

**Title** Aquadex FlexFlow Ultrafiltration System

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**Reference** Technology Review Report, online:  
[http://www.moh.gov.my/index.php/database\\_stores/store\\_view\\_page/30/205](http://www.moh.gov.my/index.php/database_stores/store_view_page/30/205)

### **Aim**

To review evidence on the effectiveness, safety and cost-effectiveness of using Aquadex FlexFlow ultrafiltration system compared with the intravenous diuretics or conventional techniques in the treatment of patients with congestive heart failure.

### **Conclusions and results**

Findings indicated that ultrafiltration efficiently produces greater weight and fluid loss, significantly decreased rehospitalisation rate for heart failure and unscheduled medical visits. There was no retrievable evidence to suggest that ultrafiltration is unsafe in comparison with conventional therapies. Ultrafiltration is beneficial to patients as it allows fluid to be removed quickly and safely, without compromising renal function or producing other side effects seen with aggressive pharmacological therapy. No other major complications were recorded. There was also evidence to suggest that Aquadex FlexFlow ultrafiltration system was likely to be more costly but more effective at fluid reduction and reducing rehospitalisation rates than diuretics in patients with congestive heart failure, though one indicated there was some uncertainty about the budget impact of this technology.

### **Recommendations**

Aquadex FlexFlow ultrafiltration system can be used as research purpose or used in research environment for excess fluid removal in patients with congestive heart failure.

### **Methods**

Electronic databases were searched, which included PubMed, Medline, Journal @ Ovid full text via OVID, OVID EBM Reviews - Cochrane central register of controlled trials, EBM Reviews - Cochrane database of systematic review, Horizon scanning databases, FDA website, MHRA website and from non scientific database - Google search engine. In addition, a cross- referencing of the articles retrieved was also carried out accordingly to the topic. Relevant articles were critically appraised and evidence graded using US/Canadian Preventive Services Task Force.

### **Further research/reviews required**

Further research is needed to establish the patient groups who would benefit most, the optimal rates of fluid removal, and the cost savings associated with long-term quality of life benefits.

### **Written by**

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