

Demographics, aetiologies, and comorbidities of inpatient referrals to specialist nephrology services at a state institution over a 12-month period

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Abstract

Introduction: While progress has been made in describing the aetiology and patient profile of chronic kidney disease (CKD) and acute kidney injury (AKI), an overall picture of these disease entities and their referral patterns is lacking. Understanding kidney disease patterns among inpatient referrals is required to improve resource allocation in the constrained state sector. We therefore reviewed all inpatient referrals at our institution over a 12-month period.

Methods: Anonymized data was extracted from the clinical records of 963 patients comprising 1179 inpatient referrals over the period 1/2/2023 – 28/2/2024. Patient demographics, comorbidities, referral patterns, and ascribed kidney disease aetiology were described for the series.

Results: Males contributed the preponderance of referrals (54.9%); the mean age at referral was 49 ± 15.8 years. Hypertension (61.5%) and HIV (32.9%) were significant comorbidities; diabetics comprised 25% of referrals. Most referrals were received from General Medicine (56.9%) followed by General Surgery (10.1%); Nephrology admissions comprised 25.3% of inpatients. Acute kidney injury (AKI) was the most frequent reason for referral (32.2%), with sepsis / infection-related AKI being the commonest cause of AKI (37.9%); nephrotoxins / intoxications or poisonings and dehydration contributed 18.5% and 16.3% of AKI episodes, respectively. Chronic kidney disease (CKD) patients comprised 27.3% of referrals; the majority (71.8%) of these referrals being CKD stage G5. Complications of dialysis comprised 18.5% of patient admissions; access failure (33.6% of dialysis admissions), access infections (22.9%), and overload (20%) contributed the majority of these admissions. Glomerular disease contributed 11.9% of referrals; nephrotic syndrome formed the majority of these cases (87.5%).

Conclusions: Kidney disease affects younger patients in our setting. Acute kidney injury due to sepsis / infectious causes places significant demand on state nephrology services; referral with advanced CKD is frequent amongst inpatients. Capacitation of hospitalists and primary care workers is required to ameliorate strain on renal services.