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Critical appraisal of the literature on economic evaluations of substitution of skills between professionals: a systematic literature review

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First published: 09 July 2008

<https://doi.org/10.1111/j.1365-2753.2008.00924.x>

Citations: 19

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Abstract

Objective Substitution of skills has been introduced to increase health service efficiency, but little evidence is available about its cost-effectiveness. This systematic review aims to identify economic evaluations of substitution between professionals, to assess the quality of the study methods applied and to value the results for decision making.

Methods Publications between January 1996 and November 2006 were searched in Medline, Cochrane, Cinahl, database of Health Technology Assessments, EPOC and Embase. Randomized controlled trials (RCTs), cost-benefit analysis, interrupted time series design and systematic reviews were selected. The methodological quality of the papers was reviewed, using the critical appraisal of Drummond and the EPOC list.

Results Eleven studies were finally included of 7605 studies: three cost-effectiveness studies, three cost-minimization studies and five studies related to partial economic evaluations. Small numbers of participating professionals and several limitations in the cost valuation and the measurement of costs were identified.

Conclusions Several potential limitations influence the validity and generalizability. Full economic evaluations per se are of limited value for making decisions about substitution of skills. The tenuous relationship between structural, process and outcome variables is not sufficient investigated. For meaningfully placing the costs and consequences of substitution of skills in the

context of health care and generating relevant data for decision making, it is strongly recommended to combine an economic evaluation (RCT) with an observational longitudinal study.

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