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THE CKD.QLD REGISTRY: CHARACTERISTICS AND COURSE OF CHRONIC KIDNEY DISEASE PATIENTS IN PUBLIC NEPHROLOGY CARE IN QUEENSLAND, AUSTRALIA.

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Introduction

Stemming the rise of end stage kidney failure (ESKF) depends on understanding its pre-terminal stages of CKD. We describe people with CKD in public renal practices in Queensland, Australia, who have enrolled in the CKD.QLD registry.

Queensland has a vast area of 1,730,648 km^2, a population of over 5 million, both of great diversity, and an excellent public health system - Queensland Health.

Methods

CKD patients enrol in the registry with informed consent and are followed until death, start of renal replacement therapy (RRT), discharge or specified censor dates.

Enrolment started in 2011, and has embraced adult nephrology services across Queensland Health Hospital and Health Services.

Results

- 9,005 patients have enrolled, with a total follow up of about 30,000 person years.
- Median age at enrolment was 68 years; 54% were male.
- **Figure 1.** 50.8% were obese, compared with 20.8% of the Australian population (with an odds ration of 2.75). 82% were overweight or obese. Obesity was powerfully associated with several serious complications.
- **Figure 2**. The frequency distribution of primary renal diseases varied by age. Glomerulonephritis (GN) and genetic disease (GRD) were most prevalent in younger persons, and diabetic disease (DN) and renal vascular (RV) disease in older persons. 48% of people had multiple renal diagnosis, with higher rates with age.
- **Figure 3.** Proportions of primary renal diagnosis varied among renal services, with a more than 2-fold difference in some disease entities.
- **Figure 4** shows that higher age was associated with more advanced CKD.
- **Figure 5** shows the risk factors for progression include diabetic nephropthy, genetic renal disease, indigenous status and acute kidney injury.
- **Figure 6** shows the remarkably different age distribution of those who started renal replacement therapy (RRT) and those who died without RRT.

Conclusions

There is great variation in CKD by age and in CKD cause by region. Progression over the short term is not inevitable. Subjects who start RRT and those who die without RRT are different populations.

Associations of obesity with CKD prevalence, and of acute kidney injury with progression, flag potential pathways for CKD prevention and modification.

Figure 1. Percentage of National Health Survey patients (2014) versus CKD.QLD patients with BMI>30 by age group, Chan et al 2018

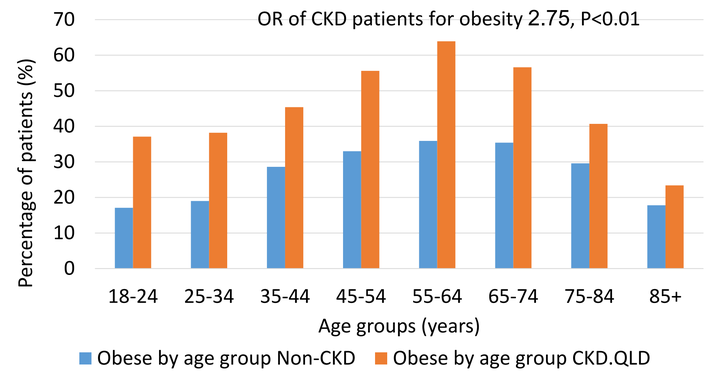


Figure 2. CKD.QLD - Primary Renal Diagnosis by age group, five sites, enrolment until June 2016. (n=4,727)

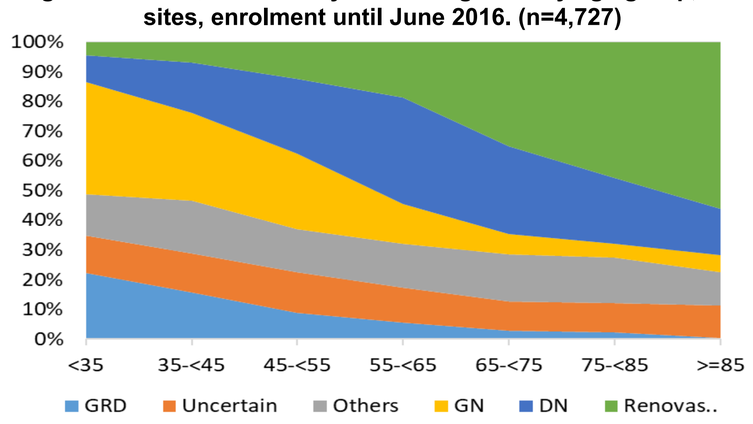


Figure 3. Variation in Proportions of Primary Renal Disease among five CKD.QLD Sites.

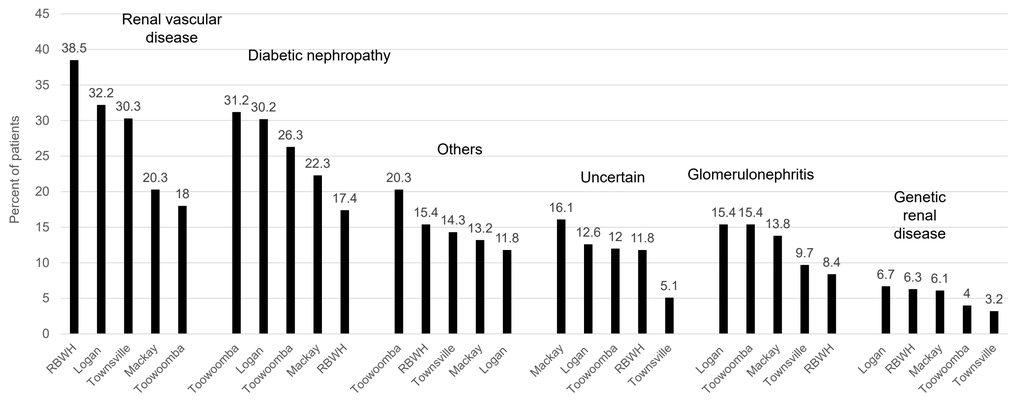


Figure 4. CKD stage by age group

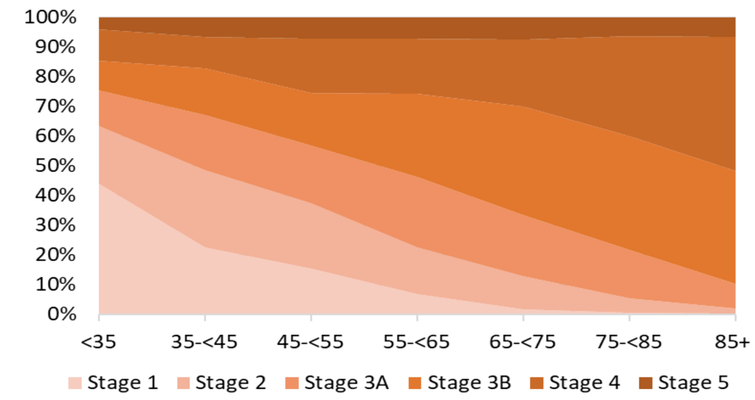


Figure 5. Predicting eGFR loss ≥ 30% or ESKF at 1 year follow-up. (n=2,894)

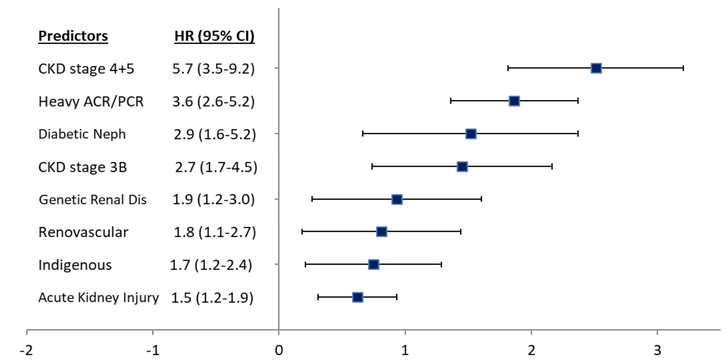
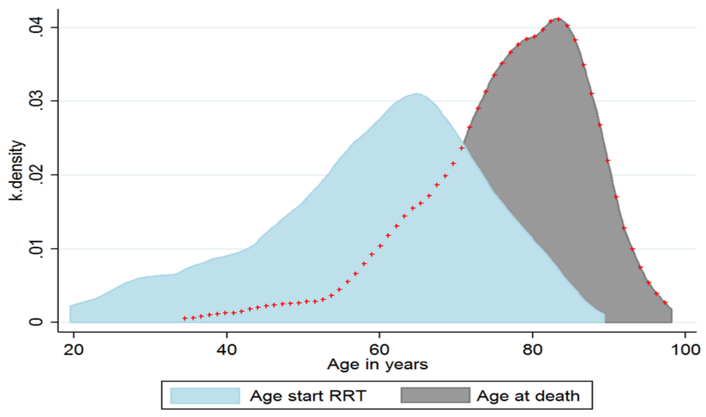


Figure 6. Age distribution of start RRT (n=347) and at death (n=637)



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