

UNLOCKING HEALTHCARE INSIGHTS

Network Meta-analysis (NMA)

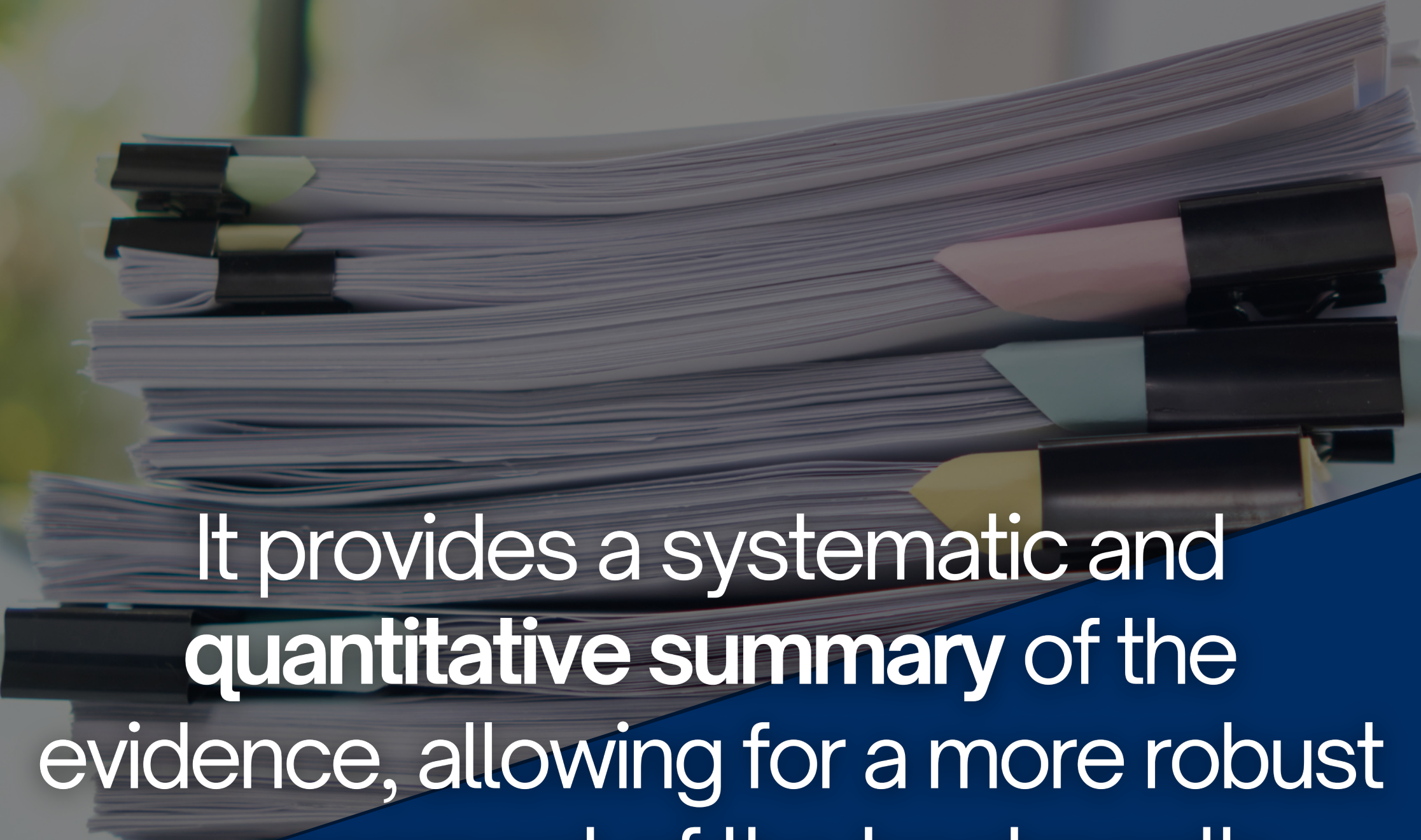


Cochrane

Multiple Sclerosis and Rare Diseases
of the Central Nervous System



A meta-analysis is the **statistical combinations** of results from multiple studies to generate a **more precise estimate** of the effect of a treatment or intervention.



It provides a systematic and **quantitative summary** of the evidence, allowing for a more robust assessment of the treatment's **effectiveness**.



A network meta-analysis is a statistical technique for comparing **three or more** interventions in a single analysis by combining both **direct** and **indirect** evidence across a network of studies.

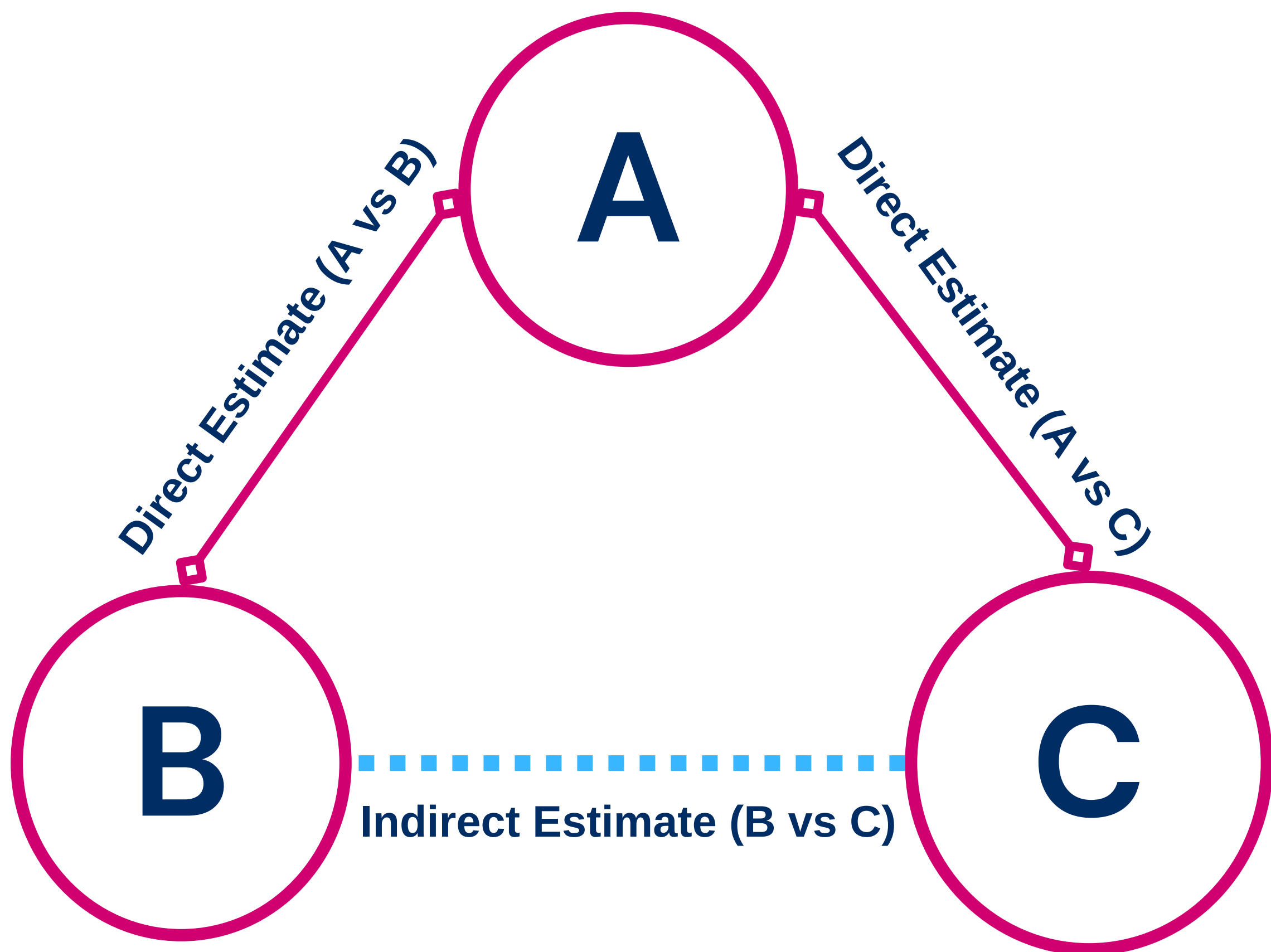
It enables researchers to assess the **relative effectiveness** of different interventions.





Direct Estimate = Direct Evidence

Compares two treatments directly in head-to-head trials, like comparing A vs B and A vs C.





Indirect comparisons help us estimate how two treatments compare, even if they **haven't** been tested against each other directly.

For example, if we have trials comparing A to B, and A to C, we can estimate the **relationship** between B and C using the data from the **other trials**.



We must assume **consistency**, meaning that, on average, various sets of RCTs are **similar** in all crucial aspects.

In this way, we can compare treatments directly and indirectly, thanks to the principle of **transitivity**.

It ensures that the **indirect effect** of B vs C is a correct estimate of the **direct effect** of B vs C.



- Integrates diverse evidence sources, surpassing traditional meta-analysis limitations.
- Provides comprehensive insights into treatment effectiveness, facilitating cross-intervention comparisons.
- Influential in healthcare decision-making, shaping treatment guidelines and policies.
- Empowers informed decision-making for healthcare providers and policymakers.





- Managing study differences can be challenging and complex.
- Not all interventions may be adequately studied.
- NMA relies on specific assumptions, like transitivity and consistency.
- Results may be harder to interpret.
- NMA requires significant time and expertise.



GET INVOLVED

Want to know more?

- Check out the Cochrane Handbook
- Read our NMAs on Cochrane Library.
- Follows us for being updated about EBM practice in the field of MS!



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