Prescribing of Renal and Cardiovascular Protective Therapies In Type 2 Diabetes and Chronic Kidney Disease: Audit of an Australian Quaternary Hospital (*ReDiCare*)

Nick Lan MBBS (Hons) MClinUS MClinRes (Dist) MSc FRACP

Cardiologist, Cardiometabolic Service, Fiona Stanley Hospital

Medical School, The University of Western Australia

Email: nick.lan@health.wa.gov.au / nick.lan@uwa.edu.au

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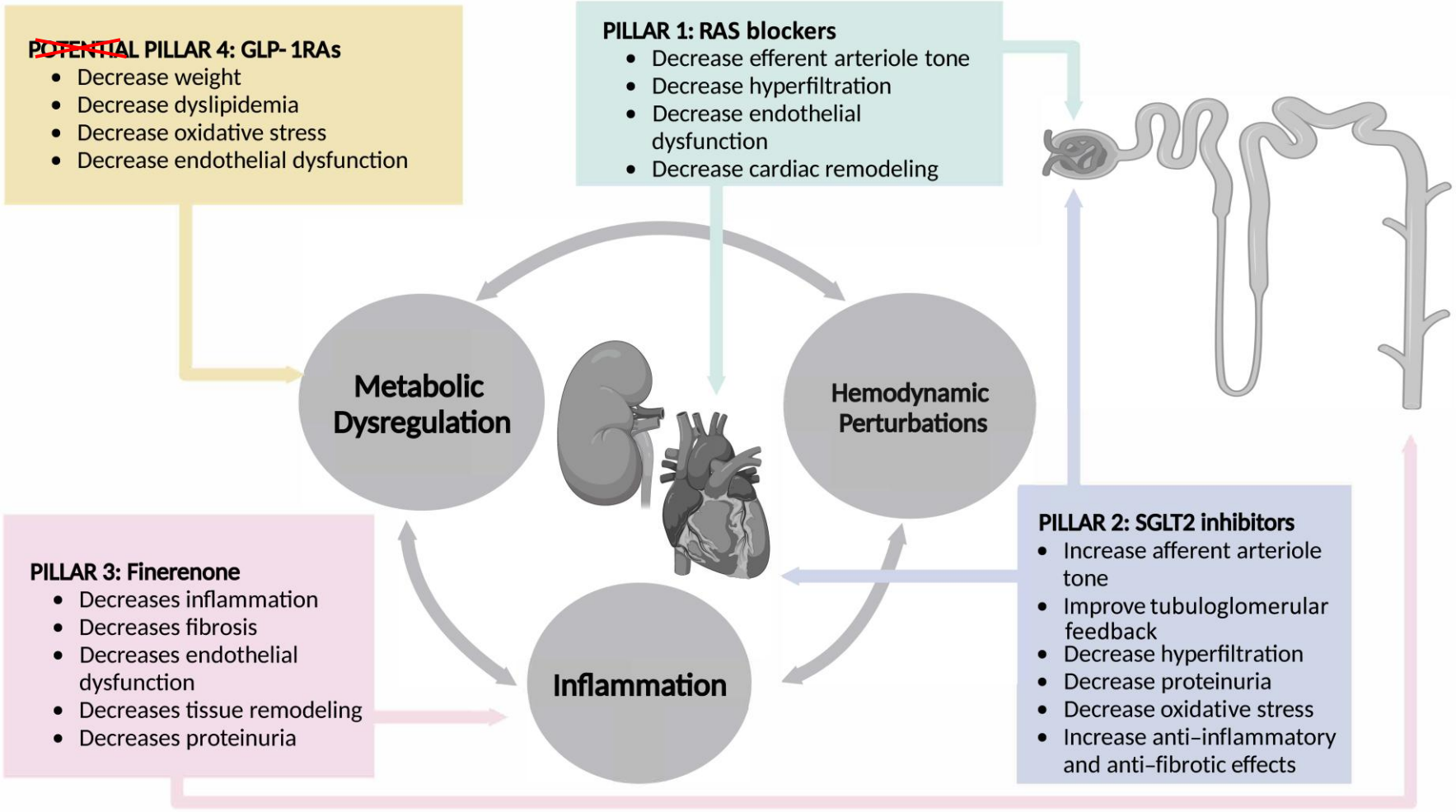
The "FOUR PILLARS OF DKD"



DKD diabetic kidney disease, GLP-1 RA glucagon-like peptide-1 receptor agonist, RAS renin-angiotensin system, SGLT2 sodium-glucose cotransporter 2 inhibitor.

Naaman SC, et al. *Diabetes Care* 2023.

Study Design

Retrospective audit quaternary hospital

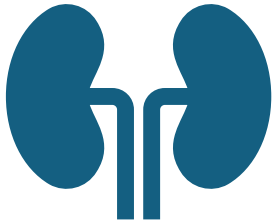
Admissions January 2020 to September 2024

Patients age >18 years with T2D and CKD

T2D

ICD-10 codes

eGFR <60 for >3 months



CKD

CKD chronic kidney disease, eGFR estimated glomerular filtration rate, ICD-10 International Statistical Classification of Diseases 10th Revision, T2D type 2 diabetes.

Exclusion Criteria

Any eGFR <15 ml/min/1.73m^2	Acute kidney injury	Undergoing dialysis	Renal transplant
Palliative care episode	Discharge against advice	Died during admission	Multiple admissions*

*Only the most recent admission was included

eGFR estimated glomerular filtration rate.

Patient Characteristics

Characteristic	n=2216
Age (years)	78 ± 11
Female sex	41%
eGFR (ml/min/1.73m^2)	
45-59	36%
30-44	39%
15-29	25%
Hypertension	76%
Coronary heart disease	41%
Heart failure	30%

eGFR estimated glomerular filtration rate.

Prescribing of “Four Pillars”

ACE inhibitor or ARB → 56%

SGLT2 inhibitor → 21%

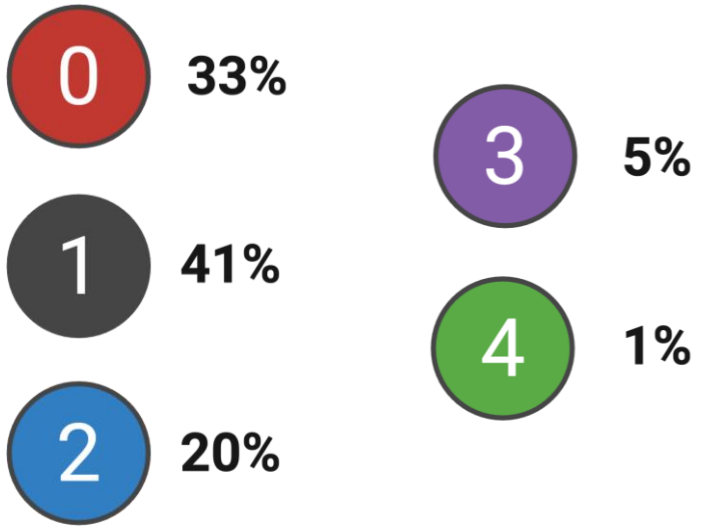
MRA → 14%

Finerenone = 3 (0.1%)

GLP-1 agonist → 7%

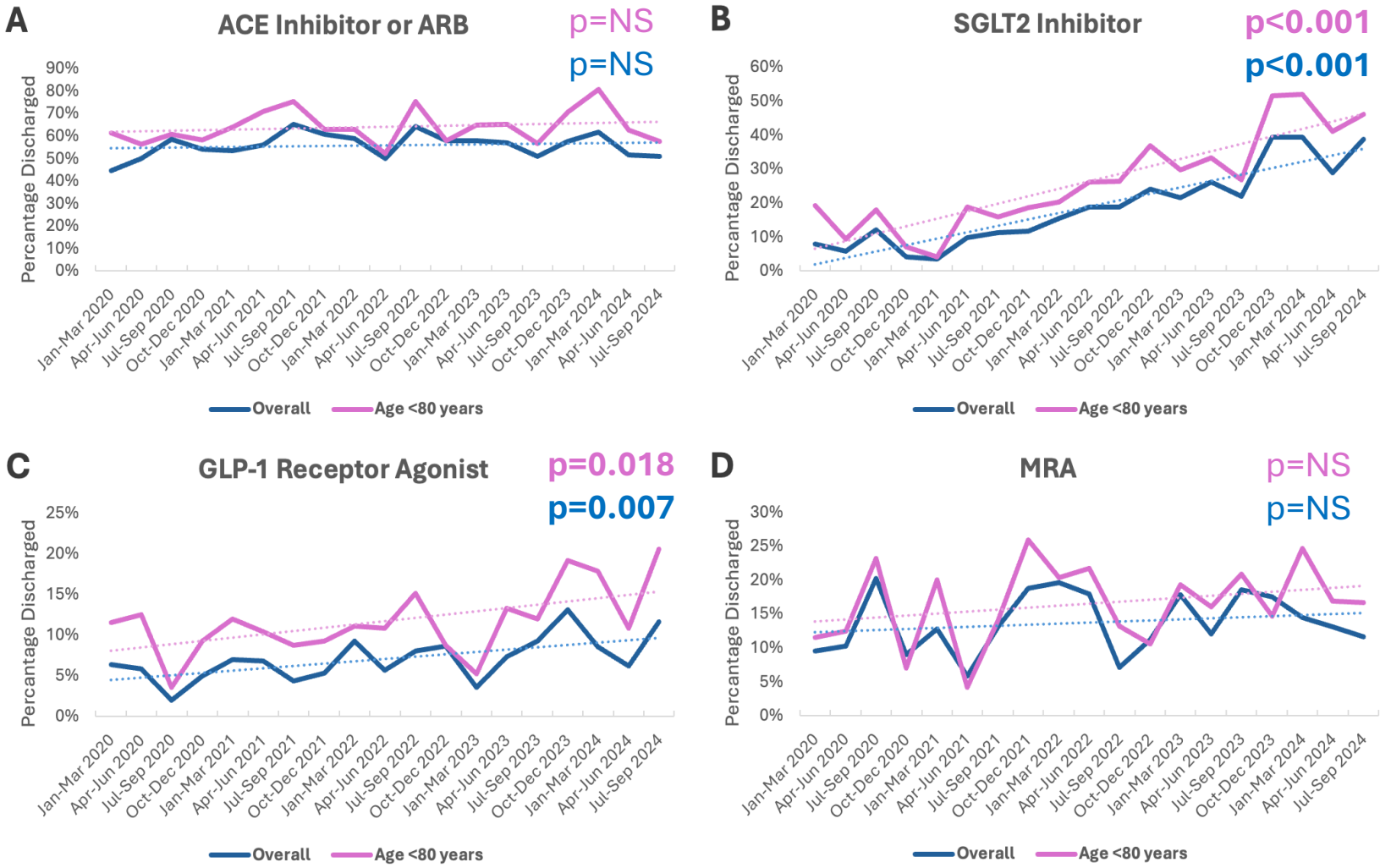
Semaglutide = 79 (4%)

Therapies in combination



ACE angiotensin converting enzyme, ARB angiotensin receptor blocker, GLP-1 glucagon-like peptide-1, MRA mineralocorticoid receptor antagonist, SGLT2 sodium-glucose cotransporter 2.

Prescribing Over Time



ACE angiotensin converting enzyme, ARB angiotensin receptor blocker, GLP-1 glucagon-like peptide-1, MRA mineralocorticoid receptor antagonist, SGLT2 sodium-glucose cotransporter 2.

Limitations

- Retrospective, singe-centre analysis
- Discharge medications only
- No information on intolerances or adverse reactions
- Cohort selection: ICD-10 codes and eGFR only
- No albuminuria data

eGFR estimated glomerular filtration rate, ICD-10 International Statistical Classification of Diseases 10th Revision.

Conclusions

Contemporary real-world data from a quaternary hospital

Cardio-renal protective drugs under-prescribed in T2D and CKD

Prescribing of SGLT2i and GLP-1RA increased significantly over time

Further research is needed to identify barriers and enablers

CKD chronic kidney disease, GLP-1RA glucagon-like peptide-1 receptor agonist, SGLT2i sodium-glucose cotransporter 2 inhibitor, T2D type 2 diabetes.

Acknowledgements

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