

# Northern NSW Healthy Kidneys Project

2018 -2019



# ACKNOWLEDGEMENTS

The Project Team and partner organisations acknowledges the Traditional Custodians of this ancient land where we live and work, the Arakwal, Bundjalung, Githabul and Yaegl nations, and their continuing connection to land, river, sea, country and communities. We pay our respects to all Elders past, present and future.

Special thanks to patients, clinicians and managers of the services and organisations of the Northern NSW Partnership for Health and the Integrated Aboriginal Chronic Care program which made this project possible.

Recognition provided to Kylie Wyndham, Clinical Nurse Consultant, who travelled the region and worked across multiple sites, organisations and settings to implement the Project.

The Project was a quality improvement activity and not a research project. No parts of the Project may be published or disseminated without the approval of all partners.

All data in this report is deidentified and presented regionally to protect the rights and confidentiality for all involved.

This report was endorsed by the Northern NSW Aboriginal Partnerships Forum – United in Aboriginal Health on 2 March 2020.

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## EXECUTIVE SUMMARY

Aboriginal and Torres Strait Islander people on the North Coast (Northern NSW and Mid North Coast Local Health District regions) experience almost twice the rate of end stage chronic kidney disease than Aboriginal and Torres Strait Islander people across NSW and ten times the rate of non-Aboriginal people on the North Coast<sup>1</sup>.

The aim of the Northern NSW Healthy Kidneys Project (the Project) was to reduce hospital admissions relating to CKD through the prevention, detection and management of early stage CKD in the three Aboriginal Medical Services (AMSs) located in Northern NSW - Bulgarr Ngaru Medical Aboriginal Corporation, Bullinah Aboriginal Health Service and Rekindling the Spirit Ltd.

The objectives of the Project were to:

1. Prevent CKD by building the capacity of AMSs to embed kidney health into standard practice, such as via Adult Health Assessments (715).
2. Detect and follow up patients that were at risk of, or who had, early stage CKD through clinical audits and coding. Early identification allows for the client to be empowered and well equipped to initiate necessary life style changes and take control of their health.
3. Better manage people with CKD through clinical capacity building, system improvement and building integration with the Northern NSW Renal Team.

The Project demonstrated that through collaboration between primary and acute care services, CKD can be detected and managed early, thereby reducing the need for renal dialysis.

As a result of Project activities it was shown that:

- There was a 36 per cent increase in the number of people who were diagnosed with CKD as a result of Project activities. At the beginning of the Project, 245 people were recorded as having CKD. In March 2019 this increased to 382 people – an increase of 137 people. One AMS saw a 66 per cent increase.
- There was a 32 per cent increase in knowledge amongst clinicians on the pathophysiology of CKD, the importance of early detection and methods of early intervention/treatment.
- AMS Aboriginal Health Workers (AHWs) and practice nurses can become influential ‘champions’ for CKD thereby changing clinical practice and culture regarding screening and follow up. AHWs are the first and trusted contact within an AMS for the community and are integral to the improvement of screening and education for CKD.
- When a whole team approach was implemented, the results were more successful.
- Four out of five AMS sites now offer a CKD clinic with a NNSW LHD Nurse Practitioner that educates patients who are at risk of, or are in the early stages of CKD, to help prevent and slow down the progression of the disease. This in turn will improve the quality of life for the patient and minimise costs associated to renal replacement therapies.

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<sup>1</sup> Centre for Epidemiology and Evidence, 2019. *Health Statistics New South Wales: Hospitalisations by cause and Aboriginality Dialysis*, NSW 2016-17 [Online] Available at: [http://www.healthstats.nsw.gov.au/Indicator/bod\\_hos\\_cat/atsi\\_hos\\_phn\\_cat\\_comparison](http://www.healthstats.nsw.gov.au/Indicator/bod_hos_cat/atsi_hos_phn_cat_comparison) [Accessed July 2019]. Accessed via North Coast Primary Health Network (2018). *Aboriginal and Torre Strait Islander Needs Assessment*. Retrieved from; [https://ncphn.org.au/wp-content/uploads/2019/03/B.-Aboriginal\\_andor\\_TorresStraitIslander\\_NeedsReport\\_Nov18.pdf](https://ncphn.org.au/wp-content/uploads/2019/03/B.-Aboriginal_andor_TorresStraitIslander_NeedsReport_Nov18.pdf)

While the Project was successful in meeting the stated objectives, it was recognised that there is still proportionally a low percentage of Aboriginal and Torres Strait Islander people being tested for kidney disease. In March 2019, 45 per cent of patients at the three AMSs had had a Kidney Health Check - an increase from 27 per cent from the previous year. For long term impact and sustainability, it is recommended that Kidney Health Checks are supported to become routine in all AMSs through the Aboriginal Health Assessment (MBS item number 715) and opportunistic testing. It is also recommended that LHD Renal Services provide outreach to AMSs and general practices with numbers of Aboriginal and Torres Strait Islander people on an ongoing basis.

It is hoped that the Project made a difference to the lives of the people that had CKD identified and followed up. It is also hoped that the Project will motivate Northern NSW (and other regions) acute and primary health care clinicians and administrators to continue to prioritise CKD prevention, detection and management into the future.

# BACKGROUND

## CHRONIC KIDNEY DISEASE

CKD is defined as “the occurrence of kidney damage and/or reduced kidney function that lasts three months or more”<sup>2</sup>.

CKD has a number of stages, ranging in severity from stages 1 to 5 with the early stages often remaining asymptomatic. An individual's kidney function can improve or regress during the early stages of the disease but once Stages 4 and 5 are reached, kidney function is severely reduced and is unlikely to improve. A person with end stage CKD is generally reliant on kidney replacement therapy in the form of dialysis or a kidney transplant. The issue with CKD is that often the patient is unaware that they have kidney issues and remain asymptomatic until onset of end stage CKD.

### Stages of Kidney Disease<sup>3</sup>

Kidney Function Stage	GFR (mL/min/1.73m <sup>2</sup> )	Albuminuria Stage		
		Normal (urine ACR mg/mmol) Male: < 2.5 Female: < 3.5	Microalbuminuria (urine ACR mg/mmol) Male: < 2.5 -25 Female: < 3.5-35	Macroalbuminuria (urine ACR mg/mmol) Male: > 25 Female: > 35
1	≥90	Not CKD unless haematuria, structural or pathological abnormalities present		
2	60-89			
3a	45-59			
3b	30-44			
4	15-29			
5	<15 or on dialysis			

Figure 1

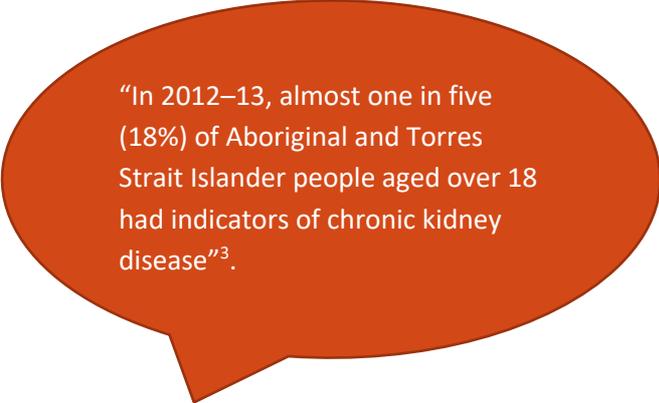
CKD is common with approximately 1.7 million Australians (1 in 10) aged 18 years and over who have indicators of CKD such as reduced kidney function and/or albumin in the urine. The issue is that fewer than 10 per cent of the people with CKD, (>1.5million Australians) are aware they have this condition.<sup>3</sup>

Encouragingly, when CKD is identified early, lifestyle and medication changes can halt or slow down progression. Early detection and intervention will result in a reduction of people requiring renal replacement therapies. Renal replacement therapies can be distressing and isolating for patients, and place a large financial and resource burden on the health system.

The rate of CKD in Aboriginal and/or Torres Strait Islander peoples is much higher than the non-Aboriginal population. Due to a lack of national data collection around early stage CKD, the total known number is understated. Available data indicates the incidence of early stage CKD among Aboriginal and/or Torres Strait Islander peoples is almost five times higher than the non-Aboriginal population nationally.<sup>3</sup> On the North Coast

<sup>2</sup> Chronic Kidney Disease (CKD) Management in General Practice (3<sup>rd</sup> Edition). Kidney Health Australia, Melbourne, 2015.

(including the NNSW and Mid North Coast LHD regions), the number of end stage CKD patients is ten times higher than that of the non-Aboriginal population.<sup>3</sup>



“In 2012–13, almost one in five (18%) of Aboriginal and Torres Strait Islander people aged over 18 had indicators of chronic kidney disease”<sup>3</sup>.

The key benefits of identifying CKD within the Aboriginal and/or Torres Strait Islander population are:

- enabling greater awareness around the importance of family history and screening
- enabling people to commence required lifestyle changes that will improve overall health
- reducing the number of people required to move away from community and family to undergo renal replacement therapies
- better supporting connection to family, community and culture by enabling people to remain in their community.

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## THE PROJECT

The Project ran from January 2018 to January 2019 as a flagship initiative of the Northern NSW Partnership for Aboriginal Health and partner organisations’ shared commitment to creating an integrated health system and preventing, detecting and better managing chronic illnesses in the Aboriginal and Torres Strait Islander community. Member organisations of the Partnership included the Northern NSW Local Health District (NSW LHD), North Coast Primary Health Network (NCPHN) and the three AMSs located in Northern NSW - Bulgarr Ngaru Medical Aboriginal Corporation, Bullinah Aboriginal Health Service and Rekindling the Spirit Ltd. These services provided five clinics collectively in total across the Northern NSW region.

The Project was modelled on a successful pilot run in 2014, titled “Early detection of CKD in Aboriginal people”. The pilot used electronic Medical Record (eMR), reviews and education of primary health care professionals to increase the identification of CKD in patients at the Bugalwena General Practice. The NNSW LHD, North Coast Medicare Local (what NCPHN was formally known as) and Bugalwena General Practice were partners in this project. The pilot resulted in increasing the identification of people with CKD by more than five times (17 to 77 patients). An opportunity was realised to expand the pilot to other AMSs in the footprint.

The Project objectives were commensurate with Kidney Health Australia’s recommendations for improving Aboriginal and Torres Strait Islander Kidney Health<sup>4</sup>. Kidney Health Australia recommends preventing CKD

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<sup>3</sup> North Coast Primary Health Network (2018). Aboriginal and Torres Strait Islander Needs Assessment. Retrieved from; [https://ncphn.org.au/wp-content/uploads/2019/03/B.-Aboriginal\\_andor\\_TorresStraitIslander\\_NeedsReport\\_Nov18.pdf](https://ncphn.org.au/wp-content/uploads/2019/03/B.-Aboriginal_andor_TorresStraitIslander_NeedsReport_Nov18.pdf)

<sup>4</sup> Kidney Health Australia (2015). *Kidney Health for All: A report on policy options for improving Aboriginal and Torres Strait Islander Kidney Health*. Available at [https://kidney.org.au/cms\\_uploads/docs/september-2015-kidney-health-for-all.pdf](https://kidney.org.au/cms_uploads/docs/september-2015-kidney-health-for-all.pdf).

through proven community-based health programs, detecting and managing CKD early via AMSs and general practices, providing innovative dialysis modality options, building the clinical workforce's capability, providing social supports and increasing the availability of kidney transplants.

The initial phases of the Project consisted of engaging a Clinical Nurse Consultant (CNC) through funding provided by NCPHN. The CNC was employed by the NNSW LHD but worked from NCPHN offices and AMS clinics across the span of the Project. The NNSW LHD Renal Team, including the Clinical Nurse Practitioner, provided mentoring and clinical governance. The Northern NSW Integrated Aboriginal Chronic Care (IACC) Governance Committee also provided guidance. A data sharing agreement was signed by all parties to enable the CNC to access patient data when at each site. The agreement clearly identified that no identified data could leave the service due to patient confidentiality requirements. Once engaged the CNC began meeting with the AMSs and providing upskilling on the importance of recognising early stage CKD to GPs, Nurses and AHWs. A short survey was undertaken to ascertain current knowledge of CKD. Clinical and cultural practices varied amongst the AMS sites and therefore a localised approach was applied.

Data mining of the AMSs' electronic Medical Records (eMR) was then undertaken, using Pen Cat, to ascertain who had already been diagnosed with CKD and who had had the appropriate pathology tests but were not yet diagnosed. This stage of the review required significant time, as once a patient was identified as having had the appropriate pathology screening, these records were required to be viewed and cross checked for coding purposes. Coding of CKD into the patients eMR was then undertaken by either the CNC or the clinic's GP according to individual practice policy. Further Pen Cat reports were done at six, nine and twelve months. Practices were also given the option of allocating a "champion" in CKD that would act as the clinic liaison and on site expert for CKD.

A quality improvement guide was also developed for future implementation in AMSs and general practices.

## IMPLEMENTATION

All AMSs had an initial meeting with their staff (nominated by their service) and the CNC to discuss the importance of the project and the significance of CKD in the Aboriginal and/or Torres Strait Islander population. The staff meeting attendance varied within each AMS with either a whole team approach or solely a GP approach. Services that promoted the whole team approach had more successful engagement of the project.

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### IDENTIFY PATIENTS THAT HAD A DEFINITIVE DIAGNOSIS OF CKD AND ARE AT RISK OF CKD

An initial Pen Cat review was undertaken by the CNC and clinical champions at each site. The PEN Clinical Audit Tool allowed practices to analyse data, devise the necessary strategies to improve patient care and report on quality improvement activities. The Audit Tool review showed who had been coded as CKD. A formula was also utilised to see who had had an eGFR and ACR but was not coded. All people who had one ACR but who were not followed up if the result was raised were also listed.

The specific demographic for the Project over the five sites consisted of Aboriginal and/or Torres Strait Islander people over the age of 18 years who had attended the practice at least three times in a two year period. 5,217 people fit this criteria and 4.7 per cent were diagnosed with CKD. AIHW (2017) states that 10 per cent of Australians have biomedical markers of CKD and that amongst Aboriginal and/or Torres Strait Islander people, statistics are more likely to be 18 – 22 per cent.<sup>5</sup>



81% of clients at the five sites  
had at least two risk factors for  
getting CKD

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### DETERMINE THE PERCENTAGE OF PATIENTS THAT HAD AN ADULT HEALTH ASSESSMENT (715) WITH ALL COMPONENTS OF A KIDNEY HEALTH CHECK INCLUDED

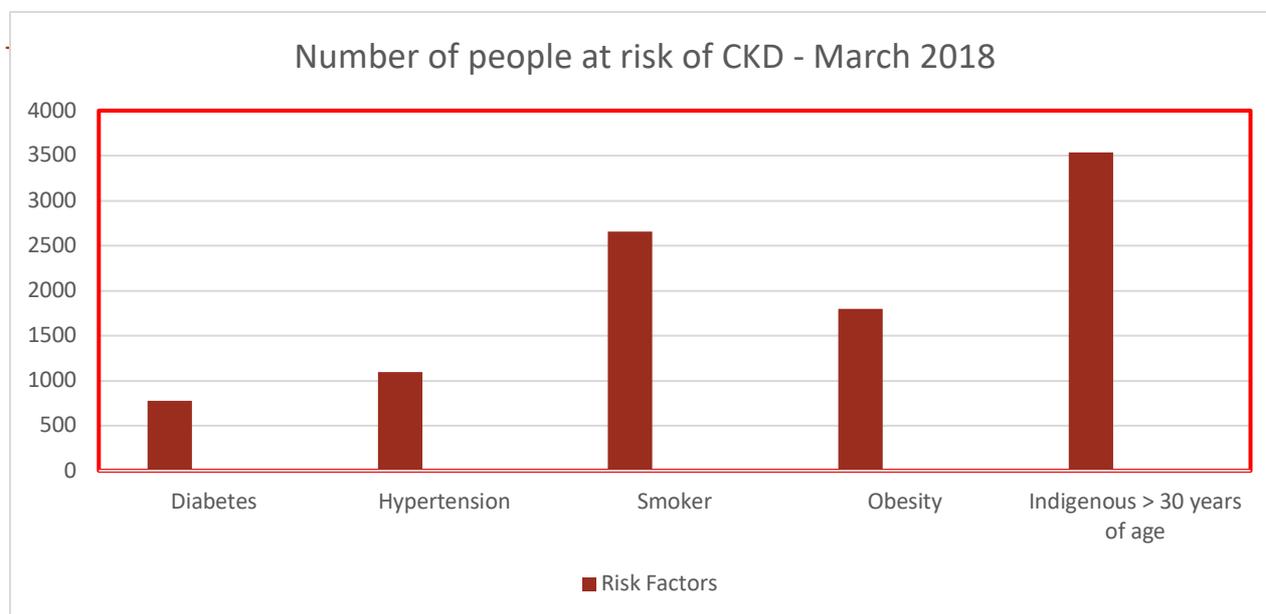
The risk factors for CKD are:

- Diabetes
- Hypertension
- Established Cardiac Disease
- Family history of kidney failure
- Obesity
- Smoker
- Aboriginal and/or Torres Strait Islander peoples > 30 years of age.

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<sup>5</sup> Australian Institute of Health and Welfare (2017). *Chronic Kidney Disease Compendium*. Available from: <https://www.aihw.gov.au/reports/chronic-kidney-disease/chronic-kidney-disease-compendium/contents/how-many-australians-have-chronic-kidney-disease>.

Out of the 5,217 people reviewed in the Pen Cat audit, 4,238 (81 per cent) of them had risk factors for developing CKD. Aboriginality was excluded as everyone in the audit was Aboriginal and/or Torres Strait Islander. This statistic was reviewed at 6, 9, and 12 months with little change in the result.



*Note - The above population adds up to more than 4,238. This is because some people had two or more risk factors and therefore sit in more than one of the columns in the graph.*

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#### GENERATE LISTS OF CLIENTS WITH MARKERS OF CKD REQUIRING FURTHER TESTING TO EITHER DIAGNOSE OR EXCLUDE CKD

The list created from the Pen Cat audit was then worked through with staff members from each AMS. The aim of this process was to code or exclude CKD. Frequently a person had had one ACR that was abnormal but this wasn't followed through with a second ACR. These people were put on the recall system according to the appropriate AMS policy. The other objective was to make sure the people who were definitely CKD 5, 4 and 3a, 3b had the correct referrals in the system and were aware of their diagnosis.

All services were asked to nominate a champion in kidney health who would work with the CNC through the Pen Cat list. Together they commenced reviewing over 500 notes in Medical Director. This required that everyone who had ever had an abnormal eGFR or ACR to be recalled for further testing or put up for coding by the GPs.

All stage 4 and 5 CKD had referrals in the system to a nephrologist for all sites. People with stages 1, 2 and 3 that had not been coded appropriately according to Kidney Australia guidelines for all sites. The five AMSs chose to do the coding of Chronic Kidney Disease in different ways. Some were happy for the champion and the CNC to do the correct coding, while others wanted the GPs to do the coding.

This will always be an ongoing process. As more Kidney Health Checks are done, more people will need further pathology to exclude or diagnose CKD. When reviewing the lists in the final round some AMSs were shocked that the list was even longer. This indicates correct screening and processes identifying more clients with early stage CKD.

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DETERMINE THE PERCENTAGE OF PATIENTS THAT HAD A 715 (ADULT HEALTH ASSESSMENT) WITH ALL THE COMPONENTS OF A KIDNEY HEALTH CHECK INCLUDED (BP, ACR, EGFR).

From the Pen Cat Audit the number of Adult Health Assessments for the last two years was established. This is significant because a 715 is utilised to determine where a person's health is at and is the ideal time to commence a Kidney Health Check. By incorporating the Kidney Health Check into the 715 the AMS is sustaining the practice of doing Kidney Health Checks after this Project has finished.

This activity had the greatest variance amongst services. While Adult Health Assessments were undertaken in all AMSs not all did Kidney Health Checks. It is up to individual services to incorporate checks into their Adult Health Assessments.

At the beginning of the Project an audit was done of how many people had an Adult Health Assessment and from that assessment, how many people had a full Kidney Health Check done.

Across the three AMSs the proportion of Kidney Health Checks undertaken as part of the annual health check at the beginning of the project was 37 per cent. At the end of the Project the proportion was 45 per cent.



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DEVELOP AND IMPLEMENT SYSTEMS SUITABLE TO EACH AMS, TO PROACTIVELY IDENTIFY PEOPLE WITH CKD AND PROACTIVELY FOLLOW UP PEOPLE WITH MARKERS OF CKD

A main focus of discussion within the AMSs was that for ease of implementing a Kidney Health Check, an Adult Health Assessment was the ideal place to do this. This allows for all staff involved in the Adult Health Assessment process to be aware of what a Kidney Health Check is and how to implement the test. This means when the Project has finished the sustainability of the Kidney Health Check is embedded into the Assessment.

One of the issues with doing ACRs and eGFRs is that one abnormal result does not mean a diagnosis. That person needs to be recalled and asked for another urine ACR or eGFR or even both.

Each site has their own method for recall. At the beginning of the Project any person's notes audited, who needed repeat pathology had an action added. It was then up to the clinical staff to attend to the action when the patient was next in the clinic. Additionally, by doing more Kidney Health Checks, more people will need repeat pathology. This requires vigilance on the GP to action every abnormal ACR or eGFR even if it is only a mildly abnormal result.

At the beginning of the Project 243 people, or 4.7 per cent, were initially coded as having CKD for the five sites. At the end of the Project 382 people, or 7.3% per cent, were coded as having CKD.

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## PUT SYSTEMS IN PLACE TO MAKE A KIDNEY HEALTH CHECK AN ESSENTIAL PART OF AN ADULT HEALTH ASSESSMENT

A Kidney Health Check is an effective strategy to detect and manage CKD early<sup>6</sup>. Screening, however, is expensive and needs to be targeted at individuals that have a higher risk of developing CKD. Aboriginality is a risk factor for CKD, therefore it makes sense in an AMS to screen for CKD. AMSs are able to offer a 715 or Aboriginal Health Assessment through the Medical Benefits Schedule (MBS). This means the screening of CKD can be attached to a monetary value (see Appendix 1). Hoy et al (1995) did a screening and early stage treatment program for CKD and cardiac disease in the Aboriginal and/or Torres Strait Islander population on the Tiwi Islands. From this research, it was concluded that the reduction in early on stage CKD was 57 per cent and mortality 50 per cent. The saving on the avoidance of dialysis was in the millions and health was substantially improved.<sup>7</sup>

Doing a Kidney Health Check in the Adult Health Assessment was discussed with the staff that attended initial Project meetings. The staff were informed on why this was important for both the patient and for the staff of the AMS. It was then up to each AMS to incorporate a Kidney Health Check into their annual health assessment templates.

This was further discussed at the six month meeting and for some the nine month review. This activity still needs further work. Aboriginal Health Assessment templates vary amongst AMSs and can even vary on the same site amongst different clinicians.

There is also speculation about point of care testing and where the clinician records the results. Many more Kidney Health Checks may have been done, over the period of the Healthy Kidneys Project, but the recording of them in the patients' notes may not have been accurate for Pen Cat to pick them up.

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## EDUCATE CLINICAL STAFF ON THE IMPORTANCE OF KIDNEY HEALTH CHECKS

All AMSs were offered presentations and workshops by the Clinical Nurse Consultant. The presentation described what the "Healthy Kidneys Project" was about and why CKD is a priority. Staff present at this meeting varied from being GP focused to whole team focused.

An extra event was created by the Clinical Nurse Consultant for AHWs and Aboriginal Health Practitioners (AHPs) to enable further education. This allowed for the education to be tailored and to allow for networking amongst LHD, NCPHN and AMS staff.

Part of the aim of the Project was to see if there had been improvement in the knowledge of the staff at the AMSs in regards to CKD. To do this, a short survey was conducted at the beginning of each education session (Appendix 2). This survey was completed by GPs, Allied Health, AHWs and Nurses.

Over the course of the Project the level of knowledge about CKD amongst the clinical teams markedly improved. Across the region, 34 participants completed the survey at the beginning of the Project. At the end

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<sup>6</sup> Toussaint, N (2012). *Screening for early Chronic Kidney Disease*. Kidney Health Australia. Cari Guidelines. Retrieved from; [http://www.cari.org.au/CKD/CKD%20early/Screening\\_CKD.pdf](http://www.cari.org.au/CKD/CKD%20early/Screening_CKD.pdf)

<sup>7</sup>Hoy WE, Wang Z, Baker PRA et al (2003). *Reduction in natural death and renal failure from a systematic screening and treatment program in an Australian Aboriginal community*. Kidney International - Supplement. 2003b: S66-73.

of the Project 19 participants completed the survey. The survey responses were anonymous so could not be directly linked.

The pie graphs below highlight the increase in knowledge that was gained from the beginning survey which was completed in April 2018, to the follow-up survey completed in March 2019.

**What three specific tests or observations are needed for a Kidney Health Check?**

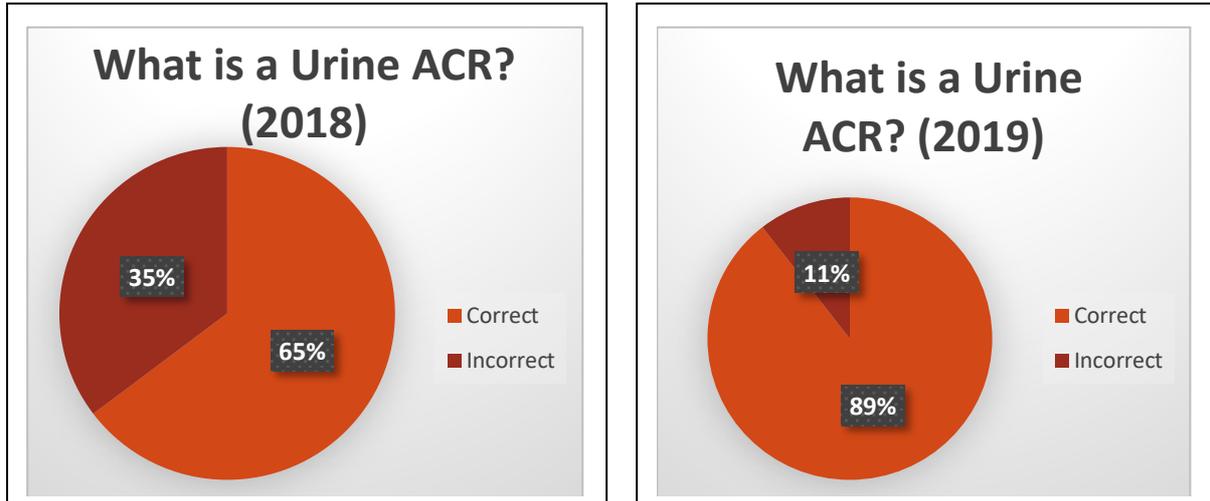


Figure 2

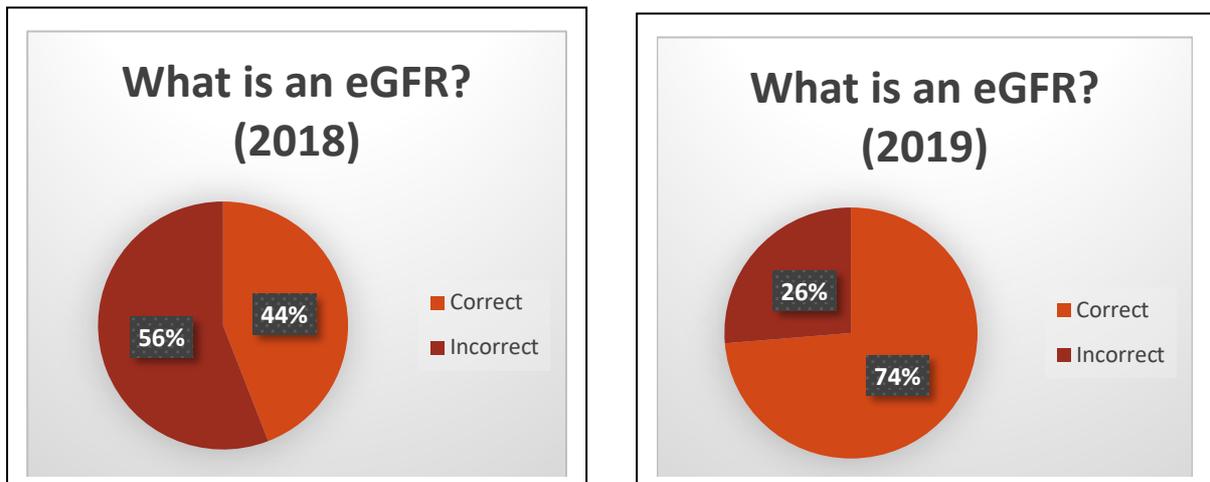


Figure 3

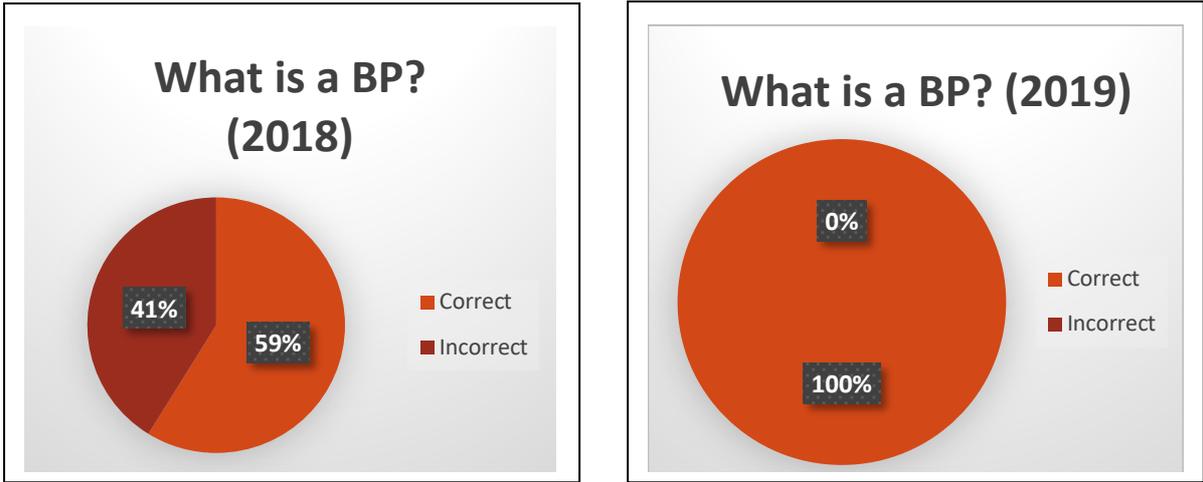


Figure 4

The same participants were asked to identify four risk factors to CKD. There are nine risk factors and while some people stated they could have identified more, some clinicians experienced some difficulty. There was also confusion over risk factors for CKD and risk factors for acute kidney injury, with some lively discussion on what should be a risk factor.

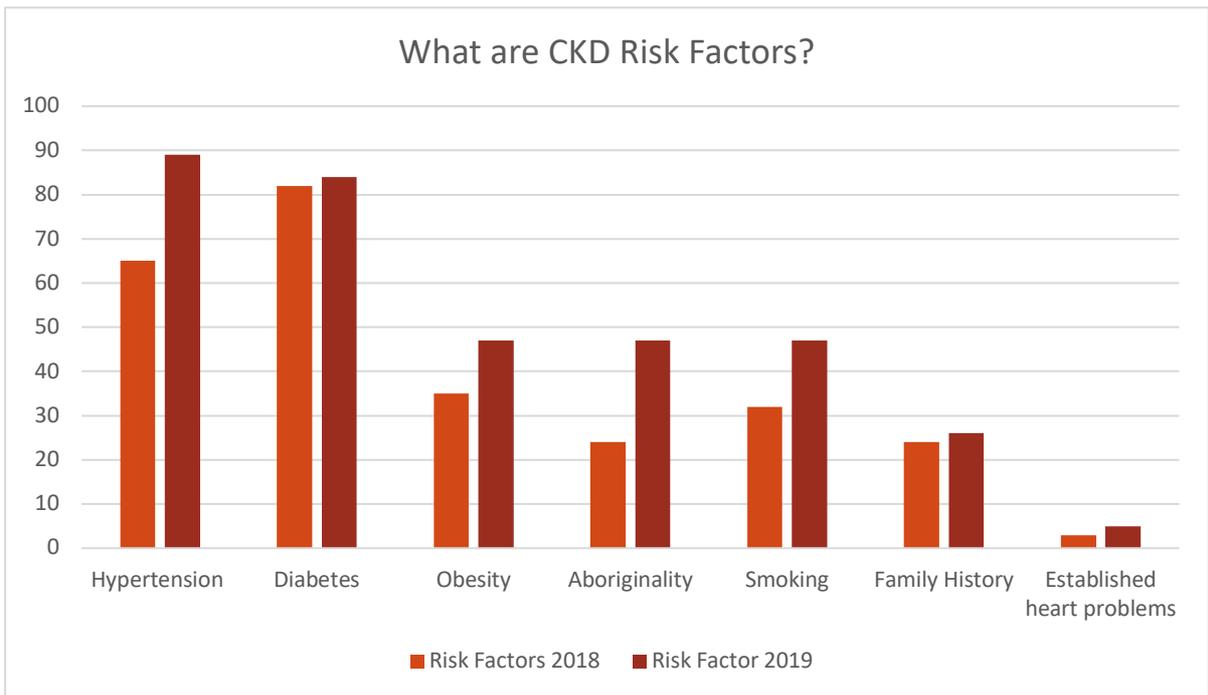


Figure 5

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#### DEVELOPMENT OF ELECTRONIC OR MANUAL RECALL SYSTEMS TO CONTACT CLIENTS TO INITIATE FOLLOW UP BY THE AMS

All AMSs have a recall systems associated with their electronic medical records. This system was utilised to recall patients who need further ACR testing.

All CKD stages 4 and 5 were having treatment or seeing Nephrologists.

There was a number of people put into the recall system needing an additional ACR.

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#### GENERATE LISTS OF PEOPLE WITH CKD AND CODE THEM APPROPRIATELY TO THE CKD CHART

All AMSs nominated a champion to work with the CNC to generate lists from Pen Cat of CKD clients. These lists were then studied and coded appropriately into the eMR. Coding varied amongst the organisations with some allowing the champion or the CNC to complete it and others wanting the GP to do it. To understand the concepts on coding CKD, a Kidney Health Check template was created (Appendix 3). This enabled visual learning for the nurse or the AHW to understand the concept of coding and the stages of CKD. Regular maintenance and strategies need to be considered to make this workable for the future.

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#### FOLLOW UP OF PEOPLE WITH MARKERS FOR CKD

All CKD stages 4 and 5 patients were having treatment or seeing Nephrologists

Different organisations had different pathways for follow up of patients with early stage CKD. It is up to the organisation to work out the best option for them. For the footprint of the NNSW LHD the Nurse Practitioner or Transitional Nurse Practitioner CKD can follow up early stages CKD with patients to provide them with further education and work with them on lifestyle interventions. They also work with the Nephrologists in the region to further educate patients on CKD to halt or delay the progression of kidney disease. There are now four dedicated CKD Nurse Practitioner clinics working in the AMSs in this region.

## CONCLUSION

The Northern NSW Healthy Kidneys Project demonstrated that through collaboration across the three Northern NSW Aboriginal Medical Services - Bulgarr Ngaru Medical Aboriginal Corporation, Bullinah Aboriginal Health Service and Rekindling the Spirit Ltd, the North Coast Primary Health Network and the Northern NSW Local Health District CKD can be detected and managed early thereby reducing the need for renal dialysis.

The Project was able to successfully achieve the objectives of preventing, detecting and better managing CKD amongst Aboriginal and Torres Strait Islander people on the North Coast in the short term. Learnings from the Project indicate that long term change will require ongoing efforts by AMSs and the NNSW LHD Renal Team to continue to prioritise CKD as part of Adult Health Assessments and through outreach services provided by the NNSW LHD Renal Team.

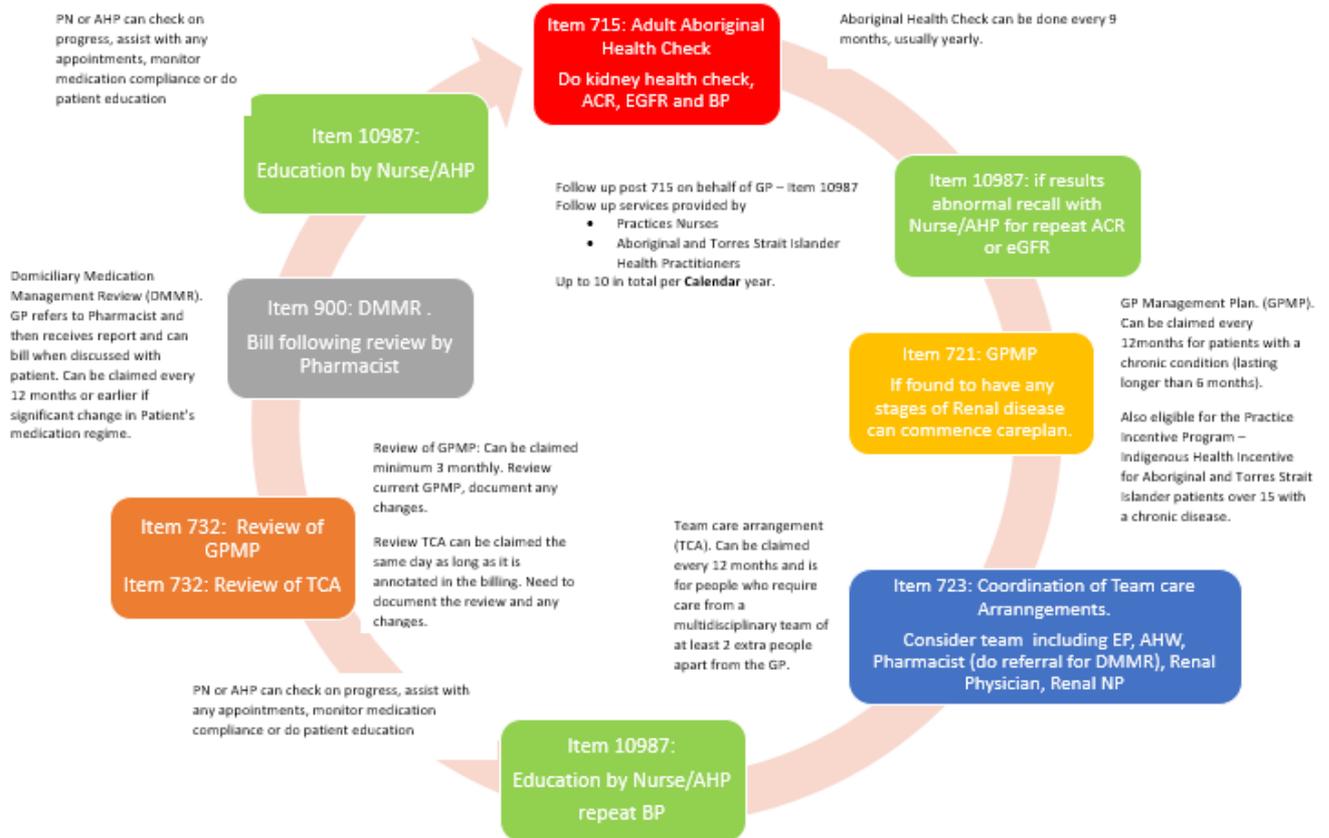
Over time it would be expected that sustained activities would result in reduced hospital renal dialysis presentations, although that cannot be proved through initial Project findings and requires ongoing analysis and research.

## GLOSSARY

ACR	Albumin-to-creatinine ratio (ACR) is the first method of preference to detect elevated protein. The recommended method to evaluate albuminuria is to measure urinary ACR in a spot urine sample. ACR is calculated by dividing albumin concentration in milligrams by creatinine concentration in grams.
BP	Blood Pressure
CKD	Chronic Kidney Disease
eGFR	<b>GFR</b> is <b>G</b> lomerular <b>F</b> iltration <b>R</b> ate and it is a key indicator of renal function. eGFR is estimated GFR and is a mathematically derived entity based on a patient's serum creatinine level, age, sex and race.
Pen Cat	PEN Clinical Audit Tool, or PEN CAT as it's commonly referred to, is a clinical audit tool that allows AMSs and practices to analyse data, devise the necessary strategies to improve patient care and report on quality improvement activities.
POCT	Point-of-care testing (POCT), or bedside testing is defined as medical diagnostic testing at or near the point of care—that is, at the time and place of patient care.
QAAMS	Quality Assurance for Aboriginal & Torres Strait Islander Medical Services provide culturally appropriate and clinically effective diabetes management to Aboriginal and Torres Strait Islander people through the use of Point-of-Care Testing for HbA1c and urine ACR that is conducted under a quality management framework.

# APPENDIX 1 – MBS BILLING

## Kidney Health Check – MBS Billing



## Kidney Health Check – MBS Payment

MBS Item Number	• Payment
715	• \$212.25 1 per year
10987	• \$24.00 up to 10 per year
721	• \$144.25 1 per year
723	• \$114.25 1 per year
900	• \$154.80 1 per year
732	• \$72.05 Up to 6 per year ( 732 can be billed x 2 on the same day as long as both 721 and 723 is being reviewed)



### Practice Incentive Program – Indigenous Health Incentive

#### \$250 - PIP - IHI registration:

A payment to practices for each Aboriginal and/or Torres Strait Islander patient aged 15 years and over who are registered with the practice for chronic disease management.

#### \$100 - Tier 1:

A payment to practices for each registered patient where a target level of care is provided by the practice in a calendar year. at least a 721 and/or 723 plus at least 1 review 732

#### \$150 - Tier 2:

A payment to practices for providing the majority of care for a registered patient in a calendar year.

Some Maths:

715 - \$212.25
10987 - \$96.00 (24 X 4)
721 - \$144.25
723 - \$114.25
732 - \$288.2 (72.05 X 4)
900 - \$154.80
PIP – IHI all Incentives = \$500

Potential for

**\$1413.75**

## APPENDIX 2 – SURVEY

### Survey

#### Healthy Kidneys Project

Date: \_\_\_\_\_

AMS: \_\_\_\_\_

What 3 **specific** tests or observations are needed for a Kidney Health Check?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Name 4 risk factors that increase your chances of getting Chronic Kidney Disease (CKD)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

## APPENDIX 2 – KIDNEY HEALTH CHECK

Name:           DOB:

Date of KHC:

General Practitioner:

### Kidney Health Check (KHC)

Offer Kidney Health Check to people with any of the following indications:

- \* Diabetes   \*Hypertension   \*Established Cardiovascular Disease   \*Family History of Kidney Failure   \*Obesity
- \*Smoking       \*Aboriginal or Torre Strait Islander aged >30years

### eGFR + ACR + BP

If urine ACR and eGFR are normal repeat Kidney Health Check yearly

DATE						
eGFR						
If stable reduced eGFR repeat eGFR within 3 months						
Minimum 3 reduced eGFR's present for > 3 months						
Urine ACR						
If Urine ACR elevated repeat in two weeks then once more in 3 months (preferably first morning void) Minimum 2 out of 3 elevated urine ACR's present for > 3 months						
BP						