Cape York Kidney Care – Reducing Dialysis in Western Cape York

Dr. Andrea Miller

Rural Generalist – AST Adult Internal Medicine (FRACGP/FARGP)

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Clinician Researchers:

Dr. N. Pink, N. Uink, K. Withers

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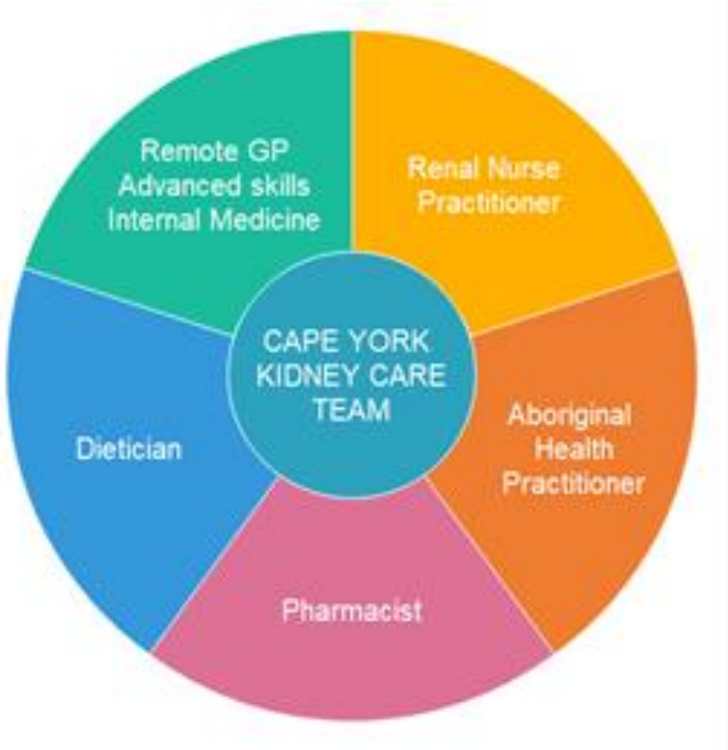
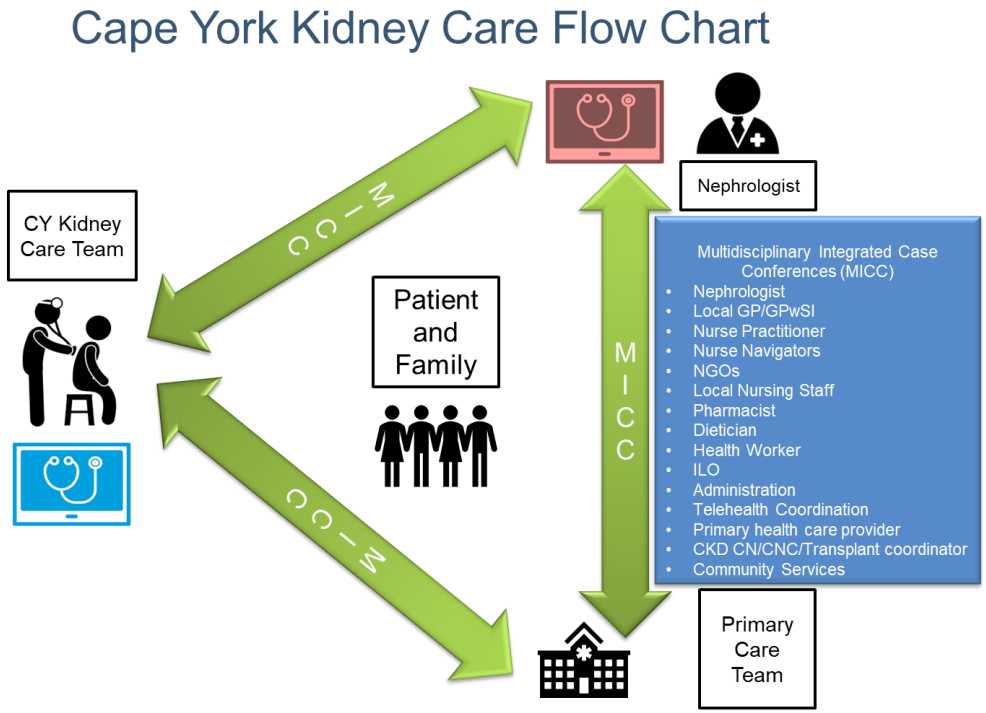
Aim

To determine the impact of a multidisciplinary integrated outreach service (Cape York Kidney Care) for management of chronic kidney disease on the rate and type of dialysis starts in western Cape York, Queensland.

Background – Cape York Kidney Care

A team approach to addressing complex health needs – ‘yarning style’ consultations





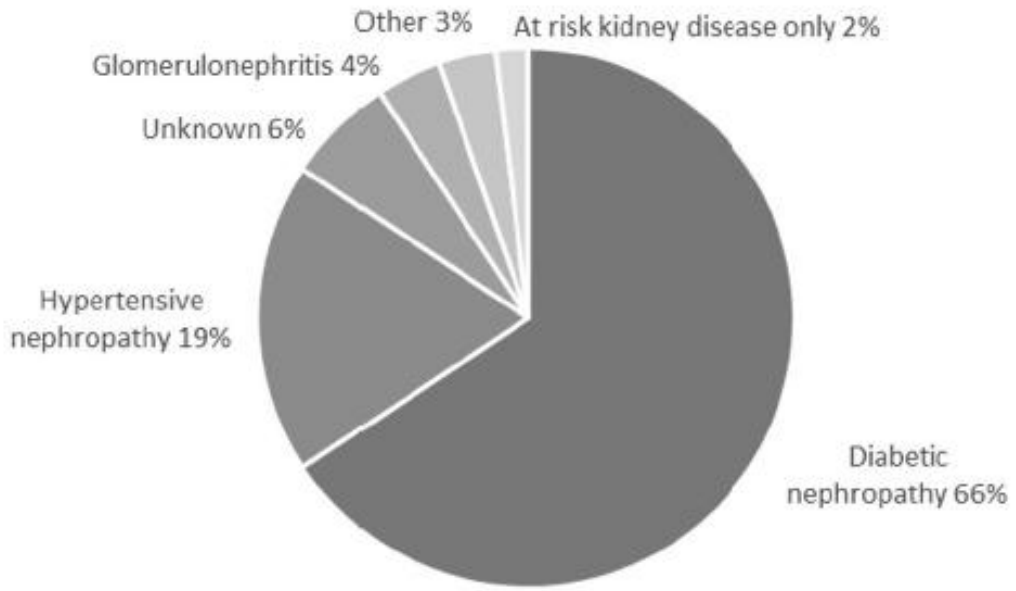
Nephrology advice through videoconferencing with CYKC team and members of primary care team

Background - Patient characteristics

Table 1 Demographic and clinical characteristics of clients in the first twelve months of service n = 204

Demographics	**N (%)**
Sex	
Male	94 (46)
Female	110 (54)
Age	
18–34	14 (7.3)
35–49	36 (17.7)
50–64	97 (47.5)
> 65	56 (27.5)
Ethnicity	
Aboriginal	153 (75)
Torres Strait Islander	14 (6.9)
Aboriginal and Torres Strait Islander	19 (9.3)
Non-Indigenous	8 (3.9)
Non-Indigenous (Other ethnic minority)	8 (3.9)
Unknown	2 (1)
Comorbidities	**N (%)**
Type 2 Diabetes	151 (74)
Hypertension	185 (91)
Cardiovascular disease	55 (27)
Hypercholesterolaemia	159 (78)
Clinical characteristics	**Mean (range)**
uACR (mg/mmol)†	140.2 (0.3–1300)
eGFR (mL/min/1.73m2)	61 (5 - >90)
Hba1c (%)§	8.6 (5–15.2)
Hba1c (mmol/mol)	70 (30 - >108)
Systolic Blood Pressure (mmHg)	139 (90–223)

†Urine Albumin-to-Creatinine Ratio uACR (n = 162), § Diabetic cohort only (n = 151); Hypertension (n = 177 previously diagnosed) and (n = 8 new diagnoses) with systolic blood pressure > 130 at baseline; Hypercholesterolaemia (n = 125 previously diagnosed) and (n = 34 new diagnoses) with total cholesterol over 5 mmol/L.



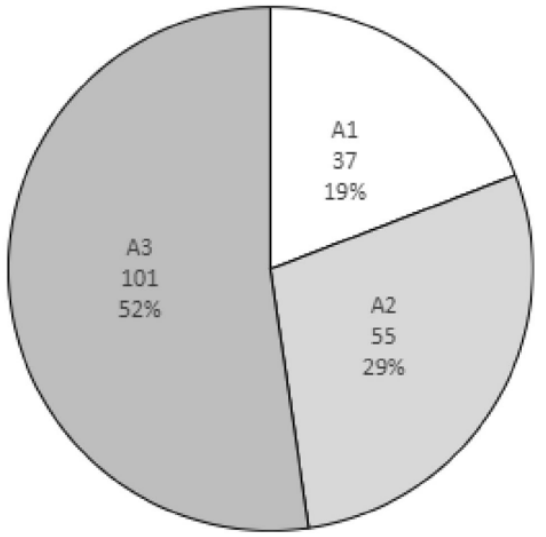


Fig. 5 Baseline albuminuria range for people accessing CYKC Service (n = 193). A1 No albuminuria (uACR < 3.0 mg/mmol); A2 Moderately increased albuminuria (uACR > 3.0–29 mg/mmol); A3 Severely increased albuminuria (uACR > 30 mg/mmol)

Miller, A., Brown, L., Tamu, C. *et al.* Cape York Kidney Care: service description and baseline characteristics of a client-centred multidisciplinary specialist kidney health service in remote Australia. *BMC Health Serv Res* **23**, 907 (2023). https://doi.org/10.1186/s12913-023-09887-6

Cape York Kidney Care

GOALS OF SERVICE

1. **Improve consumer and family understanding** of kidney disease and its management and empower self-management of health through education and shared-decision making.
2. Provide information in an **accessible and culturally safe** manner.
3. Provide a **Specialist service in community** within the primary care setting
4. Facilitate **longitudinal care** of people with CKD within the community.

Kidney **Check**

NO KIDNEY DISEASE

KIDNEY DISEASE

STAGE 1
eGFR > 90

STAGE 2
eGFR 60-89

STAGE 3
eGFR 30-59

STAGE 4
eGFR 15-29

STAGE 5
eGFR <15

Urine Protein

GOOD = under 10	
Before	Now

TIP – Healthy blood pressure and blood sugar will reduce urine protein

Blood Sugar

GOOD = under 8mmol (Hba1c <6.5%)	
Before	Now

TIP – You can lower sugar by swapping surgery drinks to diet/no sugar drinks

Blood Pressure

GOOD = under 130/80	
Before	Now

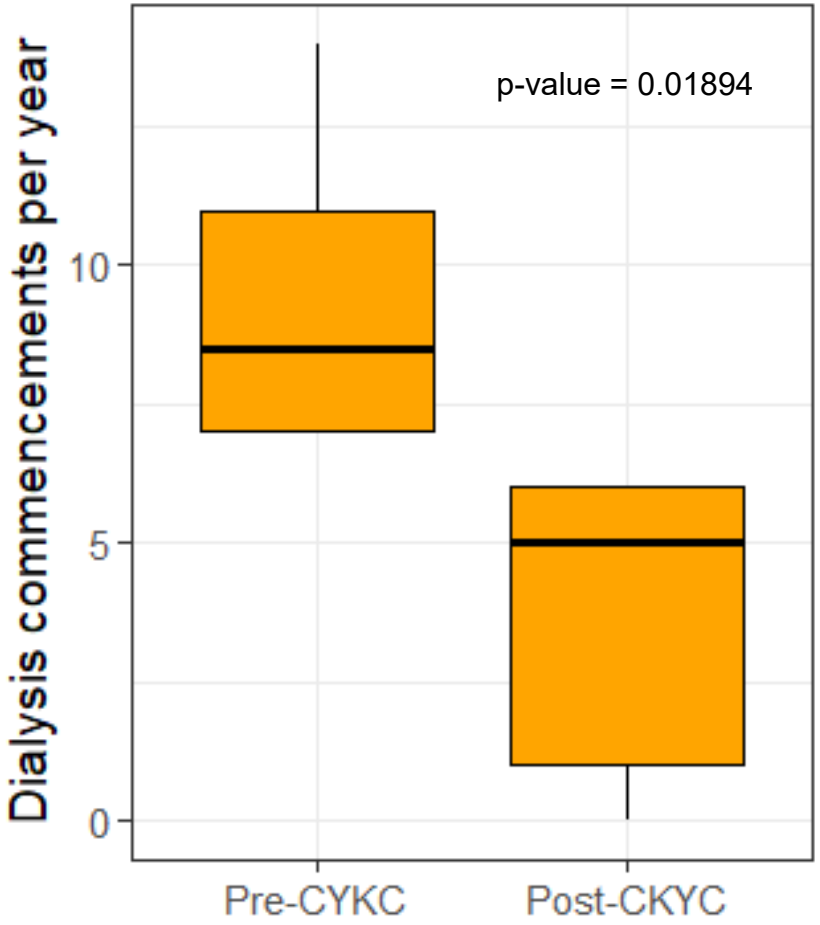
TIP – You can lower blood pressure by not smoking and adding less salt to your food

KIDNEY HEALTH

METHODS

- A retrospective comparative analysis was conducted to assess rates of dialysis pre and post commencement of CYKC. Pre-service data was sourced from ANZDATA (2016-2019) and compared with the CYKC intervention group (Wilcoxon rank sum)
- Rates of planned vs. unplanned starts to dialysis were also assessed.

RESULTS

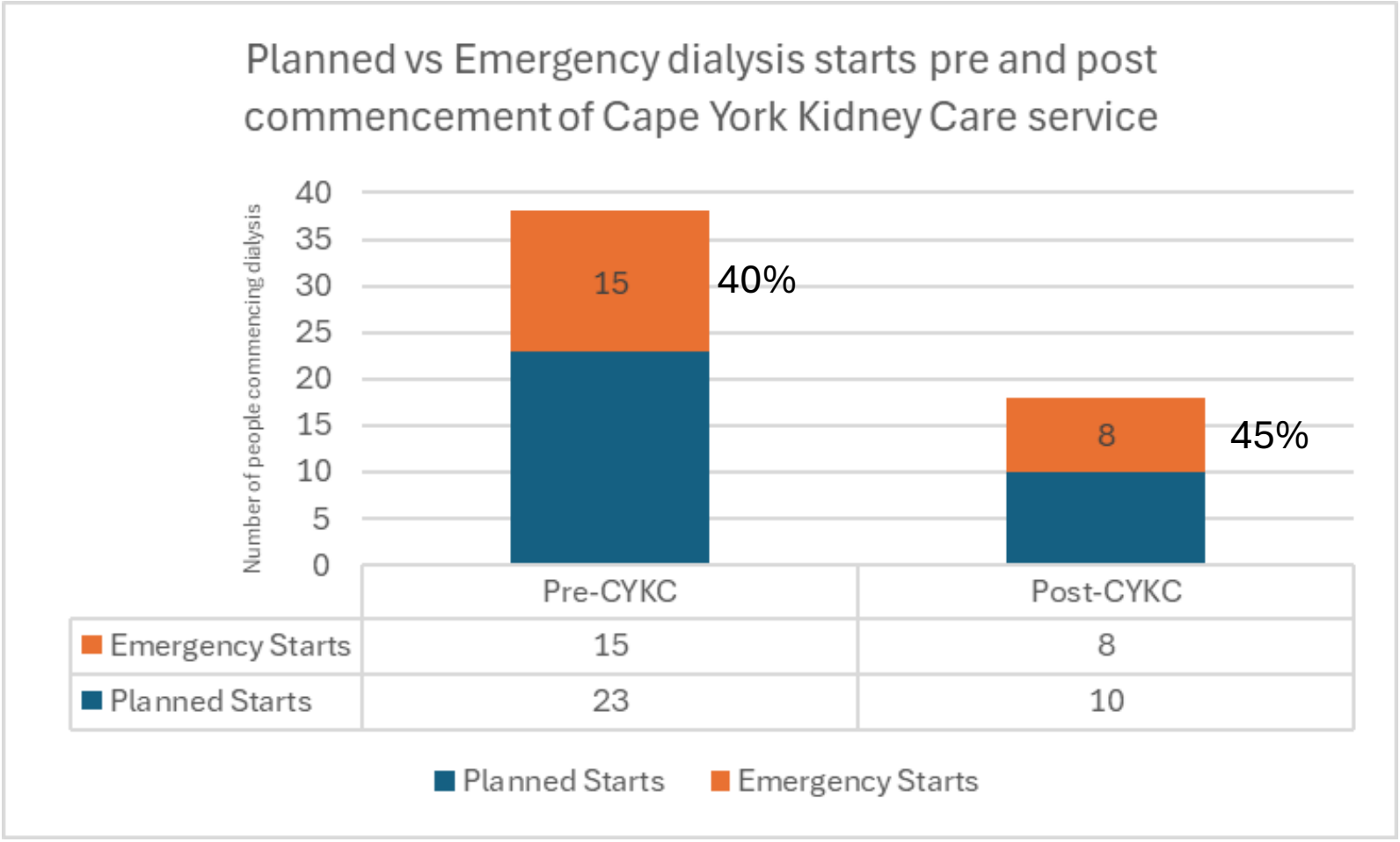


Wilcoxon rank sum test with continuity correction
data: Pre and Post W = 20

Year	Pre-CYKC (n=38)	Post -CYKC (n=18)
2016	14	
2017	7	
2018	7	
2019	10	
2020		5
2021		6
2022		1
2023		6
2024		0

Annual dialysis rate pre and post commencement of Cape York Kidney Care service

RESULTS


Planned vs Emergency dialysis starts pre and post commencement of Cape York Kidney Care service
Number of people commencing dialysis
40
35
30
25
20
15
10
5
0
15
40%
8
45%
Pre-CYKC
Post-CYKC
Emergency Starts
15
8
Planned Starts
23
10
Planned Starts
Emergency Starts

DISCUSSION

- **? More informed choices** around dialysis and choice of supportive care
- **Early use of 4 pillars -** ? Delaying progression of stage 3,4
- **Highly valued** service and team – **Trust**
  - *Availability (care close to home)*
  - *Consistency*
  - *Passion*
- **Ongoing barriers**
  - *Lack of engagement with primary care clinic (cultural safety) and fear of engagement (worry they will be told they need dialysis).*
  - *Kinship and family obligations, social stressors*
  - *Needs further consumer-based research*