

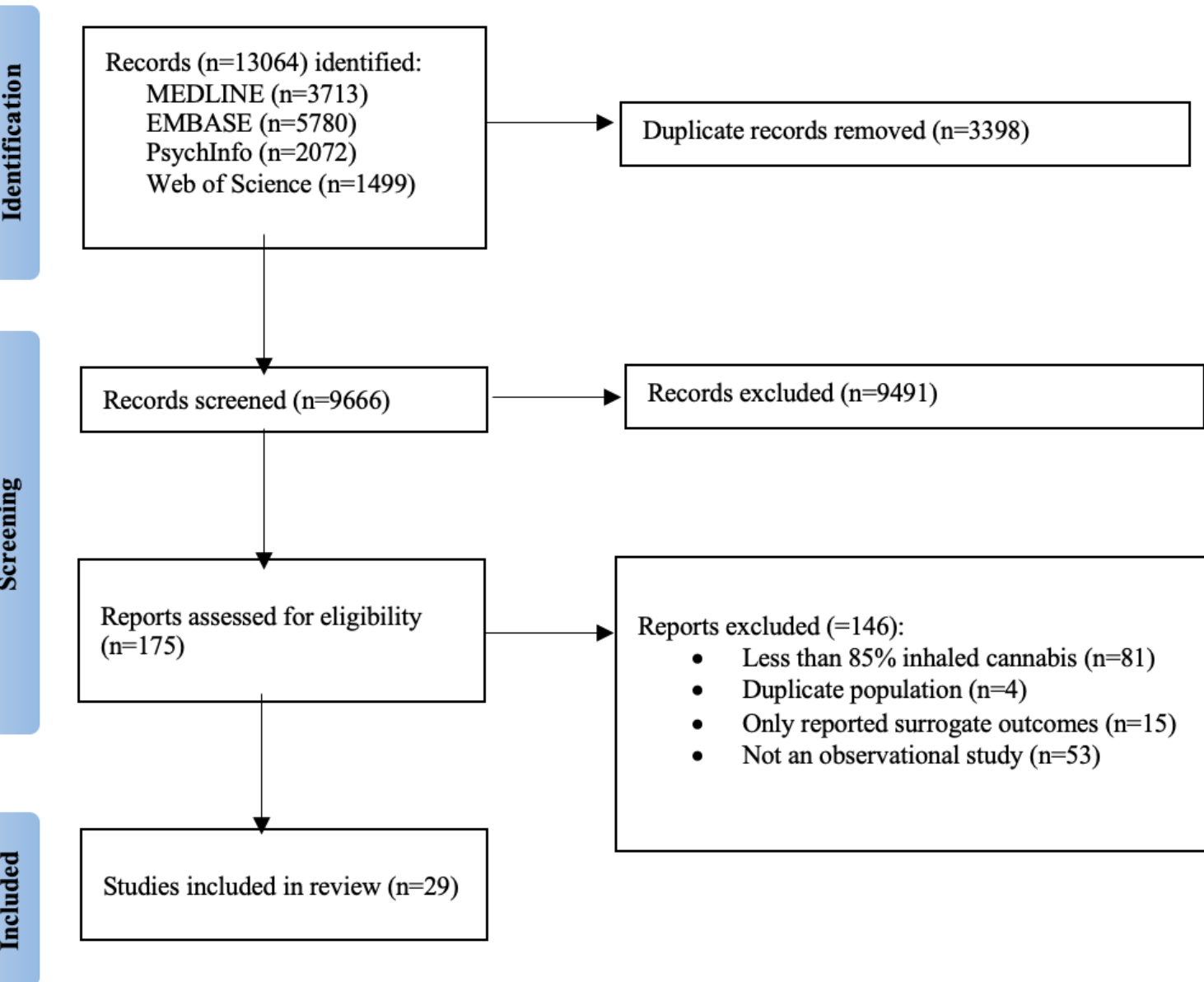
Harms Associated with Inhaled Cannabis for Chronic Pain

PRESENTER:
Jane Jomy

BACKGROUND Cannabis is increasingly used for management of chronic pain; however, the benefits and harms of this therapy remain uncertain. We conducted a systematic review to inform harms associated with inhaled cannabis for chronic pain.

- METHODS
- We searched MEDLINE, EMBASE, PsychInfo, and Web of Science for nonrandomized studies reporting on harms associated with inhaled cannabis use, from inception to October 6, 2021
 - We reported adverse events as binary outcomes. We pooled the proportion of patients who experienced adverse events of interest by first applying a Freeman-Tukey arcsine transformation to stabilize the variance of individual studies
 - For comparative studies, we pooled the odds ratio (OR) of adverse events between inhaled cannabis users and non-users using DerSimonian and Laird random-effects model and calculated pooled risk differences

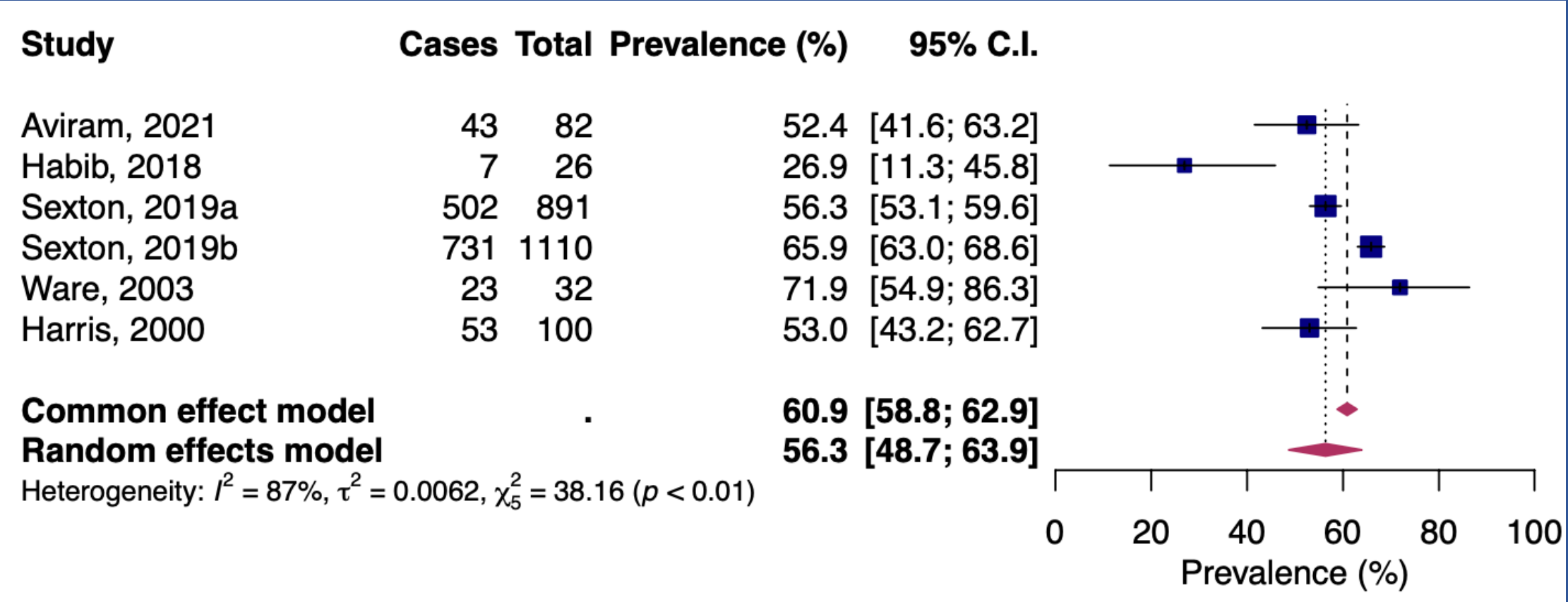
PRISMA FLOW DIAGRAM



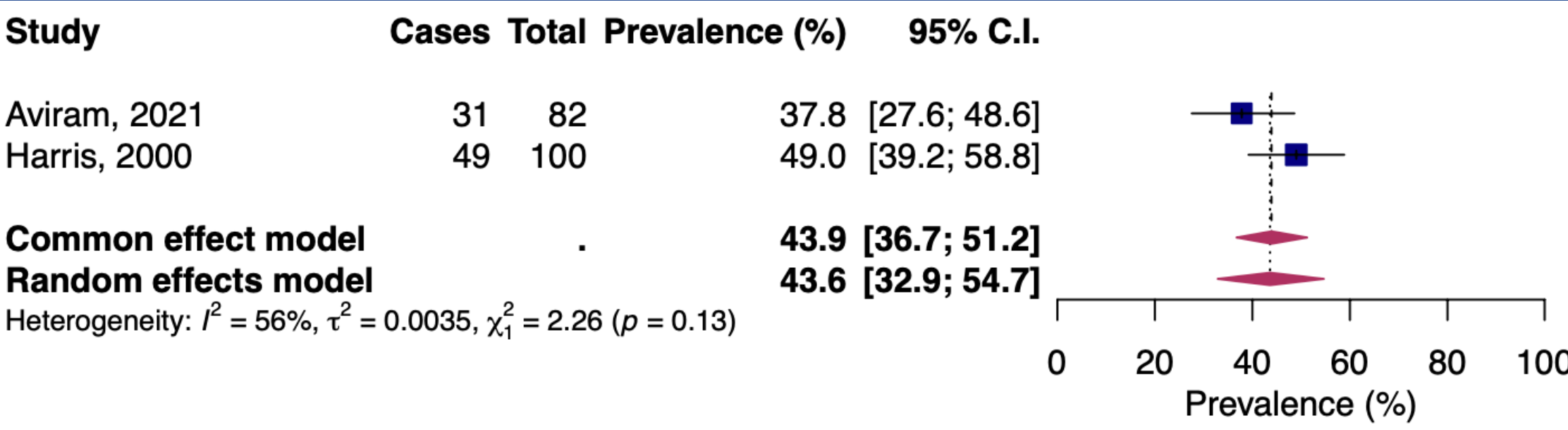
Are your patients with chronic pain using inhaled cannabis?

Our systematic review and meta-analysis found moderate certainty evidence that **dry mouth, thirst, and fatigue** are probably frequently experienced with inhaled cannabis use.

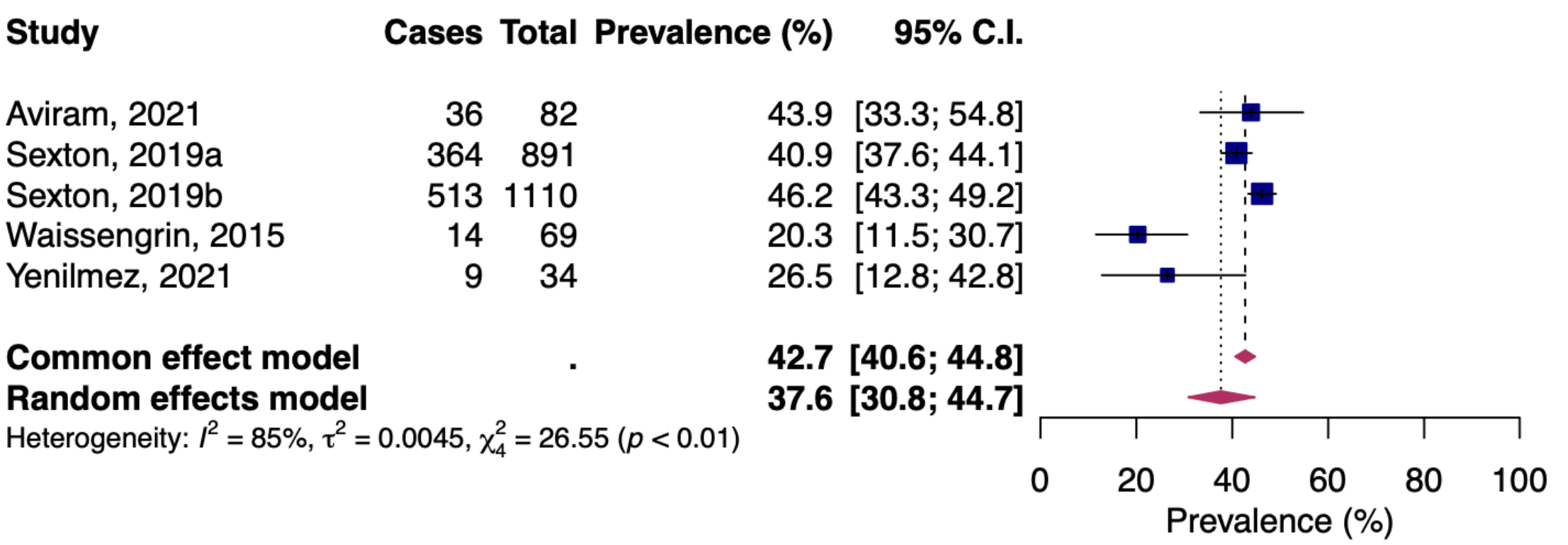
DRY MOUTH



THIRST

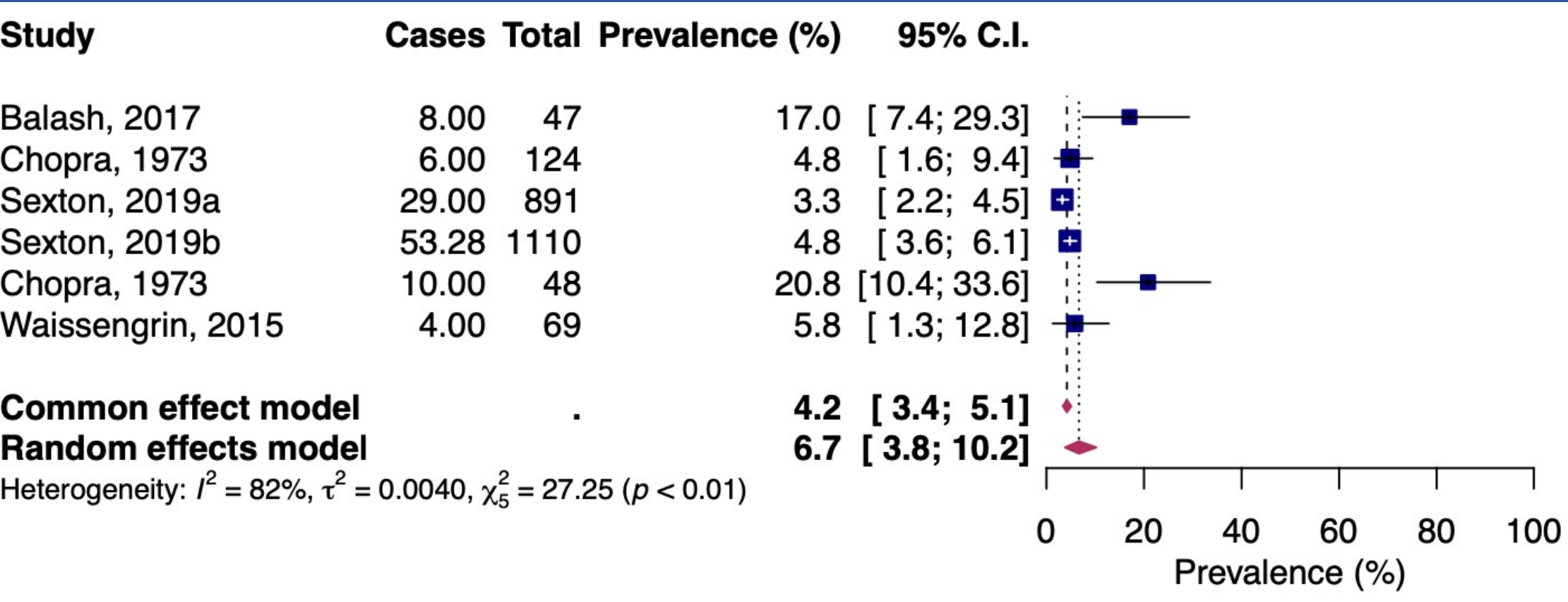


FATIGUE

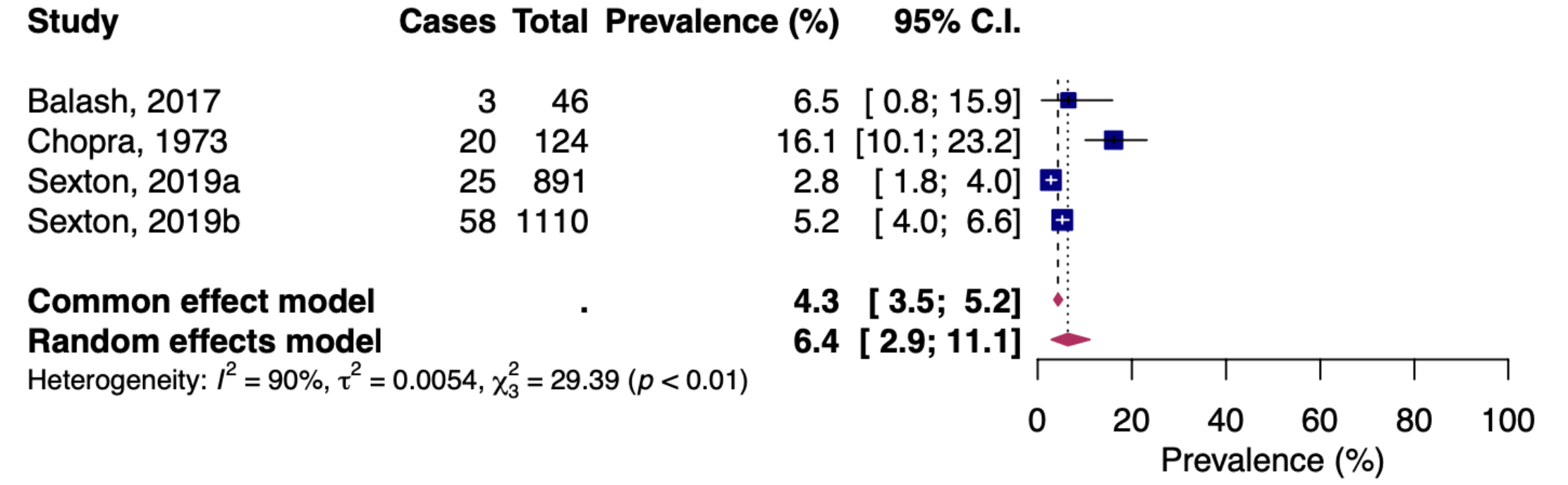


We also found that **nausea, increased appetite, dizziness, diarrhea, confusion, mood changes, hallucinations, amnesia, impaired coordination, disorientation, and shortness of breath** are also probably associated with inhaled cannabis use but are less common.

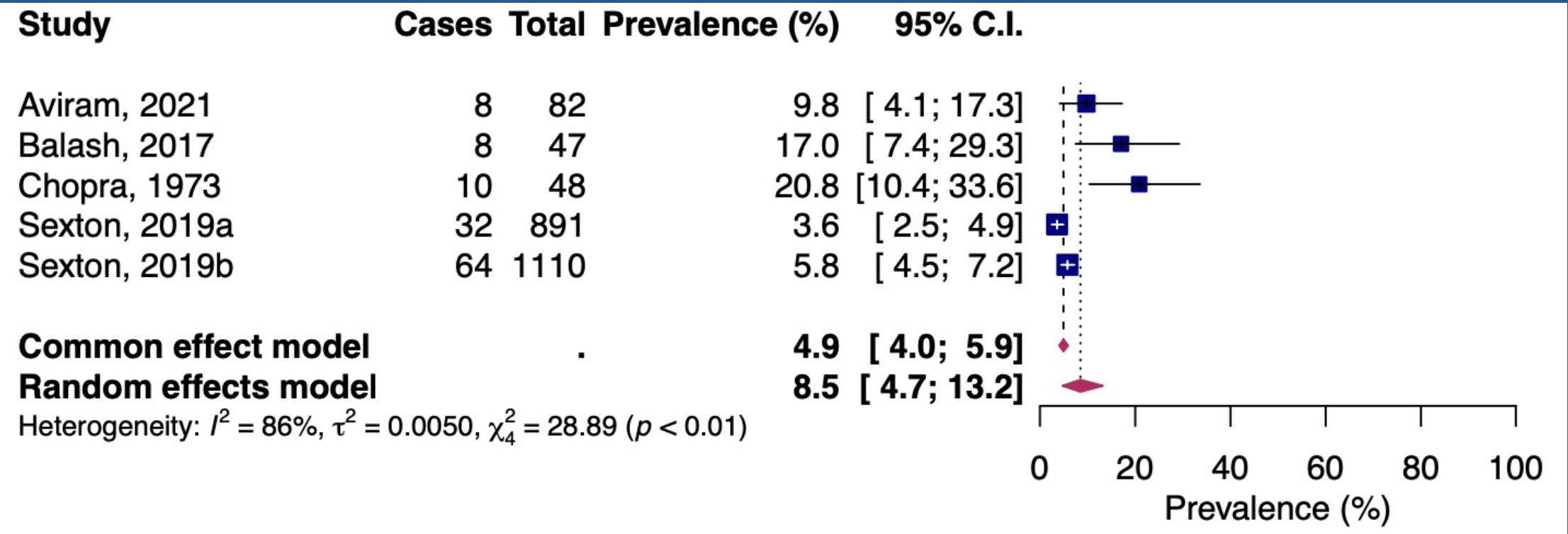
HALLUCINATIONS



AMNESIA



CONFUSION



RESULTS

We identified 29 eligible studies enrolling 174,562 participants that reported 145 adverse events

PREVALENCE OF ADVERSE EVENTS FROM NON-COMPARATIVE STUDIES

Outcome	# of studies	# of participants	Duration of follow-up (months)	Prevalence % (95% CI)	Certainty	Reasons for downgrading
Amnesia	4	2171	19 to 36	6.4% (2.9 to 11.1)	Moderate	risk of bias
Anxiety	8	2,423	6 to 288	24.4% (16.7 to 33.0)	Low	risk of bias, indirectness
Confusion	5	2178	6 to 36	8.5% (4.7 to 13.2)	Moderate	risk of bias
Dependence	2	213	84 to 288	25.8% (20.1 to 31.9)	Low	risk of bias, indirectness
Diarrhea	2	195	6 to 82	9.3% (3.4 to 17.5)	Moderate	risk of bias
Disorientation	2	130	6 to 36	3.0% (0.5 to 6.9)	Moderate	risk of bias
Dizziness	7	2265	6 to 96	9.5% (5.6 to 14.2)	Moderate	risk of bias
Dry mouth	6	2241	6 to 288	56.3% (48.7 to 63.9)	Moderate	risk of bias
Euphoria	4	338	6 to 288	51% (20.6 to 81.0)	Very low	risk of bias, indirectness, inconsistency
Fatigue	5	2186	6	37.6% (30.8 to 44.7)	Moderate	risk of bias
Hallucinations	6	2289	6 to 36	6.7% (3.8 to 10.2)	Moderate	risk of bias
Impaired coordination	4	2131	6 to 36	5.0% (4.1 to 6.0)	Moderate	risk of bias
Increased appetite	6	2174	3 to 288	13.2% (9.0 to 18.0)	Moderate	risk of bias
Irritability	2	237	36 to 84	11.9% (0.6 to 32.6)	Very low	risk of bias, indirectness, imprecision
Mood changes	3	282	6 to 288	8.4% (3.3 to 14.7)	Moderate	risk of bias
Nausea	2	195	6 to 19	16.6% (8.3 to 27)	Moderate	risk of bias
Palpitations	2	114	6 to 96	15.7% (1 to 40.6)	Low	risk of bias, imprecision
Paranoia	4	2081	36 to 96	11.5% (4.6 to 20.8)	Low	risk of bias, imprecision
Psychosis	4	309	19 to 120	4.6% (0.3 to 12.1)	Very low	risk of bias, indirectness, imprecision
Red eyes	4	239	6 to 288	47.3% (21.8 to 75.5)	Low	risk of bias, inconsistency
Thirst	2	182	6 to 288	43.6% (32.9 to 54.7)	Moderate	risk of bias
Vomiting	2	195	6 to 82	5.7% (0 to 20.8)	Low	risk of bias, imprecision

RISK DIFFERENCES FOR ADVERSE EVENTS FROM COMPARATIVE STUDIES

Outcome	# of studies	# of participants	Follow-up (months)	Odds ratio (95% CI)	Risk difference (95% CI)	Certainty	Reasons for downgrading
Asthma	2	5819	12	1.58 (1.07 to 2.34)	3.9% (0.5 to 8.6)	Low	indirectness, imprecision
Chronic wheeze	4	8997	12 to 72	2.34 (1.39 to 2.90)	2.3% (1.5 to 3.2)	Moderate	indirectness
Cough	5	9047	12 to 120	2.87 (1.39 to 5.89)	13.8% (3.3 to 28.9)	Low	indirectness, inconsistency
Depression	2	334	84 to 120	2.09 (1.04 to 4.00)	6.7% (0.3 to 16.3)	Very low	risk of bias, indirectness, imprecision
Lung cancer	4	52313	17 to 600	1.32 (0.65 to 2.71)	1.8% (-2.1 to 9)	Very low	indirectness, risk of bias, inconsistency
Phlegm	2	8140	12	1.71 (1.34 to 2.17)	2.9% (1.4 to 4.7)	Low	indirectness, risk of bias
Shortness of breath	3	6060	12	1.81 (1.43 to 2.29)	6.6% (3.6 to 10.1)	Moderate	indirectness

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