

# Journey into Renal Dietetics



Tara Hall, Senior Paediatric Renal Dietitian,  
Evelina London Children's Hospital, UK

If someone would have told me at university that I would be working as a Paediatric Renal Dietitian at the Evelina London Children's Hospital, I would have never believed them. Throughout my undergraduate dietetic degree there was a large focus on adult dietetics, with the occasional paediatric dietetic lecture, such as cows' milk protein allergy in children. Depending on your placement, you may have had the opportunity to experience working within paediatrics but, at present, these opportunities are not widely available. Nonetheless, despite the lack of teaching on paediatric dietetics and minimal experience on placement, I always knew I wanted to work with children.

## Where I started

I started my career in dietetics as a band 5 adult rotational dietitian. This entailed rotations between general medicine, surgery, gastroenterology, stroke and neurology and in the community setting. Knowing that I wanted to focus on paediatrics, I continued to seek out shadowing opportunities with the paediatric dietitians whenever possible. Within a year of working as a band 5, a rotational paediatric dietitian role was advertised. Of course, I jumped at the opportunity to start my career in paediatric dietetics.

Going into the rotational role, I was open-minded, willing to try any speciality with the exception of paediatric renal dietetics. Within the rotational role, there were opportunities to work in general medicine, gastroenterology, diabetes, cystic fibrosis, respiratory, cardiac and renal. I started the rotation in the areas of gastroenterology and diabetes, and I thoroughly enjoyed this rotation and the teams. I actually ended up staying in that rotation longer than expected. When the time came to discuss my next rotation, the one rotation I did not want to do was renal. I had even considered moving jobs if I had to rotate into renal.

The truth was, I didn't really know much about paediatric renal dietetics or even properly understand renal disease at that time. As far as I was concerned it involved advising patients to not eat bananas and formulating very complicated feed recipes. I thought you had to be a mathematician for these recipes and maths has never been my strong suit. Of course, I did not move jobs or skip the paediatric renal rotation. Instead, I started in the paediatric general medicine and renal rotation, and I was opened up to a whole new world of dietetics.

## Journey towards specialising in renal

My impression of paediatric renal dietetics quickly changed. Within my first few weeks I was constantly learning through a

combination of tutorials and starting to see my own patients. Throughout this rotation, I saw a variety of conditions, such as chronic kidney disease (CKD), acute kidney injury, haemolytic uremic syndrome, cystinosis, nephrogenic diabetes insipidus, patients on peritoneal dialysis (PD) and haemodialysis (HD) and renal transplant patients. I continued to learn and understand that the journey these patients go through is remarkable.

My love for paediatric renal dietetics continued to grow. I started to understand how to create and change recipes depending on a patient's renal condition and renal blood results, such as potassium ( $K^+$ ), phosphate ( $PO_4$ ), urea, sodium and corrected calcium. The part of paediatric renal dietetics that I feared I would hate the most, became something that I found both challenging and rewarding. Alongside developing and modifying milk recipes, I provided advice on reducing dietary potassium and/or phosphate intakes. Each child with renal disease is unique and requires individualised dietetic input.

I felt valued as a member of the multi-disciplinary team (MDT), attending daily meetings with the paediatric renal consultant on call to discuss the medical and dietetic plans for the patients. Due to the complexity of some of the patients, any small change in feed, such as adjusting the  $K^+$  and  $PO_4$ , could impact upon their blood results. As a result, good communication with the team was so important.

My role was a split role, 50% renal and 50% general medicine. As my time in the rotation continued, I realised I did not want to keep rotating. I had discovered the area I wanted to specialise in, and I was ready to become a permanent member of the paediatric renal MDT. I wanted to be able to build relationships with my patients and their families, and to continue with them on their journeys.

## Moving roles

When a permanent paediatric renal dietetic job was advertised in Evelina London Children's Hospital, I had to apply. Fortunately, I was invited to an interview. I remember being asked "So, why have you applied for this role and why renal?" and I was glad of the opportunity to be able to describe my journey from never wanting to go into renal to wanting to become a permanent member of the paediatric renal MDT. When I was offered the job, I understood that it was going to be a big change. The number of consultants and specialist nurses I was going to be working with nearly tripled. Along with this came a significant increase in the number of patients in our care. I eagerly accepted my new role and the increased responsibility and challenges that came with it.

## The role of the kidneys

I am continually amazed by how much the kidneys do. They play a crucial role in our health and we often refer to them as 'the washing machine of the body' - a comparison younger children can also understand. They excrete waste products, remove excess fluid and maintain the balance of sodium, calcium,  $K^+$  and  $PO_4$ .<sup>1</sup> They are also involved in bone metabolism, monitoring blood pressure and have a role in red blood cell formation.<sup>1</sup> When our kidneys are damaged, or if they no longer function as well as they should, there is an impact on these processes. It is known that CKD can impact upon a child's appetite, taste sensations, weight gain and growth.<sup>2</sup> Children with CKD may experience uraemia, hyperphosphataemia<sup>3</sup> and hyperkalaemia,<sup>4</sup> all of which can be managed through modifications to their diet or, in the case of infants, modifications to their milk recipes. As a result, paediatric renal dietitians are key members of the paediatric renal MDT.

## What does my current role entail?

My usual week consists of covering the paediatric renal ward and the paediatric CKD, transplant and PD clinics. In addition to this, I run my own paediatric renal dietetic telephone clinic twice a week, and I also review children receiving HD at our onsite HD unit, as well as those who receive home haemodialysis. Every day is

different and, despite prior paediatric renal experience, each day I continue to learn something new. Although we have a huge number of patients on our caseload, I am consistently supported by my team, and I continue to have tutorials with my Team Lead and discuss my feed recipes. As I transitioned from a band 6 to 7, I expected some steep learning curves. I have competencies to complete which highlight the standard that is expected and allow me to evaluate my progress. I continue to feel like a valued member of the MDT, and I have the pleasure of working with an incredible team.

## What is different in renal to other areas of dietetics?

- Specialist feeds, we use:
  - Specialised feeds that are lower in  $K^+$  and  $PO_4$  - low  $K^+$  feeds: Kindergen and Renastart
  - Energy modules: Polycal (carbohydrate), Duocal (fat and carbohydrate), Calogen (fat) are often added to feeds to meet estimated energy needs
  - Protein supplements: Renapro powder - low in potassium and phosphate and used to help meet estimated protein needs where indicated
  - Sip feed: Renastep is an energy-dense supplement that is lower in  $K^+$ ,  $PO_4$  and protein.
- From my clinical practice, infants with CKD require multiple changes to their milk recipes in the inpatient and outpatient settings. We aim to manage their electrolytes and protein intakes, whilst meeting their nutritional requirements, to promote growth.
- Spending a lot of time creating recipes (which is both rewarding and challenging). Feed recipes need to be adjusted to help manage blood urea, potassium and phosphate levels. As previously mentioned, feed plans also need to meet the patient's nutritional requirements and be within their fluid restriction (where required).
- Seeing your patients very frequently and building a good relationship with them and their families, as you could know them from birth up to when they turn 18!
- Factors that need to be considered when doing a dietetic assessment in renal:
  - Renal diagnosis and estimated renal function
  - Weight history, dry weight and lengths/heights trends

- Renal biochemistry (such as urea, creatinine, potassium, phosphate), including trends for these
- Information on the fluid targets or fluid restrictions
- Estimated energy and protein requirements
- When providing advice to reduce dietary potassium and/or phosphate intakes, need to consider if this will impact on other nutrients. In addition, as these dietary modifications can impact the entire family, advice needs to be individualised and realistic.

## Tips on how to get some experience in paediatric renal

- Shadowing:** If your centre has a paediatric renal dietetic speciality, discuss the option of shadowing this team in your appraisal. I would recommend seeing both the inpatient and outpatient settings. If shadowing in your hospital is not possible, contact a paediatric renal dietitian at another centre.
- Webinars and videos:** Vitaflo has some really good paediatric renal specific webinars, which are free for dietitians to access. I would recommend keeping your eyes peeled and signing up to the Vitaflo education portal. There is also the option of looking at the 'My renal nutrition' website for videos on different topics that we discuss with our patients.
- Read the Paediatric Renal Nutrition Taskforce guidelines** (<https://link.springer.com/article/10.1007/s00467-023-05884-3>): These are international clinical practice recommendations for the nutritional management of children with kidney diseases, developed by a group of paediatric nephrologists and renal dietitians.

## In summary

If there is one thing that I have learnt throughout my journey so far, it would be not to judge a book by its cover. While it sounds cliché, I made the mistake of overlooking an area because I had formed a false perception of it and assumed I would find it too difficult. Thankfully, I was encouraged to experience renal dietetics, and I have not looked back since! There are so many different aspects of renal dietetics that will keep you interested, challenge you and, in the process, be incredibly rewarding. Being a key part of each patient's journey is such a fulfilling experience.

References: 1. Qizalbash L, Cleghorn S, McAlister L. Kidney Diseases. In: Shaw V, eds. Clinical paediatric dietetics. 5th edition. Wiley-Blackwell Publishing, 2020. 2. Shaw V, et al. (2020). Energy and protein requirements for children with CKD stages 2-5 and on dialysis-clinical practice recommendations from the Paediatric Renal Nutrition Taskforce. *Pediatr Nephrol*; 35(3): 519-531. 3. Dasgupta I, et al. (2013) Management of hyperphosphataemia in chronic kidney disease: summary of National Institute for Health and Clinical Excellence (NICE) guideline. *Nephron Clin Pract*; 124(1-2): 1-9. 4. Desloovere A, et al. (2021). The dietary management of potassium in children with CKD stages 2-5 and on dialysis-clinical practice recommendations from the Paediatric Renal Nutrition Taskforce. *Pediatr Nephrol*; 36(6): 1331-1346.