

Older Adults Functional Status and Symptom Burden in the Last 12 Months of Life

Abdul Mueez Khalil¹, Louise Purtell^{1,2}, Laura Austin¹, Ilse Berquier¹, Ann Bonner^{1,3}, Helen Healy^{1,4}, Kirsten Hepburn^{1,4}

¹Kidney Health Service, Metro North Hospital and Health Service, Brisbane, Queensland,

²Research Development Unit, Caboolture Hospital, Caboolture, Queensland,

³School of Nursing and Midwifery, Griffith University, Southport, Queensland,

⁴Faculty of Medicine, University of Queensland, Herston, Queensland

Metro North
Health



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA



BACKGROUND

People with advanced kidney disease, particularly older people, have high symptom burden and mortality that significantly impacts on quality of life^{1,2}. It is known that kidney supportive care (KSC) services that focus on symptom control and patient-centred care improve individual symptom burden among patients on conservative and dialysis pathways³. KSC services aim to address palliative care needs in this cohort.

AIM

To examine symptom burden and functional status of older people with advanced kidney disease known to a KSC service in the last 12 months of life.

METHODS

Retrospective analysis of adults ≥ 75 years who died between February 2017 and March 2024 who were known to KSC for >12 months prior to death and were also reviewed in the 12 months prior to death. If patients were discharged from KSC, only patients discharged to a nursing home or palliative care service were included.

Demographics, disease data and treatment pathway were extracted from the medical records. Resource Utilisation Group Activities Daily Living (RUG-ADL), Australia-modified Karnofsky Performance Status (AKPS) and integrated Palliative Care Outcome Scale for Renal patients (IPOS-Renal) at 12 months (± 60 days) and within the last 3 months (± 10 days) prior to death were extracted.

Data were analysed descriptively; inter-group differences were compared using independent t-test and Mann-Whitney U test and intra-group differences were compared with paired samples t-test and Wilcoxon signed-rank test.

RESULTS

- Eighty-six people included – 36% female, mean age = 81.8 years (SD 4.2), 79.1% were on a conservative pathway.
- Mean Charlson Co-morbidity Index was 7.9 (SD 1.7) and mean eGFR at referral was 16.6 mL/min/1.73m² (SD 6.7 mL/min/1.73m²).
- 77.8% of patients withdrew from haemodialysis and 38.8% of patients were discharged to palliative care in their last year.

- RUG-ADL:** Higher 3 months prior to death vs 12 months (4 vs 6, $p=0.02$) in the 35 people with data at both 12 & 3 months.
- APKS:** Lower 3 months compared to 12 months prior to death (49.8 vs 57.1, $p<0.001$) in the 36 patients with recorded data.
- IPOS-renal:** No significant difference at 12 months compared to 3 months prior (19.9 v 20.7, $p=0.721$) in the 23 people with recorded data at both time points.

- There was no significant difference between the conservative and dialysis populations for RUG-ADL, AKPS and IPOS-renal at both 12 and 3 months.

Table 1: Patient demographics

Characteristics	Overall	Dialysis	Conservative	p-value
Total number of patients, n (%)	86	18 (20.9)	68 (79.1)	
Age at referral*	81.8 (4.2)	79.2 (4.1)	82.5 (4)	0.003
Gender, female, n (%)	31 (36)	3 (16.7)	28 (41.2)	0.095
Pathway at Referral				
Conservative, n (%)	49 (57)	-	49 (72.1)	
CCHD, n (%)	15 (17.4)	15 (83.3)	-	
General OPD, n (%)	19 (22.1)	-	19 (27.9)	
PD, n (%)	2 (2.3)	2 (11.1)	-	
Home HD, n (%)	1 (1.2)	1 (5.6)	-	
Charlson Co-morbidity Index*	7.9 (1.7)	7.7 (2.5)	7.9 (1.4)	0.764
Withdrawal from HD in last year, n (%)	14 (77.8)	14 (77.8)	-	
Discharged to palliative care, n (%)	33 (38.8)	11 (61.1)	22 (32.9)	0.054

*General OPD = patients that had not chosen a treatment pathway

*mean (SD), ^median (IQR)

Table 2: Functional status and symptom burden at 12 and 3 months of life

Outcomes	Overall	Dialysis	Conservative	p-value
Resource Utilisation Group Activities Daily Living (RUG-ADL)				
12 months before death (median (IQR)) (n=63)	4 (4-5)	4 (4-4.25)	4 (4-5.5)	0.531
3 months Before death (median (IQR)) (n=46)	6 (4-8.5)	6 (6-10)	6 (4-9)	0.286
p-value	0.02	0.059	0.008	
Australia-modified Karnofsky Performance Status (AKPS)				
12 months before death (mean (SD)) (n=63)	57.1 (7)	56 (7)	57.4 (7.1)	0.581
3 months before death (mean (SD)) (n=47)	49.8 (8.2)	52 (4.2)	49.2 (8.9)	0.166
p-value	<0.001	0.374	<0.001	
Integrated Palliative Care Outcome Scale for Renal (IPOS-Renal)				
12 months before death (mean (SD)) (n=56)	19.9 (10.2)	20.1 (13.3)	19.9 (9.8)	0.949
3 months before death (mean (SD)) (n=33)	20.7 (10.2)	26.2 (10.8)	19.7 (10)	0.194
p-value	0.721	-	0.721	

DISCUSSION/CONCLUSION

There is significant symptom burden in this population in the months before death which is comparable with current literature⁴. However, symptom burden largely remained stable in the last 12 months of life likely indicating benefit of KSC in the cohort. As expected, functional status declined closer to death.

Given the retrospective nature of the study and unpredictability of death, many data points were missing which limited the study. Larger, prospective studies are required to further expand on trends described.

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