Department of Health

health

Renal directions

Better services and improved kidney health for Victorians

State Government Victoria

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Foreword

Kidney disease has a major personal and economic impact on the life of the individual, their family, the community; and on the health system. The growing prevalence of associated conditions such as hypertension, cardiovascular disease and diabetes are placing an increasing burden on those affected and on the system as a whole.

Management of end stage kidney disease by public hospitals costs the Victorian public health system over $165 million each year. Without targeted action to prevent disease and promote health, to detect and intervene earlier, to avoid or limit disease progression and to optimise choice and independent treatment options, these costs at an individual and system level will become unsustainable.

Together we are responding to these challenges. The Victorian Government is demonstrating its commitment through investment in *Healthy Together Victoria,* a comprehensive approach to illness prevention; and is supporting good health through targeted interventions and support for cultural change. Such health promotion approaches form the foundation of a strong platform to change individual behaviour and contribute to reduced incidence and impact of renal disease.

Victoria has been active in increasing the number of kidney transplants, with approximately 270 transplants (public and private) being performed in 2011–12. Transplants have grown by approximately 100 in the past five years, through additional funding commitments for organ retrieval and transplantation services. The Victorian State Budget 2013–14 committed a further $20.8 million over four years for transplantation services, building on the $21 million committed over four years in 2012–13, and the additional $12.4 million over four years allocated in 2011–12. As kidneys represent over 65 per cent of all organs transplanted, this demonstrates a strong commitment to improving options for people, and is increasing access to donation from both live and deceased donors.

Improvements are also being made in alternative treatment options such as dialysis and supportive care, where home care options for individuals are being increased and action taken to ensure care is consistent and based on evidence of best practice, with people well supported to make informed choices.

Renal directions: Better services and improved kidney health for Victorians (Renal directions) represents a whole of system approach, outlining how together we will build on our current efforts to strengthen services for people, and reform and improve the system to deliver effective and efficient healthcare into the future.

The Victorian Renal Health Clinical Network (RHCN) is currently promoting and taking action on many of the strategies and service improvements outlined in *Renal directions*. As part of their important leadership role, the RHCN has already commenced work on clinical pathways, development of key performance indicators and an innovative project with Medicare Locals and others to improve links with primary care for early detection and intervention.

In addition, the contribution of health professionals, patients and their families, Kidney Health Australia and other groups has been invaluable to the development of these directions. I would like to thank all those who took the time to participate in consultation forums and provide input through the development process.

I am pleased to present *Renal directions* to guide service and system development into the future and deliver improved services and outcomes for Victorians. I look forward to working with all partners to achieve the vision of improved kidney health, better renal services and more person-centred care for all Victorians.

The Hon. David Davis MP
Minister for Health

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Executive summary

Renal directions: Better services and improved kidney health for Victorians (Renal directions) applies the objectives and priorities of the Victorian Government to the specific improvement of services for people both at risk of or currently experiencing chronic kidney disease (CKD). It commits to the development of services that empower and support people to maintain their health and to make informed choices about the most appropriate healthcare for their needs. It also describes how renal services will be further supported to work together to deliver healthcare along the full continuum.

Consultation with health services, consumers and the broader community has been important to the development of these directions and has ensured they are responsive to the needs of Victorians for today and the future.

The document aims to improve provision of renal services and to make sure the renal system remains sustainable. The longer-term goal is to reduce the incidence of and mortality from CKD in Victoria. While this may take many years to achieve, this document establishes ways in which the government, in partnership with health services, primary care providers, the Victorian Renal Health Clinical Network (RHCN), and the broader health community can work towards this goal over the coming years.

The directions begin with promotion of good health and prevention of disease. Early intervention reduces the impact and progression of disease, so this must be improved. For those facing deteriorating kidney function, education and support needs to be comprehensive and consistent to support informed decision making.

All effective management options need to be recognised and supported where appropriate, which means improving renal transplantation services and facilitating the provision of supportive or conservative care. For those requiring dialysis, longer therapy time, such as can be provided at home or through nocturnal services, provides improved patient outcomes, and so is the optimal first-line management.

The system must encourage innovation and partnerships to respond to patient needs and place the patient at the centre of care provision. It must provide care based on evidence of what is most effective and support improved patient outcomes. To reflect changing models of care and disease profile, renal services need to shift as much as possible from primarily hospital-based services to community-based services.

Vision

Victorians experience improved kidney health, better renal services and more person-centred care.

Strategic directions

In order to respond to drivers of change for individuals, health services and the health system, four strategic directions have been identified. The overall structure of the directions, including target groups and priority settings, is provided in Figure 1.

Direction 1: Promote healthy living and reduce renal risk factors

With the strong clinical overlap between CKD, cardiovascular disease and diabetes, health promotion and prevention strategies are best developed collaboratively to target the common risk factors for all.

Community education and promotion strategies will be strengthened to raise awareness and improve health literacy throughout the community. Strategies will also be developed to reduce risks, and increase information to people with very early signs of disease to avoid progression.

Direction 2: Improve early detection and management of kidney disease

Primary care practitioners are being supported to take an active role in screening of individuals at high risk of CKD, with strategies to make this as automated and simple as possible. This builds capacity in primary care to improve evidence-based practice and enable early signs of disease to be monitored and managed.

This work supports better linkages between primary care and health services and timely referral to specialist nephrology care when required.

Direction 3: Improve services for people with chronic kidney disease

Through the work of the RHCN and other key stakeholders, services for people diagnosed with CKD and particularly end-stage kidney disease (ESKD) will continue to improve. All disease management options, including transplantation, dialysis and supportive care are being enhanced, with the system reorientated to preference transplant and home-based therapies for those requiring renal replacement therapy.

Priorities relate to:

- improving health literacy through provision of patient information and education
- support for patient independence with home the first option for dialysis
- improved coordination of high-quality care through development of evidence-based patient pathways for:
  - chronic kidney disease
  - kidney transplantation
  - dialysis
  - supportive care.

Direction 4: Strengthen and sustain renal services

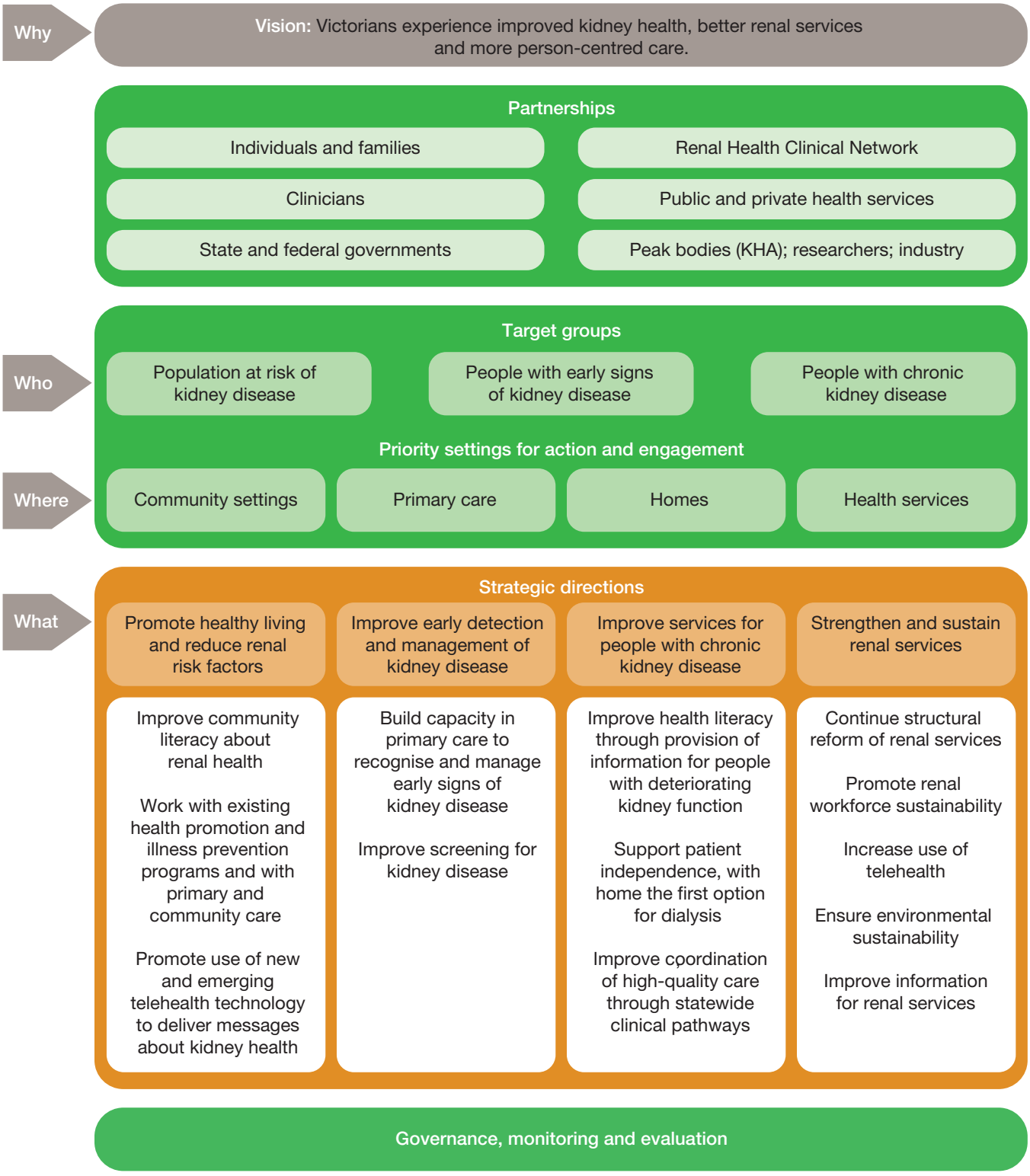
Renal services will continue to evolve to improve quality service provision and increase flexibility and sustainability in the face of increasing demand.

Priorities relate to:

- implementing structural reform of renal services by defining service roles based on capability
- promoting renal workforce sustainability
- increasing the use of innovative service models, including telehealth
- improving environmental sustainability through the effective use of resources and by reducing waste
- improving renal service information to monitor both patient outcomes and service efficiency.

Taking a whole-of-system approach, the strategic directions will guide an effective and sustainable approach to renal service provision. Achievement of the vision will be dependent on the continued leadership, collaboration and partnership of government, the RHCN, health providers, clinicians and consumers.

Figure 1: *Renal directions* framework



Introduction

Chronic kidney disease is one of a range of chronic conditions increasing in prevalence across the country. Factors contributing to this increase include population growth, an ageing population and increase in comorbid conditions. As with other chronic conditions, CKD can be caused by lifestyle or behavioural factors such as high blood pressure, smoking, excess weight and physical inactivity. The symptoms and risk factors for CKD can often go unnoticed until permanent kidney damage has occurred.

Actions to decrease the prevalence and influence of chronic disease in the Victorian community are outlined in the *Victorian Health Priorities Framework 2012–22: Metropolitan Health Plan*,[1] the *Rural and Regional Health Plan 2012*[2] and the *Victorian Public Health and Wellbeing Plan 2011–15.*[3] These documents provide the context within which health planning will occur in Victoria over the next decade. They outline the government's vision that by 2022 the Victorian health system will be high performing, people-centred and knowledge-focused.

The objectives and priorities identified in these frameworks are applied in *Renal directions* to improve services for people both at risk of or currently experiencing chronic kidney disease. *Renal directions* aims to:

- improve the kidney health of all Victorians
- empower people with CKD to better manage their ongoing healthcare needs
- improve patient outcomes and enhance patient experiences by strengthening the healthcare system to support informed choices
- ensure timely local access to best practice renal services along the full care continuum.

Kidney disease can also present as an acute condition, but this is usually managed as a medical emergency within the acute health system, so is not the focus of this document.

Reducing the prevalence of kidney disease will improve the health and wellbeing of a significant number of Victorians. It will also reduce growing demand on the health system. To achieve these goals healthcare providers and government will need to work together with the community to embrace innovation and adapt to new models of renal service provision. The aim is to develop a system that is coordinated, responsive, high quality and sustainable.

Renal directions has been developed with input from the RHCN and consultation with health services, clinicians, consumers, peak bodies and other stakeholders. This process was informed by a discussion paper which used national and international policy perspectives to contextualise the performance of the Victorian health system.

Analysis of relevant Victorian renal activity data under the current service configuration highlights both existing demand for renal services and the forecast impact of change drivers on future service provision. Summary data included in Appendix 1 updates data from the discussion paper.

Six stakeholder and consumer forums and many written responses to the strategic directions proposed in the discussion paper provided valuable advice informing this final document.

1 Department of Health 2011, *Victorian Health Priorities Framework 2012–22: Metropolitan Health Plan*, State Government of Victoria, Melbourne.

2 Department of Health 2011, *Victorian Health Priorities Framework 2012–22: Rural and Regional Health Plan*, State Government of Victoria, Melbourne.

3 Department of Health 2011, *Victorian Public Health and Wellbeing Plan 2011–15*, State Government of Victoria, Melbourne.

Background

Chronic kidney disease in Australia

Source: Kidney Health Australia 2012, *Fast facts on CKD in Australia*[4]

CKD is a significant and growing public health problem, responsible for substantial burden of illness and premature mortality. In Australia:

- one in three adults are at increased risk of developing CKD
- one in nine adults have at least one clinical sign of existing CKD
- a person can lose up to 90 per cent of their kidney function before experiencing any symptoms
- approximately 1.7 million Australians may be affected by early-stage kidney disease and do not know it
- 11.3 per cent of all deaths in Australia are due to, or associated with, kidney failure
- every day about six Australians commence expensive dialysis or transplantation to stay alive
- about 50 per cent of all organs transplanted from deceased donors are kidneys
- most people with CKD will die from cardiovascular causes before requiring dialysis or transplantation
- Aboriginal and Torres Strait Islanders experience excessive death and disability due to CKD.

Adult Australians are at risk of CKD if they:

- have high blood pressure (hypertension)
- have diabetes
- smoke cigarettes
- are obese (BMI 30 or above)
- have a family history of chronic kidney disease
- are over 50 years of age
- are of Aboriginal and/or Torres Strait Islander descent.

The greater prevalence of CKD in some ATSI communities is thought to be due to the high incidence of risk factors including diabetes, high blood pressure and smoking, in addition to increased levels of inadequate nutrition, alcohol abuse, streptococcal throat and skin infection and poor living conditions.

How many people have CKD?

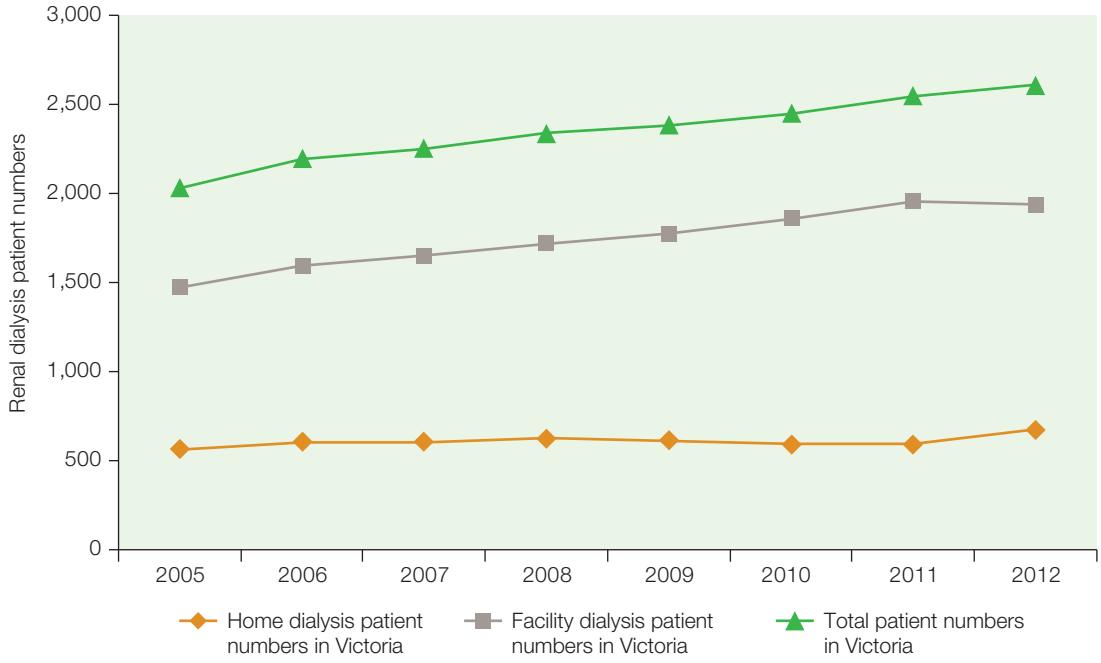
- Approximately 1.7 million Australians (one in nine) over the age of 25 have at least one clinical sign of existing CKD, such as reduced kidney function, the presence of proteinuria (protein in the urine) or haematuria (blood in the urine).
- The incidence of kidney failure is considerably greater in Aboriginal and Torres Strait Islander people compared with non-Aboriginal and Torres Strait Islander people.
- The overall death rates from CKD are up to ten times higher in Aboriginal and Torres Strait Islander communities compared to the rest of the Australian population.

4 http://www.kidney.org.au/Kidneydisease/FastFactsonCKD/tabid/589/Default.aspx

Chronic kidney disease activity in Victoria

In 2012 approximately 2,600 people with ESKD in Victoria were being managed with dialysis, with almost 26 per cent of these dialysing independently at home.

Figure 2: Dialysis activity – facility and home dialysis



Source: Victorian Renal Dialysis Registry, December 2012

In addition to those on dialysis, in 2010 there were 2,180 people living with a functioning kidney transplant. The ANZDATA for 2011 and 2012 is not yet available.

The approximately 1,930 patients dialysing in health services in 2011–12 accounted for 285,345 public hospital separations and 36,574 private hospital separations. This activity represents four per cent of all private hospital separations, but a significant 18 per cent of all public hospital separations, or almost one in every five separations.

Chronic kidney disease progression

Kidney failure can be either acute or chronic. Acute kidney injury (AKI) occurs suddenly and is often reversible. CKD is an irreversible, progressive disease that causes kidney function to deteriorate, often over many years.

The disease has five recognised stages, defined by the estimated renal function of glomerular filtration rate (GFR). Stage 1 is the mildest and usually symptom free and stage 5 is the most severe. Intervention to avoid or reduce the impact of kidney disease is possible if the intervention is targeted at stages 1, 2 or 3.

Those with stage 4 disease have reduced kidney function and require intervention and preparation for the next stage, including a pre-emptive transplant if a live donor is available. By stage 5 people will require either some form of renal replacement therapy or supportive management.

There are various causes of ESKD, with glomerulonephritis, diabetic nephropathy, and hypertension the most prevalent. CKD resulting from diabetes or hypertension is potentially preventable and future efforts should focus on strategies to prevent or postpone ESKD due to diabetes and hypertension.

Figure 3: CKD progression

Stage	Normal kidney function	**Stage 1** Kidney damage with normal or raised GFR (> 90)	**Stage 2** Kidney damage with mild reduction in GFR (60–89)	**Stage 3** Moderate reduction in GFR (30–59)	**Stage 4** Severe reduction in GFR (15–29)	**Stage 5** Established end-stage kidney disease (GFR < 15)
Intervention and management	Health promotion and risk reduction					
			Early detection and management			
					Pre-dialysis education	
					Preparation for transplant Pre-emptive transplantation	Transplantation Dialysis Supportive care

At each stage patient empowerment and choice is important, as is care planning and advance care planning for ongoing management. Choices can be made at any time in the pathway of care about next steps and appropriate levels of care, both present and future.

Current service delivery model

Renal services in Victoria have been provided through a hub and satellite model for many years. Within this model, specialist public hospitals provide a range of more complex clinical care and tertiary-level support linked with a network of satellite units delivering maintenance dialysis. Hub level services have supported satellite units across Victoria; managing the purchasing and supply of dialysis consumables and equipment, and playing a major role in education, training and research.

All specialist services provide pre- and post-transplant care, however six services actually perform kidney transplantation surgery.

Table 1: Victorian public health services providing renal specialist services

Specialist services providing kidney transplantation	Specialist services not providing kidney transplantation
Alfred Hospital	Barwon Health, Geelong
Austin and Repatriation Medical Centre	Eastern Health
Monash Health	Western Health
The Royal Melbourne Hospital	Bendigo Health
The Royal Children's Hospital	Northern Health – from 1 July 2013
St Vincent's Hospital	

There are 70 public local dialysis services (satellites) responsible for providing routine dialysis services.

Haemodialysis is also provided in six private units, which accounted for up to 11 per cent of total activity in 2011–12. Private units are not administratively linked to public specialist services.

The relationships between specialist renal services and local providers are largely historic, lack a natural geographic focus and vary significantly in number and location. This can result in a system that is less efficient and area-focused than it could be. Over recent years health services, particularly in outer metropolitan and some regional areas, have been developing their capability to provide a greater range and complexity of specialist renal services to their local communities.

The current service system is mapped in Appendix 2.

Policy context

Victorian Health Priorities Framework 2012–22

The *Victorian Health Priorities Framework 2012–22* outlines a clear and coordinated agenda for the future of the Victorian health system. The framework articulates the key outcomes, principles and priorities for the health system for the next decade. It provides details for delivering an innovative, informed and effective system that is responsive to people's needs and focused on improving health outcomes.

The framework acknowledges that there is a case for significant improvements in the current health system to ensure services become better coordinated, more efficient, and more rigorously informed and informative. This is being supported through the development of projects and tools such as area-based planning, clear role definitions and service capability frameworks.

Victorian Public Health and Wellbeing Plan 2011–15

The *Victorian Public Health and Wellbeing Plan 2011–15* aims to improve the health and wellbeing of all Victorians by engaging communities in prevention, and by strengthening systems for health protection, health promotion, and preventive healthcare across all sectors and levels of government. The plan identifies the health and wellbeing needs of Victorians and establishes objectives and policy priorities for the promotion, protection and delivery of public health in Victoria.

The plan has five platforms:

- strengthening the prevention system through governance and leadership, data, financing and resource allocation, partnerships and workforce development
- priority settings for action in and engagement with local communities, workplaces, education settings and health services
- continuing to protect the health of Victorians through interventions including communication, disease prevention and control and environmental health
- keeping people well through interventions such as healthy eating, physical activity, tobacco control and injury prevention
- strengthening preventive healthcare by strengthening screening, early detection and early intervention.

The development of renal services will enable the principles of both these policy directions, particularly where they encourage a renewed focus on equitable access, improved patient outcomes across the continuum of care and best use of resources through service efficiency.

Prevention, treatment and management of CKD according to evidence-based best practice can and should be as simple as possible. This approach supports increased home dialysis and increased capacity for routine renal management in primary care.

Drivers of change

Renal services in Victoria provide high-quality care and have worked effectively over many years. With growing demand and changing demographic profiles of communities, health services (and renal services in particular) are developing and evolving to provide more coordinated, streamlined and comprehensive care.

As with other states, Victoria is dealing with competing priorities of access, demand, cost pressure and the need to manage complex specialised services.

Specific drivers of change can be summarised as those impacting the individual, health services and the health system.

Drivers impacting individuals

- Prevention of disease should be strengthened to avoid illness and improve quality of life.
- Early detection of disease can slow disease progression and improve patient care and options.
- Consistent access to all options for renal replacement therapy expands an individual's choices.
- Home-based modalities should be enhanced and promoted to improve patient outcomes and health independence.

These drivers place the patient at the centre of all care provision and empower patients to make informed decisions between all management options.

Drivers impacting health services

- Renal patient pathways and models of care need to be based on evidence of best practice, be as efficient as possible and incorporate the full continuum of renal care.
- Greater consistency between services would ensure Victorians have equal opportunities to access evidence-based treatment.
- The efficient use of all specialist infrastructure should be maximised.

Drivers impacting the system

- Services must be able to respond efficiently and effectively to growing demand for renal services.
- A more distributed model of care would improve access to specialist services.
- Access to all care options needs to be coordinated and efficient.
- Care provided should be based on evidence of what is most effective in improving patient outcomes.

Understanding how these drivers work together provides an opportunity to review models of care and service roles and relationships. This allows the development of a coordinated system focused on evidence-based care and improved patient outcomes.

Strategic directions

Renal directions has four strategic directions for service improvement. These directions recognise that to meet current challenges, the health system can no longer simply rely on the historic response of increasing the provision of dialysis within health services. Instead, a stronger emphasis must be placed on disease prevention, early detection and adequate treatment of CKD before it progresses to kidney failure.

These directions have drawn on knowledge and evidence from a range of sources and have been refined through a consultation process. The directions will drive change over the next five years, with the full vision of renal service development achieved by 2022.

Within each direction are a number of priorities and opportunities to progress. These are specific ways the government, in partnership with the health sector and community, can improve renal health, improve patient experiences and support renal health services.

Directions	Priorities
1. Promote healthy living and reduce renal risk factors	Improve community literacy about renal health Work collaboratively with existing health-promotion and illness-prevention programs and with primary and community care to strengthen renal health messages within existing programs Promote use of new and emerging telehealth technology to deliver messages about kidney health
2. Improve early detection and management of kidney disease	Build capacity in primary care to recognise and manage early signs of kidney disease Improve screening for kidney disease
3. Improve services for people with CKD	Improve health literacy through provision of consistent and comprehensive information for people with deteriorating kidney function Support patient independence, with home the first option for dialysis Improve coordination of high-quality care through statewide clinical pathways
4. Strengthen and sustain renal services	Continue structural reform of renal services Promote renal workforce sustainability through flexible models of care and innovative training and development opportunities Increase use of telehealth Ensure environmental sustainability of dialysis services Improve information for renal services

Direction 1: Promote healthy living and reduce renal risk factors

Priorities

- Improve community literacy about renal health
- Work collaboratively with existing health-promotion and illness-prevention programs and with primary and community care to strengthen renal health messages within existing programs
- Promote use of new and emerging telehealth technology to deliver messages about kidney health

Chronic diseases are influenced by behaviour and lifestyle factors. This means there are opportunities to prevent the development of chronic diseases by encouraging and supporting individuals to modify their lifestyle and make healthier choices that protect their health.

The Victorian health monitor report from 2012[5] shows the prevalence of impaired estimated glomerular filtration was 3.5 per cent among adults aged 18–75 in 2009–10. Using albuminuria as an indicator for CKD, the prevalence was 6.4 per cent, while 9.1 per cent of Victorians aged 18–75 years had either an impaired estimated glomerular filtration rate or albuminuria. Applying this prevalence rate to the estimated 18–75 year-old population of Victoria in 2011 produces an estimate of 362,000 adults who have some early indicator of renal disease.

> While it has often been argued that today's healthcare system is threatened by the ageing of the population, I believe it is threatened more by a failure to move 'upstream' to address the factors and conditions that can prevent disease and improve health. Health promotion activities have a significant potential to impact positively on wellbeing and quality of life.
>
> Dr Robert McMurtry, former Assistant Deputy Minister of the Population and Public Health Branch, Health Canada

With the strong clinical overlap between diabetes, cardiovascular disease and CKD, health promotion and prevention strategies are best developed collaboratively to target the common risk factors for all. The *Victorian health monitor* also shows the prevalence of diabetes in 2009–10 in Victoria was 4.6 per cent, with a further 4.3 per cent of Victorians at increased risk of developing type 2 diabetes. It has been estimated that approximately 750,000 Victorians aged 18 years or over (estimated from self-reported health surveys) have signs of cardiovascular disease, the most common condition being high blood pressure.[6]

A key prevention platform is the Life! Diabetes and Cardiovascular Disease Prevention Program.[7] The Victorian Government has committed $22.2 million over four years for this program. It is targeted to Victorians 50 years and over who are at high risk of developing type 2 diabetes, and it aims to give them the awareness, skills and motivation to adopt a healthier lifestyle through simple and effective

5 Department of Health 2012, *The Victorian health monitor*, State Government of Victoria, Melbourne.

6 National Health Priority Areas in Victoria: http://www.health.vic.gov.au/nhpa/card-back.htm

7 http://www.diabeteslife.org.au/

changes. The program is provided by Diabetes Australia – Vic.[8] Program tools include locally delivered group courses, telephone health coaching, social marketing and education campaigns.

The Victorian Prevention System[9] is being developed to build on the best available evidence, current strengths in preventive health, and a strong partnership approach to promote healthy lifestyles and improve the environments in which people live and work. Initiatives such as Healthy Together Victoria[10] target poor nutrition and physical inactivity.

Other Victorian Government initiatives have targeted alcohol misuse and smoking as underlying causes of chronic disease. *Reducing the alcohol and drug toll: Victoria's plan 2013–17*[11] was released in 2012 and is the first whole-of-government strategy that aims to reduce the impact of alcohol and drug abuse in the Victorian community. While significant progress has been made with smoking cessation programs, smoking remains a leading avoidable cause of many chronic diseases. Work will continue through the anti-smoking initiatives and reforms introduced in early 2013 that regulate the sale and display of tobacco products and legislate for the reduction of environmental tobacco smoke.[12]

> Education is needed about the large number of causes of kidney disease and how some can be prevented or at least delayed through diet and exercise.
>
> At the same time ensure that the message that it could happen to you or someone else close to you is out there as only then do people become aware of what is involved in the treatment of kidney disease.
>
> Patient submission

CKD can also be a disease of socio-economic disadvantage, with low income and poor access to basic services associated with an increased risk of disease. The Aboriginal and Torres Strait Islander population is at a significantly higher risk of CKD and all chronic disease, especially circulatory disease and diabetes.[13, 14] This is particularly dependent on socio-economic status.

The Aboriginal Health Promotion and Chronic Care (AHPACC)[15] partnership initiative supports Aboriginal community controlled health organisations to work in partnerships to increase access to comprehensive primary healthcare and improve health outcomes. There are currently 11 AHPACC partnership sites across Victoria.

8 http://www.diabetesvic.org.au/diabetes-prevention/prevention-programs/life-program

9 http://www.health.vic.gov.au/prevention/community_level.htm

10 Department of Health 2011, *Working together towards healthier communities: joint statement of commitment to prevention,* State Government of Victoria, Melbourne: http://www.health.vic.gov.au/prevention/achieve_workforce.htm

11 Department of Health 2012, *Reducing the alcohol and drug toll: Victoria's plan 2013–17*, State Government of Victoria, Melbourne.

12 http://www.health.vic.gov.au/tobaccoreforms

13 National Health Priority Action Council 2006, *National chronic disease strategy,* Australian Government Department of Health and Ageing, Canberra.

14 Australian Institute of Health and Welfare 2011, *Chronic kidney disease in Aboriginal and Torres Strait Islander people,* cat. no. PHE 151, Australian Government, Canberra.

15 Department of Health 2011, *Aboriginal Health Promotion and Chronic Care partnership initiative: guidelines and strategic directions 2011–14,* State Government of Victoria, Melbourne: http://www.health.vic.gov.au/aboriginalhealth/programs/partnership_program

The Health Issues Centre[16] has a role in promoting consumer perspectives in the Australian health system, with a mission to improve the health outcomes for Australians, especially those who are disadvantaged. Strategies to address community health literacy are part of this role.

Health prevention and promotion is undertaken by a range of public, private and not-for-profit organisations, other stakeholders and governments. Collaborative partnerships such as the model used in Healthy Together Victoria ensure the maximum impact and benefit to the community and health system. Many proposed actions build on existing innovations and recognise the significant contribution already made to improve services for people with CKD.

Healthy Together Victoria is a significant Victorian prevention initiative, and is one of the largest preventive health efforts in Australia. It provides a comprehensive approach to chronic disease prevention and aims to improve people's health where they live, learn, work and play.

It incorporates policies and strategies to support good health across Victoria, as well as targeting high-risk communities through locally led Healthy Together Communities in Hume, Wyndham, Knox, Whittlesea, Dandenong, Cardinia, Mildura, Bendigo, Wodonga, Latrobe, Geelong and Grampians Goldfields.

This will reach approximately 1.3 million Victorians, comprising approximately 520 schools and 938 early childhood services and almost 4,500 workplaces.

Better Health Channel has developed a free iPhone and iPad app to provide anytime, anywhere access to Australia's most trusted and reliable health information. This allows users to:

- browse the full range of nutritious healthy recipes and create a customised shopping list
- access the full range of health articles on the go (including conditions and treatments, healthy living and relationships and family) and share with family and friends
- conveniently locate health services such as doctors, dentists, pharmacies and physiotherapists throughout Victoria
- create personalised health alerts and notifications for heat, UV, smog and pollen.

16 http://www.healthissuescentre.org.au

Direction 1: Promote healthy living and reduce renal risk factors

Priorities	Actions	Impacts
Improve community literacy about renal health	• Improve understanding of renal disease by promoting the inclusion of related information within existing community education, health promotion and awareness raising programs	All Victorians can access consistent information about the risks of kidney disease and the need to protect kidney health
Work collaboratively with existing health-promotion and illness-prevention programs and with primary and community care to strengthen renal health messages within existing programs	• Ensure chronic kidney disease is appropriately addressed in all emerging chronic disease initiatives and programs, particularly those related to diabetes or cardiovascular disease • Collaborate with relevant stakeholder groups such as Kidney Health Australia, Diabetes Australia – Vic and the National Stroke and Heart Foundations • Work with the Health Issues Centre to support consumer engagement and participation in health care provision • Work with AHPACC to ensure messages are culturally sensitive and relevant to the ATSI population • Ensure educational material recognises the needs of culturally and linguistically diverse populations across Victoria	People receive information appropriate to their needs Health literacy is promoted and people are supported to better manage their health People use health information to make more informed decisions
Promote use of new and emerging telehealth technology to deliver messages about kidney health	• Work with Better Health Channel and smartphone applications	People can access information in ways they are familiar with, including internet-based technologies

Direction 2: Improve early detection and management of kidney disease

Priorities

- Build capacity in primary care to recognise and manage early signs of kidney disease
- Improve screening for kidney disease

As more of the population live for longer with chronic disease, the health system needs to accommodate more options and support for ongoing health management. To be effective, chronic disease management needs to engage with people as active participants in their own healthcare, as they may need support to make behavioural changes and comply with medical advice.

For those with early signs of disease, effective management in primary care may be all that is required. The increasingly important role of primary care in the management of chronic disease is well known and the Victorian Government will continue to work with relevant partners, including the Commonwealth and Medicare Locals.

2.1 Management of kidney disease in primary care

Primary care practitioners have an important role in the detection and management of early CKD. Supporting this role, primary care practitioners are being provided with information and tools to make the identification and management of kidney disease as simple as possible.

The Victorian Government, through the RHCN, is undertaking a collaborative pilot project involving Western Health, General Practice Victoria (GPV), Kidney Health Australia, Pen Computer Systems, The Royal Australian College of General Practice, Kidney Check Australia Taskforce and a number of Medicare Locals to build capacity in primary care to better detect, monitor and manage those at high risk of kidney disease.

The objective of the CKD early detection and management project is to provide decision support mechanisms to assist general practitioners to identify those at risk of kidney disease. The project:

- identifies patients at risk of CKD
- provides targeted prompting to notify clinicians where key data is required to enable early CKD detection
- assists with clear referral of appropriate patients to specialist care for management of CKD, using a guidelines based clinical management plan
- enables the collection of population health data related to CKD early detection and management.

The aim of this project is to improve capacity and evidence-based practice in primary health settings and enable early signs of CKD to be monitored and managed. The project will also support better linkages with health services and ensure timely referral to specialist nephrology care when required.

The CKD early detection and management project focuses on providing general practitioners with a range of tools and educational supports to improve practice and enables better monitoring and management, before the onset of ESKD.

Tools include desktop software to prompt the user of high-risk kidney disease patients, and to ensure that transition to a chronic disease management program is instituted in primary care, through the use of evidence-based guideline information.

The project has commenced with the eMAP software completed and working in general practitioner practices in the north and western areas of Melbourne. This will be expanded as the project develops.

2.2 Early detection of kidney disease

Early-stage kidney disease is often symptom free, so it can be difficult to recognise and diagnose. Kidney function also declines with age, so older people are particularly vulnerable. Better identification of risk factors and regular testing and screening of at-risk individuals is important for early detection. Effective interventions and clinical management can slow disease progression in many cases and reduce the impact of kidney disease on individuals, their support network and the health system.

Screening the entire population has not proven to be practical or cost effective, but current guidelines[17] recommend opportunistic assessment of people with recognised renal conditions such as polycystic kidney disease or single kidneys, at-risk individuals who have precursor diseases such as diabetes and cardiovascular conditions and others at risk such as the Aboriginal and Torres Strait Islander population.

17 Caring for Australasians with Renal Impairment 2010, *CARI guidelines: acceptance onto dialysis*, CARI, Sydney.

An effective primary sector includes care by general practitioners, nurse practitioners, community health and community nursing services. Primary care is often the first point of contact an individual makes with the health system and is therefore the most likely to detect early signs of disease, provided practitioners are well informed of risk factors and early signs and symptoms and realise the benefits of early detection and management to individuals and the community.

Direction 2: Improve early detection and management of kidney disease

Priorities	Actions	Impacts
Build capacity in primary care to recognise and manage early signs of kidney disease	• Support the CKD Early Detection and Management Project • Improve patient review and early detection of CKD as part of routine primary health encounters through working with GPV, Medicare Locals and other stakeholders	GPs regularly monitor biomedical markers such as for cardiovascular disease and diabetes Signs of kidney disease are recognised earlier, allowing improved management and intervention to reduce progression of disease People with early signs of kidney disease receive timely and appropriate referral to specialist care
Improve screening for kidney disease	• Promote screening for those at high risk through working with GPV and Medicare Locals • Incorporate CKD screening within existing screening programs, guidelines and tools, such as annual diabetes health checks and the Australian absolute cardiovascular disease risk calculator • Expand opportunistic screening targeting high risk individuals in community programs	The incidence of CKD and ESKD in the Victorian population is reduced with early intervention and management

Direction 3: Improve services for people with chronic kidney disease

Priorities

- Improve health literacy through provision of consistent and comprehensive information for people with deteriorating kidney function
- Support patient independence, with home the first option for dialysis
- Improve coordination of high-quality care through statewide clinical pathways

The rise of chronic disease is the predominant driver of increasing disease burden. To address this problem, health service utilisation requires a shift in approach from a curative, episodic medical model to a more supportive long-term management approach.

Well-established chronic disease models emphasise the importance of promoting health independence and self-management, with well-informed patients supported to achieve identified goals. This is particularly relevant to CKD, because people can successfully live with it for many years.

Strategies will strengthen and improve the clinical management of people with CKD, particularly ESKD. Clinical management refers to all options, including transplantation, dialysis and supportive care.

> All patients should have access to information about their condition and all possible treatments. Honestly being told the costs involved to them and the government. It should not depend on where they live and personal preferences of the health professionals in their area. No one should be disadvantaged as far as getting information; the prohibitive money issues could also be explained. Some people may then be willing to shift or travel to get the best treatment for them.
>
> Patient submission

3.1 Improve health literacy

Knowledge and information is key to people making good decisions about their health. It enables individuals to take responsibility for their health – keeping healthy, preventing illness and seeking care from the most appropriate provider when they need it. Improving health literacy supports individuals to be active participants in decision making about their own care and to assist them make appropriate decisions about the consumption of healthcare resources.[18]

As renal function deteriorates and people approach the next stage of disease management, they and their families or carers need information, education and support so they can make well-informed decisions about their care options including pre-emptive transplants, supportive care or renal replacement therapies. These choices should be made with knowledge of the health and lifestyle impact of each option.

18 Department of Health 2011, *Victorian Health Priorities Framework: Metropolitan Health Plan*, p. 33.

To address the need to provide consistent information across the state, a standardised and evidenced-based education program will be developed in accordance with existing guidelines.[19]

An Australia-wide patient survey was conducted by Kidney Health Australia in 2010. This identified limitations in education, with 64 per cent of patients not receiving information within the ideal three months or more prior to first treatment. The survey also found that almost half of the respondents felt they were not given a choice in either type or location of dialysis. This is problematic as once patients have been established in their particular type and location of dialysis it is difficult to change.

Kidney Health Australia 2011, *Consumer perspectives on dialysis: first national census,* KHA, Melbourne.

A key performance indicator has been developed by the RHCN to measure and monitor the proportion of new planned patients who have received CKD education before starting dialysis.

The target is 80 per cent of all new planned patients.

In 2012, 89.7 per cent of all new planned patients had attended a CKD education session in Victoria.

3.2 Support health independence

Health independence will be encouraged as much as possible through increased support for dialysis at home.

The benefits of home dialysis for individuals include:

- allowing people to manage their own dialysis at the time of their choosing, whether during the day or overnight, so dialysis can be more frequent or performed for longer periods of time
- improved health outcomes where longer, more frequent dialysis is able to be undertaken, particularly overnight [20, 21, 22, 23]
- maintenance of personal independence, enhanced quality of life, social and economic advantages, with increased opportunity for employment[24]
- removal of need for regular travel to dialysis centres, which is of particular value to patients where independent travel is difficult.

19 Caring for Australasians with Renal Impairment 2010, op. cit.

20 US Department of Health and Human Services 2008, *Home hemodialysis*, National Institutes of Health Publications no. 08-6232.

21 Agar JW, Hawley CM, George CR, et al. 2010, 'Home haemodialysis in Australia: is the wheel turning full circle?' *MJA*, vol. 192, no.7.

22 Silverstein F 2007, 'Nocturnal dialysis offers you better health while you sleep', American Association of Kidney Patients. Accessed 25 March 2013: http://www.aakp.org/aakp-library/Nocturnal-dialysis/

23 http://www2.niddk.nih.gov/Research/ClinicalResearch/FHN/

24 Masterson R 2008, 'The advantages and disadvantages of home hemodialysis', Hemodialysis International, vol. 12 (suppl. 1) S16–S20.

Independent home dialysis is also a cost-effective therapy for the health system. It reduces dependence on health services for life-long management of a chronic condition.

This can result in infrastructure savings as existing hospital-based dialysis services can be more effectively managed and the need for expansion potentially reduced.

Dialysis in a hospital setting can mean that people are being provided with an expensive, medically dependent care model and a level of clinical intervention not always required. Annual dialysis cost estimates per person released by KHA in 2010[25] showed that dialysis could be provided at home for a lower cost than dialysis within a hospital setting.

An increased proportion of home dialysis, either peritoneal dialysis (PD) or haemodialysis (HD), can be achieved by ensuring that, where possible, patients commencing dialysis for the first time commence with independent or home dialysis. Dialysis performed in a health facility would then be limited to those where self-management cannot be sustained.

It can be anticipated that this change in location of dialysis will reduce demand on health facilities. Where this occurs, there may be scope to increase respite for home patients, which is important to reduce patient and carer fatigue and provide additional support as required.

The focus on home dialysis has seen approximately an eight fold increase in the number of patients commencing home dialysis in the first six months of 2012–13, compared to the same period of previous years.

This is an unprecedented change in service delivery, and demonstrates that significant change in dialysis modality in Victoria is possible.

There are now approximately 680 Victorians managing their dialysis at home.

25 Cass A, Chadhan S, Gallagher M, Howard K, Jones A, McDonald S, Snelling P and White S 2010, *The economic impact of end-stage kidney disease in Australia: projections to 2020*, Kidney Health Australia, Melbourne.

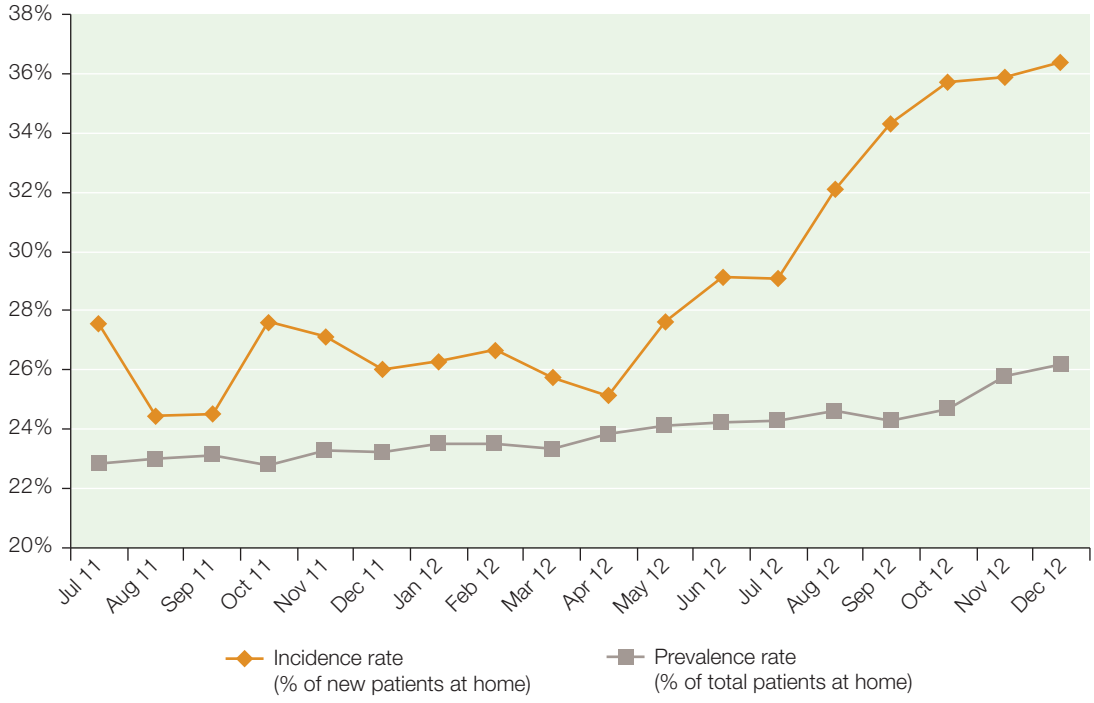
Considerable change has already been achieved, with funding of $1.8 million provided in 2012–13 to support innovative projects to increase uptake of home-based therapy. These projects are encouraging change through targeted initiatives that address one or more of the following objectives:

- building capability of the workforce to support approaches to home-based therapies
- improving training for home-based dialysis
- establishing flexible and innovative assisted models of care
- utilising new technology and e-health advances.

In December 2012, 74 per cent of patients were receiving HD in a health facility, 18 per cent managing PD at home and the remaining eight per cent managing HD at home.

Figure 4 shows the changing trend since July 2011 for both the incidence and prevalence of home dialysis, both HD and PD. The incidence rate refers to the proportion of new patients dialysing at home six months after starting dialysis. The prevalence rate is the proportion of the total dialysis population dialysing at home.

Figure 4: Home dialysis rates



Source: Victorian Renal Dialysis Registry, December 2012

Patients who are assessing their renal replacement options should consider the potential need to travel to a dialysis service three times per week. While community consultation revealed the importance of support for people travelling for dialysis, this must be balanced with the high cost burden on the health system if medical transport is used for routine dialysis.

Victoria's non-emergency patient transport (NEPT) services play a role in supporting access to health services. In recognition of this, the Victorian Government is examining the use and scope of NEPT services to determine the most effective, efficient and sustainable means of providing services to meet the needs of both patients and the health sector.

The RHCN is monitoring home dialysis rates with targets established to encourage change in service delivery patterns. For 2012–13 the target for new patients adopting home based dialysis, including both HD and PD, has been set at 35 per cent.

The target for new patients will then increase each year until 2016–17.

The impact of this target on the prevalent rate would see the 2012–13 rate of 26 per cent of all dialysis patients managed at home increase to 44.5 per cent by end of 2016–17.

3.3 Improve coordination of care

Clinical guidelines and patient pathways are tools to support better coordination and consistency in practice across the state. The Victorian Government, through the RHCN, is developing a suite of patient or clinical pathways to:

- reduce inappropriate variation in care
- support universal access and equitable patient outcomes
- improve utilisation of services.

The pathways will promote organised and efficient patient care based on high-quality evidenced-based practice.

The RHCN will regularly evaluate the pathways after implementation to maintain best practice and ensure they remain relevant.

3.3.1 CKD patient pathway

The first pathway to be developed relates to the continuum of chronic kidney disease from diagnosis to renal replacement therapy to supportive and end-of-life care. A patient pathway has been defined for management of CKD in primary care[26] but there remains need for a coordinated and consistent CKD patient pathway across all sectors, providing a comprehensive approach to linkages and referrals between all components of care.

An agreed CKD patient pathway will support standardised patient information to inform people approaching renal replacement therapy of their management options, and assist them to participate in decisions about their own care. Ideally, variation in care will be based on individual patient need rather than service or clinician needs.

Patients with chronic kidney disease should move through a defined continuum of care pathway. This pathway should offer a seamless and integrated coordinated model of care including assessment, education, interventions and decision making and would encourage a 'home first' approach for patient treatment. Importantly, the pathway would diverge for patients who choose not to undergo renal replacement therapy (therefore being managed conservatively), and for patients who choose to undergo RRT.

Health service submission

26 Kidney Health Australia 2007, *Chronic kidney disease (CKD) management in general practice*, KHA, Melbourne.

3.3.2 Kidney transplantation pathway

For many people with ESKD, kidney transplantation is the optimal form of treatment. Kidney transplant is one of the few organ transplant procedures that can directly influence quality and length of life for recipients, and is proven to be cost effective for the health system.[27]

In 2010 there were an estimated 2,170 people in Victoria living with a functioning transplant, which represents an increase of 32 per cent since 2005 when there were approximately 1,590 people. In 2010 this equated to 47 per cent of the ESKD population. Within the Aboriginal and Torres Strait Islander population only 10 had a functioning transplant in 2010, which equates to only 22 per cent of the total of 45 Aboriginal and Torres Strait Islander patients with ESKD. Most patients can expect to wait up to a year before transplant from a live donor and four years for a compatible organ from a deceased donor.

Table 1 identifies the six Victorian public hospitals providing kidney transplantation surgery. These hospitals performed 270 transplants in 2011–12. Figure 6 in Appendix 1 provides details of the increasing number since 2003–04. The majority of organs for transplantation come from deceased donors, but maximising opportunities for kidney donation from extended criteria donors and living donors is equally important.

In the 2013–14 budget, the Victorian Government increased funding for organ transplantation services by a further $21 million over four years to maximise all organ donation opportunities and support increased life-saving transplantation activity.

To also improve the transplantation process, the RHCN is taking a lead role in the development of common transplant pathways and education materials to reduce variation from evidence-based care and increase efficiency. Specific elements of this work will include:

- identification of enablers and barriers in the transplant pathway
- development of a common educational package that delivers consistent information and messages based on guidelines and evidence of best practice
- development of a generic consent form for Victoria.

This work will address pathways from two perspectives:

1. transplant recipient pathway
2. living donor pathway.

The RHCN is also monitoring performance through key performance indicators by measuring pre-emptive live donor transplants and timely management of patients eligible for transplantation. Accurate measurement performance against KPIs and trends in service provision will become more meaningful as more data is collected over a longer period of time.

3.3.3 Dialysis patient pathway

The major form of renal replacement therapy for those with ESKD is dialysis, which includes both PD and HD.

While kidney transplantation may be considered the optimal treatment option, many people have other medical conditions that may exclude them from this option. People can spend many years managing their renal health with dialysis or a combination of transplantation and dialysis.

27 Kidney Health Australia 2010, *The economic impact of end-stage kidney disease in Australia: Projections to 2020*, KHA, Sydney.

Dialysis is an effective treatment and models of care and equipment continue to evolve based on clinical evidence of best practice. This directions document is not concerned with the dialysis process itself, but the way in which patient care is managed and the level of clinical intervention required.

To support improved provision of dialysis a comprehensive patient pathway will be agreed. This will include recognition of all types of dialysis and all settings, including independent dialysis at home. It will be designed to improve patient decision making and support consistent management of this treatment option across the state.

3.3.4 Supportive care pathway

Despite comorbidities and complications of dialysis care, many people with ESKD can expect to obtain a good quality of life and gain extra years of life with kidney transplantation, dialysis or both. However, this is not the case for everyone.

Many patients presenting with ESKD have complex illnesses and require a range of healthcare professionals to manage the primary disease, associated medical complications, comorbidities, psychosocial, spiritual and care-choice issues.[28]

> Supportive care helps the patient and their family to cope with their condition and treatment of it – from pre-diagnosis, through the process of diagnosis and treatment, to cure, continuing illness or death and into bereavement. It helps the patient to maximise the benefits of treatment and to live as well as possible with the effects of the disease. It is given equal priority alongside diagnosis and treatment.
>
> The National Council for Palliative Care, United Kingdom

28 Brown E, Chambers EJ, Eggeling C 2007, *End of life care in nephrology: from advanced disease to bereavement*. Oxford University Press, Oxford.

These patients, particularly those who are also frail and elderly, have little to gain from dialysis in terms of survival or quality of life.[29, 30, 31] For these patients dialysis may be a futile and burdensome treatment that is not in their best interests. In such cases, conservative or supportive care is the more appropriate pathway. In all cases the decision to choose a treatment option will be agreed with patients, families and carers, in conjunction with managing clinicians.

Renal supportive care is a no-dialysis option but not a no-treatment option. It supports symptom management to improve the quality of life for patients and their families by providing relief from symptoms, pain and stress, rather than providing renal replacement therapy. Patients receiving supportive management can live for a substantial length of time, and in some cases achieve similar numbers of hospital-free days to patients who choose dialysis.

The RHCN has commenced work on a renal conservative care pathway to improve consistency of service provision across the state and address service gaps. This will recognise the advance care planning work that Respecting Patient Choices[32] has already developed. The multidisciplinary pathway will create opportunities for shared care by linking renal patients with the broader palliative care system, and with primary care.

At the same time, KHA is leading a national education project which includes a renal conservative care module. The RHCN is working with KHA on this module.

Dialysis is a demanding and arduous treatment, particularly in elderly people. Consequently, when helping patients to make decisions about treatment, the compromise between potential for life-saving therapy and the impact on quality of life needs to be made as explicit as possible.

Meeting patients' holistic needs requires a shift from the traditional disease-focused approach towards a more patient-centred one in which quality of life takes precedence over biochemical targets and other medically driven outcomes.

Helen Noble and Rachel Lewis 2008, United Kingdom

29 Murtagh FEM et al. 2007, 'Dialysis or not? A comparative survival study of patients over 75 years with chronic kidney disease stage 5', *Nephrology Dialysis Transplant*, vol. 22, pp. 1955–62.

30 Dasgupta I, Rayner HC 2007, 'Dialysis versus conservative management of elderly patients with advanced chronic kidney disease', *Nature Clinical Practice Nephrology*, vol. 3, pp. 480–81.

31 Carson et al. 2009, 'Is maximum conservative management an equivalent treatment option to dialysis for elderly patients with significant comorbid disease?' *Clinical Journal of American Society of Nephrology*, vol. 4, pp. 1611–19.

32 http://www.respectingpatientchoices.org.au/

Direction 3: Improve services for people with chronic kidney disease

Priorities	Actions	Impacts
Improve health literacy through provision of consistent and comprehensive information for people with deteriorating kidney function	• Include pre-dialysis education and ongoing education on management options of: kidney transplantation; dialysis modality (peritoneal or haemodialysis); independent or assisted models; and supportive care • Develop education resources and materials for transplant recipients, their families and potential donors • Produce information packages in a range of languages and formats for culturally and linguistically diverse populations • Make use of available technologies to provide alternative models of education and peer support. This may include online learning packages, the Better Health Channel, smartphone applications and online forums • Support development of local training options for patients in outer metropolitan and rural areas	All Victorians with deteriorating kidney function are provided with consistent and comprehensive information about management options to assist decision making The information considers physical and psychosocial health, including mental, emotional and social health issues to assist people confront the lifestyle changes ahead More people from an Aboriginal or CALD background can access culturally appropriate information about renal disease and care
Support health independence, with home the first option for dialysis	• Encourage service models that increase independence and support home dialysis • Continue funding reform of dialysis in line with activity-based funding • Explore alternative options for independent dialysis, including community facilities as an alternative to the home environment • Improve patient training by supporting provision in local or home-based settings	Dialysis in the home is the option of choice for all people who require dialysis Facility dialysis is a back-up option for those who cannot manage dialysis in their own home or who need temporary respite services Respite options are increased with availability of dialysis chairs in health services
Improve coordination of high-quality care through statewide clinical pathways	• Agree and disseminate models of care and clinical pathways based on evidence of best practice and inclusive of appropriate referral and management practices for: – all people with CKD, to commence with early detection through to end-stage renal disease – kidney transplantation, with statewide clinical pathways for both transplant recipients and live donors – dialysis, including both peritoneal dialysis and haemodialysis – supportive care, including integrated care and referral pathways to palliative care and related services	Renal service delivery is more consistent and evidence based Patient care is streamlined with clear pathways to improve efficiency and enable greater consistency in care The role of primary care is recognised in the provision of coordinated renal care Support for patients, families and carers is improved Education resources and tools for renal clinicians, patients and carers are consistent with pathways Renal supportive care incorporates the principles and components of general palliative care, including advanced care planning, end-of-life care and management of bereavement

Direction 4: Strengthen and sustain renal services

Priorities

- Continue structural reform of renal services
- Promote renal workforce sustainability through flexible models of care and innovative training and development opportunities
- Increase use of telehealth
- Ensure environmental sustainability of dialysis services
- Improve information for renal services

Continuing renal system development will increase flexibility and support sustainability in the face of increasing demand. The aim is to achieve an appropriate balance between the provision of specialist services for complex care and provision of services as close to home as possible.

4.1 Continue structural reform of renal services

Victoria's service model has historically had specialist expertise concentrated largely in metropolitan Melbourne, which has contributed to the development of centres of excellence in renal care within these services.

The growth in the population in outer metropolitan and regional centres is driving increased demand for more local access to specialist care. Increasing the capability of local services as appropriate and strengthening more geographically based relationships between renal services will improve and streamline care pathways and service access for patients.

Appendix 2 has maps of renal services, showing current links between specialist services and dialysis units.

The Gippsland region has 54 chairs provided in eight health services that have relationships with four different specialist service providers. This can mean a patient in Bairnsdale for example, who is unable to access chairs locally may have to travel considerable distances to access a service from their own specialist provider, despite alternative services being provided closer, but by another specialist service. This potentially leads to system overlaps and inefficiencies.

To facilitate more locally based and coordinated service provision, a renal service capability framework will be developed. Service capability frameworks describe levels of care and complexity of services across the health system, including the minimum infrastructure, workforce and services required to safely support high-quality clinical services.

A draft framework is proposed in Appendix 3 and this will be further developed in collaboration with health services and other stakeholders.

Development of a service capability framework will provide the basis to review the provision of renal services at all levels, including sites performing renal transplantation surgery, to ensure efficiency and effectiveness and improve quality service provision to patients.

Over time, relationships between health services at different levels of capability will be modified to build a more geographically based system, utilising patient pathways. In addition to improved coordination of care, an integrated regional or geographical approach can also benefit the health system by increasing opportunities for efficient use of infrastructure and technical support, flexibility through joint staff appointments, shared training and other cooperative arrangements.

4.2 Promote renal workforce sustainability

A well-skilled, experienced multidisciplinary workforce is a major enabler of effective service provision. Multidisciplinary care includes health practitioners providing coordinated care along the continuum, with open communication, effective management, referral pathways and application of best practice.

In Victoria the renal specialty workforce is primarily centred in metropolitan Melbourne, with limited access in regional centres, so the need for improved access to specialist renal clinicians in outer metropolitan and regional Victoria is recognised. A system structure based on capability and integrated within geographical areas will provide opportunities to work differently.

The renal workforce needs support to work more flexibly across the continuum of care. Role redesign allows the time and expertise of specialist renal clinicians to be focused more on complex patients and coordination of care. Generalist community clinicians can take enhanced roles in supporting patients in the community, where there are strong links and collaborative practice with specialist providers.

Innovative service models have been shown to be effective in a number of health services and there is scope for further development. Examples include:

- regionally based link nurses, who work to facilitate patient referral and timely management, and support for people dialysing at home, which in turn improves the patient experience and supports independence
- nurse practitioners endorsed in renal care. These nurses take an enhanced role in routine dialysis care, enabling nephrologists to focus on more complex patients
- technician and assistant models to support a team-based approach to care delivery.

Work is still required to extend these models across the state and make sure opportunities for flexibility are maximised.

A nurse practitioner (NP) role has been developed at St Vincent's Hospital to manage routine dialysis treatment, in partnership with nephrologists. The NPs prescribe and monitor dialysis and routine medications, organise and review protocol pathology and radiology, refer (under protocol) to vascular access surgeons and regularly assess patients' cardiovascular and volume status by clinical examination. NPs review the patients both in-centre and in satellite units on a monthly basis 'fine tuning' dialysis prescription and medications, so patients are less frequently reviewed by nephrologists, who are now able to focus on complex consultant physician assessments.

With these innovative models, clinician's roles become increasingly skill based rather than organised by traditional health professional groups. To support this model, training should be multidisciplinary, based on capabilities and involve a range of service-provider types and facilities. Linkages with the tertiary education sector, universities, rural clinical schools and technical colleges are required to develop alternate models of workforce support and education with flexible training options and mentoring programs.

Development of specific skills will be supported in areas such as renal surgery, and linkages with palliative care and primary care will be improved.

Evolving models of care for renal services, such as the increase in home dialysis and supportive care will drive change in the renal workforce, so the challenge is to appropriately distribute expertise to match population service need and service capability requirements.

4.3 Increase use of telehealth

Optimising the use of appropriate technology such as telehealth supports provision of clinical care, particularly for Victorians living in rural and outer metropolitan areas. Telehealth can bring services to people rather than bringing people to the service location, so drives change in the way care is delivered. Outreach clinics allow clinicians to manage remote consultations and to support colleagues across the state.

Improved access to clinical knowledge can support people to participate in their own care and empower them to manage their own health. Telehealth in the home can support direct patient care, training and ongoing monitoring for people managing dialysis at home.

Telehealth can also overcome the constraints of distance for rural and regional clinicians by linking them to other professionals for clinical support, education and training. It provides an opportunity to access the clinical evidence base such as best practice pathways and clinical guidelines and support clinicians to build collaborative networks across geographical areas.

Two projects were funded in 2012–13 to enhance home dialysis include components of telehealth. One aims to support video communication with patients in their home, to provide education, technical and clinical support and regular monitoring. The other aims to develop a suite of online learning packages promoting home dialysis to health professionals.

4.4 Ensure environmental sustainability

The dialysis process uses a significant amount of water and energy and generates a significant amount of waste, so strategies to increase efficiency of the process are important.

Many health services already have innovative strategies to minimise resource use and maximise environmental sustainability. One example is Barwon Health, which has developed a pilot program to conserve water by establishing systems for re-use of reverse osmosis water needed for each treatment.[33, 34] Saving Water Saving Lives is a community partnership between South East Water and Southern Health to capture the clean water discarded during the dialysis process[35] and the

33 http://www.greendialysis.org/

34 Agar J, Simmonds R, Knight R, Somerville C 2009, 'Using water wisely: New, affordable and essential water conservation practices for facility and home haemodialysis', *Hemodialysis International*, vol. 13, no. 1, pp. 32–7.

35 http://www.ecovoice.com.au/eco-news/306

Smart Water Fund Project[36] has supported North West Dialysis Service to develop a framework for identifying recycling options for the reject stream from reverse osmosis. The fund will also work with Barwon Health in 2013 on an integrated water-cycle management developer guide.

There is scope for new technologies to improve efficiency, with strategies such as solar power and water recycling systems to benefit people dialysing at home. By working with providers, the most environmentally efficient systems will be encouraged.

4.5 Improve information for renal services

Health information includes both information to support local clinical decision making and information about statewide service provision, disease patterns and trends.

Clinical decision making is supported at each specialist renal service through maintenance of a unique patient database. There are multiple systems in place across the state, so opportunities exist to enhance service efficiency with a standardised approach to renal patient data, encompassing patients living with a transplant and those being managed with either dialysis or supportive care. This would contribute to a consistent and comprehensive knowledge base of renal care that would in turn support review of best practice and development of an evidence base of effective service models.

More statewide information about those presenting with CKD and their disease progression would provide invaluable data on trends in renal disease and provide opportunities to build a robust evidence base on the diseases that contribute to CKD. A Victorian register of kidney disease would complement the data available through ANZDATA to provide a comprehensive understanding of the full continuum of care for CKD, from diagnosis, to disease progression, management and death.

In both cases, this data is already available at health service level, so enhancement of reporting would focus on how consistent data can be improved and compiled without increasing the burden of reporting.

36 http://www.smartwater.com.au/knowledge-hub/water-quality/recycled-water/identifying-options-for-haemodialysis-reject-water.html

Direction 4: Strengthen and sustain renal services

Priorities	Actions	Impacts
Continue structural reform of renal services	• Develop a service capability framework for renal services • Align the provision of renal services with existing general health service roles and levels of capability • Build geographically based relationships between services at varying levels of capability	Roles of all renal services are clearly defined People have access to an appropriate level of specialist renal care as close to home as possible Regional coordination of renal services is improved as services are organised according to geographical areas
Promote renal workforce sustainability through flexible models of care and innovative training and development opportunities	• Effectively utilise or redesign roles (for example nurse practitioners) and link nurses across regional areas, in accordance with the levels of capability • Support training opportunities for: – renal surgeons in both creation of vascular access and kidney transplantation – nephrologists in simplified access methods for peritoneal dialysis – renal clinicians in the palliative care philosophy and approach to care – sharing of renal specialist knowledge with generalist and palliative care staff – primary care in early detection and management of renal disease • Support the expanded role of generalist services, including GPs, allied health, community nursing services and Aboriginal health workers • Maximise use of general physicians with an interest in nephrology • Maximise use of available workforce assistance programs such as Medical Specialist Outreach Program and locum assistance in rural and outer metropolitan areas	The renal workforce is sufficiently skilled and flexible to meet demand Clinicians have extended their clinical skills and knowledge in relation to home dialysis, supportive care and palliative care The capacity of the health, community and primary care workforce to manage the needs of people with CKD is enhanced

Priorities	Actions	Impacts
Increase use of telehealth	• Enhance use of telehealth through: – specialist outreach clinics to increase access in rural and outer metropolitan areas – expanded specialist support for clinical education and training – supporting care provision and monitoring of patients in rural and outer metropolitan areas, including supporting people dialysing at home • Use telehealth, mobile units and simulation training to avoid the need for travel and support colleagues across disciplines to train together in their own environment • Work with the Commonwealth to improve access to MBS telehealth services, particularly in outer metropolitan and rural areas	The need for patients to travel to access specialist renal care is reduced Patients dialysing at home are actively supported through technology
Ensure environmental sustainability of dialysis services	• Incorporate water and energy efficient strategies into designs for all new or redeveloped renal facilities • Consider management of energy consumption and waste generated by the dialysis process in both health services and person's homes	All dialysis services are environmentally sustainable
Improve information for renal services	• Ensure renal data collected for patient management, monitoring of key performance indicators and informed service planning is consistent across all services – Include recognition of those being managed with supportive care • Establish a register of kidney disease, to drive clinical improvement and assist planning	IT solutions are in place to support quality initiatives and connectivity Patient outcomes are measured and reviewed to improve ongoing care

The way forward

Renal directions is a summary of the key policy directions and common objectives for government, health services, peak bodies, health professionals and consumer groups working in renal care. It is not simply a document but a living strategy that will be modified and adapted as projects develop and circumstances change.

The Victorian Government is committed to increasing accountability and transparency. Managing the priorities and actions articulated, and monitoring the impacts, is important to ensure that investment by government is well directed to achieve expected outcomes.

The RHCN will play an important role in the implementation of *Renal directions*. The development and dissemination of patient pathways, supporting local implementation of evidenced-based clinical care and innovative service models outlined in Direction 3 will be a particular focus. The role of the RHCN will continue to be strengthened to ensure that all actions and initiatives implemented maintain a strong focus on improving patient care.

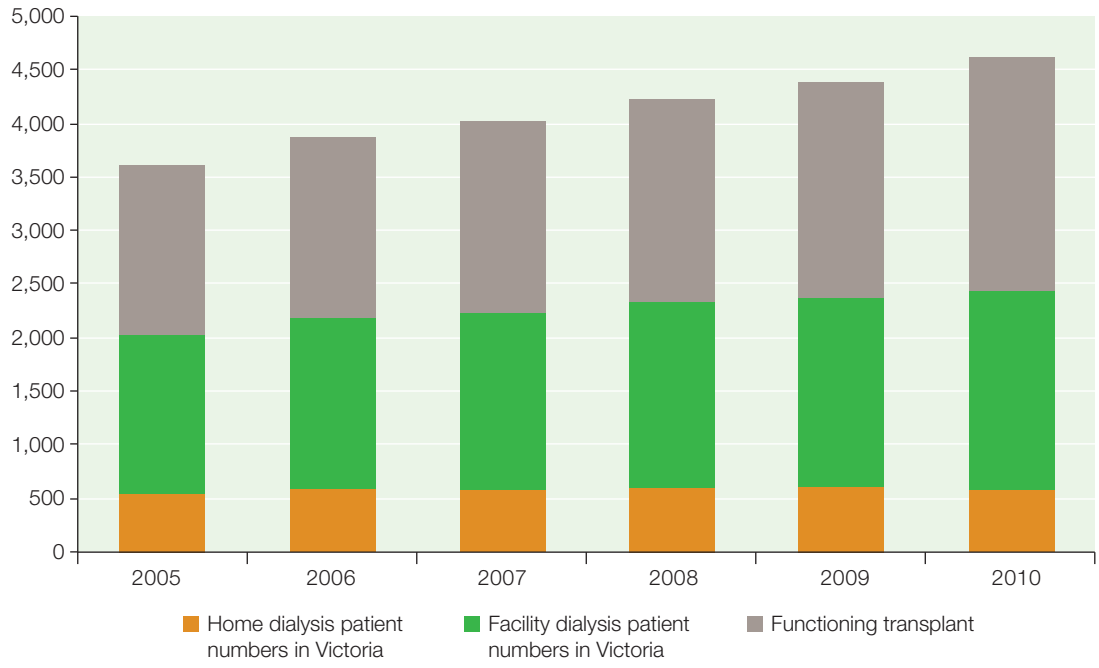
Progress towards achieving the directions and recommended actions will be regularly monitored and amended as required to make sure they remain aligned with evolving best practice, new evidence and government priorities.

Appendix 1: Background data

A detailed description of Victorian renal services and relevant activity data was provided in the discussion paper of July 2011. Additional data provided in this Appendix is to complement the data previously released.

Figure 5 shows the number of people living with CKD in Victoria each year to 2010, as recorded by ANZDATA. This shows significant increase both in the number of people living with a functioning transplant, and receiving dialysis within a health facility. The number of people dialysing at home has remained more static.

Figure 5: People with CKD



Source: 34th annual ANZDATA report 2011: data to 2010

A significant gap in the data is the number of patients with ESKD being managed conservatively by nephrologists, GPs or other medical services. These patients are being actively managed but are not included in current data collections so the quantity is unclear.

Transplants

Kidney transplants in Victoria have doubled from 136 in 2003–04 to 270 in 2011–12. Details for 2011–12 are not yet complete, but in 2010–11, 63 per cent of organs transplanted were from deceased donors.

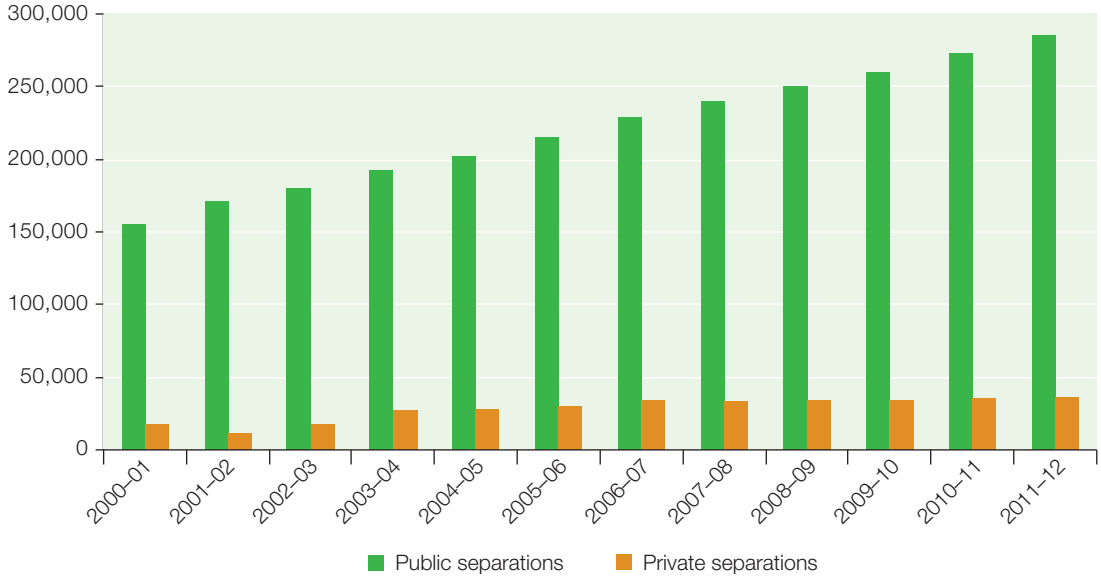
Figure 6: Victorian kidney transplants – public and private

Source: Victorian admitted episode dataset 2012 and ANZDATA 2011

Service utilisation

Separations for dialysis from health services in Victoria now account for approximately 22 per cent of all same-day separations. The total number of separations has grown from 172,697 in 2000–01 to 321,919 in 2011–12. Figure 7 shows growth in public and private dialysis separations.

Figure 7: Growth in separations for facility dialysis



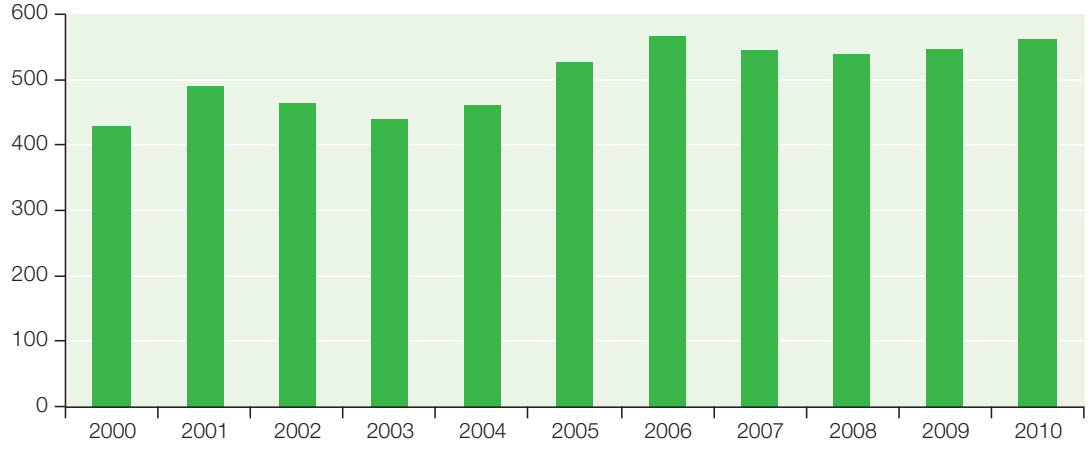
Public dialysis growth rate = 5.7% p.a.
Private dialysis growth rate = 6.7% p.a.
Acute inpatient growth rate = 3.5% p.a.

Source: Victorian admitted episode dataset

New patients

Figure 8 is based on ANZDATA to indicate new patients commencing dialysis. Data shows that 563 people commenced dialysis in Victoria in 2010, a rate of approximately 101 per million population per year. Incidence rates appear to have stabilised over the past five years. During 2010 there were also 322 deaths amongst the patients with ESKD.

Figure 8: Number of new patients commencing dialysis in Victoria

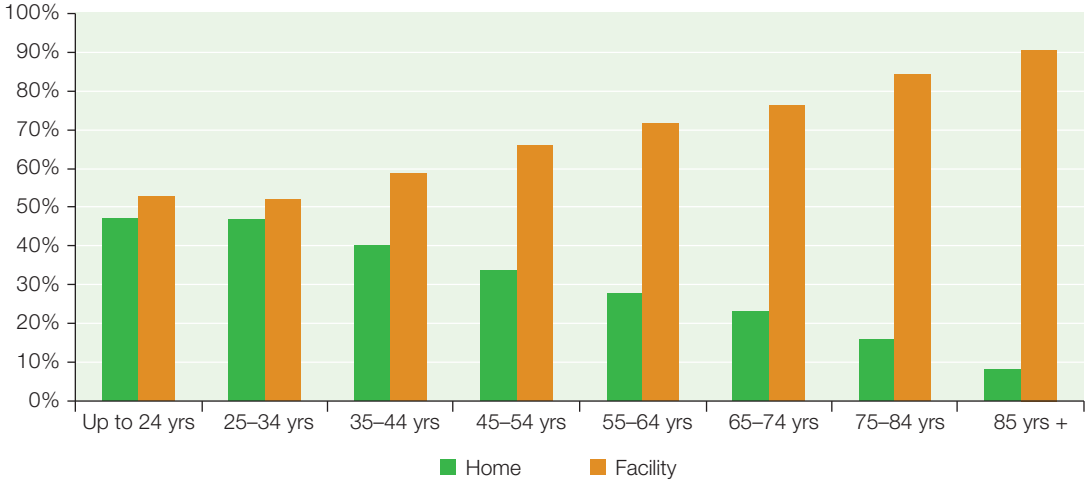


Source: 34th annual ANZDATA report 2011: data to 2010

Patient age

While CKD can affect people at any age, normal kidney function deteriorates with age so the incidence and prevalence of disease is increasing as the proportion of older people increases. Figure 9 shows the number of people on dialysis in Victoria in 2012 by age group and modality, with 54 per cent of the dialysis population aged 65 years or more. All age groups incorporate a mix of dialysis modalities. Younger age groups demonstrate a higher proportion of independent dialysis at home while older people are more likely to attend a satellite facility for dialysis.

Figure 9: Age and treatment modality of Victorian dialysis patients, 2012

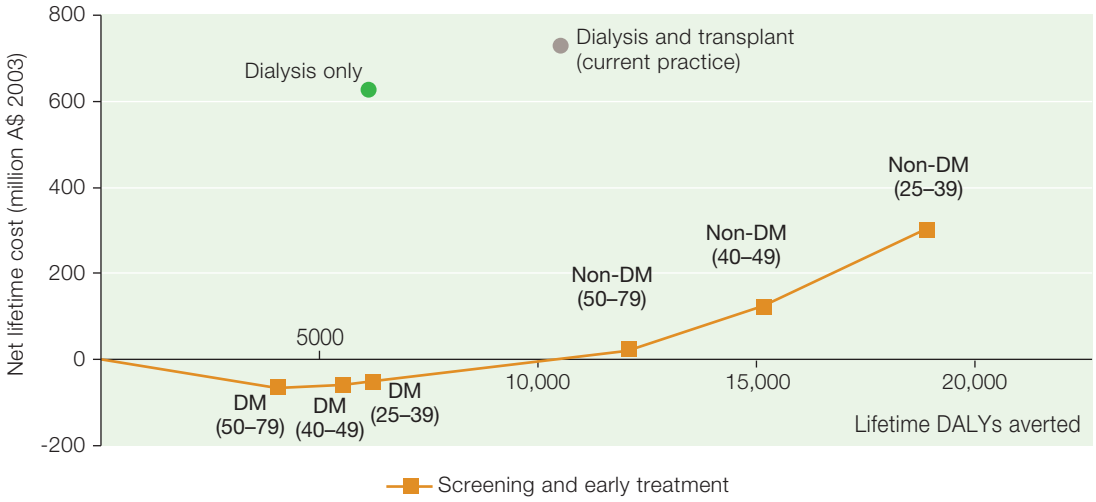


Source: Victorian Renal Dialysis Registry December 2012

Effectiveness of screening

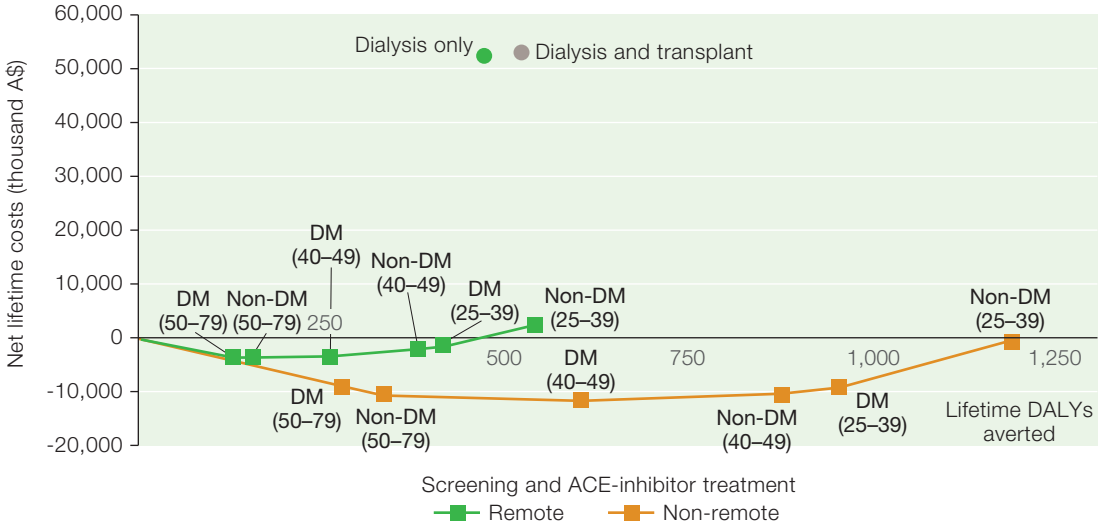
The ACE Prevention study of 2010[37] identified screening for chronic kidney disease and treatment with ACE inhibitors drugs for those identified with chronic kidney disease as very effective.

Figure 10: Intervention pathway for the chronic disease interventions, DALY, disability-adjusted life year (DM = diabetes mellitus)



Screening for chronic kidney disease in Aboriginal and Torres Strait Islander Australians from as early as 25 years with or without diabetes, in remote and non-remote areas, is a very significant preventive option. It is cost saving due to the very high costs of treatment once end-stage kidney failure has been reached. Figure 11 is also extracted from the ACE Prevention report.

Figure 11: Intervention pathway for kidney disease interventions in the Indigenous population (DM = diabetes mellitus)



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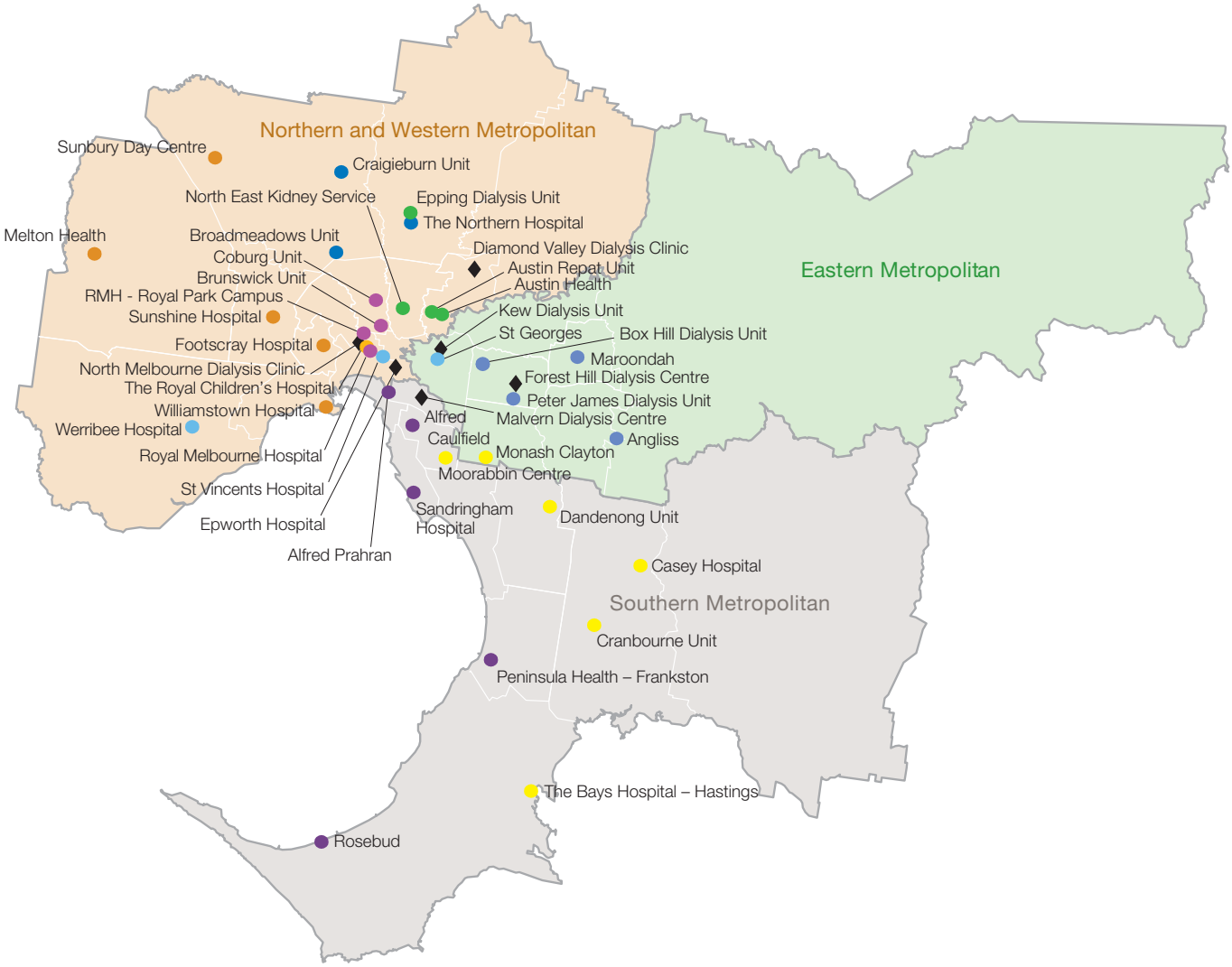
Appendix 2: Victorian renal services

Metropolitan renal dialysis units by managing specialist service



Legend

Managing specialist service

- Austin Hospital
- Barwon Health
- Bendigo Health
- Eastern Health
- Northern Health – from 1 July 2013
- Royal Children's Hospital
- Royal Melbourne
- Monash Health
- St Vincent's
- The Alfred
- Western Health
- Private dialysis sites
- Department of Health regions
- Local government areas

Regional renal dialysis units by managing specialist service

Legend

Managing specialist service

- Austin Hospital
- Barwon Health
- Bendigo Health
- Eastern Health
- Northern Health – from 1 July 2013
- Royal Children's Hospital
- Royal Melbourne
- Monash Health
- St Vincent's
- The Alfred
- Western Health
- Private dialysis sites
- Department of Health regions
- Local government areas

Appendix 3: Renal service capability framework – proposed levels

Service	Description
Level 1 Primary renal service	Ambulatory dialysis service without clinical assistance. Includes self-care in the home
Level 2 Local renal service	Dialysis provided in a designated stand alone centre within a health service environment Responsible for day-to-day supervision of maintenance dialysis including support for home-based dialysis
Level 3 Regional renal service	Dialysis provided in a designated stand alone centre within a health service environment Additional capacity to manage low to medium complexity patient services, including inpatient care when required Provides access surgery Provides education in self-care and home-based dialysis Provides supervision and support of peritoneal dialysis patients
Level 4 Specialist renal service	Provides 24-hour acute dialysis for patients admitted for complex treatment Manages patients with complex multi-system failure and acute health needs Provides support to level 1 and 2 services Provides specialist nephrology teaching and training
Level 5 Complex specialist renal service	Provides full range of renal health services including transplantation services for adult patients Provides paediatric renal services Highest level referral service Provides support to level 1 and 2 services Provides specialist nephrology teaching and training

Appendix 4: Acronyms

ANZDATA	Australia and New Zealand Dialysis and Transplant Registry
ANZSN	Australian and New Zealand Society of Nephrology
APD	ambulatory peritoneal dialysis
ATSI	Aboriginal and Torres Strait Islander
CKD	chronic kidney disease
CAPD	continuous ambulatory peritoneal dialysis
CARI	Caring for Australasians with Renal Impairment
DH	Department of Health
ESKD	End-stage kidney disease
GPV	General Practice Victoria
GRF	glomerular filtration rate
HD	Haemodialysis
KHA	Kidney Health Australia
NHMRC	National Health and Medical Research Council
PD	Peritoneal dialysis
PCP	Primary care partnership
RHCN	Renal Health Clinical Network
RRT	renal replacement therapy
SCF	Service capability framework
VHPF	Victorian Health Priorities Framework
VPTAS	Victorian patient transport assistance scheme

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