Dietitians Play a Crucial and Expanding Role in Renal Nutrition and Medical Nutrition Therapy

NUTRITION IS AN important component in the prevention and treatment of chronic kidney disease (CKD). Nutrition interventions, when performed by a dietitian, have the potential to improve quality of life and outcomes, slow the progression of CKD, and mitigate common complications in patients undergoing kidney replacement therapy.[1,2] Recognizing the critical role of the dietitian in translating science into practice and the high-level of dietitian participation in the International Society of Renal Nutrition and Metabolism (ISRNM), it was proposed at the 6th International Congress for Renal Nutrition and Metabolism in 1991, that dietitians should have a council member to ensure that their contributions and interests were a key component of the society. This proposal was adopted at the 7th congress in 1994, the first associate councilor was elected at the 8th congress, and participation has been further expanded in subsequent years.[3] This unique aspect of the ISRNM has made the society an early adopter and leader in interdisciplinary renal nutrition.

Despite renal dietitians bringing immense value to comprehensive kidney care, there continues to be a considerable gap in the availability and accessibility of this valuable discipline across the world.[4] In a recent global survey, only 48% of the countries reported availability of dietitians with training in renal nutrition. The observed disparities in the availability of renal dietitians are especially pronounced in low (9%) and low-middle income (20%) countries. Even when dietitians are available, they often lack resources or are asked to do additional tasks that limit their ability to perform optimal medical nutrition therapy.[5,6]

In the coming years, renal nutrition may face additional challenges. Traditionally, renal dietitians work primarily for patients with CKD requiring kidney replacement therapy. However, with improved awareness of the role that renal dietitians play in slowing or preventing patients from advancing to kidney failure,[1,7] there are increasing incentives to improve access to renal dietitians to deliver nutrition intervention and education for patients with non-dialysis CKD.[2] Indeed, nutritional monitoring during this time has been shown to improve the quality of life and reduce the risk of mortality in patients once they initiate dialysis.[8] However, not all patients may be offered or suitable for dialysis. Nutrition intervention also plays a crucial role in conservative kidney care leading to improved symptom control and better quality and quantity of life.[9] Given the huge global burden of CKD and the rising prevalence of the non-dialysis CKD population, this expansion in patient coverage will require additional resources, increased efficiency, and an expanded workforce.[10]

The field of renal nutrition will need to adapt to meet the increasing demand. Dietitians are leading the way in developing and adopting novel technologies, including telehealth and mobile device-assisted nutrition care, with more emphasis on food, food-group, and dietary pattern-based guidances.[11-14] We also have a unique opportunity to expand our field by training additional dietitians to deliver specialized kidney care for patients with CKD. This may be especially beneficial in areas with limited coverage including low-, low-middle, or high-income countries where specialist renal nutrition training has not been established. To assist with this training, the Global Renal Internet Course for Dietitians was developed to support advanced nutrition training for clinical dietitians globally.[15] Over 50 international experts contributed voluntarily to support the Global Renal Internet Course for Dietitians course. The ISRNM has also developed a Renal Total Nutrition Therapy Course to help train health professionals in this important area to bridge global gaps in renal nutrition care, advance interdisciplinary renal nutrition care globally, and optimize clinical outcomes for patients with kidney diseases.[16] The recent revamp of the ISRNM organizational structure and website with the provision of regular online education resources for health professionals and patients alike embrace the collaboration of practicing clinical dietitians, nephrologists, scientists, other health professionals, and patients to raise awareness of the importance of renal nutrition and metabolism, promote interests in this area, bridge gaps in renal nutrition care and improve global access to quality renal nutrition care.

In this issue of the *Journal of Renal Nutrition*, readers will see instances of research that support the statements above. Oudman et al.[17] have conducted a systematic review of Wernicke's encephalopathy in patients with kidney disease and correlated to signs and symptoms of malnutrition. Jindapateep et al.[18] have crafted a predictive equation for

Financial Disclosure: The authors declare that they have no relevant financial interests.

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1051-2276/$36.00

https://doi.org/10.1053/j.jrn.2024.02.001

energy expenditure in patients with acute kidney injury who are not critically ill. The Editor's Choice article for this issue of the *Journal of Renal Nutrition* is a paper by Ren et al.[19] who identified plasma biomarkers of dietary intake and correlated them to the progression of kidney disease in children. This important paper demonstrates that these biomarkers can be used as dietary intake phenotypes in kidney disease. Moloudpour et al.[20] examined the dietary intake of a large cohort to construct a plant-based diet index and associated the index with CKD. Tseng et al.[21] associated protein-energy wasting assessed by the Malnutrition Inflammation Score, along with markers of frailty, and dietary intake in patients with stages 3 to 5 CKD. Their study identified that frailty is associated with protein-energy wasting in this patient population, and interventions are needed to prevent and treat frailty. McLean et al.[22] evaluated frailty in patients receiving conservative management or dialysis for kidney failure and found a higher rate of frail individuals reported gastrointestinal symptoms of greater severity and frequency than patients who were not assessed as frail. Conley et al.[23] conducted a mixed-methods randomized crossover study to assess the acceptability of two low-energy diets by patients with CKD and obesity. Their study provides a good background for developing prospective studies in weight management for patients with CKD. Ding et al.[24] found that biomarkers of advanced glycation end products can be used in the early detection of diabetic kidney disease, which may improve the diagnosis of diabetic kidney disease. Okubo et al.[25] inspected the Frontier of Renal Outcome Modifications in Japan study to detect health-related quality of life over 10 years. They found some diet-related outcomes (eg, elevated blood pressure, hyperuricemia) correlated with reduced quality of life. Kianian et al.[26] examined the readability of publicly-available health information on kidney stone prevention and treatment. They instructed ChatGPT to produce material on the topic and found that ChatGPT more reliably produced material at an appropriate reading level than the material available online as written by human writers.

Dietitians and kidney nutrition care have come a long way since their initial inclusion into the ISRNM. The individualized nutrition care provided by renal dietitians goes beyond generic dietary advice to include personalized factors such as previous assessment of nutritional status, fulfilling nutrient needs, monitoring dietary prescription, social, economic, cultural factors, and so much more. Given the increasing burden expected from CKD in the future, dietitians will remain a vital part of the multidisciplinary team needed to manage the complexities of CKD. To continue to provide the best care to all people with CKD, renal dietitians will need to continue to push the field forward through research, innovation, and expanded access.

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