phn TASMANIA
An Australian Government Initiative

primary health TASMANIA

Kidney disease in Tasmania

This webinar will start shortly.

Kidney disease in Tasmania

Zoom webinar – Tuesday 22 July 2025

6.30 pm to 8 pm

Acknowledgement of traditional owners

We acknowledge the Tasmanian Aboriginal people as the traditional owners and ongoing custodians of the land on which we are meeting today. We pay our respects to Elders past and present.

We would also like to acknowledge Aboriginal people who are joining us today.

Learning outcomes

After this session, I will be able to:

- Describe the epidemiology of kidney disease for Tasmania overall, as well as your own practice location
- Identify risk factors for kidney disease and implement early detection strategies applicable to your clinical practice
- Summarise the pharmacological interventions indicated for kidney disease once detected
- Review optimal kidney disease management in your clinical practice

Some housekeeping

- Tonight's webinar is being recorded
- Please use the Zoom Q&A feature to ask questions
- At the end of the webinar your browser will automatically open an evaluation survey. We appreciate you taking the time to complete this to help us improve our events programme
- Please don't forget to register for your next webinar at: https://www.primaryhealthtas.com.au/for-health-professionals/events/

Presenters

Matthew D. Jose

Jan Radford

Lisa Shelverton

Kidney disease in Tasmania

Matthew D. Jose
Head of Renal Unit, Royal Hobart Hospital
Professor of Medicine, University of Tasmania

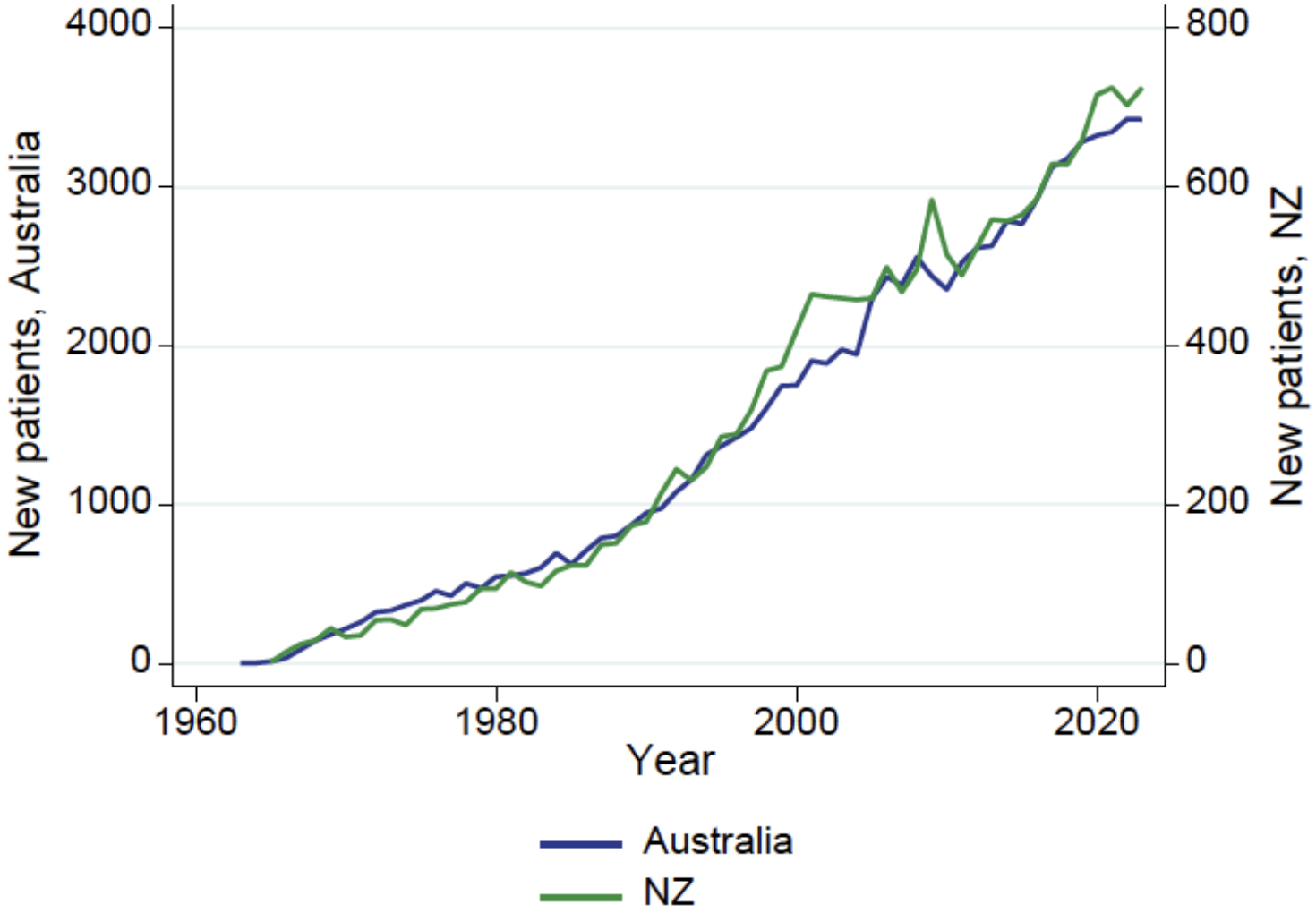
Lisa Shelverton
Renal Nurse Practitioner, Royal Hobart Hospital

Jan Radford
Professor in General Practice, University of Tasmania

Acknowledgement of country

This work was undertaken in *lutruwita* (Tasmania) Aboriginal land, sea and waterways. I acknowledge, with deep respect the traditional owners of this land, the muwinina and palawa peoples, their elders past, present and emerging.

Incident (treated) End-Stage kidney disease in ANZ



Cost

Dialysis A$60,000 per year

Transplant:
1st year A$70,000
Beyond A$10,000

Tasmania: highest (non-Indigenous) state prevalence of CKD

State of the Nation

Figure 5. Living with signs of CKD – Number of people (proportion of population)[8]

Non-Indigenous CKD:

Australia	10.0%
Tasmania	11.3%
SA	8.4%
Vic	9.8%

State of the Nation Report 2016, Kidney Health Australia

Tasmania: lowest state prevalence of dialysis

Prevalence of dialysis ~25% lower. ANZDATA 2023

Tasmania 410 per million pop

SA 581 pmp
Vic 537 pmp
NSW 566 pmp
Australia 586 per million pop.

Overall Aim:

To understand how

high CKD in the community

translates into

low use of dialysis.

Figure 1.4.7

New Patients by Age Group - TAS

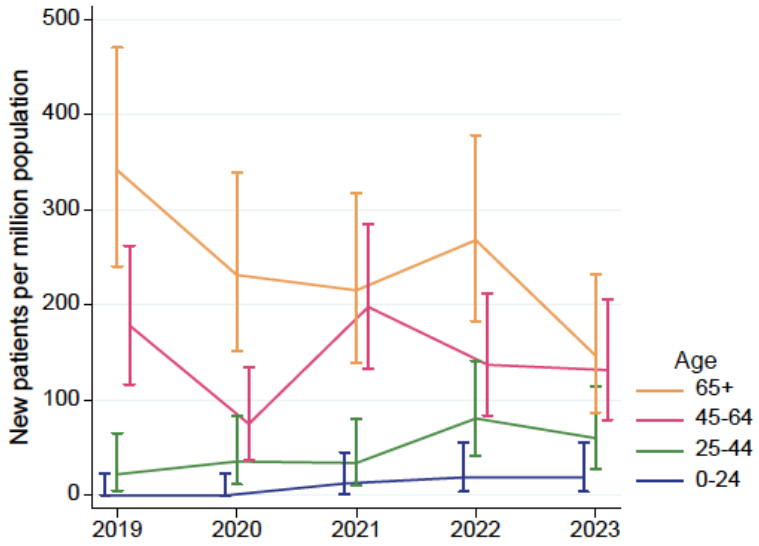


Figure 1.4.2

New Patients by Age Group - NSW

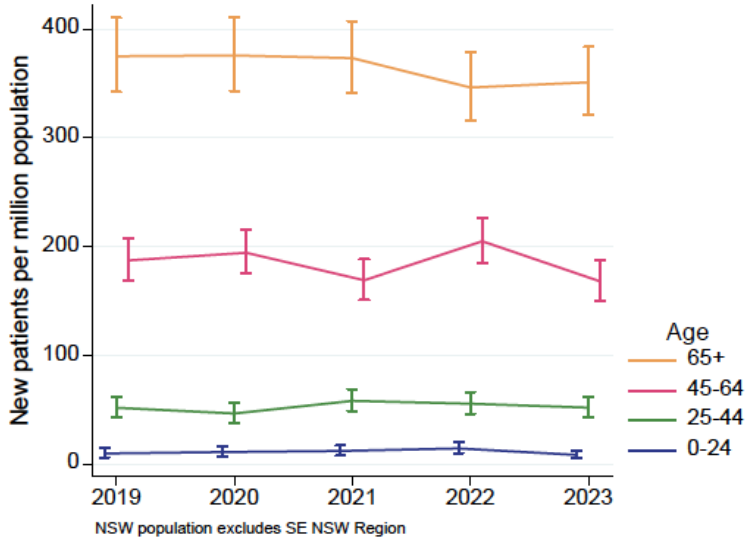


Figure 1.4.3

New Patients by Age Group - VIC

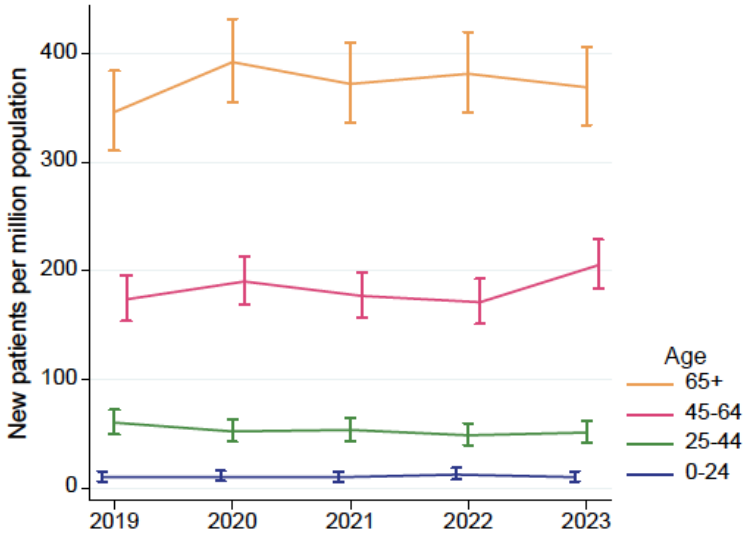
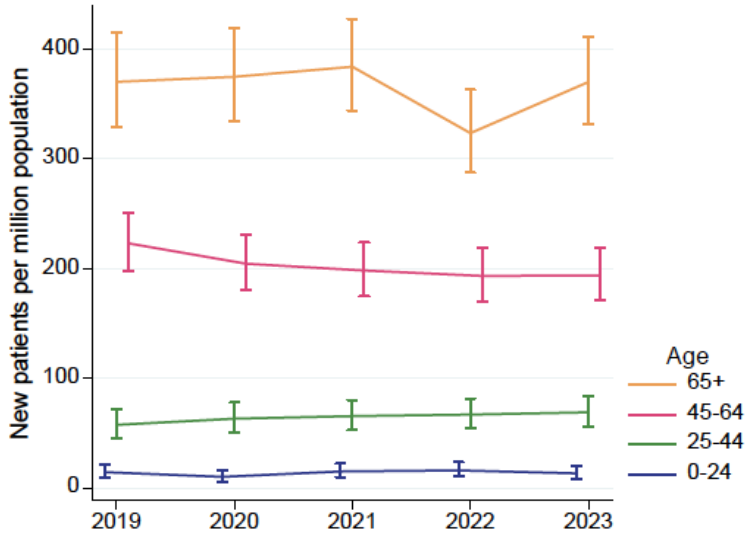


Figure 1.4.4

New Patients by Age Group - QLD



Tasmania has lower rates of treated kidney failure for age ≥45 years old

ANZDATA
47th Annual Report 2024

UNIVERSITY of TASMANIA

Tasmania: lowest state prevalence of dialysis

Prevalence of dialysis ~25% lower. ANZDATA 2023

Tasmania 410 per million pop

SA 581 pmp
Vic 537 pmp
NSW 566 pmp
Australia 586 per million pop.

Overall Aim:

To understand how **high CKD in the community** translates into **low use of dialysis.**

CKD.TASlink

- What have we done?
- **Kidney disease in Tasmania?**
  - Epidemiology & growth of chronic disease
    - Competing risk of death or dialysis
    - Co-design of decision aids
- What next?

Serum Creatinine between Jan 1 2004 to Dec 31 2023

Hobart, Launceston & NW Pathology 6,552,283 results

RHH Pathology 1,732,198 results

Perinatal dataset

Tasmanian kidney biopsy dataset

Tasmanian Death Register (DEATH)

653,102 individuals

412,864 Tasmanian Adults

2018 -2023 = 88.4% Tas pop.

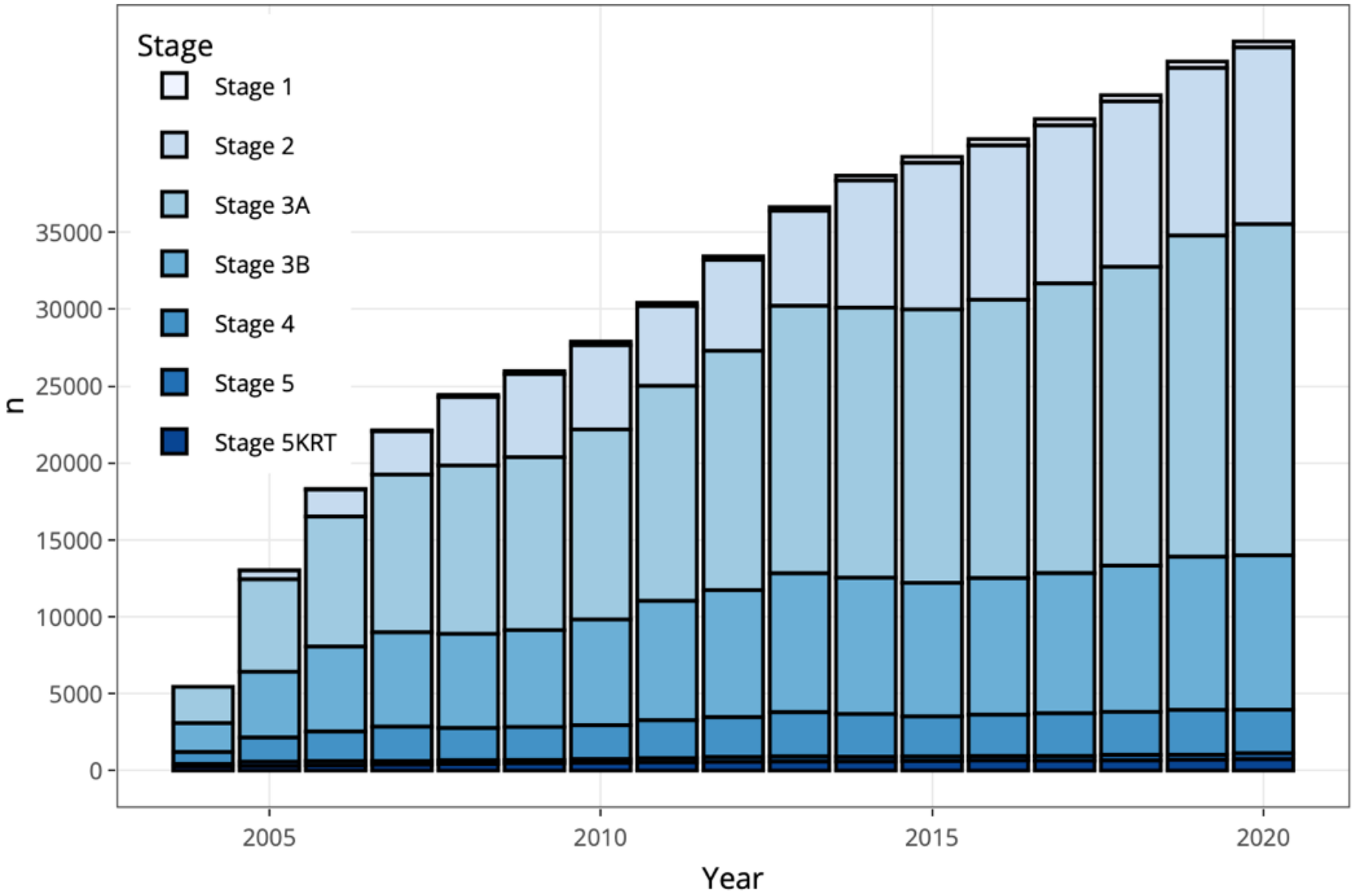
Public Hospital Admitted Patient Episodes (AP)

Private Hospital Admitted Patient Episodes

Public Hospital Emergency Department Presentations

Tasmanian Cancer Register

Results Chronic disease on the rise



Total Stage 3-5

2010 = 22,544

2020 = 37,747

67% increase in number of people

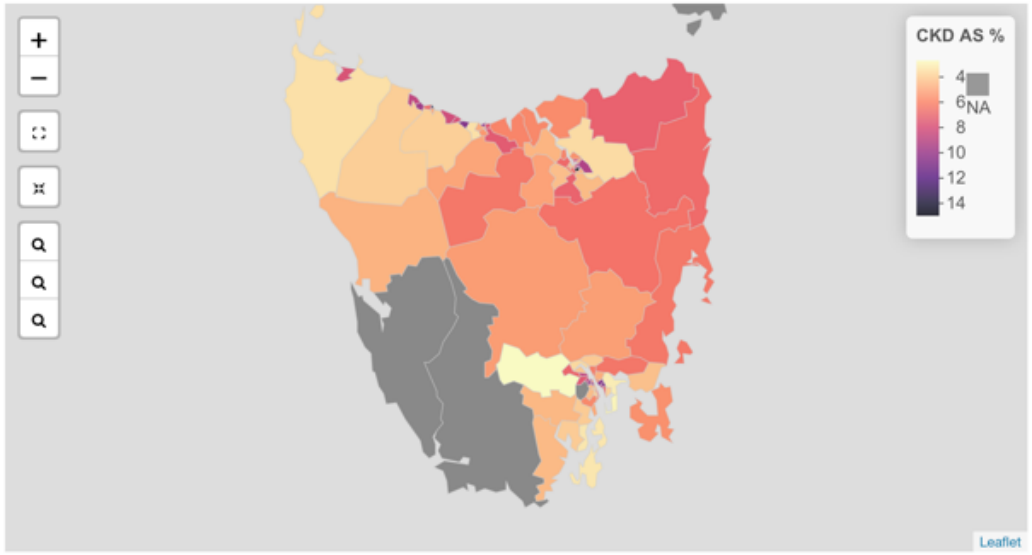
Nephrology 2024 (in press)

CKD prevalence & treatment locations

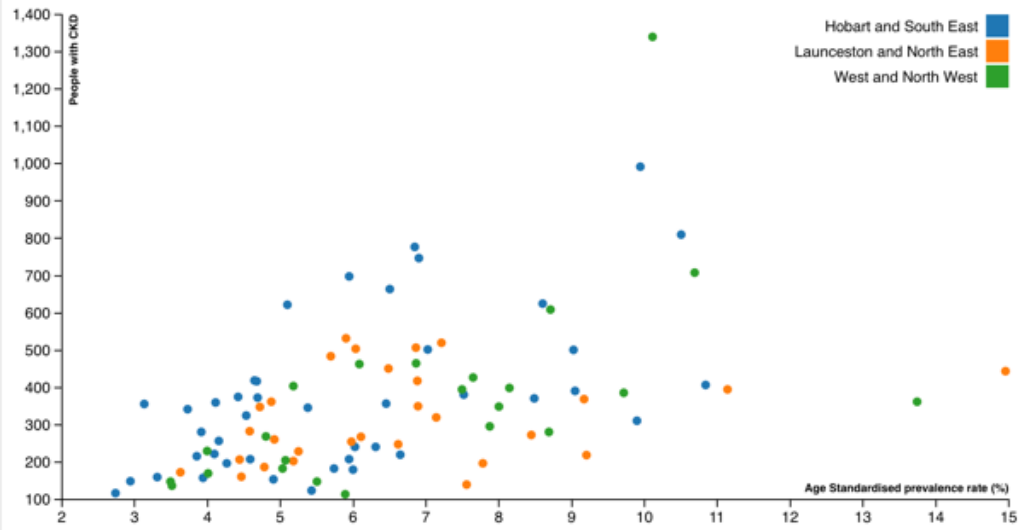
2017 - CKD Prevalence

33781	15985	9308	8488
Tasmanians with CKD	Hobart and South East	Launceston and North East	West and North West

Map



Plot

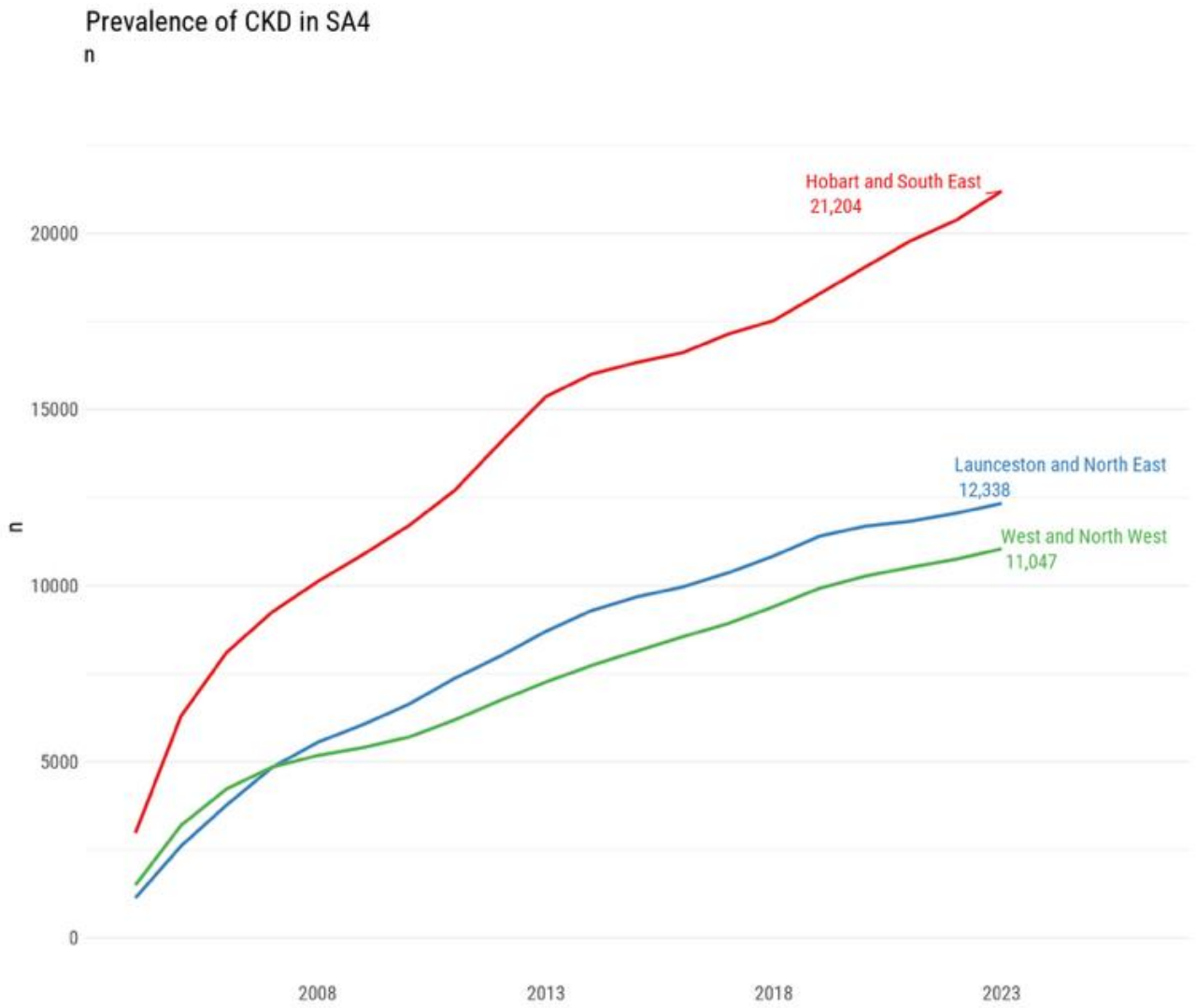


CKD Prevalence | CKD Prevalence Stages | CKD Prevalence Age Group

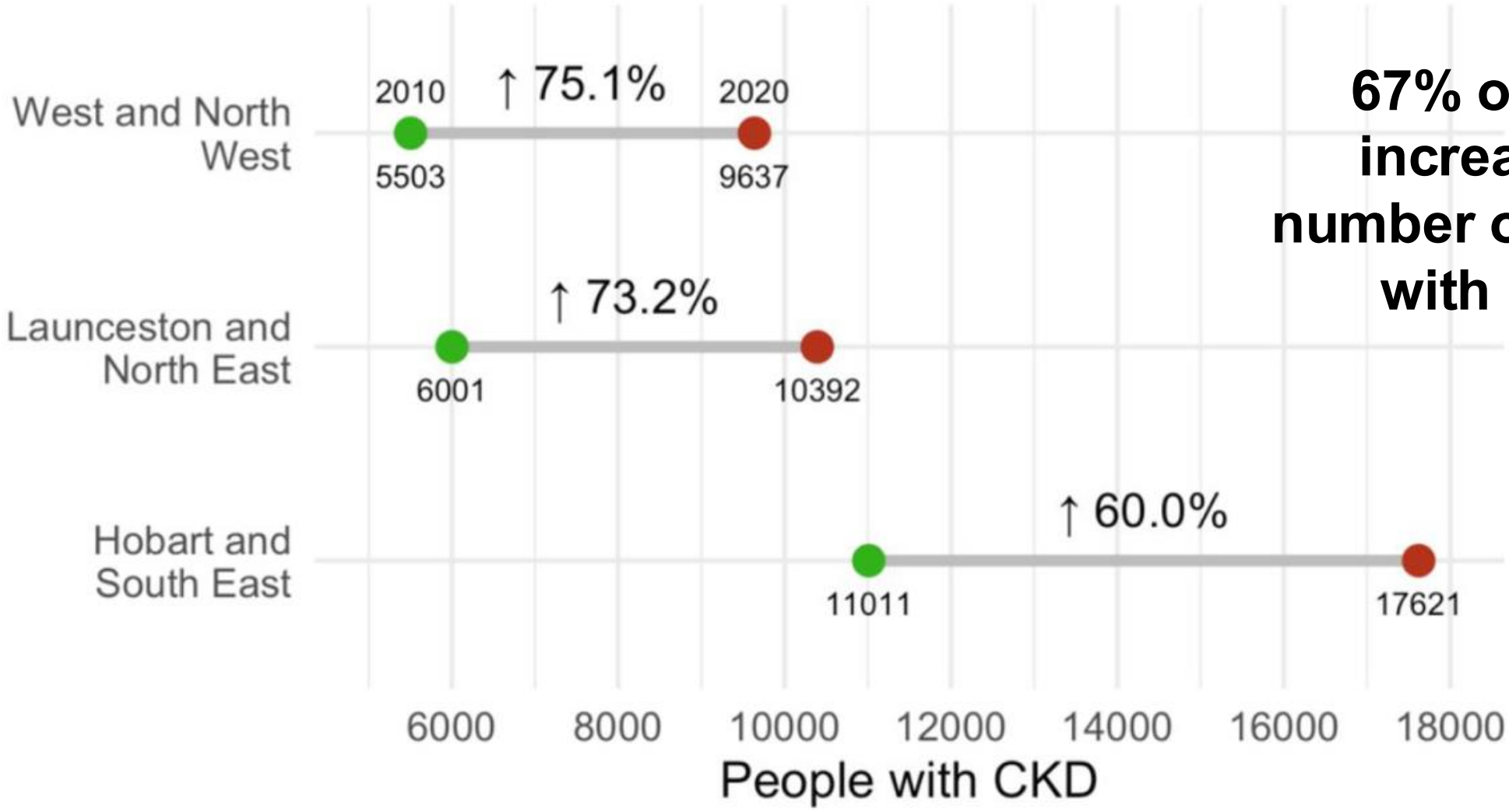
Search:

SA2	Region	ERP (18+)	# with CKD	Age Standardised %
Bridgewater - Gagebrook	Hobart and South East	5021	342	3.73
Brighton - Pontville	Hobart and South East	4160	257	4.15
Old Beach - Otago	Hobart and South East	3479	241	6.31
Bellerive - Rosny	Hobart and South East	4927	501	9.02

Results Geographic variation by SA4

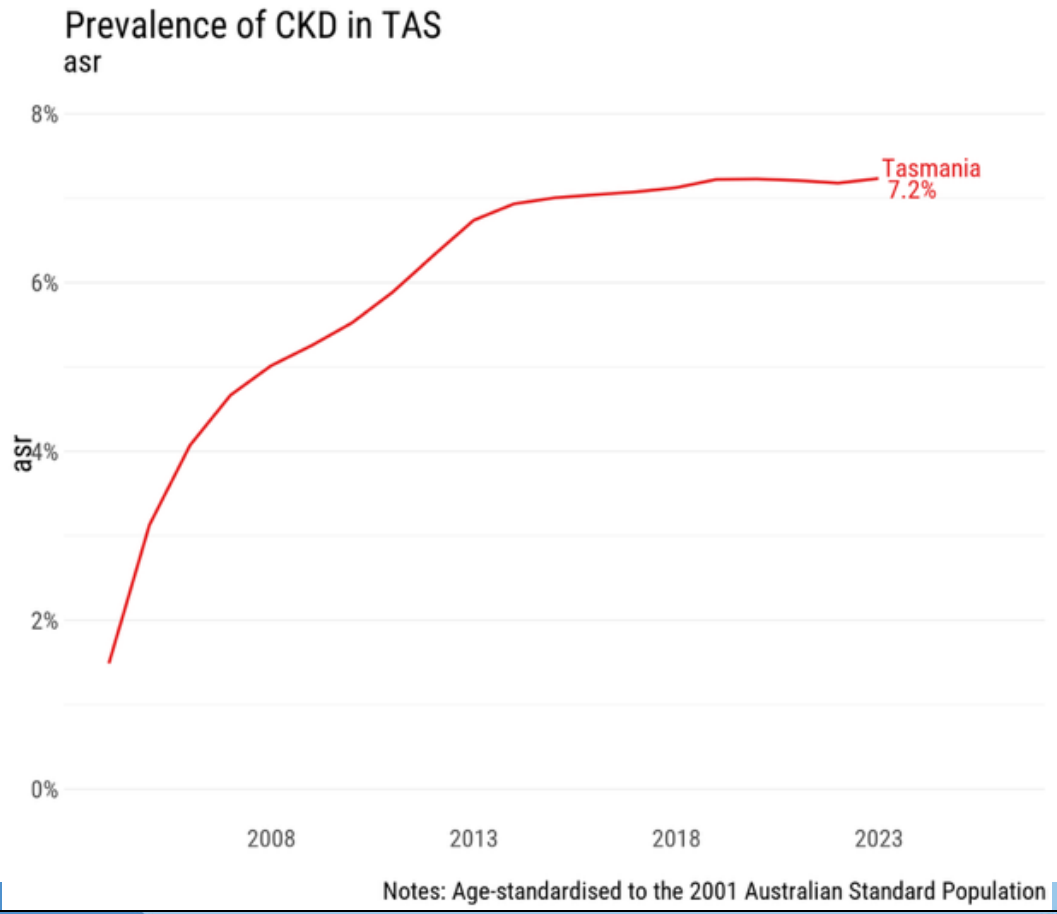


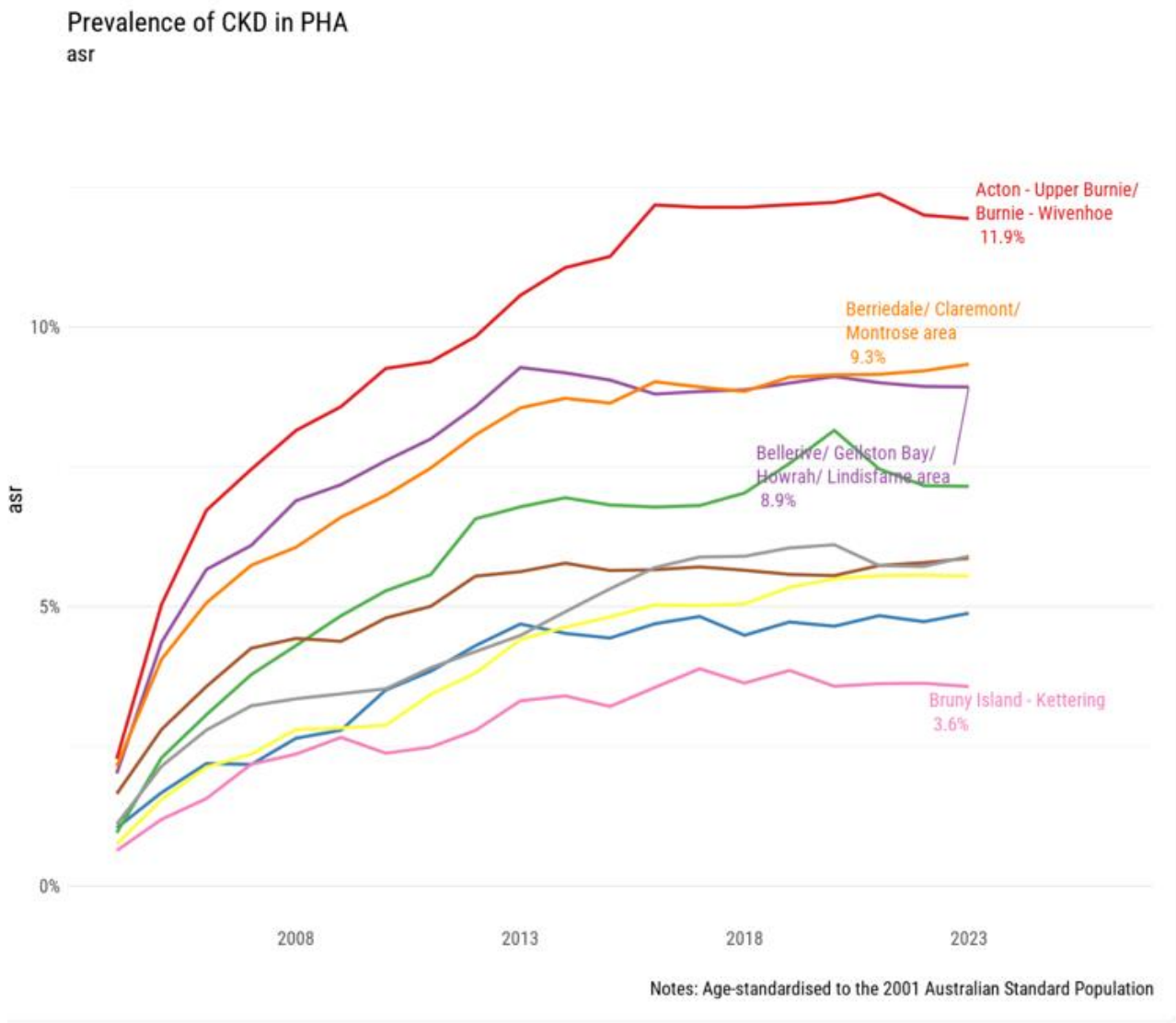
Results Geographic variation by SA4



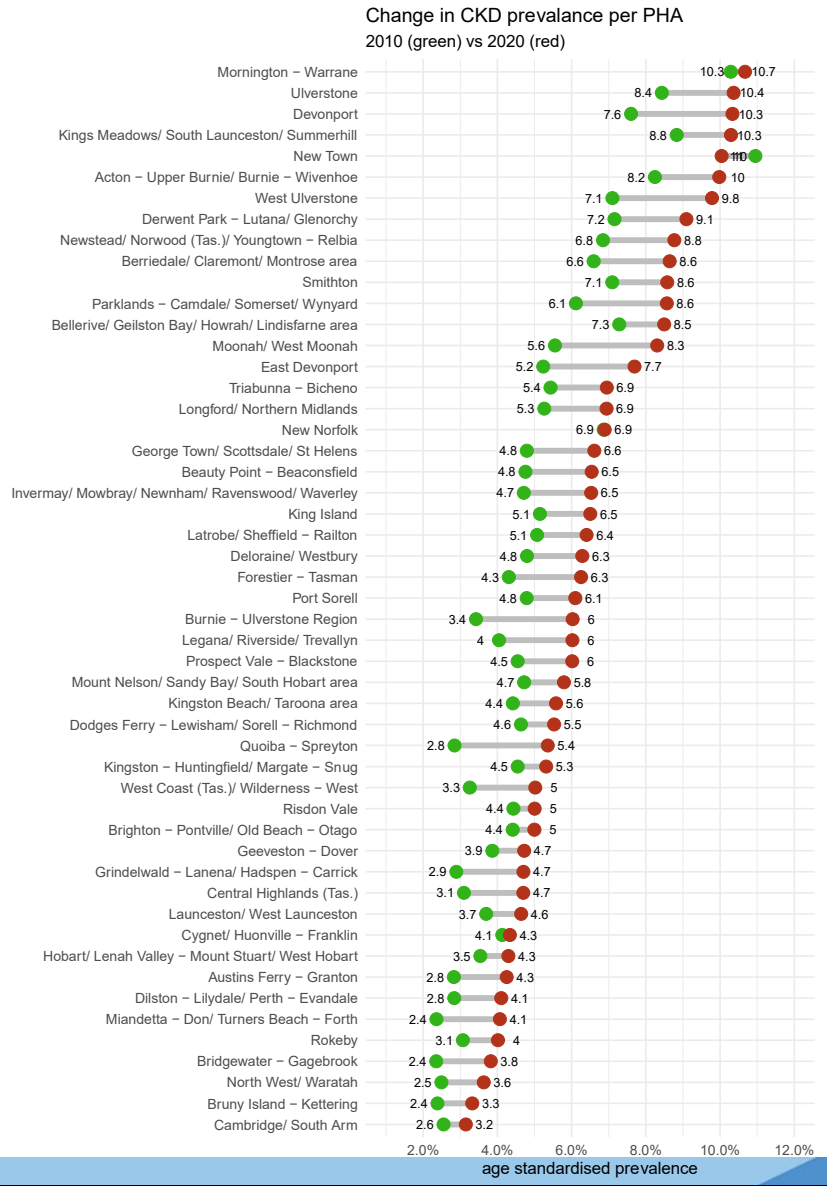
67% overall increase in number of people with CKD

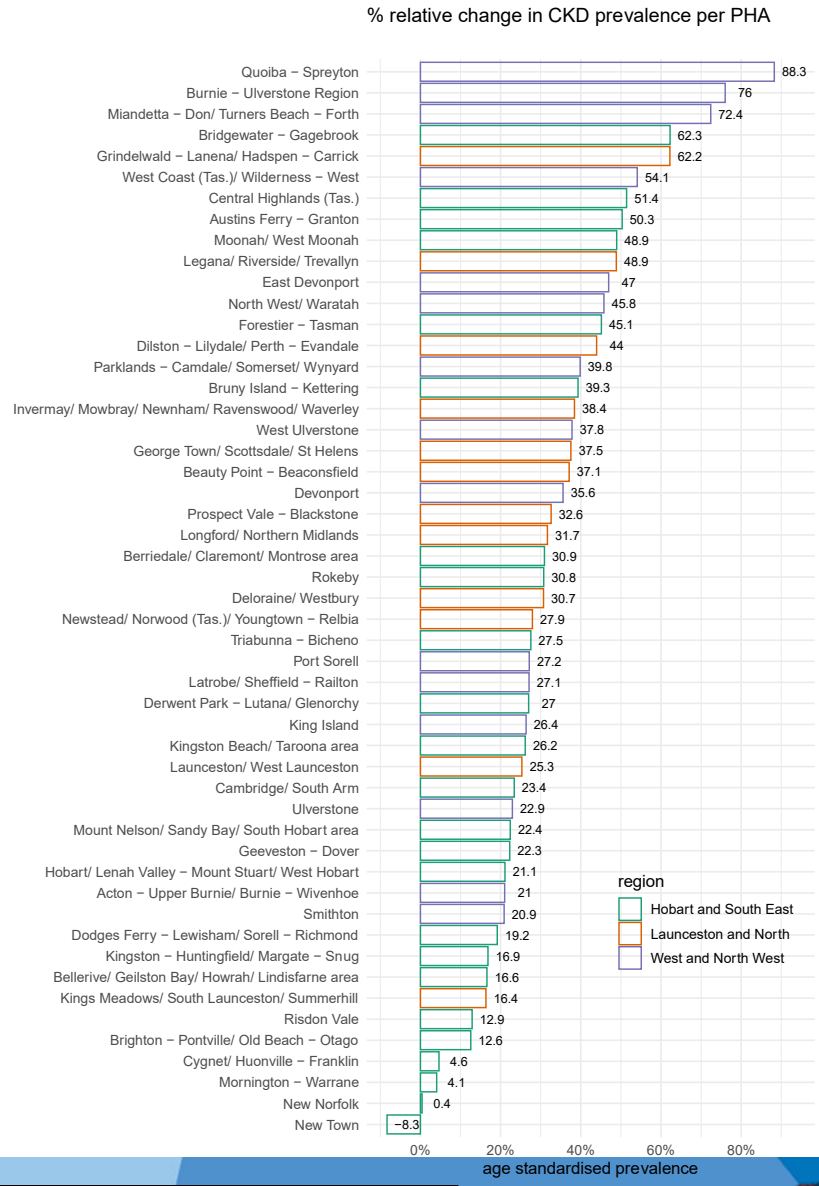
Results Geographic variation by PHA





CKD in Tasmania increased by 28% in past decade (2010 to 2020)





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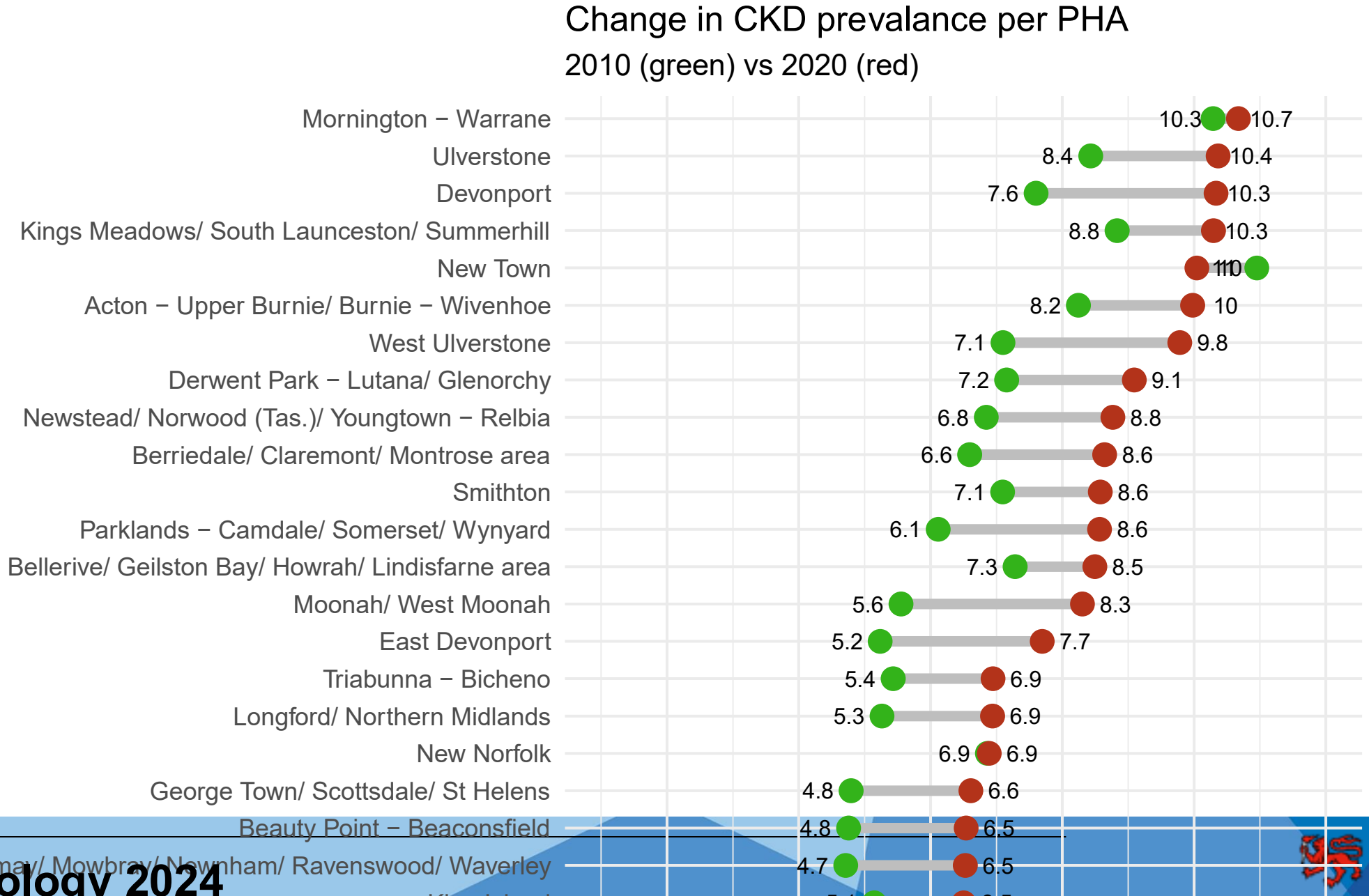
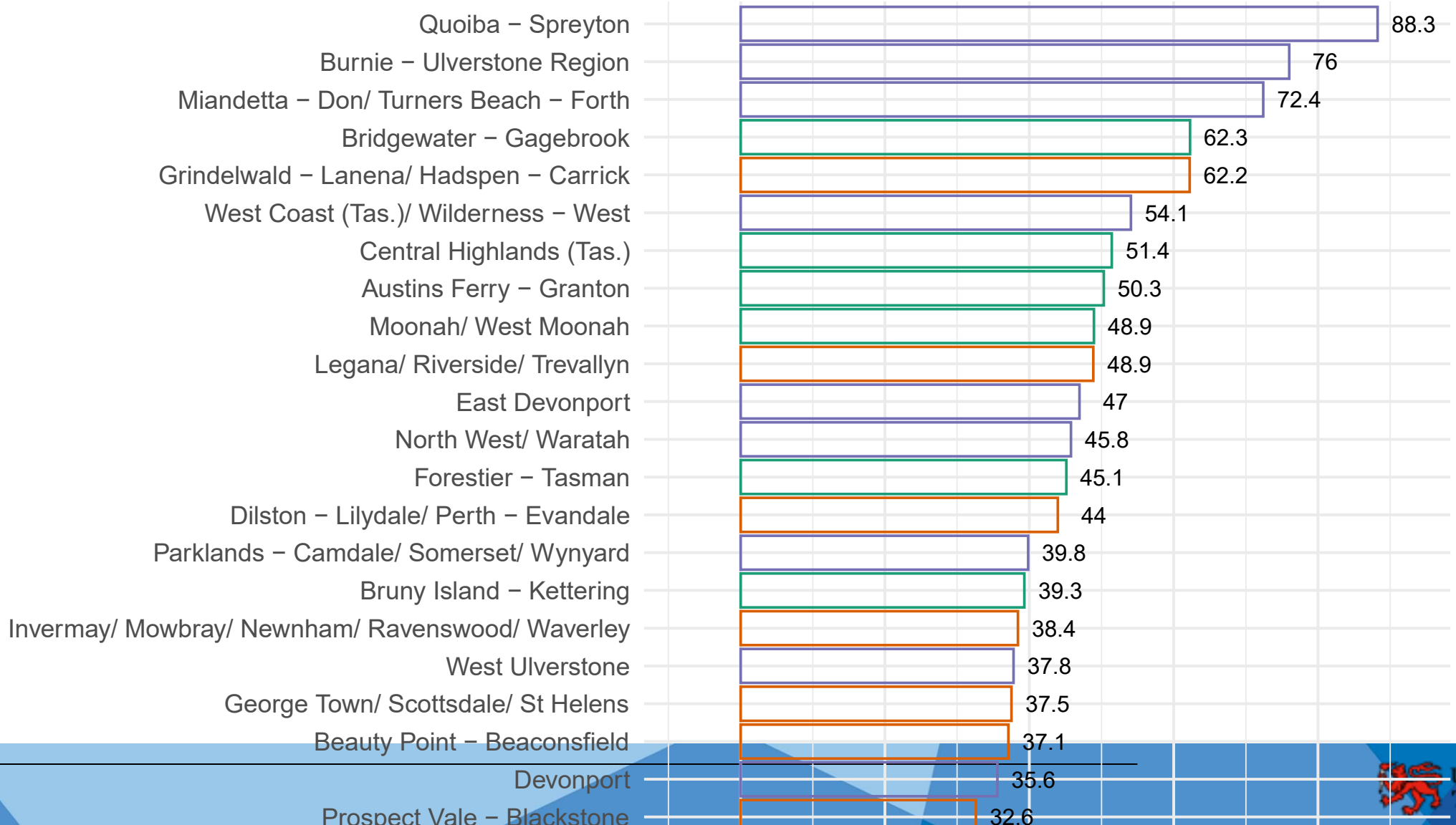


% relative change in CKD prevalence per PHA

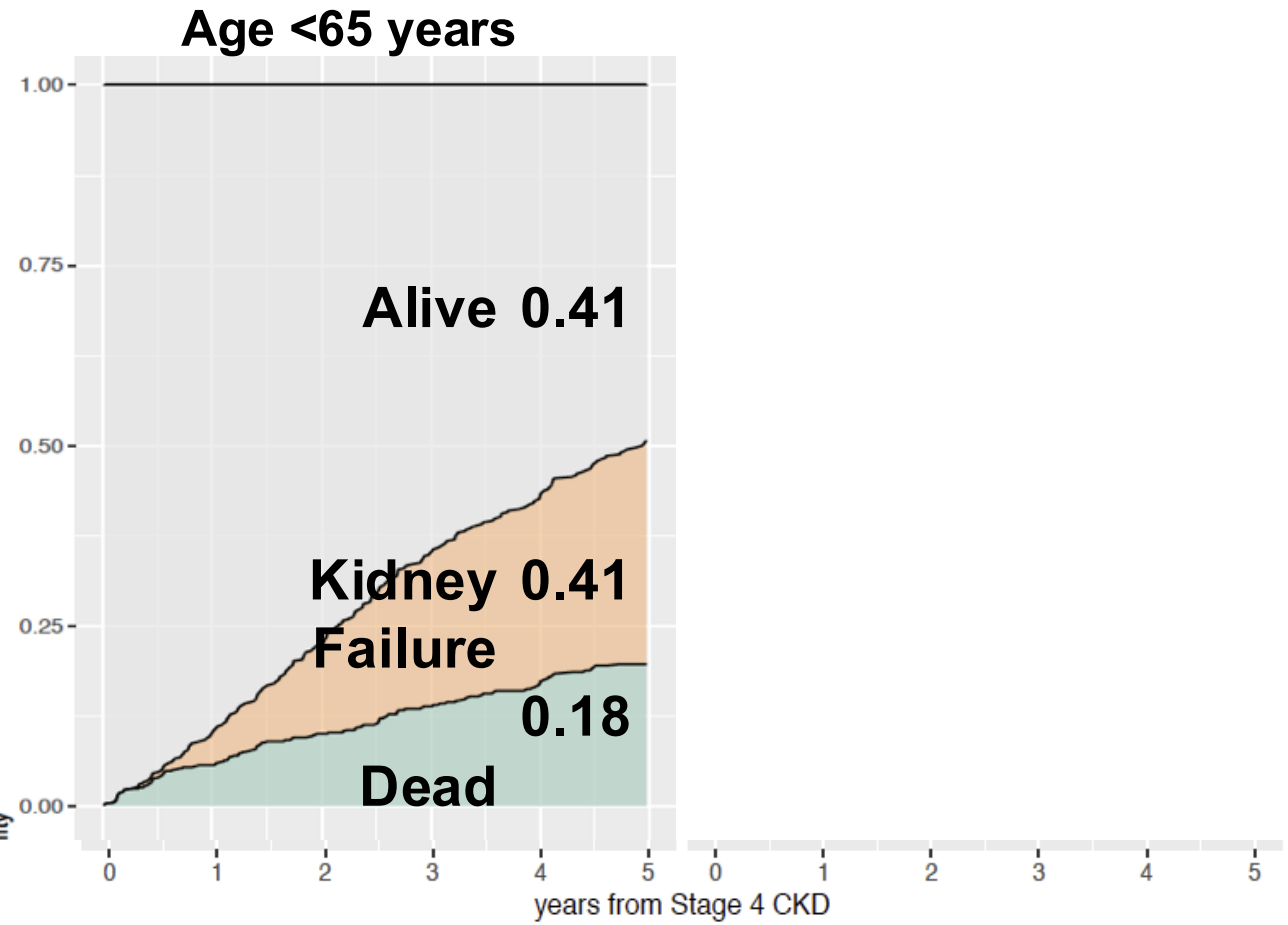


CKD.TASlink

- What have we done?
- **Kidney disease in Tasmania?**
  - Epidemiology & growth of chronic disease
    - **Competing risk of death or dialysis**
    - Co-design of decision aids
  - Mother and baby outcomes with early kidney disease
- What next?

Competing risks analysis:
Stage 4 CKD to death or kidney failure* (<10mL/min/1.73m²) at 5 yrs?

*Ravani et al, JAMA 2020



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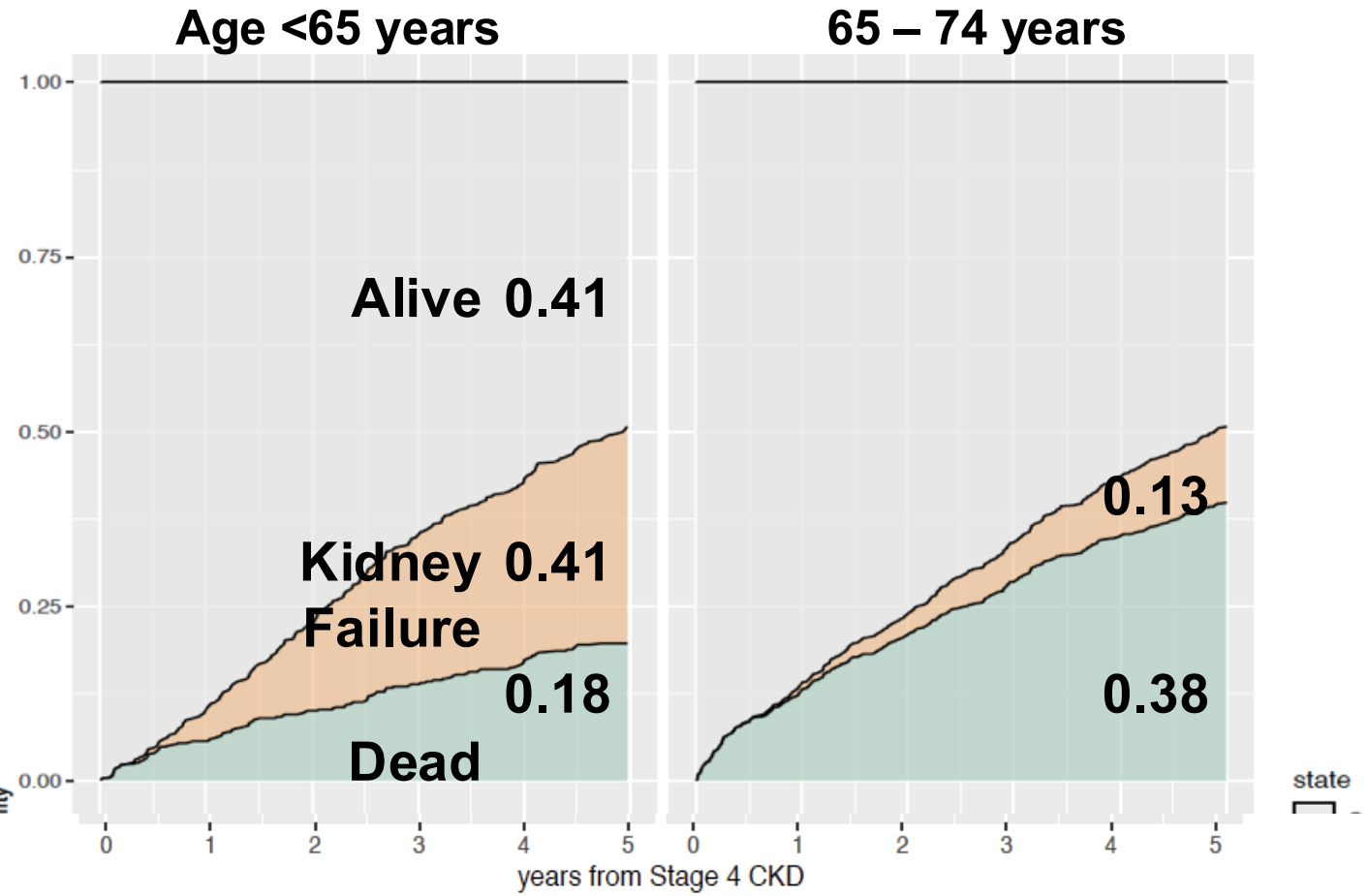

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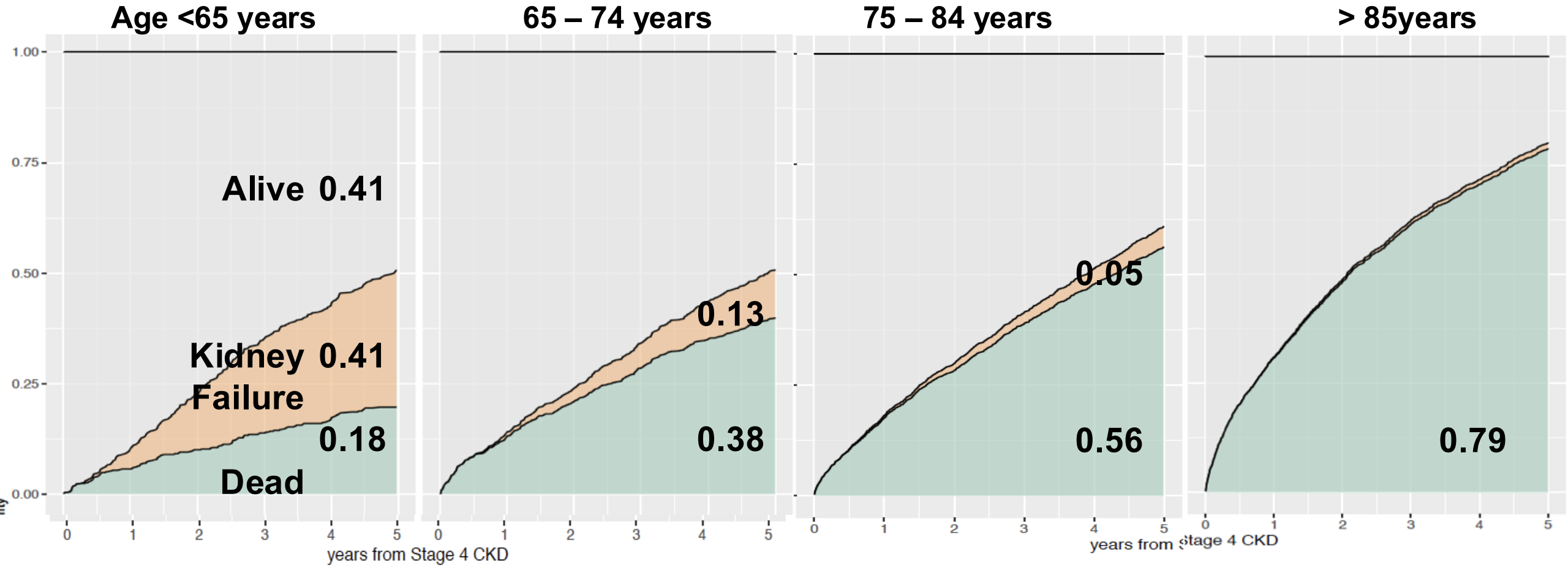


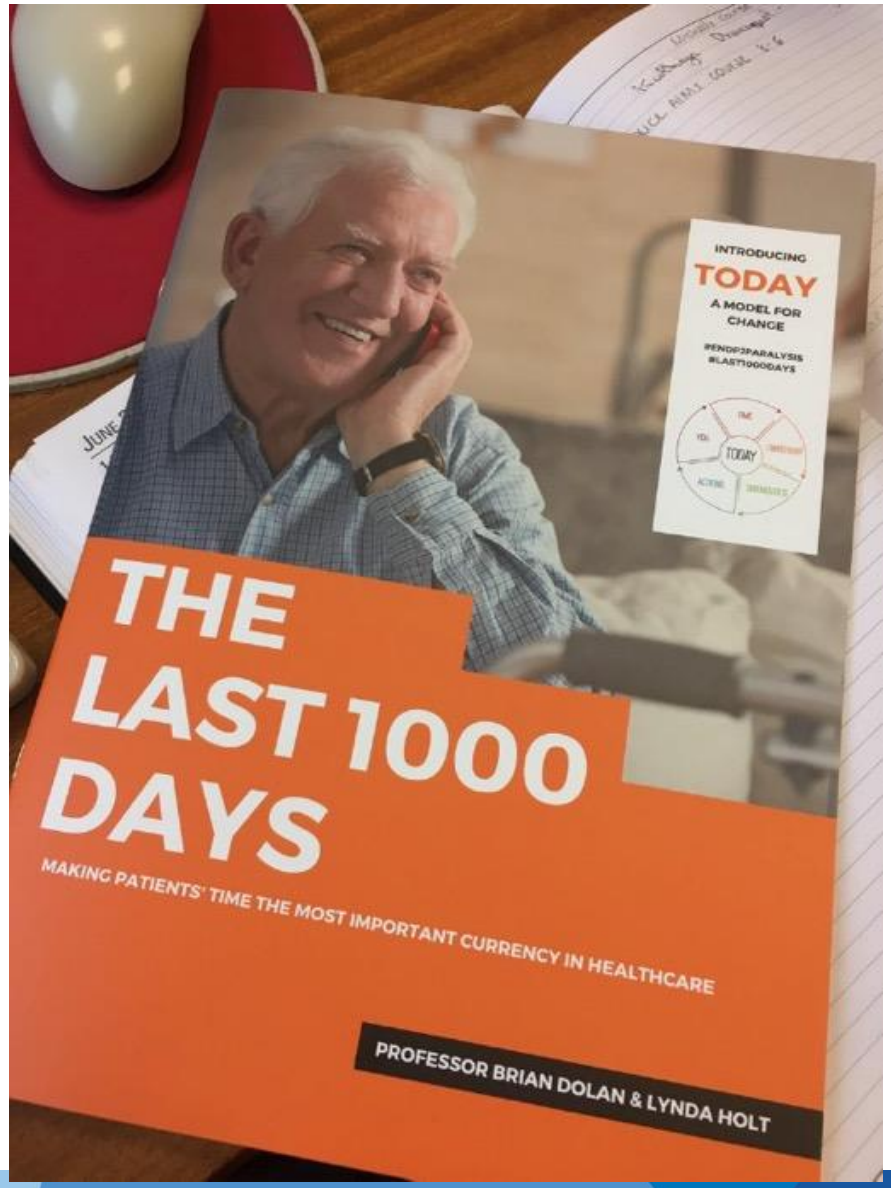
CKD.TASlink

- What have we done?
- Kidney disease in Tasmania?
  - Epidemiology & growth of chronic disease
    - Competing risk of death or dialysis
    - **Co-design of decision aids**
  - Mother and baby outcomes with early kidney disease
- What next?

First 1000 days of Life

WHAT YOU DO AND EAT IN THE FIRST 1000 DAYS,
MAKES A DIFFERENCE FOR THE REST OF YOUR LIFE

Last 1000 days



If I don't have dialysis, I'll die.

comment heard about once a week

Treatment pathways with CKD – it's about time

Age <65 years

(from incident eGFR<15 mL/min/1.73m²)

Chronic Kidney Disease TASMANIA

Median Survival (days)
[IQR]

eGFR < 15 mL/min/1.73m²

No KRT

734 days

[405, 1460]
(2.0 yrs)

2.4 2.6

Number of presentations

8.8 8.1

Dialysis-free days

1183 (3.2 yrs)

KRT (dialysis)

2070 days

[1120, 3480]
(5.7 yrs)

Nephrology 26, Supp 2 (2021): 10-16

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Age 85+ years

(from incident eGFR<15 mL/min/1.73m²)

Chronic Kidney Disease TASMANIA

Median Survival (days)
[IQR]

eGFR < 15 mL/min/1.73m²

No KRT

603 days

[322, 984]
(1.6 yrs)

2.1 1.4

Number of presentations

4.6 1.7

Dialysis-free days

432 (1.2 yrs)

KRT (dialysis)

757 days

[594, 1170]
(2.1 yrs)

Nephrology 26, Supp 2 (2021): 10-16

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Chronic Kidney Disease TASMANIA

Making sense of new (Tasmanian) information

Co-design of new Australian decision aids

ROYAL HOBART HOSPITAL RESEARCH FOUNDATION

UNIVERSITY of TASMANIA

CKD.TASlink

- What have we done?
- Kidney disease in Tasmania?
  - Epidemiology & growth of chronic disease
    - Competing risk of death or dialysis
    - Co-design of decision aids
- **What next?**

Managing CKD in primary care

CKD Management in Primary Care Handbook

5TH EDITION

The #1 guide for to help detect, manage and refer patients in your practice with CKD.

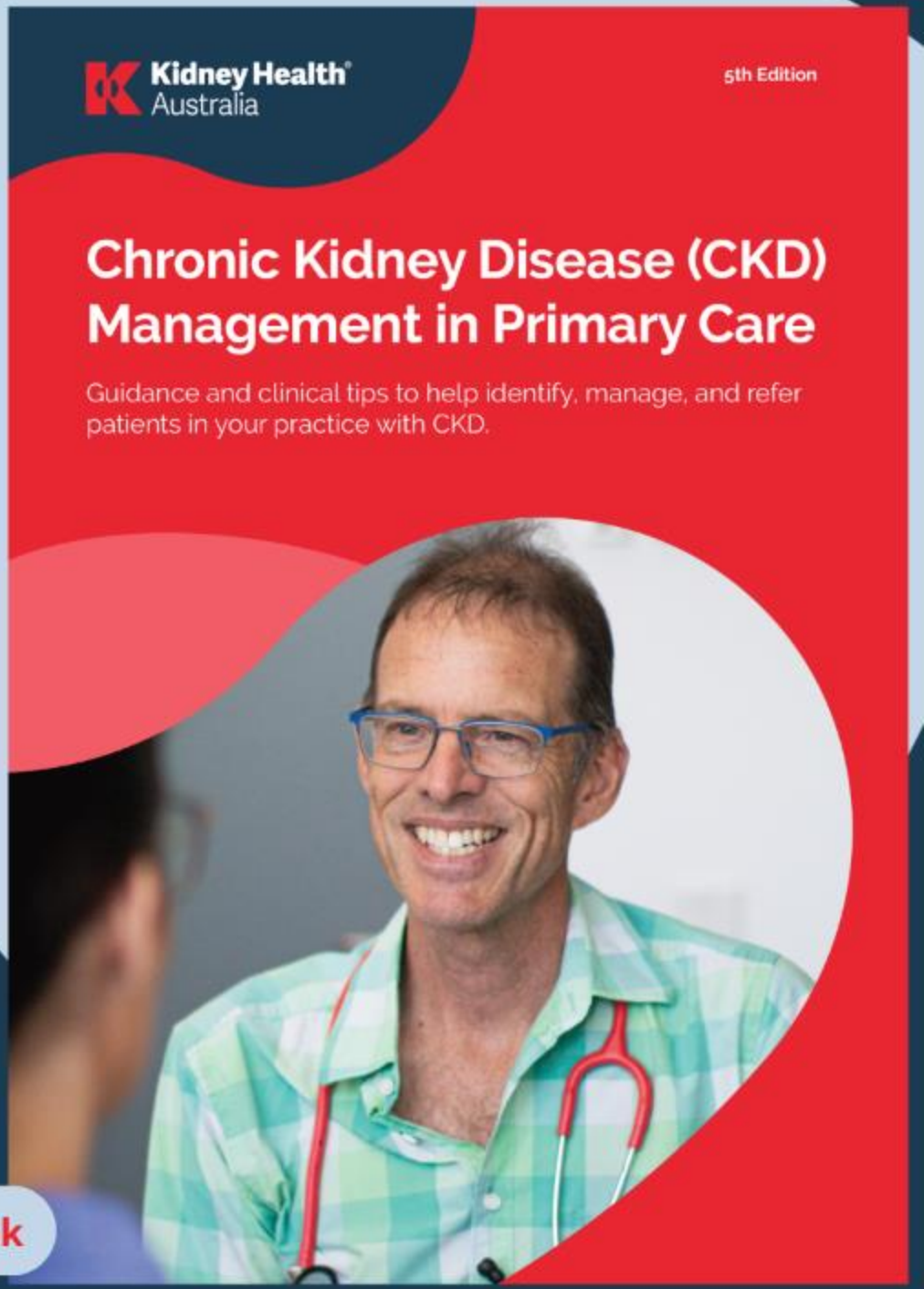
CKD-Go! App

New app available now.

The best bits of the CKD handbook in an App.

Get your copy!

kidney.org.au/ckdhandbook



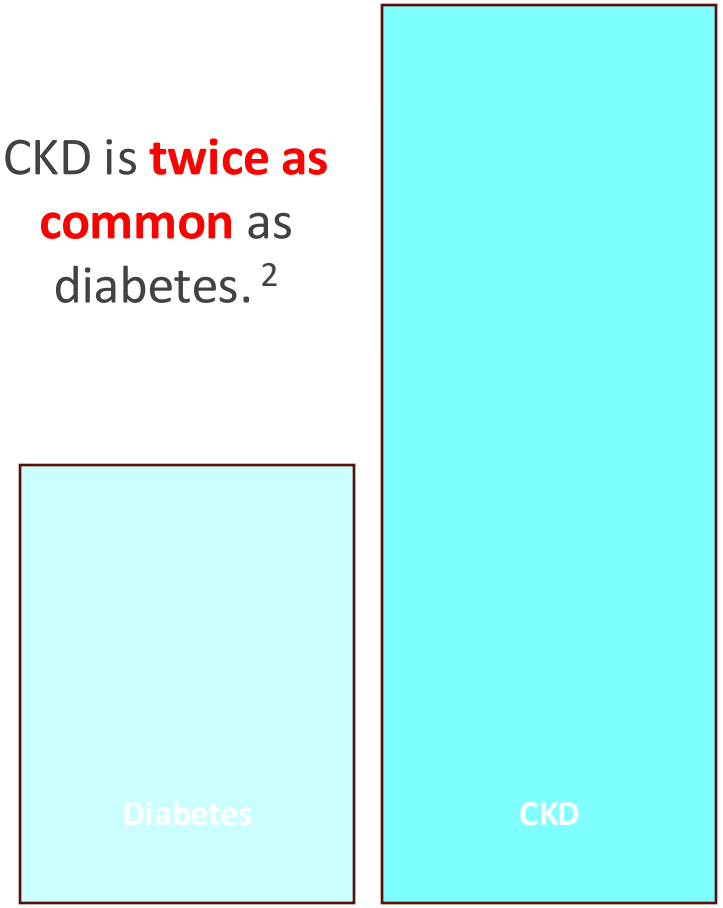
Kidney Health Australia

CKD in Australia - Common

Australian adults (1 in 7) aged 18 years and over have indicators of CKD such as reduced kidney function and/or albumin in the urine.[1]

Australian adults have at least one factor increasing their risk of CKD. [3]

CKD is **twice as common** as diabetes. [2]



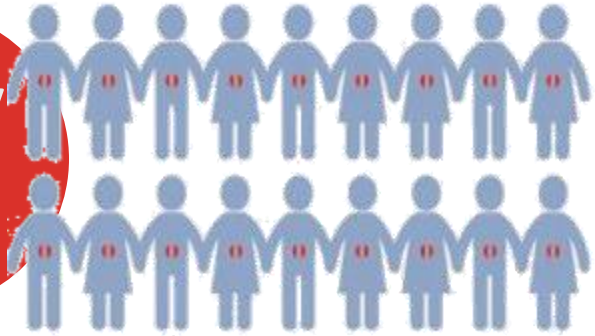
1. Deloitte Access Economics. *Changing the chronic kidney disease landscape: the economic benefits of early detection and treatment*. 2023:62. February 2023. Accessed January 23, 2024. https//kidney.org.au./get-involved/advocacy/deloittereport
2. Australian Bureau of Statistics. *Australian Health Survey: Biomedical Results for Chronic Diseases*, 2025.
3. Australian Institute of Health Welfare. Chronic kidney disease: *Australian facts*. 2023.

CKD in Australia - Harmful

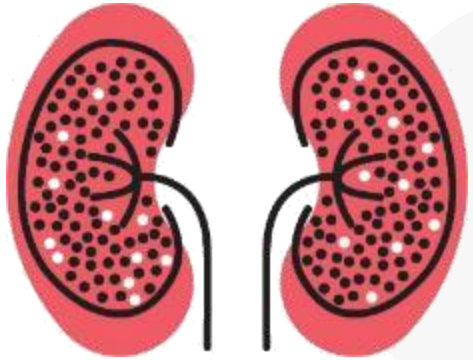
People with CKD are up to **20 times** more likely to **die from a heart attack** or stroke than they are to progress to kidney failure. [2]

~20,000

Australians **die every year** with kidney disease. [1]



The number of people needing treatment for kidney failure has **doubled** in the last 20 years. [1]



The **burden of CKD** is greatest in people experiencing socioeconomic disadvantage, living rurally and in First Nations Australians. [1]

1. Australian Institute of Health Welfare. Chronic kidney disease: *Australian facts*. 2023.
2. Tonelli M, Wiebe N, Culleton B, et al. Chronic kidney disease and mortality risk: systematic review. *J AM Soc Neph*. 2006;17:2034-2047.

CKD in Australia - Treatable

If CKD is **detected early** and managed appropriately, deterioration in kidney function can be **reduced by as much as 50%.** [1]

New treatments can slow the progression of CKD by up to **15 years**, or potentially longer if started early. [2]

1. Johnson DW. Evidence-based guide to slowing the progression of early renal insufficiency. *Intern Med J*. 2004;34(1-2):50-57.
2. Fernandez-Fernandez B. Sarafidis P, Soler MJ, Ortiz A. EMPA-KIDNEY: expanding the range of kidney protection by SGLT2 inhibitors. *Clin Kidney J*. Aug 2023;16(8):1187-1198. doi:10.1093/ckj/sfad082

CKD in Australia - Overlooked

< 7%

Fewer than 7% of people with CKD are aware they have this condition. [1]

90% of kidney function can be lost before people experience symptoms. [1]

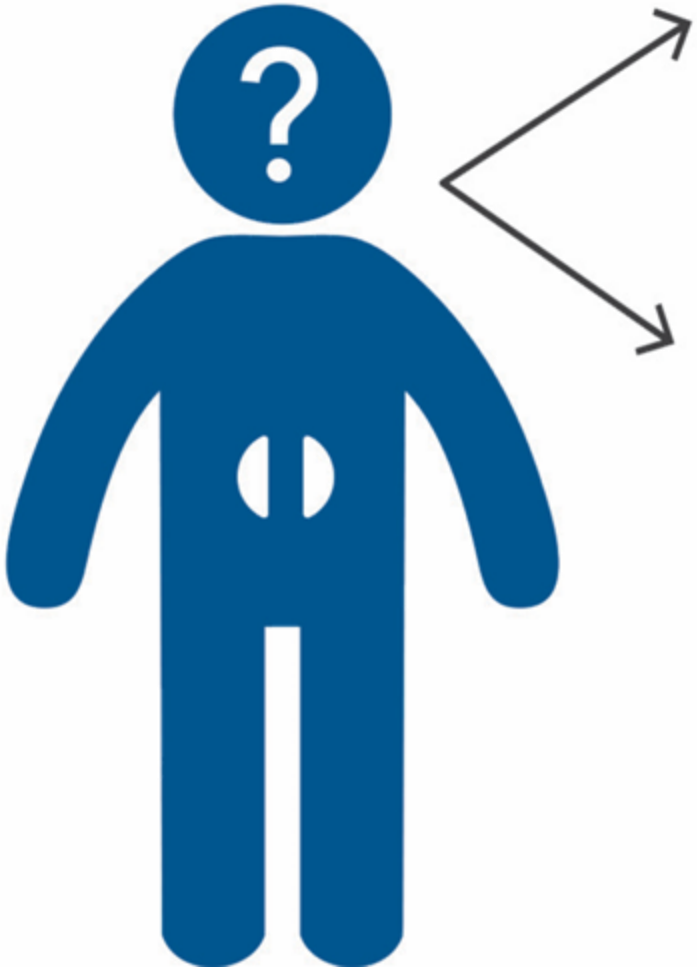
17%

Late referral is common. 17% of people commence dialysis within 90 days of being referred to a kidney service. [2]

1. Australian Bureau of Statistics. *Australian Health Survey: Biomedical Results for Chronic Diseases*, 2011-12. 2013.
2. ANZDATA Registry. 46th Report, Chapter 1: Incidence of Kidney Failure with Replacement Therapy. 2023. Accessed December 04, 2023. https://www.anzdata.org.au/report/anzdata-46th-annual-report-2023-data-to-2022/

What is CKD?

CKD is defined as…



An estimated or measured glomerular filtration rate (GFR) <60 mL/min/1.73m² that is present for ≥3 months with or without evidence of kidney damage.

Or

Evidence of kidney damage with or without decreased GFR that is present for ≥3 months as evidenced by the following, irrespective of the underlying cause:

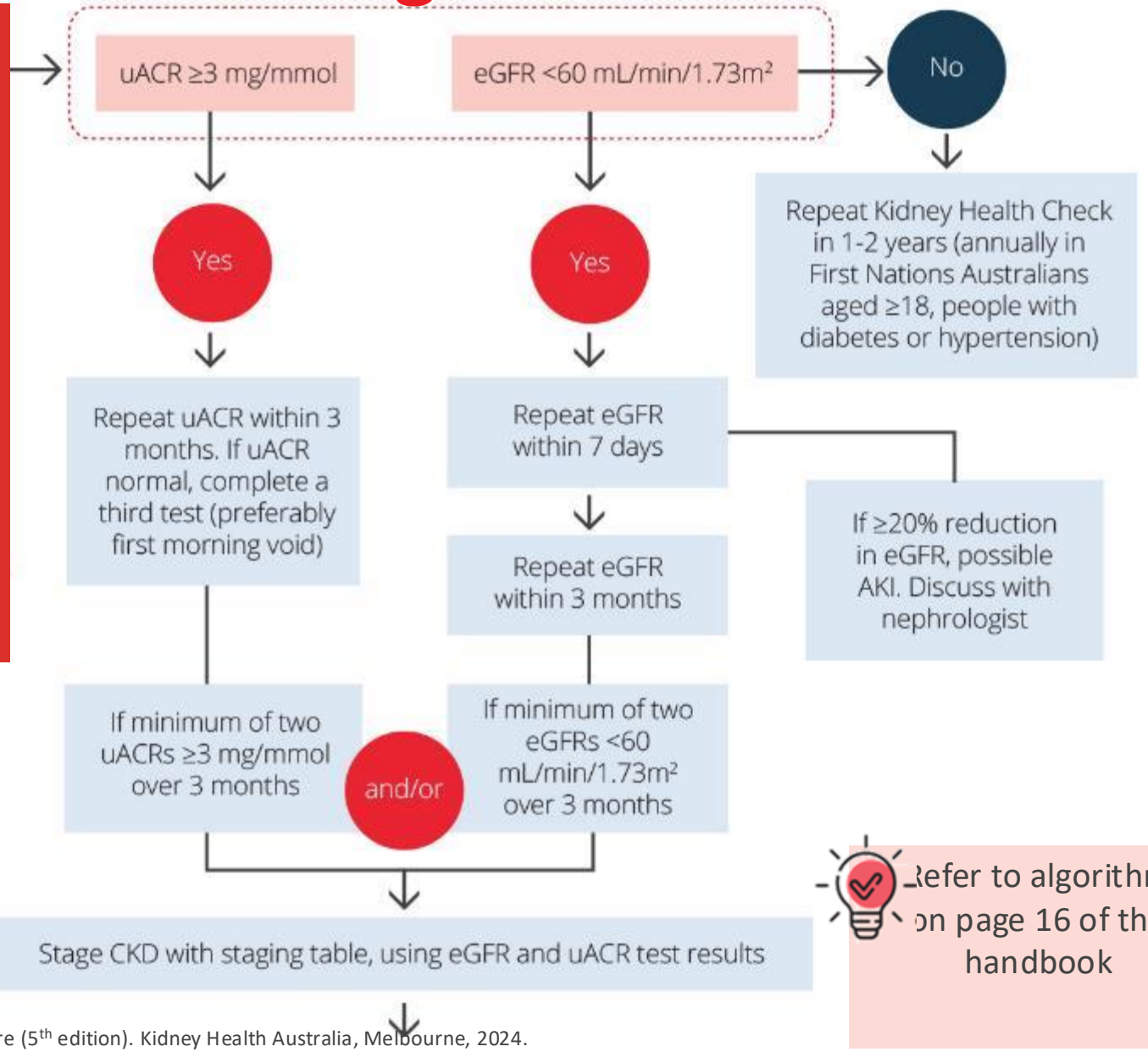
- Albuminuria
- Haematuria after exclusion of urological causes
- Structural abnormalities (e.g. on kidney imaging tests)
- Pathological abnormalities (e.g. renal biopsy)

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

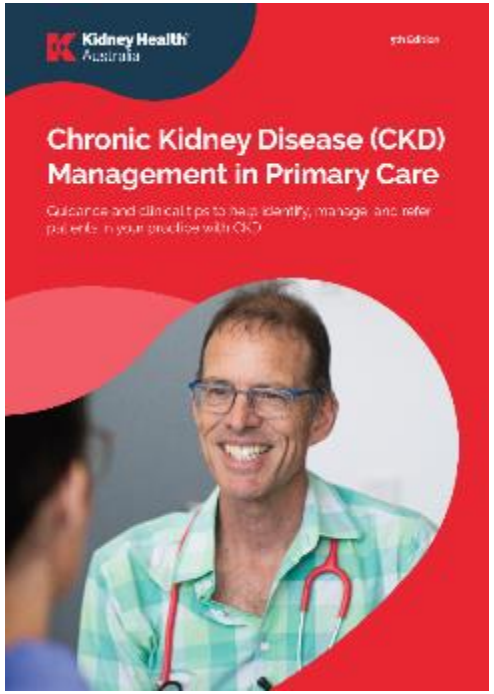
Initial detection and diagnosis of CKD

Offer a Kidney Health Check to people with

- Diabetes
- Hypertension
- Established CVD
- Family history of kidney failure
- Obesity (BMI ≥30)
- Current or former smoker or vaper
- History of AKI
- First Nations Australians aged ≥18 years
- All Australians aged ≥60 years

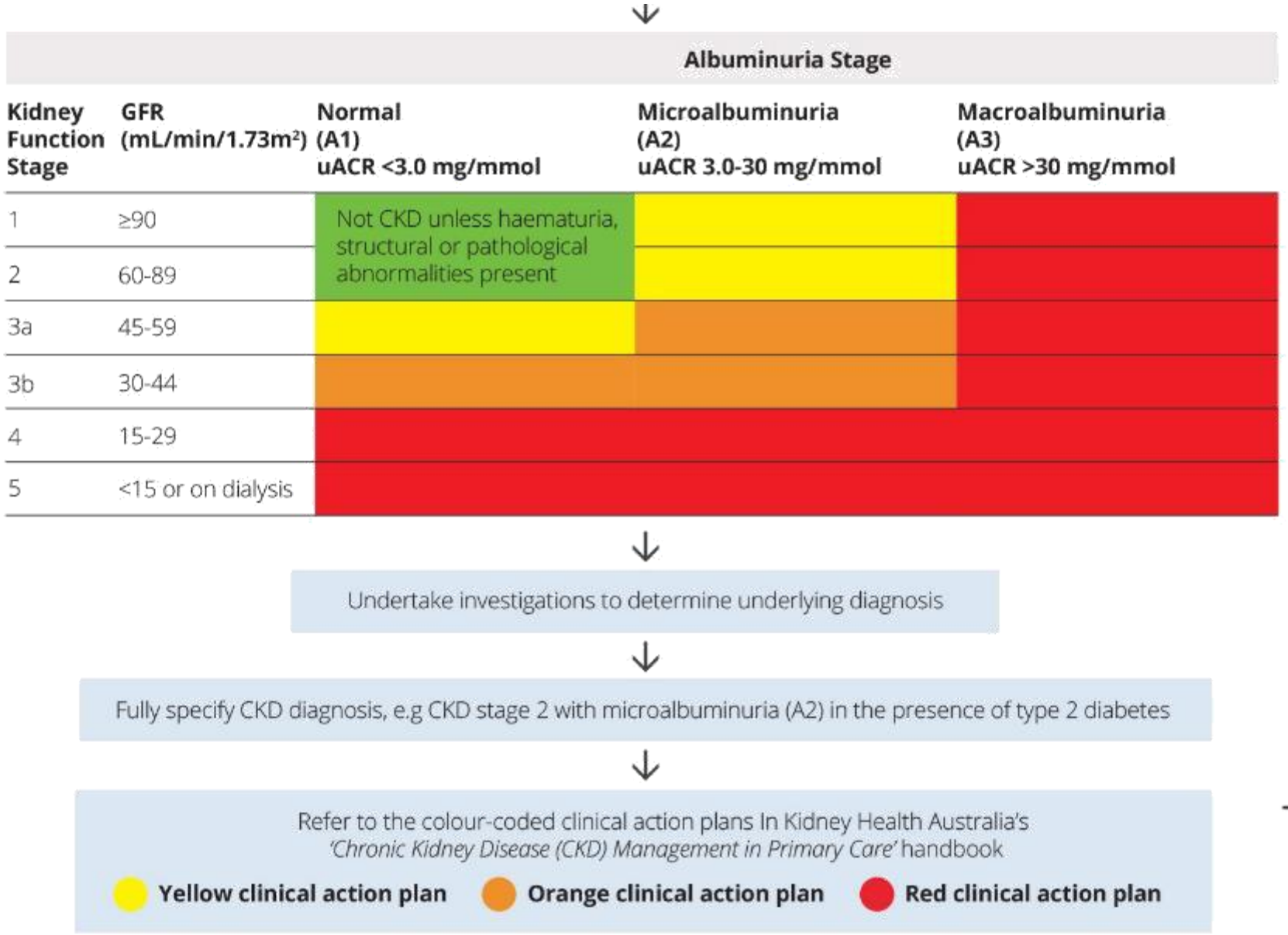


Refer to algorithm on page 16 of the handbook



Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Algorithm for initial detection and diagnosis of CKD cont…



fer to algorithm
page 16 of the handbook

Enter diagnosis into the practice software as a coded diagnosis

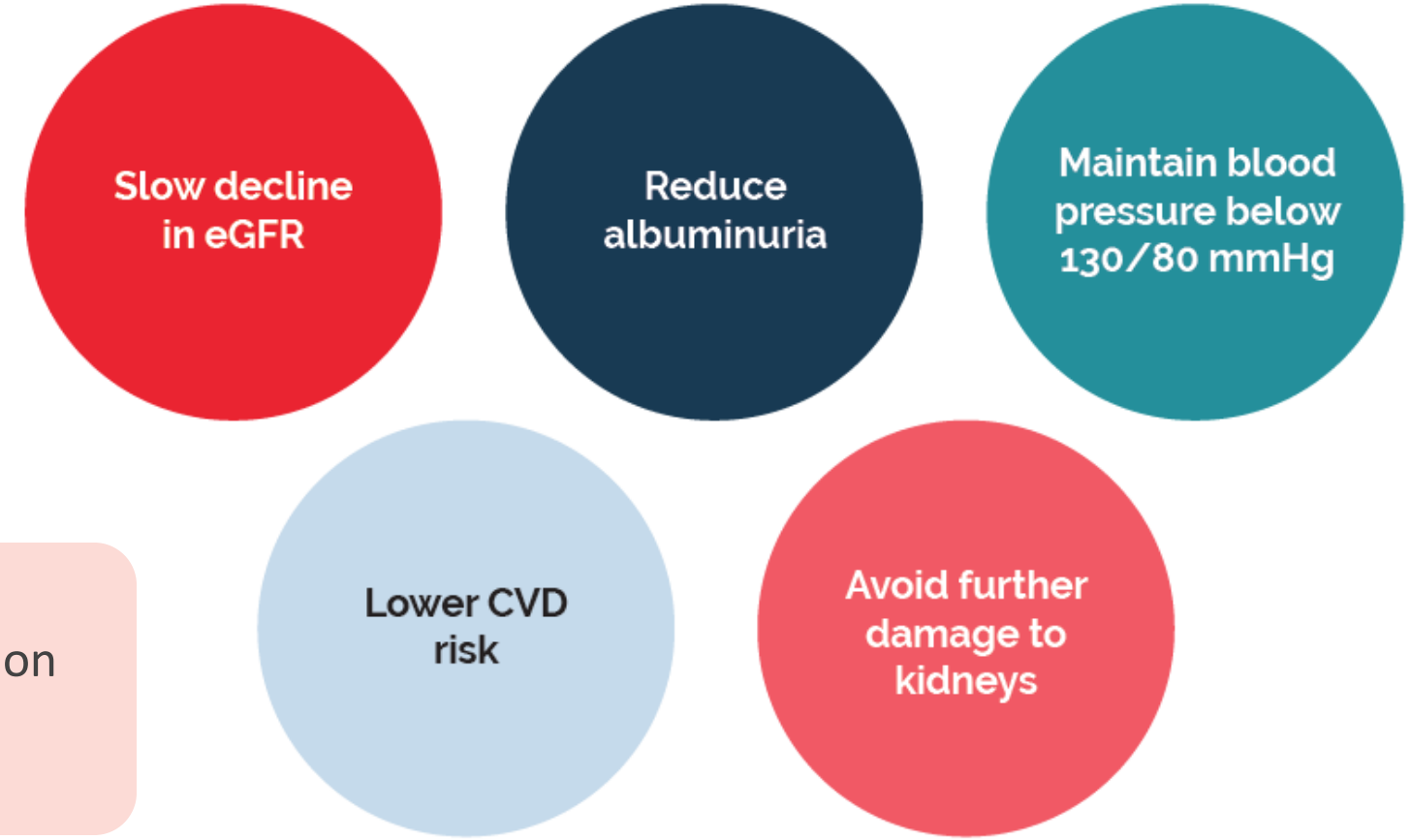
Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

What key management strategies can be implemented in primary care to manage CKD?

a) Slow decline in eGFR
b) Reduce albuminuria
c) Maintain blood pressure below 130/80 mmHg
d) Lower cardiovascular risk
e) Avoid further damage to kidneys
f) Nothing. CKD cannot be effectively managed in primary care

Question

Answer:
Key management strategies for CKD



Clinical tip

Use the corresponding colour-coded action plan for key management strategies and goals on pages 26-28 of the handbook.

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Colour-coded action plan

Yellow clinical action plan

eGFR ≥60mL/min/1.73m² with microalbuminuria (A2) or
eGFR 45-59 mL/min/1.73m² with normoalbuminuria (A1)

Management goals

- Slow progression of CKD.
  - Slow decline in eGFR.
  - Reduce albuminuria by at least 30%.
- Assess and lower cardiovascular risk.
- Avoid nephrotoxic medications or volume depletion.
- Encourage positive lifestyle changes and self-management practices.

Management strategies

Frequency of review
- Every 12 months

Clinical assessment
- Blood pressure
- Weight and waist circumference
- Smoking/vaping history

Laboratory assessment

Recommended:
- uACR
- eGFR
- Urea, creatinine, and electrolytes
- Full blood count

Also consider:
- Screening for diabetes (fasting blood glucose or HbA1c)
- HbA1c (for people with diabetes)
- Dipstick urinalysis for haematuria detection
- Lipid studies (Trig, Chol, HDLC, LDLC)

Treatment checklist
- Complete investigations to determine underlying cause of CKD.
- Provide advice on positive lifestyle changes (addressing smoking/vaping, nutrition, alcohol use, physical activity, sleep, stress).
- Maintain blood pressure consistently below target .
- Complete cardiovascular risk assessment.
- Prescribe medications to slow CKD progression, e.g., ACE inhibitor or ARB, SGLT2 inhibitor, non-steroidal MRA.
- Consider lipid lowering treatment where appropriate.
- Optimise glycaemic control.
- Avoid nephrotoxic medications or volume depletion .
- Discuss contraception with individuals of child-bearing age.
- Recommend vaccinations.

Refer to action plans on pages 26-28 of the handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Colour-coded action plans

Orange clinical action plan

eGFR 30-59mL/min/1.73m² with microalbuminuria (A2) or
eGFR 30-44 mL/min/1.73m² with normoalbuminuria (A1)

Enter review reminders and into practice software

Management goals

- Slow progression of CKD.
  - Slow decline in eGFR.
  - Reduce albuminuria by at least 30%.
- Assess and lower cardiovascular risk.
- Avoid nephrotoxic medications or volume depletion.
- Encourage positive lifestyle changes and self-management practices.

+

- Early detection and management of complications.
- Adjust medication doses to levels appropriate for kidney function.
- Appropriate referral to a nephrologist when indicated.

+

Management strategies

Frequency of review
- Every 3-6 months

Clinical assessment
- Blood pressure
- Weight and waist circumference
- Smoking/vaping history

Laboratory assessment

Recommended:
- uACR
- eGFR
- Urea, creatinine, and electrolytes
- Full blood count

Also consider:
- Screening for diabetes (fasting blood glucose or HbA1c)
- HbA1c (for people with diabetes)
- Dipstick urinalysis for haematuria detection
- Lipid studies (Trig, Chol, HDLC, LDLC)
- Iron studies
- Calcium and phosphate
- Parathyroid hormone (6-12 monthly if eGFR <45mL/min/1.73m²)

Treatment checklist
- Complete investigations to determine underlying cause of CKD.
- Provide advice on positive lifestyle changes (addressing smoking/vaping, nutrition, alcohol use, physical activity, sleep, stress).
- Maintain blood pressure consistently below target.
- Complete cardiovascular risk assessment.
- Prescribe medications to slow CKD progression, e.g., ACE inhibitor or ARB, SGLT2 inhibitor, non-steroidal MRA.
- Consider lipid lowering treatment where appropriate.
- Optimise glycaemic control.
- Avoid nephrotoxic medication or volume depletion and adjust doses to levels appropriate for kidney function.
- Assess for common issues presenting in CKD.
- Appropriate referral to nephrologist when indicated.
- Discuss contraception with individuals of child-bearing age.
- Recommend vaccinations.

Refer to action plans on page 27 of the handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Colour-coded action plan

Red clinical action plan

Macroalbuminuria irrespective of eGFR or
eGFR <30 mL/min/1.73m² irrespective of albuminuria

Management goals

- Slow progression of CKD.
  - Slow decline in eGFR.
  - Reduce albuminuria by at least 30%.
- Assess and lower cardiovascular risk.
- Avoid nephrotoxic medications or volume depletion.
- Encourage positive lifestyle changes and self-management practices.

+

- Early detection and management of complications.
- Adjust medication doses to levels appropriate for kidney function.
- Appropriate referral to a nephrologist when indicated.

+

- Prepare for kidney replacement therapy if appropriate.
- Prepare for comprehensive conservative care if appropriate.

Management strategies – as for Orange action plan, plus…

Frequency of review
- Every 1-3 months

Clinical assessment
- Oedema

Treatment checklist
- Address high cardiovascular risk (handbook page 48)
- Discuss potential progression to kidney failure with patient and treatments
- Initiate advance care planning (handbook page 75).

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Frequently asked question

What dietary changes could help preserve kidney function?

Please enter your answers in the Chat

Question

Nutrition and diet – lifestyle modification

Target	Detail
Healthy dietary pattern	• Vegetables, fruit, wholegrains, nuts and legumes, dairy foods, lean meat poultry, fish and plant protein. • Associated with reduced risk of mortality, kidney failure, developing CKD, and progression of CKD • Can reduce rate of kidney function decline, decrease body weight and blood pressure, and metabolic acidosis.
Fluid	• Make water the drink of choice. • No recommended number of glasses to consume daily. • Drink to thirst. • Avoid sugar sweetened beverages – they have shown to elevate risk of and progression of CKD.
Salt	• Reduce intake to <5g per day
Ultra-processed foods	• Avoid foods high in fat, sugar and salt e.g. biscuits, cakes, packaged snack foods, takeaway foods, energy drinks, fruit juices and cordials.

Refer to action plans on page 30 of the handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Alcohol – lifestyle modification

Australian guidelines recommend **healthy** men and women should drink no more than 10 standard drinks a week and no more than 4 standard drinks on any one day to reduce the risk of harm from alcohol-related disease or injury.

There are no specific recommendations about safe levels of alcohol consumption people with CKD, however… the less you drink, the lower your risk of harm from alcohol.

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Physical activity – lifestyle modification

Target

Be active on most days	Aim for 2.5-5 hours of moderate activity per week	Include muscle strengthening activities at least 2x per week

- Increased physical exercise and reduced sedentary time is associated with improved outcomes for people living with CKD.
- Light to moderate physical activity is a safe starting point of most individuals.

*Wang Y et al. Association between obesity and kidney disease: a systematic review and meta-analysis. *Kidney Int*. 2008;73:19-33.

Weight management – lifestyle modification

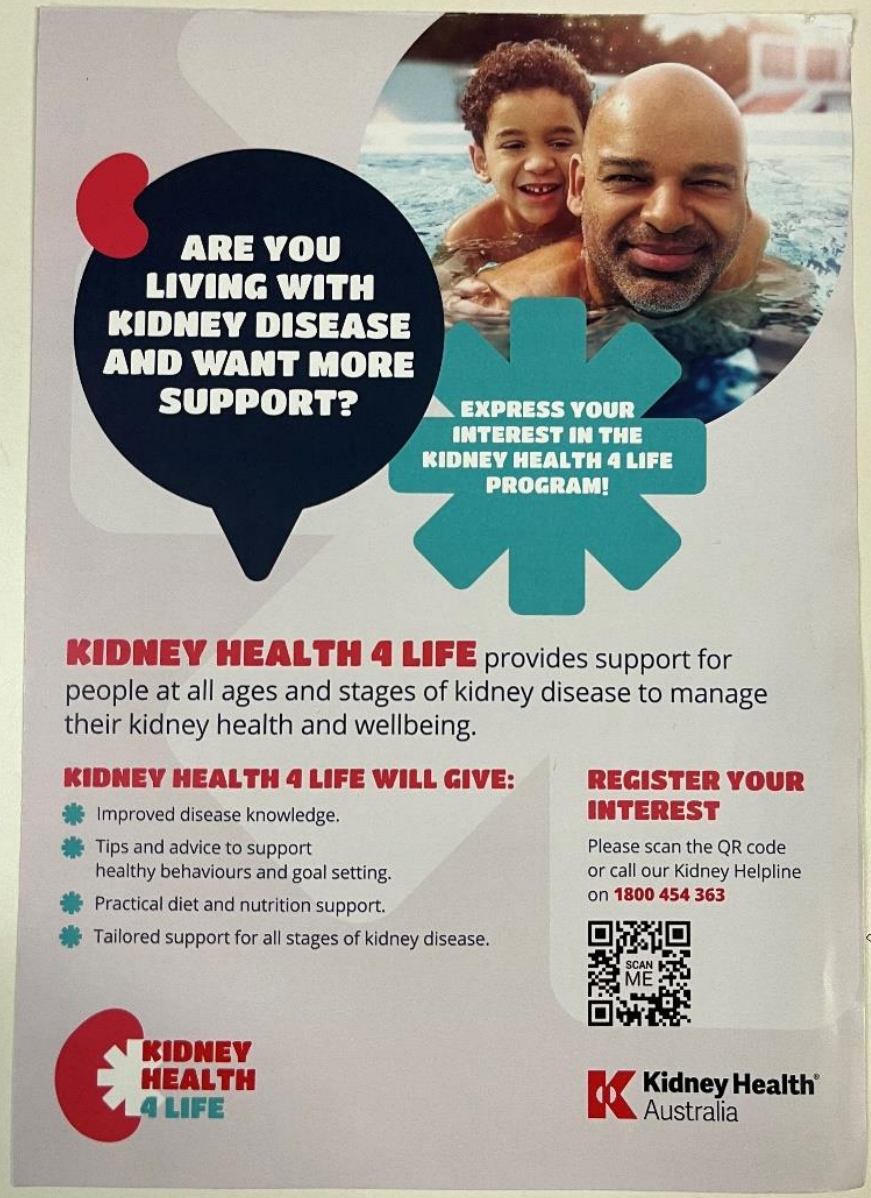
Overweight (BMI 25.1-30) & obese (BMI >30) people are **40%** & **80%** more likely to develop CKD compared to normal weight individuals*

Although not as powerful as diabetes or hypertension, obese people are more likely to develop albuminuria and proteinuria

Central obesity more important than generalised obesity

*Wang Y et al. Association between obesity and kidney disease: a systematic review and meta-analysis. *Kidney Int*. 2008;73:19-33.

Self-management programs



Get the Most Out of Life

TASMANIAN HEALTH SERVICE

Information for health and community workers

Get the Most Out of Life is a 6-week group program to help Tasmanians self-manage their chronic conditions and symptoms.

Two trained leaders deliver programs for groups of 10-15 participants.

Who can benefit from the program?
The program is suitable for people with chronic conditions, including, but not limited to:

- heart disease,
- arthritis,
- diabetes,
- asthma,
- bronchitis / emphysema / COPD
- chronic kidney disease
- multiple sclerosis and other neurological conditions.

The program is especially helpful for people with multiple conditions, as it teaches skills to coordinate many of the things needed to manage their health.

Partners / family members / friends / carers are also welcome to participate.

What does the program cover?
Get the Most Out of Life encourages participants to become more active self-managers. They share their experiences of learning new tools and support each other in the process.

Get the Most Out of Life helps participants learn how to:

- manage their symptoms
- get started with healthy eating and physical activity
- communicate effectively with their doctor and healthcare team
- manage difficult emotions
- develop an action plan - a key self-management tool
- be systematic with problem solving and decision making
- self-manage medication responsibilities
- practice relaxation techniques and self-help activities to improve sleep and reduce stress, pain and depression.

What does the research show?
This program was originally developed at Stanford University and is now licensed by the Self Management Resource Center USA, as the Chronic Disease Self Management Program.

More than 50 research studies have found that people who participate in this program generally:

- have fewer symptoms such as depression and shortness of breath,
- better quality of life,
- they exercise more, and
- use health care less.

Primary Health

TASMANIAN HEALTH SERVICE

Tasmanian Government

Research indicates that trained peers (non-professionals) with chronic conditions, can facilitate the program as effectively, if not more effectively, than health professionals. In Tasmania we have a mix of health workers and volunteers as leaders.

How do I refer people?
It's best if people self-refer via the contact details listed below (it is a self-management program after all).

They can speak with a coordinator who can answer questions and register them for the next group or add them to a waiting list.

You can help by giving them a brochure about the program and / or the contact details.

Where are programs run?
Get the Most Out of Life programs are held in venues across NW Tasmania.

People may also be able to access a program online.

Is there a cost?
A gold coin contribution for refreshments is the only cost to attend.

What is the length of the program?
The program runs for 2½ hours each week for six weeks with a group of about 10 - 15 people.

Who is licensed in Tasmania?
In Tasmania programs are delivered by Tasmanian Health Service, and Rural Health Tasmania.

Contact:
Michelle Towle (NW):
Email michelle.towle@ths.tas.gov.au
Phone (03) 6477 7347

May 2021

Dale Anderson's story

Dale Anderson, Food Services Manager at the Launceston General Hospital attended the six-week Get the Most Out of Life program and has not looked back since.

Dale has type II diabetes and says doing the program really made him take stock and look at things differently.

"I'm more comfortable since doing the program – I was in denial for a few years after my initial diagnosis. I'd even go to different doctors just to get the scripts I needed so I avoided having the conversation about changes I needed to make."

"The program made me realise I needed to be more responsible about my medication, I needed to look after myself better, and seeing other people in worse situations made me realise others do experience difficulties. I sit back and listen more and am definitely more aware and not as judgemental of others.

I really enjoyed every aspect of the program and have already recommended the program to others."

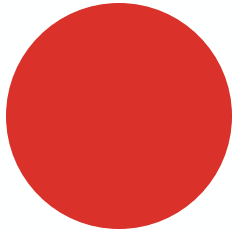
Pillars of medication management

Angiotensin-converting enzyme inhibitors (ACEi) are better than angiotensin receptor blockers (ARB) in reducing albuminuria and kidney function decline.

a) True
b) False
c) Don't know

ACE inhibitor **or** ARB is recommended first line therapy in primary care.

Combined ACE **and** ARB should **only** be used **under specialist supervision**



Hypertension target

For all people with CKD…
maintain BP below
130/80 mmHg

Treatment should always be individualised and in some patients, it may be appropriate to aim for a lower BP target

Treatment targets should take into account the risk / benefit scenario along with clinical practicalities

Blood pressure reduction

ACE inhibitor **or** ARB is recommended first line therapy.

Reducing blood pressure to below target levels is one of the most important goals of CKD management

Lifestyle changes should always be advocated and can have significant effect on BP

Hypertension may be difficult to control, and multiple (3 or more) medications are frequently required

Refer to pages **52-56** in the CKD Handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

RAS blockade and kidney function

Clinical tip

ACE inhibitors and ARBs cause a reversible reduction in GFR when treatment initiated.

Check eGFR within 2 weeks following initiation.

Provided reduction is < 25% within 2 weeks of starting therapy, the ACE inhibitor or ARB should be continued.

If reduction is > than 25% below the baseline value, discontinue and consider referral to a nephrologist.

PRESCRIBE: medications to slow CKD progression and reduce CVD risk

ACE inhibitor or ARB	Statin (+/- ezetimibe)	SGLT2 inhibitor*	Non-steroidal MRA*	GLP-1 RA*
• First-line treatment. • Up-titrate to maximum tolerated dose.	Consider use in: • People with CKD and a CVD risk ≥10% and • First Nations Australians with CKD and a CVD risk ≥5%.	• Use in people with CKD and proteinuria, with/without diabetes*. • **Do not initiate** if **eGFR <25mL/min/ 1.73m²).**	• Indicated for use in people with CKD (with albuminuria) associated with type 2 diabetes. • **Do not initiate** if **eGFR <25mL/min/ 1.73m²** or when **K+ >5.0mmol/L.**	• Indicated for use in people with CKD if they also have type 2 diabetes. • Do not use in people with kidney failure.

** Refer to product information for eligibility criteria and dosing*

SGLT2 inhibitors e.g. dapagliflozin (e.g. Forxiga), empagliflozin (e.g. Jardiance)
Non-steroidal mineralocorticoid receptor agonist (MRA) = finerenone (Kerendia)
Glucagon-like peptide- 1 receptor agonist (GLP-1 RA) (e.g. semaglutide (e.g. Ozempic)

Refer to pages **34-35** in the CKD Handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

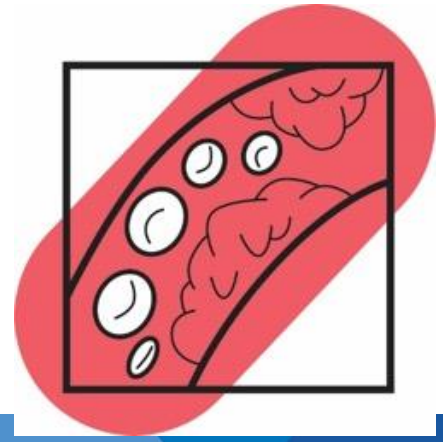
Statin therapy for CKD

Fasting lipid profile evaluation is recommended for all adults with newly identified CKD.
Consider secondary causes and specialist evaluation if LDL-cholesterol >4.9 mmol/L or triglycerides >11.3 mmol/L.

Statin (+/-ezetimibe) for:

- Non-Indigenous people with CKD (eGFR ≥15ml/min/1.73m^2) and CVD risk ≥10%
- First Nations Australians with CKD and CVD risk ≥5%.

Lifestyle advice if hyper-triglyceridaemia is present.



Refer to: CARI Guidelines: Management of cholesterol-lowering therapy in people with chronic kidney disease.

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

SGLT2 inhibitors treatment for CKD

-
- PBS Criteria:
- Diagnosis of proteinuric CKD (with or without diabetes) present for ≥ 3 months prior to prescribing.
- eGFR 25 - 75 mL/min/1.73m^2
- uACR 22.6 - 565 mg/mmol
- Must be stabilised, for at least 4 weeks, on either: (i) an ACE inhibitor or (ii) an angiotensin II receptor antagonist.
- Do not use in combination with another SGLT2 inhibitor.
- Not recommended to initiate if eGFR < 25 mL/min/1.73m^2.
- May be prescribed by nurse practitioners (continuing therapy only)

https://www.pbs.gov.au/pbs/home -

Check pbs.gov.au for full prescribing criteria

SGLT2 inhibitors

Clinical tip

- SGLT2 inhibitors cause a reversible drop in eGFR 4 weeks after initiation, then rebounds.
- Specific testing of eGFR for this purpose is not required.
- SGLT2 inhibitors cause osmotic diuresis, reduce diuretics and/or antihypertensive medications upon initiation of an SGLT2 inhibitor.

SGLT-2 inhibitors slow CKD progression

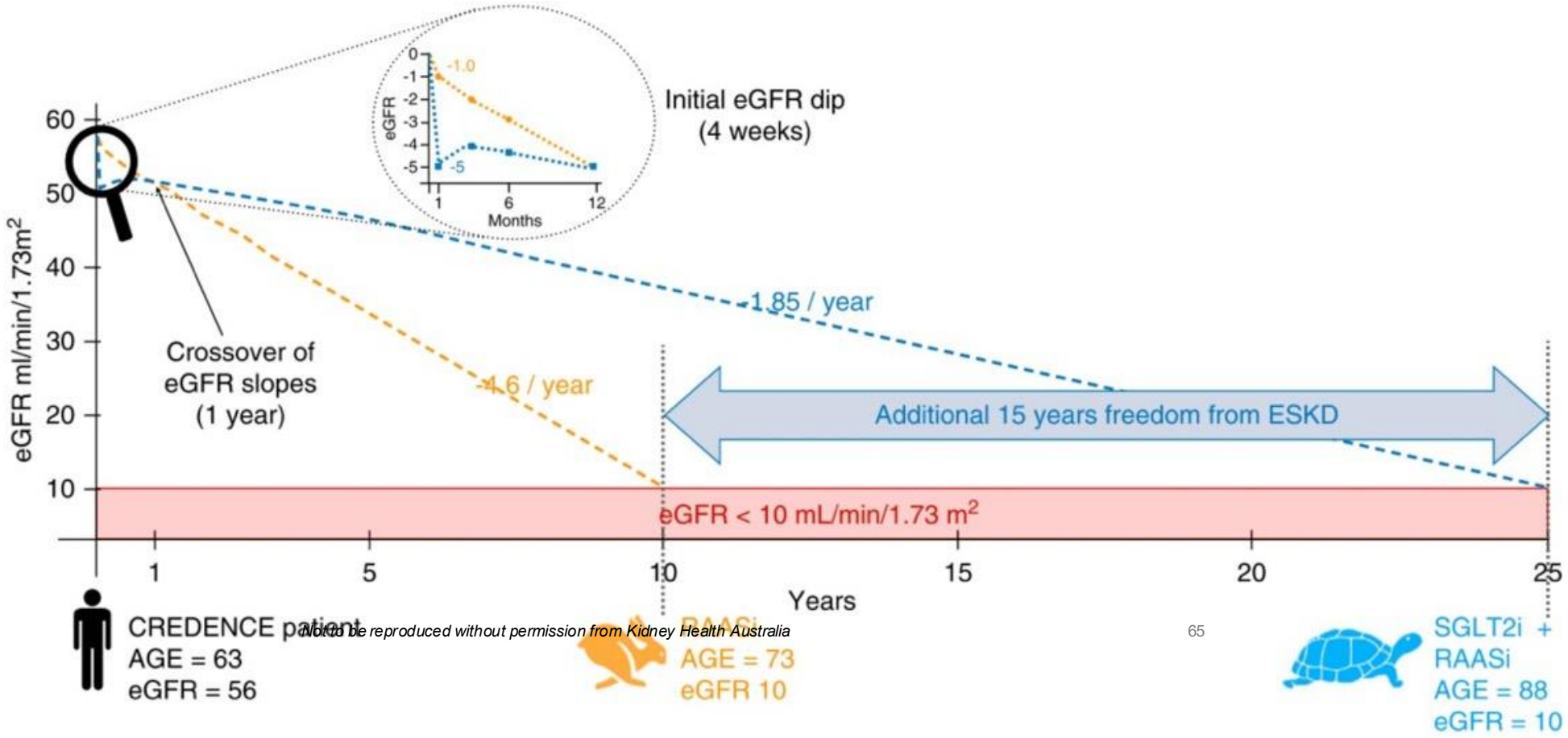


Figure 1. | SGLT2is may delay ESKD by 15 years. A typical patient included in CREDENCE would lose 4.6 ml/min per year of eGFR if treated with RAASi only, reaching ESKD in 10 years. However, if canagliflozin is added to his treatment, he would only lose 1.85 ml/min per year of eGFR, delaying ESKD by 15 years. RAASi, renin-angiotensin-aldosterone system inhibitors; SGLT2i, sodium-glucose cotransporter 2 inhibitor.

Diabetic kidney disease and CKD therapy

Non-steroidal mineralocorticoid antagonist (nsMRA), finerenone, is PBS listed for diabetic kidney disease (DKD) to delay progressive decline of kidney function and reduce risk of CV event in addition to standard care.

Tips for using nsMRA

- PBS approved for use in diabetic kidney disease

  eGFR 25 - 75 mL/min/1.73m^2

  uACR 22.6 - 565 mg/mmol

  Add on therapy to both RAS (ACEi or ARB) and SGLT2 inhibitor

  Predictable drop in eGFR and rise in serum potassium - monitor carefully

  Do not use in combination with steroidal MRAs (e.g. spironolactone)

Bakris GL et al. *Effect of finerenone on chronic kidney disease outcomes in type 2 diabetes*. New Engl J Med. 2020;383(23): 2219-2229

REDUCE: medications excreted by the kidneys

Medications that may need to be started at a reduced dose or ceased in patients with CKD include but not limited to#:

Anti-infective	Cardiovascular	Diabetes	Pain	Other
• famciclovir • nirmatrelvir • valaciclovir • antibiotics e.g. ciprofloxacin, trimethoprim, sulfamethoxazole, aminoglycosides, nitrofurantoin	• apixaban • dabigatran • digoxin • rivaroxaban • sotalol • spironolactone	• acarbose • all gliptins except linogliptin • insulin • metformin* • sulfonylureas	• gabapentin • opioid analgesics • pregabalin	• allopurinol • benzodiazepines • colchicine • baclofen • duloxetine • escitalopram • solifenacin • fenofibrate • denosumab^ • lithium

* Metformin reduce dose if eGFR 30-60mL/min/1.73m^2 and under specialist supervision if eGFR<30mL/min/1.73m^2

Medications in red have been added to the table in the 5th edition

Refer to pages **34-35** in the CKD Handbook

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

AVOID: nephrotoxic medications

Commonly prescribed drugs that can adversely affect kidney function in CKD	Commonly prescribed drugs that should be avoided temporarily during a sick day (SADMANS)*
• Lithium • Aminoglycosides • NSAIDs/COX-2 inhibitors – beware of the 'triple whammy'	• Sulfonylureas • ACE inhibitors • Diuretics • Metformin • ARBs • NSAIDs • SGLT2 inhibitors

- *As part of a sick day action plan, it is important that patients are advised to seek guidance from their healthcare professional on temporarily stopping medications during periods of illness.*
- *More on Sick Day action plans later…*

Refer to pages **34-35** in the CKD Handbook

GPs and pharmacists need to discuss appropriate pain relief medication with patients

Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Use of radiographic contrast agents in the context of CKD

Recent observations studies questions the severity of contrast-induced nephropathy (CIN).
Benefit of the imaging test and risk of CIN needs to be considered individually.

Recommended CIN risk classification for **adults**:

- eGFR ≥45mL/min/1.73m^2 low risk
- eGFR 30-40mL/min/1.73m^2 intermediate risk, diabetes increases risk
- eGFR <30mL/min/1.73m^2 high risk.

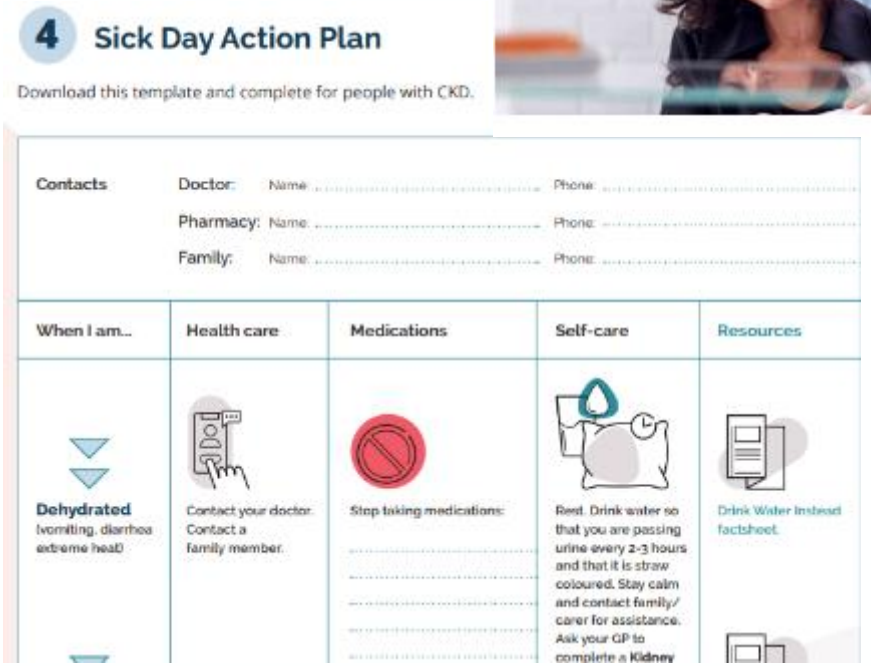
Sick day action plan

- Another important element of a CKD management plan is a Sick Day Action Plan

- ✓ People with CKD stage 3-5 are at increased risk of AKI.
- ✓ Avoid NSAIDS and other nephrotoxic medications
- ✓ Identify early people with acute illness (e.g., GI upset or dehydration)
- ✓ Temporarily cease ACE inhibitors, ARBs, diuretics with hypovolaemia / hypotension

Mnemonic for drugs to be avoided on a sick day (SADMANS)

S	Sulfonylureas
A	ACE-inhibitors
D	Diuretics
M	Metformin
A	Angiotensin receptor blockers
N	Non-steroidal anti-inflammatory
S	SGLT2 inhibitors



'How to guides' available in the Kidney Health Professional Hub

Page 40-42 of the CKD Handbook

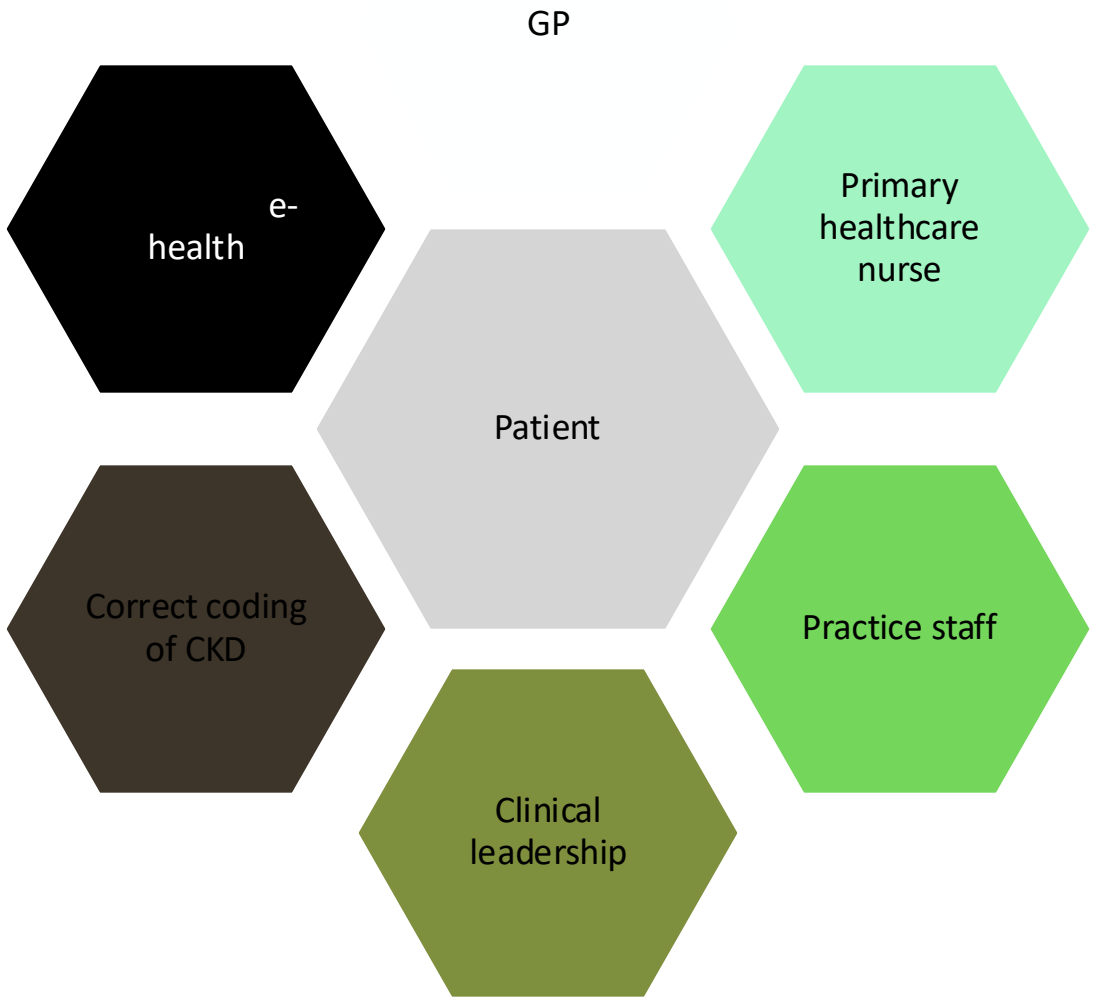
Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Treatment targets for people with CKD - summary

Parameter	Target	Treatment
Blood pressure	≤ 130/80 mmHg	Lifestyle modification ACE inhibitor or ARB
Albuminuria	uACR reduction of at least 30%	ACE inhibitor or ARB
Lipids	No target lipid level is recommended	Dietary advice Statins
Blood glucose (for people with diabetes)	HbA1c ≤ 7.0% / ≤ 53 mmol/mol BGL 6-8 mmol/L (fasting) / 8-10 mmol/L (postprandial)	Lifestyle modification Oral hypoglycaemic Insulin SGLT2 inhibitor and nsMRA

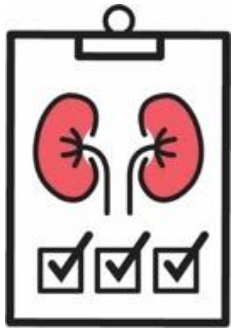
Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Whole of practice approach to CKD best practice management

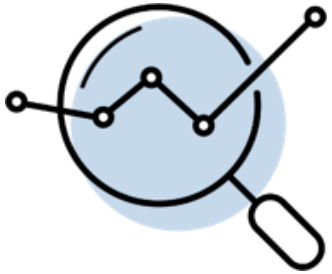


Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.

Take home messages



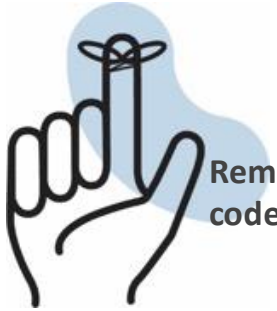
Early detection and management is important because CKD is common, harmful, **treatable** and often overlooked.



Actively identify people at risk of CKD in your practice.

Apply to your practice:

- ✓Algorithm for the initial detection
- ✓Colour coded clinical action plans to guide CKD management
- ✓PRESCRIBE, REDUCE AND AVOID classification of medications
- ✓Sick Day Action Plans



Remember: actively search for CKD indicators and code it in your practice software.

Support

Contact Kidney Health Australia for non-medical advice, information, and support.

1800 454 363

Kidney.helpline@kidney.org.au

kidney.org.au

Kidney Health Resources

Treatment options series

Make informed choices about kidney disease treatment options. The series of **'An Introduction to'** booklets includes topics on: Treatment Options, Haemodialysis, Peritoneal Dialysis, Comprehensive Conservative Care, Kidney Transplantation, Kidney Donation by Living Donors, and Withdrawing from Dialysis.

Living with kidney failure
A practical guide providing a wealth of information about kidney disease, written in Australia, for Australians.

First Nations Peoples
Various factsheets, kidney stories toolkit, and flipchart for clinics available to download.

Download resources

SCAN ME

Eating Out Guide
General advice about good food choices, options, and substitutes when eating out.

Back on the Menu
Easy to follow recipes for a reduced potassium diet.

Dining In
Delicious recipes developed for people with kidney disease.

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Kidney Health Australia

kidney.org.au

Kidney Helpline: 1800 454 363

Thank you for participating!

1. **Please complete the evaluation** form via the QR code on the screen or on the case study handout.
2. **Follow Kidney Health Australia** on Facebook, LinkedIn and X.

kidney.org.au

Kidney Health® Australia

Acknowledgements

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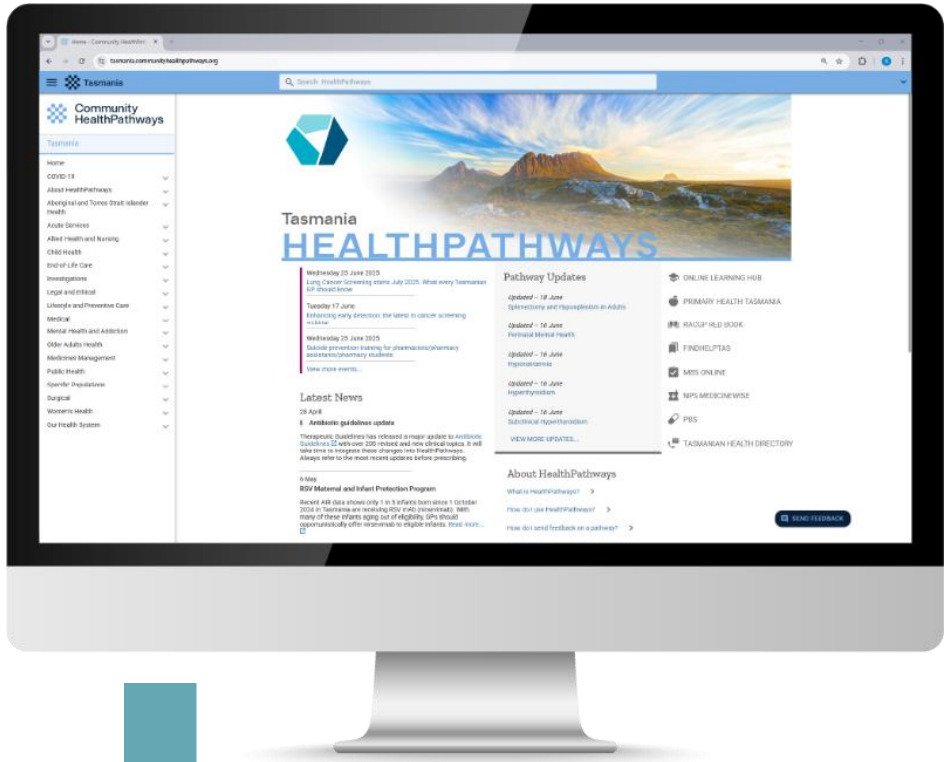
Tasmanian HealthPathways

Tasmanian HealthPathways

is a web-based information portal developed by Primary Health Tasmania. It is designed to help primary care clinicians plan local patient care through primary, community and secondary healthcare systems.

tasmania.communityhealthpathways.org



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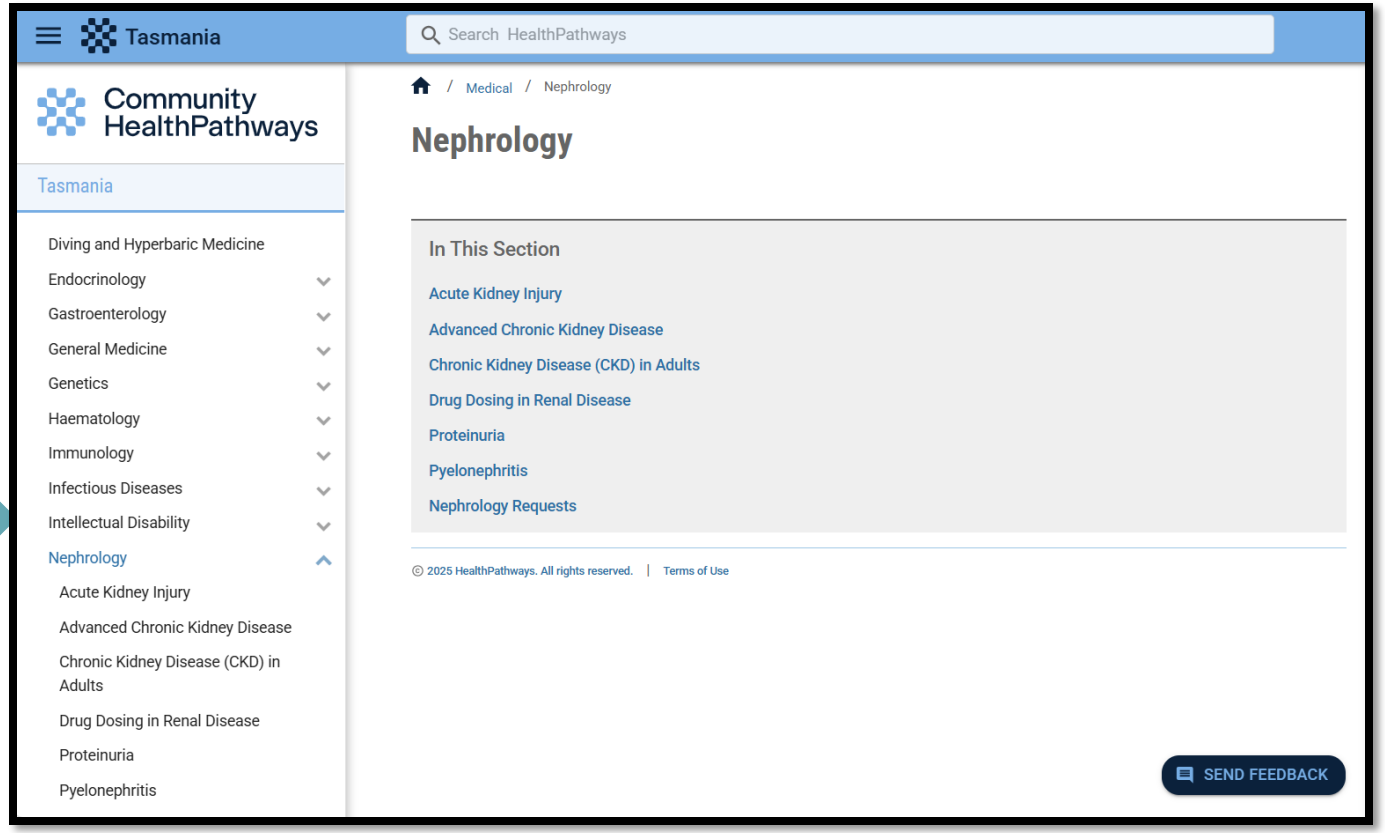

SCAN THE QR CODE OR GO TO

https://tasmania.communityhealthpathways.org/

Some final words

- After this webinar end, your browser will open a link to an evaluation survey.
- Statements of attendance will be emailed to participants.
- For event queries, please contact events@primaryhealthtas.com.au

Thank you

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