Cost-effectiveness of multisystemic therapy versus usual treatment for young people with antisocial problems: a reply to McIntosh

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We thank the editors of Criminal Behaviour and Mental Health for the opportunity to respond to Dr McIntosh’s concern that an incremental cost-effectiveness analysis is not warranted because of equal outcomes of multisystemic therapy (MST) and treatment as usual (TAU).

Methods for economic evaluations differ from common frequentist statistical approaches. Cost-effectiveness analyses typically integrate two quantities: (1) the additional costs (or savings) of a new intervention compared with the alternative one and (2) the additional health benefits. Their combination leads to a third metric: the incremental cost-effectiveness ratio (ICER). Cost-effectiveness analysis aims to inform decision makers with regards to the trade-off: Is the health gain (or cost saving) worth the additional costs (or health loss) (Petrou and Gray, 2011). Rather than statistical significance, p values and confidence intervals of a single outcome measure, cost-effectiveness analysis relies on credibility, leading to, e.g. an ICER with a 95% confidence interval based on bootstrap replications (mean ICER: $-\$384,633$; 95% confidence interval: $-\$2,001,433$ to $\$2,024,681$ – cf. Vermeulen et al., 2016).

We agree with McIntosh that, based on the denominator of the ICER, i.e. effectiveness alone, superiority of MST cannot be proclaimed. However, the primary results of this randomised controlled trial (Asscher et al., 2013) – based on various clinically relevant effect measures – showed that MST was more effective than TAU in reducing externalising behaviour problems, oppositional defiant disorders, conduct disorders and property offences.
Based on these results, and in line with Petrou and Gray (2011), we are confident that the practical implications and conclusions can be maintained. When there is no difference in health impact of an intervention – here, MST is not significantly less effective than TAU – a decision maker would make the same decision with regards to implementation of MST, because it would represent a cost saving without health loss. We acknowledge, however, that this does depend on the extent to which MST would completely replace the old system.

References


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