



Renal Health Services Plan 2010-2015

May 2010

Contents

Executive Summary	4
1. Introduction	6
2. Purpose	8
3. National and ACT Government Policy	9
4. Current Context	10
Access and Equity	10
Current Service Provision in the ACT	11
5. ACT / Target Population Demand for Renal Services	17
6. Objectives for the Future Provision of Renal Services	21
Primary Prevention	21
Early Detection and Secondary Prevention	21
CKD Stage 4	22
CKD Stage 5	23
Research and Teaching	24
7. Proposed Framework for Renal Services	25
Prevention and Health Promotion	28
Dialysis	28
Governance	29
8. Implications for the Wider Health System	30
Workforce	30
Infrastructure	31
Technology	32
Disaster Planning	32
Climate Change	33

9. Implementation	34
Infrastructure Strategies	34
Primary Prevention	35
Early Detection and Secondary Prevention	36
CKD Stage 4 Strategies	37
CKD Stage 5 Strategies	38
CKD Stage 5 Strategies (Ctd)	39
Workforce Strategies	40
Technology Strategies	41
Research and Teaching	41
Disaster Planning Strategies	42
Climate Change / Environmental Strategies	42
10. Evaluation	43
Abbreviations and Glossary of Terms	44
References / Bibliography	45
APPENDICES	46
Appendix 1 Principles behind the Renal Health Services Plan	46
Appendix 2 ACT Health Ambulatory Care Model	47
Appendix 3 Proposed ACT Renal Services Network representation	48

Executive Summary

The ACT Renal Health Services Plan 2010-2015 provides strategic direction for the provision of renal services over the next five years with a longer term ten year vision.

For the purposes of this plan, renal services are taken to encompass all services related to the identification, prevention, treatment and management of Chronic Kidney Disease (CKD). CKD is influenced by life style and behaviour and invariably results in irreversible loss of kidney function.

The objective of the ACT Renal Health Services Plan 2010-2015 is to articulate a model of service delivery that will meet increasing demand by drawing together strategic directions for the provision of clinical services in the ACT and a model of care for adult renal services.

Core to the Plan are the following principles, drawn from ACT Health's Ambulatory Care Framework and Kidney Health Australia's Patient Charter. Services will be:

- Patient centred.
- Multidisciplinary and collaborative.
- Accessible.
- Safe and high quality; and have a
- Population health approach.

Key health factors identified in the Plan include:

- The number of people in the ACT with CKD is projected to significantly increase in the future.
- In the general Australian population, there is up to a threefold increase in the risk of the people who are disadvantaged developing end stage kidney disease (ESKD).
- In the Aboriginal and Torres Strait Islander population, there is a 30-fold increased risk of ESKD compared to the general population and Aboriginal and Torres Strait Islander people are 6 times as likely to be receiving dialysis or to have had a kidney transplant.
- Whilst there is no cure for CKD, the disease is preventable and treatable and progression can be slowed.
- The majority of people with CKD are managed in the community by General Practice.
- CKD in its early stages is often symptom free and difficult to diagnose
- Where appropriate, transplantation is the preferred and most effective treatment for ESKD. However, the average wait time for a kidney transplant is four years.

Key directions for ACT Renal Services over the next five years:

- The establishment of an ACT Renal Services Network to:
 - Develop targeted health promotion/awareness strategies for high risk groups.
 - Increase community awareness of CKD risk factors
 - Provide support for strategies to address information, training and ongoing support for primary health care professionals on CKD.

- Establish nurse practitioner /allied health run clinics for the close monitoring of patients away from the acute setting.
- Create a care coordination framework for renal services in the ACT.
- Establish effective/optimal communication channels with Greater Southern Area Health Service to facilitate proposed planning initiatives.
- The provision of addition dialysis capacity in the ACT.
- Encourage and support national strategies to increase the rate of organ donation.
- Support for the establishment of homelike community settings where patients can 'self dialyse' where dialysis at the patient's home may be unsuitable.

The strong clinical overlap between diabetes, cardiovascular disease and chronic kidney disease requires that all programs developed for CKD be established and delivered in a collaborative fashion with other chronic disease programs.

The ACT Health Chronic Diseases Strategy 2008-2011 has been developed to provide the overarching framework for the provision of appropriate programs and supports to address the increasing prevalence of people at risk of, or living with, chronic disease in our community. The Strategy highlights opportunities for improved programs associated with Renal Services.

The ACT Renal Health Services Plan 2010-2015 provides an opportunity to plan for integrated services that will better meet the needs of people with, or at risk of, chronic kidney disease who also have other chronic conditions.

1. Introduction

Chronic Kidney Disease (CKD) is a chronic condition influenced by lifestyle and behaviour. The risk factors for chronic kidney disease are highly prevalent and the number of Australians at risk is increasing.

The Australian Institute of Health and Welfare 2009 report *An overview of chronic kidney disease in Australia* notes that based on Australian data:

- Chronic kidney disease is a common and serious problem.
- More and more Australians are having dialysis or transplant for the disease's most severe form, end-stage kidney disease (ESKD).
- Diabetes is increasing and is now the leading cause of end-stage kidney disease.
- Chronic kidney disease is especially common among Indigenous Australians.

Aboriginal and Torres Strait Islander Australians are 6 times as likely as other Australians to be receiving dialysis or to have had a kidney transplant.¹

For the purposes of this plan, renal services are taken to encompass all services related to the identification, prevention and treatment of CKD.

CKD is marked by long term and usually irreversible loss of kidney function. The effect of this malfunction is change in the body's chemical balance, the disruption of essential body processes, and the build up of waste products in the blood that results in damage to the body's organs and systems.

There are five clinical stages of CKD:

- *Stage 1* – kidney damage but without decreased glomerular filtration rate (GFR) and usually without symptoms.
- *Stage 2* - kidney damage with some reduction in GFR, usually no symptoms, but with high blood pressure and possible dysfunction in other organs.
- *Stage 3* - significant reduction in GFR, increased levels of urea and creatinine in blood, dysfunction in other organs, often symptomless.
- *Stage 4* – severe reduced kidney function, high levels of urea and creatinine in blood, dysfunction in other organs, mild symptoms.
- *Stage 5* - kidney function no longer adequate to sustain life, range of symptoms and abnormalities in range of organs.

There are a number of possible clinical outcomes of CKD, including:

- In the early stages despite many patients being symptomless some patients can experience fatigue, muscle cramps, nausea, itchy skin, urinary tract infections, headaches, and loss of appetite.
- In later stages, development of co-morbidities including cardiovascular diseases, bone and muscle problems, sleep apnoea, and anaemia.

1 AIHW 2009. *An overview of chronic kidney disease in Australia*. Canberra May 2009

- End Stage Kidney Disease (ESKD) in which the kidney function is no longer sufficient to sustain life. In these cases, some form of kidney replacement therapy (dialysis or transplant) is necessary. Patients on dialysis have a reduced quality of life – with severe restrictions on activity and movement created by the dialysis that can lead to feelings of anger, anxiety, hopelessness or depression.

Whilst there is no cure for CKD, the disease is preventable and treatable, and importantly the progression can be slowed or stopped.

The number of people in the ACT with kidney disease is projected to significantly increase in the future.

2. Purpose

The purpose of this plan is to provide strategic directions for service development to meet an increasing demand for the period 2010 to 2015 with a longer term, ten year vision.

The plan's objective is to articulate a model of service delivery that will meet future demand by drawing together strategic directions for the provision of clinical services in the ACT and a model of care for adult renal services.

There is an associated implementation plan detailing actions required to implement the strategic directions proposed within the plan.

The ACT Health's capital asset development plan (CADP) proposes the relocation of some ambulatory services (for which patients are not admitted to hospital overnight) currently located on hospital sites into the community. This plan will inform initiatives within both of these planning projects.

During the planning process the following principles for service development were approved by the Steering Committee to guide the development of the Renal Services Plan. These principles were drawn from ACT Health's Ambulatory Care Framework and Kidney Health Australia's Patient Charter.

Services will be:

- Patient centred.
- Multidisciplinary and collaborative.
- Accessible.
- Safe and high quality; and have a
- Population health approach.

These principles are covered in more detail in Appendix 1.

3. National and ACT Government Policy

There is a range of national and ACT Government health policy frameworks that provide the broad context for the development of renal services in the ACT.

These include:

- National Chronic Disease Strategy
- *Access Health*, the ACT Government's strategic direction for health care delivery
- ACT Health Corporate Plan
- ACT Health Ambulatory Care Framework
- ACT Health Primary Health Care Strategy
- ACT Chronic Disease Strategy
- ACT Health Community Based Health Services Plan (*under development*)
- ACT Health Diabetes Service Plan
- ACT Health Capital Asset Development Plan
- National Health and Hospital's Network Agreement (2010)
- Australia: the healthiest country by 2020: National Preventative Health Strategy (2009)
- Primary Health Care Reform in Australia – Report to support Australia's First National Primary Health Care Strategy (2009)
- Closing the Gap – Prime Minister's Report (2010)
- Towards a Healthier Australian Capital Territory – A Strategic Framework for the Population Health Division 2010 - 2015.

The Diabetes Service Plan and the Chronic Disease Strategy establish frameworks for health services to work collaboratively, particularly in the area of primary and secondary disease prevention. A significant proportion of patients with CKD, or at risk of developing CKD, also have other chronic diseases. Between 2000 and 2007 the number of new cases of end-stage kidney disease in Australia attributable to diabetes increased by two thirds in those aged 55 years and over². This plan provides an opportunity to plan for integrated services that will better meet the needs of people with, or at risk of, chronic kidney disease who also have other chronic conditions.

2 AIHW 2009. An overview of chronic kidney disease in Australia. Canberra May 2009

Current Context

People with Chronic Kidney Disease, particularly those undergoing dialysis, experience significant impediments to participation in the social aspects of their communities and in the workforce. The treatment and management of CKD involve significant lifestyle modifications.

The combination of time demands and physical complaints experienced by those on dialysis treatment can lead to major changes in established patterns of social and economic participation. Dialysis patients can also face significant financial hardship from loss of income and higher out-of-pocket health costs. They have relatively high rates of depression and other psychological or interpersonal difficulties. Home life may be significantly disrupted and family members may be required to act as carers, particularly if people opt for home dialysis services³.

ACT Health aims to support people with CKD to maintain independence where possible and to participate as fully as possible in their community.

Access and Equity

Despite the growing expenditure on, and service delivery response to, kidney disease in Australia and the ACT, there is evidence that inequities in access to and outcomes of kidney disease persist.

- In the general Australian population, there is up to a threefold increase in the risk of the disadvantaged developing ESKD compared to those better off. The drivers of this increased risk appear to be higher exposure to risk factors such as smoking, high blood pressure, diabetes, and streptococcal skin and throat infections, as well as reduced access to diagnosis and treatment services.
- In the Aboriginal and Torres Strait Islander population, there is a 30-fold increased risk of ESKD compared to the general population and Aboriginal and Torres Strait Islander people are 6 times as likely to be receiving dialysis or to have had a kidney transplant.

Whilst there is no specific data on equity of service provision and access to services for people with CKD in the ACT, there is evidence of general inequity of health service access and outcomes in the ACT. Social research conducted by the ABS for the ACT suggests that compared to higher income groups, the lower income quintiles in the ACT have:

- worse health status
- higher levels of disability/long term health conditions
- more difficulty accessing services
- are less able to get support in times of crisis and
- lower levels of general trust and trust in the health system.

People are usually assessed for and diagnosed with CKD by General Practitioners (GPs).

3 AIHW 2009. An overview of chronic kidney disease in Australia. Canberra May 2009

The ACT has a lower ratio of GPs per capita than the Australian average. It is estimated that the ACT needs an extra 74 full-time GPs to reach the national average of GPs per head of population⁴. Within the ACT there is a relative scarcity of GPs in the outer suburbs of Canberra compared to the inner city suburbs (north and south) and the town centres. The effect of this is that many GPs books are in effect closed to new patients, and that in particular access for high need groups – ie those with complex care needs, aged, mentally ill, homeless – is constrained.

There are also specific equity concerns related to renal dialysis associated with the costs associated with frequent travel to hospital/satellite sites for dialysis and/or the water and electricity costs associated with home dialysis.

Current Service Provision in the ACT

Renal services are provided from a number of locations in the ACT to residents of the ACT and surrounding catchment of the NSW Greater Southern Area Health Service and (a small proportion) to visitors from outside the area. There are a variety of primary health care and hospital based services related to CKD in the ACT.

Primary Prevention

Current primary prevention activities for chronic disease include general and targeted awareness around nutrition, physical activity and smoking. Whilst there is no CKD specific primary prevention program in the ACT, a planned strategy of primary prevention efforts related to chronic diseases is likely to be of benefit to people with CKD, given the overlap in risk factors between CKD and other chronic diseases.

Early Detection and Secondary Prevention

CKD, in its early stages, is often symptom free and difficult to diagnose, and as such is often missed. However if detected early and managed appropriately, the rate of deterioration in kidney function can be reduced by as much as 50%, and may even be reversible. The implications of investment in early detection and management are thus significant in terms of quality of life of individuals with kidney disease and in a broader sense, the avoidance of both health costs and decreased productivity and participation in society of people disabled by their condition. The majority of people with CKD are managed in the community by General Practice.

Evidence based early interventions include:

- Blood pressure control.
- Smoking cessation.
- Medication management in relation to kidney disease.
- Glycaemic control.
- Screening of high risk groups.
- Early referral for multidisciplinary care in support of self-management.

4 ACT GP Taskforce June 2009.

Identified barriers to greater uptake of secondary preventive activities in general practice include:

- Lack of awareness of disease by health professionals and the community.
- Historical practice of CKD being treated in hospital – often as ESKD by nephrologists.
- Capacity building opportunities including the adequacy of Enhanced Primary Care items in the Medical Benefits Schedule to cover the cost of annual health checks.
- Lack of culturally specific materials/strategies to reach disadvantaged groups.
- Lack of CKD specific prevention/management education opportunities for health professionals.
- Lack of focus on wellness/self management support.

General Practice and other primary health care services provide basic health care support to individuals and families and are usually the first point of contact with the health care system, offering health promotion and prevention services, consumer and carer focus and diagnosis and management of health issues.

There is a need for the provision of information and support, as well as access to services in relation to wellbeing and fitness and nutrition for people with CKD.

General Practice

The Royal Australian College of General Practitioner Guidelines for Preventative Activities in General Practice includes recommendations for targeted annual health checks to assist early detection of vascular disease (including CKD) in high risk individuals.

General Practice plays a pivotal role in the care of CKD patients with respect to:

- Screening at-risk patients for timely detection of CKD.
- Reduction of cardiovascular and kidney risk.
- Early detection and management of CKD complications.
- Avoidance of nephrotoxic medications and ensuring that the dosages of other prescribed drugs are appropriate for the level of kidney function.
- Timely referral of CKD patients to a nephrologist.
- Co-ordinating multi-disciplinary care.

Renal Specialists/Renal Medicine

Renal specialists treat patients requiring further assessment, monitoring and/or access to hospital based treatment options. In the ACT, there are currently 6 renal physicians (5 public and 1 private).

There are no public renal outreach services provided outside the Canberra Hospital (TCH).

Patients requiring admission under the care of a renal physician in the public hospital sector are admitted to the Canberra Hospital.

Dialysis

Given the lack of national opportunities for transplant, dialysis currently remains the only active treatment choice for approximately 90% of patients with ESKD.

Australia wide, approximately one third of people using haemodialysis go to hospital for their treatment. In the ACT, due to the location of 'satellite' clinics on hospital sites, over 70% of haemodialysis patients go to hospital for their treatment (although the ambulatory component of this case load is provided in separate facilities on the hospital grounds). Patients undergoing acute haemodialysis or who may be admitted to hospital for other reasons such as surgery and require dialysis are admitted to the Canberra Hospital (in centre dialysis).

In terms of home dialysis, the rate of home haemodialysis across Australia has been decreasing (52% in 1977 to current levels of 10%), and peritoneal dialysis has also decreased from approximately 30% in late 1990s to about 20% currently. (The ACT figures for both these methods are consistent with these Australian averages).

Kidney Health Australia (KHA) argues that there are number of disadvantages to hospital based dialysis (compared to home based dialysis). These include:

- Higher cost (according to AIHW hospital/satellite haemodialysis costs an average of \$66,072 per patient per year, compared to \$56,181 for home haemodialysis and \$43,996 for peritoneal dialysis. NSW Health in the 2007 NSW Renal Dialysis Service Plan to 2011 identified costs of \$50,000 per patient per year for in-centre / satellite, \$32,500 for home haemodialysis and \$25,000 for continuous ambulatory peritoneal dialysis).
- For most people the constant medical monitoring associated with in-centre dialysis is not required.
- There is an increased risk of hospital acquired infection.
- Reduced flexibility for patient (fixed schedules); and
- Travel time/costs.

In addition, KHA also identifies a number of advantages of home based dialysis, including:

- Longer survival times.
- Decreased risk of hospital infections.
- Improved quality of life.
- Decreased health system costs.
- Enhanced opportunities for rehabilitation and return to employment.
- Greater independence/flexibility – particularly with nocturnal dialysis
- No transport costs.

Based on the above, KHA has adopted a policy position which recommends maximising the opportunities for home dialysis by identifying and addressing current impediments to this form of treatment such as increased cost of domestic utilities.

Other jurisdictions have extended this position by stating a target for home dialysis- NSW, for example, is aiming for 50 % of dialysis (30% PD and 20% haemodialysis) to be provided as home dialysis.

The ACT public sector offers a mixture of acute inpatient haemodialysis, satellite (in-centre on hospital grounds) dialysis, and home haemodialysis and home peritoneal dialysis. There are no hospital based private services in the ACT, in contrast to other states, and no plans for renal dialysis to be provided in the private sector.

There are 49 dialysis chairs under the clinical governance of the TCH-based Renal Service. These comprise:

- At TCH:
 - 10 acute chairs (providing dialysis services to unstable patients requiring close monitoring in a hospital environment).
 - 18 ambulatory day chairs (providing services patients who are unable to carry out dialysis in their home environment).
 - 4 haemodialysis home training chairs (situated in the satellite facility) providing the education required for patients to learn and carry out their own dialysis in their home environment. This service is subsidised by ACT Health.
 - 4 peritoneal training dialysis chairs (situated on the renal ward providing education of patients aiming to carry out peritoneal dialysis in their home environment).
- Northside – 13 ambulatory day chairs.

The Northside satellite service located on the Calvary Hospital site is a service contracted by the Renal Service.

For patients entering and undergoing dialysis, there is a variety of hospital based allied health care/support services available (physiotherapy, occupational therapy, dietitian, social work, aboriginal liaison officers, psychology). There are no targeted outreach services available for these patients.

Other Services

Plasma exchange (PE) is the process in which plasma is isolated then discarded and replaced with a substitute blood product to remove circulating immune complexes, antibodies and other macromolecules that cause specific medical conditions and disease processes.

In the ACT the service is currently carried out by the Haematology Department at the Canberra Hospital but it is felt that there is a need to offer this service from the Renal Department for specific transplant related indications. The plan proposes to co locate this service with the acute dialysis service provided at the Canberra Hospital.

Multidisciplinary Support

Generally one year is considered optimal to physically and mentally prepare people with CKD and their families/carers for renal replacement therapy. Good preparation for renal replacement therapy (dialysis or transplantation) is associated with better outcomes once on renal replacement therapy.

Evidence suggests that access to multidisciplinary health care team for people with advanced CKD is associated with improved outcomes⁵:

- Reduced progression of CKD.
- Greater prescribing of appropriate medication.
- Fewer urgent dialysis starts.
- Less hospitalisation.
- Improved survival.

The National CKD Strategy suggests that the components of a successful multidisciplinary advanced CKD clinic contain the following elements:

- Access to a range of health professionals including nephrologists, endocrinologists, cardiologists, vascular surgeons, pharmacists, dietitians, psychologists, nurse educators, social workers and liaison officers.
- Access to trained peer support.
- Regular multidisciplinary team meetings.
- Agreed multidisciplinary management plans and goal setting.
- Regular monitoring of outcomes.

Away from Home Base (Holiday) dialysis services are required by many dialysis patients to allow them to continue with their treatment whilst away from their normal place of residence. Many stakeholders have identified significant difficulty in accessing dialysis services anywhere across Australia. As a result they have been unable to travel for a vacation or to visit family and friends in times of crisis. This is an Australia wide problem for these patients and requires the development of a national strategy to identify a workable solution.

End of life care for renal patients can involve opting for a medically supported, non-dialysis care plan. *Of the 1,452 deaths of dialysis dependent patients [in Australia] in 2007, 210 (14%) were attributed to voluntary withdrawal from treatment for psychosocial or access reasons and 290 (20%) to withdrawal from treatment for other medical reasons (McDonald et al. 2008)*⁶.

It is essential that patients are involved in decision making about medical support options and that they are aware that the decision is reversible. Standard protocols and the development of pathways to address end of life care for ESKD patients are required in the ACT.

This work should be aligned with palliative care strategies and initiatives in accordance with the standards developed by Palliative Care Australia.

5 Kidney Health Australia (2005) National Chronic Kidney Disease Strategy

6 AIHW (2009) An Overview of Chronic Kidney Disease in Australia (p 20)

Transplantation

Kidney Transplantation

For those who are suitable, transplantation is the preferred and most effective treatment for ESKD. Compared with dialysis, transplantation is associated with improved life expectancy, superior quality of life, and reduced health care costs.

The key constraint in the rate of transplantation is the availability of organs – both deceased and live donations. The current average waiting time for a kidney transplant is 4 years. Live kidney donations in Australia represented 44% of all kidney transplants in 2008 and 2007.⁷

Despite efforts to increase the rate of organ donation nationally, the rate of kidney transplant over the past 10-15 years has not substantially changed. In 2008, only 6.5% of the people on dialysis received a transplant, an increase from 5.2% in 2007 and 5.78% in 2006. The average waiting time in Australia for a transplant is about 4 years but waits of up to 7 years are not uncommon.⁸

The Australian Organ and Tissue Donation and Transplantation Authority was established in 2009 to implement and oversee a new national organ donation and transplantation system. One of the strategies of the Authority will be to increase organ donation rates in Australia.

ACT patients requiring renal transplantation are placed on the transplantation list for NSW. These patients have their pre-transplant work up and transplant in NSW with post transplant monitoring carried out in the ACT. There is no plan to commence transplantation in the ACT because there are not the numbers of patients to ensure that an ACT based services would be able to offer as high a quality of service as from larger centres that regularly undertake this level of complex clinical treatment.

7 & 8 Kidney Health Australia (May 2010) Organ Donation Fast Facts

5. ACT / Target Population Demand for Renal Services

Prevalence

It has been estimated that there will be over 34,000 ACT residents with varying degrees of CKD (Stages 1-5) in 2014. The majority of these (over 98%) will have stages 1-3 CKD and if left untreated are at risk of ESKD and/or premature death.

Stage	Description	Australian Prevalence (adults 25+)	ACT equivalent (n) 2014 (adults 25+)*
1	Kidney damage with normal or increased GFR (GFR \geq 90)	5.8%	13,980
2	Kidney damage with mild decreased GFR (60-89)		
3	Moderately decreased GFR (30-59)	8.4%	20,250
4	Severely decreased GFR (15-29)		
5	Kidney failure (< 15)		

Table 1: ACT and Australian Prevalence of Kidney Disease

Source: Kidney Health Australia (2009) prevalence from 1999-2000 AusDiab survey * Based on projected ACT 25+ adult population Male/Female 25-64 and 65+ years split

Inpatient Activity

The ANZDATA 2008 Report notes that a *predictable outcome of increasing rates of new patients starting Renal Replacement Therapy (RRT) each year is an increase in the total number of patients receiving some form of RRT at any one time. Over the period since 1990, the number of people in Australia receiving RRT has increased by 5.9% per year, and in New Zealand by 6.9% per year.*

Over this time, the proportion of all people receiving RRT who had a functioning kidney transplant has steadily fallen in both countries. Provision and funding of appropriate RRT services for this growing group is clearly a major challenge for the health systems of both countries⁹.

Renal admissions (inpatients) account for approximately 25% of all ACT public hospital admitted activity (2005-06), growing at more than 5% per annum (with renal dialysis growing at 5.4% per annum). In addition, approximately 20 ACT residents travel interstate each year for kidney transplant.

9 Australia and New Zealand Dialysis and Transplant Registry (2008) The Thirty First Report

There are currently approximately 230 patients on dialysis in the ACT of whom 67% are from the ACT and 33% are from interstate (predominantly the NSW Greater Southern Area Health Service (GSAHS)). Of these patients, 122 (53%) receive their treatment on the Canberra Hospital site (21% in acute and 32% in a satellite unit setting). Over half of the patients dialysed in the acute setting would be more appropriately dialysed in satellite units if space was available. A further 48 (21%) receive their treatment at the Northside satellite service (which is located on the Calvary Hospital site). 22 patients (10%) received home haemodialysis and 38 (almost 17%) have peritoneal dialysis.¹⁰

Forms of Dialysis

The current (2008) proportions of the different forms of dialysis in the ACT are shown below:

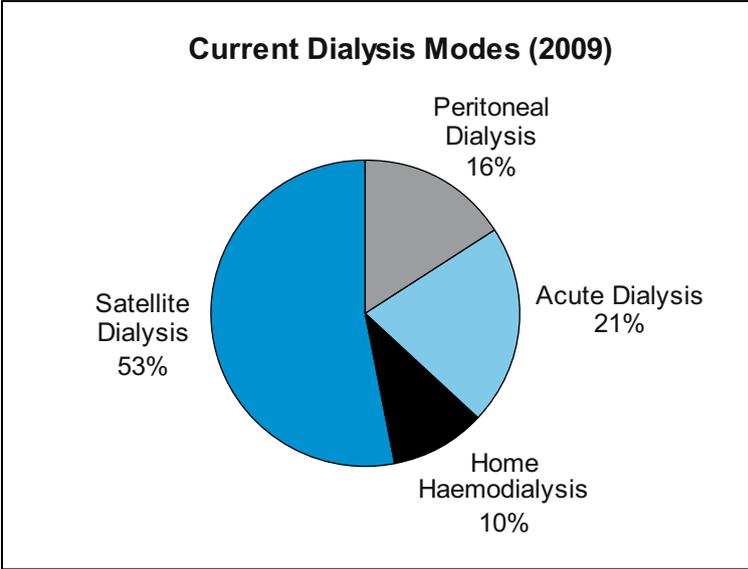


Figure 1: Current breakdown of dialysis by mode

Outpatient Activity

There is also a substantial and growing number of renal medicine outpatient consultations provided at the Canberra Hospital with renal outpatient services growing at more than 15% per annum.

10 TCH Renal Services Data

Projected Activity

Figure 2 and Table 2 show projected dialysis activity for ACT Renal Services. Figure 2 shows the impact of low, medium and high range demand scenarios.

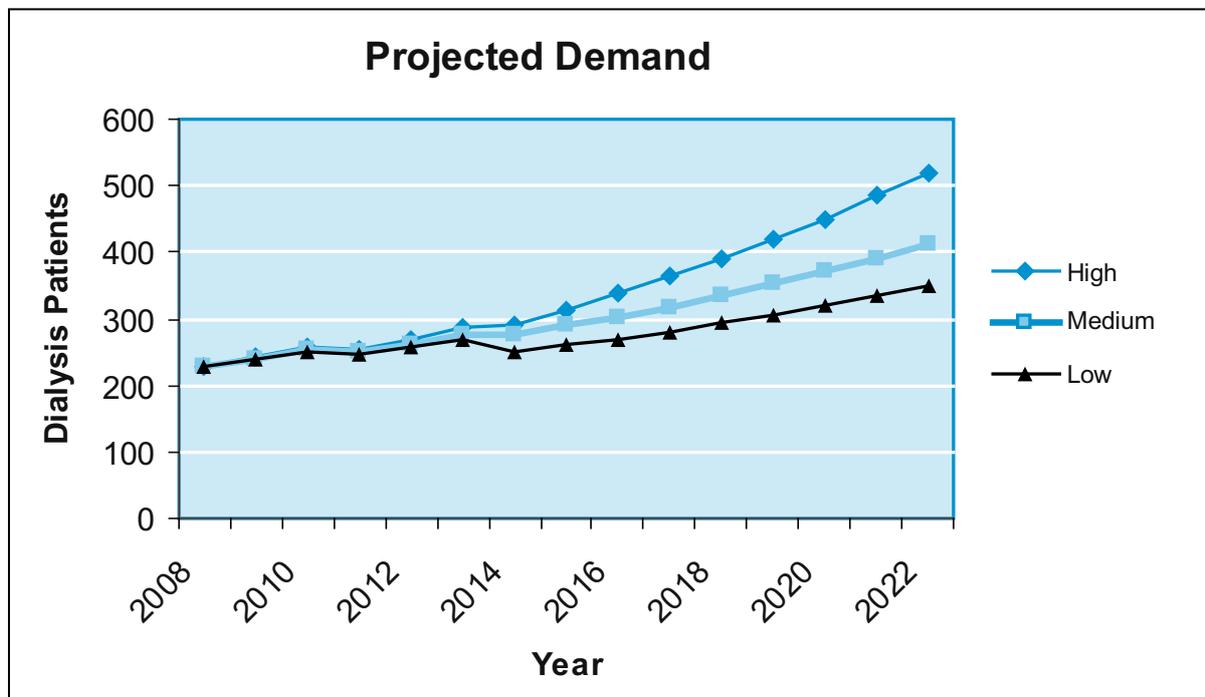


Figure 2: Projected Dialysis demand in ACT public health sector
High, Medium and Low scenarios

NSW Health has announced in 2009 capital funding for 6 renal dialysis chairs in Queanbeyan in 2009-10. Projections of demand in the ACT include assumptions about the impact of this initiative.

Table 2 (high range scenario) details projected activity used to underpin resource planning in this document. The high range scenario has been used assuming that issues such as the ageing of the population coupled with decreased availability of organs for transplant and improved cardiac protection will result in some increase in the rate of demand growth.

Area of Residence	2008*	2011	2014	2022*
ACT	153	180	220	390
Southeast NSW (receiving dialysis in ACT)	76	75	70	130
Other	1	1	1	1
Total (projected estimate) patients receiving dialysis in ACT	230	(255)	(290)	(520)

Table 2: Patients receiving dialysis in the ACT and projected demand

Source: Base years Renal Services data TCH . High scenario projection.

*2022 has been shown as it is the outer limit of the timeframe of the ACT Health Capital Asset Development Plan.

Outpatient demand will also continue to grow. Individual occasions of service are expected to grow from over 6,000 in 2008-09 to almost 9,000 appointments in 2014.

The projected initial decrease in numbers of southeast NSW residents receiving dialysis in the ACT reflects the planned increase in dialysis chairs in Southeast NSW.

6. Objectives for the Future Provision of Renal Services

The following objectives have been formed in the context of planning to deliver services in 2022 that allow people in the ACT with kidney disease, or who are at risk of kidney disease, to maintain their independence and participate as fully as possible in their community by ensuring access to:

- A coordinated and integrated range of prevention and treatment services.
- Advice, information and support to assist them to make informed decisions about their health care.

Primary Prevention

Objective: That Renal Services contribute to a planned strategy of integrated chronic disease primary prevention program focusing on nutrition, smoking and physical activity.

Actions:

Whilst currently there is no CKD specific primary prevention program in the ACT, there is likely to be benefit to people with CKD, given the overlap in risk factors between CKD and other chronic diseases, of a planned strategy of primary prevention efforts related to chronic diseases.

Early Detection and Secondary Prevention

Objective: To provide an optimal integrated service in chronic kidney disease detection and management.

Actions:

- Increase community awareness of CKD risk factors and management of complications and assessment options through establishment of partnerships with organisations currently delivering this service.
- Provide support for targeted screening of at risk individuals linked with broader vascular health check.
- Provide support through a variety of strategies to address information, training and ongoing support for health care professionals on CKD.
- Ensure increased emphasis on self-management/integration of CKD screening/management with broader chronic disease programs – particularly diabetes self-management programs.
- Identify partners for network establishment within the community – both government and non-government organisations.
- Establish a CKD registry in conjunction with GPs to improve overall detection of CKD and future monitoring.
- Development of programs that are culturally sensitive.

Whilst there is no definitive evidence of ACT specific primary care practices related to CKD, given the overall shortage of GPs in the Territory, it is likely that many of these constraints and associated barriers to effective primary care for CKD exist.

At present there are limited opportunities for primary care health professionals to undertake CKD education with inadequate coverage of CKD in current training curricula. An opportunity exists to advocate for the inclusion of CKD early detection and management principles into core curriculum for health professionals.¹¹

All programs for CKD should be established and delivered in a collaborative fashion with those for Diabetes and Cardio-vascular disease in recognition of the strong clinical overlap.

The ACT Health Chronic Disease Strategy 2008 highlights opportunities for improved programs associated with Renal Services (Actions 2 and 3).

CKD Stage 4

Objective: Establish a sustainable multidisciplinary service to meet needs of renal medicine outpatients in an environment with a community health focus for renal services within the ACT.

Actions:

- Recruit additional renal staff: nephrologists, renal nurses, allied health staff to deliver multi-disciplinary services to Renal patients.
- Establish Nurse Practitioner/allied health run clinics for the close monitoring of patients away from the acute setting.
- Establish alternate locations to hospital for outpatient services (eg community health centres).
- Harness skills of trained people who don't wish to participate in the full time workforce.
- Improve and facilitate the dissemination of information across disciplines and clinical specialty areas.
- Create a care coordination model which would include a summary record / framework for clinical communication for patients from CKD Stage 4 and beyond which is integrated, coordinated and used in collaboration with other services.

Currently in the ACT the dominant form of management of this group is via GP referral to hospital-based nephrologists who manage care with input from allied health professionals. In the ACT there is evidence of considerable waiting times to see nephrologists (4 months) that can reduce the preparation time/quality for dialysis. Given increasing demand and projected specialist shortages this situation is only expected to get worse.

There is some evidence that those who dialyse in hospitals have greater access to multidisciplinary care than those who dialyse in satellite centres or at home.¹² This is certainly the case in the ACT where there are no outpatient clinics run outside the hospital environment. Co-location of satellite services in a multidisciplinary health centre will facilitate

11 & 12 Kidney Health Australia (2005) National Chronic Kidney Disease Strategy

access to multidisciplinary services and may also be better suited to provide support to those on home dialysis than stand alone satellite centres.

Other jurisdictions have successfully trialled alternate models of care for this group which place more responsibility on nurse practitioner (NP)/extended scope allied health professionals to work with specialists and patients to develop and manage care plans and associated education and multidisciplinary care inputs. For example, Victoria has conducted a trial of a NP managing the care of dialysis patients, and concluded that model had strong support from staff and patients, and favourable outcomes in terms of clinical parameters, improved quality of life, and number of clinic attendances.

CKD Stage 5

Objective: Expand and enhance treatment options for patients with end stage kidney disease.

Actions:

- Encourage and support national strategies to increase rate of organ donation
- Streamline transplant follow up and monitoring.
- Provide access to accurate/unbiased information to allow informed choice of method for Renal Replacement Therapy (RRT) through the establishment of web based education tools for the consumer and clinicians, and setting up partnerships between government and non-government organisations.
- Modify model of care to ensure consumers view RRT as a community focused service as opposed to an institutional service. (Combine Home Training Unit and Peritoneal Dialysis Training into one unit and locate away from hospital and acute services setting to optimise opportunity to change the way these therapies are viewed.).
- Meet targets for delivering dialysis.
- Ensure the availability of continuous coordinated multidisciplinary clinical and psychosocial care for patients on dialysis – no matter where the service is provided.
- Enhance coordination and provision of away from home base (holiday) dialysis options.
- Explore and pursue options to minimise costs for patients who choose home dialysis or community home dialysis options (particularly utilities and required refurbishment of home).
- Explore dialysis options for elderly patients (eg assisted automated peritoneal dialysis rather than haemodialysis) to improve quality of life.
- Explore options for dialysis provision in partnership with the private sector.
- Establish of 'End of Life' pathways for End Stage CKD patients in collaboration with all service providers.
- Investigate demand and options for long dialysis in satellite dialysis centres.
- Explore / develop role of nurse practitioner in dialysis / home therapies

There is a range of treatment options for patients entering End Stage Kidney Disease (ESKD). These include:

- Kidney transplant
- Dialysis – haemo and peritoneal
- Conservative treatment/palliative care – for those who choose not to undertake dialysis.

The (increasing) costs borne by patients on home dialysis is a major barrier to the choice of this option for dialysis. The water and electricity used for home dialysis are from patients' domestic supplies. Currently the cost is borne by the patient. ACT Health will explore and pursue options to minimise costs for patients who choose home dialysis or community dialysis options.

Home dialysis water waste is diverted to usual domestic water waste. Allowing patients to recycle waste water from dialysis will decrease utilities costs as well as address sustainability issues (which are dealt with later in the plan).

In Centre dialysis is typically undertaken in 3 to 5 hour sessions three times a week. Long (overnight/nocturnal) dialysis is an option that, as well as increasing the capacity of the health system infrastructure for dialysis, enables some patients who choose this option to participate more easily in employment. Evidence¹³ shows that longer haemodialysis sessions are associated with improved morbidity and mortality. Studies of the potential of long dialysis continue to explore the benefits of this option.

40% of satellite dialysis patients surveyed in 2009 by Canberra Hospital Renal Services indicated that they would prefer the opportunity for nocturnal dialysis.

Research and Teaching

Objective: There will be a strong research component across all renal services within the ACT supporting and informing the delivery of clinical services.

Actions:

- Identify opportunities to build upon existing relationships with universities.
- Ensure that clinical research is an integral part of employees' roles.
- Develop IT infrastructure to support this research.
- Build upon existing relationships with clinical renal networks including Australian Kidney Trials Network.

Ongoing research will continue to inform protocols and establish a growing body of evidence on best practice. The services will actively participate in teaching and training and allow for up-skilling and on the job learning.

13 Powell, J et al (2009) Ten Years Experience of In-Center Thrice Weekly Long Overnight Hemodialysis *CJASN ePress* Published 21 May 2009 as doi:10.2215/CJN.06651208

7. Proposed Framework for Renal Services

Renal services for the ACT are currently provided largely within the hospital environment. This plan proposes a framework for a network of services within which the majority of services will be delivered in the community.

ACT Health has identified a need to shift the focus of services from the hospital to community environment so that access can be improved by providing services closer to where people live and also to make the most efficient use of health resources.

The establishment of a Renal Service network supported by appropriate communication services and information technology infrastructure will allow renal services to follow this strategic direction.

This will be done by:

- Establishing an acute/high dependency unit at the Canberra Hospital for acute patients with a step down facility for unstable patients.
- Moving current satellite dialysis services and some ambulatory clinics to Community Health Centres.
- Establishing a home training centre and respite facility away from hospital facilities to promote a model which emphasises placing the patient at the centre of the care delivery process.
- Supporting the establishment of homelike community settings where patients can “self dialyse” where dialysis at the patient’s home may be unsuitable. This latter option has been established in Cooma in 2009 and will provide information on the acceptability and feasibility of this model of service delivery.
- Identifying and implementing new communications systems and appropriate clinical information systems to support the delivery of renal services across the network of renal services providers and locations.



Figure 3: Future Renal Services Network in the ACT

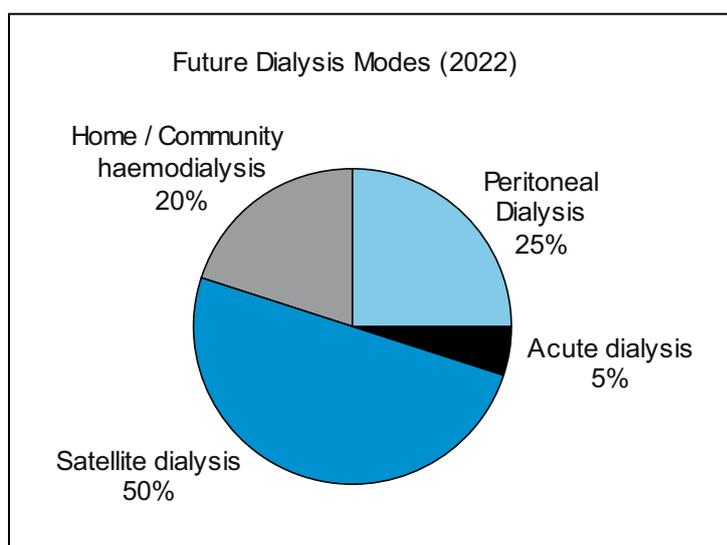


Figure 4: Proposed 10 year target for dialysis by mode

It is proposed to increase the proportion of home 'self-haemodialysis' to 20% from the current 10% through the establishment of a home training centre and respite facility. This will be complemented by supporting the introduction of home like community centres for self-haemodialysis where home self-haemodialysis is not suitable.

The initial impact of the planned introduction of 10 additional satellite dialysis chairs by 2014 would be to increase the proportion of satellite chairs meeting ACT haemodialysis demand above the current 53% to 69%. Given the proposed increase in home dialysis and peritoneal dialysis the aim is for 60% satellite dialysis by 2015, reducing to 55% in 2018 and then to 50% by 2022.

The targets for 2015 and 2022 are:

	2015	2022
Acute dialysis	5%	5%
Satellite dialysis	60%	50%
Home Haemodialysis / Community Setting Dialysis	15%	20%
Peritoneal dialysis	20%	25%

Table 3: Proposed 5 and 10 year target for dialysis by mode

Satellite dialysis units are to be located at Community Health Centres with the acute dialysis unit to be located at the Canberra Hospital.

Prevention and Health Promotion

General Practitioners play a crucial role in CKD early detection and management. Most people with CKD will be managed in general practice. All people attending their GP should be assessed for CKD risk factors as part of routine primary health encounters.

The ACT Renal Service will place increased emphasis on its role in supporting primary care professionals in their vital role in the prevention and early detection of kidney disease by providing increased education and skills development as well as guidance through clinical protocols.

The overlap in risk factors between CKD and other chronic diseases means that a planned strategy of primary prevention efforts related to chronic diseases is likely to be benefit to people with CKD. Current ACT primary prevention activities for chronic disease include general and targeted awareness around nutrition, physical activity and smoking.

Dialysis

The provision of dialysis at Community Health Centres, apart from offering the benefits of services closer to where people live in a multidisciplinary setting, may allow for even more flexible options such as nocturnal haemodialysis in a satellite setting once the model of community based service provision has been implemented.

Community Health Centres will be planned with the ability to expand satellite dialysis centres to ensure that demand above that currently projected will be able to be accommodated.

The ACT Renal Service will investigate the introduction of the option of **assisted Peritoneal Dialysis (aPD)** which has recently been reviewed by a European survey as a suitable form of home dialysis particularly for the patients over 75 years.¹⁴

aPD was developed because of the increasing proportion of frail elderly patients starting on dialysis. This method has been successful and supported across a number of countries in Europe (France, Denmark, Netherlands, UK, Norway and Sweden) where government reimbursement has been available to support its introduction. It allows the elderly to remain in their homes and receive assistance rather than needing to travel to a Dialysis Centre, offering patients a better quality of life by remaining in their own homes.

One option for the provision of a workforce to support this model of care may be to utilise renal trained nurses who, for example may be retired or not working full time.

It is unlikely that the target of 20% home/community dialysis by 2022 will be met unless the escalating costs of this option to patients are decreased. ACT Health will work with ACT Renal Services Network and patients to investigate options for decreasing the burden of utilities costs for patients who choose home haemodialysis. Options that include water recycling would also contribute to reducing the use of water.

¹⁴ The Oxford Journal.. Brown et al. 22(10): 309 Assisted peritoneal dialysis an evolving dialysis modality

Governance

Implementation of this framework which will extend beyond the current boundaries of the Canberra Hospital Renal Unit will require the development of modified governance and clinical governance structures supported by a network of public and private clinical services to oversee the implementation of the plan and the proposed service structure.

8. Implications for the Wider Health System

Workforce

A sustainable and multidisciplinary skilled workforce will be required to allow the proposed framework of renal services to be implemented. There is a current shortage of nephrologists, renal nurses and allied health professionals in Australia, and projections suggest the growth in demand over the next 10-15 years will exacerbate this shortage.

Implications of the proposed framework of services such as the role of the nurse practitioner and allied health staff are discussed in Section 6. The shortage of GPs in the ACT has also been discussed earlier in the plan.

There are also implications for the roles of nephrologists with increased focus on education and development as well as monitoring and modification of care pathways based on evolving best practice evidence.

There are limited numbers of allied health professionals who are appropriately trained and qualified to address specific CKD issues related to diet, social support, and psychosocial adjustment to CKD. This limitation is in addition to the general shortages – current and projected - of allied health professionals. The proposed change in the model of service delivery will have significant implications for the allied health workforce. Currently dialysis and renal outpatient services are supported by allied health staff who work across the spectrum of patients cared for in the hospital setting. The role of dietitians, for example, will change from the current structure (A Public Health Nutrition Plan p 122)¹⁵. Supporting patients on dialysis in community health centres will mean that staff currently in community based health services will need to be supported to enhance their skill mix and education related to a change in scope of practice and the acuity of patients to whom they are delivering care. The governance structure which oversees professional issues will also undergo change to support the staff who will deliver services in the community under the proposed model of service delivery, through clinical experts supporting allied health professionals caring for patients with complex conditions and undertaking and translating the findings of research in those areas.

In summary, workforce issues and needs include:

- Ageing workforce.
- Recruitment and retention issues.
- Development of innovative models of care eg. Nurse Practitioners etc.
- Increased professional development opportunities for new staff to allow skills development.
- Harnessing technologies that lead to improved integration and coordination of services.

15 ACT Health (2004) A Public Health Nutrition Plan 2004-10

A framework will be developed for renal services to enable services to plan to build a workforce that has the range of skills required to support the proposed services framework. Although all of the issues noted above point to a need to increase workforce numbers, strategies aimed at reducing fragmentation in the workforce such as a planned strategy of a common primary prevention program related to chronic diseases, the introduction of multidisciplinary, multispecialty teams to work with patients with a combination of chronic conditions and extending staff skill mix in specific areas of chronic disease will mean that scarce skilled resources can be utilised as effectively as possible.

Infrastructure

Currently renal services are provided from the Canberra Hospital (TCH) acute ward, outpatient clinics, and satellite clinics at TCH (Gaunt Place) and Northside satellite unit. Clearly demand projections suggest there will be a need for increased physical capacity for renal services into the future.

The renal services in-patient beds have been projected based on the ACT Acute Inpatient Model, and the expected increased requirements have been incorporated into the ACT Health Capital Asset Development Plan.

The following table outlines projections for dialysis infrastructure required in the future based on targets for in centre, satellite and home/community options.

Demand Treatment Modality	2008	2014	2018	2022
Acute	9	4	6	7
Satellite	28	44	54	65
Training	6	6	10	12
Respite	0	4	4	4
Total	43	58	74	88

Table 4: Dialysis Infrastructure Projections to 2022

Notes:

1. Infrastructure demand for haemodialysis treatment is based on 4 patients per treatment space (2pt/ day for 6 days/week with 3 sessions required per patient per week).
This demand on infrastructure may be reduced through extending the available satellite dialysis treatment hours and / or through the introduction of the option of long (nocturnal) dialysis.
2. Training spaces for training patients in self peritoneal dialysis and self haemodialysis 3-4 new pts/ mth @ 8 weeks for haemodialysis and 3-4 new pts/mth for peritoneal dialysis
3. Introduction of respite service to commence in 2012

The projections for 2014 reflect movement toward the targets noted in Figure 4 however it is expected that in 2010-11 there will be a need for up to 10 more satellite dialysis chairs than are available in the ACT in 2009.

In order to provide flexibility to expand beyond the infrastructure identified above, identified Community Health Centres will be designed to allow for expansion to incorporate additional dialysis capacity.

In the detailed planning of necessary renal services infrastructure, there are a number of specific requirements related to water quality and drainage. These are set out in the *Australasian Health Facilities Guidelines*¹⁶.

Technology

The establishment of a Renal Services Network and movement of services to the community is dependent upon enabling communications services across campuses and implementing Information Technology infrastructure.

Effective management of chronic diseases will require information systems that assure ready access to key data and patient clinical information. The complexities of renal patients' conditions require that access to all patient related information be at the fingertips of the health care provider in order to deliver comprehensive health services. Local and national initiatives are working toward harnessing information technology to this end.

It is also expected there will be a number of new technology developments over the medium term which will impact on particularly dialysis services. The main thrust of these technologies will be to support home based dialysis. Specific technologies include:

- Movement, within PD, to different types of fluids with better patient outcomes (although potentially more expensive than current fluids)
- Smaller, modular mobile dialysis machines which may provide access for some patients who might not have otherwise been able to access the technology; and
- Remote monitoring of dialysis patients.¹⁷

Disaster Planning

With disasters happening infrequently in the ACT, health organisations often fail to plan for such events. With the Canberra bush fires still fresh in our minds, a disaster mitigation / continuity of services plan for dialysis services needs to be put in place for the ACT in the event of a similar occurrence. There is currently no specific plan to be actioned in the event of a disaster that would directly affect the Renal Unit's ability to meet the needs of dialysis patients. This could have significant adverse results especially should the lack of services continue for an extended period of time.

The Renal Services disaster plan will align with the ACT Health Emergency Plan. The location of dialysis services across the Territory will be spread over a number of health facilities to mitigate the effects of disaster on the continuity of this essential health service.

16 Australasian Health Facility Guidelines: <http://www.healthfacilityguidelines.com.au/>

17 NSW Renal Services Plan to 2011

Climate Change

Current annual water usage in providing dialysis to patients at TCH and the satellite location at Gaunt Place is over 2,000,000 litres of water. There is no mechanism for recycling any of this water at either site.

There are currently no Australia-wide water-saving policies in place to guide dialysis services. Geelong Dialysis units have developed a recycling program for the reuse of the many litres of water discarded following dialysis treatment.

It is essential that in Canberra with water shortages topical, opportunities to recycle water are explored and consideration given to recycling options in the future for patients home dialysing and in ACT Health facilities in concert with broader ACT initiatives and infrastructure plans for water.

Implementation

Implementation of the plan will require a planned and staged process. Meeting the targets for delivering home / community based dialysis is heavily dependant upon the availability of redeveloped capital infrastructure. Strategies that are planned to be achieved within the life of the plan all have a timeframe listed as 2014 to enable translation of the plan to implementation as resources become available.

There will be an annual implementation plan developed so that progress toward implementation can be monitored.

Clinical Operations (DCE) undertakes the responsibility for the establishment of and the ongoing provision of operational support for the proposed Renal Services Network. Proposed membership is listed in Appendix 3

The proposed Renal Service Network will prepare an annual progress report regarding the Plan's implementation.

Infrastructure Strategies

Objective One: Establish governance structures to facilitate implementation of Renal Services Plan

Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures	
1.1	Establish ACT Renal Services Network	Clinical Operations (DCE)	2010	3	Renal Services Network governance and clinical governance structures implemented

Funding column legend:

- 1 = Can be implemented using existing resources
- 2 = Can be implemented within "Growth" funding
- 3 = Requires recurrent funding
- 4 = Requires capital funding

Primary Prevention

Objective Two: That the Renal Services Network contributes to a planned strategy of integrated chronic disease primary prevention program focusing on nutrition, smoking and physical activity.

Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
2.1 Establish and maintain linkages to ACT Health health promotion strategy development	Renal Services Network	2010	1	Renal Services Network contributes to a planned strategy of integrated chronic disease primary prevention program
2.2 Develop targeted health promotion/ awareness strategies for high risk groups including low socio-economic status, Aboriginal and Torres Strait Islander peoples and their primary health care providers	Renal Services Network	2011	2	Strategies and resources developed

Early Detection and Secondary Prevention

Objective Three: To provide an optimal integrated service in chronic kidney disease detection and management.

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
3.1	Increase community awareness of CKD risk factors and management of complications and assessment options through establishment of partnerships with organisations currently delivering community awareness programs.	Renal Services Network	2011	1	Partnerships established with organisations delivering community awareness programs
3.2	Provide support for targeted screening of at risk individuals linked with broader vascular health check	Renal Services Network	2011/12	3	Framework established and resources developed to support to primary care practitioners
3.3	Provide support for a variety of strategies to address information, training and ongoing support for health care professionals on CKD	Renal Services Network	2011	3	Framework established and resources developed to support to primary care practitioners
3.4	Ensure increased emphasis on self-management/integration of CKD screening/management with broader chronic disease programs – particularly diabetes self-management programs	Renal Services Network	2011	2	Framework established and resources developed
3.5	Investigate ways of increasing health literacy about CKD and supporting patients' self management/leadership in their treatment	Renal Services Network	2011	2	Options identified and resources developed
3.6	Establish CKD registry in conjunction with GPs to improve overall detection of CKD and future monitoring	Renal Services Network	2014	3	Registry established

CKD Stage 4 Strategies

Objective Four: Establish a sustainable multidisciplinary service to meet needs of renal medicine outpatients in an environment with a community health focus

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
4.1	Establish Nurse Practitioner/allied health run clinics for the close monitoring of patients away from the acute setting	Renal Services Network	2011	2	Nurse Practitioner/allied health run clinics established
4.2	Review the staffing model of nursing care and leadership to enable support to a decentralised care delivery system	Renal Services Network	2012	2	Review undertaken and recommendations implemented
4.3	Establish alternate locations to hospital for outpatient services (eg community health centres)	Renal Services Network	2012	2	Include accommodation for renal ambulatory services in planning for capital works for community health centres Renal outpatient services moved to community based settings where appropriate as infrastructure allows.
4.4	Improve and facilitate the dissemination of information across disciplines and other clinical speciality areas.	Renal Services Network	2011	2	Framework established and resources developed
4.5	Create a care coordination framework for renal services in the ACT	Renal Services Network	2012	2	Framework established and resources developed

CKD Stage 5 Strategies

Objective Five: Expand and enhance treatment options for all patients with end stage kidney disease

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
5.1	Encourage and support national strategies to increase rate of organ donation.	Renal Services Network (working with national Organ and Tissue Donation & Transplantation Authority)	2014 Ongoing	1	Evidence of support
5.2	Streamline transplant follow up care and monitoring.	Renal Services Network	2011	2	Link to Strategy 4.5
5.3	Provide access to accurate/unbiased information to allow informed choice of method for Renal Replacement Therapy (RRT)	Renal Services Network	2011	3	Information available to patients and their carers
5.4	Develop an interim plan to expand satellite dialysis capacity if required prior to additional facilities being delivered under the Capital Asset Development Plan.	Renal Services Network	2010	2	Interim service capacity strategy for 2010-2011 developed
5.5	Combine Home Training Unit and Peritoneal Dialysis Training into one unit and locate away from hospital and acute services setting	Renal Services Network	2011. Dependant upon capital infrastructure	4	Units located in community
5.6	Investigate demand and options for centre based long (nocturnal) dialysis. Meet targets for delivering dialysis.	Renal Services Network	2011	2	Preferred option identified
5.7	Acute Dialysis – 10% Satellite Dialysis – 55% Home Haemodialysis/Community Setting Dialysis – 15% Peritoneal Dialysis – 20%	Renal Services Network	2014	4/2	Targets met
5.8	Investigate and develop options for supporting the establishment of homelike community settings where patients can “self dialyse” where dialysis at the patient’s home may be unsuitable	Renal Services Network	2011	3	Recommendations developed and implemented

CRD Stage 5 Strategies (Ctd)

Objective Five: Expand and enhance treatment options for all patients with end stage kidney disease

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
5.9	Establish facilities to enable future demand for dialysis and renal medicine services to be delivered	Government Relations Planning and Development	2012	4/3	Acute & Satellite dialysis, renal medicine and renal outpatient resources identified in Capital Asset Development Plan are planned and built
5.10	Enhance coordination and provision of 'away from home base' dialysis options for ACT dialysis patients	Renal Services Network	2012	2	Framework established and implemented
5.11	Explore and pursue options to minimise costs for patients who choose home dialysis or community home dialysis options.	Renal Services Network	2010	3	Support available for eligible patients
5.12	Explore changing dialysis options for elderly patients such as to aPD rather than HD to improve quality of life	Renal Services Network	2013	3	Research complete Support available for eligible patients Option implemented
5.13	Explore and encourage options for provision of dialysis services in the private sector to complement public sector services	Renal Services Network	2014	1	Options explored
5.14	Establish 'End of Life' pathways for End Stage CKD patients in collaboration with all service providers	Renal Services Network	2012	2	Pathways established and implemented

Workforce Strategies

Objective Six attract and retain a high quality, multidisciplinary workforce with identified clear career paths

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
6.1	Develop Workforce Strategy across medical, nursing and allied health professions to support implementation of the Renal Services Plan.	Renal Services Network	2011	2/3	Renal Services Network Workforce Strategy developed and implementation commenced
6.2	Establish effective/optimal communication channels with GSASHS to enable proposed planning initiatives to work well	Renal Services Network	2011	1	Effective communication established Where appropriate Service Level Agreements in place
6.3	Work with relevant professional associations and training institutions to increase the number of trainees entering relevant chronic disease specialities	Human Resources Division	2014	1	Strategies developed and implemented
6.4	Explore innovative models of extended scope of practice/assistant roles to enable staff with higher skill levels to focus on more specialised tasks	Renal Services Network	2011	2	Results of research available Strategies implemented to implement agreed models

Technology Strategies

Objective Seven: To identify and embrace current new technologies that will improve Renal Services within the ACT

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
7.1	Identify requirements of and implement strategies to develop communications and technology /management platform to support proposed model of service delivery, including the following strategies, and research directions	Renal Services Network	2010	3/4	Information technology/ management platform available
7.2	Investigate and implement an appropriate clinical record that will enable information exchange between renal services patients and the range of health care providers.		2010/11		Link to Strategy 7.1
7.3	Enable tele-monitoring of patients on dialysis in the community.		2010/11		Link to Strategy 7.1

Research and Teaching

Objective Eight: There will be a strong research component across all renal services within ACT Health supporting and informing the delivery of clinical services

	Improvement Action	Lead Responsibility	Timeframe	Funding	Performance Measures
8.1	Identify opportunities to build upon existing research relationships with universities	Renal Services Network	Ongoing	1	Opportunities identified
8.2	Ensure that clinical research is an integral part of relevant employees' roles	Renal Services Network	Ongoing	2	Framework developed Number of publications

Disaster Planning Strategies

Objective Nine: Create an integrated disaster management plan to action in the event of such an incident.

Improvement Action		Lead Responsibility	Timeframe	Funding	Performance Measures
9.1	Develop a Business Continuity Plan for ACT Renal Services	Renal Services Network	2010	2	Completion of Business Continuity Plan for ACT Renal Services

Climate Change / Environmental Strategies

Objective Ten: Explore opportunities to provide services in a more sustainable way

Improvement Action		Responsibility	Timeframe	Funding	Performance Measures
10.1	Explore opportunities to recycle water from ACT Health dialysis facilities in concert with broader ACT initiatives and infrastructure plans for water saving / recycling practices.	Renal Services Network with Business and Infrastructure Division	2011	4	Results of investigations are available

Evaluation

Progress against the strategies in the plan will be presented to ACT Health Portfolio Executive annually by Clinical Operations, ACT Health.

Abbreviations and Glossary of Terms

ABS	Australian Bureau of Statistics
ANZDATA	Australia and New Zealand Dialysis and Transplant Registry data
APD	Assisted Peritoneal Dialysis (Refer Chapter 7)
AIHW	Australian Institute of Health and Welfare
AHS	Area Health Service
CHC	Community Health Centre
CKD	Chronic Kidney Disease Refer Section 1 <i>Stage 1</i> –kidney damage but without decreased glomerular filtration rate (GFR) and usually without symptoms. <i>Stage 2</i> - kidney damage with some reduction in GFR, usually no symptoms, but with high blood pressure and possible dysfunction in other organs. <i>Stage 3</i> - significant reduction in GFR, increased levels of urea and creatinine in blood, dysfunction in other organs, often symptomless. <i>Stage 4</i> – severe reduced kidney function, high levels of urea and creatinine in blood, dysfunction in other organs, mild symptoms. <i>Stage 5</i> - kidney function no longer adequate to sustain life, range of symptoms and abnormalities in range of organs.
DRG	Diagnosis Related Group
ESKD	End Stage Kidney Disease Refer Section 1
GFR	Glomerular Filtration Rate Refer Section 1
GP	General Practice/Practitioner
GSAHS	Greater Southern Area Health Services (NSW)
HD	Haemodialysis
KHA	Kidney Health Australia
NP	Nurse Practitioner
PD	Peritoneal Dialysis
RRT	Renal Replacement Therapy Transplantation/dialysis
TCH	The Canberra Hospital

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Appendices

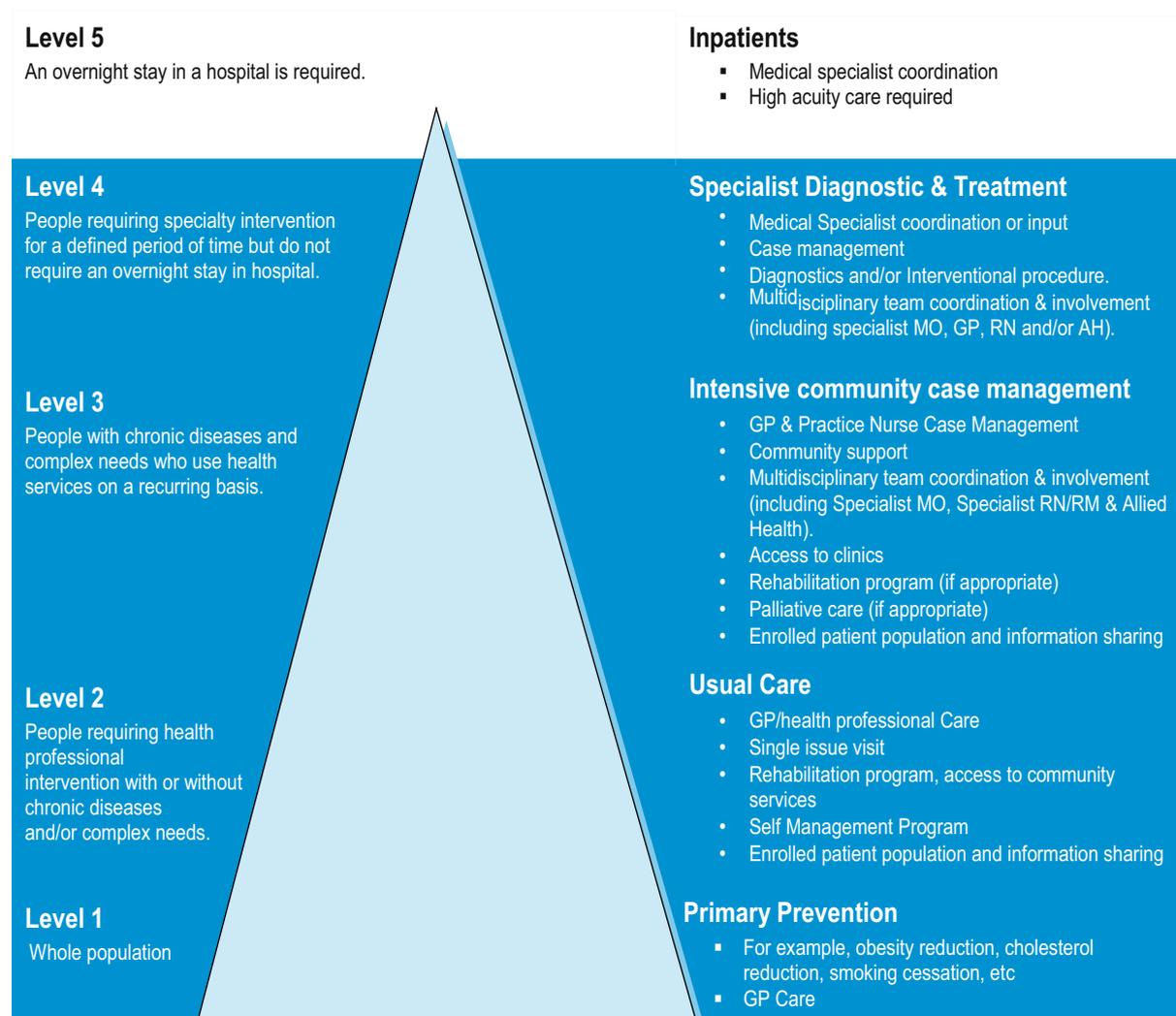
Appendix 1 Principles behind the Renal Health Services Plan

ACT Health Ambulatory Care Principles	Kidney Health Australia's Patient Charter Elements
Patient Centred	<ul style="list-style-type: none"> • Informed choice and discussion of treatment options • Maintaining independence • Confidentiality and respect. • Patients should be encouraged to play an active role in their management and treatment. • Patients with chronic kidney disease should have the opportunity to find work and if needed, assistance should be provided to help them achieve this goal.
Multidisciplinary and Collaborative	<ul style="list-style-type: none"> • Patients should be provided with appropriate access to multidisciplinary care and generalist primary care. • When a patient with chronic kidney disease presents to a hospital emergency department, the renal team should be notified and a nephrological consultation conducted as soon as possible.
Accessible	<ul style="list-style-type: none"> • Early referral for treatment • Waiting period for treatment should be in accordance with clinical priority policy. • Location and time of dialysis service at the nearest suitable location on a regular and predetermined schedule. • Patients with chronic kidney disease should receive appropriate treatment regardless of health insurance status. • Patients should not suffer financially for the cost of undergoing treatment. • Transport to and from dialysis would normally be the responsibility of the individual but no one should be denied dialysis because they cannot afford the cost of transport or are unable to access transport that will provide treatment.
Safe and High Quality	<ul style="list-style-type: none"> • Adequate treatment facilities and well trained staff • Best practice and total patient care. • Peritoneal dialysis should be explained and be available as a treatment choice • Haemodialysis should be explained and the restrictions on lifestyle understood by patients before a decision is made on which treatment to use. • Patients should be fully informed about kidney transplantation and whether or not it is suitable treatment for them. • Patients should be able to choose whether to accept or refuse treatments that are offered and should have palliative care offered as a treatment option. • All medication should be thoroughly explained by the prescribing doctor and the pharmacist at the commencement of treatment • Health care professionals should be vigilant for possible complications and risks and should monitor to avoid adverse outcomes
Population Health Approach	<ul style="list-style-type: none"> • Early diagnosis of chronic kidney disease. • Slowing the progression of kidney disease • Both short and long term planning to provide the necessary infrastructure for care of patients should include consumer input

Appendix 2

ACT Health Ambulatory Care Model

Ambulatory Care Model



Appendix 3: Proposed ACT Renal Services Network representation

ACT Health - Clinical Operations

TCH – Director, Renal Services

ACT Health – Aged Care & Rehabilitation Services

Kidney Health Australia – ACT Consumer Participation Committee

Aboriginal Health Representative

General Practice Representative

Greater Southern Area Health Service Representative

ACT Health - Health Improvement Branch

ACT Health - Allied Health Representative

ACT Health - Nursing Representative

Calvary Hospital Representative

Consumer Representatives

Non-government Organisation Representative

The above proposed membership list is indicative only and will be amended by the Renal Service Network once established.