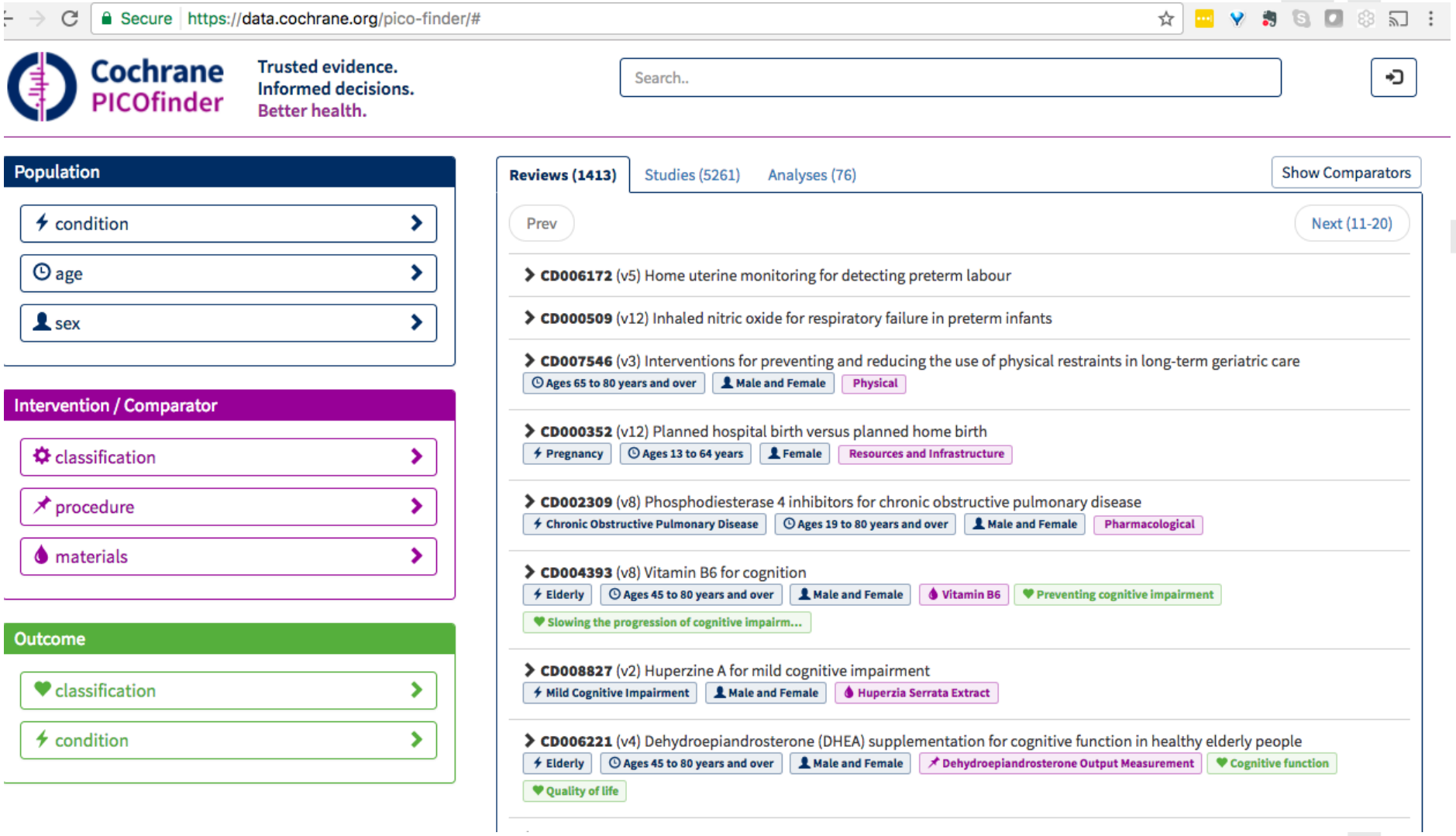
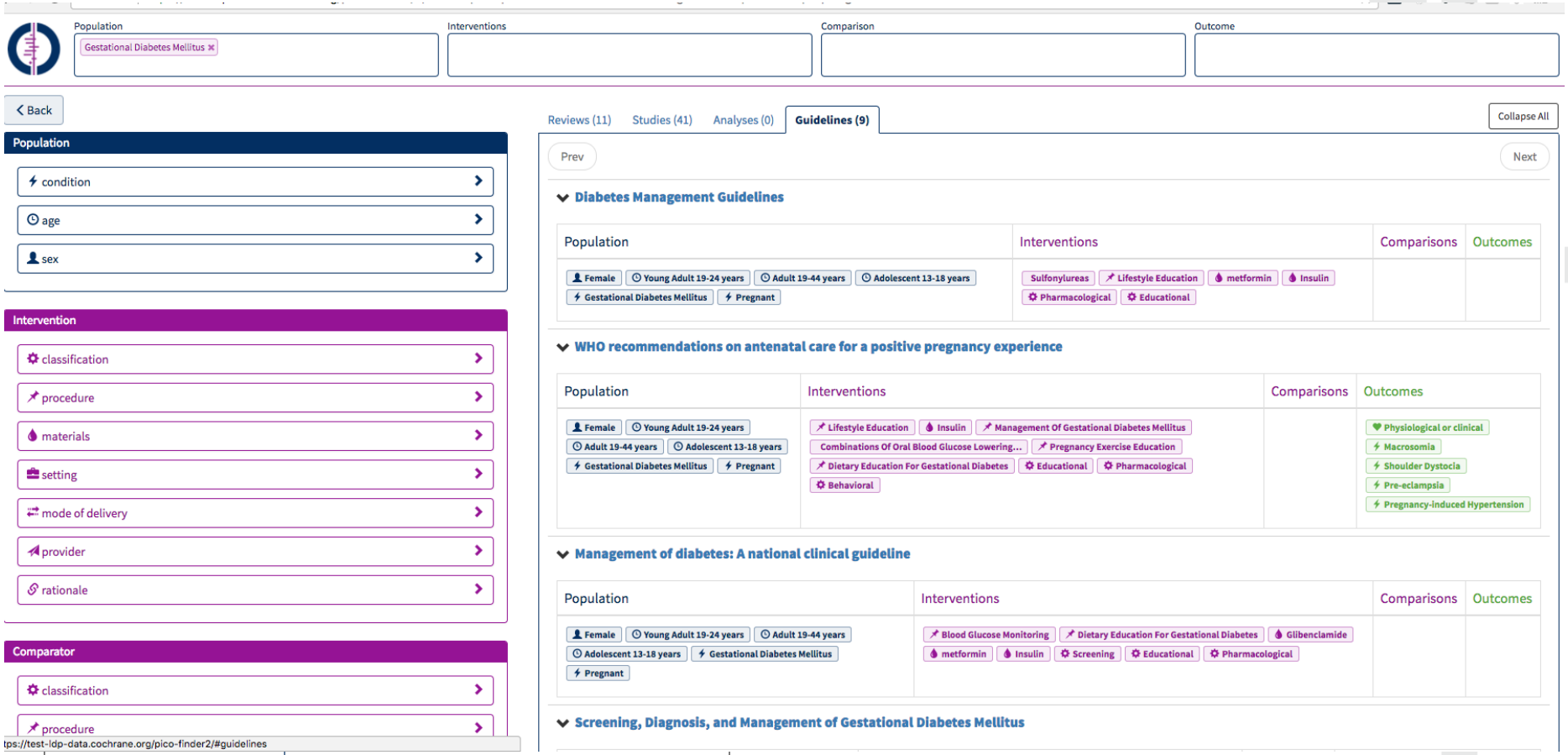
Exploring PICO

Flexible search for combinations of Population, Intervention, Outcome



Exploring PICO

Flexible search for combinations of Population, Intervention, Outcome



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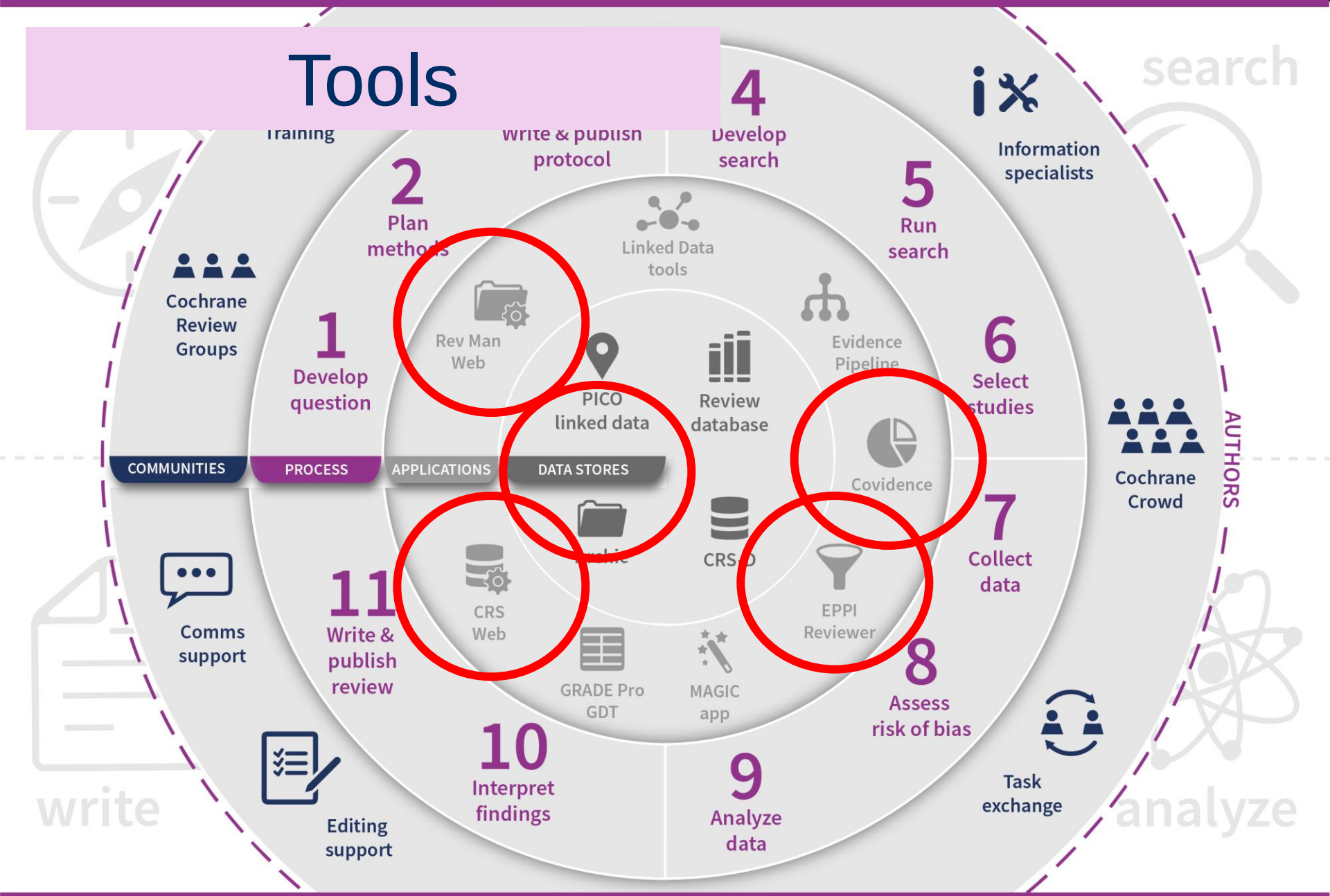
Tools



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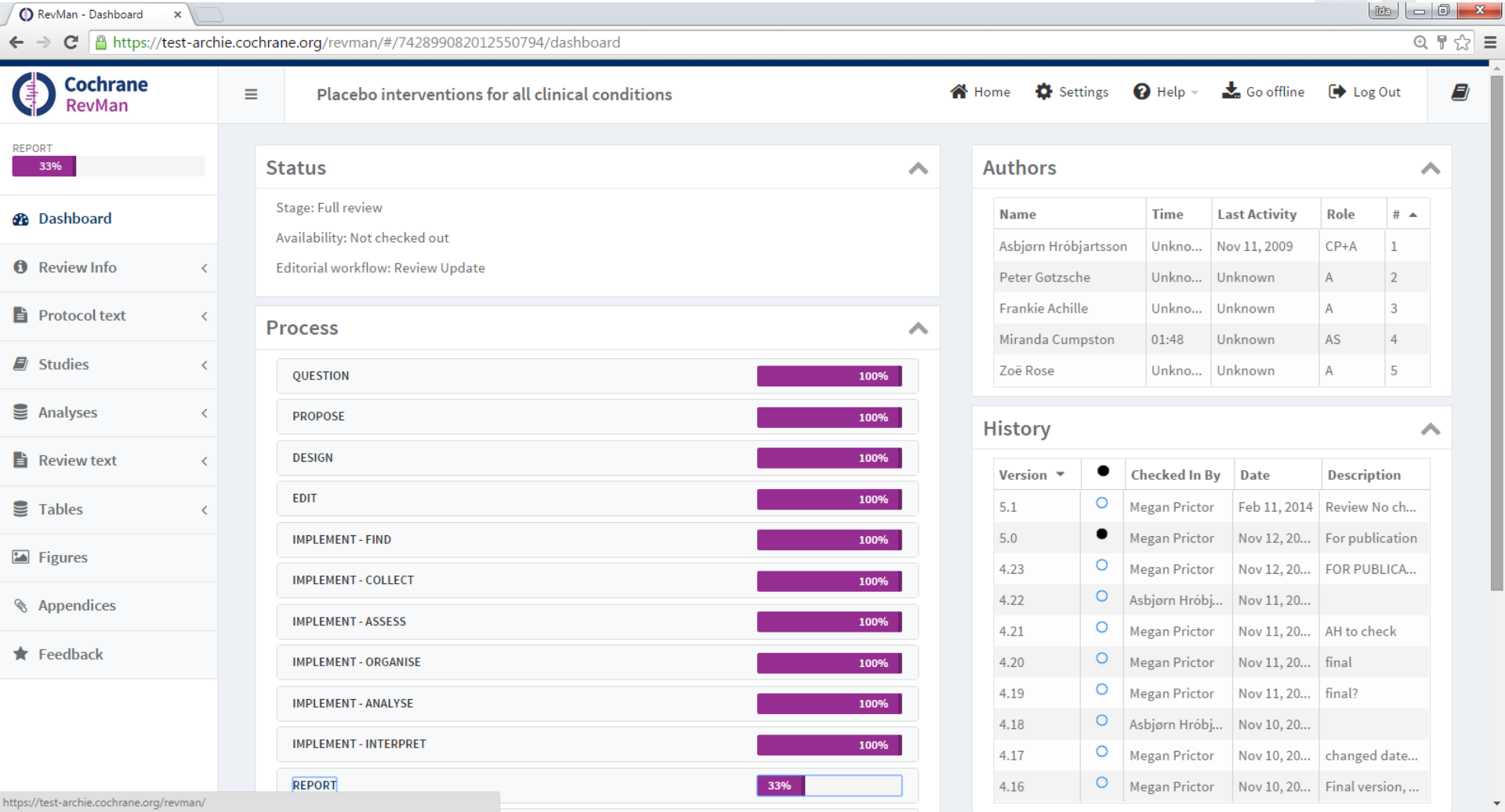
RevMan Web Review Dashboard



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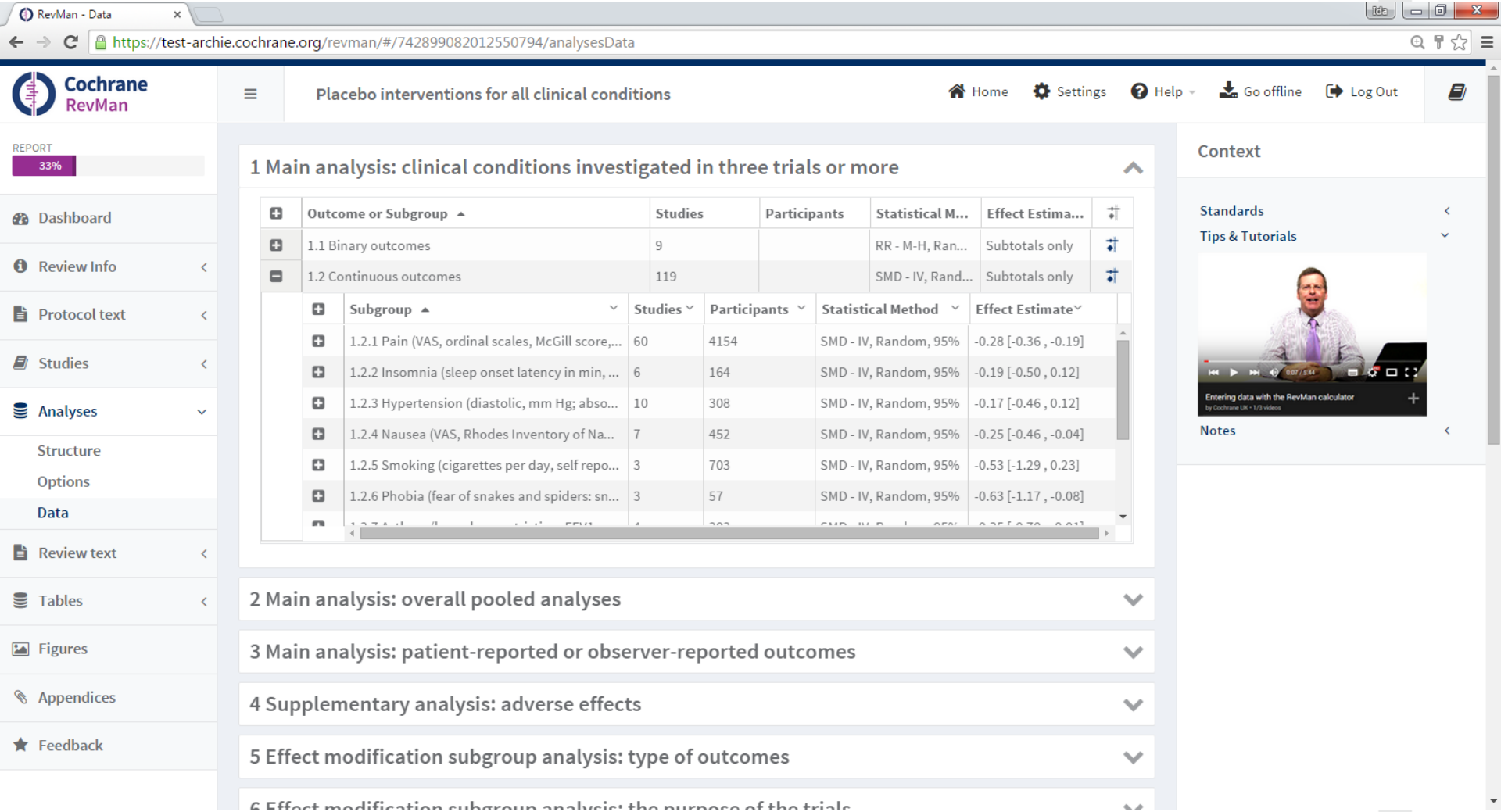
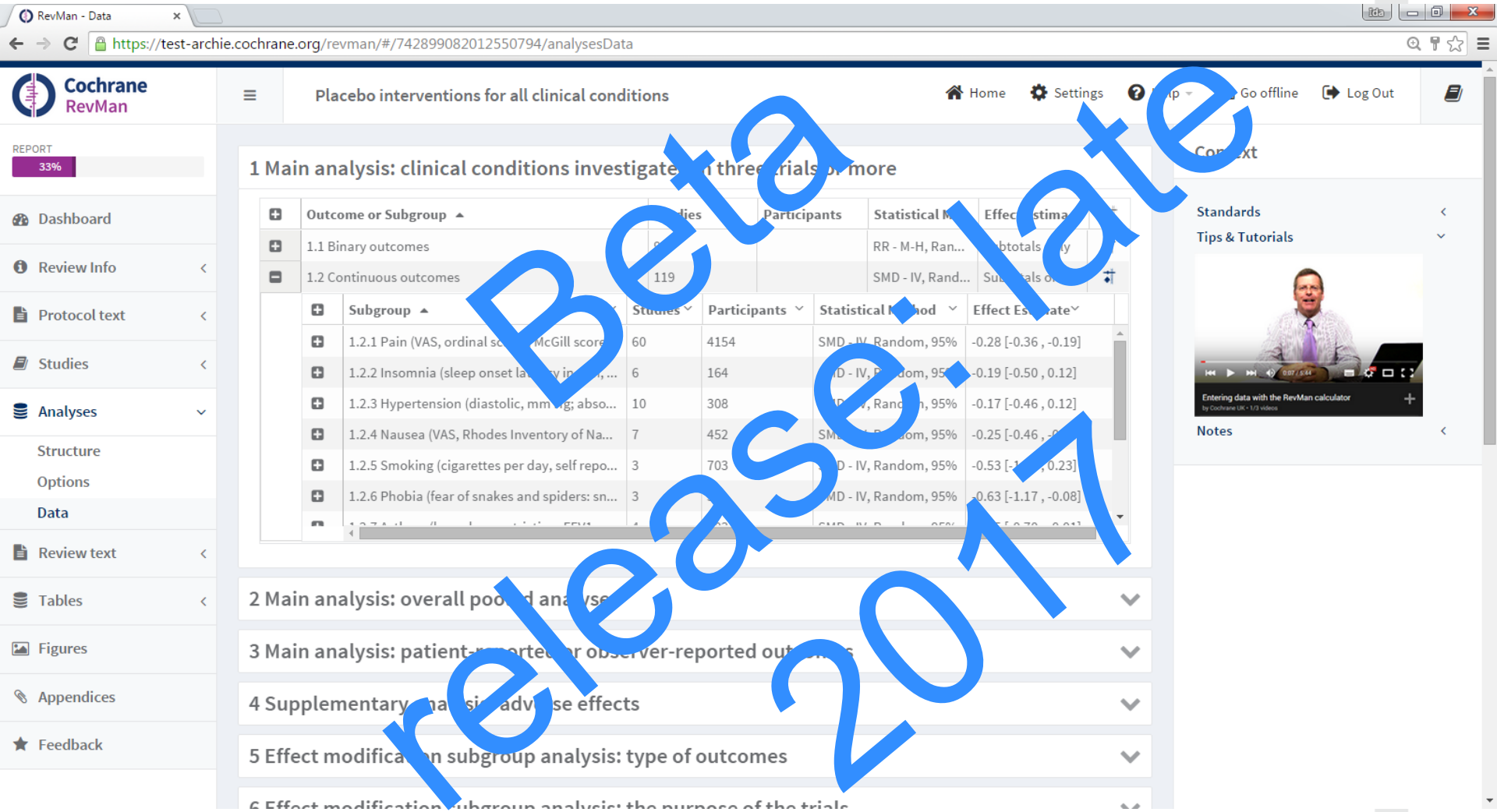
RevMan Web



RevMan Web



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An introduction t

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Wednesday, February 24, 2016

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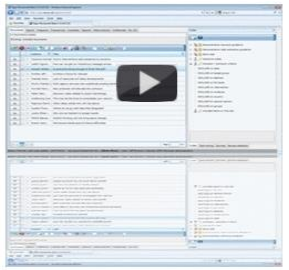

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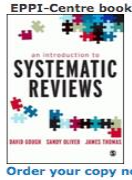

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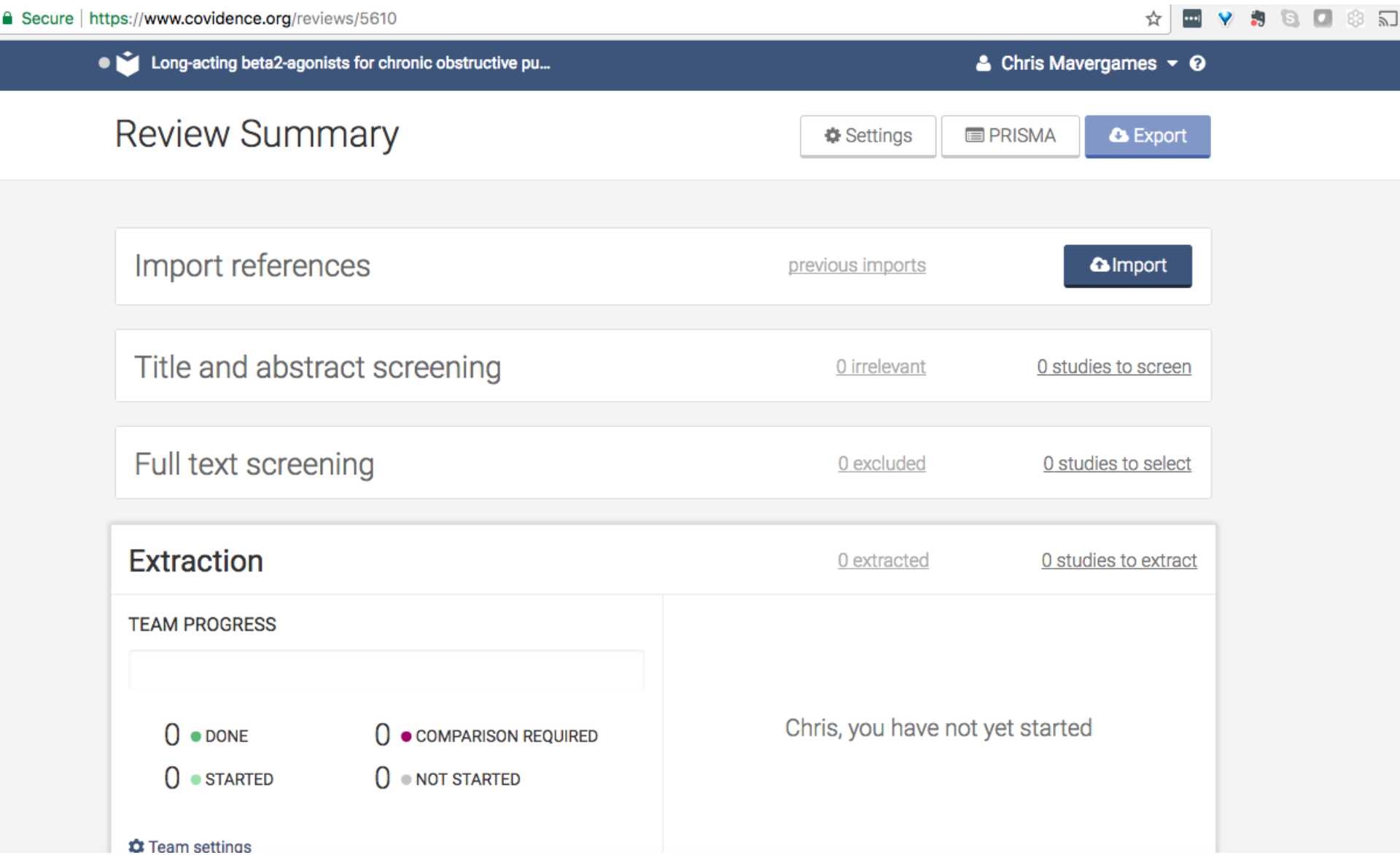

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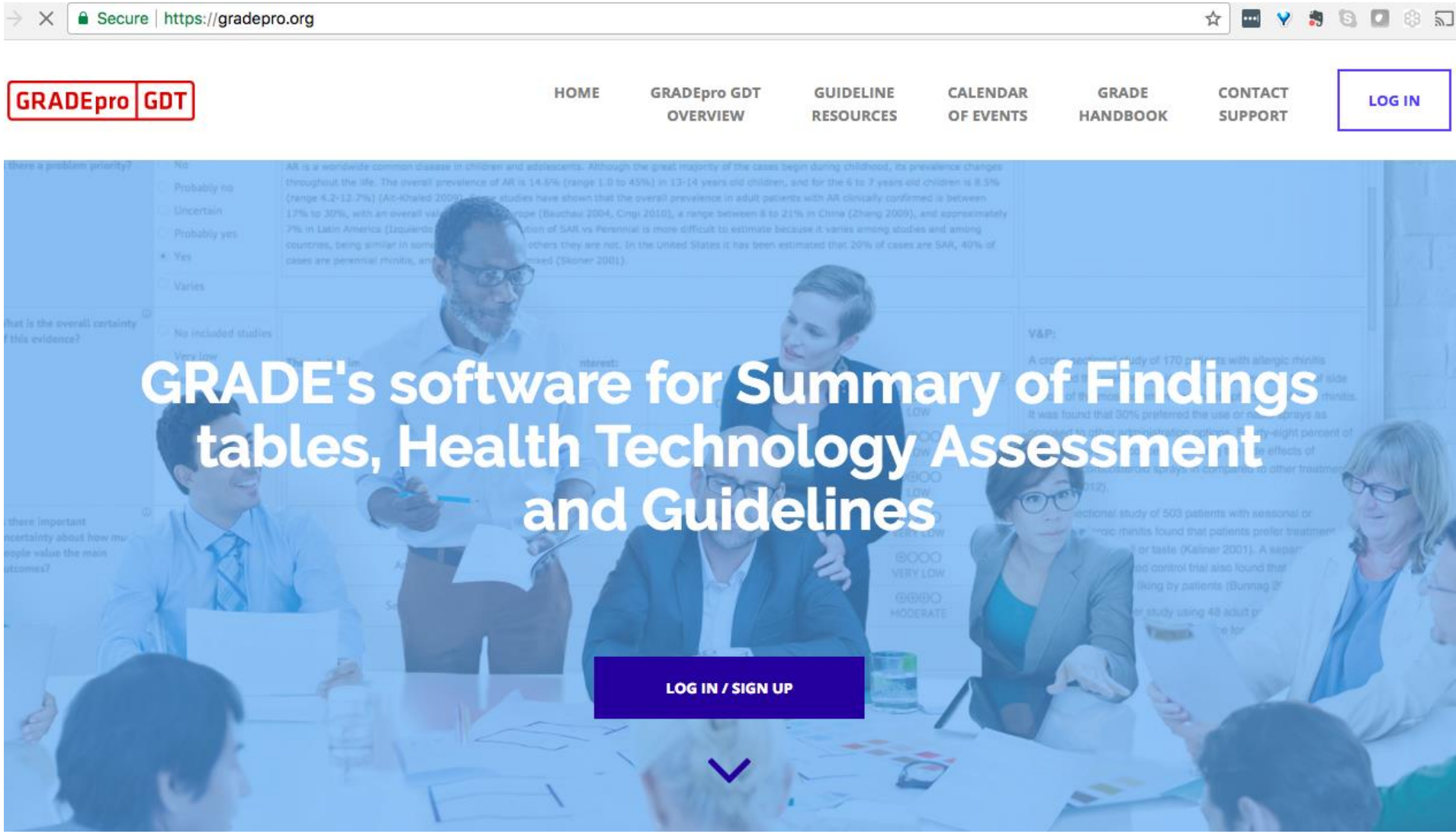
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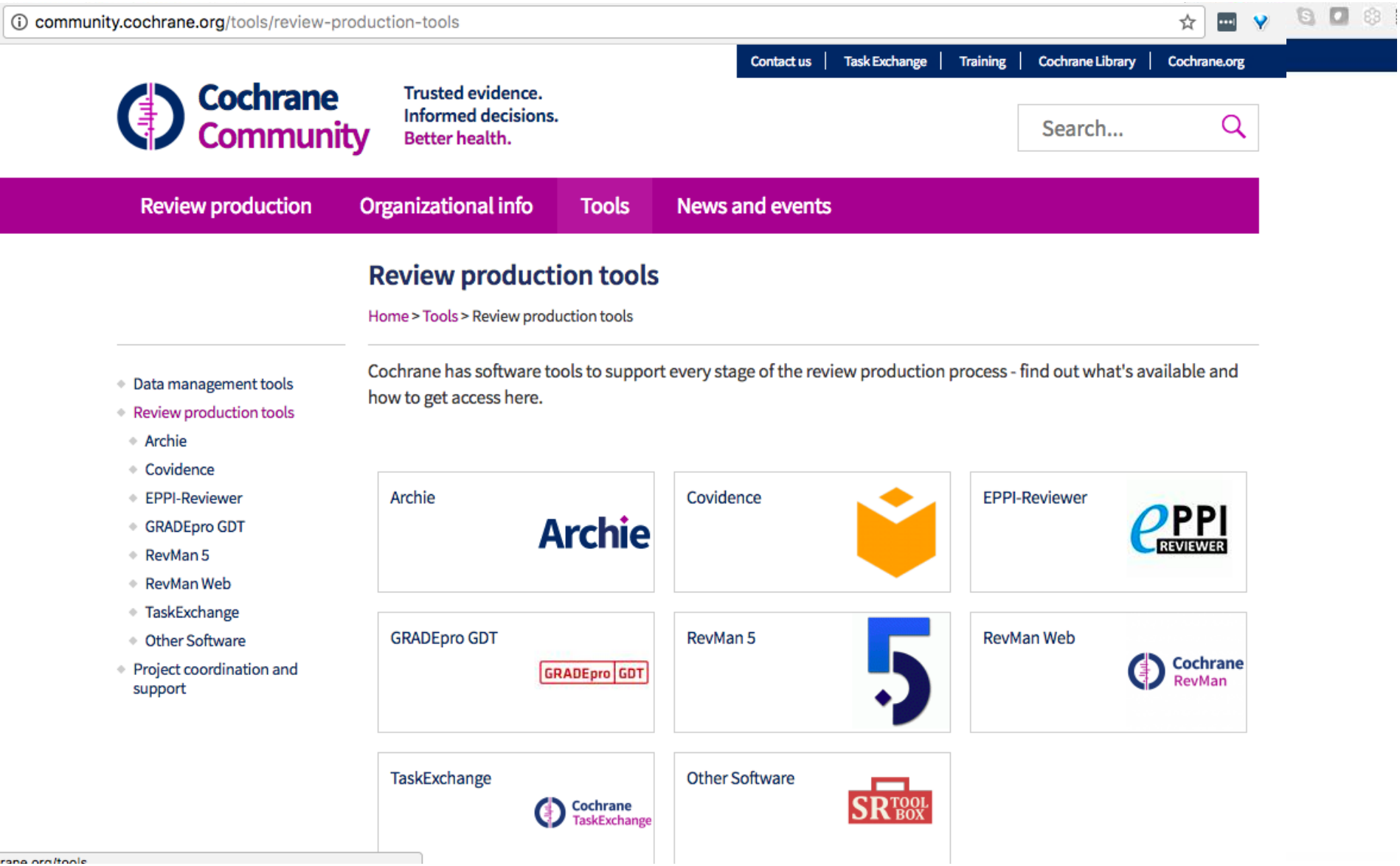
You can import results of statistical analyses from Cochrane Collaboration's Review Manager and export a summary of findings table into the RevMan file. RevMan is the software used for preparing and maintaining Cochrane Reviews. The GDT supports import and export to RevMan 5 format, with more seamless integration on the way.

community.cochrane.org/tool

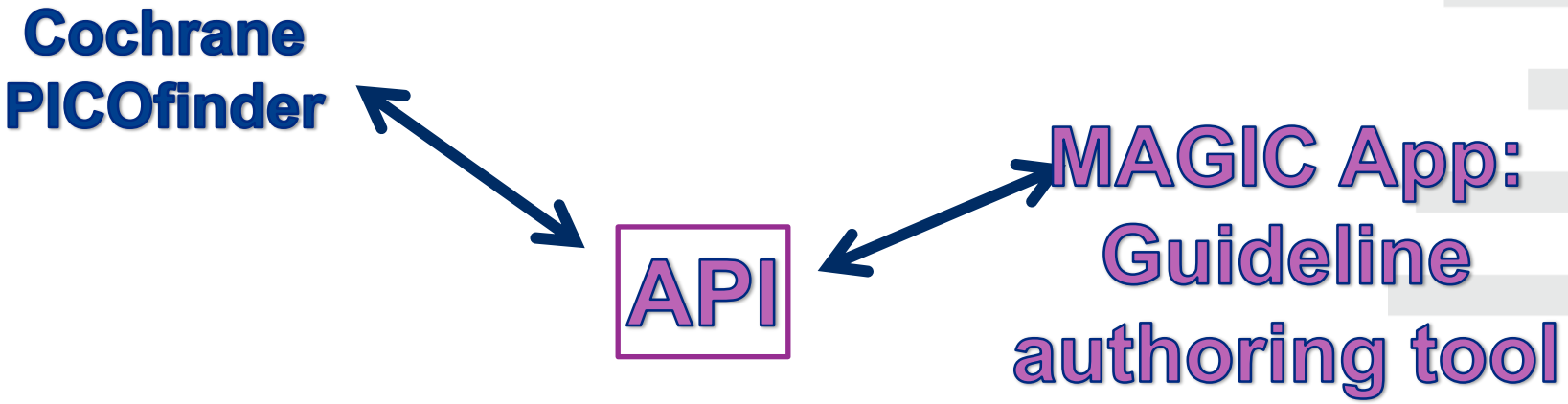



…breathe....

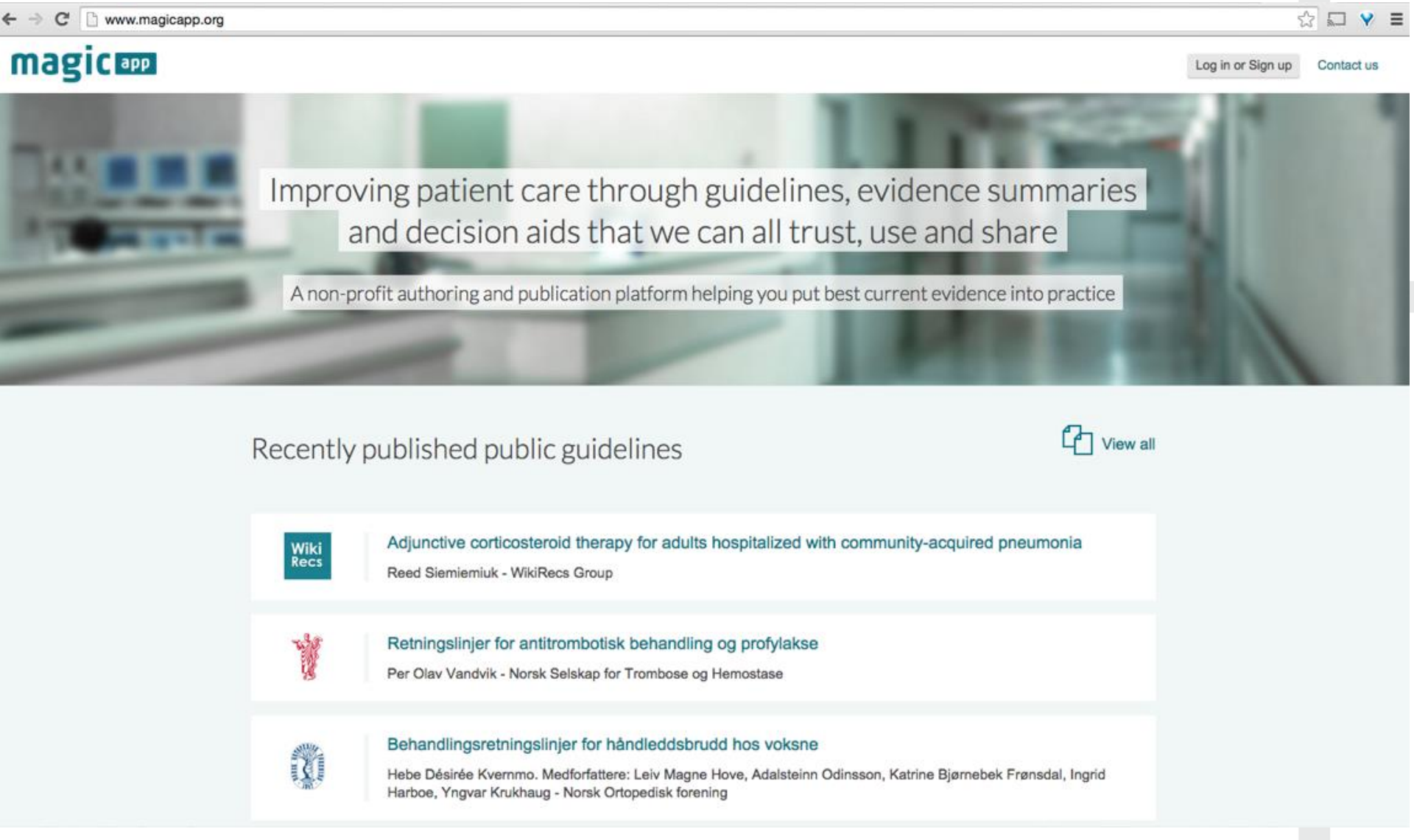
Connecting tools in the Ecosystem

Example: MAGIC and Cochrane PICOfinder

Cochrane


Cochrane
PICOfinder
API
MAGIC App:
Guideline
authoring tool

Cochrane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Adjunctive corticosteroid therapy for adults hospitalized with community-acquired pneumonia
Reed Siemiemiuk - WikiRecs Group
Retningslinjer for antitrombotisk behandling og profylakse
Per Olav Vandvik - Norsk Selskap for Trombose og Hemostase
Behandlingsretningslinjer for håndleddsbrudd hos voksne
Hebe Désirée Kvernmo. Medforfattere: Leiv Magne Hove, Adalsteinn Odinsson, Katrine Bjørnebek Frønsdal, Ingrid Harboe, Yngvar Krukhaug - Norsk Ortopedisk forening

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MAGIC app

November update for Organizations and admins.

We currently have over **23 000** users and **125** organisations signed up on our platform.

23 400
Users

34 active
Organisations

81
Public guidelines

New features planned to be released within the next week

New Organization- specific guideline pages

All organizations now get their own branded page where all their public content are listed. The pages has a direct

Organizations can customize guideline colours

All organizations can now theme their guidelines and Organization specific pages to better match their own brand-

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Brief MAGIC “demo

& live robot demo

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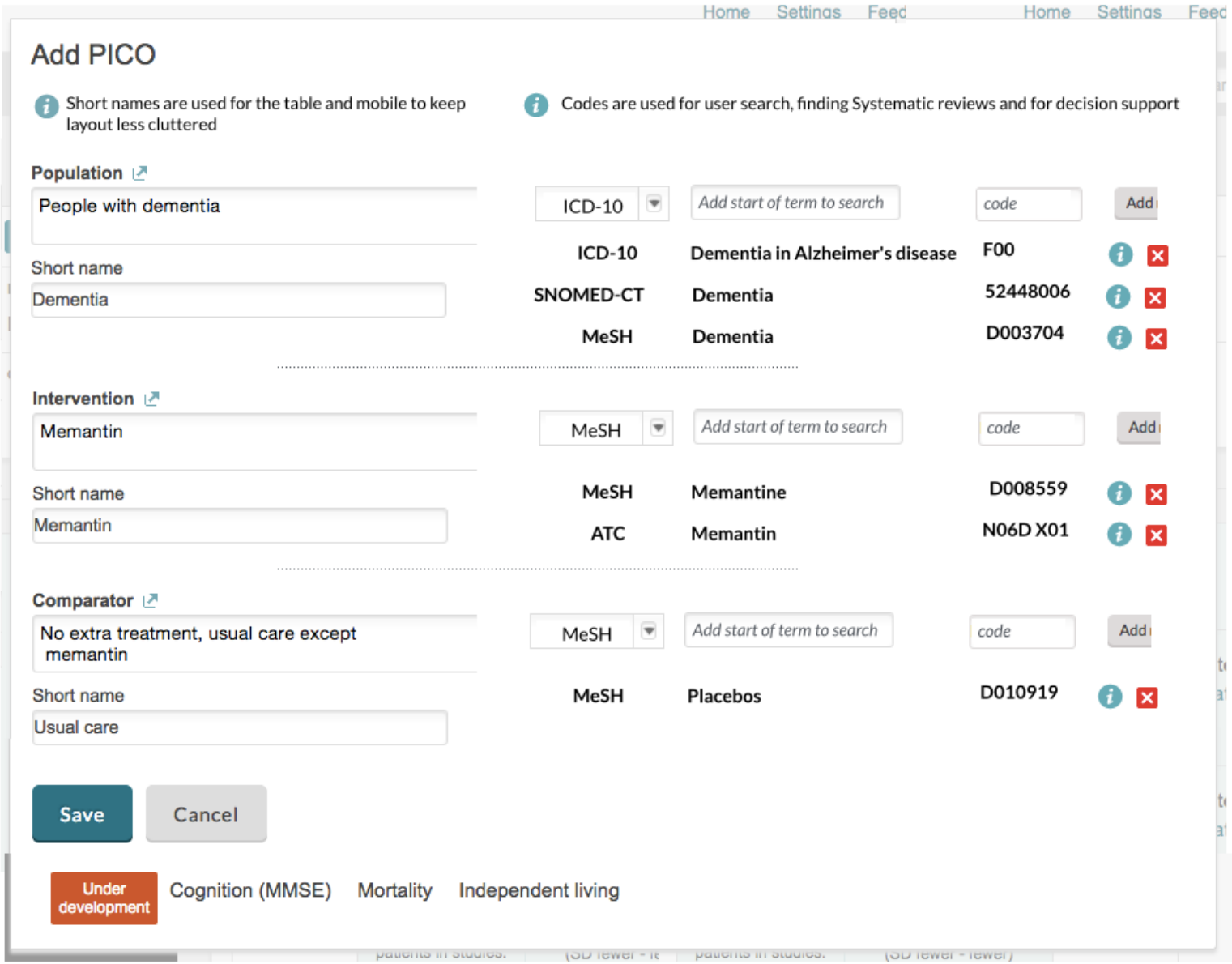
Home Settings Feed
Add PICO
Short names are used for the table and mobile to keep layout less cluttered
Codes are used for user search, finding Systematic reviews and for decision support
Population
People with dementia
Short name
Dementia
ICD-10
Add start of term to search
code
Add
ICD-10 Dementia in Alzheimer's disease F00
SNOMED-CT Dementia 52448006
MeSH Dementia D003704
Intervention
Memantin
Short name
Memantin
MeSH
Add start of term to search
code
Add
MeSH Memantine D008559
ATC Memantin N06D X01
Comparator
No extra treatment, usual care except memantin
Short name
Usual care
MeSH
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Under development
Cognition (MMSE)
Mortality
Independent living

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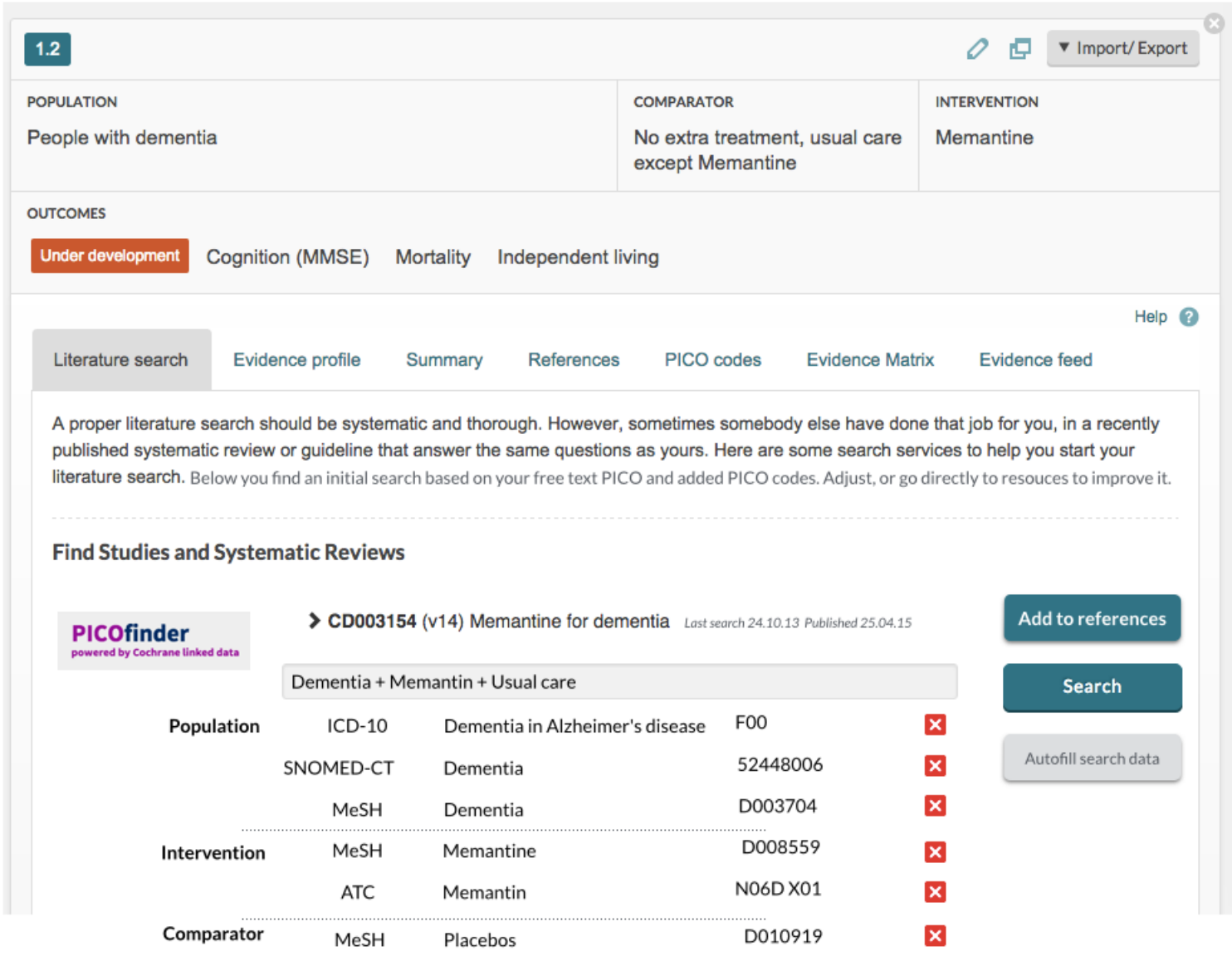
1.2
Import/ Export
POPULATION
People with dementia
COMPARATOR
No extra treatment, usual care except Memantine
INTERVENTION
Memantine
OUTCOMES
Under development
Cognition (MMSE)
Mortality
Independent living
Help
Literature search
Evidence profile
Summary
References
PICO codes
Evidence Matrix
Evidence feed
A proper literature search should be systematic and thorough. However, sometimes somebody else have done that job for you, in a recently published systematic review or guideline that answer the same questions as yours. Here are some search services to help you start your literature search. Below you find an initial search based on your free text PICO and added PICO codes. Adjust, or go directly to resouces to improve it.
Find Studies and Systematic Reviews
PICOfinder
powered by Cochrane linked data
CD003154 (v14) Memantine for dementia
Last search 24.10.13 Published 25.04.15
Add to references
Search
Autofill search data
Dementia + Memantin + Usual care
Population
ICD-10
Dementia in Alzheimer's disease
F00
SNOMED-CT
Dementia
52448006
MeSH
Dementia
D003704
Intervention
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ATC
Memantin
N06D X01
Comparator
MeSH
Placebos
D010919

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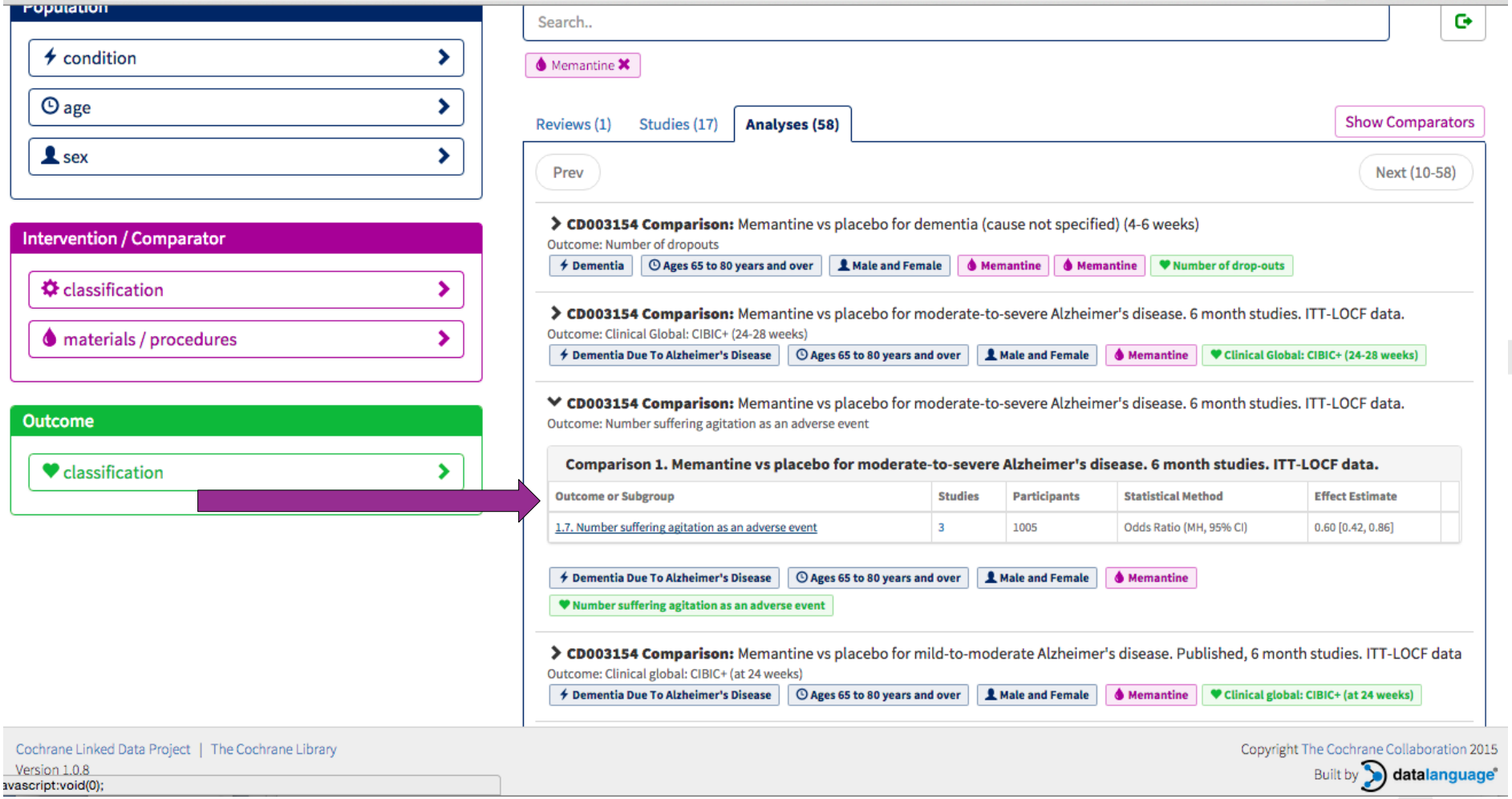
Population
condition
age
sex
Intervention / Comparator
classification
materials / procedures
Outcome
classification
Search..
Memantine
Reviews (1)
Studies (17)
Analyses (58)
Show Comparators
Prev
Next (10-58)
CD003154 Comparison: Memantine vs placebo for dementia (cause not specified) (4-6 weeks)
Outcome: Number of dropouts
Dementia
Ages 65 to 80 years and over
Male and Female
Memantine
Memantine
Number of drop-outs
CD003154 Comparison: Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome: Clinical Global: CIBIC+ (24-28 weeks)
Dementia Due To Alzheimer's Disease
Ages 65 to 80 years and over
Male and Female
Memantine
Clinical Global: CIBIC+ (24-28 weeks)
CD003154 Comparison: Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome: Number suffering agitation as an adverse event
Comparison 1. Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome or Subgroup
Studies
Participants
Statistical Method
Effect Estimate
1.7. Number suffering agitation as an adverse event
3
1005
Odds Ratio (MH, 95% CI)
0.60 [0.42, 0.86]
Dementia Due To Alzheimer's Disease
Ages 65 to 80 years and over
Male and Female
Memantine
Number suffering agitation as an adverse event
CD003154 Comparison: Memantine vs placebo for mild-to-moderate Alzheimer's disease. Published, 6 month studies. ITT-LOCF data
Outcome: Clinical global: CIBIC+ (at 24 weeks)
Dementia Due To Alzheimer's Disease
Ages 65 to 80 years and over
Male and Female
Memantine
Clinical global: CIBIC+ (at 24 weeks)
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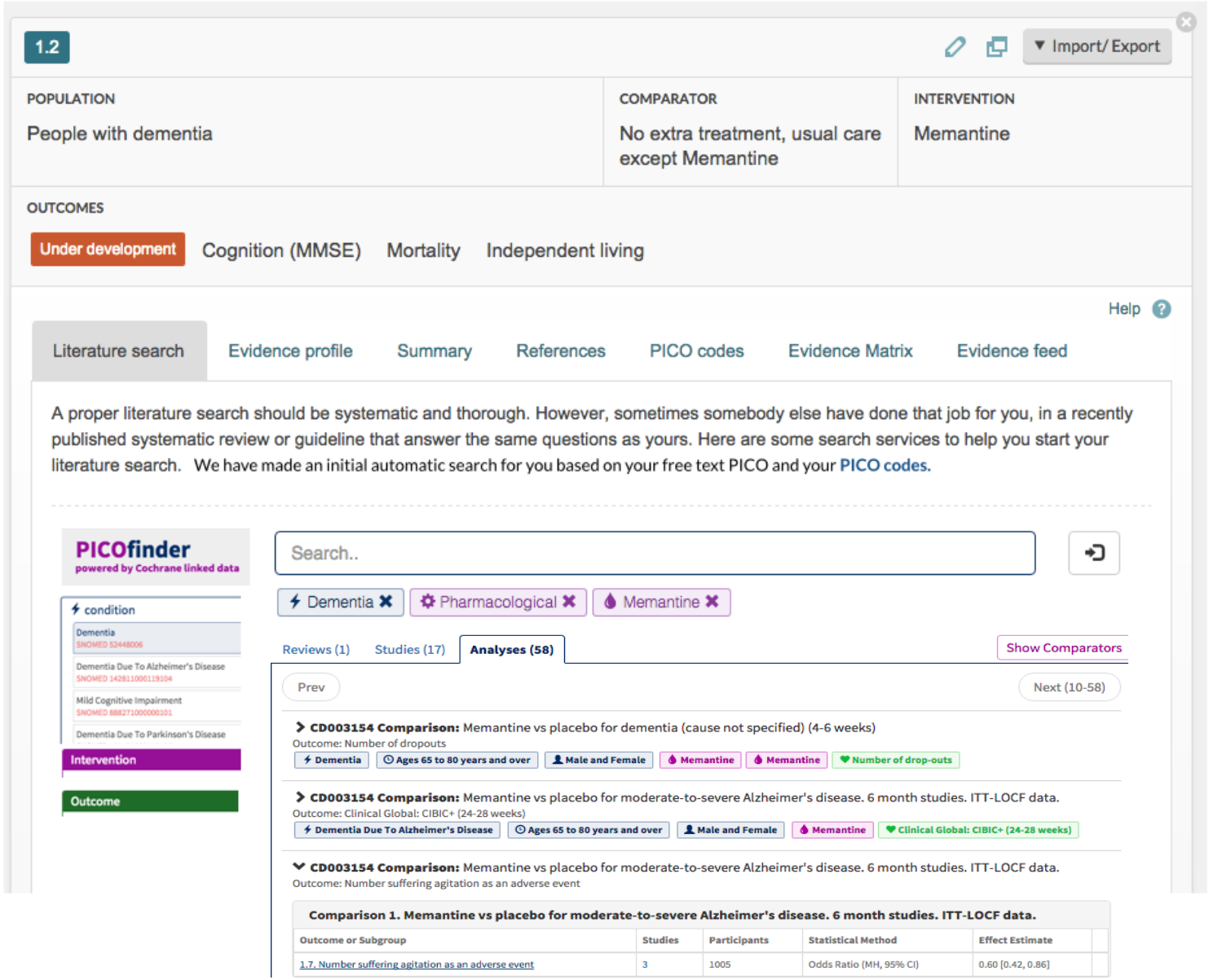
1.2
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People with dementia
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No extra treatment, usual care except Memantine
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Literature search
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Evidence Matrix
Evidence feed
A proper literature search should be systematic and thorough. However, sometimes somebody else have done that job for you, in a recently published systematic review or guideline that answer the same questions as yours. Here are some search services to help you start your literature search. We have made an initial automatic search for you based on your free text PICO and your PICO codes.
PICOfinder
powered by Cochrane linked data
condition
Dementia
SNOMED 52448006
Dementia Due To Alzheimer's Disease
SNOMED 1428110001191O4
Mild Cognitive Impairment
SNOMED 88827100000O101
Dementia Due To Parkinson's Disease
Intervention
Outcome
Search..
Dementia
Pharmacological
Memantine
Reviews (1)
Studies (17)
Analyses (58)
Show Comparators
Prev
Next (10-58)
CD003154 Comparison: Memantine vs placebo for dementia (cause not specified) (4-6 weeks)
Outcome: Number of dropouts
Dementia
Ages 65 to 80 years and over
Male and Female
Memantine
Memantine
Number of drop-outs
CD003154 Comparison: Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome: Clinical Global: CIBIC+ (24-28 weeks)
Dementia Due To Alzheimer's Disease
Ages 65 to 80 years and over
Male and Female
Memantine
Clinical Global: CIBIC+ (24-28 weeks)
CD003154 Comparison: Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome: Number suffering agitation as an adverse event
Comparison 1. Memantine vs placebo for moderate-to-severe Alzheimer's disease. 6 month studies. ITT-LOCF data.
Outcome or Subgroup
Studies
Participants
Statistical Method
Effect Estimate
1.7. Number suffering agitation as an adverse event
3
1005
Odds Ratio (MH, 95% CI)
0.60 [0.42, 0.86]

Dissemination using the Ecosystem

Example: Dentistry guideline

Alpha testing the ecosystem in dentistry

2010

COVER STORY

ADA

Evidence-based clinical recommendations regarding screening for oral squamous cell carcinomas

Michael P. Rethman, DDS, MS; William Carpenter, DDS, MS; Ezra E.W. Cohen, MD; Joel Epstein, DMD, MSD, FRCD(C), FDS RCS(Ed); Caswell A. Evans, DDS, MPH; Catherine M. Flaitz, DDS, MS; Frank J. Graham, DMD; Philippe P. Hujoel, MSD, PhD; John R. Kalmar, DMD, PhD; Wayne M. Koch, MD; Paul M. Lambert, DDS; Mark W. Lingen, DDS, PhD; Bert W. Oettmeier Jr., DDS; Lauren L. Patton, DDS; David Perkins, DMD; Britt C. Reid, DDS, PhD; James J. Sciubba, DMD, PhD; Scott L. Tomar, DMD, DrPH; Alfred D. Wyatt Jr., DMD; Krishna Aravamudhan, BDS, MS; Julie Frantsve-Hawley, RDH, PhD; Jennifer L. Cleveland, DDS, MPH; Daniel M. Meyer, DDS; for the American Dental Association Council on Scientific Affairs Expert Panel on Screening for Oral Squamous Cell Carcinomas

The American Cancer Society (ACS) estimated that there would be 35,720 new cases of cancer of the oral and pharyngeal region in the United States in 2009, with 7,600 deaths from the disease.[1] When focusing specifically on the oral cavity, ACS estimated that in 2009, there would be 23,110 new cases of cancer of the oral cavity (hereafter referred to as "oral cancer") and 5,370 deaths.[1] Nearly 90 percent of these malignancies are squamous cell carcinomas.[2] More than 97 percent of U.S. cases of these cancers occur among adults 35 years and older.[3] Although the incidence rate (IR) of oral and pharyngeal cancers is decreasing overall, the IR of cancers of the tongue, oropharynx and tonsil is increasing.[3] The 2002–2006 age-adjusted (to the 2000 U.S. population) IR of oral and pharyngeal cancers in the United States was 10.3 per 100,000 per year. The age-adjusted IR was more than twice as high among men (15.9) as among women (6.0), as was the mortality rate (men, 4.0; women, 1.5).[3]

ABSTRACT

JADA CE CONTINUING EDUCATION ARTICLE 1

Background. This article presents evidence-based clinical recommendations developed by a panel convened by the American Dental Association Council on Scientific Affairs. This report addresses the potential benefits and potential risks of screening for oral squamous cell carcinomas and the use of adjunctive screening aids to visualize and detect potentially malignant and malignant oral lesions.
Types of Studies Reviewed. The panel members conducted a systematic search of MEDLINE, identifying 332 systematic reviews and 1,499 recent clinical studies. They selected five systematic reviews and four clinical studies to use as a basis for developing recommendations.
Results. The panel concluded that screening by means of visual and tactile examination to detect potentially malignant and malignant lesions may result in detection of oral cancers at early stages of development, but that there is insufficient evidence to determine if screening alters disease-specific mortality in asymptomatic people seeking dental care.
Clinical Implications. The panel suggested that clinicians remain alert for signs of potentially malignant lesions or early-stage cancers while performing routine visual and tactile examinations in all patients, but particularly in those who use tobacco or who consume alcohol heavily. Additional research regarding oral cancer screening and the use of adjuncts is needed.
Key Words. American Dental Association (ADA); biopsy; brush; cancer; carcinoma; squamous cell; evidence-based dentistry; mouth neoplasms; oral cancer; practice guidelines.
JADA 2010;141(5):509-520.

2015

Cochrane Library

Cochrane Database of Systematic Reviews

Diagnostic tests for oral cancer and potentially malignant disorders in patients presenting with clinically evident lesions (Review)

Macey R, Walsh T, Brocklehurst P, Kerr AR, Liu JLY, Lingen MW, Ogden GR, Warnakulasuriya S, Scully C

2013

Cochrane Library

Cochrane Database of Systematic Reviews

Clinical assessment to screen for the detection of oral cavity cancer and potentially malignant disorders in apparently healthy adults (Review)

Walsh T, Liu JLY, Brocklehurst P, Glenny AM, Lingen M, Kerr AR, Ogden G, Warnakulasuriya S, Scully C

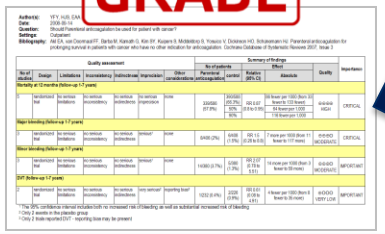
Alpha testing the ecosystem in dentistry

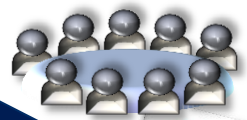
Early detection OC (2010)

PICO

Update

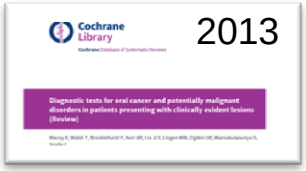
GRADE

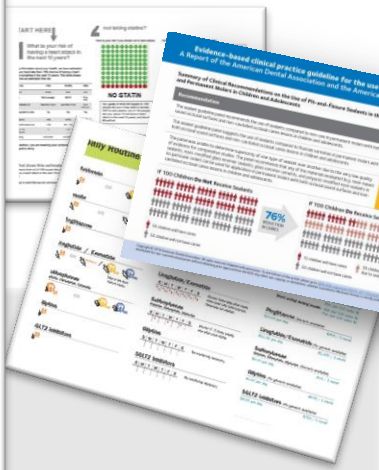




Recommendations

3 months!!!





Lessons after the experience

1. Reduction in time from two years to three months

2. Reduction in resources

3. Additional guidance on the analysis

4. Provided a framework to summarize the evidence

1. Need to update the searches

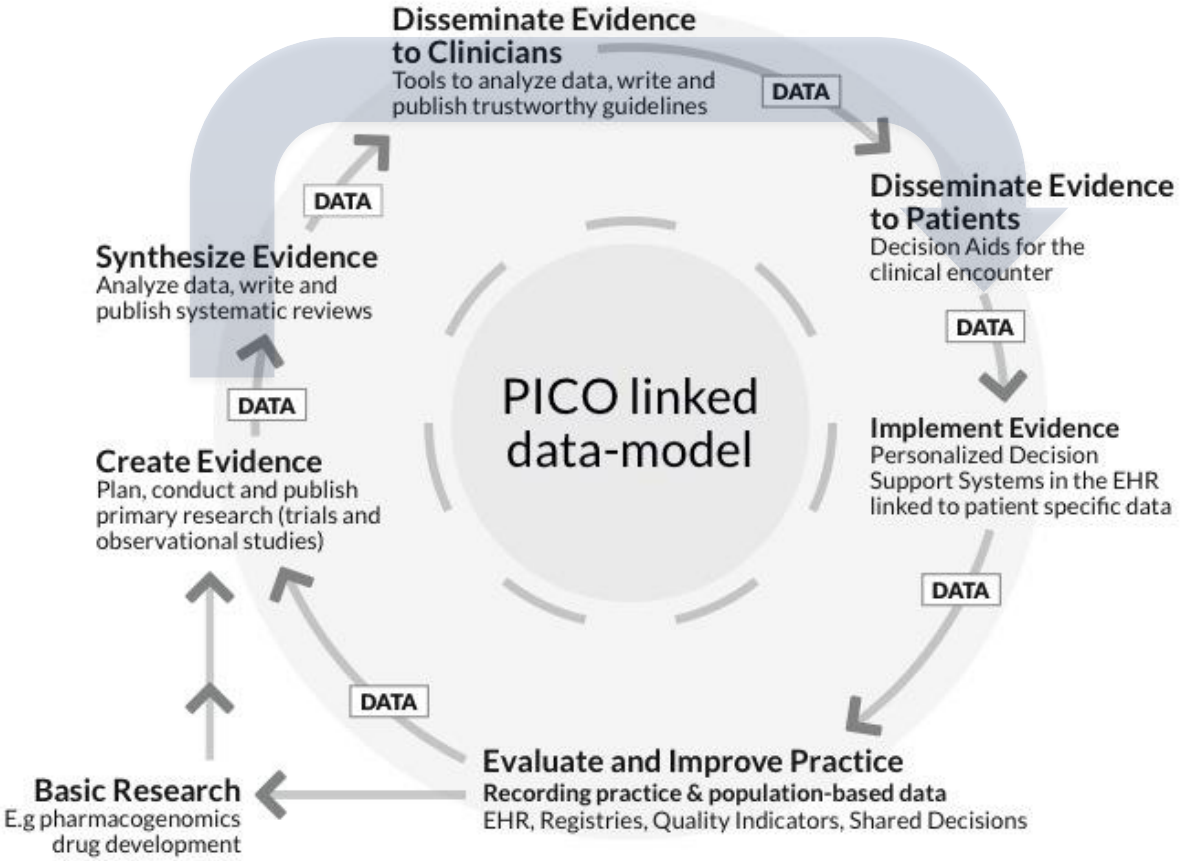
2. Context dependence of the review and the guideline

3. The panel needed specific comparisons (reorganization of the data)

4. Many methodological decisions needed to be reviewed by the ADA team

Challenges of operating in the ecosystem

1. Poor quality of clinical practice guidelines and SRs
2. Lack of channels to share data
3. Lack of communication across institutions
4. Methodologies not standardized
5. Lack of a common platform/software
6. Poor understanding of shared decision-



Challenges of operating in the ecosystem

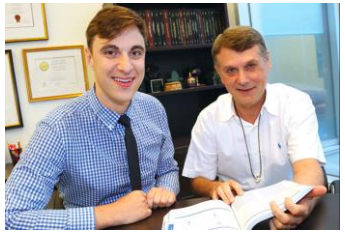
1. Lack of implementation of decision support systems in the EDR
2. How to measure compliance with recommendations and outcomes
3. Lack of a common and digital platforms to share data
4. Lack of connection between “real-data in clinical practice” and basic research

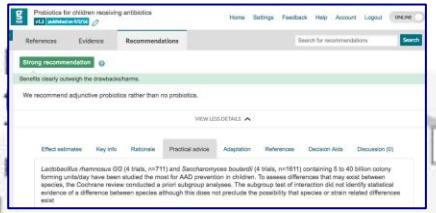
Closing the loop in the ecosystem

Example: RapidRecs

Digital and Trustworthy Evidence Ecosystem

From RapidRecs pilot to closing the loop in Finland and Belgium





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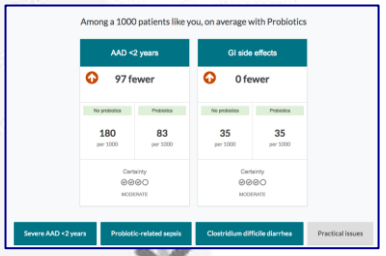

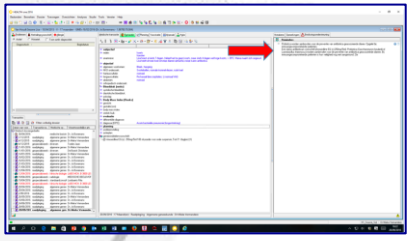

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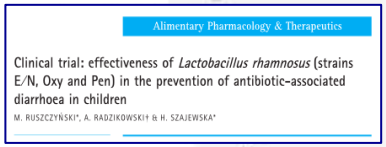


DATA

PICO linked data-model

23 trials
n=4000

Offer probiotics

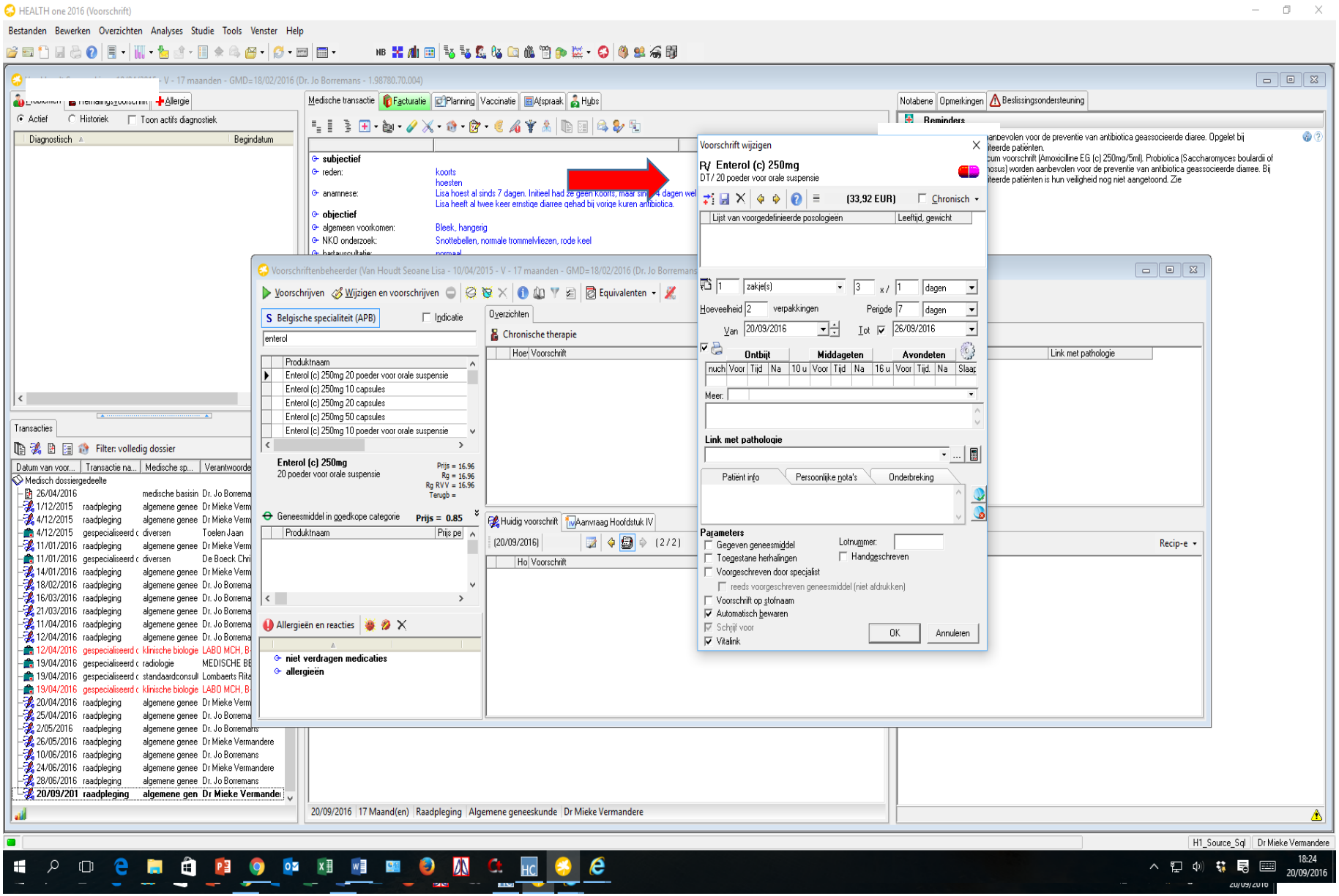
Basic Research
E.g pharmacogenomics drug development

Evaluate and Improve Practice
Recording practice & population-based data
EHR, Registries, Quality Indicators, Shared Decisions

Baseline:
3 of 100 offered probiotics

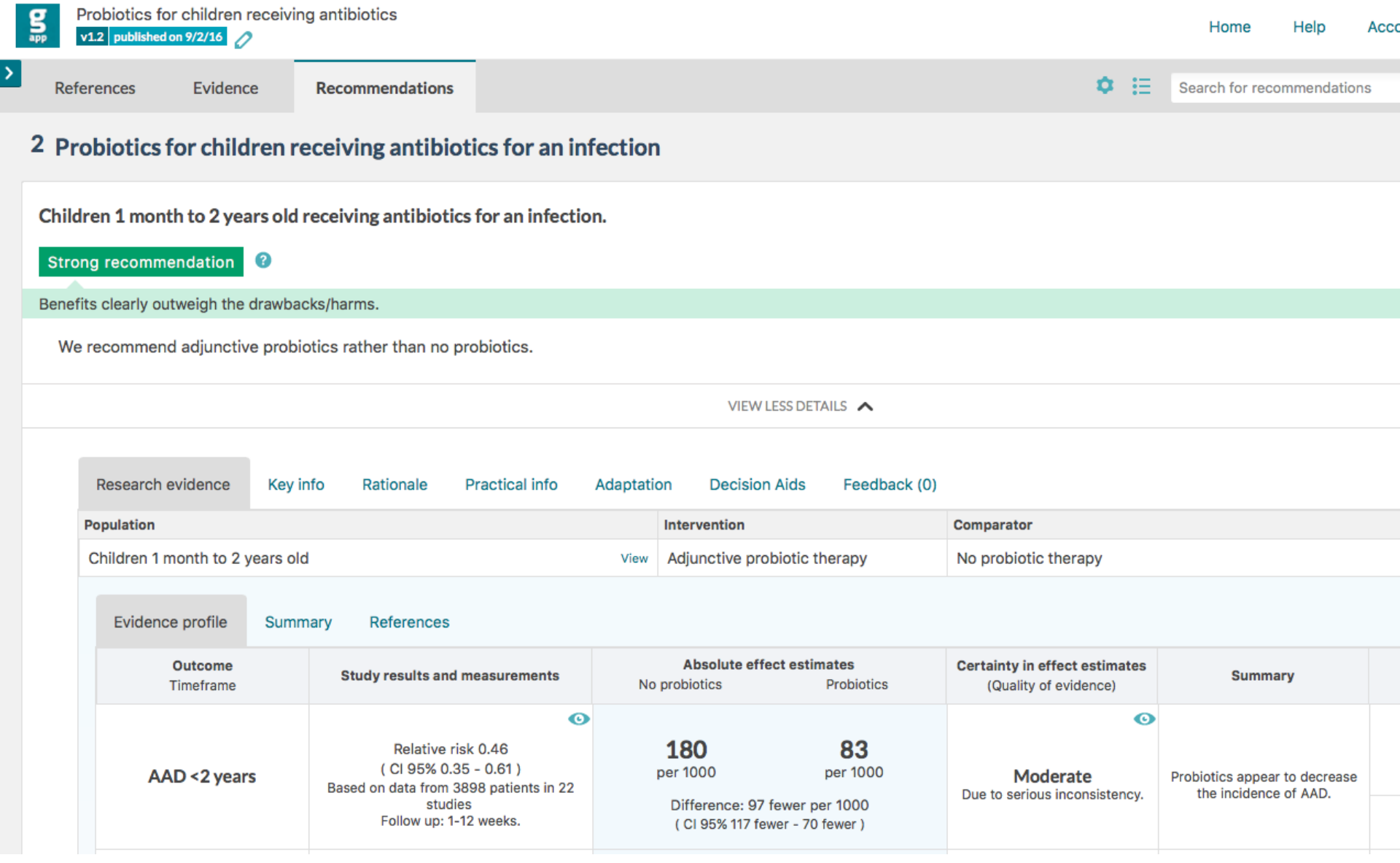
To practice: 17-month old ”Stella” with pneumonia is prescribed antibiotics in Belgian primary care

Doctor prescribes antibiotics in the EHR….



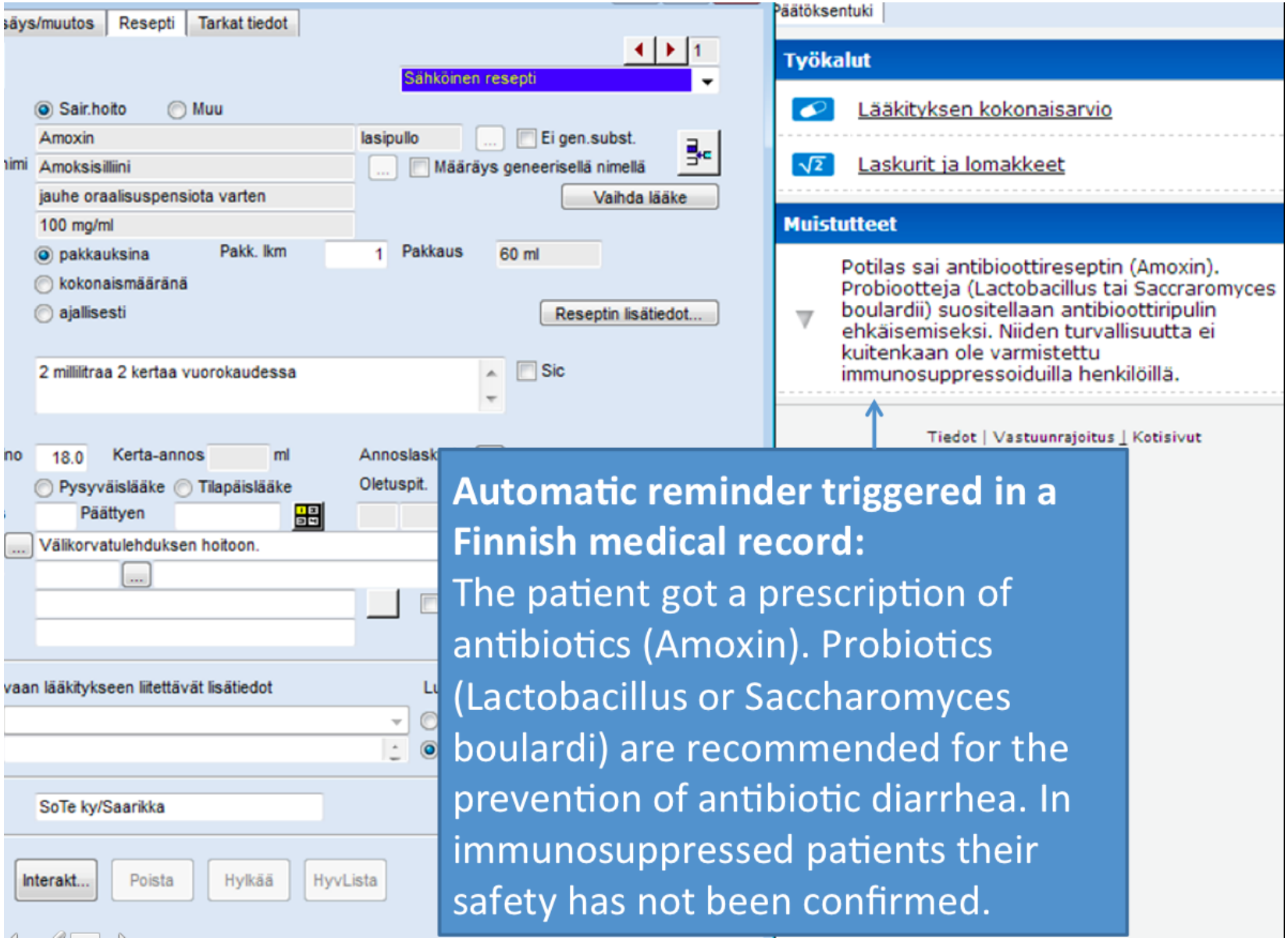
needed

Recommendation - evidence summary - all the way to the meta-analysis?



Acting on – and implementing - the evidence together

And the same goes for Finland…



Automatic reminder triggered in a Finnish medical record:

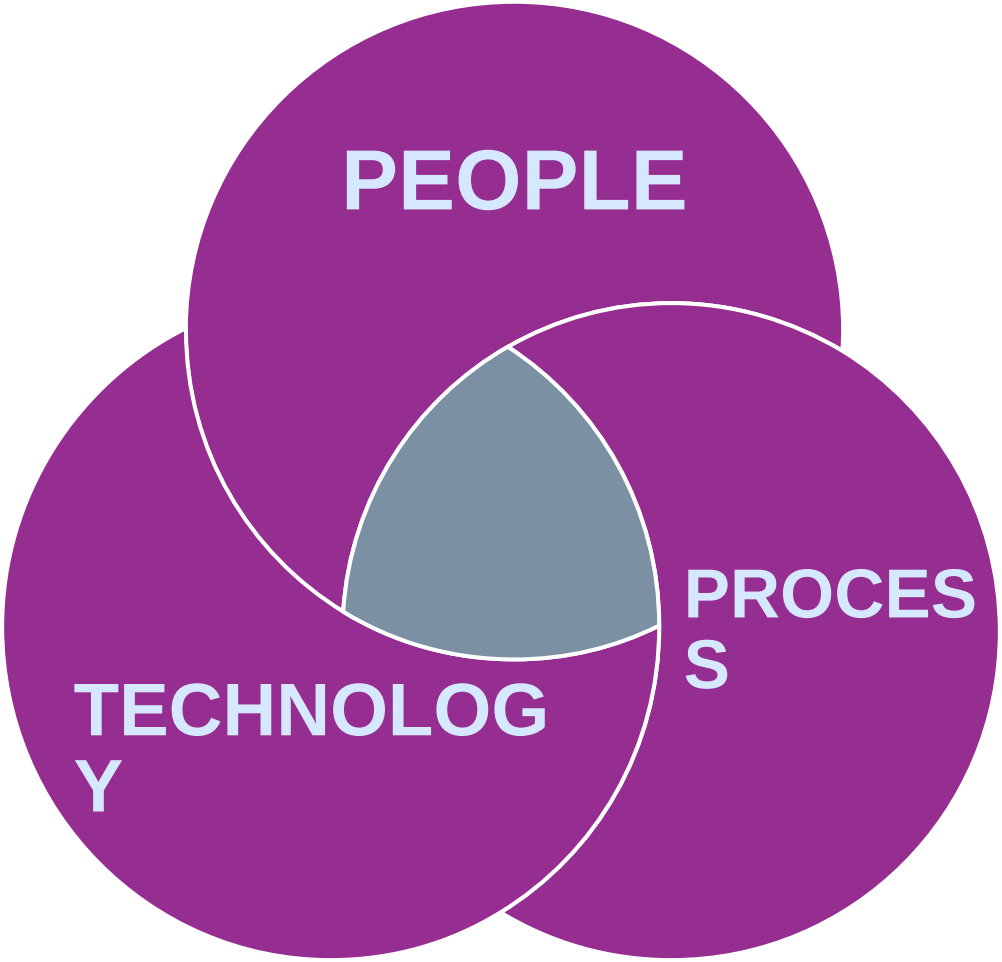
The patient got a prescription of antibiotics (Amoxin). Probiotics (Lactobacillus or Saccharomyces boulardi) are recommended for the prevention of antibiotic diarrhea. In immunosuppressed patients their safety has not been confirmed.

Cochrane

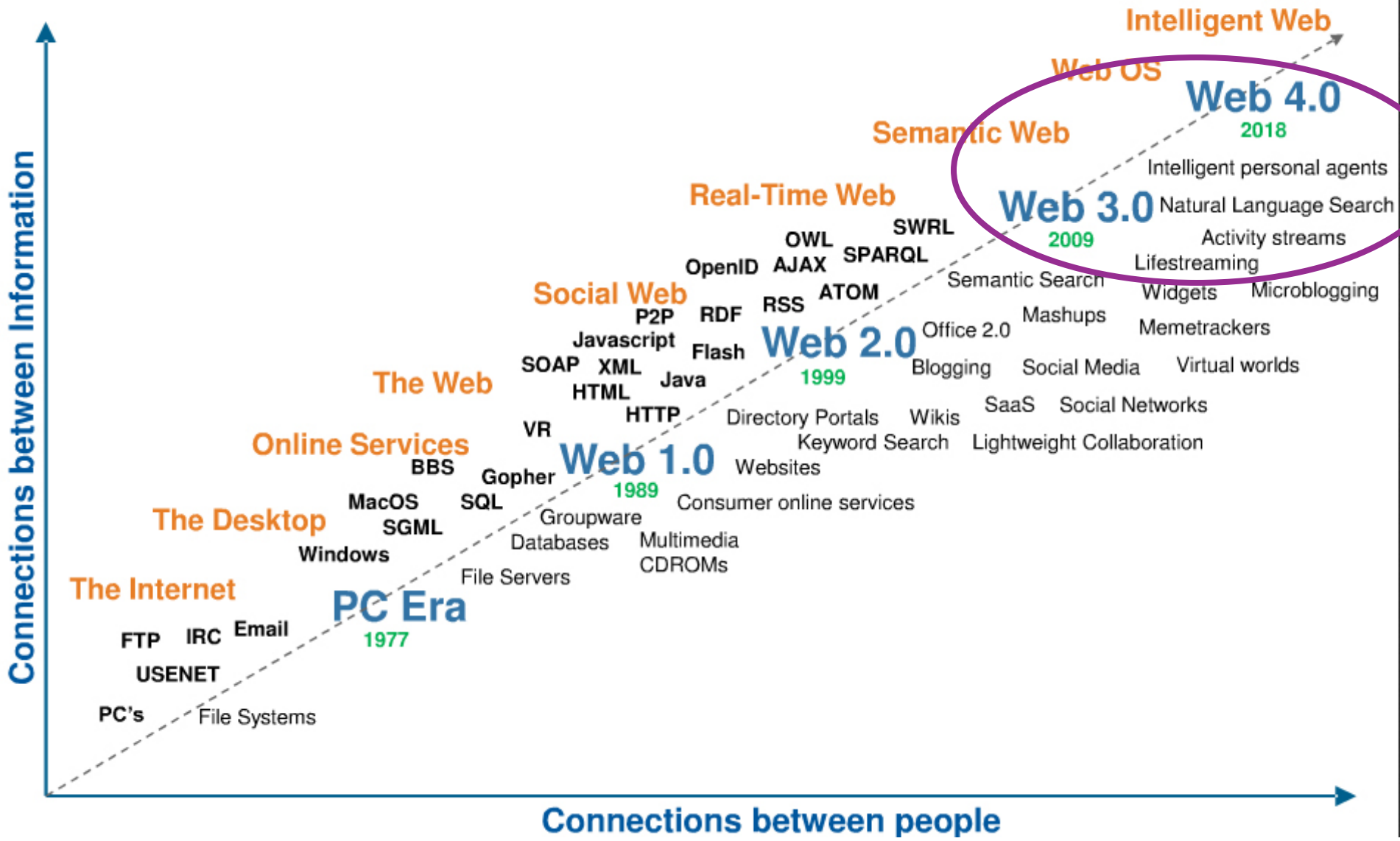
Summary

- The “Digital and Trustworthy Evidence Ecosystem” is emerging:
  - New and improved methods and tools are available
  - Digitally structured, linked data with sharing across platforms and organizations is now possible
- People and process need to evolve to leverage the new "Ecosystem” including:
  - Promote a culture of sharing
  - Adapt to standards and structuring of data
  - Common understanding of research methods
  - Incorporation of evidence from “diverse” sources

Cochrane



The Intelligence is in the Connections



Credit: Nova Spivack

Cochrane

www.cochrane.de/de/news/cochrane-deutschland-stiftung-nun-offiziell

Cochrane Deutschland Stiftung nun offiziell

Am 26. Oktober 2017 wurde die unabhängige und gemeinnützige Cochrane Deutschland Stiftung (CDS) mit Sitz in Freiburg offiziell gegründet. Die Stiftung wird ab sofort vom Bundesministerium für Gesundheit mit bis zu einer Million Euro pro Jahr gefördert, um die Aktivitäten von Cochrane in Deutschland dauerhaft realisieren zu können.

Am 9. November äußerte sich der Bundesgesundheitsminister Hermann Gröhe in einer offiziellen Erklärung wie folgt:

"Wir brauchen unabhängige Forschung, die den Stand der Erkenntnisse immer wieder wissenschaftlich auf den Prüfstand stellt und uns so verlässliche Informationen über die besten Behandlungsmethoden liefert. Deshalb habe ich mich dafür eingesetzt, dass der Bund die Arbeit von Cochrane in Deutschland mit der Cochrane Deutschland Stiftung endlich nachhaltig fördern kann."

Damit endet eine zwanzigjährige Phase der projektbasierten Finanzierung von Cochrane in Deutschland. Die Stiftung kann sich nun angesichts stabiler Finanzierung und planbarer Ressourcen satzungsgemäß nachhaltig für die Generierung und Implementierung von Wissen aus Cochrane Evidenz für alle relevanten Nutzergruppen einsetzen,

Thank you

Attribution: Scott Marsland -