

Simplicity, complexity and modelling in clinical trials

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Many clinical trials have a complexity in allocating treatments that is not matched by the models commonly used to analyse them. I argue that this is not necessarily a good idea, that contrary to what is supposed such an approach does not lead to simpler interpretations, is not necessarily more robust and wastes time, resources and ultimately patients' lives. I conclude that although complexity for complexity's sake is not always a good idea we must stop having a prejudice against modelling and do better in analysis.

There is one field of statistical analysis, however, in which the opposite tendency may be observed. The exception in which complex modelling is common is repeated measures. Here I shall claim that although it would be wrong to ban complex models we ought to work harder to understand what the models do for us.