RSA Conference 2026

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Inspiring and Enabling:
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17–19 June 2026

Te Pae Christchurch
Convention Centre

Incremental Haemodialysis

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RSA Renal Society of Australasia

Te Pae
The Christchurch Convention Centre

What is Incremental Haemodialysis



Haemodialysis (HD) prescription is adjusted based on the patient's Residual Kidney Function (RKF) where patients has shorter /fewer dialysis treatment session.



Standard HD regimen(CARI, KDOQI, KDIGO)
Is defaulted to 4 -5 hours x 3 week – assumes no RKF (anuric patients).

Why Consider Incremental HD?

Benefits:

- Shorter HD sessions
- May reduce access complications
- Helps preserve remaining kidney function
- Fewer HD- related side effects
- Better patient quality of life

Why Consider Incremental HD?

Other Benefits:

- Reduced Cost
- Reduction in non-recyclable wastes
- Space availability within the Renal Unit – appointment days.

Incremental Haemodialysis

Challenges:

Requires frequent HD prescription changes

Regular urine collections needed

Risk of underdialysis if not monitored closely

Potential for fluid and electrolyte imbalance



Incremental Haemodialysis

Suitable patients must :

Understand HD options (patient information brochure provided)	Discuss risks & benefits with their Nephrologist	Be willing and able to perform regular timed urine collections	Accept ongoing HD prescription adjustments	Stable Nutrition - infrequent history of ↑K and ↑PO4

Incremental Haemodialysis

Patients NOT Suitable :

- No residual kidney function
- Severe cardiac failure
- Poor fluid, BP or phosphate control
- Malnutrition
- Poor adherence to treatment
- Unable or unwilling to perform timed urine collections
- Medically unstable

Incremental Haemodialysis

Measuring of Residual Kidney Function (RKF) Requires:

Blood Test - post HD urea and creatinine

Timed Urine Collection – from end of dialysis to beginning of the next dialysis (check urine volume, urea and creatinine)

Blood Test – pre HD urea, creatinine,CRP and B2 migroglubulin



Incremental Haemodialysis

Monitoring :

- Monthly - first 3 months
- Every 2 months - for the first year
- Then every 3 months thereafter
- Close monitoring if ↓urine output, ↑ potassium level
- European guidelines - total Std Kt/V

Incremental Haemodialysis

Haemodialysis Prescription Guide
Based on Residual Renal Urea Clearance (KrU)

<2 mL/min : Not suitable

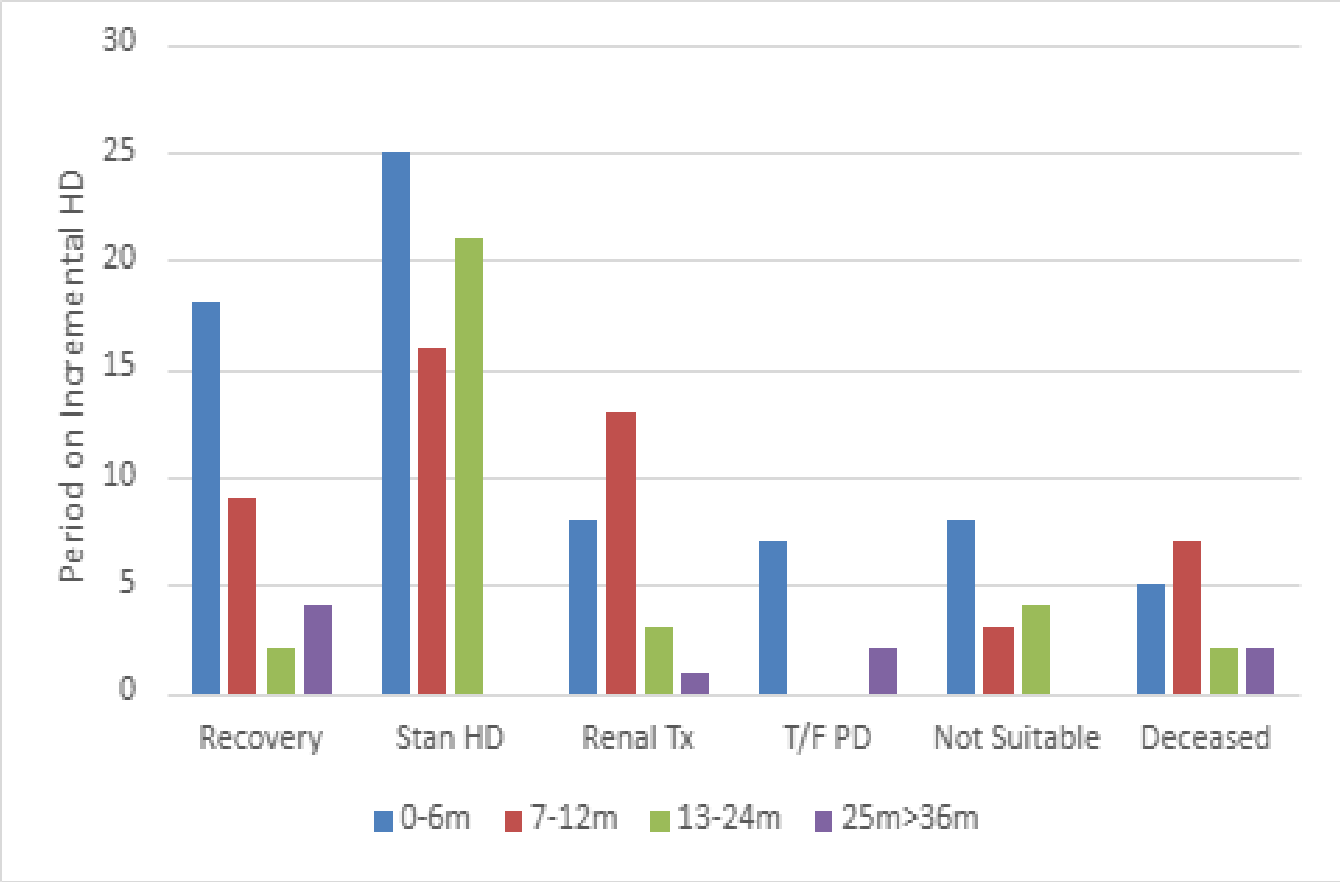
2-3 mL/min: 3hrs x 3/wk

3-8 mL/min: 4hrs x 2/wk

>8 mL/min: Wean off HD

Incremental Haemodialysis

Outcomes (What We See – 2018 – Dec 2025)



Outcome	0-6m	7-12m	13-24m	25m>36m
Recovery	18	9	2	4
Stan HD	25	16	21	
Renal Tx	8	13	3	1
T/F PD	7			2
Not Suitable	8	3	4	
Deceased	5	7	2	2

Incremental Haemodialysis

Current patients

1 Home Therapy	19 Satellite Dialysis	2 Acute Unit
3 Regional (Echuca Bairnsdale)	2 Other Hub	2 Private Dialysis Centre

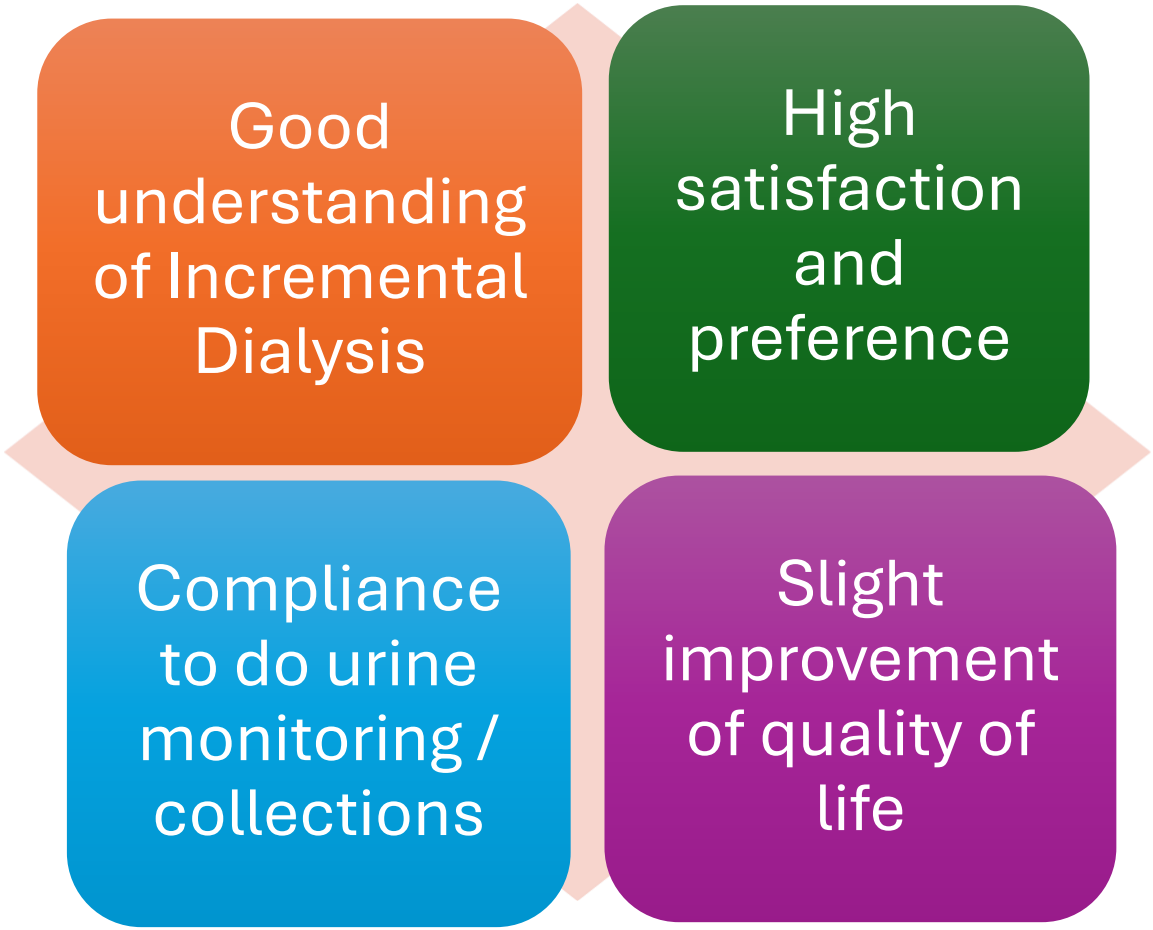
Incremental Haemodialysis

29 Total Recoveries 1month-18 months



Incremental Haemodialysis

Patient Experience



Incremental Haemodialysis

Austin Health Evidence Summary

Safe and effective in selected patients.

Helps identify renal recovery potential.

Can reduce dialysis exposure appropriately.

To our knowledge Austin Health is the first Australian Dialysis Service to implement a structured Incremental HD program based on measuring and monitoring RKF to support an individualized HD prescription.

Key Takeaways for Nurses:

- Individualised Dialysis
- Preserve Kidney Function where possible
- Accurate urine collection is essential
- Monitor closely for adequacy
- Patient selection is important



THANK YOU

Any Questions?

Incremental Haemodialysis

Referrences:

- Wong, J, Vilar, E, Davenport, A, Farrington, K: Incremental haemodialysis. *Nephrol Dial Transplant,* 30**:** 1639-1648, 2015.
- Daugirdas, JT, Greene, T, Rocco, MV, Kaysen, GA, Depner, TA, Levin, NW, Chertow, GM, Ornt, DB, Raimann, JG, Larive, B, Kliger, AS, Group, FHNT: Effect of frequent hemodialysis on residual kidney function. *Kidney Int,* 83**:** 949-958, 2013.
- Kalantar-Zadeh, K, Unruh, M, Zager, PG, Kovesdy, CP, Bargman, JM, Chen, J, Sankarasubbaiyan, S, Shah, G, Golper, T, Sherman, RA, Goldfarb, DS: Twice-weekly and incremental hemodialysis treatment for initiation of kidney replacement therapy. *Am J Kidney Dis,* 64**:** 181-186, 2014.
- Tattersall, J, Martin-Malo, A, Pedrini, L, Basci, A, Canaud, B, Fouque, D, Haage, P, Konner, K, Kooman, J, Pizzarelli, F, Tordoir, J, Vennegoor, M, Wanner, C, ter Wee, P, Vanholder, R: EBPG guideline on dialysis strategies. *Nephrol Dial Transplant,* 22 Suppl 2**:** ii5-21, 2007.
- National Kidney, F: KDOQI Clinical Practice Guideline for Hemodialysis Adequacy: 2015 update. *Am J Kidney Dis,* 66**:** 884-930, 2015.

Incremental Haemodialysis

References:

- https://kidney.wiki/adequacy-calculator/
- https://medcalculators.stanford.edu/dialysis
- https://arep.hhdcalculator.com/
- http://www.hdcn.com/calcf/ley.htm
- https://aktn.org.au/inch-hd/
- https://clinicaltrials.gov/study/NCT04932148