

Kidney Health Services Plan

2018–2023



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How does this plan fit?

The Metro North Hospital and Health Service (Metro North HHS) Strategic Plan describes Metro North HHS vision, purpose and service objectives. The Health Services Strategy describes four focus areas which reinforce Metro North HHS commitment to providing high quality care centred around individual need and preferences. This Kidney Health Service Clinical Services Plan 2018-23 will assist in delivering key actions contained in the Health Service Strategy together with contributing to delivery of Metro North HHS Strategic Plan.

The relationship and cascade of strategic documents and health service plans is described below



Effective: October 2019 / Review: October 2020

How to read this plan

Metro North Hospital and Health Service Kidney Health Services have developed this Plan to provide direction and guidance on kidney health service development across the Hospital and Health Service for the next five years. Many actions in the Plan will be delivered by doing things differently within existing resources. Some actions will require resources to progress. It is important to recognise that kidney health services operate within a health service system with competing needs and finite resources and that allocation of new resources required to progress the actions will be subject to normal budgetary processes.

This Plan has been prepared in three parts:

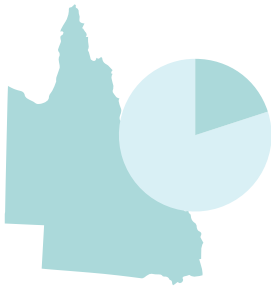
Part A: The health care plan – presents the future directions, success measures and supporting actions that will guide service delivery and enhancement for people with kidney disease over the next five years.

Part B: Context and background – describes the background information that was analysed and informed the development of the future directions contained in Part A. Information described in Part B includes the policy context, a review of the population and health status of people with kidney disease who live in Brisbane North, current service arrangements, service activity together with a summary of the issues and challenges facing the current service environment.

Part C: Implementation, monitoring and review – details the implementation, monitoring and review process that will be implemented on approval of this Plan.



KEY FACTS OUR POPULATION



METRO NORTH
has a population of
980,000
approx 20% of Queensland



Redcliffe and Caboolture
are experiencing
**SIGNIFICANT
POPULATION
GROWTH**

Part A – The Plan Introduction

Chronic kidney disease is a disease where kidney function deteriorates over time. Many people living with chronic kidney disease have other chronic diseases including hypertension/cardiovascular disease and diabetes. Kidney disease is silent; often people in the early stages of the disease do not have recognisable symptoms. This means many are not diagnosed until their kidney function has significantly and irretrievably deteriorated. With our current state of knowledge people diagnosed with chronic kidney disease require lifelong care and treatment. Care and treatment is determined based on the severity or extent of kidney deterioration which is categorised according to a progressive five stage scale based on kidney function.

People living Metro North who are diagnosed with stage 1 and 2 chronic kidney disease are largely managed in primary care by general practitioners. The aim of care at this stage of the disease is to slow its progression through lifestyle changes and medication. As the disease progresses and kidney function deteriorates patients at stage 3 (a and b) are often referred to a kidney specialist to manage complications relating to their poor kidney function. People at this stage of the disease are likely to receive joint care by a general practitioner and the kidney specialist. At stages 4 and 5 people are largely managed by kidney specialist teams. End stage kidney disease (stage 5) is the most severe form of kidney disease and requires people to receive dialysis or kidney transplantation to prolong life. [1]

Metro North HHS delivers kidney health care to patients with stage 3, 4, 5 kidney disease ensuring individual social, emotional and health care needs are supported. Kidney health services are provided across Metro North HHS by a multidisciplinary team. Kidney health services include education and information, pre and post transplantation care, dialysis access procedures, dialysis and supportive management. Transplant surgery is currently not provided in Metro North HHS and patients access services in Metro South HHS.

Our services are facing a range of significant challenges. A changing and growing population including population ageing and increased rates of people living with multiple chronic diseases has increased demand for kidney health services. People who are at risk of developing kidney disease or are in the early stages of the disease are often referred to Metro North kidney health services in late stages of the disease requiring treatment. Treatments in this late stage of the disease are limited. Dialysis is a time consuming treatment that significantly impacts people's lifestyle. Dialysis has inferior long-term survival rates compared to kidney transplantation however national shortage of donated kidneys means that many suitable end-stage kidney disease patients do not receive a transplant and therefore revert to dialysis or choose supportive care. [2]

Whilst Metro North HHS kidney health service system delivers excellent high quality patient care, it is consistently challenged by the increasing demand for care. Metro North HHS has actively worked to respond to challenges as they present however this reactionary approach has resulted in services not being distributed equitably and service mix not always aligning with the greatest health need.

The number of people aged 65 and over will increase by

↑ **3.7%**
per annum

This Plan has been developed as a proactive response to address the kidney health service demand challenges. A priority of this Plan is to support people living with chronic kidney disease across Metro North HHS to continue to receive best practice care. Recognising the need to keep people well and delay disease progression this plan considers the kidney health care continuum from early detection, transplantation, dialysis and supportive care. Acute kidney injury resulting in a sudden loss of kidney function, a risk factor for developing chronic kidney disease, is also increasingly growing in Metro North HHS and is included in the scope of this plan.

Informed by a comprehensive assessment of health need, current and future service activity, literature and consultation with Metro North HHS staff this Plan will guide kidney health service provision by Metro North HHS over the next five years. Patients and carers have also actively informed the development of this Plan. Our commitment to work with partner organisations to connect and coordinate care across the care continuum is also described. All actions will be progressed over the next five years, any actions requiring additional resources will be subject to normal budgetary processes.

KEY FACTS OUR HEALTH



1 in 4
adults are classified
AS OBESE



16.7%
of adults are
CURRENT SMOKERS



5%
of adults consume
alcohol at levels of
HIGH RISK

In Queensland

18.4%

of Aboriginal and Torres Strait Islander people are living with chronic kidney disease compared to approximately

10%

of the non-indigenous population



**ALMOST HALF OF
the adult population
suffer from a
LONG TERM
CONDITION**

2011/12

OVER HALF OF ADULTS
LIVING IN AUSTRALIA
with chronic kidney disease
also had

**CARDIOVASCULAR
DISEASE AND/OR
DIABETES**

KEY FACTS

KIDNEY HEALTH SERVICE

41%

of kidney dialysis activity
is performed by patients
at home



Metro North HHS
in-centre kidney dialysis
activity has increased

14.4%

over three years from
2014 to 2016

76% of people who
live in RBWH catchment
receive kidney services
locally compared to
57% people who live
in Caboolture Hospital
catchment receive
services locally

Acute kidney
injury admissions
increased

23.7%

over three years
from 2014 to 2016

90%

of patients admitted
with chronic kidney
disease were
classified as
stage 4 or 5

*“Queensland had one of the lowest
kidney transplant rates in Australia
from 2010 to 2014”*

What kidney health services are available in Metro North HHS and where?

Royal Brisbane and Women's Hospital population catchment	The Prince Charles Hospital population catchment	Redcliffe and Caboolture Hospital (Northern region population catchment)
<p>Royal Brisbane and Women's Hospital</p> <ul style="list-style-type: none"> • outpatients <ul style="list-style-type: none"> — general nephrology clinic — sub- speciality clinics – renal genetics clinic, kidney vascularitis clinic — transplant clinics – pre and post-transplant clinics with transplant case management • transition into dialysis unit (case management) • hot clinic (urgent clinical reviews) • inpatient kidney medical beds • inpatient consultation • acute kidney consultation liaison service • chronic centre based haemodialysis program • acute dialysis service • haemodialysis access • peritoneal dialysis access (Tenckhoff catheter) • kidney supportive care (in reach for inpatients, patients in high dependency chronic centre based haemodialysis unit and acute dialysis unit only) <p>North West Community Health Centre at Keperra</p> <ul style="list-style-type: none"> • independent chairs available (self-care) 	<p>The Prince Charles Hospital</p> <ul style="list-style-type: none"> • acute kidney consultation liaison service • acute dialysis service • haemodialysis access <p>Nundah Community Health Care Centre</p> <ul style="list-style-type: none"> • one stop chronic kidney team clinic • kidney supportive care clinics (hub) <p>Stafford Kidney Health Centre</p> <ul style="list-style-type: none"> • outpatients general nephrology clinic • transition into dialysis unit (case management) • peritoneal dialysis unit – training and maintenance • home haemodialysis unit – training and maintenance 	<p>Moreton Bay Integrated Care Centre</p> <ul style="list-style-type: none"> • outpatients general nephrology clinic • chronic centre based haemodialysis program • transition into dialysis unit (case management) • kidney supportive care (in reach from Nundah as required) <p>Caboolture Hospital</p> <ul style="list-style-type: none"> • independent chairs available (self-care) <p>Kilcoy Hospital</p> <ul style="list-style-type: none"> • telehealth services from chronic kidney team at North Lakes <p>North Lakes Health Precinct</p> <ul style="list-style-type: none"> • outpatients general nephrology clinic • kidney business • one stop chronic kidney team clinic • chronic centre based haemodialysis program • kidney supportive care (in reach from team based at Nundah as required)

Who delivers kidney health services?

Kidney health services in Metro North HHS are delivered by a team of highly skilled staff that include nephrologists, nurses and allied health professionals including (dietitians, pharmacists, psychologists and social workers). Our kidney health services team work in partnership with other speciality teams across Metro North HHS to deliver care that meets the health needs of individuals.

What outcomes will we achieve through implementation of this plan?

This plan will guide decision making for Metro North HHS kidney health services over the next five years. Implementation of the directions and associated actions will drive continuous improvement and innovation. Through implementing this plan Metro North HHS will achieve the following outcomes:

- *person-centred care* – better engagement of people with kidney health disease enabling them to make informed decisions in managing their conditions and treatment processes that best suit their needs, aiming for better experiences of care, improved quality of life and better health outcomes
- *access* – increased and equitable access to Metro North HHS kidney services for all Metro North HHS residents delivered by a highly skilled workforce
- *effective care* – evidenced-based practice and systems including translations from the high quality research programs of the service e.g. early detection of reduced kidney function
- *safe care* – sustainable quality best practice care resulting in reduced care complications that is prospectively monitored and reported e.g. surveillance and sentinel systems in place
- *efficient care* – a culture of monitoring and analysis of performance and reporting for the purposes of implementing sustainable changes in practices to maximise current resources e.g. reduced duplication and wasteful practices, avoiding frequent and prolonged hospitalisation
- *integrated care* – integrated and multidisciplinary chronic kidney disease management that takes a population perspective.

What will be the future of kidney services in Metro North HHS in five years?

Metro North HHS kidney health services actively partner with patients and families to enable them to make informed decisions regarding their care and treatment through each stage of the disease. Through this partnership care and treatment is tailored to what is important to the individual being respectful and responsive to the diverse physical, social, emotional cultural and spiritual care needs of individuals.

We understand that the best way to reduce the health burden associated with chronic kidney disease is through disease prevention, early identification and management. Working together with the broader health care system including Brisbane North PHN, general practitioners and other community health providers and local kidney support groups Metro North HHS ensures people with or at risk of kidney diseases have access to early awareness, screening and management of kidney disease. Collaborative integrated care pathways are advanced to support people with multiple chronic diseases including chronic kidney disease to be cared for in an integrated and coordinated way across providers and service settings.

Proactive planning drives Metro North HHS kidney health service system change and resource allocation. As a priority all processes, practices and models of care are reviewed and as required reoriented to ensure care is patient centred, efficient and cost effective. Short term maximising current resources is our priority.

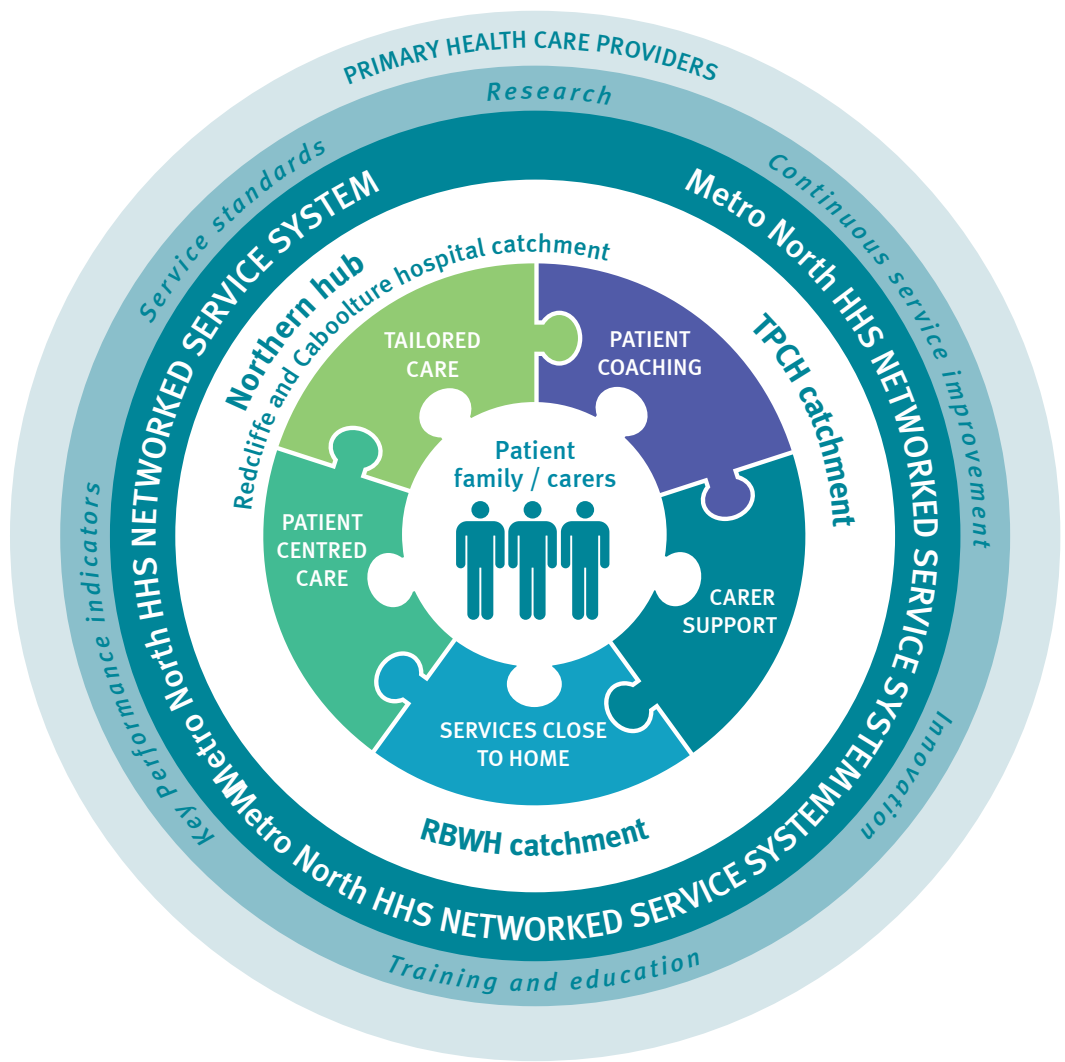
In response to the increasing prevalence of kidney disease and demand on health services Metro North HHS increases education, management and treatment of kidney disease close to where people live. A new transplant surgery service is established in Metro North HHS recognising transplantation provides the best long term health outcomes for suitable patients. Early identification and timely treatment of people with acute kidney injury is advanced to avoid kidney function deterioration.

The Metro North HHS wide networked kidney health service model is enhanced with proactive planning informing development of sustainable high quality, innovative services. These are underpinned by a whole of Metro North HHS commitment to technological advances, research, education and training. Staff are supported to participate in innovative evidence based practice and research. A strong collaborative integrated governance arrangement is established including clinical and executive leadership from across Metro North HHS and informs kidney health services planning, resource allocation, clinical redesign and oversees quality and performance.



This whole of Metro North HHS approach is balanced by a local population catchment approach to planning and delivering kidney health services. Metro North HHS is made up of geographic catchment areas where the population is naturally connected to local hospitals including Redcliffe, Caboolture and Kilcoy Hospitals, The Prince Charles Hospital and Royal Brisbane Women’s Hospital (see appendix 2). These geographic areas guide planning and service growth ensuring new and enhanced kidney health services better meet local health needs and enable local relationships to be established with patients and the community.

Figure 1: Metro North HHS kidney health service system in five years



Why is this important:
People with kidney disease, families and carers told us
“I want to actively participate in my care and treatment choices including discussion and consideration of my personal lives and individual circumstances.”

Service Directions

This Plan provides service directions, each with its own set of service standards and actions, to guide the development of kidney health services in Metro North HHS. The Plan aligns and supports delivery of the Queensland Statewide Renal Health Services Plan for 2008-2017 and has been informed by work currently occurring to revise this statewide plan. Actions are described in two groups—those actions that should be implemented as a priority within the next one to two years and those that can be achieved within the next five years.

Direction 1 – Metro North HHS kidney health services will deliver tailored person centred care

People who receive care in Metro North HHS kidney health services will receive care that is tailored and is responsive to their preferences, needs and values. Patients and their carers will be actively involved in planning, decision making, self-managing and monitoring their care. Patients with chronic kidney disease face critical decision making points at each stage of the disease. We commit to providing high quality information and education to all patients to empower and support patients and families to actively participate in and make critical decisions throughout their journey.

We will strengthen the organisational culture of kidney health services to deliver person-centred care across service settings and along the care continuum. Recognising our patients as partners we will work together to design the service system and models of care.

Why is this important – People with kidney disease, families and carers told us

- I want to actively participate in my care and treatment choices including discussion and consideration of my personal lives and individual circumstances.
- Having my supporting friends and family at my appointments make me feel like my best care options are understood.

What are our service standards*

Standard 1a – People with established kidney failure have access to psychosocial support (which may include support with personal, family, financial, employment and/or social needs) tailored to cultural and religious beliefs and appropriate to their circumstances.

Standard 1b – All patients and their family members or carers, undertake individualised/ personalised education programmes and are offered opportunity and support throughout stages of the disease. Adults are supported to make informed choices regarding their treatment options.

Standard 1c – Physical environment for dialysis services at the hospital and community is patient friendly and comfortable. *(this standard also links in with standard 3a).*

* Many of the service standards have been adopted from the National Institute of Clinical Excellence, NHS (National Health Service).

How will we measure the standards

- Proportion of patients undertaking individualised education program (both targeted and generic) at all stages of kidney disease.
- Proportion of family members or carers of adults given an opportunity to undertake education program at all stages of kidney disease.
- Proportion of patient survey results reporting understanding and knowledge of kidney disease progression and treatment pathways.
- Number of quality improvement initiatives undertaken that include consultation and collaboration with patients.
- Proportion of strategic and governance planning committees or groups which includes consumers on its membership.

No.	Priority actions	Responsibility
1.1	Update and, where needed, develop information and education curriculum that can be delivered in various modes such as mobile, face to face, telehealth and internet that enables: <ul style="list-style-type: none"> • all kidney health service patients and families to access information and education about the disease (acute and chronic kidney disease), kidney replacement therapy and supportive care • ongoing patient education with checkpoints along the care journey to support people to make informed choices regarding their care and treatment • palliative care options discussions to be had early and on an ongoing basis • patients to be empowered to collaborate with multidisciplinary teams as equal partners in their care • family/carer engagement. 	KHS
1.2	Design and deliver tailored information and education for: <ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander people • Culturally and linguistically diverse communities • Patients with a cognitive impairment. 	KHS
1.3	Enhance education for patients their carers and families that dialyse at home to ensure understanding of how to access: <ul style="list-style-type: none"> • phone support (24/7) • nursing/medical support at home • equipment maintenance • respite • holiday dialysis. 	KHS
1.4	Employ staff using a process that includes value based competencies.	KHS & RBWH
No.	Actions to be delivered over 5 years	Responsibility
1.5	Advocate and influence State government to modify the patient transport scheme (similar to NSW) to include kidney patients without requiring minimal mileage threshold.	Medicine stream
1.6	Implement the patient experience caRe tool to systematically capture patient, family and carer experiences that will be used to inform service improvements.	KHS Metro North HHS Safety and Quality
1.7	Pilot a program to support newly diagnosed kidney health patients to be supported by existing patient champions.	KHS

Note: KHS – Kidney Health Service Metro North HHS

Why is this important: People with kidney disease, families and carers told us

“Having access to education and awareness within the community to increase prevention and early detection is very important.”

Direction 2 – Metro North HHS will partner to promote early detection and management of kidney disease.

Chronic kidney disease can advance over many years with no symptoms. The silent nature of the disease means it is important people who are at risk are made aware of factors to monitor. It is also important health care providers are educated and informed to be vigilant in efforts to detect the disease early. Supporting people to be educated to prevent the disease or slow disease progression is a priority. Metro North HHS kidney health services commit to continuing to partner with patients, general practitioners, primary care, Brisbane North PHN, Institute of Urban Indigenous Health and peak consumer organisations to advance this agenda. Recognising many people who have chronic kidney disease also often live with other chronic diseases, Metro North HHS will partner with the above mentioned organisations to advance integrated clinical pathways. Together we will work to develop pathways that enable people to receive planned rather than reactive care, are patient centred and focus on health outcomes that are important to the patient.

Why is this important: People with kidney disease, families and carers told us

- Having access to education and awareness within the community to increase prevention and early detection is very important.
- Marketing and promoting the risk factors of kidney disease, so more people have checks. A lot of cases of end stage kidney disease treatment could possibly be prevented or delayed if identified in the early stages.
- I want to be able to coordinate my multiple specialist appointments on a single day. This is a problem if you have multiple conditions like kidney failure, diabetes, vision issues, heart issues.
- I want my doctor to have all the information from my hospital appointments.
- I want to be able to go to a GP who has training in diagnosing the early stages of kidney failure.

What are our service standards

Standard 2a – Adults with, or at risk of, chronic kidney disease have estimated Glomerular Filtration Rate (eGFR) creatinine and albumin creatinine ratio (ACR) testing at the documented frequency agreed by the General Practitioner and Nephrologist / or as per guidelines.

Standard 2b – Patients together with general practitioners and relevant kidney clinicians will have current agreed care plans appropriate to the stage and rate of progression of chronic kidney disease.

How will we measure the standards

- Proportion of patients with chronic kidney disease with an agreed and documented care plan appropriate to the stage and rate of progression of chronic kidney disease.
- Clinical care pathways that support integrated chronic disease management are developed, shared and used.
- Increased education sessions between nephrologists and general practitioners and nurses.



What will we do

KHS – Kidney Health Service Metro North HHS | **COSI** – Clinical Operations and Strategy Implementation | **GPLO** – General Practice Liaison Officer

No.	Priority actions	Responsibility
2.1	Design and implement a local catchment approach to deliver connected integrated kidney health care across all stages of the disease through a partnership with patients, community agencies, primary care, general practice and hospital services.	KHS Hospital Clinical Directorates CISS Medicine Stream
2.2	Work with Brisbane North PHN to develop and implement an education program to upskill general practitioners and practice nurses on best practice early detection, monitoring and management of chronic kidney disease and care of acute injury patients.	KHS Medicine Stream COSI (GPLO's)
2.3	Develop and implement clinical pathways that enable best practice care for people with chronic kidney disease being cared for in the community in partnership with Brisbane North PHN and local general practices.	KHS Medicine Stream COSI (GPLO's)
2.4	Develop integrated clinical care pathways for 'at risk' acute kidney injury patients to be cared for in the community and regularly monitored for early detection of chronic kidney disease in partnership with Brisbane North PHN and local general practices.	KHS Medicine Stream COSI (GPLO's)
2.5	Design and implement one patient care plan that is shared between care providers across multidisciplinary teams inclusive of patient care goals.	KHS Medicine Stream COSI (GPLO's)
2.6	Work in partnership with Metro North HHS Aboriginal and Torres Strait Islander Unit and diversity team to explore care navigation and coaching roles for patients with kidney disease.	KHS Metro North HHS Aboriginal and Torres Strait Islander Unit Diversity Officer
2.7	With partners review current referral process and template and update as required to ensure ease of use and increased compliance.	KHS
No.	Actions to be delivered over 5 years	Responsibility
2.8	Support partner organisations to increase community awareness of chronic kidney disease.	KHS
2.9	Explore establishing care navigation and coaching roles to support care of people with multiple chronic diseases including chronic kidney disease.	KHS
2.10	Informed by local catchment health needs and partner organisation programs increase initiatives that promote early detection and management which may include: <ul style="list-style-type: none"> • Keeping Kidneys General Practitioner with Special Interest (GPwSI) pilot program • Kidney Business program that provides screening at the local Aboriginal and Torres Strait Islander community festivals • Kidney Check Australia Taskforce (KCAT) education program. 	KHS Medicine Stream COSI (GPLO's) Metro North HHS Aboriginal and Torres Strait Islander Unit
2.11	Explore opportunities to support information to be shared in real time across providers to proactively manage kidney disease and enable specialist support in timely manner.	KHS RBWH Metro North HHS ICT

Why is this important: People with kidney disease, families and carers told us

“I want to be cared by staff who are friendly and helpful in a nice environment like the community facilities.”

Direction 3 – Metro North HHS will implement enhanced models of care and increase capacity to deliver treatment to people with kidney disease as close to home as clinically appropriate.

The current networked kidney health service will be enhanced to deliver consistent best practice multidisciplinary models of care that are tailored to local population catchment health needs and complimentary to the broader health service system. Metro North HHS wide standards, protocols and care pathways will be introduced and monitored to ensure consistent high quality care is delivered across the HHS. Treatment for people with end stage kidney disease significantly impacts people's quality of life. People who are at stage 5 end stage kidney disease must receive a kidney transplant, start dialysis or choose a conservative care pathway. Anyone who starts dialysis will require access surgery. Over the next five years Metro North HHS will:

- improve access to genetic care pathways
- improve timeliness of referral to access surgery
- increase the provision of access surgery
- increase the provision of home based therapies
- increase centre based dialysis services in settings close to where people live
- expand supportive care access
- increase access to transplant services.

Recognising transplantation provides the best long term health outcomes for suitable patients. Metro North HHS will advocate for a new living donor kidney transplant service to be established in Metro North HHS.

Why is this important: People with kidney disease, families and carers told us

- I want to be cared by staff who are friendly and helpful in a nice environment like the community facilities.
- Better support and training for people on home based treatments is needed.
- More flexibility with specialists appointment times, maybe more phone or face time consultations.
- I want to be treated in treatment facilities closer to home.
- When I reach the stage of palliative care, I would like caring and supportive staff in a peaceful area.

Why is this important: People with kidney disease, families and carers told us

“I want to be treated in treatment facilities closer to home”.

What are our service standards

Standard 3a – All patients have access to kidney services closer to home where clinical criteria (to be developed) are met (this standard also links in with standard 1c).

Standard 3b – Adults who need long term dialysis are offered home based dialysis with a peritoneal dialysis first philosophy (where clinically appropriate) and provided support in the home environment including capacity for home visit and review home circumstances. Patients will have access to an identified clinical team for support.

Standard 3c – Adults with established kidney failure who are starting planned dialysis will receive timely and ongoing education on all three pathways (transplantation, dialysis and kidney supportive care) to inform their decision making.

Standard 3d – Adults with established kidney failure who choose dialysis will receive timely surgery to establish a functioning arteriovenous fistula or peritoneal dialysis catheter prior to commencing dialysis.

Standard 3e – Adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment and evidenced based practice guidelines.

Standard 3f – Adults who will need kidney replacement therapy who meet criteria are offered a pre-emptive kidney transplant and adults on dialysis are offered a kidney transplant.

Standard 3g – People who are at risk of acute kidney injury are made aware of the potential causes and people in hospital who are at risk of acute kidney injury have their serum creatinine level, albuminuria and blood pressure monitored.

Standard 3h – Patients that express a desire to withdraw from treatment are supported in a structured program with clear treatment protocols and an agreed palliative care treatment plan.

How will we measure the standards

- Increased percentage of patients receiving kidney care in their local catchment.
- Percentage of dialysis patients offered the option of home dialysis.
- Increased percentage of patients on home dialysis.
- Proportion of patients starting dialysis with a functioning arteriovenous fistula or peritoneal dialysis catheter.
- Percentage of patients that have a documented plan for monitoring and maintenance of vascular access.
- Process is in place for monitoring and maintenance of the vascular access for patients on haemodialysis.
- Evidence based practice guidelines are developed and consistently implemented for vascular access.
- Proportion of eligible dialysis patients either on the waiting list for a kidney transplant or being worked up for a transplant
- Increased number of patients offered transplantation.
- Increased number of agreed and documented palliative care treatment plan and advanced directive for all eligible kidney disease patients, irrespective of end stage or dialysis status.

What will we do

No.	Priority actions	Responsibility
3.1	Establish a steering group with representation from RBWH, Redcliffe, Caboolture, TPC and CISS Directorates to guide Metro North HHS kidney health service planning, clinical redesign, resource allocation and quality of care and performance monitoring.	KHS, Hospital Clinical Directorates, Medical Imaging Directorate, CISS, Medicine Stream
3.2	Expand pre-dialysis education and make it available in each population catchment to support patients in making the best decisions for their care.	KHS Hospital Clinical Directorates Medicine Stream
3.3	Establish a multidisciplinary team inclusive of vascular, kidney and transplant clinicians to develop and implement best practice access surgery pathways that support timely surgery for initial access, ongoing monitoring and maintenance of procedures.	KHS Vascular surgery RBWH Surgery Stream Medical Imaging
3.4	Explore development of a fistula access monitoring and surveillance service for patients as close to their homes as possible.	KHS Vascular surgery RBWH Surgery Stream Medical Imaging
3.5	Develop and implement a process to monitor all admitted patients with abnormal and/or deteriorating kidney function with timely consultations by a nephrologist.	KHS All Hospital Clinical Directorates
3.6	Document and implement a consistent multidisciplinary team best practice model of kidney health care across Metro North HHS to ensure excellent care for all.	KHS Medicine Stream
3.7	Advocate for a new living donor kidney transplant service to be established in Metro North HHS.	KHS Metro North HHS Executive Director Operations
3.8	Initiate general nephrology kidney health outpatient clinics at Caboolture Hospital.	KHS Caboolture Hospital Clinical Directorate
3.9	Explore the feasibility to: <ul style="list-style-type: none"> undertake radiological access services at Redcliffe and Caboolture Hospitals provide outpatient vascular access consult services at Redcliffe Hospital. 	KHS Vascular surgery RBWH Metro North Medical Imaging Redcliffe and Caboolture Hospital Clinical Directorate
3.10	Cohort the kidney health service medical beds at RBWH into a dedicated inpatient space to support efficient delivery of specialist kidney care including specialist nursing care.	RBWH Hospital Clinical Directorate KHS
3.11	Increase access to peritoneal dialysis services in Metro North HHS by expanding the current peritoneal training service at Stafford and establishing peritoneal dialysis support services (e.g. fluid assessment, fluid drop off service) at Caboolture Hospital.	KHS Caboolture Hospital Clinical Directorate
3.12	In partnership with patients and kidney health clinical staff identify and address barriers to people taking up the option of home dialysis.	KHS
3.13	In partnership with palliative care teams across Metro North HHS expand programs to support people who choose conservative management programs.	KHS Medicine stream, TPC, Caboolture and Redcliffe Hospital Directorates

3.14	Develop and implement a program/s to support respectful and culturally appropriate discussions regarding treatment for end stage kidney disease including conservative management in partnership with Aboriginal and Torres Strait Islander people and other culturally and linguistically diverse communities.	KHS Metro North HHS Aboriginal and Torres Strait Islander Unit Diversity officer
3.15	Develop pathways and formalised models of care to support seamless transition of care of children/youth with kidney disease to adult services with aim to proactively manage specific needs of this cohort of patients.	KHS
3.16	Actively contribute to delivering Metro North HHS centre of excellence care for older people.	KHS Medicine Stream
No.	Actions to be delivered over 5 years	Responsibility
3.17	Increase haemodialysis capacity and develop a home therapies hub to improve local access for people who live in the northern region of Metro North HHS.	KHS Medicine Stream RBWH, Redcliffe and Caboolture Hospital Directorates
3.18	Establish in-centre haemodialysis capacity at TPCH.	TPCH Clinical Directorate KHS Medicine Stream RBWH Clinical Directorate
3.19	Expand nephrology services at Redcliffe Hospital in a networked service model with RBWH by providing: <ul style="list-style-type: none"> • general and sub-speciality nephrology outpatient clinic • inpatient consultation service • a post-transplant clinic. 	KHS RBWH and Redcliffe Hospital Clinical Directorates
3.20	Develop nephrology services at Caboolture Hospital in a networked service delivery model by providing: <ul style="list-style-type: none"> • general and sub-speciality nephrology outpatient clinic • inpatient consultation service • biopsy services. 	KHS RBWH, and Caboolture Hospital Clinical Directorates
3.21	Develop Metro North HHS as national leader in kidney genetics in partnership with Genetic Health Queensland.	KHS GHQ
3.22	Develop and implement consistent care pathways inclusive of dietary advice and care.	KHS RBWH Nutrition and Dietetic Services
3.23	Explore the introduction of a case managed approach to care for people with kidney disease and multiple other complex/chronic conditions.	KHS
3.24	In line with dialysis capacity increases grow enabling services including vascular access, pharmacy and outpatient administrative services.	RBWH Clinical Directorate KHS Medicine Stream Surgery Stream
3.25	Explore developing a pilot integrated disease management project for kidney health patients with multiple chronic conditions/diseases where specialists from across specialities work together toward patient health and treatment goals.	KHS Medicine Stream Metro North HHS Research
3.26	Explore the opportunity to track and monitor patients who are 'at risk' of developing end stage kidney disease by data linkage across a variety of datasets and diverse sources including pathology.	KHS Metro North HHS ICT

We commit to providing innovative evidence based quality care that is underpinned by service standards and measurements.

Direction 4 – Metro North HHS kidney health services will drive continuous improvement through health research, education and training.

Metro North HHS kidney health service capacity to deliver outstanding health care will be advanced through our commitment to continuous improvement. We commit to providing innovative evidence based quality care that is underpinned by service standards and measurements.

Metro North HHS has a strong culture of research and evidence based health improvement and is committed to supporting, developing and nurturing staff to lead better patient's outcomes. Through translating research into clinical practice and continuing to develop and nurture our staff Metro North HHS kidney health services will continue to be recognised as a leader in kidney health care nationally and internationally. We will increase our research collaborations including between departments, professions and facilities in Metro North HHS; partnerships with other health care services, the Brisbane North PHN, non-government organisations, and partnerships with academic organisations. Further, over the next 10 years Metro North HHS kidney health services will utilise these research, translation, education and engagement activities to inform future directions and opportunities for subsequent service plans. This recognises that the clinical practice of nephrology and kidney health is likely to significantly evolve in the medium to long term, and take advantage of emerging technologies, practices and therapies.

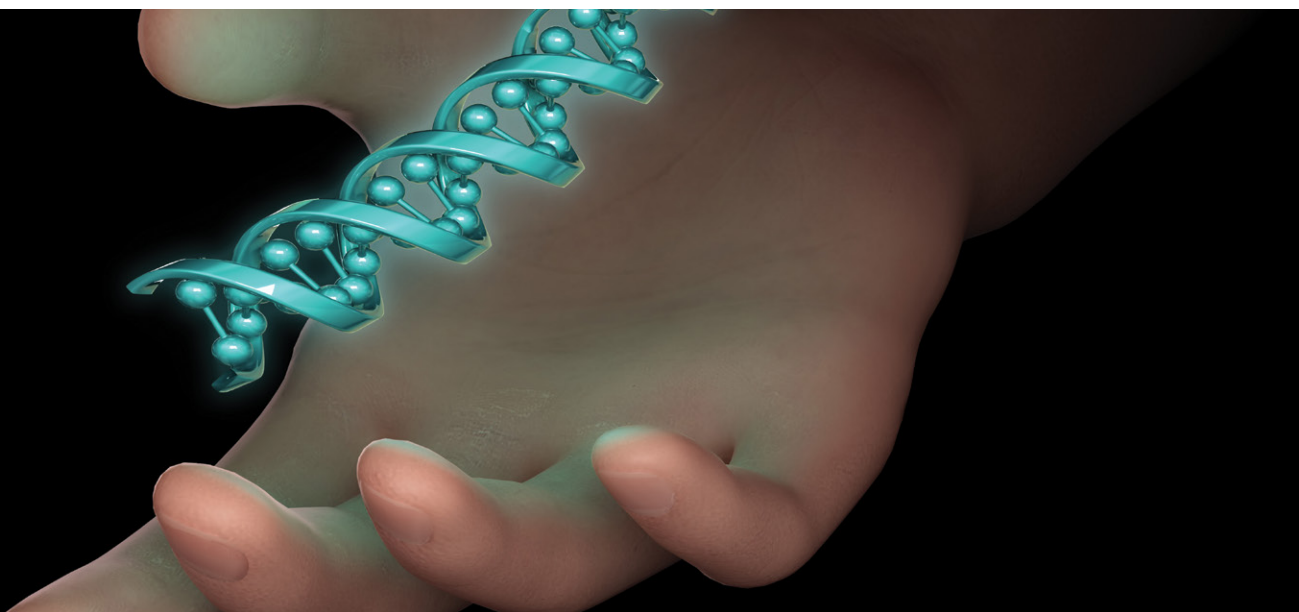
What are our service standards

Standard 4a -Care for people with kidney disease will be underpinned by continued research to achieve optimal health outcomes.

Standard 4b – Metro North HHS kidney health services will be monitored and measured by KPI's and service performance measures.

How will we measure the standards

- Number of KHS staff undertaking research and training to advance kidney health services.
- Number of published papers by KHS staff.



What will we do

No.	Priority actions	Responsibility
4.1	Lead continuous improvement by: <ul style="list-style-type: none"> • implementing service standards included in this plan • measuring and reporting performance against standards on a regular basis including benchmark against other services • evaluate the results and make service improvement adjustments • publish results for staff and people with kidney health disease to access in an agreed timeframe. 	KHS Medicine Stream
4.2	Enhance education and professional development programs in partnership with universities to support existing staff and enable succession planning for nephrologists, nursing and allied health with kidney health expertise.	KHS Medicine Stream
4.3	Increase patient access to clinical trials by : <ul style="list-style-type: none"> • increasing partnerships with research institutions and universities to increase clinical research programmes across facilities • extending clinical trial programs to allow patients at all Metro North HHS sites access to trial treatment options • improving access to training and certification required for clinical trial involvement • improving awareness of clinical trial opportunities among clinicians and patients. 	KHS Medicine Stream Metro North HHS Research
4.4	Explore establishment of RBWH as a training site for second year pharmacist residents in The Society of Hospital Pharmacists of Australia residency program for elective rotations in nephrology.	KHS Allied Health RBWH Hospital Directorate
4.5	Actively partner with Genetic Health Queensland, research institutions, universities and alliances to advances genetic and genomic kidney health research.	KHS Genetic Health Queensland
4.6	Build on existing partnerships to support staff to participate in research and publish articles.	KHS Metro North HHS Research
4.7	Utilise outcomes of 5.1-5.6 above to inform future MNHHS kidney health service plans and the future integration of emerging technologies, practices and therapies as the nephrology standard of care continues to evolve.	KHS Medicine Stream MNHHS Research
4.8	Actively partner with research institutions including the Queensland Institute of Medical Research, universities and other organisations such as CKD Queensland to advance research.	KHS Medicine Stream MNHHS Research
4.9	Participate in the development of the Metro North Biobank facility to advance chronic kidney disease research	KHS MNHHS Research

Note: KHS- Kidney Health Service Metro North HHS



Part B – Context and background

Part B of the Plan summarises the background information that was analysed to inform the development of the directions and actions contained in Part A. Information described in Part B includes the policy context, population and health status of people who live in Brisbane North, current service arrangements together with a summary of the issues and challenges facing the current service environment.

1.0 Policy

Improving wellbeing and providing timely treatment for people with kidney disease is a priority nationally and internationally. Below is an overview of current national and international policy relating to chronic kidney disease. A summary of literature findings is also provided.

1.1 Australia

The Queensland Statewide Renal Health Services Plan for 2008-2017 [2] was developed in response to significant increases in demand for dialysis, kidney transplantation and other services related to chronic kidney diseases. The Department of Health is currently in the process of reviewing and updating the Queensland Statewide Renal Plan.

The strategic objectives relating to kidney health services from jurisdictions across Australia are listed in the table below.

	Tasmania (2010) [3]	Queensland (2008) [2]	Northern Territory [4]
Strategic Objectives	Provide a coordinated and responsive approach to service delivery	Invest in chronic disease detection and management	Continue development of a functional hub and spoke model of governance and service delivery
	Integrate renal services across the continuum of care	Expand treatment options for patients with end-stage kidney disease	Invest in chronic kidney disease detection and management
	Develop a sustainable and equitable state-wide renal service	Promote a sustainable multidisciplinary workforce for renal services	Ensure treatment options for patients with End Stage Kidney Disease are affordable and sustainable, closer to home or home based
	Maintain an efficient and effective service	Develop a functional hub and spoke service network and governance framework	Promote a sustainable and multidisciplinary workforce with increased Aboriginal and Torres Strait Islander participation
			Develop minimum service standards, guidelines and resources for the delivery of renal services

1.2 International

International strategies, plans and national guidelines that guide the delivery of kidney services internationally were also reviewed. Documents utilised to inform this Plan include:

- The United Kingdom renal registry collects analyses and reports on data from renal centres across United Kingdom. The National Institute for Health and Care Excellence [5] has developed and published safety and quality guidelines that directs the delivery of kidney services in National Health Service.
- Ontario Renal Plan 2015-2019 [6]. This is a four year plan that guides the delivery of kidney services and addresses patient care across all stages of the kidney care journey, from early detection through dialysis, palliative care and transplant.
- The Blueprint for Improving Renal Services in New Zealand [7] describes the priorities for kidney health services in New Zealand

2.0 Literature review

Plans, reports, policies, guidelines and standards in the literature review were scanned from jurisdictions that are comparable specifically United Kingdom, Canada and New Zealand. The following themes were identified:

Early detection

Most countries included in the review have strategies to improve early detection of chronic kidney disease. This focus is motivated partially by the high costs associated with treatments, and recognising that changing population demographics and lifestyle choices leads to increases in chronic kidney disease (such as obesity) and necessitate a focus on early detection.

Patient-centred Care

The focus on patient-centred care is recognised by all health systems. The need to empower patients to be able to manage their care, to understand the various treatment options available to them (such as conservative care) and make informed choices and decisions are key themes across all countries.

Care coordination

Many papers highlighted that most patients living with chronic kidney disease also live with other conditions or diseases. Their care is provided by multiple health professionals. Creating linkages between primary and acute care, providing centralised data registries, and providing General Practitioners education are some of the more common ways that health care providers are trying to improve care for patients.

Home-based treatments

Given the difference in costs to treat a patient at home versus in the acute care setting, all jurisdictions included home-based treatments as a core strategic objective. Most have developed clinical guidelines and recommendations to help identify all patients eligible to receive home-based treatments safely.

Kidney transplantation

Although expensive in the first year, there is widespread policy acknowledgement that increasing kidney donations and transplantations will have benefits both for patient quality of life and for health system finances. The rates of donations varied significantly across the jurisdictions, as did their focus on living or deceased donor participation rates.

2.1 Horizon scanning

Emerging technologies expected to impact on the way kidney care is delivered over the next decade include:

- genetic and genomic advancements
- cell therapy for positive desensitisation of cross match to reduce transplant rejection
- wearable portable artificial kidney and bio artificial kidneys
- portable haemodialysis machine such as NxStage System One Dialysis System.

3.0 Population and health status

Metro North HHS currently has a population of over 980,000 people. By 2026 the local population is anticipated to grow to over 1.1 million people, with the population growth for older people aged 65 years and over projected to increase by 40 per cent [8]. This population growth will not be equally distributed across Metro North HHS with a high population growth expected in the northern region of Caboolture and Redcliffe Hospitals. Metro North HHS also delivers services to regional and statewide catchments for complex specialist services. Approximately 20 per cent of all patients cared for in Metro North HHS hospitals reside in other Hospital and Health Services.

In 2015, approximately 21,040 adults in Metro North HHS identified as of Aboriginal and/or Torres Strait Islander origin, representing 2.2 per cent of the adult Metro North HHS population [9]. In 2016, 46.8 per cent of Metro North HHS residents reported having a long-term health condition. Aboriginal and Torres Strait Islander people were 1.7 times more likely to report a long-term health condition than the non- Indigenous population of Brisbane North.

Metro North HHS is a diverse population with diverse health outcomes. Many people in Metro North HHS have a number of risk factors that are associated with the development of chronic kidney disease in adults:

- aged 60 years or older
- low birth weight
- Aboriginal and Torres Strait Islander descent
- diabetes
- obesity
- high blood pressure
- tobacco smoking.



Diabetes is the most common primary kidney disease amongst people commencing kidney replacement therapy (41.1 pmp) more than twice the next highest (glomerulonephritis, 18.7 pmp) [10]. The level of comorbidity among people with chronic kidney disease is estimated to be high. In 2011–12, over half of adults (51 per cent) with chronic kidney disease were estimated to have a comorbidity of cardio vascular disease and/or diabetes. The level of comorbidity for people with chronic kidney disease increased with age, from 10 per cent in the 18–44 age group to 74 per cent in the 65 and over age group.

End stage kidney disease is the final stage of chronic kidney disease in which the kidneys no longer function well enough to meet the needs of daily life. The Australia and New Zealand Dialysis and Transplant Registry records patients being treated with kidney replacement therapy and transplantation and the data indicates:

- in 2015, a total of 468 adults commenced kidney replacement therapy (dialysis or transplant) in Queensland, 63 per cent of which were males. The largest proportion of new cases were between the ages of 65 to 74 years (25.6 per cent), followed by 55 to 64 years (20.0 per cent) and 75 to 84 years (18.2 per cent)
- as at 31 December 2016, there were 2376 Queenslanders living with end stage kidney disease accessing dialysis and based on reported Queensland prevalence rates, Metro North HHS had an estimated prevalence of 335 residents living with end stage kidney disease and accessing dialysis.
- the rate of new transplants completed in Queensland in 2016 was the second lowest of the transplant regions. Prior to 2016, transplant rates had been decreasing since 2011
- as at 31 December 2016, there were 2087 Queenslanders living with a kidney transplant. The prevalence (pmp) of kidney transplants in Queensland is third lowest in Australia.

Acute Kidney Injury risk factors include older age, diabetes, hypertension, obesity and cardiovascular disease. Pre-existing chronic kidney disease has been identified as the most important risk factor for the development of acute kidney injury, with approximately 44 per cent of people admitted for acute kidney injury having a pre-existing diagnosis of chronic kidney disease [11].

Acute Kidney Injury is also commonly identified as a hospital-acquired disorder. Trends reported for the Australian population indicate there has been a significant increase in the number and rate of hospitalisations where acute kidney injury was recorded as a principal diagnosis. Between 2000-01 and 2012-13, hospitalisation rates doubled with an increase of approximately 6 per cent per year [12].

4.0 Service activity

A detailed analysis of service activity data from across Metro North HHS informed the development of this Plan. The following is a summary of this analysis.

Emergency Department

Between January 2014 and December 2016 (calendar years) 75 per cent of patients presenting to a Metro North HHS Emergency Department with a kidney health related diagnosis were admitted compared to the average admission rate of 38.6 per cent for all patients.

Renal dialysis

- In 2016, 41.0 per cent of renal dialysis activity was delivered in the home/community
- Over three years from January 2014 to December 2016 (calendar years):
- renal dialysis activity (admitted and non-admitted) for Metro North HHS residents increased by 4.9 per cent
- admitted renal dialysis activity for Metro North HHS residents increased by 14.7 per cent
- admitted peritoneal dialysis increased 201.3 per cent (from 80 separations to 241 separations) compared to an increase of 16.1 per cent for admitted haemodialysis (from 22,006 separations to 25,553 separations).

Renal Medicine

- In 2016 almost 90 percent of patients admitted with chronic kidney disease were classified as stage 4 or 5
- Between January 2014 and December 2016 (calendar years):
- renal medicine admitted activity (excluding renal dialysis) increased 14.8 per cent
 - renal failure admitted activity increased by 40.2 per cent
 - acute kidney injury admissions in Metro North HHS increased by 23.7 per cent

Access surgery

- In 2016, 216 surgical vascular access procedures were undertaken in Metro North HHS of which majority were arteriovenous fistula procedures (168).
- Between 2014 and 2016, the number of Intra-articular (IA) catheter placement procedures has remained relatively consistent at an average of 27 procedures per calendar year.

Transplantation

- The total number of kidney transplants (live donor and deceased) in Queensland has decreased from 161 in 2012/13 to 133 in 2014/15 and then increased to 202 in 2016/17.
- In 2016, there were 42 kidney transplantation admitted separations (overnight and same day) for residents of Metro North HHS in both public and private hospitals.
- In 2015 Queensland had the lowest transplantation rate in Australia at 29 pmp with the Australian average at 40pmp. This rate has decreased from 35 pmp in 2011 while the Australian rate has increased from 37 pmp in 2011.

Access to service

- 95.2 per cent of admitted renal dialysis patient that are Metro North HHS residents are treated within the Metro North HHS catchment
- In 2016, approximately 60.0 per cent of kidney patients residing in the Metro North HHS catchment lived in the northern regions. Patients residing in the Caboolture catchment travelled to other catchments to access services (North Lakes – 41.3 per cent, RBWH – 25.0 per cent, Redcliffe – 24.4 per cent)
- In 2016, approximately 80.0 per cent of outpatient appointments were collectively provided at the RBWH renal department (29.9 per cent), Stafford Kidney Health Centre (27.0 per cent) and the North Lakes Community Health Centre (24.8 per cent)
- In 2016, 73.5 per cent of patients requiring an outpatient appointment were seen within clinically recommended timeframes.

5.0 Issues and challenges

A range of issues and challenges have been identified through a review of the literature, data analysis and stakeholder consultation. A summary of these is described below.

Metro North HHS has a changing patient profile as a result of a growing and aging population	Increased rates of burden of disease
Limited access to prevention and early detection services targeted to chronic kidney disease	Demand for kidney health services outstripping supply
Access to kidney health services close to home	Inefficient inpatient models of care
Limited access to support services such as allied health	Fragmented care for patients with co-morbidities
Inconsistent patient and carer support and education	Patient care not always in line with patient preferences
Delay in access surgery	Disconnect between hospital directorates and KHS as a result of current funding arrangements
Accurate clinical coding	Physical environment does not support contemporary practice and is often not accommodating to patient needs
Limited systematic performance measuring and reporting	Limited access to research and training
No chronic in centre haemodialysis chairs at TPCB or Caboolture hospitals.	Limited access to transplant surgery.
Poor identification and ongoing management of people with acute kidney injury	

Part C: Implementation, monitoring and review

Part C of this Plan details the implementation, monitoring and review process that will be implemented over the life of this Plan.

Metro North HHS is committed to implementing the Metro North HHS Kidney Health Services Plan 2018-23 over the next five years and will actively work in partnership with private, community and non-government providers to progress the service directions across settings across Brisbane North. An implementation plan will be developed to progress actions over time and will guide the priorities of the Metro North HHS Clinical Directorates and Clinical Streams. Some actions will require resourcing over time and these will be sought through normal budgetary processes.

Monitoring, reporting and review

This Plan will be monitored and reported on annual basis. These processes will allow changes in health needs or service developments during implementation of this Plan to be identified and ensure this Plan can be reviewed and updated if required.



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APPENDIX 1

Table 1 : Summary of built dialysis capacity across Metro North HHS (excludes inpatient beds with capability to dialyse)

Facility	Number of chairs
Nundah Community Health Centre	Nil
TPCH	Nil
Redcliffe Hospital	Nil
Chronic chairs	
North Lakes Health Precinct Dialysis Unit	14
RBWH Herston Dialysis Unit, Acute and Chronic	14 + 2 (isolation chairs) = 16
Moreton Bay Integrated Care Centre	10
Total chronic	40
Stafford Kidney Health	8 training chairs
Independent chairs	
North West Community Health	2
Caboolture	2
Total Independent chairs	4
TOTAL	52

APPENDIX 2: Metro North HHS hospital catchment by SA2

Hospital catchment	Geographical catchment by SA2
Caboolture/Kilcoy Hospital catchment	Beachmere – Sandstone Point, Bribie Island, Burpengary, Burpengary – East, Caboolture, Caboolture – South, Elimbah, Kilcoy, Morayfield, Morayfield – East, Narangba, Upper Caboolture, Wamuran, Woodford – D’Aguilar.
Redcliffe Hospital catchment	Brighton, Clontarf, Dakabin – Kallangur, Deception Bay, Margate – Woody Point, Murrumba Downs – Griffin, North Lakes – Mango Hill, Redcliffe, Rothwell – Kippa-Ring, Scarborough – Newport.
TPCH catchment	Albany Creek, Aspley, Bald Hills, Boondall, Bracken Ridge, Bray Park, Bridgeman Downs, Carseldine, Cashmere, Chermside, Chermside West, Dayboro, Deagon, Eaton Hills, Everton Park, Geebung, Hills District, Kedron – Gordon Park, Lawnton, McDowall, Northgate – Virginia, Nudgee – Banyo, Nundah, Petrie, Samford Valley, Sandgate – Shorncliffe, Stafford, Stafford Heights, Strathpine - Brendale, Taigum – Fitzgibbon, Wavell Heights, Woolloowin – Lutwyche, Zillmere.
RBWH catchment	Albion, Alderley, Ascot, Ashgrove, Auchenflower, Bardon, Bellbowrie – Moggill, Boondall, Brisbane Airport, Brisbane City, Brookfield – Kenmore Hills, Chapel Hill, Clayfield, Eagle Farm – Pinkenba, Enoggera, Enoggera Reservoir, Fig Tree Pocket, Fortitude Valley, Grange, Hamilton (Qld), Hendra, Indooroopilly, Kelvin Grove – Herston, Kenmore, Keperra, Mitchelton, Mount Coot-tha, New Farm, Newmarket, Newstead - Bowen Hills, Paddington – Milton, Pinjarra Hills – Pullenvale, Red Hill (Qld), Spring Hill, St Lucia, Taringa, The Gap, Toowong Upper Kedron – Ferny Grove, Wilston, Windsor.

