

The role of health economic analyses in clinical practice

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Health economic analyses are essential to ensure the efficient and equitable allocation of scarce healthcare resources. Wounds impose a heavy burden. For example, venous leg ulcers account for approximately 1% of the UK's total healthcare expenditure (Simon et al, 2004) and pressure ulcers a further 4% (Bennett et al, 2004). Yet few research studies examine the cost-effectiveness of dressings for pressure ulcers, venous leg ulcers and surgical wounds. Economic analyses in wound healing, however, are being published with increasing regularity. Against this background, we emphasise the importance of not drawing inferences for clinical practice from headline results alone, as these can be misleading.

Cost-effectiveness studies compare the total costs and benefits associated with two or more technologies. This means considering more than the acquisition cost of two dressings. The analysis also needs to include all related healthcare resource use, such as the time taken to apply the dressing and the number of changes required. For example, a 'cheap' dressing may be more costly than an 'expensive' dressing over the period of wound healing, as it may be less effective meaning patients require additional treatments (Guest and Ruiz, 2005; Guest et al, 2005). However, manufacturers frequently refer to their

product as being cost-effective just because its acquisition cost is less than that of a competitor. A full analysis needs to include many more data inputs.

Economists tend to derive the costs and benefits from a combination of clinical trials, databases, published literature and clinicians' opinions. By combining clinical outcomes and estimates of healthcare resource use, a computer model can be constructed to estimate the cost-effectiveness of two or more technologies. Obviously this approach means that the analysis makes numerous assumptions and the results depend on the data entered into the model. Relying on the headline figures alone could therefore be misleading. Consequently, economists perform sensitivity analyses which vary key assumptions. If the average result changes little, the results are considered 'robust'. Therefore, studies that do not include sensitivity analyses should be treated with caution.

It is also necessary to examine the resources used in the model and the clinical outcomes associated with the technologies being assessed, which should be clearly set out in the methods. Outcome data are often derived from clinical trials which, because of the inclusion and exclusion criteria, may not reflect a naturalistic population. Also, if factors such as referral rates, number of dressing changes, infection rates, concurrent medication, and nursing and physician time differ from a clinician's

own clinical practice, then the headline figures in the article may not be relevant to that clinician.

Despite these concerns, health economic studies are an invaluable aid to efficient and equitable allocation of healthcare resources. However, practitioners should ensure that a health economic study is methodologically rigorous and applicable to their practice. In other words, they should read economic analyses with the same critical eye they use for clinical studies, and be suspicious of those that do not state explicitly the assumptions, allow the reader to compare the costs and benefits with their own practice, and include sensitivity analyses.

Scrutinising health economic studies in this level of detail may mean learning a new vocabulary, but maximising health gain from limited resources will more than repay the effort. **WUK**

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