

Dialysis results from the Australian PINOT study

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- › Guidelines for ‘Acceptance onto dialysis’
 - Refer to a nephrologist eGFR < 30ml/min/1.73m²
 - Allow 3-6 months for pre-dialysis education, access, planned dialysis start or conservative care
- › Professional consensus UK National framework
 - 12 months optimal



- › 30% of patients were not presented with any treatment options^{1,2}
 - 48% received information < 1 month before starting
- › Systematic review of 18 studies³
 - Too sick, or occupied with other health problems / procedures
- › Evaluation of information provision not previously been reported



Transplant



Peritoneal dialysis



Home
haemodialysis



Centre
haemodialysis



Conservative
care

¹ Mehrotra R et al (2005) *Kidney International*. Vol 68 pp 378–390; ² Finklestein FO et al (2008) *Kidney International*. Vol 74 pp 1178–1184
³ Morton R et al (2010) *BMJ*. Vol 340 C112.

- › Determine the effect of patient and unit characteristics on the type and timing of information presented

- › Examine the associations between patient and unit characteristics on initial treatment modality
 - Dialysis access

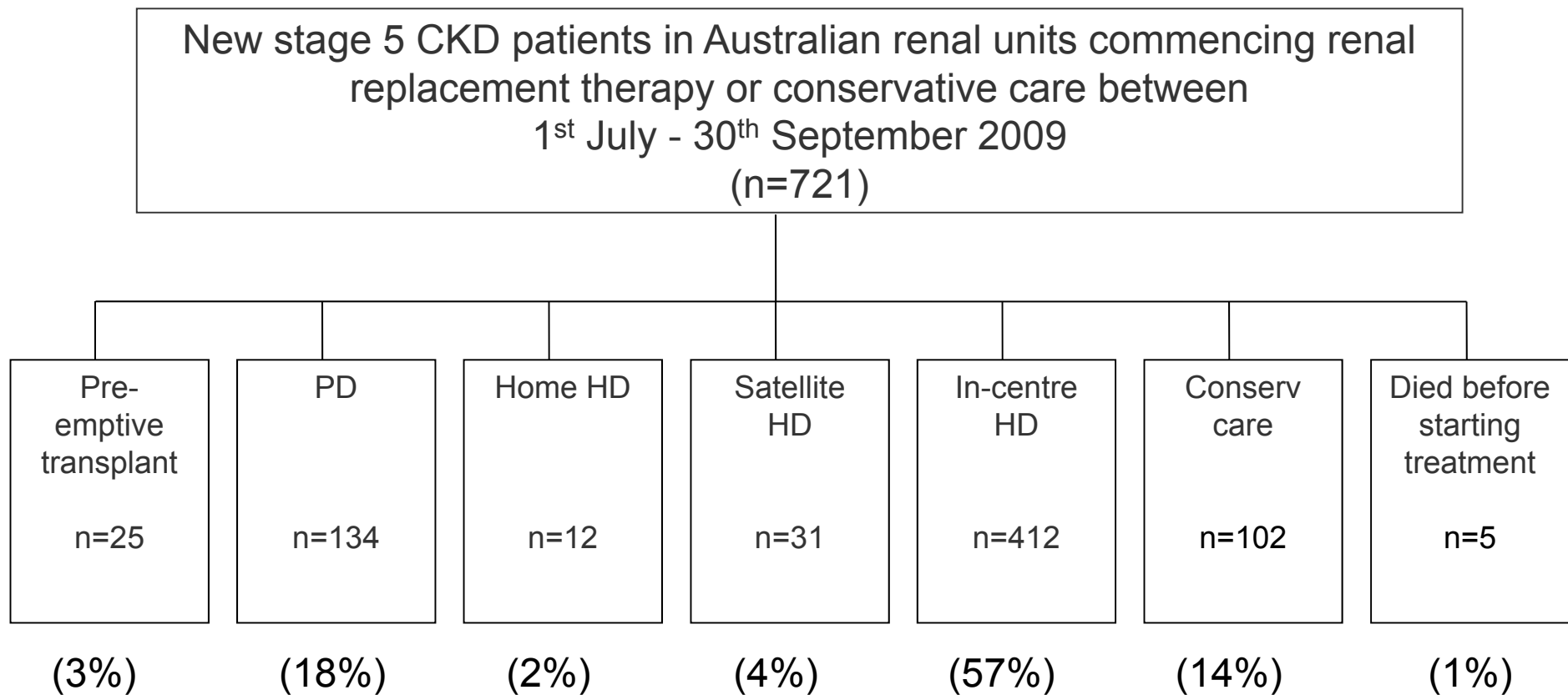
- › Prospective observational study of new patients over a 3 month period
- › All public and private Australian units
- › Web-based questionnaire to clinicians (www.limesurvey.com)
- › Source data: pre-dialysis databases, letters, patient's notes
- › Quality assurance
 - source data verification
 - 2nd rater
- › Ethical approval #11261
- › Clinicaltrials.gov identifier: NCT01298115

- › Logistic regression - to estimate the effects of patient and unit characteristics
 - the likelihood of provision of information prior to treatment
 - initial treatment commenced
 - type of dialysis access

- › One sample binomial test - to assess proportion of patients not receiving information prior to treatment from a previously reported value of 30%

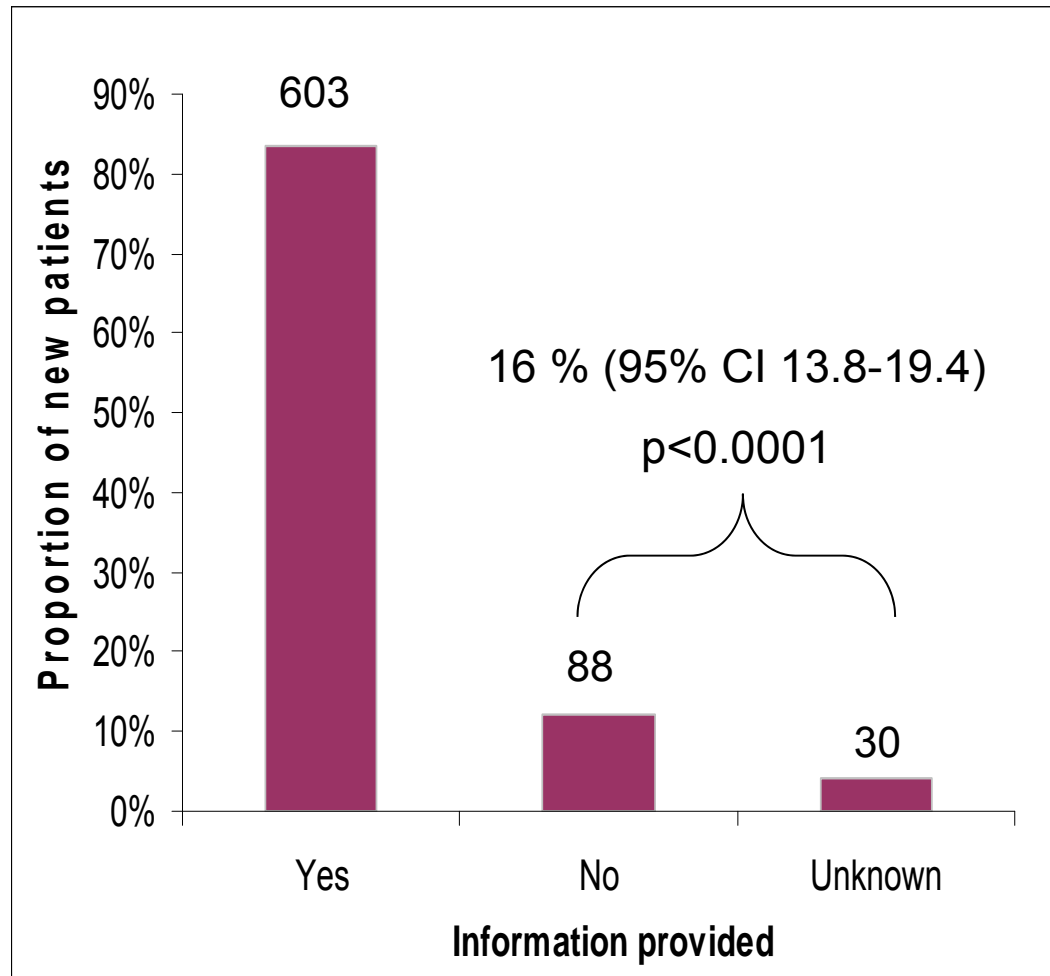
- › Results presented as odds ratios (OR) with 95% CI
 - SAS v 9.2

66 of 73 units participated ~95% of all RRT patients



Characteristic	Description	n	(%)
Age (years)	Median (IQR)	67 (53-77)	
Males		423	(59)
Health insurance	Public only	479	(66)
	Private	145	(21)
	DVA	24	(3)
English spoken at home		573	(79)
Interpreter required		70	(10)
Time known to a nephrologist	< 3 months	157	(22)
	3 -12 months	126	(17)
	1 - 2 years	132	(18)
	> 2 years	306	(42)

Results: New patients receiving information about any treatment option prior to starting

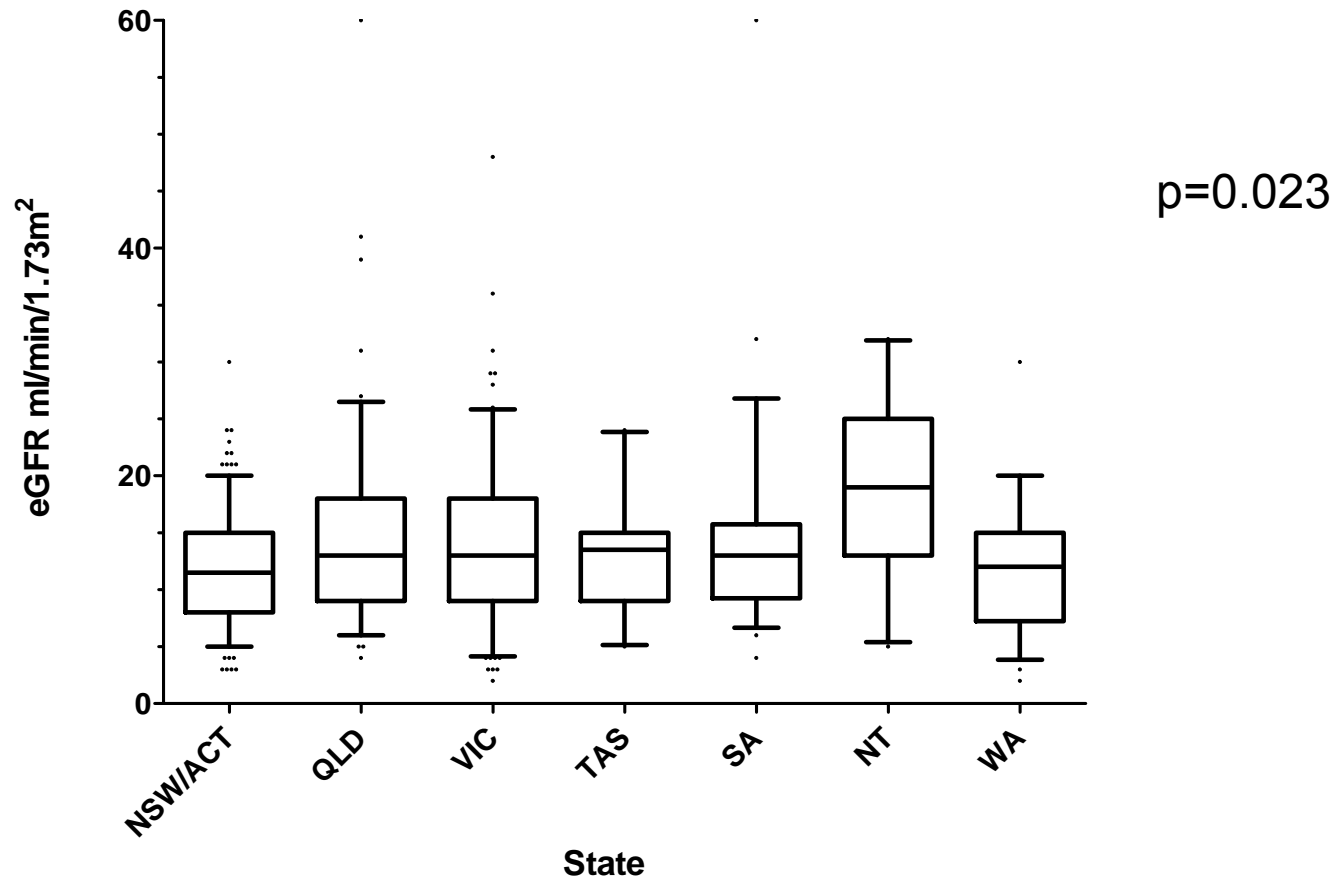


- › Known to a nephrologist for more than 3 months
(OR 7.29, 95%CI 3.86-13.79, $p < 0.001$)
- › Treated in small units
(OR 2.40, 95%CI 1.26-4.60, $p < 0.003$)

Significantly less than 30% reported by others.

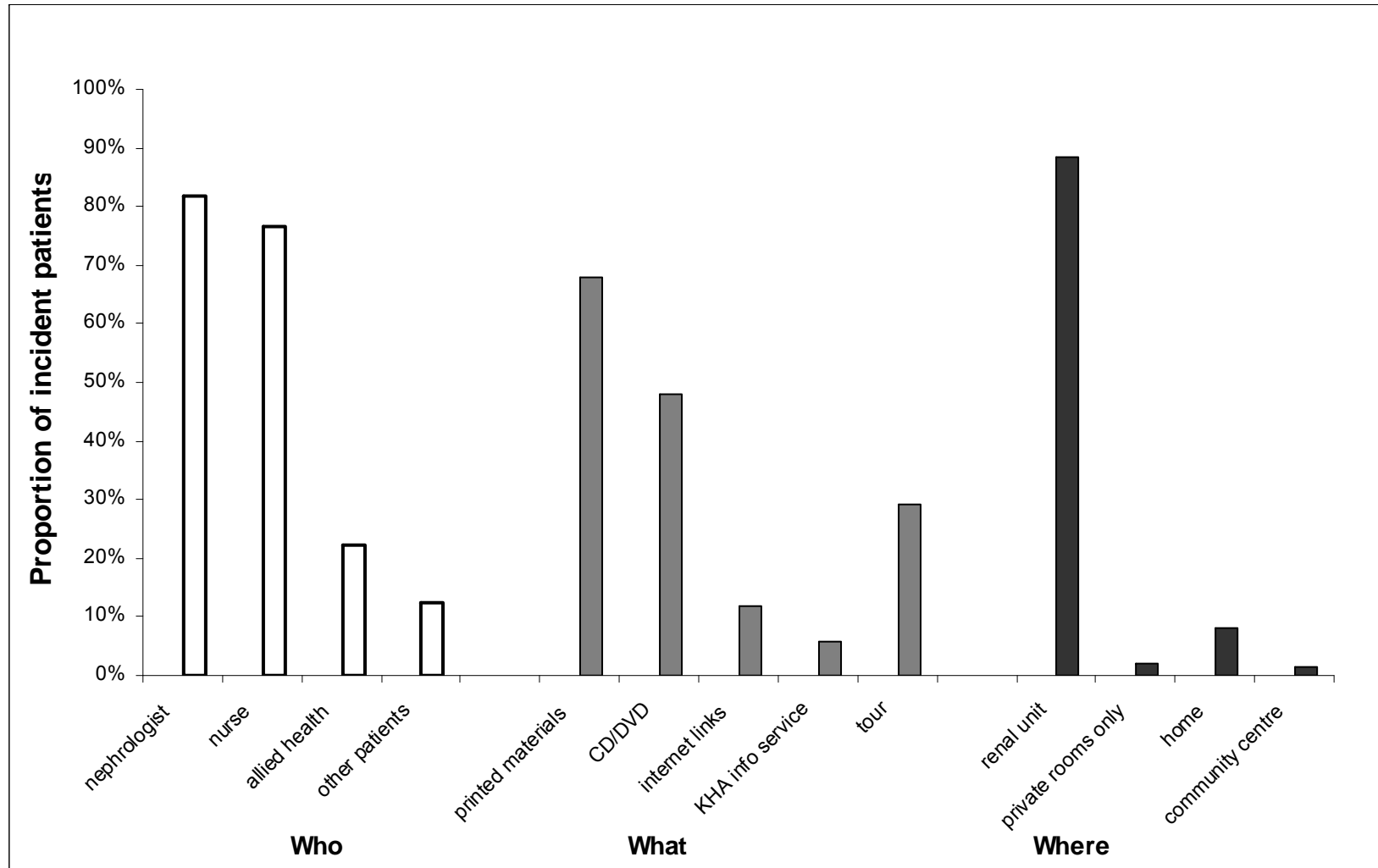
(Kappa 89%)

- › Mean eGFR was 13.3ml/min/1.73m² (95%CI 12.7-13.8)
- › Mean serum creatinine was 449umol/L (95%CI 431-467)

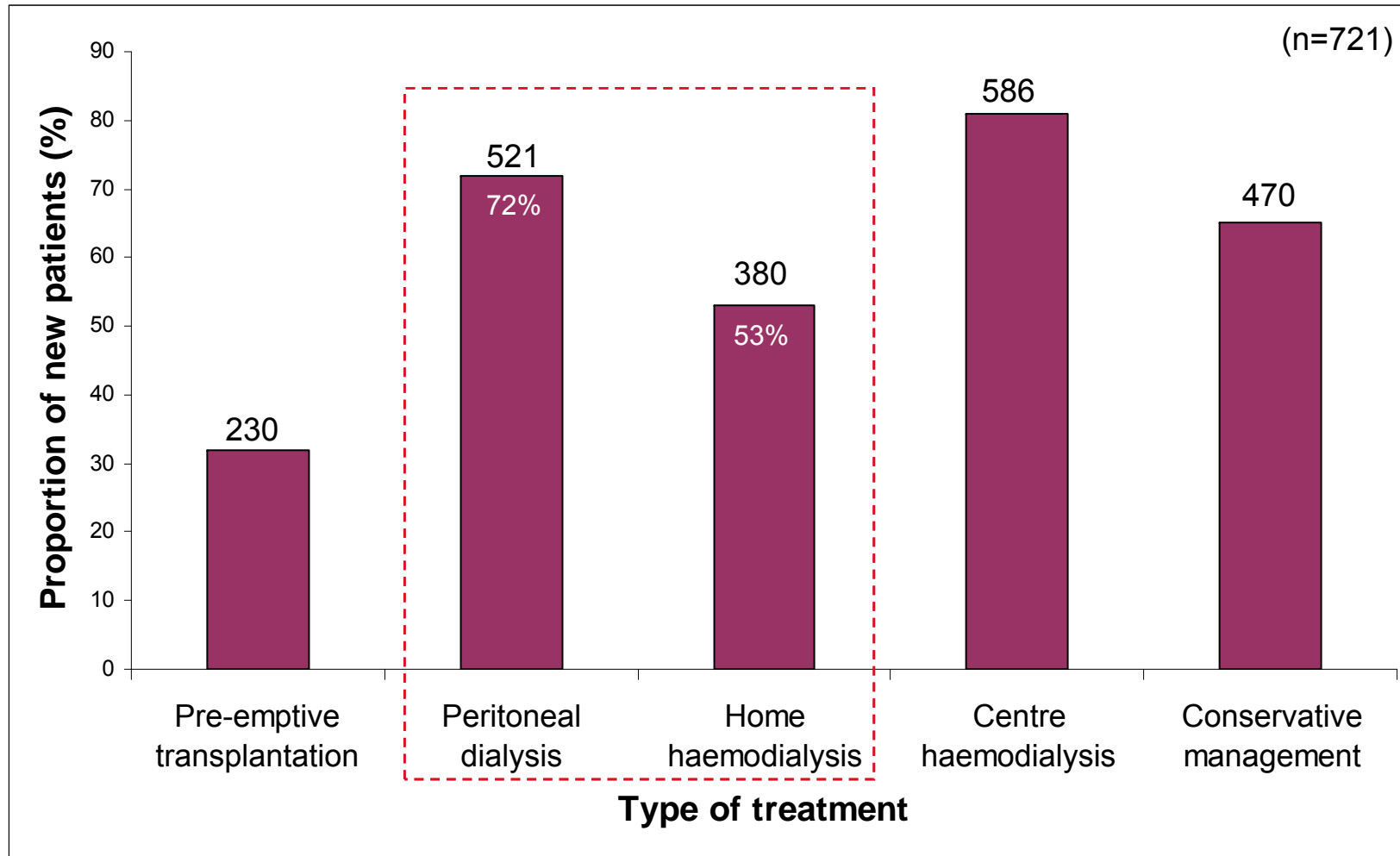




How information was provided



Results: Proportion presented with home dialysis option



Primary reason given for patients not receiving information about PD and Home HD

Treatment Option	Acute	Med/Surg Contra-indication	Housing*	Low literacy	No support†	Psycho-social‡	Refusal	Not available [∞]
PD	1	30	4	2	-	2	3	2
Home HD	-	16	18	2	10	5	1	-

* Insufficient water or power supply, extremely remote location, poor hygiene, multiple pets, renting accommodation, no fixed address, and residential aged care facility

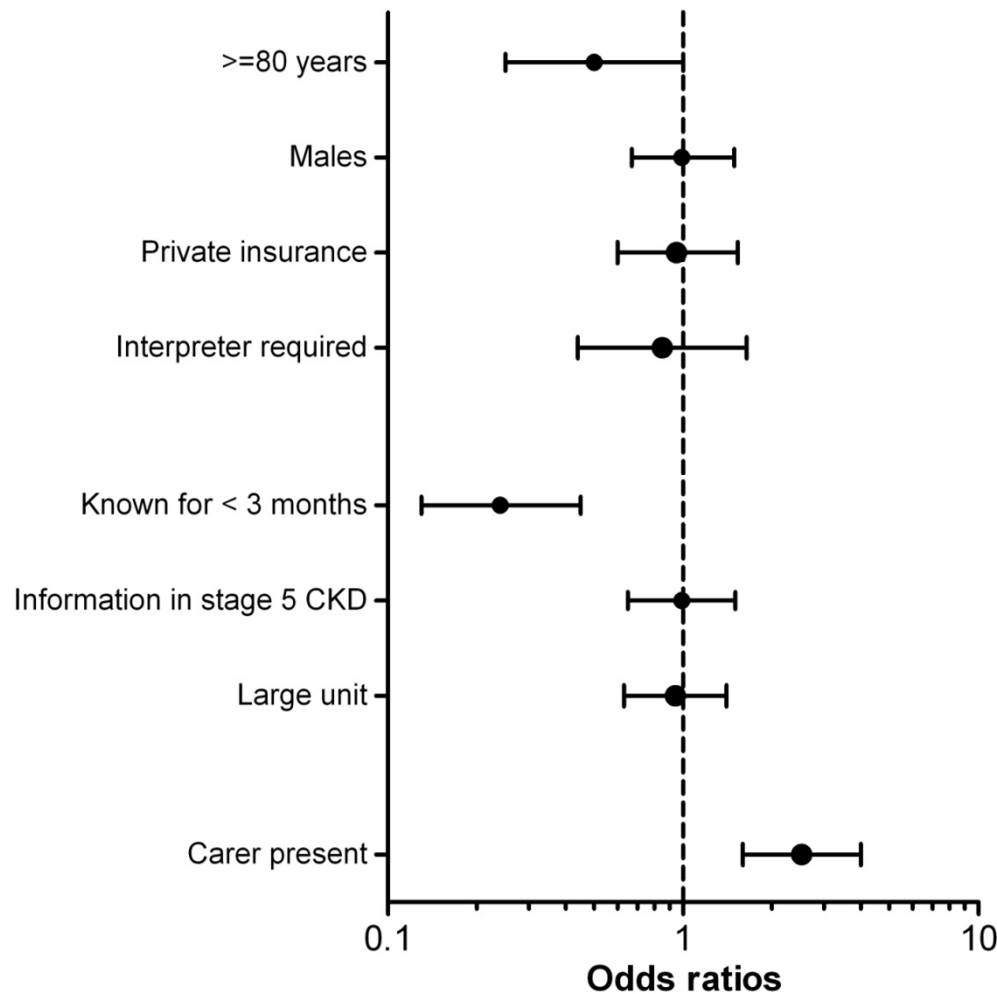
† No support person / caregiver

‡ Psychiatric illness eg. bipolar disorder, schizophrenia

[∞] No peritoneal dialysis home training service

Factors associated with commencing home dialysis (PD or HD)

Centre HD vs Home dialysis



Age

Sex

Insurance

Interpreter

Time known ($p < 0.001$)

Timing of information presentation

Size of unit

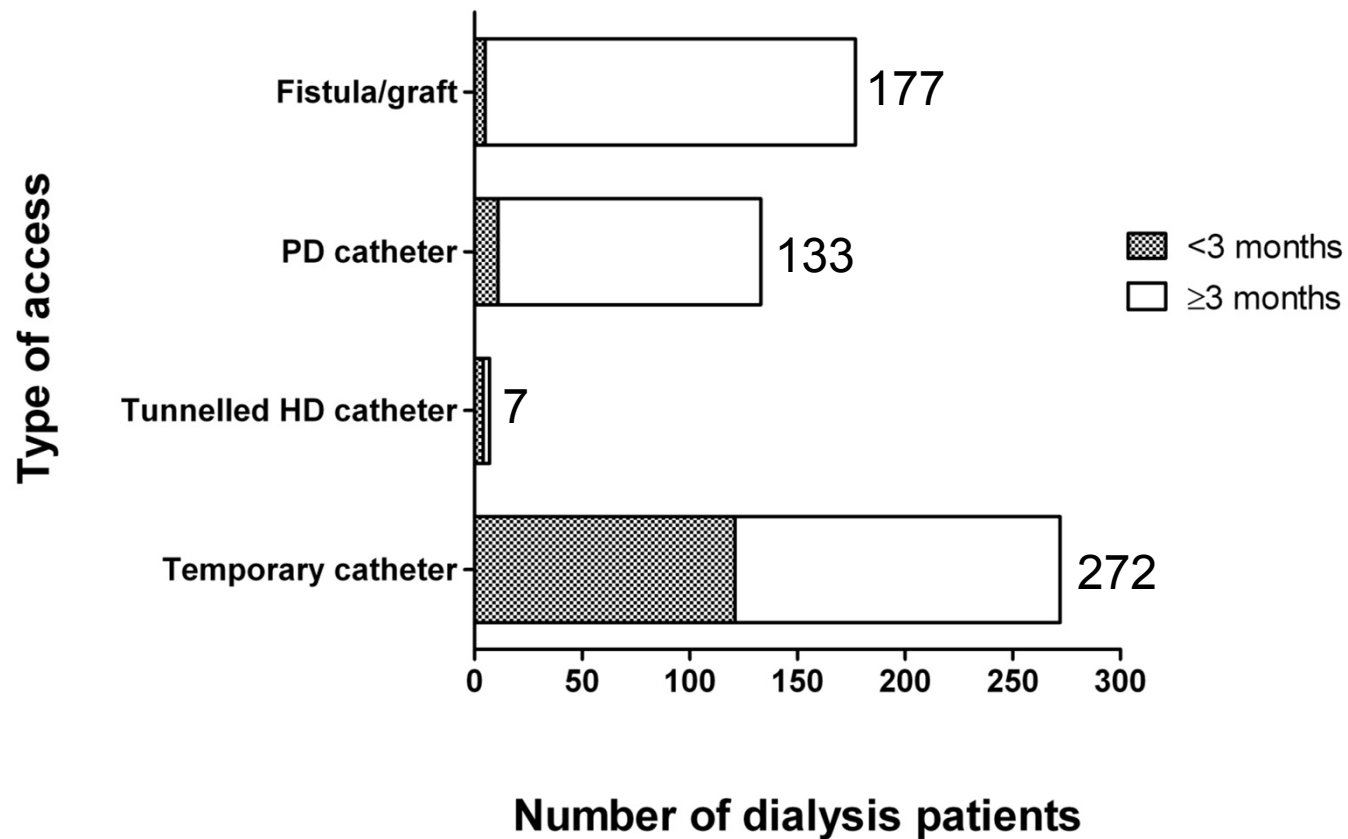
Carer present ($p < 0.001$)

Current treatment and planned treatment in 6 months time

Treatment modality	Initial modality at time of study		Projected modality in 6 months		Direction and magnitude of projected change
	n	(%)	n	(%)	
Transplant	25	(3)	40	(5)	+2%
Peritoneal dialysis	134	(18)	210	(28)	+10%
Home haemodialysis	12	(2)	56	(8)	+6%
Centre haemodialysis	443	(62)	332	(44)	-18%
Conservative care	102	(14)	111	(15)	+1%

Dialysis access and late referral

n=589



- › Incident patients measured over a 3 month period
 - › No evaluation of the *effectiveness* of information
 - › Multi-centre study with 66 of 73 Australian renal units participating
 - › No patient recall bias
 - › Excellent inter-observer agreement
-

- › The majority of incident dialysis patients in Australia are presented with information about their treatment options prior to starting treatment

- › 75% receive information about home dialysis options

- › Information is first presented on average rather 'late'
 - Except in the Northern Territory

- › There is a lot of planned ‘switching’ of modalities
- › Rates of temporary dialysis access are high, even in patients known for > 3 months



Questions and Discussion

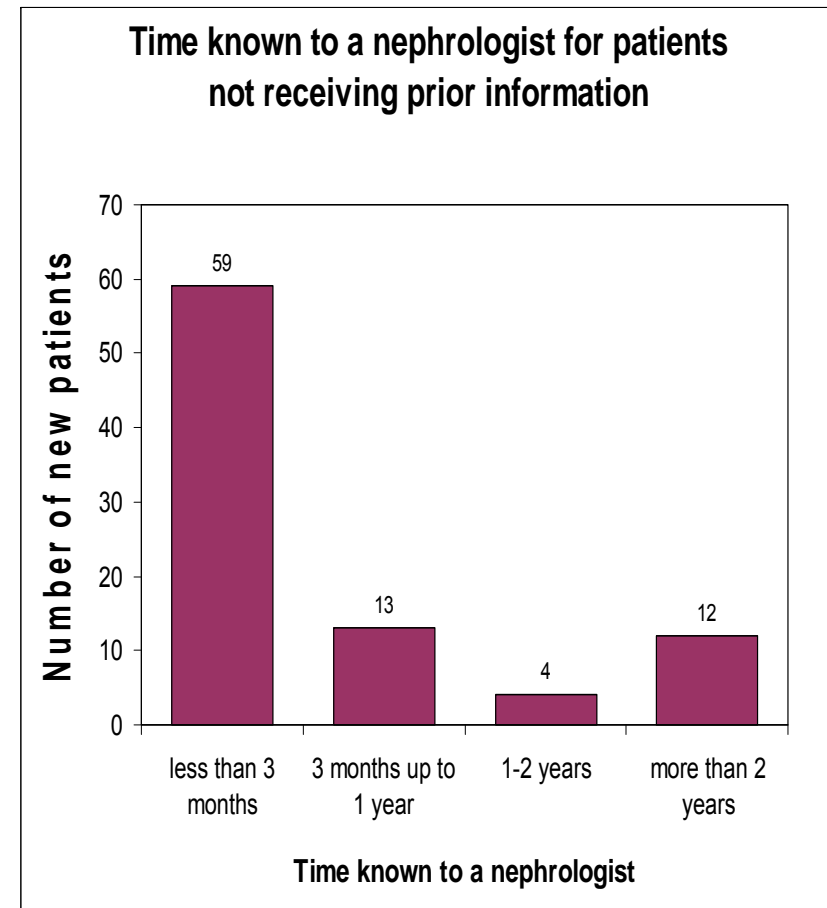
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Prevalent dialysis patients at 31st December 2009

Dialysis modality	n	(%)
Peritoneal dialysis	2177	(21)
Home haemodialysis	963	(9)
Satellite haemodialysis	4850	(47)
Hospital haemodialysis	2351	(23)
TOTAL	10,341	(100)

Results: Characteristics associated with receiving information prior to starting

- › Known to a nephrologist for more than 3 months
(OR 7.29, 95%CI 3.86-13.79,
p <0.001)
- › Treated in small units
(OR 2.40, 95%CI 1.26-4.60,
p <0.003)
- › Of those who were known for > 3 months
 - 7 refused
 - 6 not referred
 - 4 not for dialysis
 - 3 transferred
 - 2 remote, 2 dementia



Number of patients receiving information prior to commencing treatment by initial treatment type

Info prior	Type of treatment											
	Pre-emptive transplant		Peritoneal dialysis		Home haemodialysis		Centre-based haemodialysis		Conservative care		TOTAL	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Yes	25	(100)	133	(99)	12	(100)	341	(77)	87	(85)	598	(84)
No	0	(0)	1	(1)	0	(0)	102	(23)	15	(15)	118	(16)
TOTAL	25	(100)	134	(100)	12	(100)	443	(100)	102	(100)	716*	(100)

* The 5 patients who died before starting planned treatment were excluded