Cochrane and systematic reviews

Jenny McCleery
Joint Co-ordinating editor
Cochrane dementia and cognitive improvement group
What is a systematic review?

Archie Cochrane (1909-1988)

In medicine, we don’t have evidence for most of what we do

Some things we do are probably harmful
What is a systematic review?

Archie Cochrane (1909-1988)

In medicine, we don’t have evidence for most of what we do

Some things we do are probably harmful

We need “a critical summary, adapted periodically, of all … relevant, randomised controlled trials”
Started in perinatal medicine in 1980s

1. Computerised register of RCTs

2. Methods to combine data from different trials to create overall estimates of effects

3. An international collaboration to prepare and maintain the “critical summaries” (systematic reviews) of the RCTs in the register
Writing (or reading) a systematic review – start with a question
What do I want to know?

Should I be offering aducanumab to my patients with dementia?
Structure the question: PICO for interventions

**P** – Participants (Patients with dementia? With dementia due to AD? With mild dementia due to AD? With mild dementia due to AD and positive amyloid markers?)

**I** – Intervention (Low or high dose aducanumab?)

**C** – Comparison (Placebo? Placebo and a cholinesterase inhibitor?)

**O** – Outcomes (Cognition? Function? Cognition and function combined? Which scales? Which harms?)
Process of a systematic review

- Literature search
- Quality assessment
- Data synthesis
Literature search

On 27 Jan 2020, PubMed included >30 million citations & abstracts

In the 10 years to 31 Dec 2019, an average of nearly 1 million new records were added to PubMed each year

Cochrane’s Central Register of Controlled Trials is a highly concentrated source of reports of RCTs

Cochrane is pioneering the use of ‘crowd’ methods and machine-learning to identify RCTs
Quality assessment
An essential part of a good systematic review

Cochrane Risk of Bias tool – risk of bias in individual RCTs
- Selection bias (random sequence generation, allocation concealment)
- Performance bias (blinding of participants and study personnel)
- Detection bias (blinding of outcome assessors)
- Attrition bias (incomplete outcome data)
- Reporting bias (selective outcome reporting)
- Other biases

Different quality assessment tools for other study types (e.g. QUADAS-2 for diagnostic test accuracy studies to assess risk of bias and external validity)
Risk of bias assessment:
Pharmacotherapies for sleep disturbances in dementia
Meta-analysis is a common but not essential part of a systematic review.
Interpreting results

*How confident can I be that this review gives me the right answer to my question?*

GRADE – overall certainty of the evidence related to each outcome

- Risk of bias in included studies
- Imprecision of results
- Inconsistency between studies
- Indirectness in relation to question
- Publication bias

Critical for interpretation of results
Interpreting results

• Endovascular thrombectomy for acute ischaemic stroke:

“Treatment increased the chance of achieving a good functional outcome, defined as a modified Rankin Scale score of 0 to 2: risk ratio (RR) 1.50 (95% confidence interval (CI) 1.37 to 1.63; 3715 participants, 18 RCTs; high-certainty evidence).”


• Discontinuing cholinesterase inhibitors:

“Compared to continuing cholinesterase inhibitors, discontinuing treatment may be associated with worse cognitive function in the short term (standardised mean difference (SMD) -0.42, 95% confidence interval (CI) -0.64 to -0.21; 4 studies; low certainty), but the effect in the medium term is very uncertain (SMD -0.40, 95% CI -0.87 to 0.07; 3 studies; very low certainty).

A warning ........
Annual publications between 1991 and 2014 increased 2,728% for systematic reviews and 2,635% for meta-analyses versus only 153% for all PubMed-indexed items. Currently, probably more systematic reviews of trials than new randomized trials are published annually.

Most topics addressed by meta-analyses of randomized trials have overlapping, redundant meta-analyses ….. Some fields produce massive numbers of meta-analyses; for example, 185 meta-analyses of antidepressants for depression were published between 2007 and 2014. These meta-analyses are often produced either by industry employees or by authors with industry ties and results are aligned with sponsor interests.

Many … meta-analyses have serious flaws. Of the remaining, most have weak or insufficient evidence to inform decision making. Few systematic reviews and meta-analyses are both non-misleading and useful.

Conclusions: The production of systematic reviews and meta-analyses has reached epidemic proportions. Possibly, the large majority of produced systematic reviews and meta-analyses are unnecessary, misleading, and/or conflicted.
Cochrane systematic reviews and meta-analyses

➢ Conflicted?
No, robust conflict of interest policy.

➢ Misleading?
No, we hope not, rigorous methods and quality control.

➢ Unnecessary?
Maybe some. Increasing emphasis on prioritisation.
Cochrane Dementia
Greatest Hits
(some of them)

Terry Quinn,
Co-ordinating Editor Cochrane Dementia
@CochraneDCIG
@DrTerryQuinn
COCHRANE
7,500 reviews
14 languages
53 review groups
30,000 volunteers
7.89 CDSR Impact factor 2019
Figure 3: Average number of Full Text accesses received by Cochrane Review Groups in 2019

Average = 523
Figure 5: Average number of guideline cites to reviews (published anytime) for each Cochrane Review Group

Average = 3 guideline cites per article
### Table 9: Top 10 Altmetric scores for reviews published in 2019

<table>
<thead>
<tr>
<th>Score</th>
<th>Review title</th>
<th>CD Number</th>
<th>Publication date</th>
<th>CRG</th>
<th>CCA number</th>
<th>B</th>
<th>T</th>
<th>N</th>
<th>F</th>
<th>W</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>774</td>
<td>Exercise for preventing falls in older people living in the community</td>
<td>CD012424.pub2</td>
<td>Jan-2019</td>
<td>Bone, Joint and Muscle Trauma Group</td>
<td>2469</td>
<td>6</td>
<td>949</td>
<td>29</td>
<td>17</td>
<td>0</td>
<td>355</td>
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<tr>
<td>641</td>
<td>General health checks in adults for reducing morbidity and mortality from disease</td>
<td>CD009009.pub3</td>
<td>Jan-2019</td>
<td>Effective Practice and Organisation of Care Group</td>
<td>1598</td>
<td>4</td>
<td>1058</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>105</td>
</tr>
<tr>
<td>420</td>
<td>Constraint-induced movement therapy in children with unilateral cerebral palsy</td>
<td>CD004149.pub3</td>
<td>Apr-2019</td>
<td>Developmental, Psychosocial and Learning Problems Group</td>
<td>-</td>
<td>0</td>
<td>99</td>
<td>44</td>
<td>1</td>
<td>1</td>
<td>141</td>
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<tr>
<td>355</td>
<td>Environmental interventions to reduce the consumption of sugar-sweetened beverages and their effects on health</td>
<td>CD012292.pub2</td>
<td>Jun-2019</td>
<td>Public Health Group</td>
<td>-</td>
<td>4</td>
<td>246</td>
<td>26</td>
<td>10</td>
<td>1</td>
<td>269</td>
</tr>
<tr>
<td>307</td>
<td>Different doses, durations and modes of delivery of nicotine replacement therapy for smoking cessation</td>
<td>CD013308</td>
<td>Apr-2019</td>
<td>Tobacco Addiction Group</td>
<td>2526</td>
<td>8</td>
<td>225</td>
<td>28</td>
<td>8</td>
<td>2</td>
<td>91</td>
</tr>
<tr>
<td>304</td>
<td>Incentives for smoking cessation</td>
<td>CD004307.pub6</td>
<td>Jul-2019</td>
<td>Tobacco Addiction Group</td>
<td>1533</td>
<td>3</td>
<td>165</td>
<td>30</td>
<td>2</td>
<td>1</td>
<td>194</td>
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<tr>
<td>290</td>
<td>Paracetamol versus placebo for knee and hip osteoarthritis</td>
<td>CD013273</td>
<td>Feb-2019</td>
<td>Musculoskeletal Group</td>
<td>2520</td>
<td>2</td>
<td>467</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>110</td>
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<tr>
<td>224</td>
<td>Mediterranean-style diet for the primary and secondary prevention of cardiovascular disease</td>
<td>CD009825.pub3</td>
<td>Mar-2019</td>
<td>Heart Group</td>
<td>2536</td>
<td>4</td>
<td>347</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>224</td>
</tr>
<tr>
<td>211</td>
<td>Memantine for dementia</td>
<td>CD003154.pub6</td>
<td>Mar-2019</td>
<td>Dementia and Cognitive Improvement Group</td>
<td>2645</td>
<td>0</td>
<td>367</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>403</td>
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<tr>
<td>147</td>
<td>C-reactive protein for diagnosing late-onset infection in newborn infants</td>
<td>CD012126.pub2</td>
<td>Jan-2019</td>
<td>Neonatal Group</td>
<td>-</td>
<td>1</td>
<td>291</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>64</td>
</tr>
</tbody>
</table>

B=Bloggers  T=Tweeters  N=News outlets  F=Facebook mentions  W=Wikipedia pages  M=Mendeley readers
Reviews of drugs
Tacrine for Alzheimer's disease (Review)

Qizilbash N, Birks J, López Arrieta J, Lewington S, Szeto S

Qizilbash N, Birks J, López Arrieta J, Lewington S, Szeto S.
Tacrine for Alzheimer's disease.
DOI: 10.1002/14651858.CD000202.
Objectives: To determine the clinical efficacy of tacrine for the symptoms of Alzheimer’s disease.

Search strategy: The Cochrane Dementia Group Register of Clinical Trials was searched using the terms ‘tacrine’, ‘tetrahydroaminoacridine’ and ‘THA’ (see the Group’s search strategy for full details).

Selection criteria: All unconfounded, double-blind, randomized trials in which treatment with tacrine was administered for more than a day and compared to placebo in patients with dementia of the Alzheimer’s type.

Data collection and analysis: Data were extracted independently by two reviewers, pooled if appropriate and possible, and the pooled odds ratios (95%CI) or the average differences (95%CI) were estimated. Where possible, intention-to-treat data were used.

Main results: This review produced no clear results. The results were compatible with tacrine producing improvement, no change or even harm for those with Alzheimer’s disease. It was not possible to use many of the published results in a combined analysis. For measures of overall clinical improvement, the intention-to-treat analyses failed to detect any difference between tacrine and placebo (OR 0.87; 95%CI 0.61 - 1.23). Behavioural disturbance, as measured by the Alzheimer’s Disease Assessment Scale-nocognitive, failed to detect any difference between tacrine and placebo (SMD -0.04; 95%CI -0.52 - 0.43). For cognition function, the effect of tacrine was not statistically significantly different from placebo for the MiniMental State Examination score (0-30: high = good) (SMD 0.14; 95%CI -0.02 - 0.30) and was barely statistically significantly in favour of treatment for the Alzheimer’s Disease Assessment Scale-cognitive scale (SMD -0.22; 95%CI -0.32 - -0.13). Adverse events were not reported in a systematic way in the different trials, making formal comparison difficult. Raised serum liver enzymes was the major reason for withdrawal. The odds ratio for withdrawal due to an adverse event was significantly different from one: the control group experienced fewer events (OR 5.7; 95%CI 4.1-7.9). Gastrointestinal side effects (diarrhoea, anorexia, dyspepsia and abdominal pain) were the other major cause of adverse events and for withdrawal, and the odds ratio for withdrawal was also significantly different from one in favour of the control group (OR 3.8; 95%CI 2.8-5.1). No deaths were reported in any of the studies during the trial period, up to six months.
Memantine for dementia (Review)

McShane R, Westby MJ, Roberts E, Minakaran N, Schneider L, Farrimond LE, Maayan N, Ware J, Debarros J
## SUMMARY OF FINDINGS

Summary of findings for the main comparison. Moderate-to-severe AD, six to seven months

Memantine 20 mg or equivalent compared to placebo for moderate-to-severe Alzheimer's disease (AD) 24- to 30-week data. OC

**Population:** Alzheimer's disease (AD), moderate-to-severe  
**Intervention:** memantine 20 mg or equivalent  
**Comparison:** placebo

<table>
<thead>
<tr>
<th>Continuous outcomes</th>
<th>Score with placebo (median)</th>
<th>Mean improvement in change score between memantine and placebo</th>
<th>SMD (95% CI) meta-analysis findings</th>
<th>No of participants (studies)</th>
<th>Certainty of the evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Clinical Global (CIBIC+) 7-point Likert scale | Median CIBIC+ score was 4.60  
(i.e. deterioration with time) | MD: 0.21 (0.14 to 0.30) | -0.20  
(-0.28 to -0.13) | 2797  
(10 RCTs) | ⚫⚫⚫⚫ HIGH | SMD as a negative outcome  
(Analysis 1.1)  
Converted to CIBIC+ scale; median SD(pooled) = 1.06. |
| Cognitive Function (SIB) 100-point scale | Median SIB score at baseline: 75.2  
Median change from baseline (positive scale): -2.4  
(i.e. deterioration with time) | MD: 3.11 (2.42 to 3.92) | -0.27  
(-0.34 to -0.21) | 3337  
(13 RCTs) | ⚫⚫⚫⚫ HIGH | SMD as a negative outcome (Analysis 1.2).  
Converted to SIB scale (and scale direction inverted); median SD (pooled) = 11.53. |
| Functional performance on activities of daily living: AD-  
CS-ADL19 54-point scale | Median ADCS-ADL19 score at baseline: 33.2  
Median change from baseline (positive scale): -2.8  
(i.e. deterioration with time) | MD: 1.09 (0.62 to 1.64) | -0.16  
(-0.24 to -0.09) | 2687  
(11 RCTs) | ⚫⚫⚫⚫ HIGH  
(Analysis 1.3).  
Converted to ADCS-ADL19 scale (and scale direction inverted); median SD(pooled) = 5.84. |
Memantine as a treatment for dementia

Published:
20 March 2019

Authors:
McShane R, Westby MJ, Roberts E, Minakaran N, Schneider L, Farrimond LE, Maayan N, Ware J, Debarros J

Primary Review Group:
Dementia and Cognitive Improvement Group

Review question

We reviewed the evidence on memantine, which is one of the main drugs for treating people with dementia. We wanted to find out if memantine can slow down the course of dementia and if it is harmful in any way. We also wanted to know if adding memantine to other dementia drugs gives an extra effect.

Background

The commonest type of dementia is Alzheimer's disease (AD), followed by vascular dementia. About one or two people in 100 have AD at age 65, and this rate doubles every five years. Dementia involves loss of memory, difficulty thinking and often changes in mood and behaviour.
Cholinesterase inhibitors for vascular dementia and other vascular cognitive impairments: a network meta-analysis (Review)

Battle CE, Abdul-Rahim AH, Shenkin SD, Hewitt J, Quinn TJ
Figure 5. Forest plot (Bayesian model) network meta-analysis results: Cognition.
Withdrawal versus continuation of long-term antipsychotic drug use for behavioural and psychological symptoms in older people with dementia (Review)

Van Leeuwen E, Petrovic M, van Driel ML, De Sutter AIM, Vander Stichele R, Declercq T, Christiaens T

Antihypertensive withdrawal for the prevention of cognitive decline (Review)

Jongstra S, Harrison JK, Quinn TJ, Richard E
Non-drug Reviews
Aromatherapy for dementia (Review)

Ball EL, Owen-Booth B, Gray A, Shenkin SD, Hewitt J, McCleery J
## Summary of findings 1. Aromatherapy versus control (placebo aromatherapy / no intervention) for dementia

**Aromatherapy versus control (placebo aromatherapy / no intervention) for dementia**

**Patient or population:** Dementia  
**Setting:** Care facilities or hospital wards  
**Intervention:** Aromatherapy  
**Comparison:** Control (placebo aromatherapy / no intervention)

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Impact</th>
<th>№ of participants (studies)</th>
<th>Certainty of the evidence (GRADE)</th>
</tr>
</thead>
</table>
| Agitation assessed with: CMAI, PAS, individual study assessment tools follow up: range 1 to 12 weeks | 5 trials provided either no usable data or data in which our confidence was very low. Of the remaining 5 trials, 4 reported no statistically significant effect on agitation and 1 reported a significant benefit. | 593 (10 RCTs) | ☹️☹️☹️  
VERY LOW 1 2 3 4 |
| Overall behavioural and psychological symptoms assessed with: NPI follow up: range 2 to 12 weeks | 3 trials provided either no usable data or data in which our confidence was very low. Of the remaining 5 trials, 4 trials reported a significant reduction in overall behavioural and psychological symptoms and 1 trial did not find a significant effect of aromatherapy. | 346 (8 RCTs) | ☹️☹️☹️  
VERY LOW 1 3 4 5 |
| Adverse effects follow up: range 1 to 12 weeks | Adverse effects were reported in only 4 of 12 trials. None reported any adverse effects. | 206 (4 RCTs) | ☹️☹️☹️  
VERY LOW 3 4 |
| Quality of life assessed with: Blau Quality of Life, Dementia Care Mapping follow up: range 4 to 12 weeks | 1 trial reported a significant beneficial effect of aromatherapy on quality of life. The other trial did not find any significant effect of aromatherapy on quality of life. | 134 (2 RCTs) | ☹️☹️☹️  
VERY LOW 1 3 4 6 7 |
| Mood assessed with: CSDD-C, PGCARS follow up: range 1 to 9 weeks | 1 trial reported no significant effect of aromatherapy on mood. The other trial reported a statistically significant beneficial effect of aromatherapy on depressive symptoms. | 120 (2 RCTs) | ☹️☹️☹️  
VERY LOW 1 3 4 8 |
| Sleep | 1 trial provided no useable data. | 21 (1 RCT) | - |
| Activities of daily living assessed with: Barthel Index for Activities of Daily Living, follow up: 12 weeks | 1 trial provided no useable data. 1 trial found no significant effect of aromatherapy on activities of daily living. | 91 (2 RCTs) | ☹️☹️☹️  
VERY LOW 3 4 10 |
Interventions for preventing delirium in hospitalised non-ICU patients (Review)

Siddiqi N, Harrison JK, Clegg A, Teale EA, Young J, Taylor J, Simpkins SA
## SUMMARY OF FINDINGS

Summary of findings for the main comparison. A multi-component delirium prevention intervention compared to usual care for hospitalised non-ICU patients

### Multi-component delirium prevention intervention compared to usual care for hospitalised non-ICU patients

**Intervention:** A multi-component delirium prevention intervention versus usual care

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Illustrative comparative risks* (95% CI)</th>
<th>Relative effect (95% CI)</th>
<th>No of Participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incidence of delirium</strong></td>
<td>Assumed risk: 209 per 1000 2</td>
<td>RR 0.69 (0.59 to 0.81)</td>
<td>1950 (7 studies)</td>
<td>moderate</td>
<td>4,5,6</td>
</tr>
<tr>
<td><strong>validated instruments</strong></td>
<td>Corresponding risk: 144 per 1000 (123 to 172)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duration of delirium</strong></td>
<td>The mean duration of delirium in the control groups ranged from 2.1 to 10.2 days</td>
<td>The mean duration of delirium in the intervention groups was <strong>1.16 days shorter</strong> (2.96 shorter to 0.64 longer)</td>
<td>244 (4 studies)</td>
<td>very low</td>
<td>4,6,7,8,9</td>
</tr>
<tr>
<td><strong>(days)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Severity of delirium</strong></td>
<td>The standardised mean severity of delirium in the intervention groups was <strong>1.04 standard deviations lower</strong> (1.65 to 0.43 lower)</td>
<td></td>
<td>67 (2 studies)</td>
<td>low</td>
<td>4,12</td>
</tr>
<tr>
<td><strong>DRS-R-98 and CAM-5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Length of admission</strong></td>
<td>The mean length of admission in the control groups ranged from 5 to 38 days</td>
<td>The mean length of admission in the intervention groups was <strong>0.01 days longer</strong> (0.48 days shorter to 0.51 days longer)</td>
<td>1920 (6 studies)</td>
<td>moderate</td>
<td>4,6,7</td>
</tr>
<tr>
<td><strong>Days</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Diagnosis Reviews
AD-8 for detection of dementia across a variety of healthcare settings (Review)

Figure 3. Summary ROC plot of AD-8 informant cut-off score 2. The dark point is a summary point, the other points individual studies; the broken line represents 95% confidence region.
META-DTA v2.0
Crsu.shinyapps.io/dta_ma/

Suzanne Freeman, Clareece Nevill, Amit Patel, Nicola Cooper, Terry Quinn, Alex Sutton
For feedback/questions about this app please contact Alex Sutton at aje22@leicester.ac.uk
App powered by R shiny with statistical analyses performed using the package lme4:
https://CRAN.R-project.org/package=lme4
AD-8 for detection of dementia across a variety of healthcare settings (Review)


Structural magnetic resonance imaging for the early diagnosis of dementia due to Alzheimer's disease in people with mild cognitive impairment (Review)


CSF tau and the CSF tau/ABeta ratio for the diagnosis of Alzheimer's disease dementia and other dementias in people with mild cognitive impairment (MCI) (Review)

Ritchie C, Smailagic N, Noel-Storr AH, Ukoumunne O, Ladds EC, Martin S
Network meta-analysis of diagnostic test accuracy studies identifies and ranks the optimal diagnostic tests and thresholds for health care policy and decision-making

Rhiannon K. Owen\textsuperscript{a,}\textsuperscript{*}, Nicola J. Cooper\textsuperscript{a}, Terence J. Quinn\textsuperscript{b}, Rosalind Lees\textsuperscript{b}, Alex J. Sutton\textsuperscript{a}

\textsuperscript{a}Department of Health Sciences, University of Leicester, Leicester, UK
\textsuperscript{b}Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK

Accepted 7 March 2018; Published online 13 March 2018

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity (95% CrI)</th>
<th>Specificity (95% CrI)</th>
<th>Rank best sensitivity (95% CrI)</th>
<th>P (Best sensitivity)</th>
<th>Rank best specificity (95% CrI)</th>
<th>P (Best specificity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without threshold constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMSE \textless{} 25</td>
<td>0.72 (0.61, 0.82)</td>
<td>0.84 (0.79, 0.89)</td>
<td>4 (3,4)</td>
<td>0</td>
<td>1 (1,2)</td>
<td>0.97</td>
</tr>
<tr>
<td>MMSE \textless{} 27</td>
<td>0.89 (0.81, 0.95)</td>
<td>0.58 (0.45, 0.70)</td>
<td>2 (2,3)</td>
<td>0.01</td>
<td>3 (3,3)</td>
<td>0</td>
</tr>
<tr>
<td>MoCA \textless{} 22</td>
<td>0.82 (0.70, 0.91)</td>
<td>0.77 (0.67, 0.85)</td>
<td>3 (2,4)</td>
<td>0</td>
<td>2 (1,2)</td>
<td>0.03</td>
</tr>
<tr>
<td>MoCA \textless{} 26</td>
<td>0.97 (0.94, 0.99)</td>
<td>0.35 (0.23, 0.48)</td>
<td>1 (1,1)</td>
<td>0.99</td>
<td>4 (4,4)</td>
<td>0</td>
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</tbody>
</table>
Prognosis research in Cochrane

Fundamental prognosis

*What is the natural history of X*

Prognostic factor

*Is exposure to X associated with development of Y*

Prediction models

*Can a model that includes a, b, c predict development of X*
Anticholinergic burden (prognostic factor) for prediction of dementia or cognitive decline in older adults with no known cognitive syndrome (Review)

Promoting EBM & Raising Standards
REPORTING STANDARDS FOR STUDIES OF DIAGNOSTIC TEST ACCURACY IN DEMENTIA
THE STARDDEM INITIATIVE

ABSTRACT
Objective: To provide guidance for studies of diagnostic test accuracy in dementia disorders.
Methods: A systematic review of the literature on the use of diagnostic tests in dementia was conducted. A consensus meeting was held to develop a checklist for evaluating the accuracy of diagnostic tests in dementia, based on the STARD guidelines.
Results: More than 80% of studies did not report on the accuracy of diagnostic tests. The checklist was developed to help researchers reporting on diagnostic tests in dementia studies.
Conclusion: The checklist can be used to improve the quality and reporting of diagnostic tests in dementia studies.

Neuropsychological tests for the diagnosis of Alzheimer's disease dementia and other dementias: a generic protocol for cross-sectional and delayed-verification studies (Protocol)

Davis DHJ, Creavin ST, Noel-Storr A, Quinn TJ, Smailagic N, Hyde C, Brayne C, McShane R, Cullum S

REVIEW OF RESEARCH METHODS

Review of Diagnostic Test Accuracy (DTA) studies in older people

YEMISI TAKWOINGI1, TERENCE J QUINN2

1Institute of Applied Health Research, University of Birmingham, UK
2Institute of Cardiovascular and Medical Sciences, University of Glasgow, UK

Address correspondence to: Dr Yemisi Takwoingi, Institute of Applied Health Research, College of Medical and Dental Sciences, University of Birmingham, Birmingham B15 2TT, UK. Tel: (+44) 121 4147833. Email: y.takwoingi@bham.ac.uk
Online Exclusive

Systematic review of the body of evidence for the use of biomarkers in the diagnosis of dementia


When is Alzheimer’s not dementia—Cochrane commentary on The National Institute on Ageing and Alzheimer’s Association Research Framework for Alzheimer’s Disease

Jenny McCleery, Leon Flicker, Edo Richard, Terence J Quinn

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Our next review......
Prioritisation
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<tr>
<th>Categories</th>
<th>Definition</th>
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<tr>
<td>Prevention</td>
<td>Prevention of dementia and understanding relevant risk factors</td>
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<tr>
<td>Pathology</td>
<td>Understanding disease mechanisms, causes or stages of disease</td>
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<td>Diagnosis</td>
<td>Role of identification of the disease and diagnostic tools</td>
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<td>Drugs and Interventions</td>
<td>Using drugs and other interventions to manage disease</td>
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<td>Support</td>
<td>Supporting people with dementia in daily life and disease management</td>
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<td>Caregivers</td>
<td>Addressing the needs of caregivers, and how to support them</td>
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<td>Awareness &amp; Education</td>
<td>Educating and raising awareness of dementia and dementia-related issues for people living with dementia, care-givers, lay public and professionals</td>
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<tr>
<td>Research Methods</td>
<td>To improve the design, conduct, reporting and implementation of primary dementia research</td>
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