

A discrete choice experiment to elicit prevalent haemodialysis patient attitudes to longer or more frequent in-centres haemodialysis regimes

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Introduction: Longer and more frequent haemodialysis have been associated with changes in survival, quality of life and vascular access patency, but how these outcomes influence uptake of more intensive dialysis regimes is unknown. Quantification of patient preferences and likely uptake could inform clinical trial design, dialysis capacity and policy.

Methods: A statistically efficient discrete choice experiment (DCE) was completed by three times a week haemodialysis patients on treatment for at least one year, which described a scenario where they had high ultrafiltration and significant symptom burden and were offered 4.5 hr haemodialysis sessions three times a week (longer), four times a week haemodialysis, or to continue on their current regime. To elicit preference the specific survival, quality of life, fluid restriction, hospitalisation and vascular access implications associated with these regimes varied across 12 questions. A mixed logit regression model quantified preference for the regimes and attitudes to the benefits and harms. Demographic, patient experience and fatigue questions were also collected.

Results: 194 patients completed the DCE across five centres in England, with a mean age of 63.8 years, 62.3% male, 79.9% Caucasian who had been on renal replacement therapy for a mean of 4.22 years with 22.2% dialysing via a line. 24.7% and 14.8% of patients had previously been approached about longer hours and 4xW HD respectively. When reading the scenario 78.7% felt it sounded a bit or a lot like them.

Improvements in quality of life, survival and fluid restriction were associated with increased odds of regimes being selected while increased vascular access complications reduced them (all $P < 0.01$). Patients who were younger valued survival advantages more, while older patients found the augmented regimes less preferable (all $P < 0.001$). Patients with experience of access problems were more likely to choose an augmented regime ($P < 0.001$) but had similar concerns about increases in access complications, while dialysing via a line did not significantly alter regime preference or attitude to access complications. Patients who lived nearer the dialysis unit, had been offered an augmented regime previously, and who felt the scenario sounded like them were more likely to select an augmented regime ($P < 0.05$).

When applying benefits and harms values from observational and trial data for longer and four times a week haemodialysis to the model, when presented with this scenario 17.8% of patients would choose longer treatments, 35.9% would choose four times a week in-centre haemodialysis and 46.2% would stay on their current treatment.

Discussion: This DCE quantifies how benefits, harms and the treatment burden associated with longer and four times a week haemodialysis influences patient choice, aligning with existing literature. With relatively high predicted uptake of these regimes, priorities should include obtaining robust estimates of treatment effects and modelling dialysis capacity implications.