

# Key initiatives in the areas of renal nutrition and rehabilitation

To promote collaborative work between kidney care professionals in the multidisciplinary team, the British Renal Society has a number of affiliate groups. Two of these groups are the Renal Nutrition Specialist Group and the Renal Rehabilitation Network. In this column, chairs Harriet Williams and Sharlene Greenwood discuss recent and ongoing projects in their respective fields.

■ affiliated groups ■ renal rehabilitation ■ exercise ■ nutrition ■ research

**T**his article highlights the activities of two British Renal Society (BRS) affiliates: the Renal Nutrition Specialist Group (RNG) and the Renal Rehabilitation Network (RN). As mentioned previously, the purpose of the BRS is to promote a formal dialogue between the many specialist groups supporting professionals involved in kidney care. The two groups highlighted in this article demonstrate how they have engaged with the BRS and accessed the multidisciplinary team to support their work.

## Renal Nutrition Specialist Group

The RNG has been an affiliate of the BRS since its formation in 2001, sharing progress of its work via regular reports to BRS council, and providing dietetic input in collaborative work, such as workforce planning guidance.

At present, the RNG has 269 members who are registered dietitians with expertise in renal disease. With membership from across the UK, a key aim of the group is to facilitate standardised practice based on the best available evidence, and demonstrate the effectiveness of nutritional interventions.

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## Education

The RNG provides education, including postgraduate courses for new renal dietitians and twice-yearly study days, which are open to all multidisciplinary team members with an interest in renal nutrition. Education leads oversee the development and delivery of franchise courses, as well as resources for the education of student dietitians and non-specialist dietitians who may encounter people with chronic kidney disease (CKD).

## Research

The RNG holds a UK database of renal nutrition-related audit and research, which enables members to form collaborations with one another to enhance and strengthen the quality and applicability of their research and its potential findings, as well as address gaps in the evidence base.

## Supporting prescribing rights for dietitians

The RNG has played a key role in supporting the case for dietitians to become supplementary prescribers—a proposal which, if successful, will enable advanced dietitians to undertake appropriate training to prescribe in accordance with a clinical management plan. This holds many opportunities, particularly in the management of CKD mineral and bone disorder. CKD patients are encouraged to consume adequate amounts of protein to avoid protein-energy wasting (PEW); however, proteins contain phosphorus. Advice focuses on reducing the consumption of foods with a high phosphorus-protein ratio, and phosphate binders are often prescribed in line with the amount of phosphorus consumed at each meal. With

the relevant knowledge and skills, dietitians would be ideally placed to prescribe such medications—a change in legislation to allow this looks promising in 2016.

## Objectives 2015–2018

- Support the case for supplementary prescribing rights
- Develop national evidence-based outcome measures for renal dietetic intervention
- Encourage renal dietitians to undertake audit and research to demonstrate the effectiveness of nutritional intervention
- Work with the food industry to establish the facts on food additives and CKD
- Promote the role of renal dietitians within the multidisciplinary team to service users and other health professionals
- Ensure consistency of practice through national guidance, and facilitate the sharing of educational resources.

## Recent publications

### **Stage 4–5 chronic kidney disease and oral nutrition support**

Undernutrition is associated with poor outcomes and is reported in 20–50% of people with CKD, depending on the stage of their disease (Chung et al, 2012; Steiber, 2014). The treatment of undernutrition in late stages of CKD can be complex, with the need to consider biochemical parameters, such as potassium and phosphate, as well as fluid balance. There are many, and sometimes conflicting, guidelines on the estimated energy and protein requirements of people throughout the stages of CKD.

The RNG produced a consensus statement on oral nutrition support in stages 4–5 CKD (RNG, 2015). It provides recommendations from the point of screening, through to

nutritional assessment, diagnosis and treatment; suggesting strategies for mild, moderate and severe undernutrition. The use of nutritional supplements and considerations when choosing between powdered, standard and specialist feeds is also discussed.

## **Acute kidney injury**

Nutritional intervention for patients with acute kidney injury (AKI) must take into account not only the specific metabolic disturbances associated with the kidney injury, but also the underlying disease process. The aim is to maintain nutritional status while limiting the complications of AKI, preventing or minimising PEW, avoiding further metabolic derangements, and thus reducing risk of mortality (Fiaccadori et al, 1990).

In November 2015, the RNG worked with the national Think Kidneys programme to develop an overview of nutritional considerations in the management of adults with AKI in hospital (Mafrić and Williams, 2015). This document summarises the available evidence on requirements for energy, protein, fluid and micronutrients in AKI, with these variables and electrolyte considerations in mind.

## **Ongoing projects**

### **Tools for measuring renal dietetic outcomes**

Nearing completion is a 4-year project to develop outcome models for nutritional intervention in kidney disease. This UK-wide project has seen the pilot use of standard tools to measure the outcome of dietetic intervention in the management of phosphate, potassium and nutrition support.

## **Renal transplantation**

A toolkit for dietary advice post renal transplantation is due for publication in early 2016. It aims to promote standardisation in clinical practice within the UK with clear and practical guidance relating to food safety advice and other nutritional considerations. It outlines UK Government advice on minimising the risk of foodborne illness in this high-risk population, including general food hygiene and specific high-risk foods (McGeeney and Gatiss, 2014). The latter part of the document outlines other considerations,

including potential drug-food interactions and renal transplant bone disease.

## **Food additives**

A key RNG objective for 2015–2018 is to investigate the use of food additives in the UK and the implications for people with CKD. Although food labels detail the addition of relevant additives, information is lacking on the quantities used, making it difficult to provide accurate advice to patients. A working party of RNG members has been established to evaluate the effects of phosphorus-based food additives.

*To learn more about the work of the RNG, please email [harriet.williams@wales.nhs.uk](mailto:harriet.williams@wales.nhs.uk).*

## **Rehabilitation Network**

The RN became affiliated with the BRS in 2011. It strives to direct patients, clinicians, researchers and health professionals to appropriate information and answers to questions regarding renal rehabilitation.

A multidisciplinary steering group has been established and includes dietetic, nurse, doctor, psychologist, physiotherapist, exercise scientist and patient representation. The steering group has its own website, providing information and support for those considering the initiation of rehabilitation programmes in CKD. The website information and e-communication provides evidence of good practice and has direct links to professional and patient groups (e.g. European Association of Rehabilitation in Chronic Kidney Disease and Canadian Renal Rehabilitation Network). The American Society of Nephrology is also forming a rehabilitation group and the RN is working towards developing links with this group.

The RN hosts a general meeting once a year, which coincides with the annual conference. It is also planning to hold a standalone study day in the next year.

## **Projects**

In 2013, the RN conducted a UK-wide multidisciplinary survey about exercise counselling practices (Greenwood et al, 2014a; Greenwood et al, 2014b). It highlighted barriers to exercise services for renal patients, with 'funding, lack of time, and lack of appropriate exercise personnel' being most widely reported.

Also in 2013, the RN formed a research

consortium that brought together UK experts in exercise and CKD to answer a National Institute for Health Research (NIHR) Health Technologies Assessment (HTA) commissioned call, which asked the question: 'What is the clinical benefit and cost-effectiveness of exercise during haemodialysis (intradialytic exercise) in patients with end stage kidney disease?'

The PEDAL trial was a successful grant application. The study aims to evaluate the effectiveness of a 9-month intradialytic exercise training intervention designed to improve quality of life and functional limitations in patients with stage 5 CKD, against established treatment options available within UK haemodialysis units. The study is due to complete in 2018.

In 2014, an exercise clinical study group was formed within the UK Kidney Research Consortium (UKKRC), which is linked to the RN, to advance and encourage collaborative research in exercise training and exercise-based rehabilitation in the UK. This will contribute to the evidence base necessary to justify the promotion and recommendation of renal rehabilitation across all stages of CKD. The link between the RN and UKKRC has resulted in an expert forum, which is the first point of reference for evaluation of study protocols related to this topic. **JRN**

*To become involved with the RN, please contact our chair [Sharlene Greenwood](mailto:Sharlene.Greenwood@nhs.net) on [sharlene.greenwood@nhs.net](mailto:sharlene.greenwood@nhs.net) and our membership secretary [Alice Smith](mailto:Alice.Smith@leicester.ac.uk) on [aa50@leicester.ac.uk](mailto:aa50@leicester.ac.uk).*

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