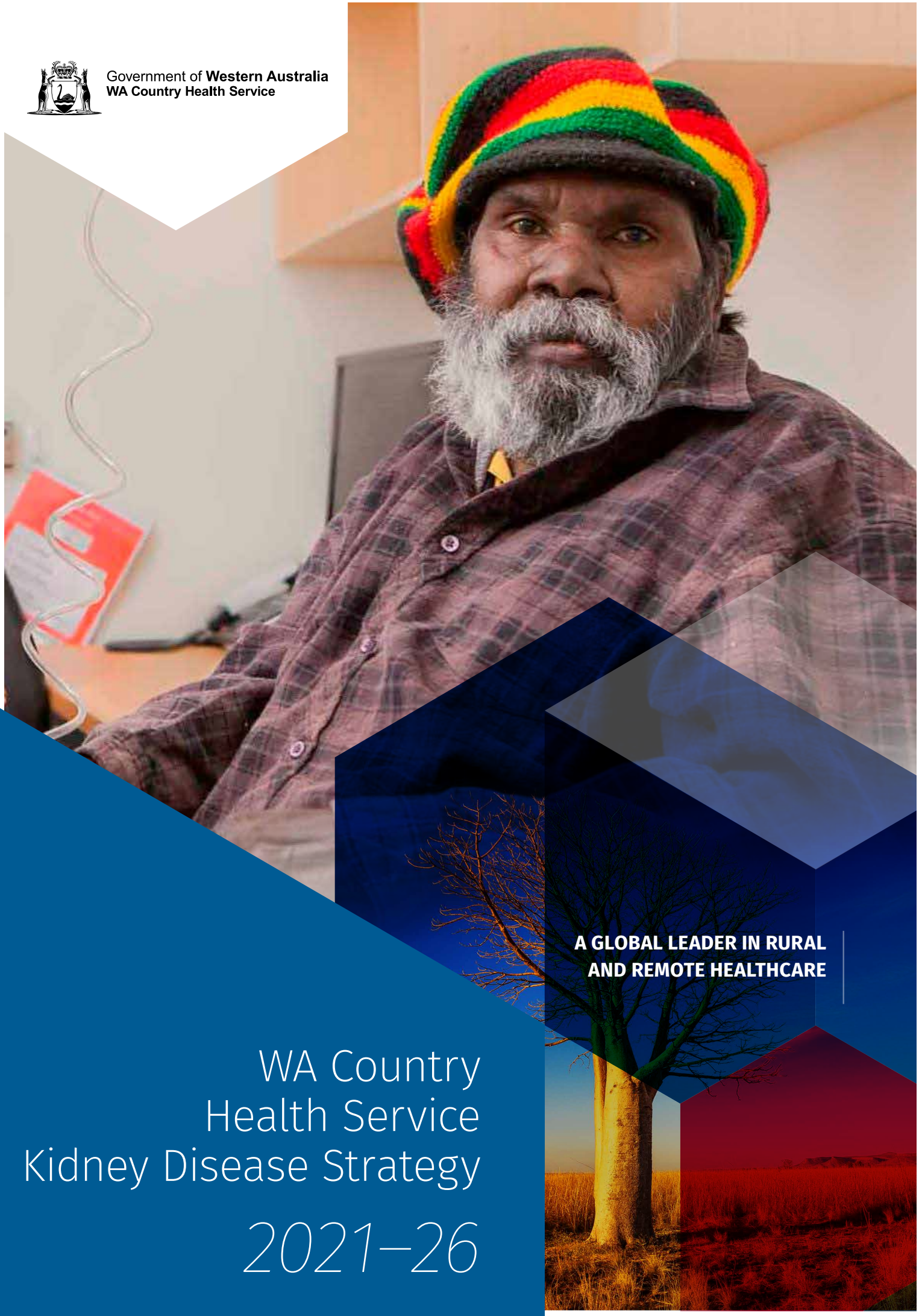
Government of **Western Australia**
WA Country Health Service



A GLOBAL LEADER IN RURAL AND REMOTE HEALTHCARE

WA Country Health Service Kidney Disease Strategy 2021–26

Acknowledgements

WA Country Health Service acknowledges the Aboriginal people of the many traditional lands and language groups of Western Australia. It acknowledges the wisdom of Aboriginal Elders both past and present and pays respect to Aboriginal communities of today.

Using the term—Aboriginal

Within Western Australia (WA), the term Aboriginal is used in preference to Aboriginal and Torres Strait Islander, in recognition that Aboriginal people are the original inhabitants of Western Australia. Aboriginal and Torres Strait Islander may be referred to in the national context and Indigenous may be referred to in the international context. No disrespect is intended to our Torres Strait Islander colleagues and community.

Using the term—on country

For the purposes of this document, on country represents a term used by Aboriginal people referring to the land to which they belong and their place of Dreaming.

Definition of cultural security

Cultural security is the provision of programs and services offered by the health system that will not compromise the legitimate cultural rights, values and expectations of Aboriginal people. To be culturally secure, programs and services need to:

- identify and respond to the cultural needs of Aboriginal people
- work within a holistic framework that recognises the importance of connection to country, culture, spirituality, family and community
- recognise and reflect on how these factors affect health and wellbeing.

Please note: Aboriginal people should be aware that this publication may contain images or names of deceased persons in photographs or printed material. Photos have been used with written permission. For further information please contact WACHS Communications.

Glossary of terms

Definitions of a number of health terms used in this document are in the glossary on page 16.

Contents

A chronic diseases study in 2012–13 showed nearly one in five Aboriginal people had signs of chronic kidney disease (CKD), and those in remote areas were five times as likely to have CKD as non-Aboriginal people[1].

Survey results from 2018–19 show that the proportion of Aboriginal and Torres Strait Islanders reporting kidney disease has been consistent over the last decade[2].

Message from the Board Chair

The incidence of kidney (renal) disease is increasing, placing pressure on kidney health services, particularly in country WA.

Historically, there has been inequity in access to kidney health services for people living in country areas compared to residents in the metropolitan area. For many country patients, accessing life-sustaining treatment has meant leaving their homes, families and communities and relocating to Perth.

Demand for kidney health services in WA's more remote areas is high. Many Aboriginal families experience significant disconnect when they have to leave their communities for long periods to have kidney treatment elsewhere.

To date, the delivery of kidney health services in country WA has focussed on end stage kidney disease dialysis services, providing more dialysis treatment closer to home rather than people having to leave their homes, communities and country to relocate to Perth.

The ***WA Country Health Service (WACHS) Kidney Disease Strategy 2021–26*** (the Strategy) adds focus to reaching those at risk earlier while continuing provision of end stage kidney disease care. It integrates with other key WACHS strategies, ensuring the kidney health of country people is addressed at multiple points throughout their life journey.

WACHS delivers kidney health services in accordance with the *WA Health Clinical Services Framework 2014–2024*. This Framework defines service location according to need with the highest demand during this period identified in the north west of the State.

Delivering kidney care across country WA is complex and requires a whole of sector approach. WACHS works closely with a range of health partners to deliver kidney services including the WA Primary Health Alliance (WAPHA), the Aboriginal Health Council of WA (AHCWA), the Aboriginal community controlled health sector, Kidney Health Australia, private providers, general practitioners (GPs) and non-government organisations.

Expansion of innovative service delivery options, including the use of telehealth, means more country people can access treatment closer to home or in a supported regional community facility.

Our thanks go to the many consumer representatives, stakeholders and health staff who have worked with WACHS in the development of this Strategy. Your input will help WACHS deliver more equitable regional kidney care services, resulting in better kidney health care closer to home for WA country people.

DR NEALE FONG

BOARD CHAIR
WA COUNTRY HEALTH SERVICE

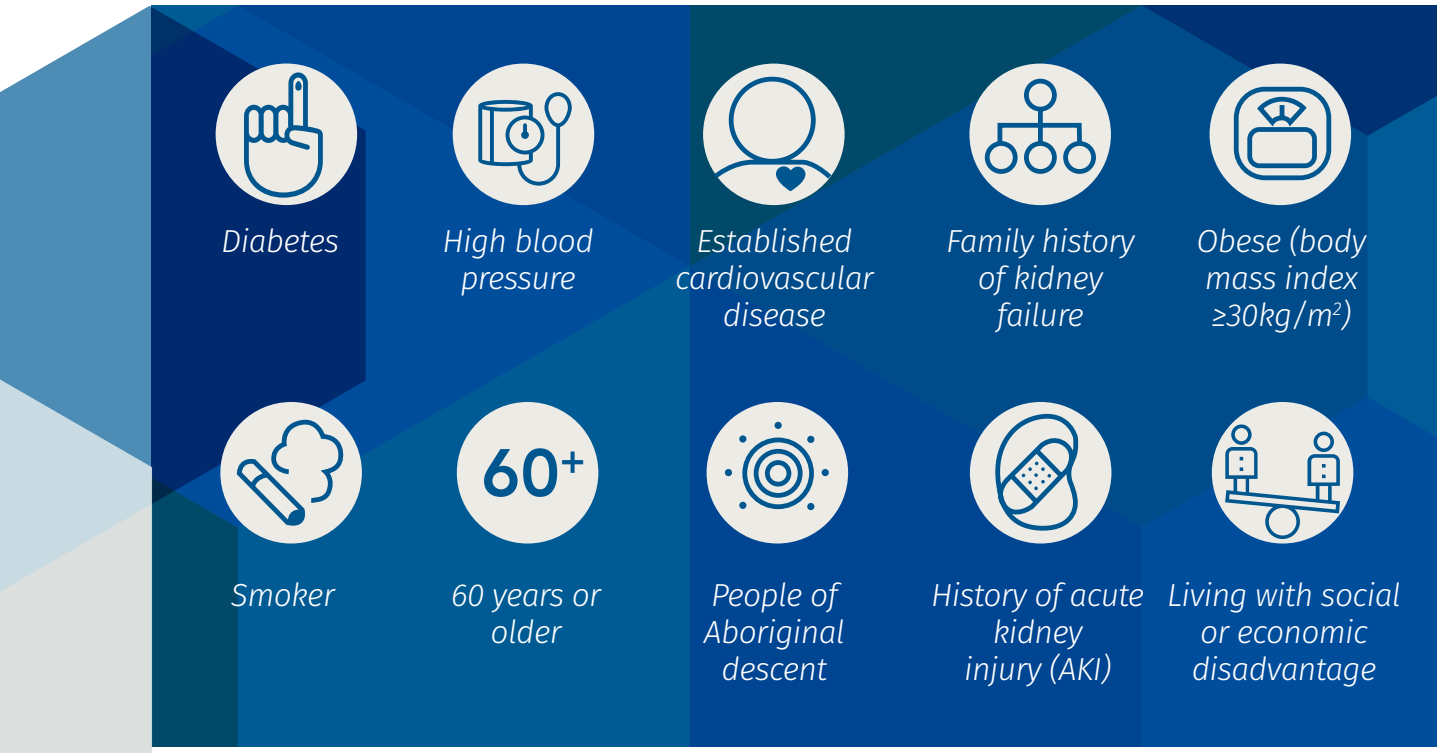
Aboriginal people from remote country areas have incidence rates of end-stage kidney disease up to 20 times higher than the national incidence rate. [3]

What is kidney disease?

Kidney disease refers to damage or disease that acutely or chronically reduces kidney functioning. The term 'chronic kidney disease' (CKD) represents the entire spectrum of disease that occurs following the initiation of kidney damage. Due to the asymptomatic nature of CKD and low awareness of the risk factors, it remains a relatively under-recognised condition in Australia.[4]

Who is at risk of developing chronic kidney disease?

Adult Australians are at increased risk of developing CKD if they have any of the following risk factors: [4]



The prevalence of risk factors associated with chronic conditions are not distributed equally across the community. People who live in areas of socioeconomic disadvantage or outside major cities, have lower levels of education, lower incomes, experience mental health problems or live with disability are more likely to report health risk behaviours.[5]

Preventing chronic kidney disease

Chronic (long-term) health conditions such as cancer, coronary heart disease, diabetes and chronic kidney disease are becoming more common in the Australian population. Many chronic conditions are caused by similar risk factors and behaviours.

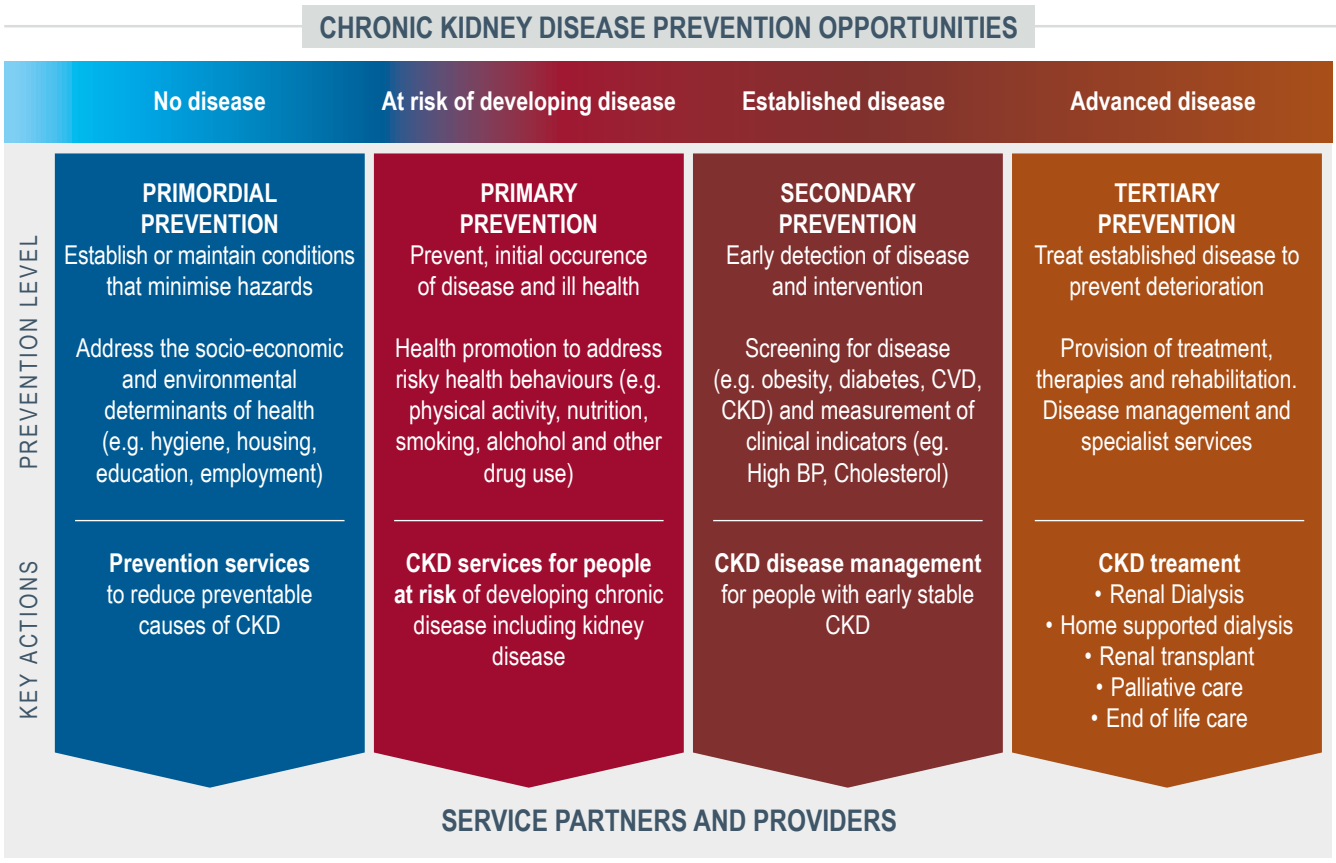
Preventative action can avoid the onset of kidney disease, reduce the severity of the disease, and where people have significant disease can slow disease progression, as shown in the figure below[6] Preventive actions are less expensive and have greater impact on health outcomes, whereas treating symptoms is costly and less effective overall. Common preventative actions supported by WACHS, and other key partners and providers, include:

- stopping smoking
- reducing alcohol intake
- regular physical activity
- healthy diet and nutrition
- early CKD assessment for those with risk factors or family history
- chronic disease management education and intervention.

Health systems with strong prevention and primary health care are more efficient, have lower rates of hospitalisation, fewer health inequalities and better health outcomes.[7]

Development of partnerships between service providers enables effective prevention and management of CKD. WACHS will continue to build and strengthen partnerships with a range of organisations including:

- national, state and local government agencies
- private and non-government organisations
- rural health organisations including GPs and community service providers
- private industry and health insurers
- Aboriginal and Community Controlled Health Services (ACCHSs)
- researchers and academics.



The need to improve kidney health services

The care of people with kidney disease is complex, due to its multiple causative factors and the many care providers involved throughout the patient's health journey. Social determinants have a major impact on the health of many people, particularly those in remote parts of WA.

WA country patients with kidney disease often have delayed access to prevention, diagnostic and treatment services. Delays and care fragmentation regularly require people to leave home to access treatment and training in the metropolitan area for extended periods.

Greater access to primary prevention, a skilled workforce and increased integration between health service providers will improve the health experience and health outcomes for people with kidney disease.

Country kidney patients are significantly disadvantaged by limited availability of specialist renal nurses and dialysis chairs in regional and remote communities. To begin dialysis, people need to relocate to Perth for specialist support and vascular access development then wait for a dialysis chair to become available in their region before they can return home.

Seven people each and every day are accepted into dialysis programs across Australia[1]

The waiting period varies from one month to a year or more. On average, patients wait for 174 days or six months for a dialysis chair in country WA[8]. This disconnect from home can become an emotional, social, financial and psychological burden, particularly for Aboriginal people from remote areas, who have to travel far from their country to access treatment.[3]

There are currently 121 dialysis chairs operating in country WA, delivering in-facility and outreach dialysis. The demand for kidney treatment and associated costs has increased significantly across WA and continues to grow.

There is a need to shift the focus from the treatment of end stage kidney disease (ESKD) to prevention, early identification and slowing the progression towards invasive treatment.

Kidney health snapshot

NATIONALLY [1,9,10]

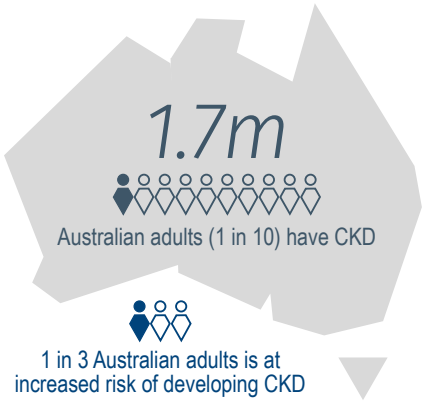
Around **90%** of people who have CKD don't know they have it

1 in 1400 Australian adults are on dialysis or living with a transplant

4X Aboriginal people are almost 4x more likely to die from CKD than non-aboriginal people

Annual health service cost p/person for haemodialysis treatment

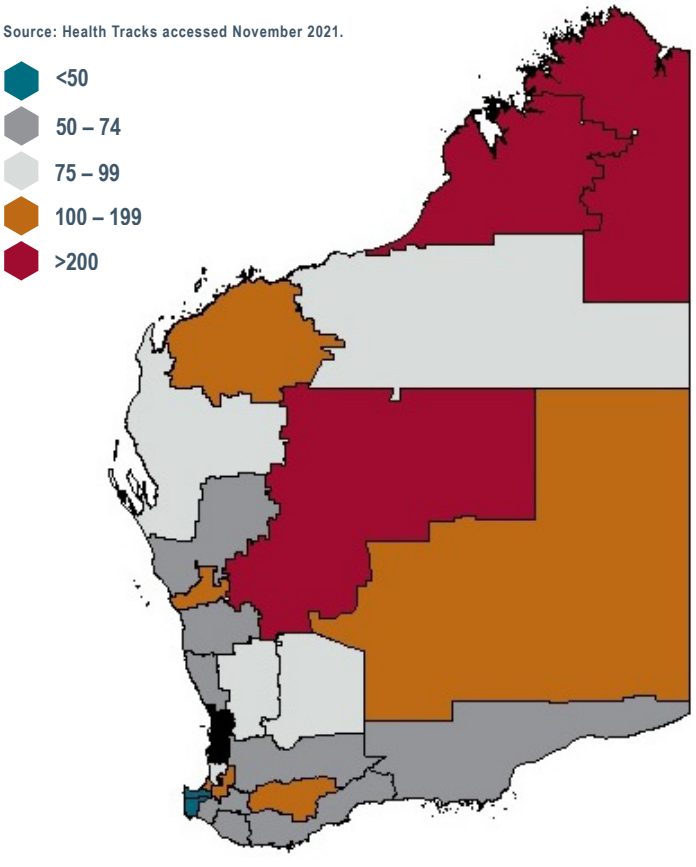
$80,000	$65,000	$49,000
Hospital haemodialysis	Satellite haemodialysis	Home haemodialysis



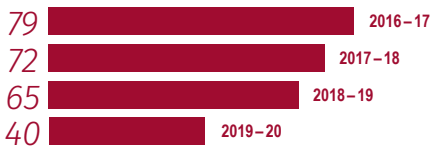
WA COUNTRY [11,12]

Age standardised rates of hospitalisations (number per 100,000 population) for renal failure 2015-20 by health district of residence

Source: Health Tracks accessed November 2021.

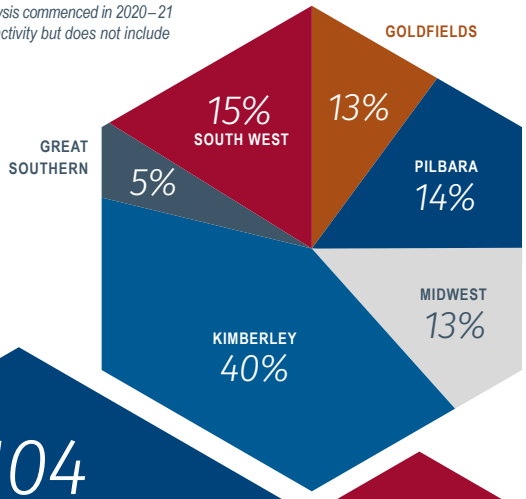


Average number of country patients waiting to return home for dialysis in regional hospitals



WACHS dialysis activity 2019–20##

Wheatbelt dialysis commenced in 2020–21
##Contracted activity but does not include home dialysis.



104 Country dialysis patients receiving home therapies *(2019–20)*

79% of dialysis hospital admissions in country WA are for Aboriginal people

52,151 Dialysis treatments in all 13 country dialysis units in 2019–20

401 Country patients receiving dialysis treatment in WACHS facilities *(2019–20)*

Challenges for delivery of kidney care in country WA

Currently the greatest challenges for delivery of kidney care in country WA are seamless provision across multiple sites and providers, compounded by the complexities of the disease.

As a provider of kidney services in country WA, WACHS is well placed, in partnership with the Aboriginal Medical sector, to provide oversight of a shared-care approach to enable better coordination of kidney services for country people across the life journey.

Improved shared-care arrangements and information sharing between WACHS and service partners will facilitate more effective service delivery to patients with kidney disease.

PREVALENCE OF THE DISEASE

Current research indicates the causes of kidney disease can be identified before birth, during early childhood and throughout adult life. These multiple factors can cause the development of other chronic conditions which may lead to kidney disease including diabetes and hypertension.

Kidney disease is a major factor in the health and life expectancy gap between Aboriginal and non-Aboriginal people. Aboriginal people are four times more likely to die from CKD than non-Aboriginal people and those from remote areas are more likely to experience accelerated development of CKD.[1]

Typically, ESKD occurs 10 to 15 years earlier in Aboriginal people than non-Aboriginal people.[13] Recent literature estimates nearly one in five Aboriginal people have signs of CKD, and those in remote areas are five times more likely to have CKD than non-Aboriginal people.[1]

A diagnosis of ESKD may mean having to leave home and country to access appropriate treatment, usually in the metropolitan area, with significant financial and social impacts. This experience is cited anecdotally as a significant reason for delaying or not seeking healthcare access.

REGIONAL AND REMOTE POPULATIONS

People in remote areas across Australia are disadvantaged by living greater distances from health service provision and have much higher rates of ESKD than their metropolitan counterparts. Longer travel time to dialysis is associated with increased mortality and a diminished quality of life. People receiving dialysis in country areas have poorer outcomes compared with people living in metropolitan areas.[14]

EQUITABLE ACCESS TO HEALTH CARE

Limited access to primary health and specialist services often leads to people accessing services later in the development of disorders, resulting in later diagnosis, delayed intervention and increased likelihood of chronic and acute co-morbidities.

Generally, people living in the country have lower life expectancy and higher risk of illness, chronic conditions and injury than people living in major cities[3] but have less access to necessary services, resulting in poorer health outcomes. Greater use of innovations in digital communication and treatment technologies are necessary to provide greater access to better health care for people in country communities.

Challenges for delivery of kidney care in country WA

LOW SOCIO-ECONOMIC POPULATIONS

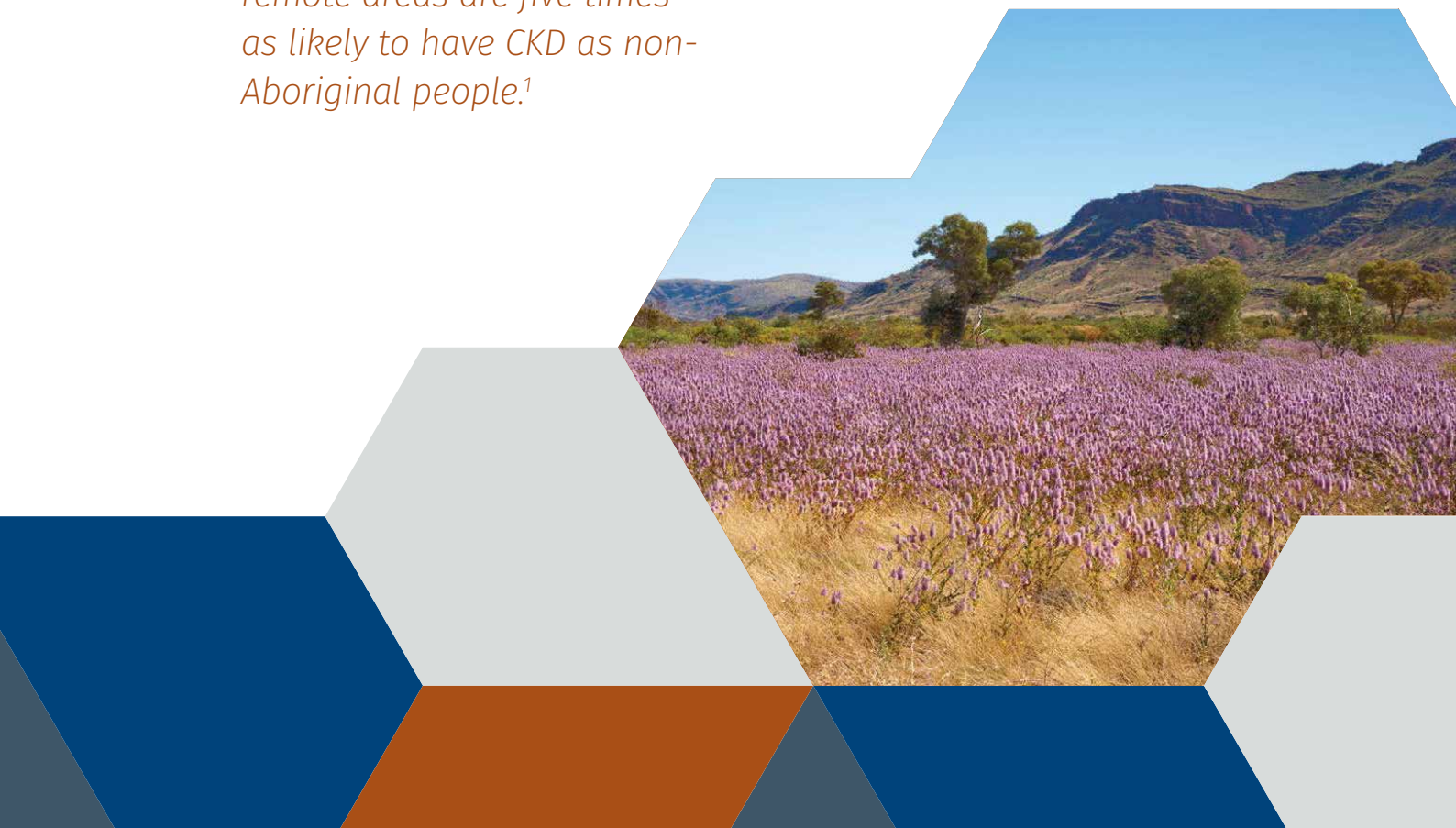
CKD deaths in the lowest socio-economic group are 1.7 times as high as deaths in the highest group. This trend is concerning given a large proportion of the areas serviced by WACHS are of a low socio-economic status.[1]

The risk of hospitalisation from CKD increases in areas of low socio-economic status.[1] In 2015–16, rates of hospitalisation for CKD (excluding dialysis) were 1.9 times as high in the lowest socio-economic group compared with the highest socio-economic group (2.1 times as high for females and 1.7 times as high for males). The pattern was similar for hospitalisation for dialysis — 1.8 times higher for males and 2.7 times higher for females in the lowest versus the highest socio-economic groups.[1]

THE UNKNOWN AT-RISK POPULATION

Currently there is no national registry for people with CKD. Consequently, demand for kidney health services is projected by the current availability of treatment chairs, rather than projecting the future number of people who will require services. WACHS has begun gathering data to track the progression rates of the disease, which will help to project service need into the future and inform national understanding of service demand.

Throughout Australia, one in five Aboriginal people have signs of CKD and those in remote areas are five times as likely to have CKD as non-Aboriginal people.[1]



WA regional kidney health services

Current service as at September 2021 Planned service to 2026

Description of Service	Great Southern	South West	Wheatbelt	Goldfields	Midwest	Pilbara	Kimberley
Multi-professional kidney health services teams	✔	✔	✔	✔	✔	✔	✔
Number of dialysis chairs operated in WACHS facilities	6 Albany	6 Busselton	4 Northam	2 Warburton 12 Kalgoorlie	9 Geraldton 4 Carnarvon	12 Port Hedland	4 Fitzroy Crossing
							4 Fitzroy Crossing
Number of dialysis chairs operated in non-WACHS facilities		11 Bunbury		2 Wanarn		2 Kiwirrkurra	9 Kununurra 13 Derby 10 Broome
							10 Halls Creek
Number of Community Supported Home Dialysis chairs (WACHS facilities)			2 Moora	2 Esperance		2 Onslow	1 Wangkatjunka 1 Wyndham 4 Fitzroy Crossing 2 Kalumbaru
Number of Community Supported Home Dialysis chairs (non-WACHS facilities)					1 Wiluna	4 Roebourne 1 Jigalong	2 Bidyadanga 1 Halls Creek
						4 Newman	2 Halls Creek
Hostel beds				19 Kalgoorlie	5 Carnarvon		8 Kununurra 20 Derby 20 Fitzroy Crossing
							20 Broome

Vision: A global leader in rural and remote healthcare

Mission: Reduce the impact of kidney disease through excellent, culturally secure kidney health care closer to home and on country

DIRECTION 1

Prevention, detection and disease management

DIRECTION 2

Innovation, technology and partnerships

Directions

DIRECTION 3

Skilled kidney health workforce

DIRECTION 4

Right care, right time, right place

Direction 1

PREVENTION, DETECTION AND DISEASE MANAGEMENT

Increased community awareness and early intervention can decrease the burden of kidney disease.

The continuum of kidney health awareness and intervention extends beyond the scope of this Strategy and has strong linkages to other key WACHS strategies.

WACHS will use its lead role in healthcare provision across country WA by building on existing partnerships to create new opportunities for shared-care between metropolitan and country kidney health services. This will incorporate consumer involvement and working closely with Aboriginal Community Controlled Health Services (ACCHS), GPs and other primary care providers to enable early identification and management of people with kidney disease.

Outcome: Improved prevention, detection and disease management to reduce the impact and progression of kidney disease in country communities

ACTIONS

- **Evidence-based primary prevention programs and services:** Evidence-based health promotion programs targeting factors which prevent chronic conditions are implemented.
- **Clear referral pathway:** WACHS has formalised linkages with metropolitan health services, consumers and primary care providers including WAPHA, AHCWA and Kidney Health Australia that clearly document referral and care pathways for country kidney health patients.
- **Early identification and management:** Early identification and management of people with, or at risk of developing, kidney disease. Increased community-based detection of asymptomatic CKD for at-risk populations through regionally-based or telehealth disease education and screening programs.
- **Opportunistic screening:** WACHS staff, in collaboration with other health providers, undertake targeted opportunistic screening for early detection of kidney disease.
- **Self-management:** Delivery of collaborative models of care and programs for chronic conditions that promote self-management.
- **Multidisciplinary assessments:** Patients receive a comprehensive, multi-disciplinary assessment that collects information including medical, psychological and social functioning.
- **Culturally appropriate disease management education:** Patients receive clear and culturally appropriate disease management education with a focus on promoting healthy choices and self-care.
- **Improved case management:** WACHS works with the country and metropolitan workforce and other providers to improve case management of patients with multiple and complex co-morbid conditions including CKD.

Chronic conditions account for 44 per cent of all potentially preventable hospitalisations in country WA[15]

Direction 2

INNOVATION, TECHNOLOGY AND PARTNERSHIPS

The innovative use of technology, research and partnerships to expand and evaluate country kidney health services will bring more care closer to home and on country and guide further improvements.

Telehealth is evolving as an alternative to travelling to the metropolitan area or a larger regional centre for kidney patients, helping to close the gap between country and metropolitan service delivery.

Partnerships provide the foundation for WACHS, ACCHS and other service providers to plan, manage and evaluate the impact of the provision of kidney health care for country patients. WACHS will coordinate these functions with service providers.

Outcome: Innovative delivery of kidney health services.

ACTIONS

- **Clinical telehealth services:** Country patients with kidney disease use telehealth for video consultations with kidney care clinicians and vascular access surgeons, reducing the need for them to travel to a metropolitan tertiary hospital.
- **CKD education through telehealth:** CKD educators use telehealth when working with country patients with kidney disease, either in their homes or their closest town, or for case-management meetings with health staff.
- **Allied health links:** Telehealth links country kidney patients with allied health professionals including social workers and kidney health specific dietitians.
- **Application of technology and digital innovation:** Assessment and application of technology and digital innovation in the country context improves the patient's journey and health status, including the use of applications and social media for health promotion.

Telehealth and virtual services will become a regular part of service delivery with much greater coordination and safer access for country patients.

Sustainable Health Review Final Report to the WA Government 2019

- **Portable treatment options:** Innovative portable treatment options for dialysis patients enable them to be away from home for extended periods.
- **Chronic conditions clinic:** One-stop shop chronic conditions clinics in remote communities provide lifestyle education, screening and clear patient-focussed health pathways for prevention of disease progression.
- **Medical imaging for vascular access:** Radiological and sonographic investigations for the surveillance of vascular access for dialysis are available in the region.

Outcome: Better knowledge sharing, partnerships and research.

ACTIONS

- **Service partnerships:** Comprehensive shared care kidney health pathways and outcomes for country patients are enhanced through collaborative service partnerships with WAPHA, AHCWA, the Aboriginal community-controlled health sector, Kidney Health Australia, private providers, GPs and non-government organisations.
- **Consumer reference group:** A kidney health consumer reference group develops a consumer partnership framework for guiding and supporting effective kidney health care.
- **CKD database:** Improvements in the management of kidney patients through introduction of a CKD database.
- **Research and evaluation:** The standard of kidney care for country patients is improved through opportunities for WACHS to work with the WA Department of Health, universities and clinical networks across Australia to progress statewide research and evaluation.
- **Digital medical record:** Comprehensive statewide kidney patient medical record information systems, including My Health Record, improve information sharing between government and non-government providers.
- **Kidney dashboard:** A kidney health business intelligence dashboard provides close to real-time data to inform service improvement opportunities.

Direction 3

SKILLED KIDNEY HEALTH WORKFORCE

Addressing workforce requirements is crucial to providing and maintaining a quality kidney health service for country patients.

Successful delivery of kidney health services across country WA requires a workforce that is culturally appropriate and responsive to need.

Innovative strategies will be implemented to recruit and retain specialist kidney health staff to deliver early intervention and care throughout the life journey including clinical, managerial, health promotion and social support.

People who have experienced the kidney health system would be encouraged to pass on their knowledge as mentors within their own communities or cultural groups.

"For our patients, being able to meet with the (renal) team and given the education they need to support their CKD puts them at ease with the process rather than scared of outcomes and being left unsure of what to do."

Registered nurse, Wirraka Maya Health Service Aboriginal Corporation, Pilbara

Outcome: Targeted recruitment and retention of a specialist kidney health workforce.

ACTIONS

- **Kidney workforce profile:** A workforce profile identifies WACHS workforce requirements including nephrology clinical leads, GPs, renal nurse practitioners, renal nurses, allied health professionals (psychologists, social workers, educators, dieticians and pharmacists), Aboriginal health workers, volunteers, mentors and carers.
- **Local kidney health nursing workforce:** A local kidney health nursing workforce is commensurate with the increasing number of kidney patients.
- **Aboriginal kidney health workforce:** Aboriginal health professionals are employed to support kidney health care in rural and remote Aboriginal communities.
- **Kidney health workforce continuing education:** Education sessions via telehealth assist in maintaining and increasing the skill level of the regional kidney health workforce as well as providing professional development and networking opportunities.

"I am very proud to have been part of such a fantastic team that has grown the renal service in the Goldfields. We have often received feedback from our patients and their loved ones that they are extremely grateful to be able to receive comprehensive specialist renal services closer to home."

WACHS Goldfields Renal Nurse

Direction 4

RIGHT CARE, RIGHT TIME, RIGHT PLACE

High quality kidney health services for country patients closer to home and on country where possible, with the main focus on those areas where the known demand is highest.

Outcome: Supported kidney treatment journey for country people.

ACTIONS

- **Effective treatment planning:** Application of effective treatment planning encompasses an all-inclusive patient perspective including their mental, physical and social wellbeing, social supports and care needs. A consistent, documented kidney treatment and support plan, guided by an optimal kidney care pathway and targeted to individual needs, is shared with all treating clinicians.
- **Pre-dialysis, dialysis, transplant, vascular access services:** Patients have access to pre-dialysis and dialysis services within country WA including monitoring and specialist appointments via telehealth. Increasing specialist visiting transplant teams assist with early assessment and ongoing review of patients before and after a kidney transplant.
- **Promotion of home therapy:** WACHS ensures that Home Therapies (home self-care program) meet the needs of country patients to perform their haemodialysis or peritoneal dialysis at home or on country. Community supported home dialysis (CSHD) units facilitate treatment in the community when the patient's home environment is not suitable for Home Therapies.
- **Effective utilisation of treatment services:** Satellite dialysis units will have a strategy to optimise the usage of chairs through management of missed dialysis treatments, backfilling dialysis chairs for clients referred to tertiary care, and a plan to accommodate clients travelling for cultural purposes.
- **Local support:** Kidney health clinicians provide increased local support for country patients to undertake home and community-based dialysis including via telehealth. Appropriate psychosocial support is provided for both the patient and carers via consumer reference groups that link to carer and other support services. Patients are aware of all treatment options including end-of-life decisions. People with ESKD who opt for a conservative pathway can stay closer to home and on country, and are assisted to access available support when required.
- **Culturally appropriate:** An Aboriginal health workforce will have ongoing input into the care of patients with kidney disease ensuring culturally appropriate care is provided and timely, informed decision making is advocated.

Home therapies, including haemodialysis or peritoneal dialysis, provide the best outcomes for appropriate, eligible patients and the most cost-effective dialysis treatment.

Direction 4

RIGHT CARE, RIGHT TIME, RIGHT PLACE

(CONTINUED)

Outcome: New and expanded kidney health services and accommodation for country patients.

ACTIONS

- **Management of higher acuity patients:** Cultural and clinical assessment will enable higher acuity dialysis patients to be managed closer to home, reducing the need for transfers to Perth.
- **Accommodation:** Patients having to relocate for treatment are supported to find accommodation close to their treatment centre.
- **Region-based home therapy training:** Expansion of home therapies provides patients with kidney disease with regionally-based training facilities and ongoing support, either directly or via telehealth. Patients using home therapies are monitored remotely through real-time data transmission for safety and quality of care.
- **Future kidney services:** Planning for new WACHS health facilities includes the capability to accommodate a future kidney health service.

"The set-up in Geraldton is very good, I could not fault it. (The Clinical Nurse Educator) was great; making all those phone calls to doctors on my behalf so I didn't have to go to Perth. Brilliant!"

Midwest pre-dialysis client

Outcome: Sustainable and robust governance of country kidney health services.

ACTIONS

- **Clinical governance:** A clinical governance group is established to support evidence-based kidney health care, monitoring, evaluation and benchmarking of regional kidney services. The organisation's performance is shared with other government, non-government and private providers of kidney health services and consumer groups.
- **Implementation plan:** The development of an implementation plan will include key performance indicators (KPI) that will measure achievements and improvements in kidney health services.
- **Data reporting:** A centralised database is established and configured to enable reporting and decision-making, identifying improvements, providing visibility, and reporting back to service providers.
- **Funding:** Ongoing funding sources for service continuation and new services or facilities are secured through a focus on establishing and monitoring KPIs that drive evidence of quality improvement and achievement of improved patient and service outcomes.
- **Service evaluation:** Patients and stakeholders participate in the evaluation of country kidney health services through patient satisfaction and quality of life surveys, interviews and consultation.

Next steps

Successfully implementing the *WACHS Kidney Disease Strategy 2021–26* will rely on collaborative efforts, active involvement and partnerships.

An implementation plan will guide the delivery and monitoring of WACHS-wide actions in the Strategy.

Regional kidney health clinical service plans will guide the local implementation of the Strategy within the regional context. A review of data collection will be undertaken to inform future service planning.

Lessons learned from implementation of the Strategy will be shared across all country regions and will help inform local, state and national service development.

Appendix 1

GLOSSARY OF TERMS

Term	Definition
Aboriginal Health Worker (AHW)	AHWs provide both clinical health care delivery and health education to Aboriginal patients with kidney disease.
Aboriginal Liaison Officer (ALO)	ALOs provide emotional, social and cultural support to Aboriginal patients with kidney disease and their families. ALOs also provide cultural education and support to health service staff. ALOs are a valuable source of cultural education for non-Aboriginal staff.
Chronic kidney disease (CKD)	All conditions of the kidney, where a person has had evidence of kidney damage and/or reduced kidney function lasting at least three months.
Community supported home dialysis (CSHD)	Provision of a facility within the local community for patients to perform Home Therapies when their home environment is unsuitable.
Conservative management	Conservative management involves ongoing patient care without dialysis or a kidney transplant. The focus of care is on quality of life and symptom control. A patient can choose conservative management instead of dialysis or a transplant.
Cultural security	Cultural security is the provision of programs and services offered by the health system that will not compromise the legitimate cultural rights, values and expectations of Aboriginal people. To be culturally secure, programs and services need to: • identify and respond to the cultural needs of Aboriginal people • work within a holistic framework that recognises the importance of connection to country, culture, spirituality, family and community • recognise and reflect on how these factors affect health and wellbeing.
Dialysis	A type of treatment that removes waste products from the blood stream in ESKD.
End stage kidney disease (ESKD)	The stage of kidney disease when a person's kidney function cannot sustain their wellbeing, requiring some form of treatment to maintain life. Also known as renal or kidney failure.
Estimated Glomerular Filtration Rate (eGFR)	The flow rate of filtered blood through the kidney which is an indicator of how well the kidney is working.
Haemodialysis	Treatment for ESKD via machine and artificial kidney using access to the bloodstream. Treatment can be nurse assisted or performed by patient self-caring.
Home Therapies	The performance of haemodialysis or peritoneal dialysis in a home environment by the patient. Where the home environment is unsuitable, these therapies can be performed in a community supported home dialysis facility.
Nephrologist	A physician who deals with diagnosis and management of kidney disease.
Peritoneal Dialysis	Outpatient treatment for ESKD via a soft plastic tube inserted into a patient's abdomen (peritoneal cavity). Usually self-care or with the assistance of a carer.
Regional Renal Support Teams (RRST)	Regionally-based teams for the identification and management of CKD patients.
Kidney disease (also known as renal disease)	A general term for any damage that acutely or chronically reduces the functioning of the kidney.
Satellite Dialysis Unit (SDU)	Provides haemodialysis away from a tertiary hospital site. This option is suitable for medically stable, relatively independent patients for whom Home Therapies is not appropriate.
Satellite Outreach Service (SOS)	Enables small numbers of medically stable and independent patients to receive dialysis treatment closer to home in smaller country hospitals. This option is for stable chronic patients who don't require acute treatment and for whom Home Therapies is not appropriate.
Social determinants of health	The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources and include income security, employment, education, food and shelter and political determinants of health and health experiences.
Telehealth	The use of telecommunication techniques for the purpose of providing telemedicine, medical education and health education over a distance.
TeleRenal service	Enables country patients to have appointments with kidney care clinicians via video.
Vascular access	A method of accessing the blood stream for the purpose of haemodialysis.

Appendix 2

MEASURES AND MILESTONES FOR SUCCESS

TYPES OF MEASURES:

Key Performance Indicator **(KPI)**, Supporting Indicator **(SI)**, Milestone **(M)**

Directions	Key Performance Measures or Indicators	Target (what we aim to achieve)	Time frame	Type of measure
Direction 1:	**Clear referral pathway**			
Prevention, detection, and disease management	Establishment of formalised agreements between regional and metropolitan health service providers to provide care for country patients.	100% of regions have an agreement(s) with a metropolitan health service provider(s).	**2023**	**M**
	Early identification and management			
	Patients with CKD are assessed within 3 months of referral.	100% of patients with CKD are assessed within 3 months of referral.	**2024**	**KPI**
	Monitoring incidents/episodes of disease progression of CKD patients with stage 3B progressing to 5 at 3 months.	100% of patients with CKD stage 3B are assessed by a nephrologist within 3 months of staging.	**2024**	**KPI**
	Multidisciplinary assessments			
	Number of patients seen by the multidisciplinary team within three months of disease staging assessment.	100% of referred patients seen by multidisciplinary team within three months.	**2024**	**SI**
	Culturally appropriate disease management education			
	Tailored education resources and schedule developed by the Aboriginal kidney health workforce.	Resources and education schedule have been developed with consumer and staff input.	**2024**	**SI**
		100% of regions recording CKD education offered and received by CKD patients.	**2025**	**KPI**
		Increased percentage of education uptake.	**2026**	**M**
	Improved case management			
	A documented management plan for each stage of CKD is accessible by the WACHS CKD workforce and other agencies involved in kidney care.	Agreed documented process for sharing of relevant information between providers to support CKD care for country patients.	**2025**	**M**

Appendix 2

MEASURES AND MILESTONES FOR SUCCESS

TYPES OF MEASURES:

Key Performance Indicator **(KPI)**, Supporting Indicator **(SI)**, Milestone **(M)**

Directions	Key Performance Measures or Indicators	Target (what we aim to achieve)	Time frame	Type of measure
Direction 2: **Innovation, technology, and partnerships**	Number and proportion of telehealth consults (specialists, allied health clinical consultations).	≥5%	**2024**	**SI**
	Number and proportion of CKD patient education session by telehealth.	≥5%	**2024**	**SI**
	Improved management of patients who access multiple sites for dialysis and other services. This will include improved communication and handover, and be developed with both consumer and staff involvement.	Documented process to improve management of dialysis patients moving between communities and regions.	**2022**	**SI**
	Improve access to chronic condition prevention and management in WA remote communities.	Feasibility study on potential use of 'one stop clinics' for chronic conditions in remote WA communities.	**2023**	**M**
	Increased regional access to medical imaging to monitor dialysis vascular access, to reduce travel for CKD patients.	Increased regional self-sufficiency of dialysis vascular access monitoring within the regions.	**2025**	**SI**
	Consumer engagement			
	Establish a centrally managed WACHS kidney health consumer reference group with regional representation.	Consumer reference group established and meetings held.	**2022**	**M**
	Feedback from consumers is used to guide and support kidney health care.	Documented evidence of consumer feedback informing service redesign.	**2023**	**SI**
	Improved patient and carer satisfaction with service access and delivery.	Annual satisfaction survey of patients, carers and other stakeholders to assist in evaluation of kidney health services.	**2024**	**M**
	Improved capture of country renal patient data			
	Establish centralised kidney database to standardise and simplify data collection.	WACHS kidney database and associated business rules established.	**2023**	**M**
		WACHS kidney dashboard produced.	**2023**	**M**
	Research and evaluation			
	Number of formal partnerships with research organisations to investigate provision of kidney care for country patients.	Two formal research partnerships to investigate potential improvements in the standard of kidney care for country patients.	**2026**	**M**

Appendix 2

MEASURES AND MILESTONES FOR SUCCESS

TYPES OF MEASURES:

Key Performance Indicator **(KPI)**, Supporting Indicator **(SI)**, Milestone **(M)**

Directions	Key Performance Measures or Indicators	Target (what we aim to achieve)	Time frame	Type of measure
Direction 3: **Skilled kidney workforce**	Develop a detailed WACHS kidney health workforce incorporating all clinical and other disciplines and based on projected service demand by region.	WACHS kidney health workforce profile developed.	**2024**	**SI**
	Promotion of dialysis unit within graduate nurse program.	Increased number of graduate nurses completing a rotation to a dialysis unit.	**2023**	**SI**
Direction 4: **Right care, right time, right place**	**Increased access to local service provision**			
	Increased access to home therapies, community-supported home dialysis and/or satellite outreach service (SOS) within region.	100% of CKD patients advised of their suitability for home dialysis or satellite outreach services.	**2022**	**SI**
		80% of suitable patients are trained for home dialysis therapies within their region.	**2024**	**KPI**
	Improved dialysis chair utilisation rates as required.	>95% chair occupancy rate.	**2023**	**KPI**
	Develop a procurement plan to guide kidney care contracting.	Forward procurement plan developed.	**2023**	**M**
	Culturally appropriate care and decision-making.	Aboriginal health workers input into care plan of CKD patients.	**2024**	**SI**
	Improvement in early assessment of transplant suitability.	All CKD patients have an assessment of transplant suitability documented within six months of starting dialysis.	**2023**	**KPI**
	Management of higher acuity patients			
	Increased capability to manage higher acuity dialysis patients within region.	Establishment of acuity assessment and guidelines for managing higher acuity dialysis patients.	**2026**	**SI**
	Ensure supported accommodation (hostels) for patients needing to relocate for dialysis.	Establish baseline of hostel bed occupancy and availability by region.	**2022**	**SI**
	Clinical Governance			
	Establish a clinical governance group to strengthen clinical governance and decision making.	Governance group established.	**2021**	**SI**

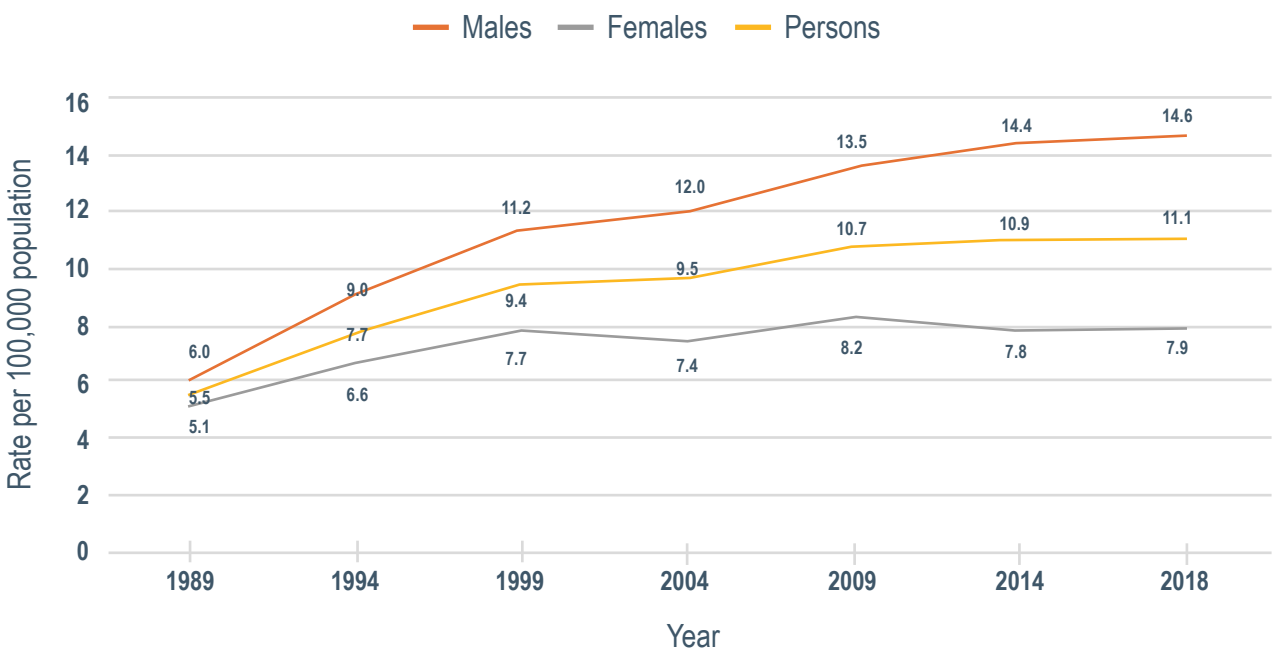
Appendix 3

AUSTRALIAN TRENDS IN END-STAGE KIDNEY DISEASE

The graph below shows the historical incidence of End-Stage Kidney Disease (ESKD) across Australia from 1989 through to 2018. This shows a consistent increase in incidence over this time.

The increase is particularly evident for males compared with females where there has been very little change in the incidence since 1999.

NEW CASES OF TREATED ESKD, BY SEX, 1989 TO 2018



Source: Chronic Kidney Disease report, Australian Institute of Health and Welfare, updated 15 July 2020.

Appendix 4

KEY STRATEGIES AND PLANS

The *WACHS Kidney Health Strategy 2021–26* aligns with a number of national, state and WACHS publications that support and strengthen country health services including:

- WACHS Strategic Plan 2019-24
- Sustainable Heath Review Final Report to the WA Government 2019
- WACHS Mental Health and Wellbeing Strategy 2019–24
- WACHS Aboriginal Health Strategy 2019–24
- National Strategic Framework for Chronic Conditions 2016
- National Strategic Action Plan for Kidney Disease April 2019
- National Safety and Quality Health Service Standards - Second Edition.
- WA Health Clinical Services Framework 2014–2024
- WA Health Chronic Kidney Disease Model of Care 2008
- WACHS Renal Dialysis Plan 2010–2021
- Kidney Health For All: A report on policy options for improving Aboriginal and Torres Strait Islander Kidney Health
- Kidney Health Australia: A Model for Home Dialysis Australia 2012
- WA Telehealth Strategy and Implementation Framework 2017–2022
- WACHS Operational and Regional plans

Appendix 5

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