

## Abandoning the ‘One-Size-Fits-All’ Dialysis Prescription: Substantial Numbers of Patients Likely to Benefit?

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The 2019 Renal Association Clinical Practice Guidelines for Haemodialysis recognise the importance of residual kidney function (RKF) in determining outcomes (Fig 1). Hitherto, the most common approach to administering HD in the UK is the prescription of 3x weekly dialysis with sessional times between 3.5 and 4 hours while ignoring residual kidney function (RKF). Some dialysis providers employ the prescription of 3x4 hrs as a key performance indicator (KPI).

Rigid adherence to this one-size-fits-all approach does not recognise:

- the contribution of residual renal function (RRF) to volume control
- the contribution of RRF to solute removal
- the need to preserve residual kidney function
- that, for some, the goal of treatment is QoL not longevity

The Renal Association now supports a more nuanced approach whereby the duration of a dialysis session can be individualised around RKF. The aim is to exceed the minimum target level of small solute clearance using a composite of dialyser and native kidney clearances.

In 2009 our unit published a 19 yr. experience with incremental dialysis reporting that residual kidney function was an important determinant of survival (Ref 1). Our research team has recently reported shorter post-dialysis recovery times and improved short-term survival in centres practicing incremental vs conventional approaches to HD delivery (Ref 2). While monthly measurement of urea clearance in HD patients passing urine is expensive in terms of pathology costs and nursing time we have continued with this practice because our patients tell us they appreciate dialysing for a safe minimum time.

When the RA Guideline was published we decided to ascertain how many patients in a typical average size ‘stand-alone’ satellite facility had RKF sufficient to impact on their dialysis prescription i.e. in whom dialysis duration could be reduced while target eKt/V (combined dialysis + RKF) was still achieved. We thought this exercise may be instructive for facilities contemplating movement to an incremental approach. The QA results in a single month were reviewed.

Among the 90 patients in our facility 40 (44%) were anuric. 50 patients (56%) had residual kidney function (RKF), 34 pts having a urine urea clearance (KrU) >1 ml/min. 16 patients had a KrU > 2ml/min.

In patients passing urine, dialysis time (Td) ranged from 180 to 240 mins (mean 214 mins); inter-dialytic weight gain (IDWG) averaged 0.6 Kg. In anuric patients Td ranged from 180 to 270 min (mean 234 mins); mean IDWG was 1.7 Kg.

Our data suggests, in a typical satellite unit, tailoring dialysis dose to residual kidney function will likely allow at least half of patients to reduce dialysis time safely while still achieving recommended adequacy targets.