



Evaluating treatment outcomes in pharmacogenomic-guided care for depression: a rapid review and meta-analysis

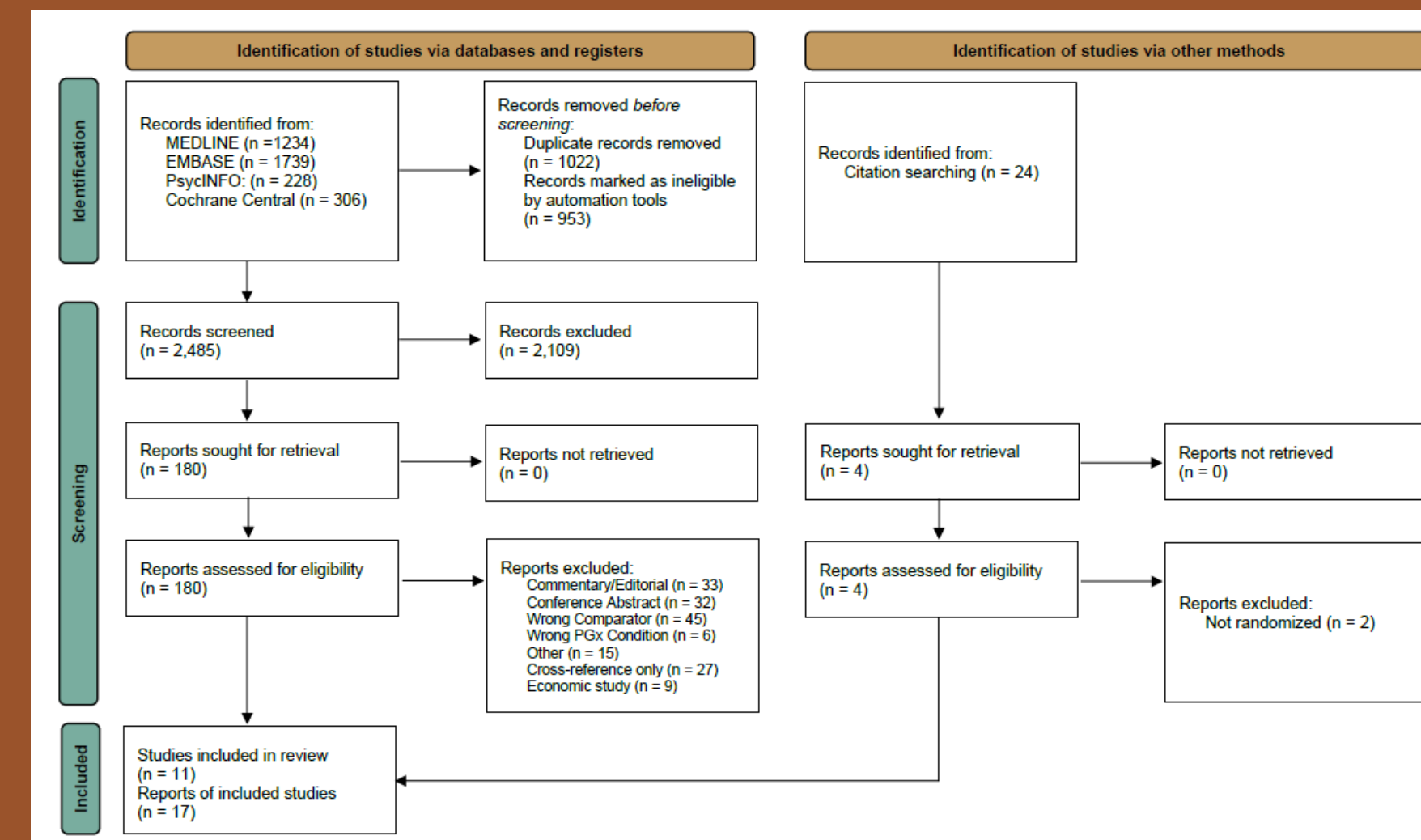


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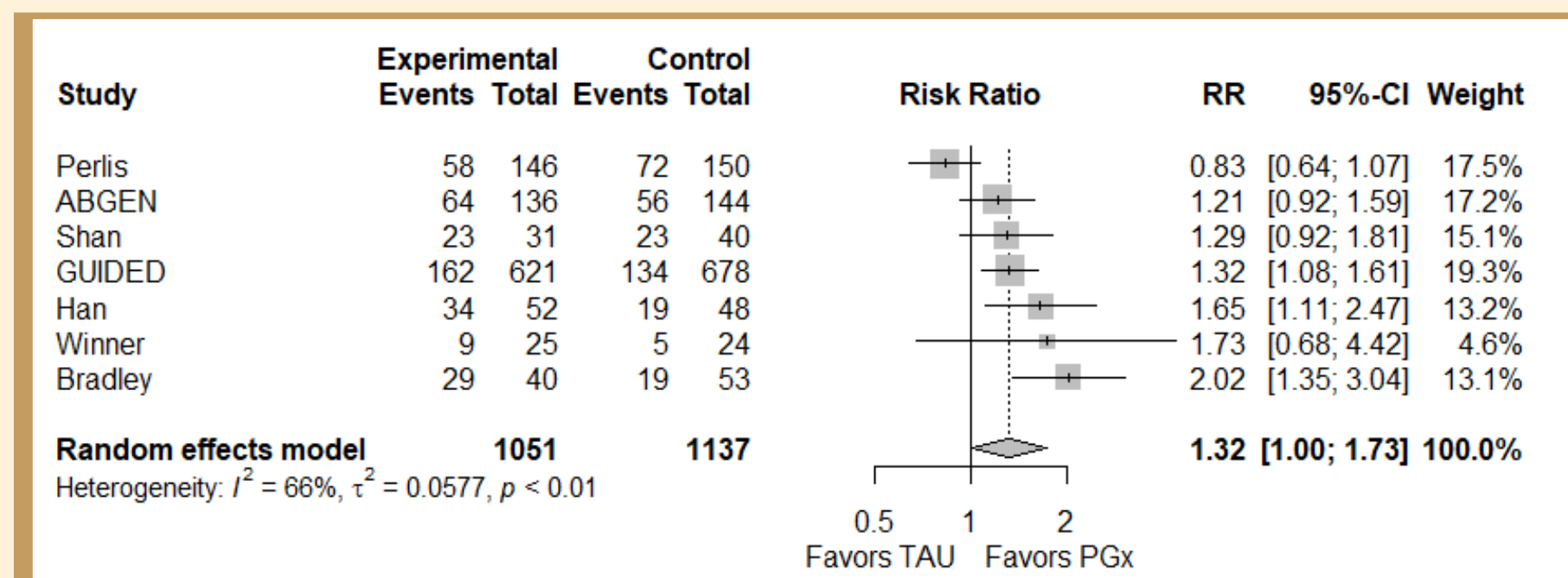
Use of a pharmacogenomic (PGx) test to guide medication selection made remission 1.46 times more likely than treatment as usual without PGx testing in patients with moderate to severe depression.

METHOD

- Protocol registered with Cochrane; followed PRISMA guidelines for systematic reviews
- Searched MEDLINE, EMBASE, PsycINFO, & Cochrane Central
- Inclusion criteria: RCTs comparing PGx-guided treatment versus standard of care for MDD patients (aged 6+) eligible for pharmacotherapy

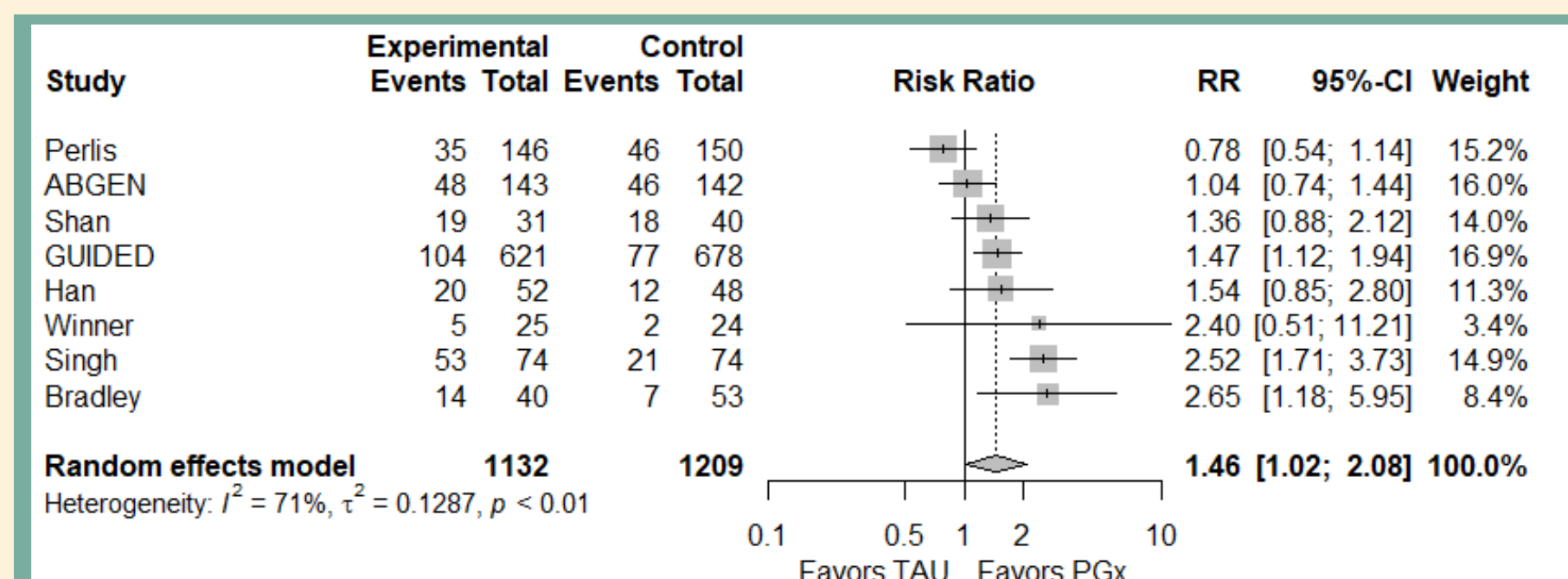
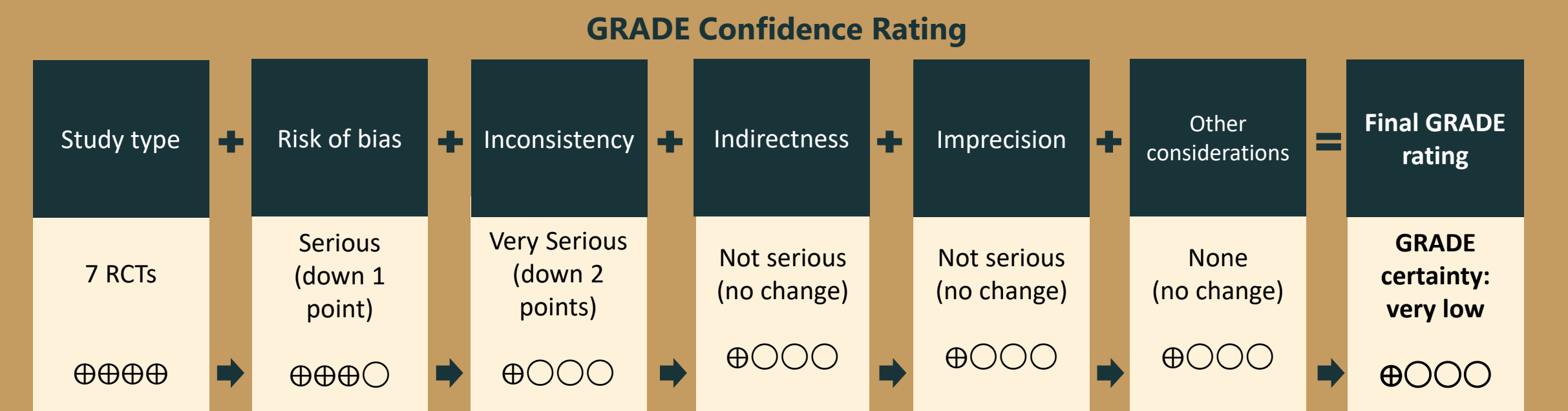


- 2,485 titles/abstracts screened
- 184 full texts reviewed
- 11 RCTs included in 17 papers
 - 10 in adults
 - 1 in adolescents (analyzed separately)
- Bias assessed with ROB2 tool



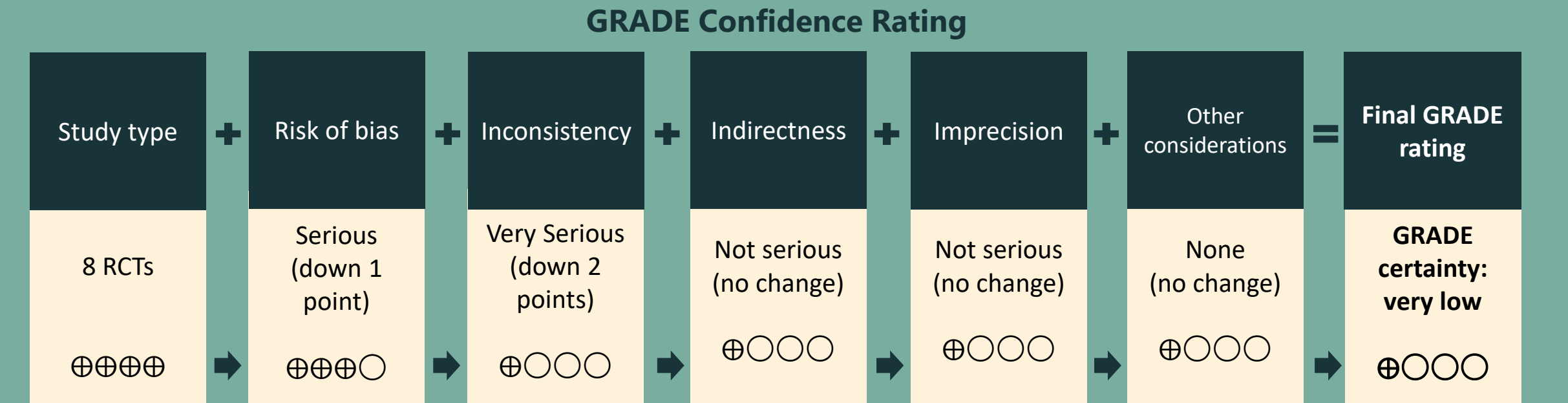
RESPONSE

1.32 times more likely with PGx-guided treatment. Some bias from missing outcome data.



REMISSION

1.46 times more likely with PGx-guided treatment. High risk of bias from missing outcome data.



CHARACTERISTICS

- 4,333 adult participants
- HAM-D17 baseline scores: 19-25 (moderate to severe depression)
- Follow-ups ranged 8-12 weeks
- Averaged 3 previous antidepressant trials (range: 0-15)

NOT SIGNIFICANT

- Depression scale score after treatment
- Total discontinuation
- Serious adverse effects
- Withdrawal due to adverse events
- Response or remission in adolescents (n=1 study)

FUTURE RESEARCH

- Consistent reporting of outcomes
- PGx for mild depression
- Children and adolescents
- Independently-funded
- Patient satisfaction with treatment

High risk of bias and low confidence in the evidence (GRADE) means these estimates are likely to change when more evidence becomes available.