

A Novel Education Strategy to Improve Self-Care of Fluids in Haemodialysis

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Background

Haemodialysis (HD) patients find it challenging to adhere with fluid restrictions and, although studies have shown positive results from self-management interventions,¹ it is estimated that 11-35% of patients struggle with adhering to the requisite fluid restrictions for HD.² Evidence suggests that teach-back, a systematic technique involving patients to literally teaching back to the educator what they have learnt, assists with increasing self-management behaviours leading to better adherence to treatment.³

Aim

To assess whether teach-back embedded into a structured Fluid Watchers Program would improve self-care of fluid intake.

Methods

- **Design:** Prospective pre/post with longitudinal follow up (figure 1)
- **Inclusion criteria:** >18 years of age; HD; able to understand English. Exclusion criteria: cognitive impairment; residing in a nursing home or institution (as generally do not perform self-care); serious life-limiting comorbidity or palliative care
- **Intervention:** Fluid Watchers Program delivered 3 times during HD; teach-back 2 and 4 weeks later; topics: signs, symptoms and causes of fluid overload, importance of self-managing fluid and salt intake (recording fluid intake, checking for symptoms of fluid overload, weight daily, reading labels for salt content), and every day problem-solving strategies; program images modified for male/female patients (figure 2)
- **Data:** Demographics, and pre/post HD assessment (BP, weight) for every HD session over 12 weeks
- **Instrument :** Modified with permission Self-Care of Heart Failure Index⁴ → Self Care Index (SCI); 22 items; 3 sub-scales
 - Maintenance - how well patients adhere to recommendations aimed at avoiding fluid overload
 - Management - how well patients who have had difficulties with fluid overload have dealt with these difficulties
 - Confidence - how confident patients are that they can self-manage their disease.

FIGURE 1: 12-week Fluid Watchers Program Intervention and Study Timeline

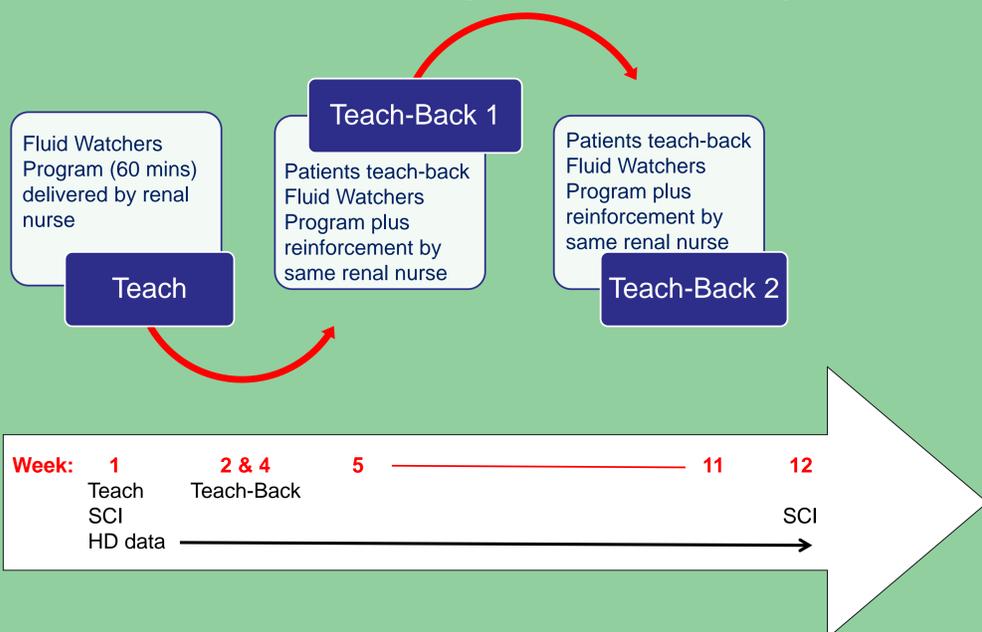
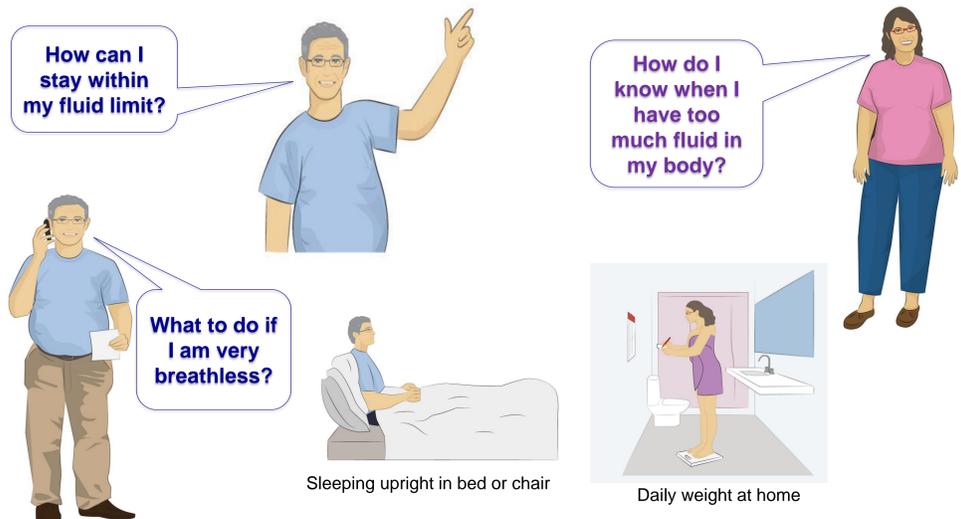


Figure 2: Fluid Watchers Program - Selected Figures



Results

- Twenty five patients aged between 28-85 years completed the entire intervention. Most were male (56%), and had received HD between 1-156 months.
- There were significantly improved mean scores on all sub-scales of the SCI (table 1).
- There was no statistically significant change in intradialytic weight gain (IDWG) or mean arterial pressure (MAP) across five time points (baseline, immediately post-intervention, immediately post-Teach-Back1, immediately post-Teach-Back2, and 12 weeks later; table 2).

Table 1: Self Care Index change between baseline and week 12

Sub-scale	Time – Mean (SD)		t	d	p
	Baseline	12 weeks			
Maintenance	62.26 (16.67)	72.26 (15.48)	3.59	.72	.001*
Management	59.38 (15.45)	80.63 (16.57)	2.84	1.00	.025*
Confidence	Time – Median		z	r	p
	Baseline	12 weeks			
Confidence	66.72	77.84	2.21	.44	.027*

* $p < .05$

Table 2: Intra-dialytic weight gain (IDWG) and mean arterial pressure (MAP) across different time points

	Time – Mean (SD)					F	η^2	p
	Baseline	Post-intervention	Post-TB1	Post-TB2	12 week follow-up			
IDWG	2.46 (1.19)	2.24 (1.16)	2.26 (.96)	2.40 (.91)	2.49 (1.12)	.71	.03	.542
MAP	Time – Median					χ^2	p	
	8.00	7.00	6.89	9.67	10.56			

* $p < .05$

Implications for Practice

- ❑ Due to the prolonged contact with patients, renal nurses are in an ideal position to support patient self-care activities.
- ❑ Teach-back is an effective strategy to assist with supporting patients to comprehend complex information
- ❑ Fluid Watchers Program can be used to increase patients' confidence to self-care with fluid intake and monitor at home for signs of fluid overload.
- ❑ It is a brief nurse-delivered program that is suitable for incorporation into routine HD treatment.

References

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4. Riegel B, et al. 2004. Psychometric testing of the self-care of heart failure index. *Journal of Cardiac Failure*; 10:350-360.