## *Abstracts - e-Poster Presentations (Mini-Free Communications)*

***Friday, May 3rd, 2024 from 16:30-18:00 EDT***
***Saturday, May 4th, 2024 from 15:30-17:00 EDT***

***P-071***

# HOW EQUIPPED ARE FAMILY PHYSICIANS TO PROVIDE CARE TO LIVING KIDNEY DONORS? A CROSS-SECTIONAL STUDY

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**Background:** Living kidney donors (LKDs) are a vital source of organs for patients with kidney failure. In Canada, over 500 individuals donate a kidney annually. Their long-term care has been described as sub-optimal. In our prior work, we reported that most transplant programs defer long-term care of LKDs to family physicians (FPs), and that LKDs perceived deficiencies in care and in the knowledge of their FPs.

**Objectives:** To explore the knowledge, attitudes and practices of Canadian FPs regarding living kidney donation and LKD care.

**Methods:** Cross-sectional survey study of Canadian FPs. The questionnaire included scales adapted from validated instruments.

**Results:** We received 151 responses. Participants represented 10 provinces and one territory. 52.3% were women, and 39.1% had at least one LKD in their practice. Most FPs were Caucasian and practiced for >10 years. 78.2% received no formal training on living kidney donation and 75.5% reported that no information on organ donation was available to them. On a scale of 1-10, 78.8% rated their knowledge ≤5. Attitudes regarding living kidney donation were generally favorable (Table 1). FPs perceived donation as a subspeciality, reported that it was a rare occurrence in their practice and that they would benefit from closer guidance from transplant centers and on-demand resources.

**Conclusions:** There are long-term risks of donation and FPs are not formally trained or supported to care for LKDs. As we promote and increase living donation, it is our ethical responsibility to ensure LKDs receive optimal care. We have identified critical knowledge gaps to pursue prospective work to address them.

**Table 1. Attitudes and beliefs of Canadian family physicians regarding living kidney donation**

| | Agree or strongly agree |
|---|---|
| Living donor kidney transplantation is the best treatment for patients with end-stage kidney disease | **64.2%** |
| Living kidney donation is often not a rewarding experience for the donors | **2.7%** |
| The rates of living kidney donation should be increased in Canada | **55.6%** |

| | |
|---|---|
| Family doctors/general practitioners should have living organ donation information available in their practices | **62.3%** |
| Family doctors/general practitioners should talk about living organ donation with their patients | **30.5%** |
| I would be willing to be a living kidney donor to someone with whom I have a genetic or emotional relationship | **70.9%** |
| I would be willing to be a living kidney donor to a stranger | **12.6%** |
| Living organ donation is against my religious/cultural beliefs | **0.7%** |
| I have personal conflicts or moral objections to living organ donation | **1.3%** |

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***P-093***

# VITAMIN C SUPPLEMENTATION IN CHRONIC HEMODIALYSIS : A QUALITY IMPROVEMENT PROJECT

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**Background:** Ascorbic acid is a 176 dalton water soluble vitamin with a low degree of protein-binding. We hypothesized that due to poor intake and losses through hemodialysis, patients on hemodialysis (HD) are at risk of vitamin C deficiency. Indeed, the prevalence of vitamin C deficiency was 45% (118/263) among prevalent HD patients at our institution.

**Objectives:** The aim of this project was to examine whether 1) systematic vitamin C supplementation would reduce vitamin C deficiency prevalence to less than 5% in this population 2) evaluate the proportion of patients actually receiving supplementation, 3) systematic vitamin C supplementation would cause vitamin C excess.

**Methods:** This is a single center study conducted at the CHU de Québec. The intervention consisted of informing the treating team about the prevalence of vitamin C deficiency and implement a systematic protocol for prescription of a multivitamin (Replavite, containing 100 mg of Vitamin C) to every prevalent and incident chronic HD patients. The outcome measure was the prevalence of Vitamin C deficiency (serum level < 11 umol/L) in a sample cohort of 40 patients after 3 months of the application of the intervention protocol. The balancing measure was the proportion of patients with vitamin C excess (> 115 umol/L) after 3 months. The process measure was the proportion of incident HD patients with an active prescription of Replavite at 1 year after the implementation of the protocol.

**Results:** Three months after the intervention protocol, the prevalence of vitamin C deficiency was reduced to 5% (2/40). Proportion of patients with excess vitamin C was 0% (0/40). After 1 year, the proportion of incident HD patients with an active prescription of Replavite was 88% (15/17).

**Conclusions:** A systematic vitamin C supplementation of 100 mg/day was successfully implemented, effective in reducing the prevalence of vitamin C deficiency in HD patients, and safe.

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***P-096***

### AST-120 IMPROVED UREMIC PRURITUS BY LOWERING INDOXYL SULFATE AND INFLAMMATORY CYTOKINES IN HEMODIALYSIS PATIENTS

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**Background:** Pruritus is a common and distressing symptom that affects patients with chronic kidney disease. The concentration of protein bounded uremic toxin was associated with the uremic pruritus.

**Objectives:** To assess the efficacy of AST-120 for uremic pruritus in hemodialysis patients.

**Methods:** The participants were enrolled and then divided into the AST-120 treatment group and control group with a ratio of 2:1. All participants underwent pre-observation screenings two weeks before the study with three visits. In the treatment phase (week 1 to week 4), the treatment group added 6g/day of AST-120 along with routine anti-pruritic treatment. Visual analog scale (VAS) and biochemical parameters were measured.

**Results:** The VAS score began to be lower in the AST-120 treatment group after the 5th visit ($p < 0.05$). Indoxyl sulfate (IS) reduction at 5th week along with TNF-alpha. The reduction ratio of IS correlated with the reduction of parathyroid hormone.

**Conclusions:** This study has demonstrated that the four-week treatment of AST-120 decreased the severity of uremic pruritus in patients with ESRD. The concentration of IS and TNF-alpha decreased in the AST-120 treatment group. The reduction of iPTH correlated with the reduction of IS in the AST-120 treatment.

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# FACTORS LIMITING EARLY REFERRAL AND WAITLISTING FOR TRANSPLANTATION IN AN ACADEMIC CKD CLINIC: A SINGLE CENTER EXPERIENCE

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**Background:** The best treatment for end-stage renal disease is kidney transplant and pre-emptive kidney transplant (PEKT) has shown additional benefits. Many barriers to PEKT have been identified including timely referral, socioeconomic barriers, ethnicity and age.

**Objectives:** We aimed to characterize patients referred to pre-transplant evaluation in our center's chronic kidney disease (CKD) clinic and to quantify delays between start of pre-transplant evaluation (PTE) and waitlisting for kidney transplant.

**Methods:** Single center retrospective study using data from the CKD clinic's registered patients in June 2021, followed until July 2022. We assessed differences between referred and unreferred groups using the independent samples t test for continuous variables and chi-squared test for categorical variables.

**Results:** 203 of the 395 patients with CKD had a progressive disease and were classified by transplantability status. Over a third of patients were considered unsuitable. Of the remaining 125 patients, 38 (30.4%) were referred to PTE, 8 (6.4%) were possible candidates, but did not start PTE and 79 (63.2%) progressive patients were unreferred or had an undetermined status for transplant. Undetermined patients were older (66 years old vs. 57, $p < 0.001$), had a higher Dusseux score (5.9 vs. 3.1, $p < 0.001$), and their estimated glomerular filtration rate was slightly higher (15 ml/min/1,73m$^2$ vs 11, $p < 0.001$). There was a non-significant trend toward a greater proportion of diabetes, coronary or peripheral vascular disease and dysrhythmias.

**Conclusions:** Age and subjective burden of comorbidities were limiting factors toward PTE referral and a substantial proportion of patients had an undetermined status, suggesting that PTE and PEKT may be optimized.

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***P-139***

### DIETITIAN DRIVEN MINERAL BONE DISEASE PROTOCOL IN CHRONIC HEMODIALYSIS PATIENTS

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**Background:** Mineral Bone Disease (MBD) management in dialysis patients is often dependent on dietary intake. Physicians rely on the dietitians' assessments before adjusting medications (such as phosphate binders and activated Vitamin D analogues). As part of their scope of practice, dietitians are able to make medication changes independently – provided they have some direction.

**Objectives:** To develop a dietitian-based protocol managing MBD in chronic hemodialysis; empowering dietitians to make changes while ensuring they have enough direction and support, without any negative effects on patient care.

**Methods:** Using quality improvement methodology, we developed a protocol for dietitians directing MBD management based on patients' laboratory results, using an iterative process with input from dialysis dietitians and nephrologists in Calgary. As part of the Plan-Do-Study-Act (PDSA), we tested this protocol by asking renal dietitians in Calgary, Alberta, to utilize it and determine next-steps in MBD management in 10 case scenarios. Respondents were encouraged to leave comments to justify their answers, and replies were kept anonymous.

**Results:** 11/11(100%) of the dietitians provided responses to the scenarios. Respondents were able to correctly identify exclusions from the protocol (100% correct). Mean correct response rate was 84%. Justifications for incorrect answers included: concerns about incomplete information in the scenarios, lack of comfort with changing vitamin D analogue doses and improper use of the protocol. These results indicate that dietitians may need further education and familiarity with the protocol.

**Conclusions:** We were able to develop and test a MBD management protocol driven by dietitians. Future PDSA cycles will involve further calibration of the protocol, increased education for dietitians, and further testing with case scenarios before real-life implementation.

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***P-150***

# ANEMIA AND CKD: UNDERSTANDING THE PATIENT EXPERIENCE AND LEVERAGING PATIENT PERSPECTIVES TO INFORM THE DEVELOPMENT OF A NEW EDUCATIONAL TOOLKIT

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**Background:** Anemia is a common comorbidity among people living with chronic kidney disease (CKD), and yet there is a lack of qualitative studies regarding anemia-related experiences and patients' gaps in knowledge, and a lack of educational tools for patients with CKD and anemia.

**Objectives:** To explore the multidimensional effects of anemia on people living with CKD and their caregivers, with a focus on the day-to-day challenges, experiences navigating the healthcare system, and gaps in knowledge regarding anemia and CKD.
Our second objective is to use this data to inform and develop an educational toolkit to support patients and caregivers of people living with CKD and anemia

**Methods:** We conducted three focus groups sessions with a total of 17 CKD patients and caregivers. The sessions were led by patient partners who were co-leads on this project. Transcripts were coded, and themes and subthemes were identified using inductive thematic analysis. The data that pertains to gaps in knowledge was used to inform the content for an educational webpage and flier on anemia and CKD.

**Results:** Themes relate to three large categories: A) impact of anemia on individual, B) patient experience within healthcare system and C) Gaps in knowledge and information needed.
Within these categories, the themes identified by patients and caregivers were 1) Physical and Emotional Toll of Anemia, 2) Challenges with Management of Anemia, 3) Impact on Quality of Life, 4) Disconnect Between Patients and their Healthcare Provider, 5) Experiences Interacting with Healthcare Teams, 6) Information needed, and 7) Consequences of lacking information.

**Conclusions:** In this study, participants described important challenges that accompany a diagnosis of anemia and CKD, including confusion about anemia, unanticipated severe symptoms, challenges with management and disconnects between patients and providers. Our educational toolkit was developed to address gaps in knowledge and empower patients to engage in their care.