

Effectiveness of nurse-led clinics for patients with coronary heart disease: an updated systematic review

Ainagul Alzhanova¹, Verena Schadewaldt², Jeroen M Hendriks^{1,3},
Timothy J Schultz³

¹University of Adelaide, ²University of Melbourne, ³Flinders University

1. Introduction – Nurse Led Clinics (NLCs)

- Staffed by nurses, deliver education, treatment and monitoring; consult with doctors
- Focus on evaluation of needs, counselling, education, empowerment and self-management
- No risk of poorer outcomes from NLC for patients with coronary heart disease (CHD)
- Recent trials (including telehealth) not yet included in systematic reviews
- Certainty of evidence has not been GRADEd

2. Review question

- What is the effectiveness of nurse-led clinics for patients with coronary heart disease on mortality, morbidity and other patient outcomes?
 - P – Patients with new or existing CHD (eg angina pectoris, myocardial infarction)
 - I – NLCs
 - C – Managed by doctors or others
 - O – Mortality, exacerbations, risk factors, behaviours, self-management, quality of life

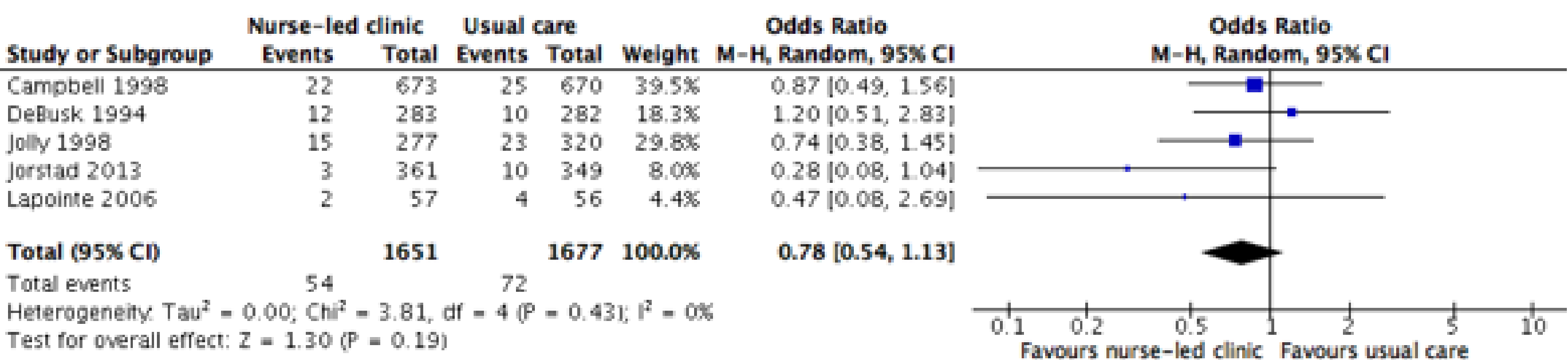
3. Methods

- Update to a 2010 review ^[1]
 - 16 ‘new’ RCTs to add to 13 ‘old’ RCTs
- Searched from Jan ‘08 – Feb ‘22
- Assessed risk of bias, conducted meta-analysis in Revman, assessed certainty using GradePRO and generated ‘Summary of Findings’

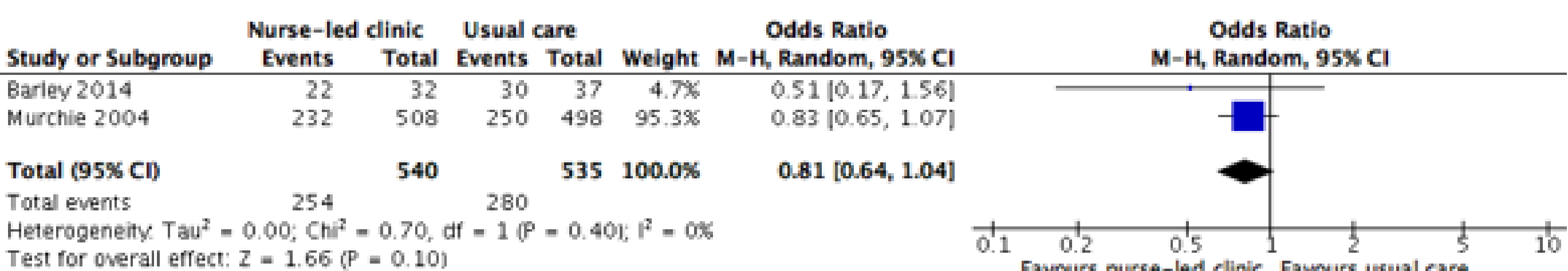
4. Results

(i) Mortality and exacerbations were not significantly different (Moderate certainty)

Effect of NLCs on all-cause mortality



Effect of NLCs on chest pain exacerbations



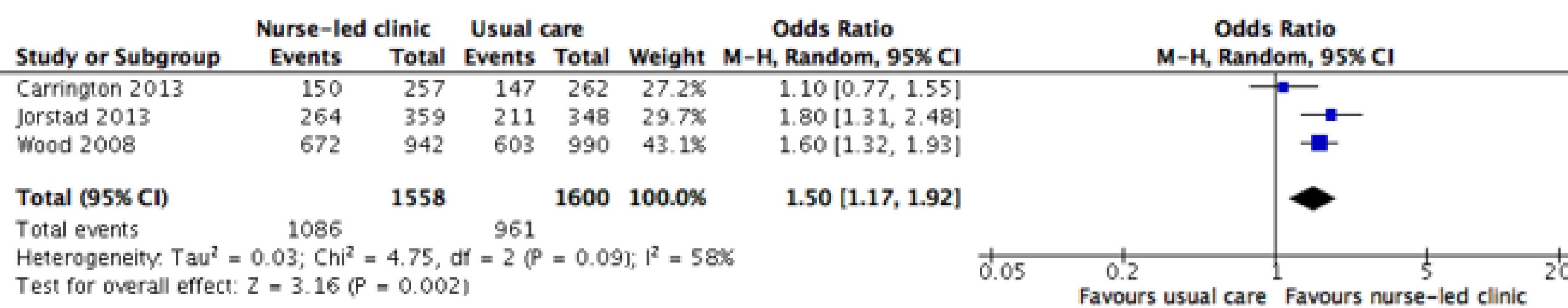
References

- Schadewaldt V, Schultz T. A systematic review on the effectiveness of nurse-led cardiac clinics for adult patients with coronary heart disease. *JBI Library of Systematic Reviews*. 2010;8(2):53-9.
- Alzhanova A, Schadewaldt V, Hendriks J, Schultz, T. Effectiveness of nurse-led clinics for patients with coronary heart disease: a systematic review and meta-analysis. Submitted

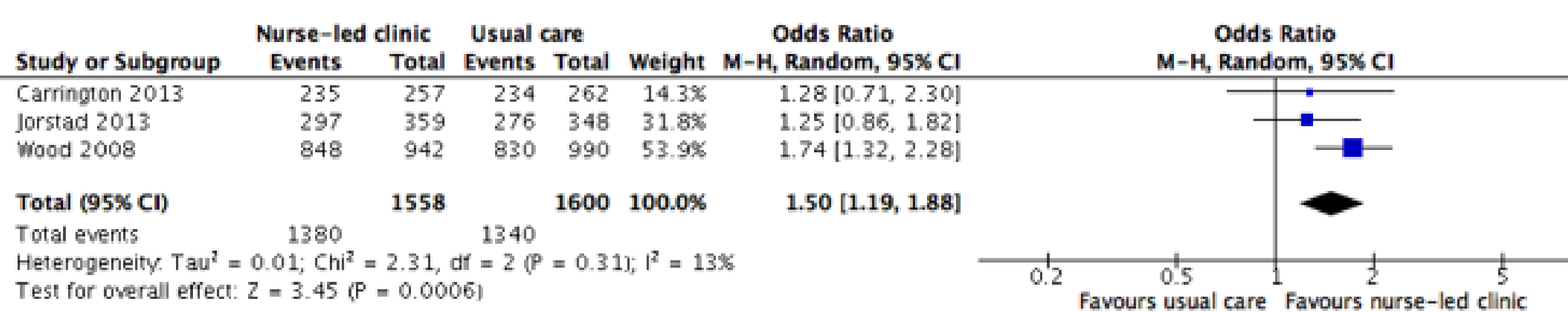
4. Results (cont)

(ii) Blood pressure targets more likely to be met for NLCs (Moderate and low certainty)

Effect of NLCs on achieving targeted systolic blood pressure (mmHg)



Effect of NLCs on achieving targeted diastolic blood pressure (mmHg)



(iii) Other outcomes (Summary of Findings)

Outcomes	N of participants (trials)	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with usual care	Risk difference with nurse-led clinics
Smoking cessation	2586 (5 RCTs)	⊕⊕○○ Low ^{a,b}	OR 1.30 (0.84 to 2.01)	714 per 1,000	50 fewer per 1,000 (120 fewer to 37 more)
Physical activity (30 min x4)	3796 (3 RCTs)	⊕⊕⊕○ Moderate ^a	OR 2.33 (1.07 to 5.05)	295 per 1,000	199 more per 1,000 (384 more to 14 more)
ACE Inhibitors adherence	3158 (3 RCTs)	⊕⊕○○ Low ^{a,b}	OR 1.08 (0.75 to 1.56)	558 per 1,000	19 more per 1,000 (105 fewer to 72 more)
Antiplatelet adherence	4295 (4 RCTs)	⊕⊕⊕○ Moderate ^a	OR 1.31 (0.83 to 2.07)	851 per 1,000	31 more per 1,000 (25 fewer to 71 more)
Beta-blockers adherence	3158 (3 RCTs)	⊕⊕○○ Low ^{a,b}	OR 1.01 (0.69 to 1.49)	733 per 1,000	2 more per 1,000 (78 fewer to 71 more)
Statins adherence	5617 (6 RCTs)	⊕⊕○○ Low ^{a,b}	OR 1.33 (0.82 to 2.15)	580 per 1,000	67 more per 1,000 (49 fewer to 168 more)
Depression and anxiety	2326 (5 RCTs)	⊕⊕⊕○ Moderate ^a	OR 1.27 (0.93 to 1.72)	71 per 1,000	17 more per 1,000 (5 fewer to 45 more)
Explanations a. downgraded by 1 level for inconsistency. b. downgraded by 1 level for imprecision.					

5. Take home points

- Most outcomes were better or similar, with the exception of mental health
- NLC for coronary heart disease is supported
- Quality of life and psychosocial factors are independent risk factors for CHD
- Research into cost effectiveness is needed

Contact: timothy.schultz@flinders.edu.au