Discussion: Familial Mediterranean Fever is an autoinflammatory disorder that presents in ninety percent of patient by the age of 20. Recognition of non-specific symptoms is crucial to the initiation of suppressive therapy to prevent systemic amyloidosis. In our case, the patient presented with renal amyloidosis at a later age and likely lacked febrile attacks due to his chronic NSAID use. The biopsy proved to be instrumental in the diagnosis and initiation of suppressive management.

SA-PO941
Major Adverse Kidney Events in Multidisciplinary CKD Care Compared With Usual Outpatient Care: A Propensity Score Matched Analysis
Palita Chittinamanda, Pongsathorn Gojasani, Anan Chuauswan, Worawon Chaillimbamentee, Anutra Chittinamanda. Bhumibol Adulyadej Hospital, Bangkok, Thailand.

Background: Chronic kidney disease (CKD) causes a public health problem worldwide. Multidisciplinary CKD care (MDC) has been recommended in clinical practice guideline to delay disease progression and minimize complications. However, effectiveness of MDC on major adverse kidney events (MAKE) in CKD patients is still inconclusive.

Methods: We conducted a cohort study in patients with CKD stage G3b and 4 who were followed up at Bhumibol Adulyadej Hospital since 2014 to 2020. Propensity score matching by age, sex, CKD staging, diabetes, blood pressure and rate of estimated glomerular filtration rate (eGFR) decline before inclusion between patients in MDC and usual outpatient care (UOC) was done. The primary outcome was MAKE, a composite of cardiovascular or renal mortality, 40% eGFR decline and initiation of long-term kidney replacement therapy.

Results: After 1:1 propensity score matching, 822 patients were included. The mean age was 70.9 years, 64% have diabetes. During treatment up to follow up of 3.3 years, rate of the primary endpoint was lower in MDC group than UOC group (24.1% vs. 38.9%; hazard ratio [HR], 0.66; 95% confidence interval [CI], 0.52 to 0.86; P=0.002). The results showed benefit of MDC over UOC in 40% eGFR declined (21.7% vs. 35.9%; HR, 0.67; 95%CI 0.52 to 0.88; P=0.004), all-cause mortality (8.5% vs. 19.5%; HR, 0.46; 95%CI 0.40 to 0.90, P=0.014), non-cardiovascular death (6.1% vs. 15.1%; HR, 0.56; 95%CI 0.35 to 0.90; P=0.015) and hospitalization per year (1.0 ± 1.5 vs. 1.6 ± 2.0; P<0.005).

According to subgroup analysis, diabetic patients benefit the most from MDC.

Conclusions: In a tertiary care hospital, MDC showed benefits over UOC on kidney outcomes in patients with CKD stage G3b and 4. The benefit will be enhanced in diabetes group.

Funding: Government Support - Non-U.S.

SA-PO942
Acceptance of Recommendations for SGLT2 Inhibitors and GLP1 Receptor Agonists in a High-Risk CKD Population
Melanie R. Weltman,1 Manisha Jhamb,2 Jonathan Yabes,2 Manqi Cai,4 Thomas D. Nolin,1,2 Khaled Abdel-Kader,1,2 Yale University School of Medicine, New Haven, CT, USA; 2Menninger Clinic, Houston, TX, USA; 3University of Connecticut School of Pharmacy, Storrs, CT, USA; 4University of Alberta, Edmonton, AB, Canada

Background: Chronic kidney disease (CKD) causes a public health problem worldwide. Multidisciplinary CKD care (MDC) has been recommended in clinical practice guideline to delay disease progression and minimize complications. However, effectiveness of MDC on major adverse kidney events (MAKE) in CKD patients is still inconclusive.

Methods: We conducted a cohort study in patients with CKD stage G3b and 4 who were followed up at Bhumibol Adulyadej Hospital since 2014 to 2020. Propensity score matching by age, sex, CKD staging, diabetes, blood pressure and rate of estimated glomerular filtration rate (eGFR) decline before inclusion between patients in MDC and usual outpatient care (UOC) was done. The primary outcome was MAKE, a composite of cardiovascular or renal mortality, 40% eGFR decline and initiation of long-term kidney replacement therapy.

Results: After 1:1 propensity score matching, 822 patients were included. The mean age was 70.9 years, 64% have diabetes. During treatment up to follow up of 3.3 years, rate of the primary endpoint was lower in MDC group than UOC group (24.1% vs. 38.9%; hazard ratio [HR], 0.66; 95% confidence interval [CI], 0.52 to 0.86; P=0.002). The results showed benefit of MDC over UOC in 40% eGFR declined (21.7% vs. 35.9%; HR, 0.67; 95%CI 0.52 to 0.88; P=0.004), all-cause mortality (8.5% vs. 19.5%; HR, 0.46; 95%CI 0.40 to 0.90, P=0.014), non-cardiovascular death (6.1% vs. 15.1%; HR, 0.56; 95%CI 0.35 to 0.90; P=0.015) and hospitalization per year (1.0 ± 1.5 vs. 1.6 ± 2.0; P<0.005).

According to subgroup analysis, diabetic patients benefit the most from MDC.

Conclusions: In a tertiary care hospital, MDC showed benefits over UOC on kidney outcomes in patients with CKD stage G3b and 4. The benefit will be enhanced in diabetes group.

Funding: Government Support - Non-U.S.

SA-PO943
Patient Perceptions of a CKD Population Health Management Program to Improve Kidney Care
Sanjiv Devani,1 Megan E. Hamm,1 Balchandie N. Kenkeri,1 Flor Cameron,1 Khadeel Abdel-Kader,2 Manisha Jhamb,1 University of Pittsburgh Department of Medicine, Pittsburgh, PA; 2Vanderbilt University Medical Center, Nashville, TN.

Background: The majority of chronic kidney disease (CKD) patients are managed by primary care providers (PCPs), and novel approaches are needed to improve care and outcomes in these patients. We sought to ascertain patient perceptions of a population health management (PHM) approach to improving CKD care in high-risk patients managed by their PCP.

Methods: Patients with high-risk CKD who were receiving PHM intervention in an ongoing randomized control trial involving remote co-management of CKD by a nephrologist, pharmacist led medication reconciliation, and CKD education who had at least one CKD education session were recruited from May 2021-Feb 2022 for this study. Using purposive sampling, patients from three pre-defined strata (racial/ethnic minorities, low socio-economic status, multi-morbidities) were enrolled until thematic saturation was reached. A one-time 30-min phone interview was conducted, and data was analyzed using MAXQDA software.

Results: In this preliminary analysis of 30 of 45 patient interviews (mean age 74 years, 47% females, 17% racial/ethnic minorities, 47% low SES, 43% high comorbidity burden), several themes have emerged. First, patients expressed support for a collaborative relationship between their PCP and the nephrologist for co-management of CKD. Secondly, patients expressed poor understanding of the cause or health risks associated with CKD. In fact, some did not even recall receiving education although they had all met with the nurse educator. Thirdly, patients reported receiving diet/fluid education tips and had interest in implementing them, with many reporting a greater understanding of how diet/fluid recommendations related to their kidney health and could be implemented in the context of their personal habits. Finally, most patients affirmed they would recommend the education sessions to other CKD patients.

Conclusions: CKD patients who are managed by their PCP have high acceptance of remote co-management by a nephrologist. Patients perceive some aspects of CKD health education to be beneficial, however more effective approaches to communicating risk for CKD development and progression may be needed.

Funding: NIDDK Support

SA-PO944
Patient Navigators for CKD and Kidney Failure: A Systematic Review
David T. Collister,1 Yasmin A. Iman,2 Clara Bohm,1 Paul Kornensa,2 Navdeep Tangri,31 University of Alberta Faculty of Medicine & Dentistry, Edmonton, AB, Canada; 2University of Manitoba Max Rady College of Medicine, Winnipeg, MB, Canada.

Background: To what degree and how patient navigators improve clinical outcomes for patients with chronic kidney disease (CKD) and kidney failure is uncertain. We performed a systematic to summarize patient navigator program design, evidence, and implication in kidney disease.

Methods: A search strategy was developed for randomized controlled trials and observational studies that evaluated the impact of navigators on outcomes in the setting of CKD and kidney failure. Articles were identified from various databases. Two reviewers independently screened the articles and identified those which met the inclusion criteria.

Results: After screening a total of 3371 citations, 17 articles met the inclusion criteria including 14 original studies. Navigators came from various healthcare backgrounds including nursing (n=6), social worker (n=2), medical interpreter (n=1), research (n=1) and also included kidney transplant recipients (n=2) and non-medical individuals (n=2). Navigators focused mostly on education (n=9) and support (n=6). Navigators were used for patients with CKD (n=5), peritoneal dialysis (n=2), in-center hemodialysis (n=4), kidney transplantation (n=2) but not home hemodialysis. Navigators improved transplant workup and listing, adherence, peritoneal dialysis utilization and patient knowledge.

Key: TH - Thursday; FR - Friday; SA - Saturday; OR - Oral; PO - Poster; PUB - Publication Only

Underline represents presenting author.
SA-PO945
Where Do Primary Care Physicians Fit in CKD Patient Care? Meghan Staudt, Denise Foy, SphereX Global Insights, Exton, PA.

Background: This research examines the management of patients with chronic kidney disease (CKD) who are not on dialysis by primary care physicians (PCPs) and evolving best care practices given the emergence of new treatment options to delay CKD progression.

Methods: Patient level data was collected via an online, HIPAA-compliant form during June 2020 as part of an independent, retrospective chart audit. A total of 1,009 CKD non-dialysis patient records were submitted by 207 PCPs.

Results: While 87% of PCPs express that they are comfortable treating patients with mild kidney disease (CKD Stages 1-2), the majority are not confident managing patients who have progressed to more severe kidney disease (CKD Stages 3-5). Comorbidities and complications that patients have as CKD progresses contribute to this sentiment. Nearly two-thirds of PCPs agree early referral to nephrology results in better outcomes for patients with progressive renal disease; however, the referral often does not occur until patients reach CKD Stage 3, highlighting contradiction in PCPs perceptions versus their actions. 75% of PCPs report they are comfortable initiating patients on an SGLT2 inhibitor, a therapy among several others proven to slow the progression of CKD, indicating there is potential to delay referral to nephrology even further. Several factors contribute to the delayed referrals, including 28% of PCPs who believe nephrologists cannot do more than a PCP to manage a patient until their CKD is severe enough to require dialysis, and 32% who believe many patients consider nephrologists as “dialysis doctors” and are reluctant to be referred. Additionally, one-quarter of PCPs say nephrologists have a financial incentive to place patients on dialysis, which further delays referrals. Conversely, 69% of PCPs report they have an excellent relationship with nephrologists when co-managing CKD patients. However, 24% report the wait time for a newly referred patient to see a nephrologist (when not an emergency) is very long. This comparison well against rheumatology and dermatology where more than one-half of PCPs report the wait time is very long.

Conclusions: Although PCPs recognize the benefit of co-managing CKD patients with nephrologists, barriers to optimal care between physicians do exist. As PCPs adopt new therapies that delay CKD progression, there is potential for their CKD patient pool to expand and further delay referrals to nephrology.

SA-PO946
Feasibility of a Remotely Delivered Trial Testing an Online Self-Management Programme for People Living With CKD. Courtney J. Lightfoot,1,2 Thomas J. Wilkinson,1,3 Noemi Vadaszy,1,3 Alice C. Smith,1,2 1University of Leicester, Leicester, United Kingdom; 2Leicester NIHR Biomedical Research Centre, Leicester Diabetes Centre, Leicester, United Kingdom; 3NIHR Applied Research Collaboration East Midlands, Leicester Diabetes Centre, Leicester, United Kingdom.

Background: Self-management of a long-term health condition, like CKD, requires appropriate self-care knowledge, and confidence from patients to actively change behaviors. However, resources to support and improve self-management behaviours in CKD are lacking. We developed a 10-week online self-management programme for people with non-dialysis CKD, called My Kidneys & Me (MK&M). This programme is being evaluated in an ongoing multicentre randomised control trial (called SMILE-K). To ensure that the full scale trial protocol is feasible, we conducted a mixed-methods nested feasibility pilot involving the first 60 participants.

Methods: The SMILE-K trial is conducted entirely using remote recruitment and outcome assessment methods. It has a 2:1 (intervention:control) randomisation. Assessment surveys, including the Patient Activation Measure, are collected at baseline and at 10 weeks. Based on recruitment rates, acceptability of recruitment and randomisation methods, feasibility and acceptability of outcome assessments, and engagement with the intervention group activating their account. On average, participants logged in 35 times during the 10 weeks spending a mean of 18 minutes per login. Participants described their views and experiences of taking part in this remote trial, including email communication, engaging in online assessments, online education and suggestions for improvements to full study protocol.

Conclusions: This nested pilot study provides evidence for the feasibility of the full-scale trial. Consequent refinements to the protocol have been made through the identified areas for improvement. These results are relevant to the design of other remotely delivered trials in CKD.

SA-PO947
Participant Experience in the Kidney Precision Medicine Project. Angela M. Victoria Castro,1 Celia P. Corona Villalobos,2 Natalya Sarkissova,4 Kristina N. Blank,4 Ashveena Dighe,5 Glenda V. Roberts,2,5 Alan Y. Xu,2 Victoria Blanch,1 Michael P. Rose,1 Ian H. de Boer,1 Jonathan Himmelfarb,6 Katherine R. Tuttle,1 KJMP 2Yale University School of Medicine, Department of Internal Medicine, New Haven, CT; 3Johns Hopkins University, School of Medicine, Division of Nephrology, Baltimore, MD; 4Kidney Precision Medicine Project Patient Partner, Seattle, WA; 5Kidney Research Institute and Division of Nephrology, University of Washington, Seattle, WA; 6University of Michigan, Ann Arbor, MI.

Background: Optimal participant experience is a foundation of the Kidney Precision Medicine Project (KJMP). This study aimed to identify participants’ motivation to participate in research, comprehension of informed consent, satisfaction with processes, and perception of personal impact.

Methods: Participants with acute kidney injury (AKI) or chronic kidney disease (CKD) enrolled at nine recruitment sites in the United States during 2019-2022 attended a visit 28 days after their KJMP protocol kidney biopsy. At that time, participants were asked to complete a survey about their experience with 48 questions developed in collaboration with an evaluation expert from the Institute of Translational Health Sciences at University of Washington.

Results: A 28-day survey was completed by 70% of 129 participants, 17 enrolled for AKI and 73 for CKD. Median age was 60 (IQR 46-66) years, 46% were women, and 27% identified as Black race. Individuals most commonly joined the KJMP to help future patients (56%), and 97-99% understood the informed consent process and their role in the study. They were asked to rate their anxiety during the biopsy on a graded scale; 45% of participants reported a scale of 10 (maximum) anxiety compared to 29% who reported no anxiety. They also rated the pain of the biopsy on a graded scale with 2% reporting 10 (maximum) while 46% chose a rating of 0 (none). Difficult aspects of their KJMP experience were reported by 8%, mostly related to biosample collection. They were asked about their recent life changes in taking medication, diet, physical activity, and views of kidney disease after receiving their biopsy results.

Conclusions: KJMP participants are motivated to participate primarily by altruism and report positive experiences with informed consent and the impact of the study on their daily lives, despite some anxiety and pain related to the biopsy. The KJMP will improve methodology based on participant feedback and will provide guidance for better clinical research processes more broadly.

Funding: NIDDK Support.

SA-PO948
Assessing Cognition and Sex Differences in CKD Using the NIH Toolbox. Luis M. Perez, Seth B. Furgeson, Zhiyong You, Jessica B. Kendrick. University of Colorado Denver School of Medicine, Aurora, CO.

Background: Chronic kidney disease (CKD) is largely an age-related clinical disorder with accelerated cognitive and cardiovascular aging. Cognitive impairment is a well-documented occurrence in midlife and older adults with CKD and affects multiple domains. In the general population, there is a higher prevalence of cognitive impairment in women. We examined whether cognition differed by sex in adults with CKD.

Methods: We included 109 individuals (51% women) with CKD stage 3b-4 (eGFR 15-44 ml/min) from the Bicarbonate Administration in CKD Trial. We measured cognitive function using the National Institute of Health (NIH) Toolbox® (TB) cognitive battery, which assesses cognitive and motor measures such as executive function, attention, memory, and dexterity. All study measures were collected and analyzed at the study baseline.

Results: The mean age and eGFR were 61 ± 12 years and 34.9 ± 9.8 ml/min/1.73m². Overall, both men and women scored below the 50th percentile on all fluid cognition measures, dexterity and total fluid and total cognition scores (Table). Notably, men scored higher than women on the flanker test (t(21) = 2.15, p = 0.04). However, men scored higher on both the dominant/non-dominant pegboard test (t(21) = 2.45, p = 0.02) and 10-15 (p = 0.02) scores. There were no other sex differences among other cognitive measures (p > 0.05). EGFR was associated with crystallization (r = 0.26, p = 0.21).

Conclusions: Individuals with CKD had cognitive function below the median NIH-TB reference population values. These results establish baseline cognitive impairment levels in individuals with CKD as well as sex differences in cognitive measures.

Funding: NIDDK Support.