Early detection and management of chronic kidney disease

This webinar will start shortly.

Kidney Health Australia

phn TASMANIA
An Australian Government Initiative

primary health TASMANIA

Early detection and management of chronic kidney disease

Zoom webinar – Wednesday 16 October – 7.00 pm to 8.00 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:

- Outline the importance of early detection for those at risk of chronic kidney disease
- Describe the elements of the assessment for chronic kidney disease (Kidney Health Check)
- Define the treatment options to delay progression of kidney disease

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/

Presenter(s)

- **Professor Matthew Jose, Head of Nephrology (Royal Hobart Hospital)**

- **Emily Beadle, CKD Educator (Royal Hobart Hospital)**

Early detection and management of Chronic Kidney Disease

Primary Care Education Workshop

*This module was conceived and developed by PEAK**

Presented by:

- **Professor Matthew Jose, Head of Nephrology (Royal Hobart Hospital**
- **Emily Beadle, CKD Educator (Royal Hobart Hospital)**

Kidney Health® Australia

CLINICALLY REVIEWED & ENDORSED

Acknowledgement of Country

Recognition

Thanks to the ‘Primary Care Education Advisory Committee for Kidney Health Australia’ (PEAK) who has developed and reviewed this education.

Thanks to our volunteer presenters!

Thanks to our sponsors

The Kidney Health Australia's workshop program has been supported by

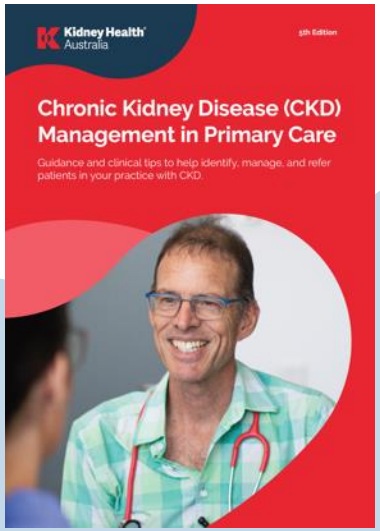
This education has been developed in reference to the Kidney Health Australia

Chronic Kidney Disease Management in Primary Care 5th edition handbook.

To enhance your learning experience please download the app version

CKD Go!

from your iPhone or Android app store.



Why use the CKD Management handbook app?

Chronic Kidney Disease (CKD) management in Primary Care handbook provides best practice recommendations for detecting and managing CKD in primary care:

- ✓ Easy to use and interactive.
- ✓ Colour coded CKD staging table.
- ✓ Colour coded clinical action plans outlining goals of management, key management tasks and treatments to slow the progression of CKD.
- ✓ Medication advice and treatment targets.
- ✓ Management framework for common CKD complications.
- ✓ Nephrology referral algorithm.
- ✓ Links to additional resources for you and your patients.

Learning aim

Provide the tools to drive the early detection of Chronic Kidney disease (CKD) in a primary care setting, using optimal management of CKD to slow or halt disease progression.

Learning outcomes

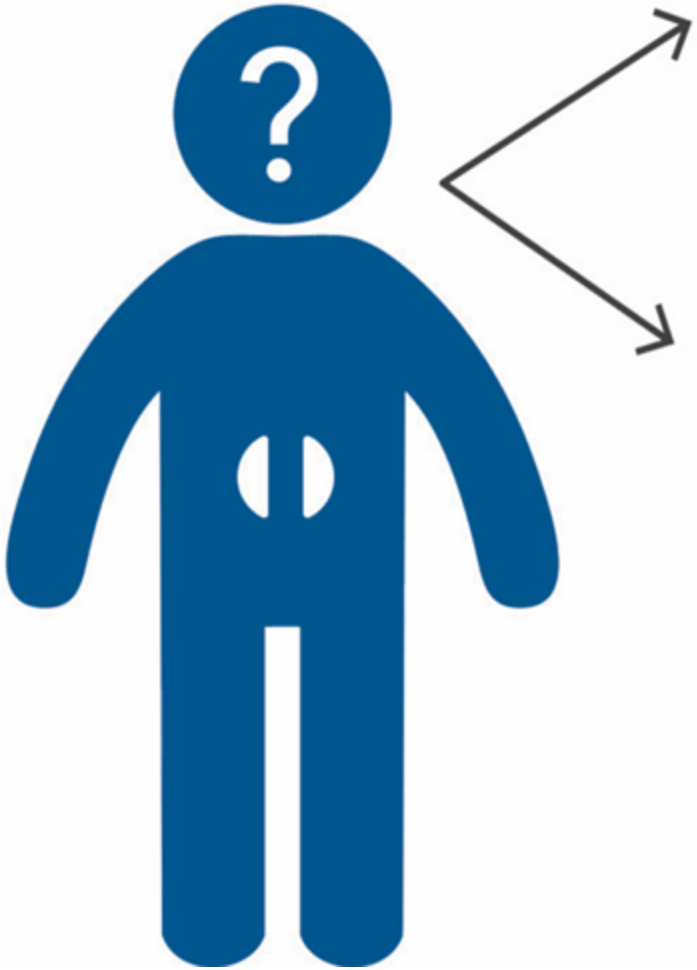
Outline the importance of early detection for those at risk of Chronic Kidney Disease

Describe the elements of the assessment for Chronic Kidney Disease (Kidney Health Check)

Define the treatment options to delay progression of kidney disease

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.

How prevalent is CKD in Australian adults?

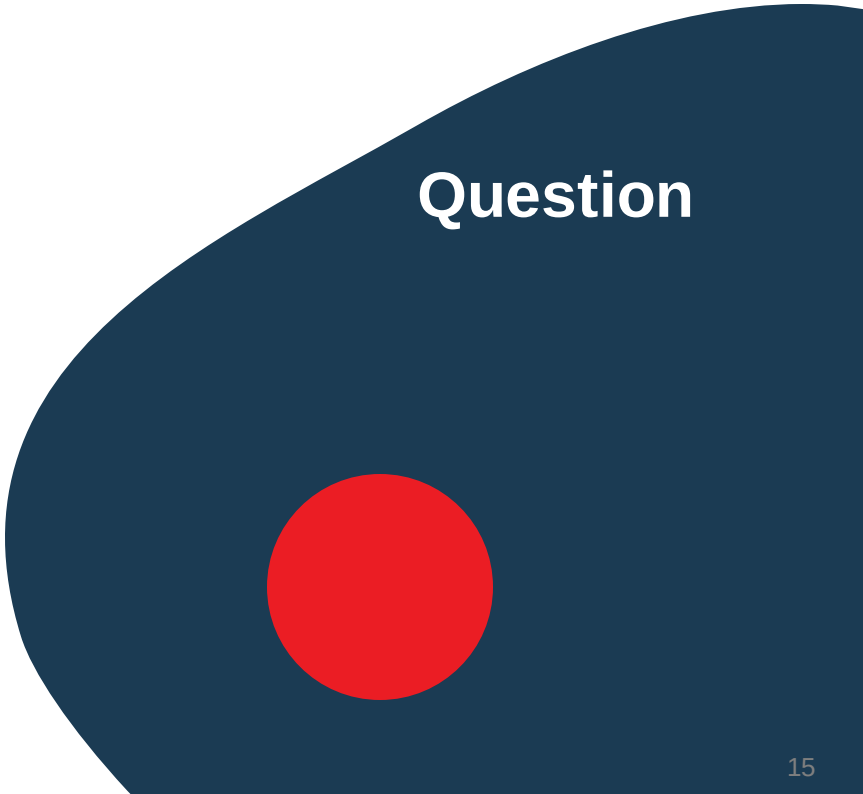
a) 1 in 5

b) 1 in 10

c) 1 in 20

d) 1 in 100

Entire group discussion



How prevalent is CKD in Australian adults?

a) 1 in 5

b) 1 in 10

c) 1 in 20

d) 1 in 100

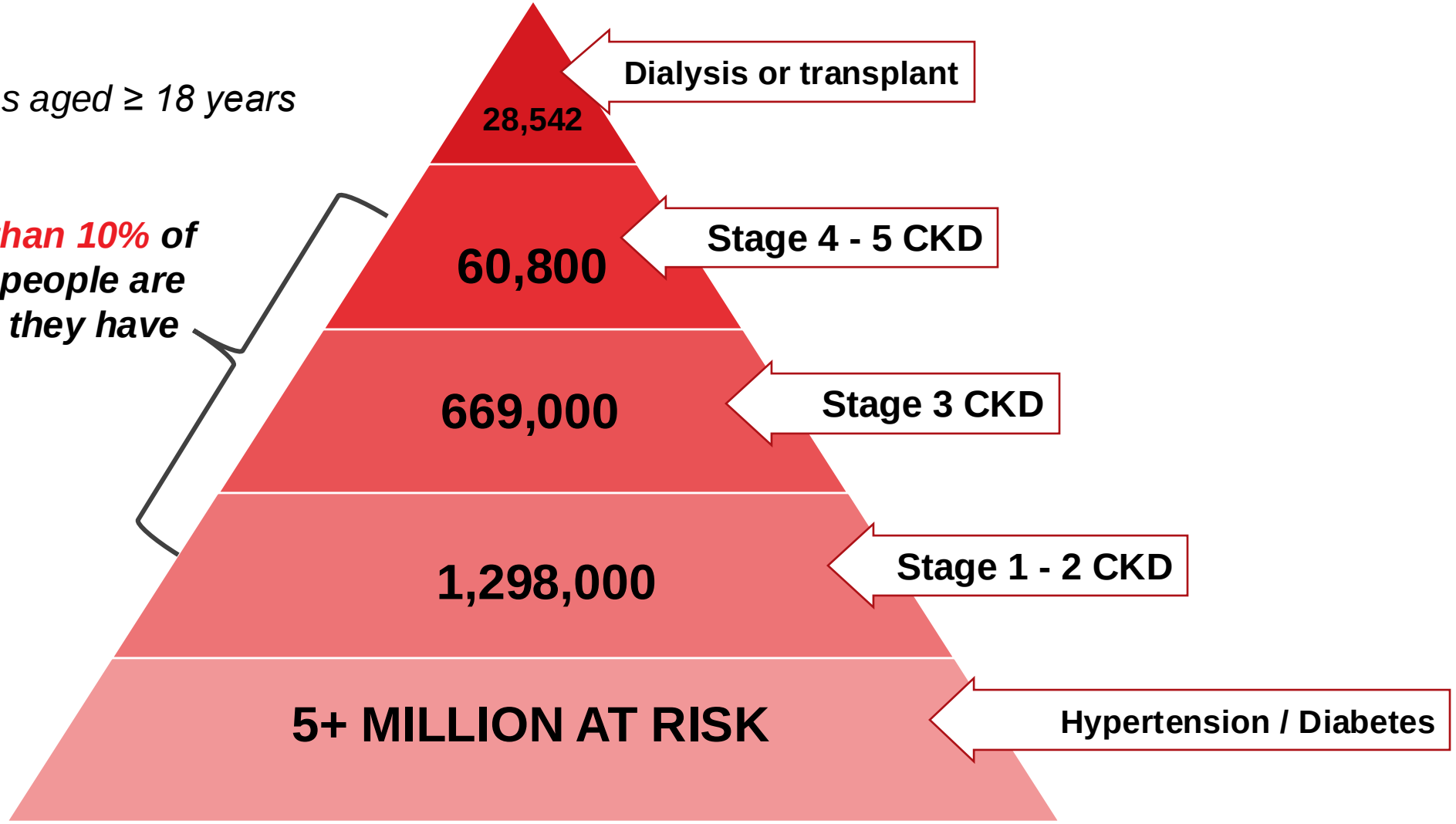
Answer

1 in 5 First Nations Australian adults have indicators of CKD

Prevalence of kidney disease in Australia

Australians aged ≥ 18 years

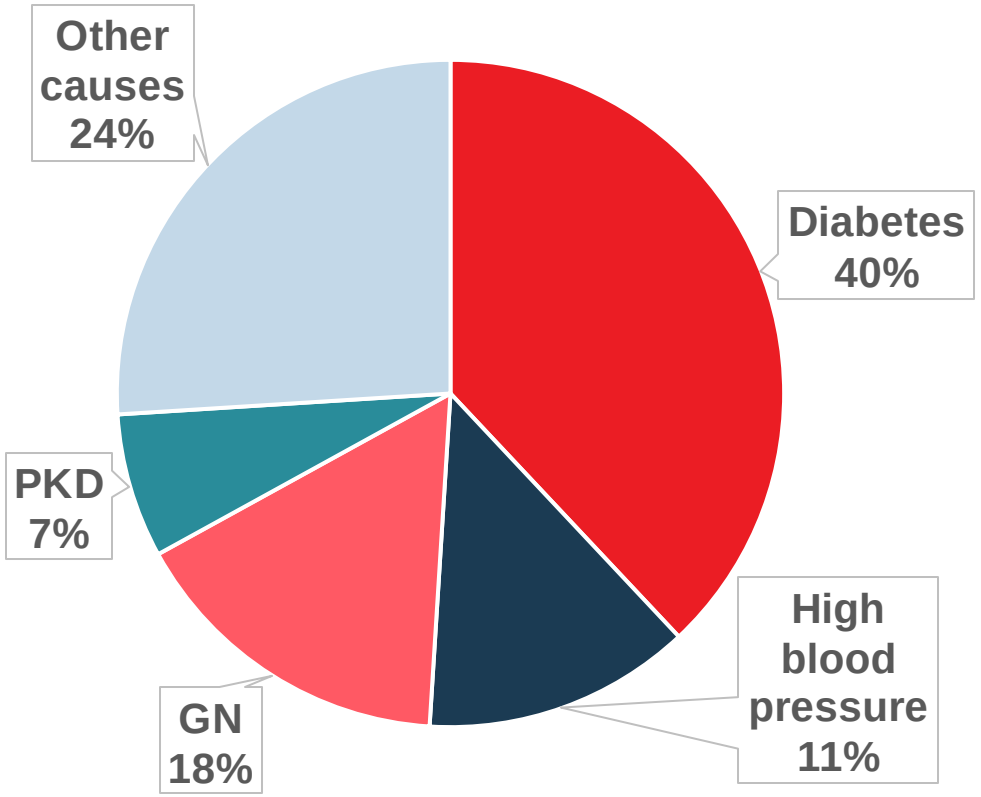
***Less than 10%* of these people are aware they have CKD**



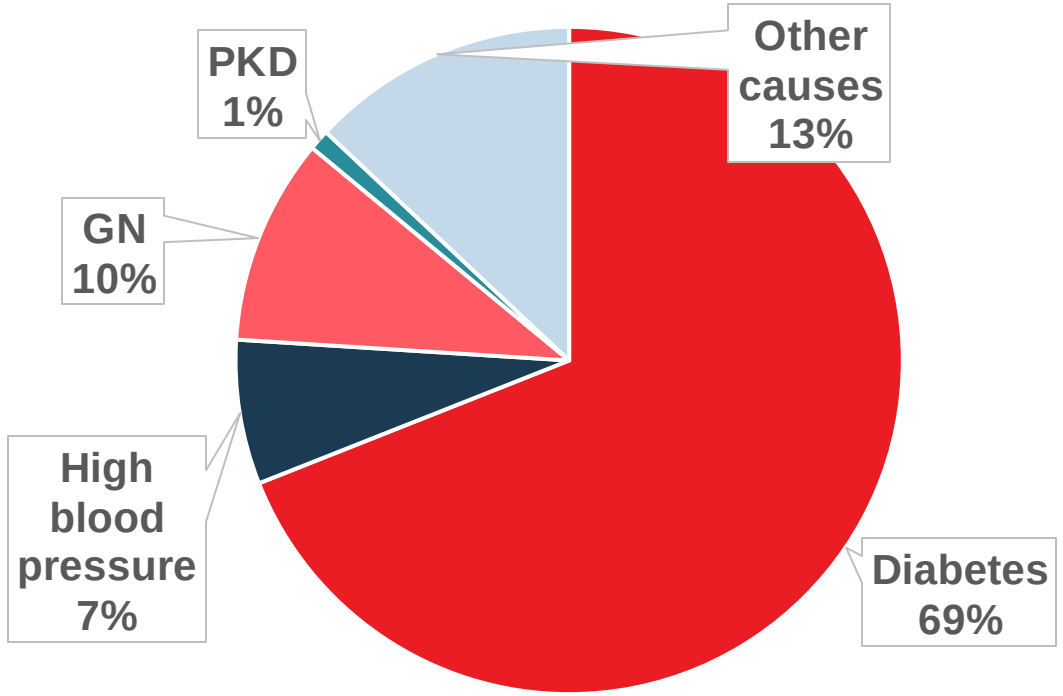
Australian Health Survey 2013; ABS population estimates June 2022; ANZDATA 2022 Report
CKD staging is according to the CKD-EPI equation

Causes of kidney failure in Australia

All people aged ≥ 18 years

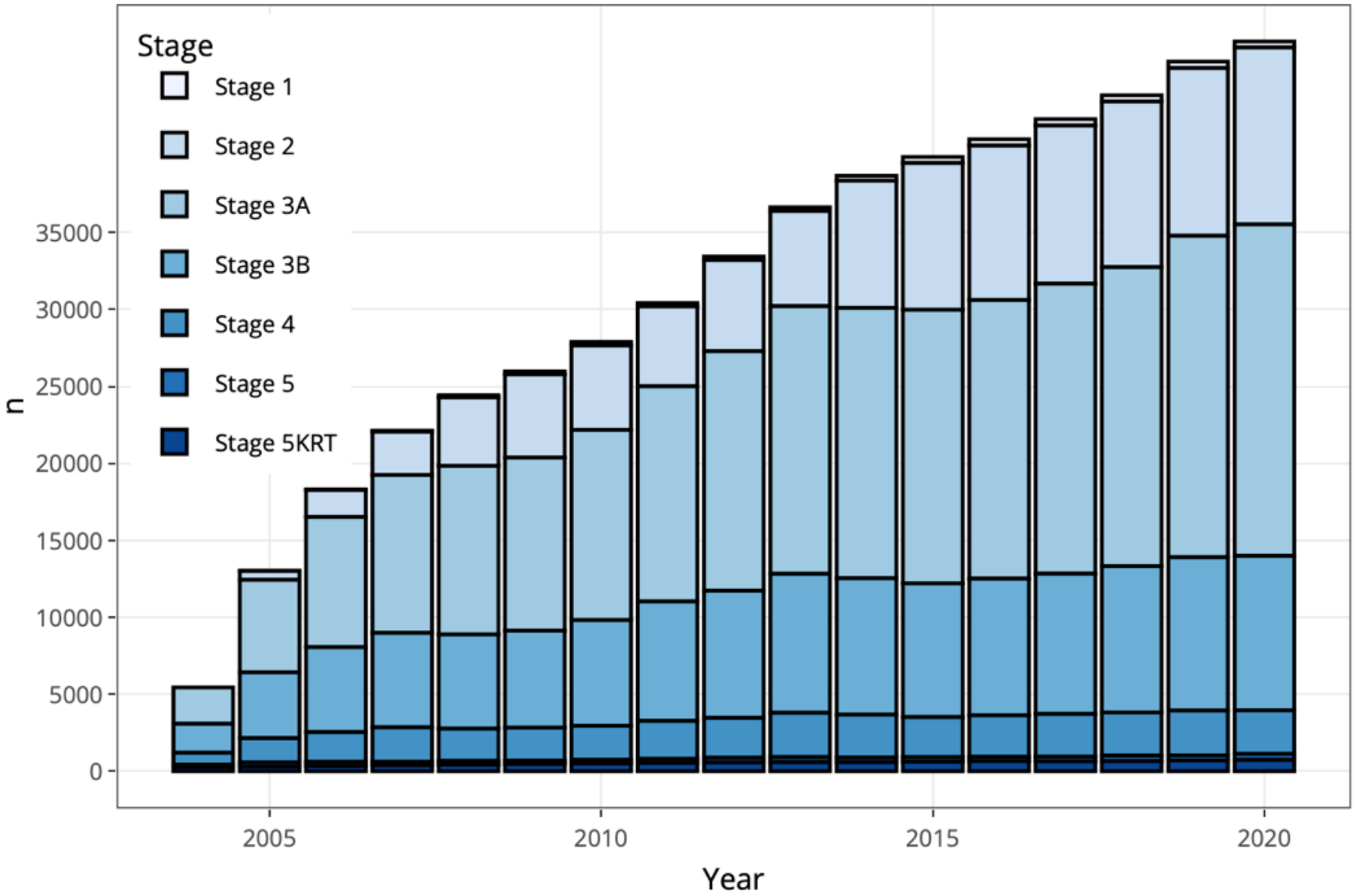


Aboriginal and Torres Strait Islander people ≥ 18 years



ANZDATA Registry. 46th Report, Chapter 1, Incidence of Kidney Failure with Replacement Therapy. 2023

Prevalence of each CKD stage in Tasmania



Total Stage 3-5

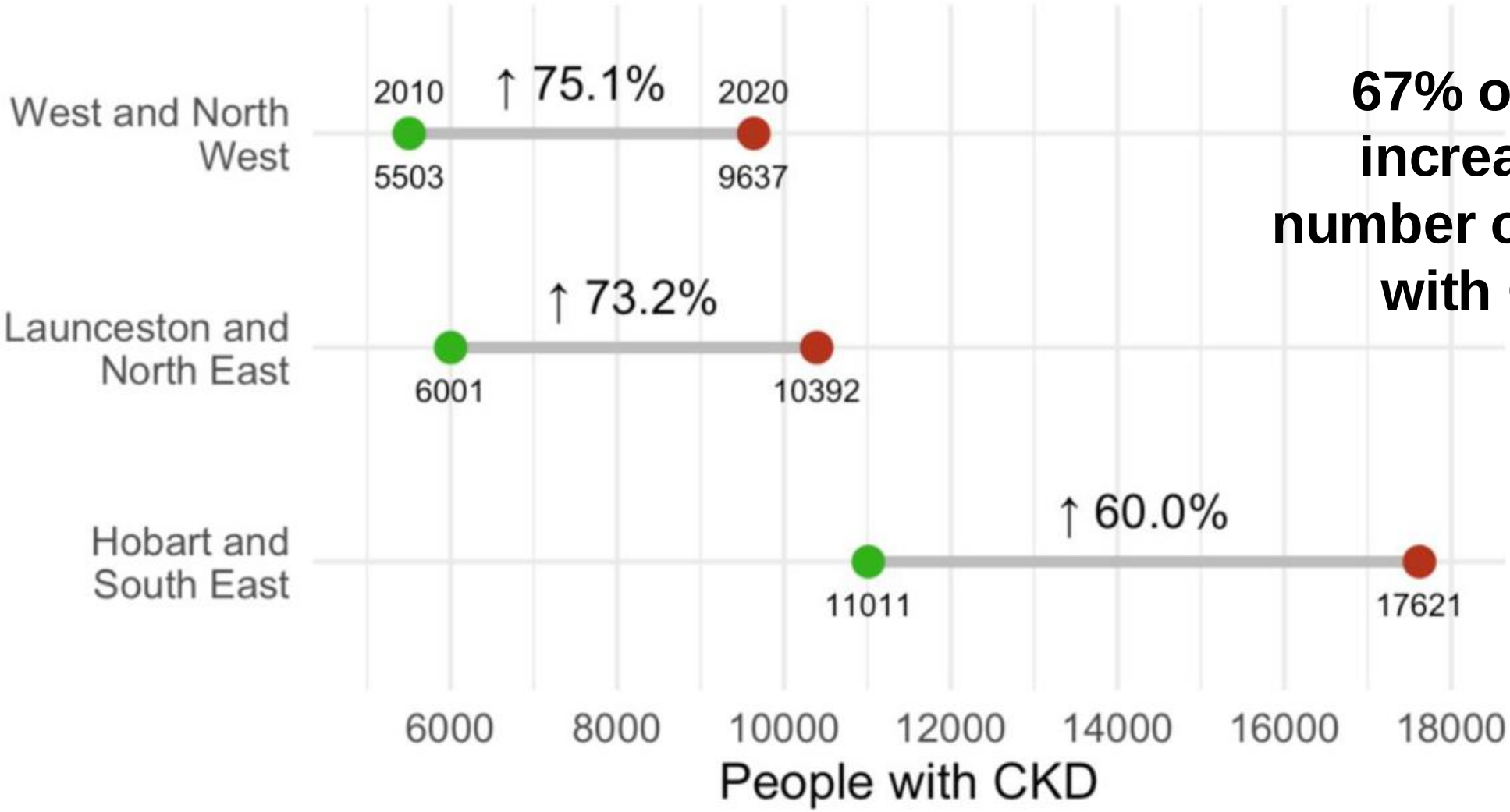
2010 = 22,544

2020 = 37,747

67% increase in number of people

Nephrology. 2024;1-9. doi:10.1111/nep.14296

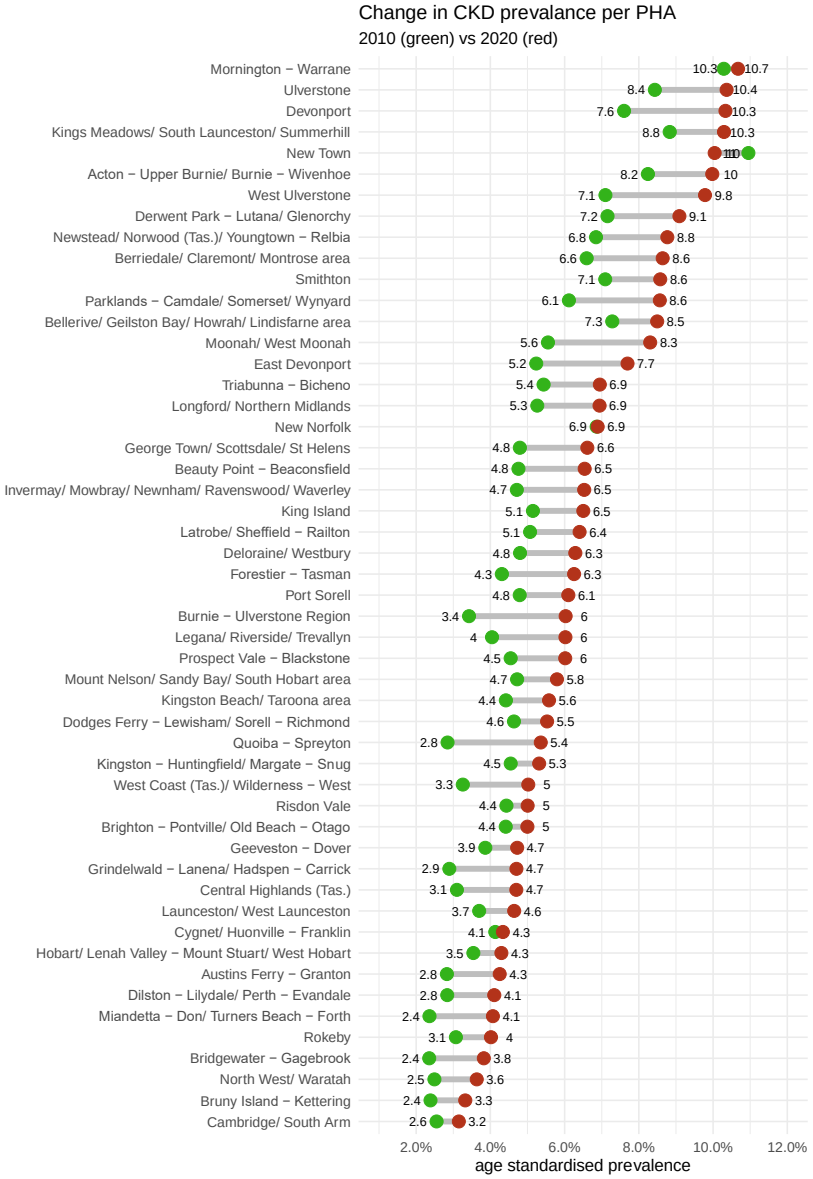
Results Geographic variation by SA4 in Tasmania

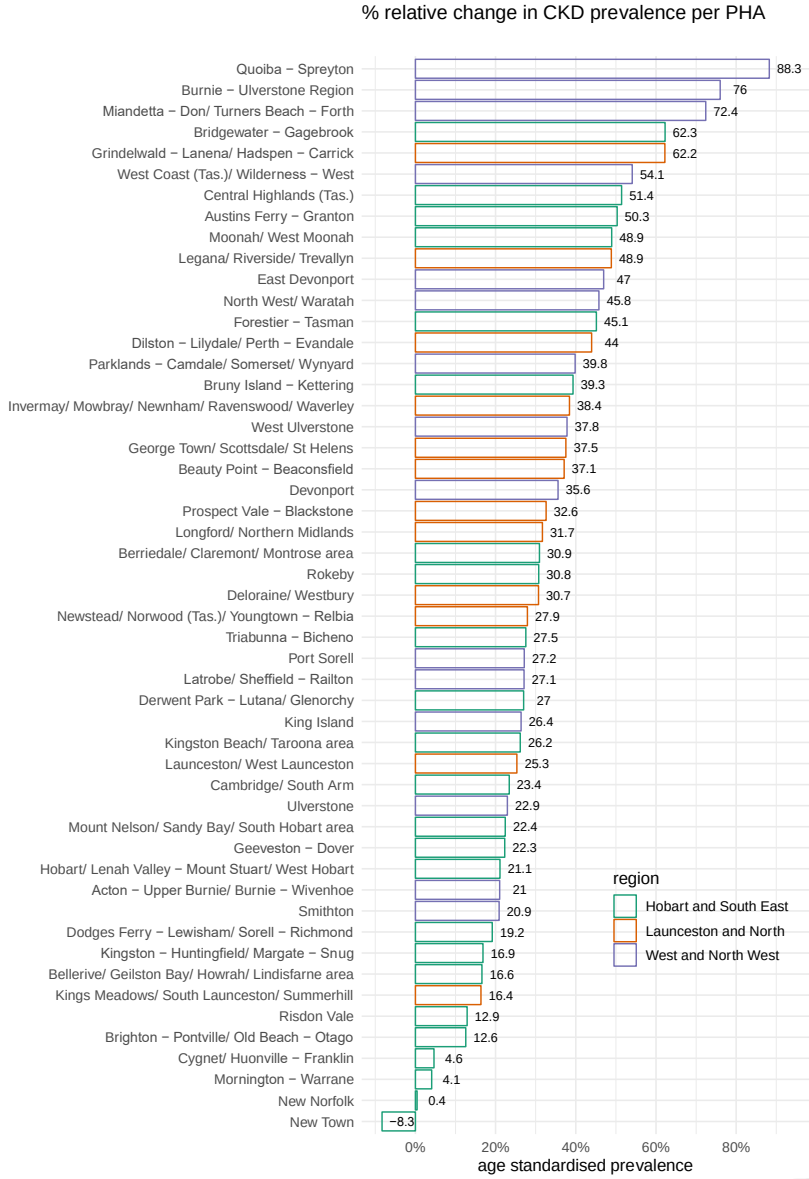


67% overall increase in number of people with CKD

Nephrology. 2024;1-9. doi:10.1111/nep.14296

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

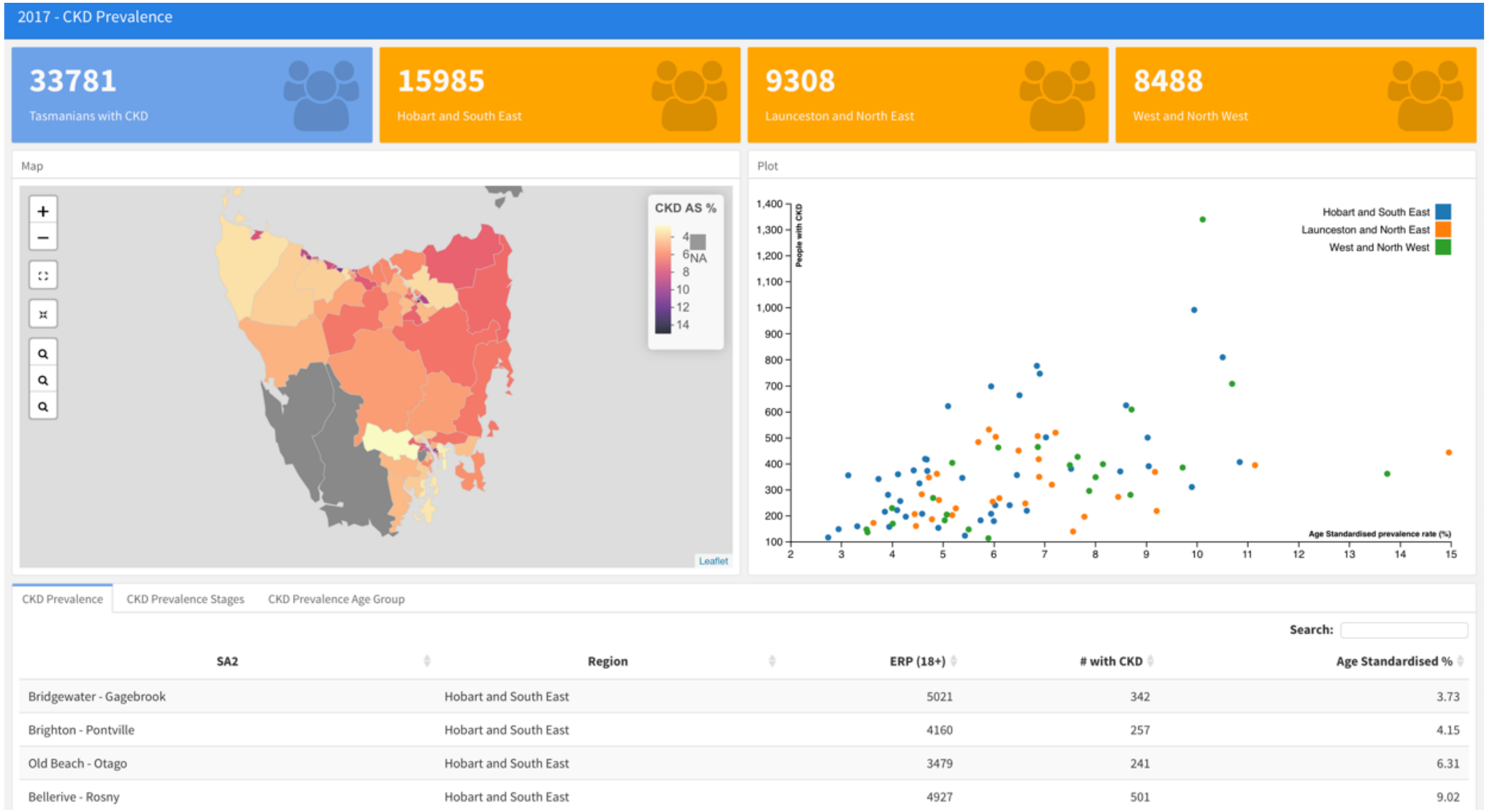




Nephrology. 2024;1-9. doi:10.1111/nep.14296

UNIVERSITY of TASMANIA

CKD prevalence & treatment locations in Tasmania



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

Nephrology. 2024;1-9. doi:10.1111/nep.14296

Only ~35% with CKD have uACR checked in one year in Tasmania

Table 2: Percentage of Tasmanians having both Urine-ACR and eGFR tested in a single year (2017)

	Overall	Hobart and South East	Launceston and North East	West and North West	<75 years	<75 years+DM	<75 years+HT	<75 years+DM+HT
eGFR >60 mL/min/1.73m^2 (Stage 1 & 2 CKD)								
People	14.94	12.03	21.34	14.69	14.22	59.03	28.12	55.22
Women	12.94	10.33	18.20	13.25	12.10	58.05	26.93	55.82
Men	17.33	14.07	25.09	16.43	16.74	59.78	29.00	54.79
eGFR 30–60 mL/min/1.73 m^2 (Stage 3 CKD)								
People	29.59	24.57	36.50	30.74	35.92	61.96	40.44	56.58
Women	28.50	23.16	35.01	30.57	34.92	61.43	38.08	55.03
Men	30.80	26.14	38.20	30.93	36.93	62.39	42.32	57.73

Urine-ACR: Urine Albumin:Creatinine Ratio, eGFR: estimated Glomerular filtration rate. DM: Diabetes Mellitus, HT: Hypertension.

Case study - Audrey

Background

- 63 years old
- Accountant
- History of mild asthma
- Hypertension

Audrey presents needing a script for hypertension medication.

Case study - Audrey

Past medical history

- History of overweight /obesity (current BMI 31kg/m^2)
- Mild intermittent asthma
- Chronic low back pain
- Mild hypertension

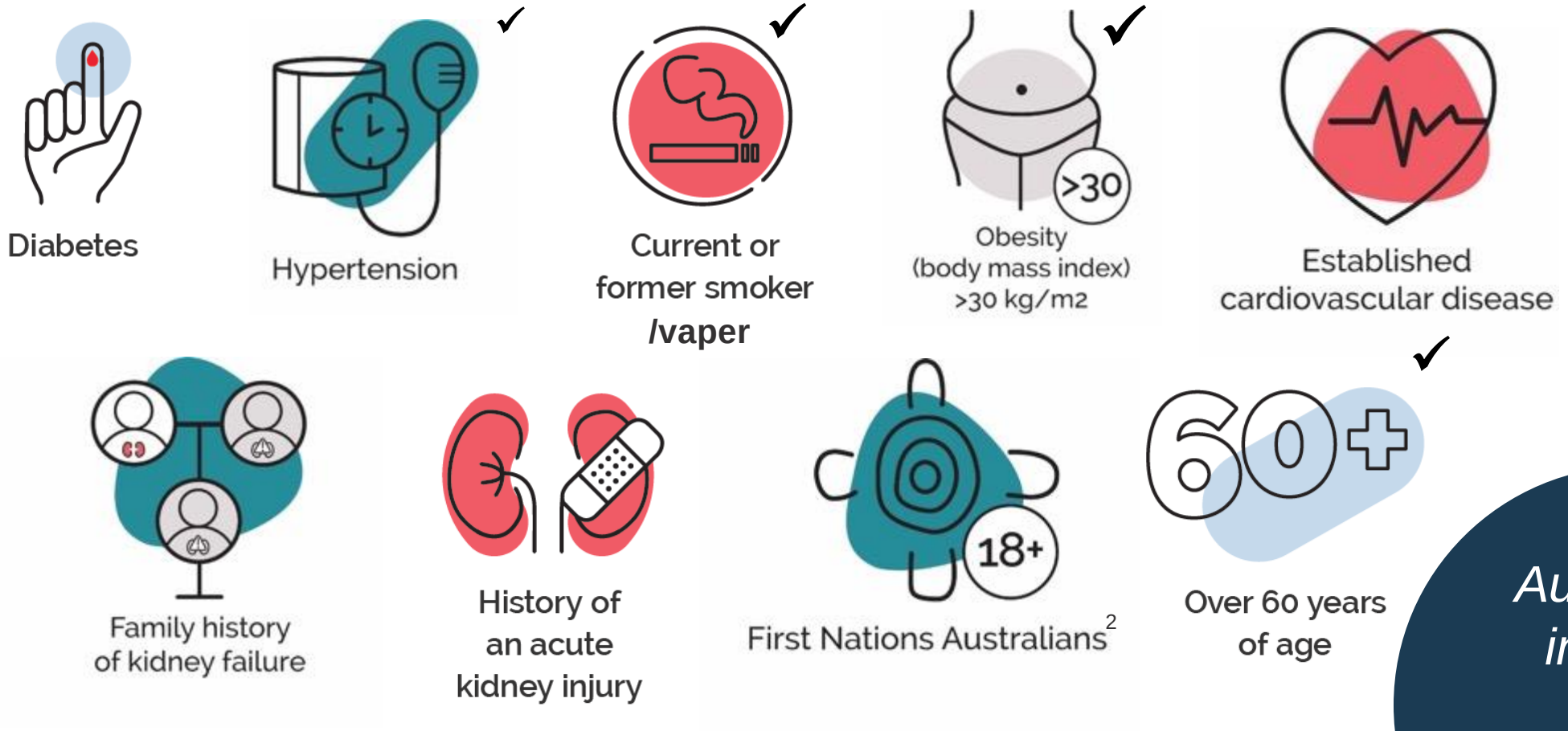
Family history

- Maternal grandmother died of a heart attack in her 60's but also had a history of 'kidney problems'
- Mother has type 2 diabetes
- Father has angina and hypertension

Case study - Audrey

Smoker	*20-25 cigarettes per day* *(25 pack-year history)*
Alcohol	*1-2 glasses of wine* *3-4 nights per week*
Allergies	*Nil known*
Medications	*Salbutamol 100mcg/dose as needed* *Low dose ACE/ARB*

Who should be offered a Kidney Health Check?



*Audrey has a high risk for diabetes but currently not diagnosed

*Audrey fits into 4 of these groups, possibly 5 **

1. Chronic Kidney Disease (CKD) Management in Primary Care, (5th edition). Kidney Health Australia: Melbourne, 2024
2. Recommendations for culturally safe kidney care for First Nations Australians. 2022

What are the elements of targeted assessment for CKD in at risk groups? *(choose multiple options)*

a) Serum creatinine and eGFR
b) Renal imaging
c) Blood pressure measure
d) Urine Protein:Creatinine Ratio (uPCR)
e) Urine dipstick
f) Urine Albumin:Creatinine Ratio (uACR)

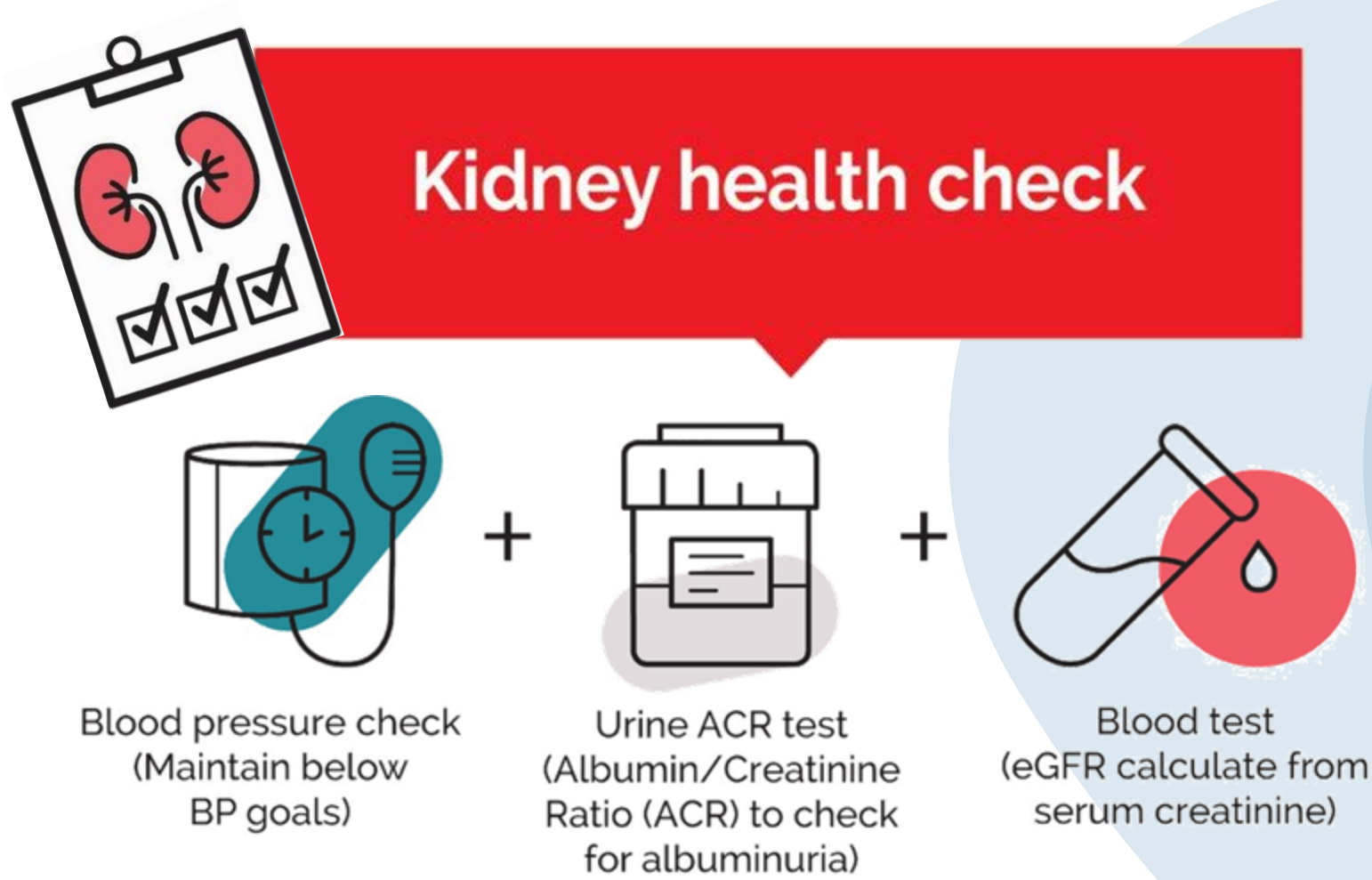
Question

What are the elements of targeted assessment for CKD in at risk groups?

a) Serum Creatinine and eGFR
b) Kidney Imaging
c) Blood pressure measure
d) Urine Protein:Creatinine ratio (uPCR)
e) Urine dipstick
f) Urine Albumin:Creatinine Ratio (uACR)

Answer

How to detect CKD …



Complete a **Kidney Health Check** every 1-2* years

***annually for individuals living with diabetes or hypertension and First Nations Australians 18 years and over.**

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

Early detection of CKD in non-Indigenous Australians

Indication for assessment	Recommended frequency	Assessment
Diabetes / Hypertension	Annually	Complete a **Kidney Health Check**: 1. Blood pressure check 2. uACR (first morning void preferably) 3. eGFR If results indicate CKD, repeat tests.
Established CVD Family history of kidney failure Obesity Smoking/vaping	Every 2 years	
History of acute kidney injury	Every year for first 3 years post AKI, then every 2 years	
Aged ≥ 60 years	Once off, unless developing other indications for assessment	

Refer to page 14 of the handbook

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

Early detection of CKD in First Nations Australians

Indication for assessment	Recommended frequency	Assessment
Aged < 18 years	As needed.	Screen for 'red flags' of CKD: • Family history of CKD • Clinical history of diabetes, hypertension, obesity, smoking, established CVD, AKI, low birth weight or recurrent childhood infections Complete **Kidney Health Check** if concerned.
Aged ≥ 18 years	At least annually. Utilise MBS item 715, if appropriate.	Complete a **Kidney Health Check.**

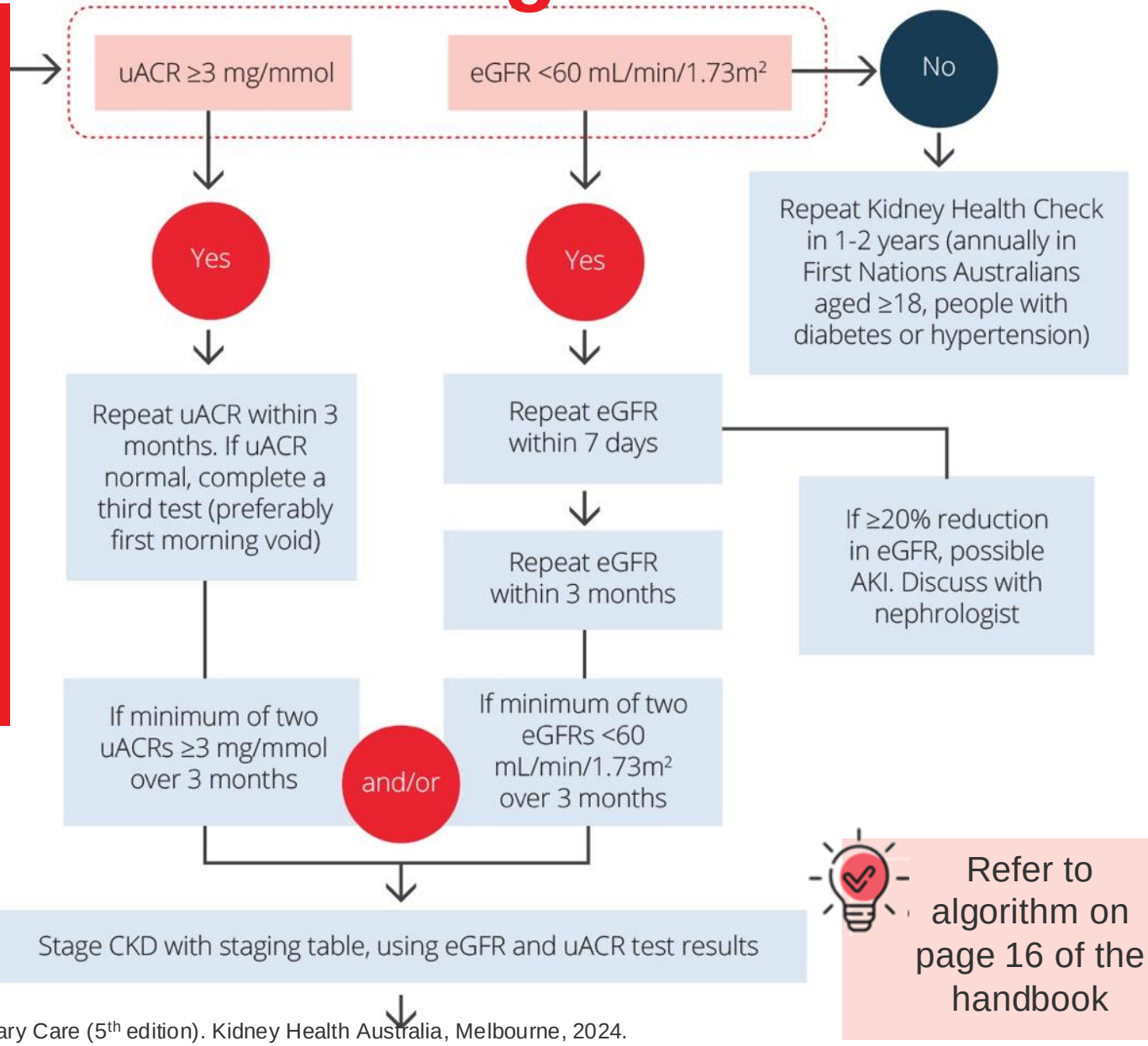
Refer to page 15 of the handbook

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

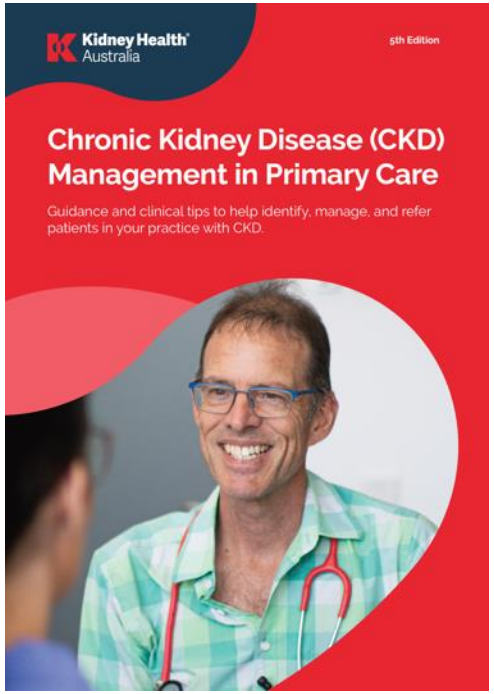
Initial detection and diagnosis of CKD

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

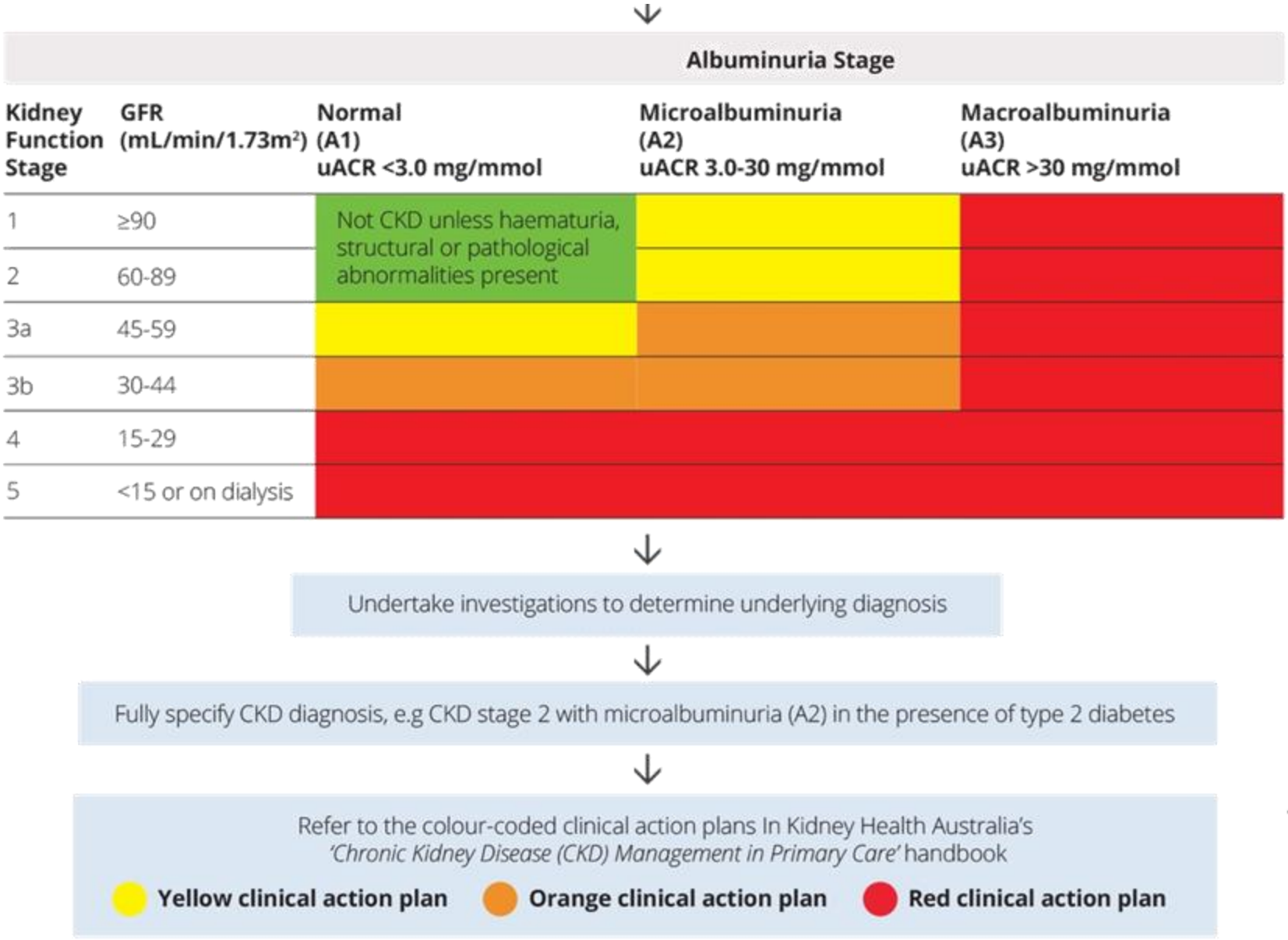


Refer to algorithm on page 16 of the handbook



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

Algorithm for initial detection and diagnosis of CKD cont…



Refer to algorithm on 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 is Glomerular Filtration Rate (GFR)?

- **Accepted as the best measure of kidney function.**
- **Can be estimated from serum creatinine using prediction equations.**
- ≥ 50% function lost before serum creatinine is outside the normal range.
- Normal serum creatinine levels do not exclude serious loss of kidney function.

eGFR	Indicates…
≥ 90 mL/min/1.73m^2	Normal GFR in healthy adults (declines with age)
60-89 mL/min/1.73m^2	Preserved kidney function unless there is evidence of kidney damage
Consistently ≤ 59 mL/min/1.73m^2	CKD

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

Interpreting eGFR results

Clinical situations where eGFR results may be misleading	
• acute changes in kidney function	• People under the age of 18 years
• people on dialysis	• severe liver disease present
• exceptional dietary intake (e.g. vegetarian diet, high protein diet, recent consumption of cooked meat, creatinine supplements)	• drugs interacting with creatinine excretion (e.g. trimethoprim)
• extremes of body size	• eGFR values above 90mL/min/1.73m^2
• diseases of skeletal muscle, paraplegia or amputees (may overestimate eGFR) or high muscle mass (may underestimate eGFR)	• pregnancy

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

How to detect albuminuria

- An initial uACR test should be repeated on a first void sample if the results are positive for albuminuria as urinary protein excretion follows a circadian pattern.
- Where first morning void not possible, random spot specimen for uACR is acceptable.
- Dipsticks for protein in the urine are now no longer recommended due to poor sensitivity and specificity.
- uPCR tests may miss microalbuminuria, resulting in false-negative results.
- 24-hour urine collection is not warranted to quantify proteinuria.
- uACR criteria for CKD is not applicable in pregnancy.

Don't let perfection get in the way of testing!
Random sampling is better than NOT AT ALL

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

Repeating the urine ACR

Factors other than CKD known to increase urine albumin excretion:

- Urinary tract infection
- High dietary protein intake
- Congestive heart failure
- Acute febrile illness
- Heavy exercise within 24 hours
- Menstruation
- Genital discharge or infection
- Drugs e.g. NSAIDS

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

Case study – Audrey

- first examination results

You decide that based upon Audrey's increased risk of CKD, she should have a kidney health check. Audrey's kidney health check results reveal the following:

Audrey's Kidney Health Check results		Normal results
Creatinine	**128 µmol/L**	<115µmol/L
eGFR	**55 mL/min/1.73m²**	>90 mL/min/1.73m²
Urine ACR	**15 mg/mmol**	<3.0 mg/mmol
Blood pressure	**155/95 mmHg**	<130/80 mmHg (target)

Do Audrey's Kidney Health Check results mean she has Chronic Kidney Disease?

a) Yes

b) No

c) Maybe

Question

Do Audrey's Kidney Health Check results mean she has Chronic Kidney Disease?

c) Maybe

<u>Remember</u>
To diagnose Audrey with CKD, her urine ACR and eGFR needs to be repeated twice over 3 months (preferably first morning void).

However, as Audrey's eGFR is **< 60 mL/min/1.73m²** and **uACR > 3 mg/mmol, retest within 7 days to exclude acute kidney injury (AKI).**

Answer

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

Hypertension targets

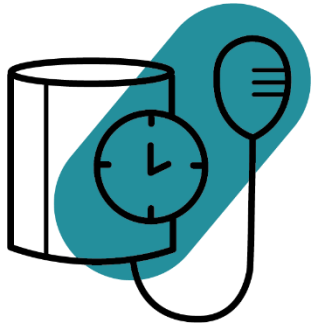
For all people with CKD…
maintain BP below
130/80 mmHg

- 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

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

Blood pressure reduction

- 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.
- ACE inhibitor or ARB is recommended first line therapy.
- Hypertension may be difficult to control, and multiple (3 or more) medications are frequently required.



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

Audrey should not be started on an Angiotensin Converting Enzyme (ACE) inhibitor or an Angiotensin II Receptor Blocker (ARB) to slow progression of kidney disease as it is too early in the condition.

a) True
b) False

Question

Audrey should not be started on an Angiotensin Converting Enzyme (ACE) inhibitor or an Angiotensin II Receptor Blocker (ARB) to slow progression of kidney disease as it is too early in the condition.

a) True

b) False

ACEi or ARB therapy:

- can be prescribed safely at all stages of CKD;
- has been shown to reduce the risk of CV events and death in people with CKD, and
- maximal tolerated dose of ACE inhibitor or ARB is recommended.

combined ACEi and ARB therapy is NOT recommended.

Answer

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.

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

Case study

Audrey returns to see you to review tests for urine ACR, eGFR, and you take her blood pressure for the 3rd time.

Test	1st visit	2nd visit (7days later)*	3rd visit (3 months later)
eGFR	55 mL/min/1.73m^2	54 mL/min/1.73m^2	52 mL/min/1.73m^2 ↓
Urine ACR	15 mg/mmol	30 mg/mmol	23 mg/mmol ↓
BP	155/95 mmHg	155/95 mmHg	145/80 mmHg** ↓

*** Tests were repeated seven days later.**
Then repeated within three months as the results were stable.

*** Audrey was started on a low dose ACE/ARB at the 2nd visit.*

Refer to the algorithm for the Initial Detection of CKD in the Chronic Kidney Disease Management in Primary Care handbook or CKD Go! app.

Refer to algorithm on page 16 of the handbook

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

Case study - Audrey

You can now record Audrey's diagnosis as CKD stage 3a with microalbuminuria. You ensure that CKD Stage 3a is coded as a diagnosis in her medical record and review the Orange Clinical Action Plan in the CKD Go! app (or CKD Management in Primary Care handbook). You ask reception to book Audrey in for a GP Management Plan (MBS item 721).

		Albuminuria Stage		
Kidney Function Stage	**GFR (mL/min/1.73m²)**	**Normal (A1) uACR <3.0 mg/mmol**	**Microalbuminuria (A2) uACR 3.0-30 mg/mmol**	**Macroalbuminuria (A3) uACR >30 mg/mmol**
1	≥90	Not CKD unless haematuria, structural or pathological abnormalities present		
2	60-89			
3a	45-59		CKD Stage 3a	
3b	30-44			
4	15-29			
5	<15 or on dialysis			

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.

What are the key treatment interventions for Audrey now that you have diagnosed her with CKD? *(choose multiple options)*

a) **Lifestyle modification**
b) **Blood pressure management**
c) **Cardiovascular risk reduction**
d) **Lipid lowering treatment**
e) **Adjust medications to kidney function**
f) **Sick day action plan**
g) **Referral to nephrologist**
h) **Referral to the Kidney Helpline for non-medical advice for people living with CKD 1800 454 363**

Question

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

What are the key treatment interventions for Audrey now that you have diagnosed her with CKD?

a) **Lifestyle modification**

b) **Blood pressure management**

c) **Cardiovascular risk reduction**

d) **Lipid lowering treatment**

e) **Adjust medications to kidney function**

f) **Sick day action plan**

g) **Referral to nephrologist?**

h) **Referral to the Kidney Helpline for non-medical advice for people living with CKD 1800 454 363**

Answer

Refer to the Orange Action Plan in the Chronic Kidney Disease Management in Primary Care handbook (or CKD Go! App) for more interventions

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

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.

What about Audrey's CVD risk? Should it be determined using the *Australian CVD risk calculator?*

a) True
b) False

Question

What about Audrey's CVD risk? Should it be determined using the *Australian CVD risk calculator?*

a) True

b) False

Why? Because the presence of albuminuria is an important prognostic feature of CKD, and the driver of CVD.

Answer

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

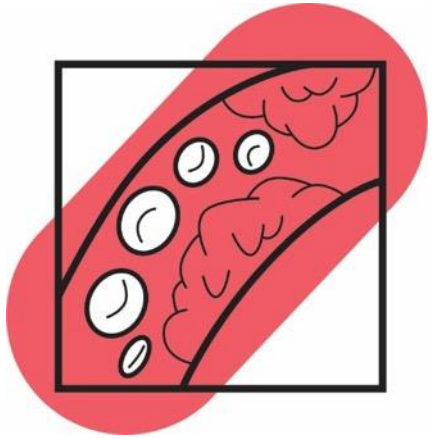
Cardiovascular risk assessment in CKD

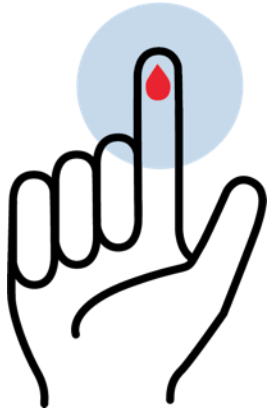
- CKD is a potent risk factor - more than diabetes.
- Reduced eGFR and presence of albuminuria are independent risks for CVD.
- The Australian CVD risk calculator can be used to estimate CVD risk, but determine CKD **before** using the calculator www.cvdcheck.org.au.
- People with **moderate to severe CKD** (eGFR < 45 mL/min/1.73m^2 and/or uACR > 30mg/mmol have **pre-determined high risk** of a CVD event in 5 yrs (≥ 10% probability).
- For people with **eGFR 45-59mL/min/1.73m^2** and/or **3-30mg/mmol**, **consider reclassification** to a higher risk category.

New CVD Guidelines were launched July 2023
www.cvdcheck.org.au

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

Lipid lowering and glycaemic control





- **Lipids**
  - Audrey's lipids should be assessed
  - Lipid-lowering treatment should be considered for CVD risk reduction
- **Glycaemic control**
  - Audrey's glycaemic control should be assessed
  - For people with diabetes, blood glucose control significantly reduces the risk of developing CKD, and in those with CKD reduces the rate of progression

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

Statin therapy for CKD

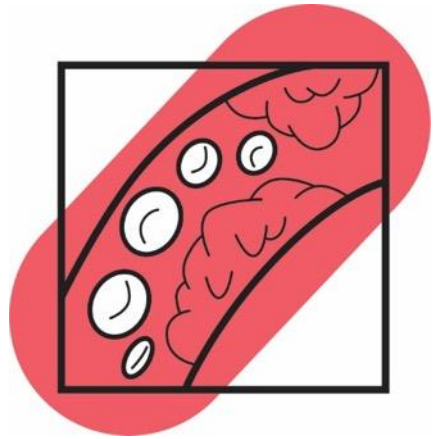
All adults with newly identified CKD, fasting lipid profile evaluation is recommended. Follow-up measurement of lipid levels may not be needed.

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.

Audrey has not been diagnosed with diabetes. Would you start her on a SGLT2 inhibitor at this stage?

a) Yes
b) No
c) Maybe

Question

Audrey has not been diagnosed with diabetes. Would you start her on a SGLT2 inhibitor at this stage?

a) Yes
b) No
c) Maybe

Answer

…Audrey does meet the PBS criteria to be prescribed a SGLT2 inhibitor for CKD.

SGLT2 inhibitors for CKD

When can I use SGLT2 inhibitors in CKD?

PBS Criteria Authority Streamline 13220:

- 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).

Dapagliflozin for chronic kidney disease: a new indication and clinical criteria have been added to the PBS listing for dapagliflozin. NPS MedicineWise website. New PBS listing: Dapagliflozin for chronic kidney disease (nps.org.au). Accessed Sep 7, 2022.

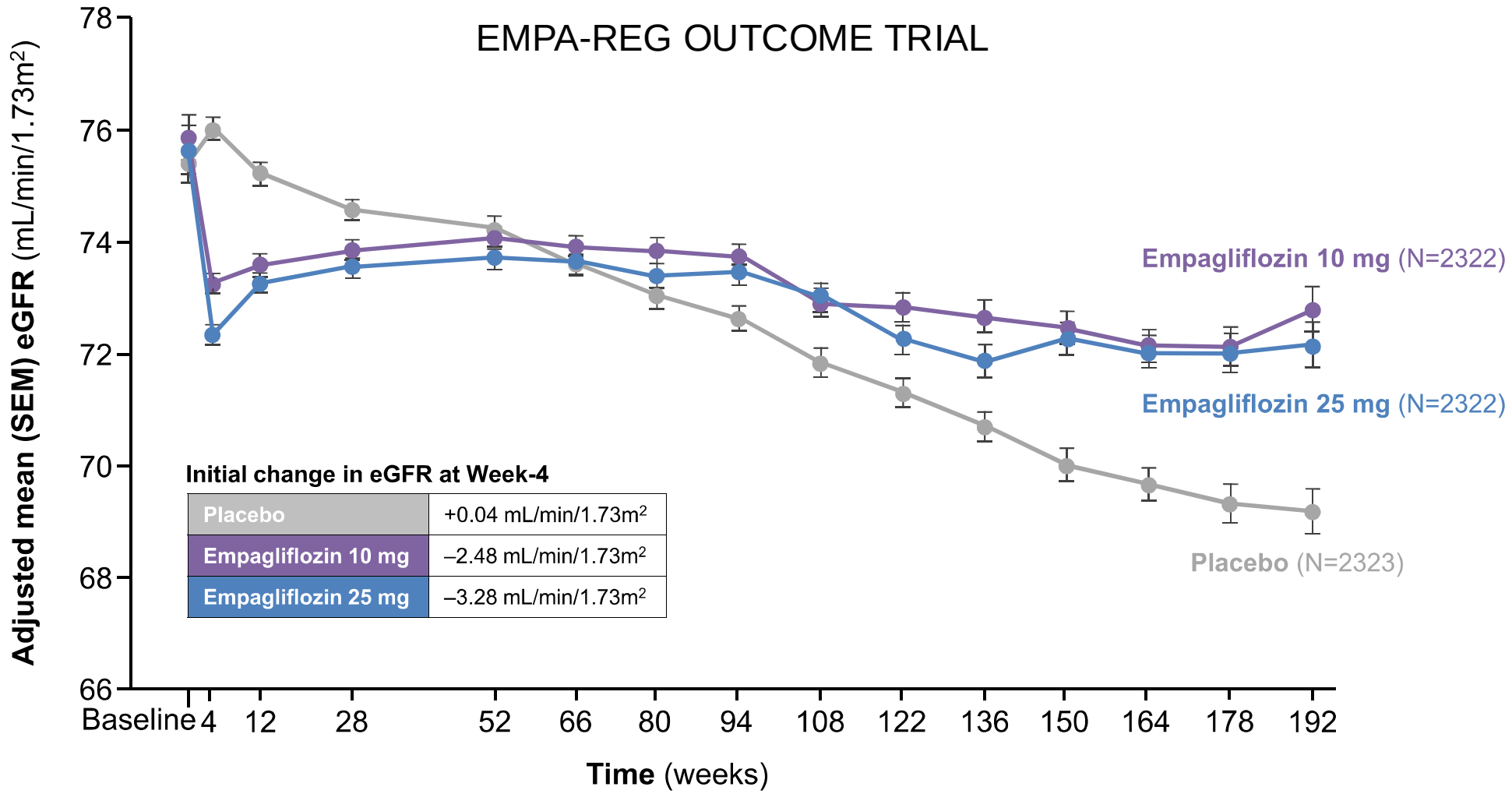
SGLT2 inhibitors

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.

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

SGLT2 inhibitors and eGFR



J Am Soc Nephrol 28: 1023–1039, 2017. doi: 10.1681/ASN.2016060666. Adapted from Wanner et al. NEJM 2016

eGFR and medication dosing

Dose reduction of some drugs is recommended for patients with reduced kidney function.

Both eGFR (mL/min/1.73m^2) and estimated CrCl (mL/min) provide an estimate of relative kidney medication clearance.

If using eGFR for therapy dosing, body size should be considered, in addition to referring to the approved Product Information.

For medications with a narrow therapeutic index, therapeutic medication monitoring or a valid marker of therapy effect should be used to individualise dosing.

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

Sick day action plan

REMEMBER
Ensure patients/clients have a sick day action plan to prevent acute kidney injury.

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

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

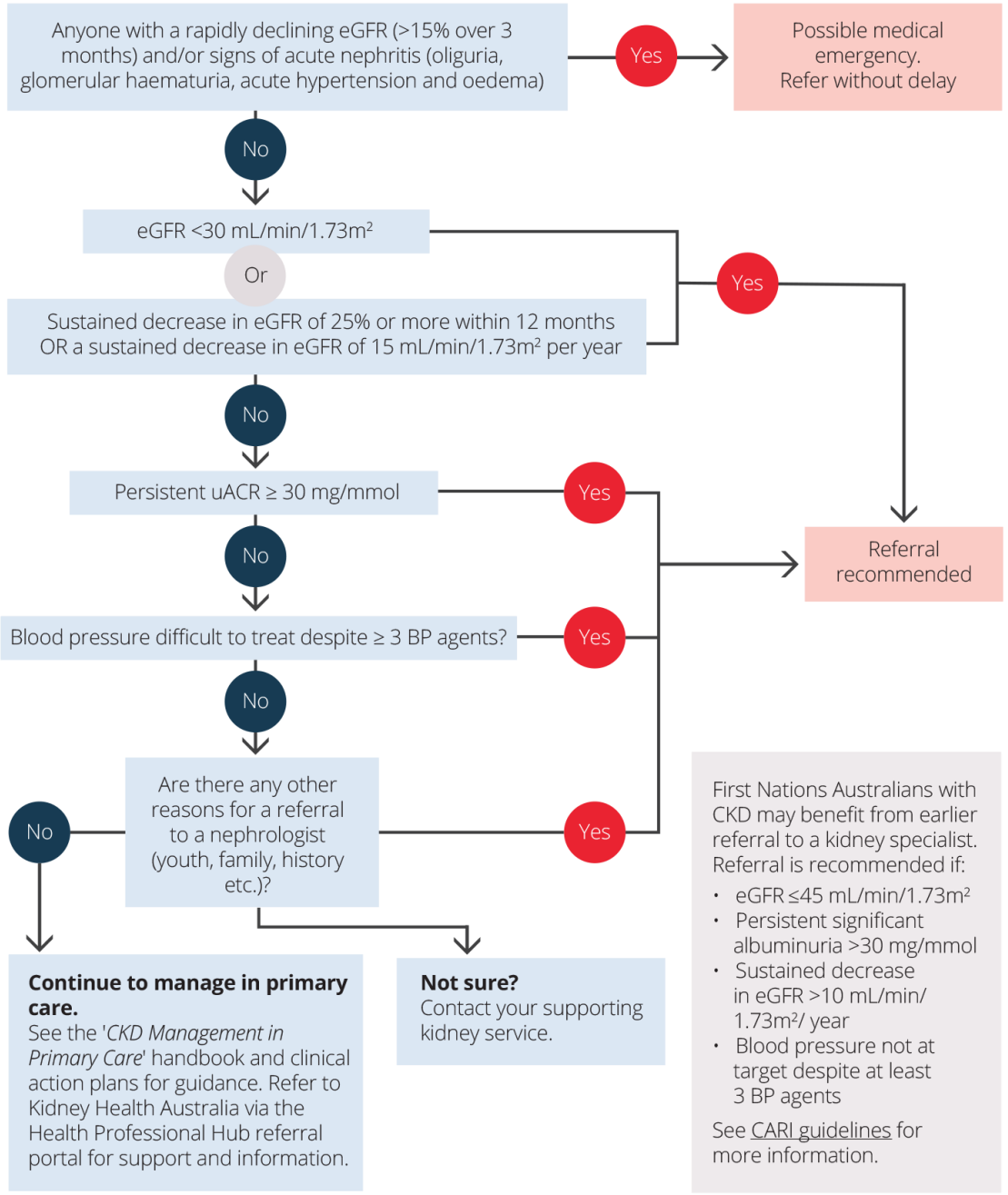
‘How to guides’ available in the Kidney Health Professional Hub

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

Nephrology referral guidelines

Refer to action pans on page 74 of the handbook

Where referral to a Nephrologist is not possible, as may be the case for people located in regional and remote areas, we recommend contacting your supporting kidney service to discuss options for referral, which may include telehealth consultations.



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

Culturally safe kidney care for First Nations Australians

Removing Indigenous status as a risk factor for CKD because the increased risk is explained by …

- Diabetes
- High blood pressure
- Obesity
- Smoking
- Heart disease
- Acute kidney injury

- Low birthweight (<2.5 Kgs)
- Previous kidney infection damage
- Social disadvantage
  - Remoteness
  - Lower socioeconomic status
  - Lower education
  - Insecure housing
  - Other impacts of colonisation

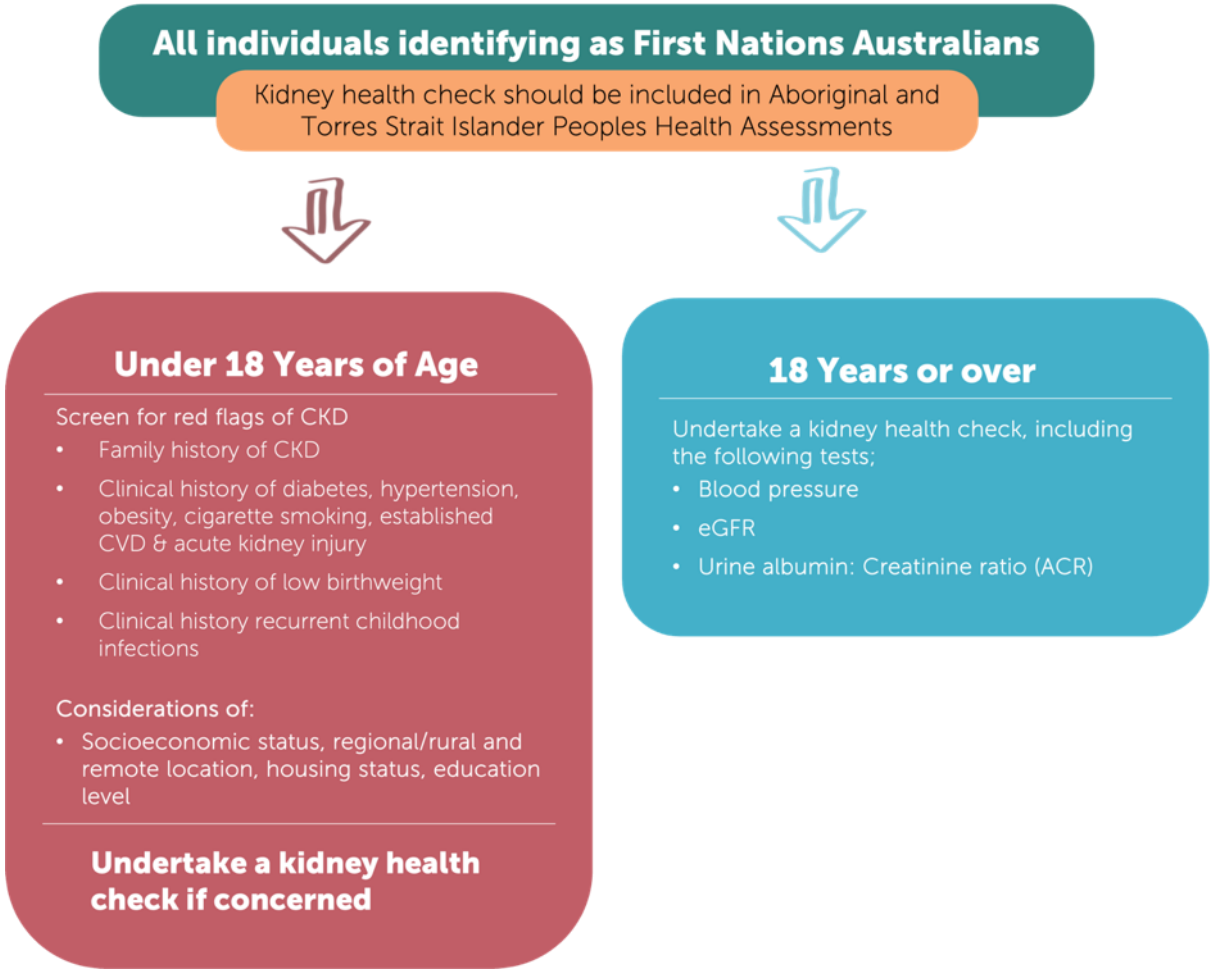
Refer to www.cariguidelines.org

CARI First Nations Australians Guidelines Working Group Advance Collaborative. Executive Summary – Recommendations for culturally safe kidney care for First Nations Australians. 2022, October

Culturally safe kidney care for First Nations Australians – cont…

Screen First Nations Australians earlier for CKD

Refer to www.cariguidelines.org

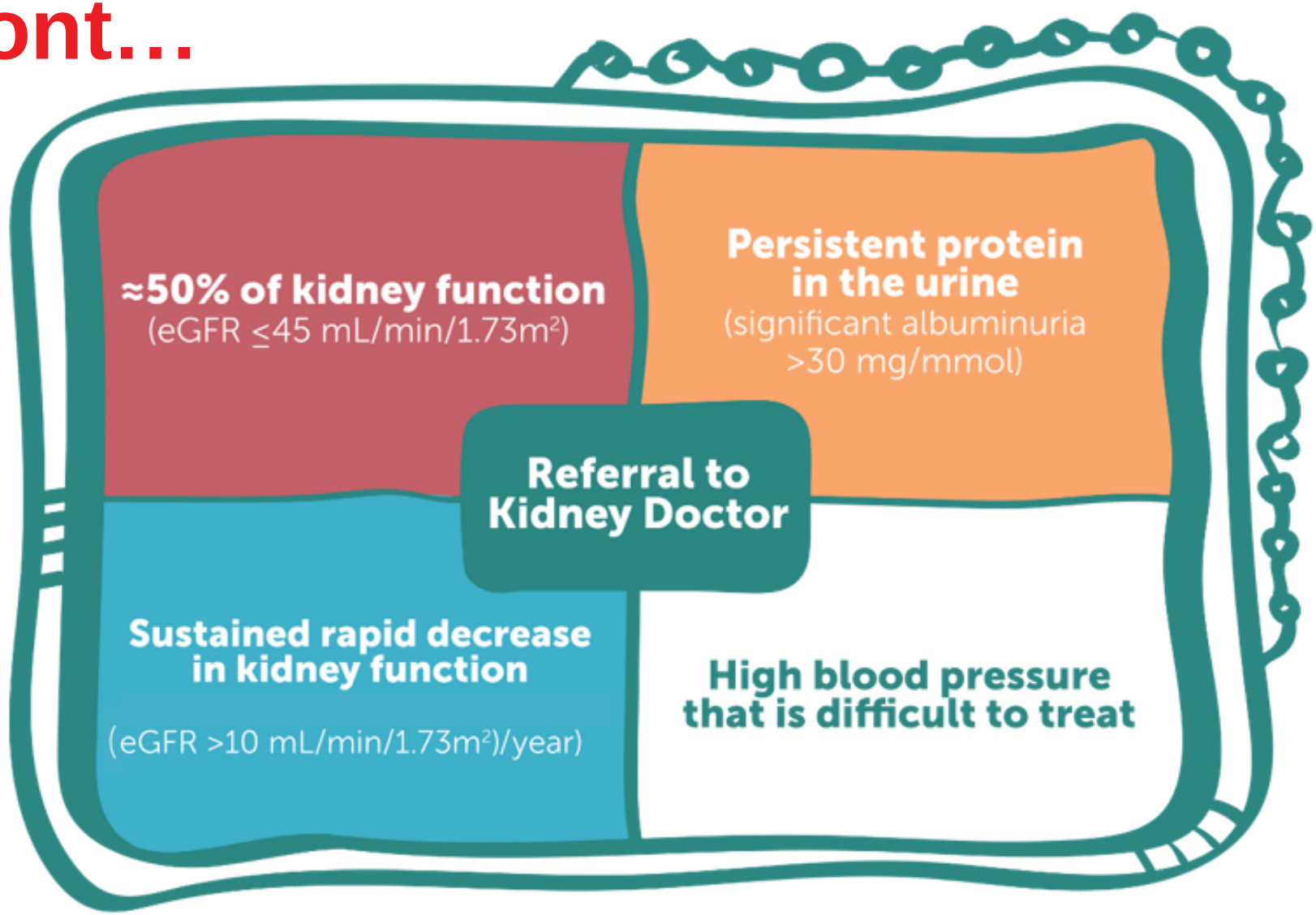


CARI First Nations Australians Guidelines Working Group Advance Collaborative. Executive Summary – Recommendations for culturally safe kidney care for First Nations Australians. 2022, October

Culturally safe kidney care for First Nations Australians – cont…

Earlier referral to kidney specialists for First Nations Australians

Refer to www.cariguidelines.org



CARI First Nations Australians Guidelines Working Group Advance Collaborative. Executive Summary – Recommendations for culturally safe kidney care for First Nations Australians. 2022, October

Addressing CKD in your practice

- Patient/client led behavioural changes and lifestyle management
- Practice nurses implement Kidney Health Check prompts in all chronic disease management templates

- Use your practice data to identify patients/clients with risk factors
- Code CKD stage and underlying causes in your practice software

- Implement a register and recall system to actively screen patients
- MBS Item numbers implement care through management plans and assessments

Take home messages

CKD is common, harmful, treatable and often overlooked.

Early detection & interventions and can slow progression of CKD.

Health risks associated with CKD include diabetes, hypertension, and CVD.

Elements of a Kidney Health Check assessment include eGFR, urine ACR and blood pressure to detect CKD.

Albuminuria is an important prognostic feature of CKD and the driver of CV events.

Treatment strategies to delay the progression of CKD include lifestyle changes, ACEi/ARBs, SGLT2 inhibitors, statins, nsMRAs, sick day action plan, and maintain BP < 130/80mm/Hg.

Refer to the CKD staging table and clinical action plans in 'CKD management in primary care' handbook (or CKD Go! app).

Support

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

1800 454 363

Kidney.helpline@kidney.org.au

kidney.org.au

CKD Management in Primary Care Handbook

5TH EDITION

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

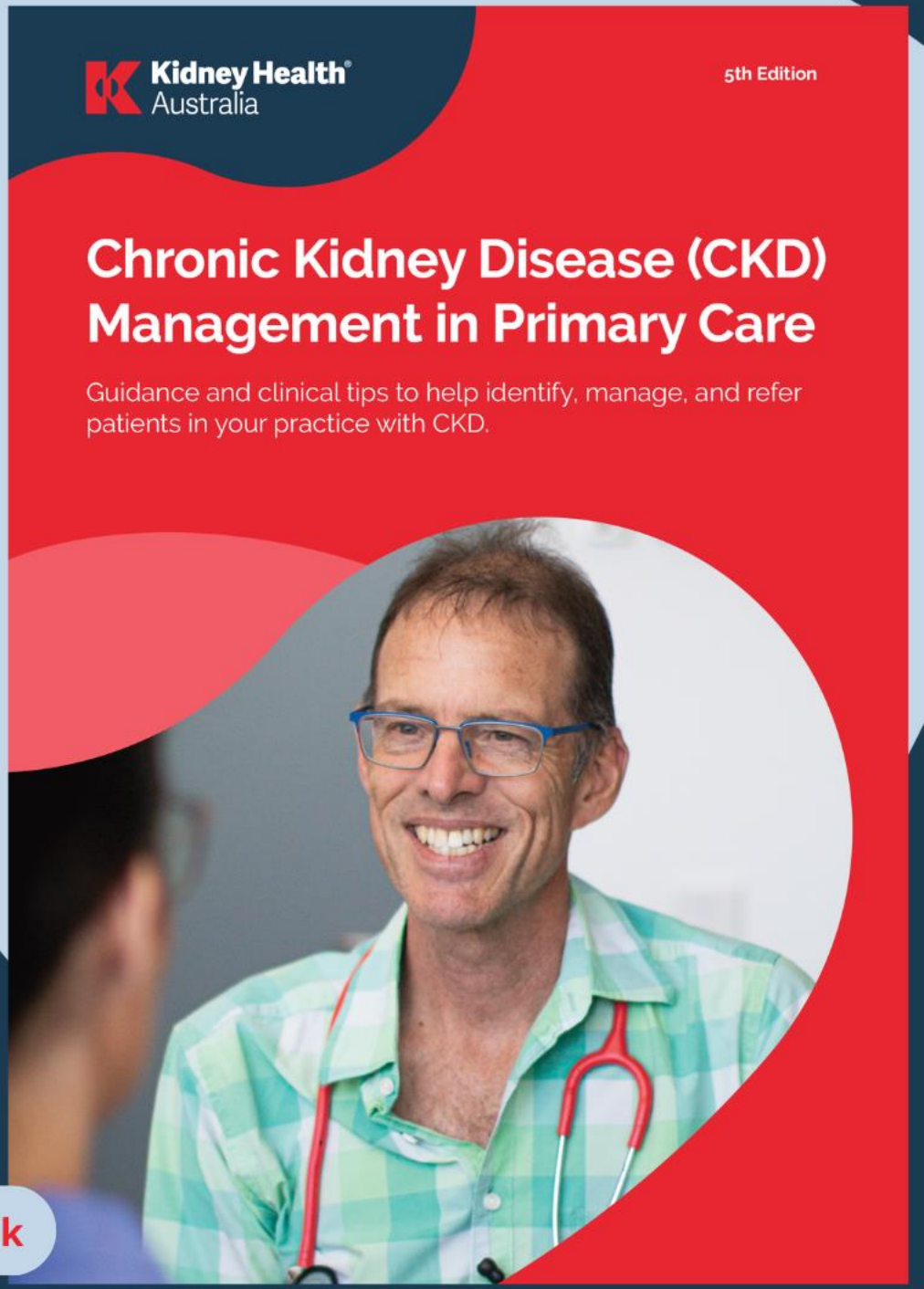
CKD-Go! App

New app available now.

The best bits of the CKD handbook in an App.

Get your copy!

kidney.org.au/ckdhandbook



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Kidney Health Australia

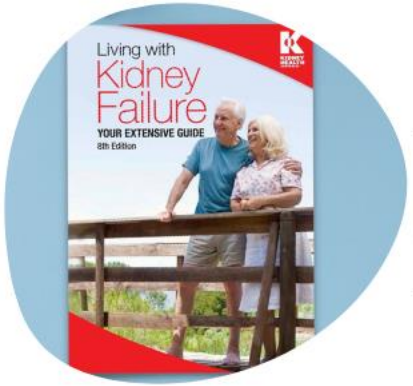
kidney.org.au

Kidney Helpline: 1800 454 363

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.

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.

We value your feedback.

kidney.org.au

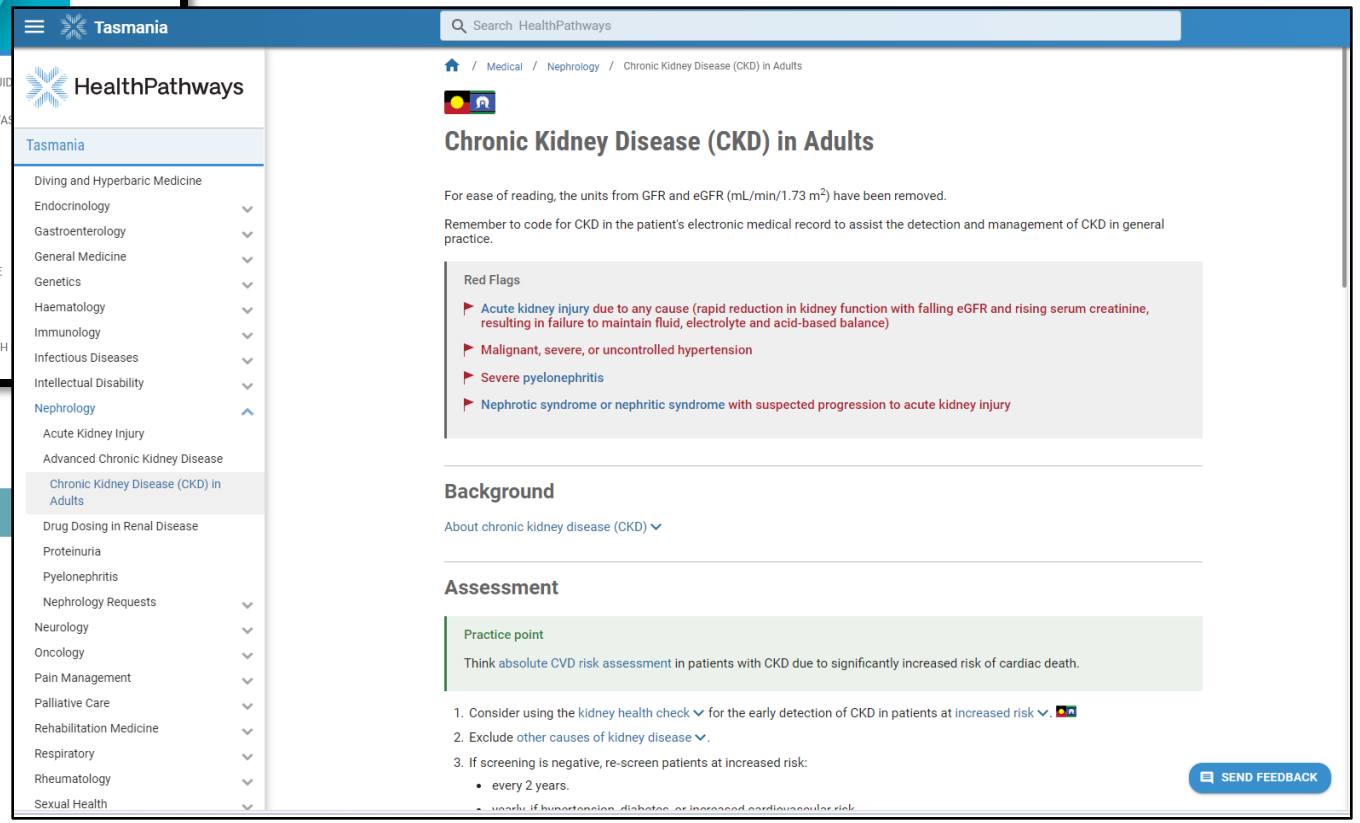
Kidney Health® Australia

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.

For access to the Tasmanian HealthPathways, please email:

healthpathways@primaryhealthtas.com.au



Tasmanian HealthPathways

For access to the Tasmanian HealthPathways, please email:

healthpathways@primaryhealthtas.com.au

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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