Cost-effectiveness and value of information analyses of nutritional support in preventing pressure ulcers in high-risk hospitalised patients

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Objectives
To assess the cost-effectiveness of nutritional support (high protein supplementary diet) versus standard care (regular hospital diet) in preventing pressure ulcers in hospitalised patients at high risk of pressure ulcers and malnutrition.

Methods
The analysis was from the perspective of the State health department in Queensland, Australia, using a decision model. Evidence was derived from a systematic review and meta-analysis. Monte Carlo simulation was used to calculate value of information measures.

Results
Nutritional support resulted in an average incremental net benefit of AU$530 with 84% probability of being cost-effective. The expected value of perfect information was AU$4.75 million. The parameter with the highest value of information was the relative risk of pressure ulcers at AU$2.25 million. For a future randomized study investigating the relative effectiveness of nutritional support in preventing pressure ulcers, the sample size would be optimised at 1,200 patients/arm resulting in 32% return on investment.

Conclusions
Nutritional support is cost-effective in preventing pressure ulcers in high-risk hospitalised patients although with high decision uncertainty. A future clinical trial to resolve this uncertainty is worthwhile and the intervention should be implemented with research.

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