Aim
To improve chronic kidney disease [CKD] outcomes in an Aboriginal population from within the Darling Downs Hospital and Health Service [DDHHS] [figure 1], a regional and remote area of Queensland.

Background
Chronic disease, including CKD, is a major health burden in the Aboriginal and Torres Strait Islander [A&TSI] population 1. Many A&TSI people face difficulties attending specialist clinics secondary to concerns such as the distance required to travel for appointments and transportation, cultural and community expectations, and possible distorted trust in the health care system.

Limited engagement with the system can lead to delayed presentation with [some] DDHHS patients historically having first contact with the renal service when they were at end stage renal disease. Late presentations are associated with the need of acute clinical management, including catheter access for dialysis, and are a negative influence on patient health outcomes.

The DDHHS renal service implemented a change management program in June 2014, with the goal of improving patient engagement, and therefore health outcomes, specifically for the peoples of Cherbourg.

Methods
- Referral guidelines were revised to accept patients with early stages of CKD.
- A Tele-health program was initiated, with community engagement.
- The Kingaroy CKD nurse practitioner [NP] provided local oversight and care.
- Specialist reviews were organized via tele-Health [3rd monthly] and 6 weekly NP clinics on site, at Cherbourg.
- Multi-disciplinary care support, with on-site dietician, diabetic educator and podiatrist was provided.
- Local aboriginal health workers were employed for support and advocacy.

Results
- 44 patients [91% of indigenous referrals] were from the Cherbourg area.
- As of August 2016, 29% [48/165] of the DDHHS renal tele-health service were of Aboriginal and/or Torres Strait Islander descent.
- Age and gender: A&TSI patients were much younger [56.7 vs 67.5 years] compared to non-A&TSI group. 26 were female [54%].
- Primary Renal Diagnosis: the leading diagnosis was Diabetic Nephropathy [74%], noting that 89.5% of had a comorbidity of diabetes. [Figure 2]
- CKD stage at last telehealth clinic review: Significant numbers [58.3%] were CKD stage 3 or earlier. [Figure 3]
- Comorbidities: prevalence of vascular comorbidities and current smoking status are summarised in Figure 4 and 5. 83% of the patients were overweight with 62.5% categorised as obese [BMI-30].
- Patient renal outcomes: Of those with advanced stages of CKD, renal replacement therapy [RRT] was discussed with 9 patients and their families, with 3 choosing a renal supportive care pathway and 6 RRT, inclusive of elective access creation.
- All patients [100%] received multi-disciplinary care.
- At the time of reporting, there have been no emergency admissions for RRT.

Conclusions
An innovative approach utilising tele-health technology, facilitated by a CKD Nurse Practitioner, with collaborative engagement of affiliated chronic disease disciplines including allied health, has provided an improved renal health service for this community.

Revised referral practices, enacted with community engagement, has improved both earlier patient review and patient health outcomes, with emphasis on timely education and preparation for renal replacement therapy as needed.

References
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