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TITLE

Improving the Accuracy and Comparability of Model-based Economic Evaluations of Pharmaceuticals for Reimbursement Decisions

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Increasingly, decision analytic models are used within economic evaluations of pharmaceuticals submitted to national reimbursement bodies in countries like UK and Australia, where such models play a fundamental role in informing public funding decisions. Estimates from decision analytic models are subject to various forms of uncertainty. This paper will focus on uncertainty specifically arising from the choice of model structure, a neglected area in guidelines developed by national reimbursement bodies, which is recognised as having a significant impact on the predictive ability of a model. We argue that the use of a reference model is an appropriate approach to address structural uncertainty affecting national reimbursement decisions. We propose a methodological framework for developing such models for specific diseases for economic evaluations of pharmaceuticals. The structure of the reference model reflects the natural history of the condition under study and defines the clinical events to be represented, the relationships between the events, and the effect of patient characteristics on the probability and timing of events. It is expected that the use of reference models will improve the accuracy and comparability of public funding decisions.

Biography

Dr Afzali is a Postdoctoral Research Fellow (Health Economics) in the Discipline of Public Health at the University of Adelaide, Australia. He was awarded his PhD in the area of efficiency measurement in 2007 from the University of Adelaide. He also holds a Medical Degree (MD) which was awarded in 1994. Following his doctorate, he was appointed as a senior health economist in Adelaide Health Technology Assessment, and his role was to evaluate and critically appraise submissions from pharmaceutical companies that were lodged with the government. He took up his current Postdoctoral Research Fellow position in 2009. Dr. Afzali has extensive experience in designing decision analytic models, and proposing methodological frameworks within economic evaluations of health technologies.