

## **Patient Outcomes Following Discharge from Chronic Kidney Disease Clinic**

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### **Background**

Multi-disciplinary kidney care is recommended for patients with advanced chronic kidney disease (CKD). The eligibility criteria for multi-disciplinary CKD funding have evolved in Ontario over time. In 2013, patients with an estimated GFR (eGFR) less than 33 ml/min/1.73m<sup>2</sup> were eligible. In April 2016, the cut-off for funding was revised to a two-year risk of end-stage kidney disease (ESKD), calculated by the Kidney Failure Risk Equation (KFRE), of greater than 10% or an eGFR less than 15 ml/min/1.73m<sup>2</sup>. This led to the discharge of CKD patients to primary care or general nephrology clinics. The impact of discharge on important patient outcomes is unknown. The objective of this study was to determine the frequency of re-referral to nephrology, death and need for kidney replacement therapy (KRT) of discharged CKD patients.

### **Methods**

A retrospective cohort study was performed in adults seen at least once in CKD clinic at Kingston General Hospital in 2013. A database of these patients including urine albumin to creatinine ratio (ACR), and creatinine (Cr) was available through a previous study. Using these biochemistries, the 2 year KFRE (KFRE-2) was calculated. Patient outcomes between study entry in 2013 and Jan 01, 2020 including discharge from CKD clinic, re-referral, and initiation of KRT were extracted from available electronic medical records. Death was ascertained through Ontario's Office of the Registrar General.

### **Results**

Of 791 patients seen at least once in CKD clinic in 2013, 643 had both Cr and ACR available and were included in the study. As of January 01, 2020, 200 (31%) had started KRT while 143 (22%) and 32 (5%) had been discharged to primary care and general nephrology, respectively. Of the 143 patients who were discharged to primary care, 15 (10%) were re-referred to Nephrology and 9 (6%) required KRT. The mean KFRE-2 at time of discharge for patients who later required KRT was 4% vs 10% for those who did not need KRT with a mean of 1056 days between discharge and initiation of KRT. Death records remain pending.

### **Discussion**

The majority of patients who were discharged to primary care were not re-referred to Nephrology or develop the need for KRT suggesting that the funding policy changes did not adversely affect patient outcome. Discharged patients who needed KRT had lower KFRE scores at time of discharge than those who did not receive KRT indicating poor discriminatory ability of the KFRE tool at low levels.