Clinical and cost-effectiveness of left ventricular assist devices as destination therapy for advanced heart failure: systematic review and economic evaluation

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Plain language summary

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Plain language summary

The majority of patients with advanced heart failure would be unsuitable for heart transplantation due to their age and comorbidities but selected patients could benefit from a left ventricular assist device. Left ventricular assist device therapy for such patients is known as 'destination therapy'. This is a long-term therapy that involves implanting a battery-powered pump to support the patient's heart.

The purpose of this project was to collect and assess the research evidence on the effectiveness of left ventricular assist devices when used for destination therapy, and to estimate value for money compared to medical management from the United Kingdom National Health Service/personal social service perspective.

This research identified that the currently available left ventricular assist device improves patient survival as well as reducing stroke rates and complications compared to earlier devices and relative to medical management. However, there is uncertainty in the evidence due to the absence of studies directly comparing the current device to medical therapy alone. An ongoing clinical trial is currently assessing this. It also means there is uncertainty about whether left ventricular assist devices could provide value for money as determined currently for the United Kingdom National Health Service.

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