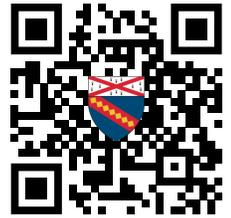


# Age-treatment subgroup analyses in Cochrane intervention reviews: a meta-epidemiological study

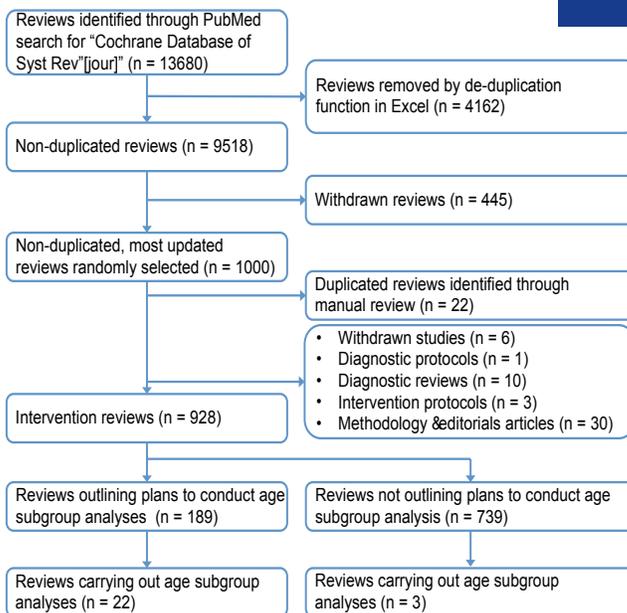
## Main takeaways

1. While Cochrane intervention reviews often plan age-treatment subgroup analyses, few of them are conducted, and lack of available age-related data is a common obstacle.
2. Research intending to identify differential treatment effects between age groups can benefit from standardization at all levels, from demographic data reporting in individual trials to synthesis and reporting in meta-analyses.



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## What we found



### Reviews with at least one age subgroup analysis:

Planned: **189/928 (20.4%)**

Conducted: **25/928 (2.7%)**

### Among 65 age subgroup analysis in 25 reviews:

Statistically significant ( $P < 0.05$ ): **7/65 (10.8%)**

Authors provided clinical or biological rationale: **0/65 (0.0%)**

### Among 7 statistically significant age subgroup analyses:

None were included in common clinical practice resources

## What is already known

- There is a growing interest in evaluating differences in health interventions across routinely collected demographic characteristics
- There are concerns about the credibility of individual subgroup analyses
- Evidence suggests that sex based subgroup analyses are infrequently reported in Cochrane reviews and have limited clinical and biological plausibility

## What we did

For a random sample of 928 **Cochrane intervention reviews** of randomized trials, we determined:

- # planned and/or conduct age subgroup analyses;
- # of analyses with a  $P < 0.05$  from formal interaction testing;
- # of statistically significant results included in commonly used clinical management resources: **BMJ Best Practice, UpToDate, Cochrane Clinical Answers, Google Scholar, and Google search**

## What it means

**When age subgroup analyses are conducted in meta-analyses, authors should: (1) report all findings, (2) compare results to previous studies, (3) discuss the potential impact on care.**

Limitations:

- Small number of age subgroup analyses
- Inability to determine performed but not reported analyses

### Come find me!

1. At the conference to discuss this paper or metascience
2. By email/on Twitter: [@JoshuaDWallach](https://twitter.com/JoshuaDWallach) | [joshua.wallach@yale.edu](mailto:joshua.wallach@yale.edu)



## Team

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