People with chronic kidney disease: Who to refer, when to refer, and the impact on outcomes

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Background

- Chronic kidney disease (CKD) is common and associated with increased risks of morbidity and death
- Most people with CKD are cared for by primary care physicians, who must decide whether to refer them for specialist nephrology care and when to do it, if needed
- The Kidney Disease: Improving Global Outcomes (KDIGO) recommends early nephrology referral for people with CKD who have eGFR<30 ml/min/1.73m² or a consistent finding of significant albuminuria (A3),1 based on many observational studies showing better outcomes after dialysis start in people who received longer predialysis nephrology care2
- We propose this project considering that prior studies:
  - focused on individuals who started dialysis, rather than the broader population of CKD patients
  - designed to examine the effects of duration of predialysis care, rather than the important variables available that may influence decision-making at the time when referral decisions are made

Objectives

- To evaluate the impact of nephrology referral and its timing on outcomes of people who met the KDIGO’s criteria for referral
- To identify which patient group would benefit from current nephrology referral criteria, if benefits exist

Methods

- Data Sources: Population-based, provincial-wide administrative and lab databases
- Study population: We will:
  - identify Albertans aged ≥18 years with CKD (G3-4 or A2-3) for >90 days between July 30, 2002 and March 31, 2013
  - include people who met either, or both, of referral criteria of eGFR<30 ml/min/1.73m² or a consistent finding of albuminuria A3
  - exclude those who i) already met either of the above referral criteria when their CKD was ascertained, ii) were on renal replacement treatment prior to the index date, or iii) saw a nephrologist prior to the index date

Exposures: We will use the initiation of outpatient nephrology visit as a proxy of nephrology referral as we do not have information on when referrals were submitted
- Primary: initial nephrology visit as an outpatient vs never saw a nephrologist
- Secondary: the time from the index date to the first outpatient nephrology visit, early (<1 year) vs late (>1 year) visit

Expected results & Implications

- We expect to observe benefits from early nephrology referral; our study power will allow to detect smaller effects, if they exist
- This work will provide for the first time high-quality evidence to inform referral decisions in the CKD population, referral guidelines and future research

References


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