Kidney Transplant Recipients (n=4; mean age 59y) – 3 managed as outpatients and survived with functioning grafts. 1 KTR (dual liver and kidney transplant recipient) received haemofiltration in ITU but died. Chronic Peritoneal Dialysis (n=2; mean age 68y) – 1 survived, managed as outpatient. 1 patient died.

Acute Kidney Injury (n=24; mean age 67y) – 23 patients escalated and ventilated in ITU. 18 died. 4 remain on haemofiltration at the time of data collection (1 patient transferred to London for Extracorporeal Membrane Oxygenation). 1 patient required no ventilatory support and survived with resolution of AKI. 1 patient required invasive ventilation and survived with resolution of AKI.

For all of the deceased, COVID-19 was listed as the cause of death. 50% of chronic HD and chronic PD patients who tested positive for COVID-19 died. Poorer outcomes may be attributable to increased comorbidities, nosocomial transmission and lack of escalation to critical care facilities.

Surprisingly, despite immunosuppression, only 4 KTRs (out of our cohort of 352 KTRs) tested positive for COVID-19. Low incidence of COVID in this cohort may be attributable to better compliance with social distancing and less hospital exposure.

COVID patients with AKI had the poorest outcomes in terms of need for ventilatory support and mortality. The AKI patients were not previously known to renal services and developed AKI in association with their viral illness. It is not clear whether AKI reflects more severe COVID disease or is an independent risk factor for increased mortality among people with COVID. Early identification and treatment of AKI may significantly reduce mortality.

The sharing of data and patient outcomes on global platforms can help optimise best practice procedures worldwide and reinforce the international collaborative against this global pandemic.

No conflict of interest

**POS-327**

**THE COST OF END OF LIFE INPATIENT ENCOUNTERS IN PATIENTS WITH CHRONIC KIDNEY DISEASE IN THE UNITED STATES**

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**Introduction:** Real-world data reporting healthcare resource utilization (HCRU) and costs associated with end of life inpatient encounters in patients with CKD are limited.

**Methods:** Within the DISCOVER CKD observational study of patients with CKD, the PREMIER dataset (Premier Applied Sciences®, Premier Inc) of hospital admissions in the US was analysed, covering the period from 2016 until end of March 2020. Patients were aged ≥18 years at first recorded CKD diagnosis code (ICD-10 code indicating CKD stages 3-5; or kidney failure). Inpatient hospital deaths were identified as inpatient encounters where the discharge status was death. Precise information on cause of death was unavailable, therefore as a proxy, these encounters were classified as cardiovascular (CV), kidney failure, or infection-related if a corresponding diagnosis code was recorded as the primary or admitting reason for the encounter, with the remaining unclassified encounters grouped as “other”. The cost (USD) of an inpatient encounter ending in mortality was calculated as the total HCRU incurred during the encounter. The payor for the encounter was identified as either Commercial, Medicaid, Medicare or Other (remaining unclassified or unknown payor types).

**Results:** A total of 237,734 inpatient encounters which ended in mortality were observed with mean (SD) age at death of 74.2 (12.4) years, with the regional distribution of these encounters matching the regional distribution of CKD patients in the dataset (Table 1). Of these encounters, 10.6% were attributed to CV, 1.8% to kidney failure and 32.1% to infection. Given the advanced age of the population, the majority of encounters had Medicare payor coverage. The average (SD) cost of CV related encounters (n=20,779) was $30,874.89 ($73,841.18). Kidney failure encounters (n=3,573) $37,588.15 ($274,523.52), and infection-related encounters (n=63,541) was $27,194.42 ($40,980.16).

**Conclusions:** The cost of end of life inpatient encounters was high overall with kidney failure incurring the highest average cost. Despite all patients having CKD, relatively few end of life encounters were attributed to kidney failure, demonstrating the health economic burden of patients with CKD and associated comorbidities.

**Conflict of Interest:** MA, JGSS, GJ, TC, AAS, and SN are employees and stockholders of AstraZeneca. JJC has received institutional grants from AstraZeneca, ViforPharma and Astellas speaker fees from AstraZeneca, Abbott and Nutricia, and consultancy for AstraZeneca, Baxter Healthcare and Bayer. HH has received grants and other fees from AstraZeneca, Merck, Mitsubishi Tanabe, Janssen, Mundipharma, Gilead, Abbvie, Retrophin, Boehringer Ingelheim, Bayer, Chiaoook, Novo Nordisk, and CSL Pharma. CL is supported by a Clinician Scientist Award from the National Medical Research Council of Singapore and has received research support from Boston Scientific. Bayer, Roche Diagnostics, AstraZeneca, Medtronic, and Vifor Pharma has served as consultant or on the Advisory Board/Steering Committee/Executive Committee for Abbott Diagnostics, Amgen, Applied Therapeutics, AstraZeneca, Bayer, Biofourmirs, Boehringer Ingelheim, Boston Scientific, Corvia Medical, Cytokinetics, Darma Inc., Eko.ai, Pte Ltd. JGSS, CL, JJGS, GJ, TC, AAS, and SN are employees of Janssen Research & Development, LLC. Medtronic, Menarini Group, Merck, MyoKardia, Novartis, Nordovis, Radcliffe Group Ltd., Roche Diagnostics, Sanofi, Stealth BioTherapeutics, The Corpus, Vifor Pharma and WebMD Global LLC and serves as co-founder & non-executive director of Us2.ai Pte Ltd. CP is an advisory board member for AstraZeneca, Eli Lilly/Joh Boehringer Ingelheim, and has received speaker fees from Novartis, Janssen Cilag, Otsuka, and Vifor. RP is an employee of Arbor Research Collaborative for Health, which receives global support for the ongoing DOPPS Programs (provided without restriction on publications by a variety of funders - for details see https://www.dopps.org/AboutUs/Support.aspx) and has received research grants from Fresenius Medical Care, non-financial support from AstraZeneca, Bayer, Boehringer, Novo Nordisk, Akebia, and personal fees from Retrophin outside the submitted work. This study is funded by AstraZeneca.

**POS-328**

**THE BURDEN OF HYPERKALEMIA IN PATIENTS WITH CHRONIC KIDNEY DISEASE: A REPORT FROM THE DISCOVER CKD RETROSPECTIVE COHORT**

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Introduction: Hyperkalemia (HK), defined as serum potassium (sK+) >5.0 mmol/L, is a potentially fatal condition most often observed in patients with chronic kidney disease (CKD), heart failure (HF), or diabetes and exacerbated by medications that inhibit the renin-angiotensin aldosterone system (RAAS). This real-world study describes characteristics of patients with and without HK in a large international observational study of patients with CKD.

Methods: The DISCOVER CKD retrospective cohort was extracted using the US TriNetX hospital-EMR, UK Clinical Practice Research Datalink (CPRD) linked to hospital data, the US Dialysis Outcomes and Practice Patterns Study (DOPPS) and Japan Medical Data Vision (JMDV) databases. The study cohort included patients aged >18 years (>20 in JMDV database) with a diagnostic CKD code (stage 3a+ to stage 5) >60/75 m/min/1.73 m² between January 2008 and March 2020. For patients with eGFRs 60–75 m/min/1.73 m², one or more of the following was also required inclusive or prior to the second eGFR measurement: CKD diagnostic code, history/presence of albuminuria, history of kidney transplant, or confirmed cause of CKD, including any of the following: IgA nephropathy, glomerulonephritis, lupus nephritis, ANCA nephritis, or polycystic kidney disease. The index date for patients with HK was a second sK+ measurement >5.0 mmol/L and for non-HK patients, date of CKD. Descriptive analyses were used.

Results: In patients with CKD, 125,196 with HK (48.5% female, mean±SD age 68±14.1 years, mean±SD sK+ 5.3±0.3 mmol/L) and 1,672,595 without HK (57.6% female, mean±SD age 63.6±14.0 years, mean±SD sK+ 4.2±0.05 mmol/L) were identified (Table 1). Compared to CKD patients without HK, patients with HK were older, had substantially higher proportions of comorbidities and about 25 mL/min/1.73 m² lower eGFR which decreased with increasing comorbidity burden. Diuretic and K+ binder use increased with additional comorbidities in HK and was greatest in patients with CKD + T2D + HF. Even among patients with comorbid HF, the highest proportion of RAASi use was 57.7%.

Conclusions: This large cohort of patients with CKD demonstrates the high burden of HK even though HK was generally mild. Patients with HK and CKD + T2D + HF had the greatest HK burden as evidenced by AKI, albuminuria, and diabetic nephropathy, though similar sK+ ranges were seen across groups. The use of HK treatments was low overall. Use of RAASI, representing life-saving guideline recommended therapy for patients with CKD and HF, was absent in >40% of patients regardless of the presence of HK.

Conflict of Interest: GJ, SK, EW, and HK are employees and stockholders of AstraZeneca. JIC has received institutional grants from AstraZeneca, Vifor Pharma and Astellas speaker fees from AstraZeneca, Abbott and Nutricia consultancy for AstraZeneca, Baxter Healthcare and Bayer. SF has received research support and consulting fees from AstraZeneca research support from Akebia Inc, MegaPro Biomedical Co., Ltd, Ardelyx, Corvidia Therapeutics, and Cara Therapeutics. EK is a consultant for AstraZeneca. NK is a consultant for AstraZeneca, Boehringer Ingelheim and Novartis. HK is a consultant or an advisory board member of Roche Diagnostics. HK received research support from Roche Diagnostics. MI is a consultant or on the Advisory Board for Roche Diagnostics. BD served an advisory board member and consultant for Abbott Diagnostics, Amgen, Applied Therapeutics, AstraZeneca, Boehringer Ingelheim, Boston Scientific, Corvia Medical, Cytokinetics, Darmia Inc., DCG, Eko.ai Pte Ltd, ISN WCN 2021, MONTREAL, CANADA