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## P118 -Impact of extended haemodialysis using the Theranova dialyser on patient reported outcome measures (PROMs).

Dr Stephanie Bolton<sup>1</sup>, Ms Rachel Gair<sup>2</sup>, Mr Michael Matthews<sup>1</sup>, Louanne Stewart<sup>1</sup>, Natasha McCullagh<sup>1</sup>  
<sup>1</sup>Northern Health And Social Care Trust, Antrim, United Kingdom, <sup>2</sup>UK Renal Registry, Bristol, United Kingdom

### Introduction

Despite advances in dialysis technology, mortality and morbidity remain significantly higher in the dialysis population. Middle molecules > 15dKa are not removed by high flux haemodialysis and these are known to be associated with cardiovascular disease, immunodeficiency and malnutrition.

HDF provides better clearances but is unsuitable for patients with sub-optimal access. Expanded haemodialysis using Medium Cut-Off (MCO) dialyzers such as Theranova allow substantial middle molecule clearance, without substitution fluid and standard dialysis access.

Our dialysis unit offered HDF to all patients however only 15-20% were suitable. Considering this we decided to convert all patients to Theranova. Previous studies on MCO dialyzers have focused on measuring middle molecule clearance with limited data on the impact on patients' lives. This study considers patient-reported outcome measures (PROMs) following conversion.

### Methods

All chronic haemodialysis patients (110) at our renal unit were converted to the Theranova dialyser over a 2-week period in April 2018. Baseline PROM/Patient Activation Measure data was collected from 89 patients using validated questionnaires (POS-S Renal, EQ5D-5L). Data was submitted to the renal registry for analysis. PROM data will be collected at Months 0, 3, 6,9 and 12; completing in April 2019. Additional information recorded for each patient includes recovery time from dialysis, haemoglobin, albumin and CRP levels.

### Results

Baseline data was collected on 89 patients and in 77 patients at month 3. The improvements in moderate/severe symptoms were: Feeling depressed 25%, poor appetite 23%, feeling anxious 66%, shortness of breath 20%, pain 22%, difficulty sleeping 19%, drowsiness 27%, itching 21% and lack of energy 10%. (Figure 1)

Patient-reported recovery time improved from 325 minutes to 238 minutes; further improvement is noted at month 6.

Haemoglobin and albumin levels were stable between months 0 and 3. There was no increase in CRP or rate of infection between months 0 and 3.

### Discussion

There is an increasing body of evidence on the use of MCO dialyzers to improve middle molecule clearance and reduce morbidity in chronic dialysis patients.

The Theranova dialyzer was well tolerated by all patients within the unit and staff reported that it was quicker and easier to use compared with HDF.

Initial PROM data suggests a reduction in moderate to severe symptom burden in this patient group.

Further comparison will be made with Month 6 data when analysis is complete and similar studies have shown sustained improvement. The fall in anxiety levels is notable but may be reflective of the listening aspect of the data collection itself.

Recovery time has improved in month 3 and again in month 6. Anecdotal evidence has been provided by several patients to confirm increased activity and energy levels following dialysis.

The stability of Haemoglobin, albumin and CRP in this group is reassuring given the theoretical concerns of increased albumin loss and increased infection rates.

We continue to collect data in this group and plan further analysis including comparison of dialysis vintage, dialysis access, erythropoietin use and hospital admission.