

Improving Validity and Relevance of Indirect Comparisons and Network Meta-Analysis: Implications for HTA Submissions

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Overview

- Current methods for population adjustment for indirect comparisons
- A new approach: Multi-Level Network Meta-Regression
- Simulation study to compare methods
- Discussion of implications for HTA submissions

Implications for HTA Submissions

- ML-NMR assumes that all covariate information is reported in all studies
 - Unlikely to be the case in practise ...
 - Qu: what are the implications for these methods in practise?
- ML-NMR provides treatment effects in a target decision population
 - Qu: Will those making submissions for reimbursement have access to patient characteristics in the relevant population?

Implications for HTA Submissions

- In practise MAIC has been the main population adjustment method used
 - Qu: Why do you think that is?
 - Qu: Given your simulation study findings, should we stop using MAIC?
 - Qu: Is MAIC “assumption free”?
- Many applications in HTA involve survival outcome data
 - Qu: Can regression based methods, such as ML-NMR be used with survival outcome data?

Implications for HTA Submissions

- MAIC is often used with single-arm studies or disconnected networks
 - Qu: Can ML-NMR be used with single-arm studies or disconnected networks?
- In some cases there is no trial data available, but “real world evidence” may be available
 - Qu: Can these methods be used with observational data?
 - Qu: Does this mean we don’t need trials anymore?!

Implications for HTA Submissions

- If individual patient data were available from studies these methods would not be necessary
 - Qu: Do you think open data initiatives will help with this?
- In practise effect modifiers may be limited or have small effects.
 - Qu: Is this an academic exercise? Does it really matter?

Implications for HTA Submissions

- Population adjustment is often used when the sample sizes are small
 - Qu: How do these methods perform with small samples? Which method is more robust?
- Population adjustment is just one aspect of adjustment that may be necessary.
 - Qu: Can the methods adjust for other factors such as treatment switching, missing data, biases, etc?

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THANK YOU!

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