

Redesigning the management of Malnutrition and Obesity in Paediatric Kidney Disease: Improving communication between children, families and their kidney team

Dr. Caroline Anderson Lead Paediatric Renal and Improvement Dietitian. University Hospital Southampton.

Background and importance

- Kidney disease is a lifelong public health problem that costs the NHS billions with no cure.
- Increasing prevalence, complexity, outdated technology and expanding clinical teams have resulted in an overstretched service that 'fire fights' those who are most unwell (stage 4 to 5 disease).
- Leading to variation in practice (unclear patient goals, frustration, miscommunication, conflicting advice) and poor access to the right healthcare professional, at the right time, to suit the needs of the child and their family.
- This increases the risk of malnutrition, stunting and obesity, subsequent worsening of disease and the need for earlier dialysis or transplantation, further increasing patient burden and NHS cost.
- Improving nutritional management through safe, effective and efficient communication can delay the progression of disease and healthcare costs during childhood, but need to be delivered in a simple, consistent and timely manner.
- Service evaluations have identified patient and healthcare gaps in communication that require a systematic approach to improving (the delivery of better) clinical care.
- Addressing these issues aligns with UHS (University Hospital Southampton) and national renal priorities regarding patient centred, collaborative and technologically capable care.

Project aims

The project team had 2 aims:

- to reduce variation in communication for children and their families in advanced (stage 4 to 5) disease, attending the regional paediatric nephrology service at UHS;
- to develop a quality improvement ethos and programme for the regional paediatric nephrology team at UHS.

Project Design/Strategy

A multidisciplinary and patient project group was formed consisting of dietitians, nurses, consultants, IT specialists, and service users (young people and parents). A questionnaire was given to children, families and the team to identify key issues in nutritional management communication. This was followed by focus groups to produce themes and discuss key issues in detail. Process maps and cause and effect diagrams were used to understand variability in the process and the patient journey and pathway. This led to the driver diagram development, and the cloud summaries of service comments below.

Figure 1. Driver Diagram

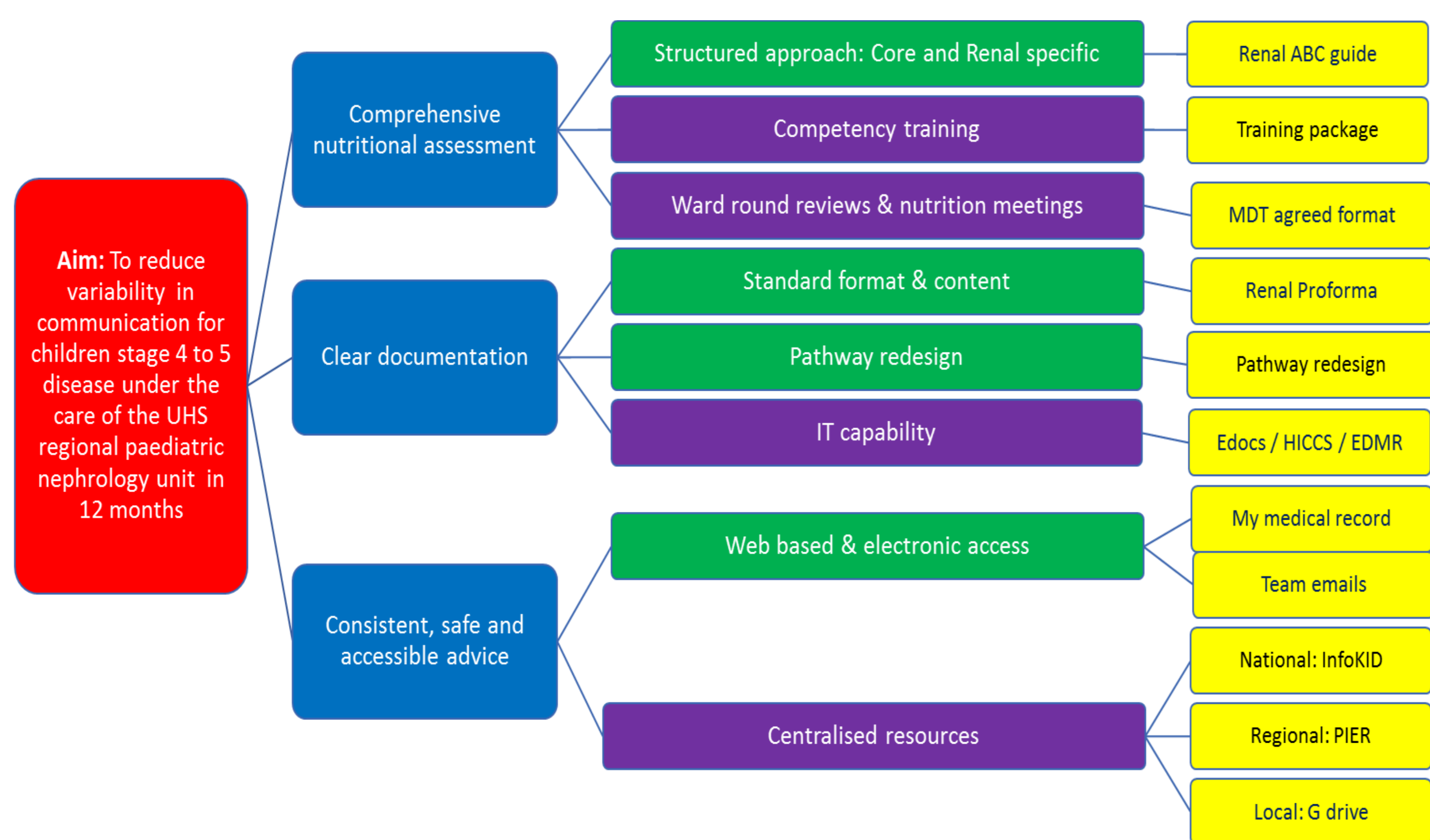
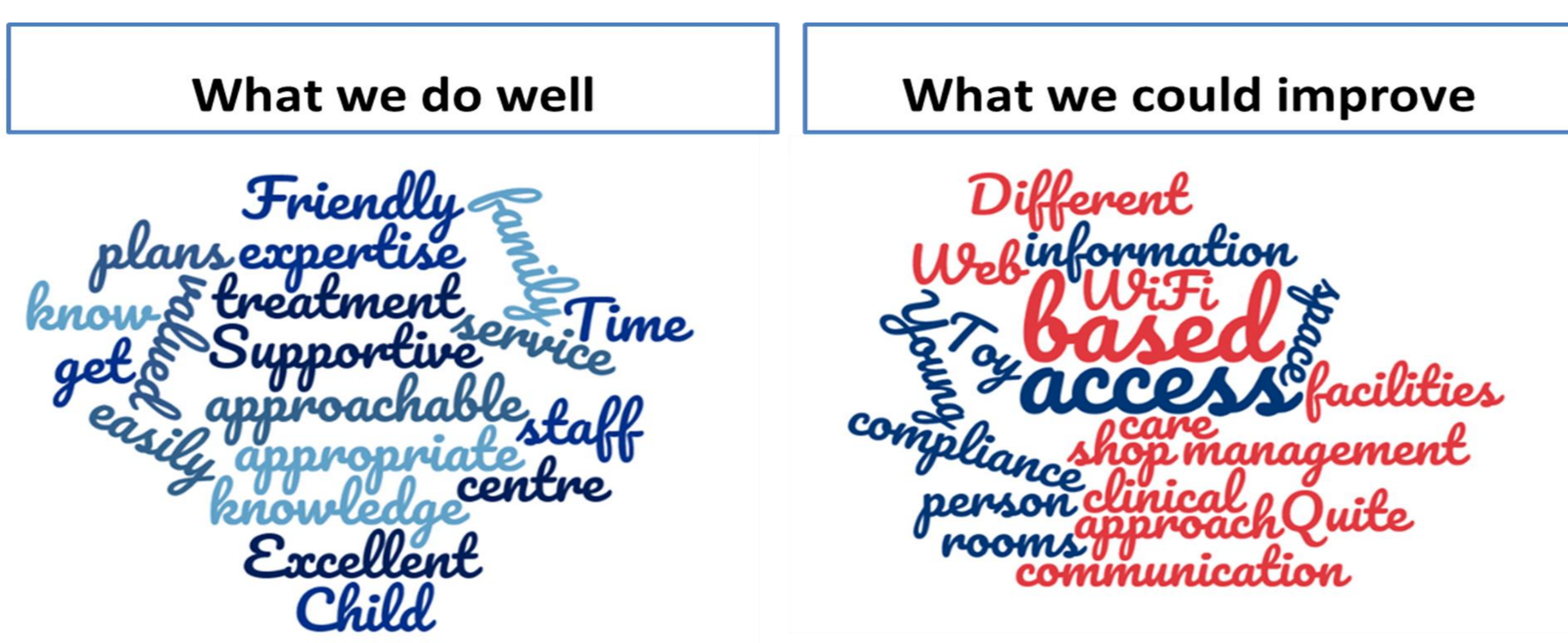


Figure 2. Cloud picture of the children and their families thoughts on the service we provide



Changes made

- A **multicomponent patient** mixed method communication model was developed and introduced to improve accessibility and patient choice, consisting of a dietetic renal team: (i) email; (ii) mobile for texting and direct patient contact calling.
- My Medical Record messaging (web based patient centred communication platform) has also been set up and patients are being registered and a small group have started trialling this.
- A renal dietitians' contact information business card has been produced, that includes a communication pathway and signposting to key resources.
- **Electronic nutritional management** documentation pathway for the healthcare team has been redesigned. To streamline the process and key information needed for assessment, advice and patient information.
- This will then be electronically linked to My Medical Record to improve patient access to advice and supporting information.

Outcomes

Figure 3. Number of My Medical Record patients and messages

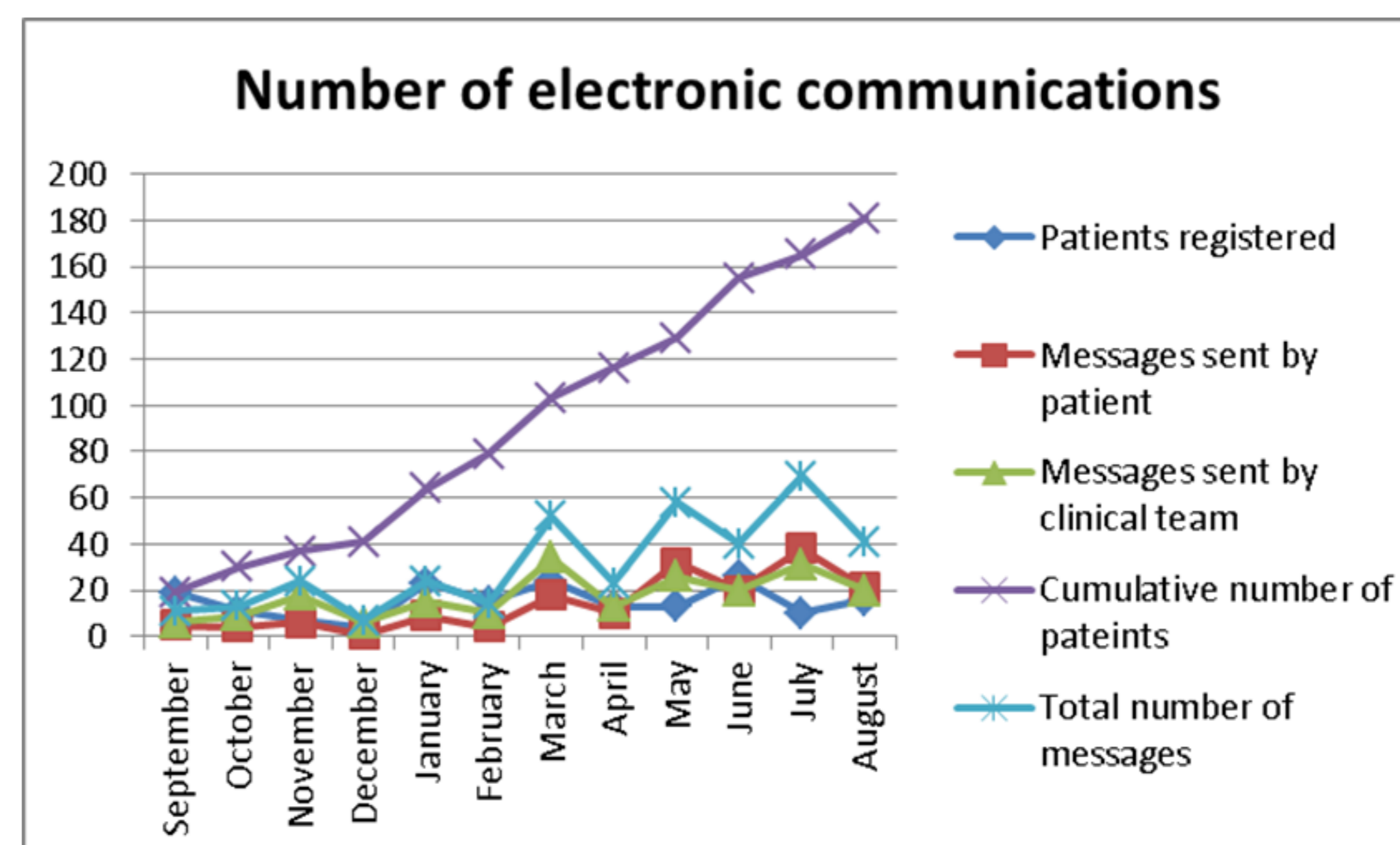
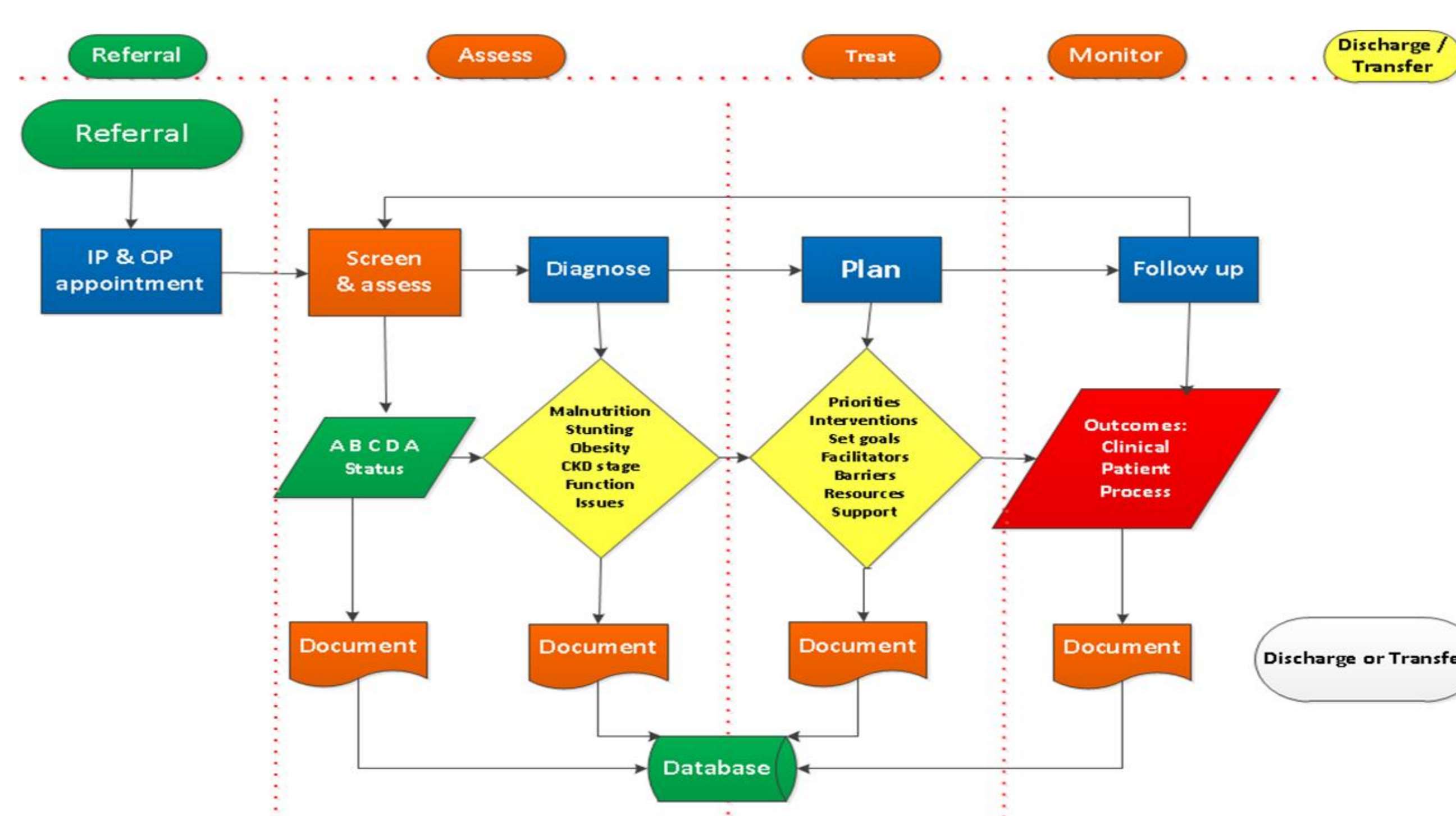


Figure 4. Simplified Renal Nutritional Management Process map



Next steps and sustainability

- Continue leading improvement in the team at University Hospital Southampton and nationally (PRING – Paediatric Renal Interest Nutrition Group).
- Support, train and collaborate with local, national and international dietetic and renal colleagues.
- Disseminate at National, International and Regional conferences.
- Apply for team QI fellowship to embed web-based technology into practice and develop team QI skills and ethos, upskilling the workforce.
- Use my role on KQuIP (Kidney Quality Improvement Partnership) and my Q community membership (NHS Improvement and the health foundation) to enable the above. Along-side my QI involvement in Child Health at University Hospital Southampton and PIER (Paediatric Innovation, Education and Research network) regionally.
- This is only the beginning and a whole programme of improvement across the department, within the renal team and nationally are being explored.

Figure 2. Simplified Renal Nutritional Management Process map

Nutritional renal pathway standard				Nutritional renal risk assessment		
Screen	Nutrition screening tool	Quality of Life	Appetite	Low risk	Medium risk	High risk
Assess	Anthropometry	Biochemistry	Clinical	Diet and activity	Psychosocial	
Diagnose	Growth status	Nutrient status	Disease severity	Barriers	Facilitators	Concordance
Intervention	Diet	Activity	Nutritional supplementation	Support	Resources	
Follow-up	Clinic appointments	Home support				
Evaluation	Clinical outcomes	Patient outcomes	Process outcomes			

Learning

- Thorough ground work is essential and takes time to do well.
- Utilising a QI approach allows flexibility to enable changes to become measurable improvements.
- Teams engage better with QI and see the relevance and benefit more than research due to the quick implementation of changes. However, but both have clear and complimentary roles.
- Patients and team members value being listened to and asked to help.
- Allied health professionals are under used and often lack the awareness of QI opportunities afforded to others, awareness needs to be raised through multiple channels.
- Child health at UHS, PIER (Paediatric Innovation Education and Research local network), KQuIP and Health Education England have a fantastic network for QI support and development. Allied health professional's should seek opportunities to get involved as they can offer complimentary improvements to clinical care.