

## **Dietary Changes After the Covid19 Pandemic in Inner-City Chronic Kidney Disease (CKD) and Kidney Transplant (KTx) Patients: Lower Caloric and Protein Intake**

### **Introduction**

We examined the impact of the COVID19 pandemic on dietary intake in an inner-city population of CKD and KTx patients.

### **Methods**

Dietary intake was assessed using 24-hour recall in a random sample of patients from CKD and Transplant clinics in 2019 (48) and in 2020 (30). Dietary assessments were conducted in person in 2019 and by phone in 2020. Diets were analyzed using ASA-24 software. Entries with less than 1,100 kcal were excluded from analysis. There was no difference in patterns between the two clinics so they were analyzed together. Statistical analysis was by t-test or Chi-square as appropriate.

### **Results**

The 2019 cohort and the 2020 cohort were similar for age ( $55.9 \pm 12.5$  vs  $60.0 \pm 11.7$ ,  $p=0.148$ ), gender (60.4% vs 43.3% male,  $p=0.141$ ), race (81.3% vs 69.2% Black,  $p=0.241$ ), and education (75% vs 80.8% with less than a college degree,  $p=0.573$ ).

The 2020 patients consumed fewer total calories ( $1513.16 \pm 350.82$  vs  $1731.02 \pm 573.07$  kcal,  $p=0.041$ ) compared to 2019 patients. For macronutrients, the 2020 cohort ate less protein ( $72.59 \pm 24.40$  vs  $88.44 \pm 37.17$  g,  $p=0.030$ ), with no significant difference in total fat ( $62.11 \pm 19.38$  vs  $72.59 \pm 38.85$  g,  $p=0.118$ ) and carbohydrate intake ( $163.08 \pm 64.75$  vs  $185.02 \pm 76.46$  g,  $p=0.179$ ). In relation to protein intake, the 2020 cohort consumed less protein-rich foods such as meat, poultry, seafood, organ meat and cured meat compared to the 2019 cohort ( $6.74 \pm 3.21$  vs  $8.83 \pm 5.53$  oz. eq.,  $p=0.038$ ). Dark green vegetable consumption was also significantly less in the 2020 cohort ( $0.14 \pm 0.29$  vs  $0.35 \pm 0.60$  cup eq.,  $p=0.031$ ). Finally, the 2020 cohort consumed less water ( $1883.98 \pm 1005.99$  vs  $2694.12 \pm 1410.35$  g,  $p=0.004$ ).

### **Conclusion**

In our population: 1. CKD and Transplant patients consumed less protein and water during the Covid-19 pandemic than in the previous year. 2. Consumption of dark green vegetables and protein-rich foods decreased significantly during the pandemic.