

Paediatric training for excellence

Paediatric Nephrology

Sub-specialty Syllabus

Version 3

Approved by the GMC for implementation from 1 August 2023



This document outlines the syllabus to be used by doctors completing Paediatric Nephrology training in the United Kingdom (UK). It accompanies the RCPCH Progress+ curriculum and Assessment Strategy.

This is Version 3. As the document is updated, version numbers will be changed and content changes noted in the table below.

| Version number | Date issued | Summary of changes | | | | | |
|----------------|----------------|--|--|--|--|--|--|
| Version 2 | September 2021 | Document reviewed as part of the Shape of Paediatrics Training review. | | | | | |
| | | 'Using the Syllabus with ePortfolio' (page 5) updated. | | | | | |
| | | Learning Outcome (LO) 1, Illustrations updated (Demonstrates an understanding section removed and one new Illustration added). | | | | | |
| | | LO2 amended (renal replacement therapy and renal transplantation removed). Key Capabilities (KCs) amended (three new KCs added and one removed). Illustrations updated (AKI - Applies knowledge of section removed and 'Demonstrates the following skills' section updated; CKD and Transplantation sections replaced with new Illustrations). | | | | | |
| | | LO3 amended (KRT added). KCs amended (two added and one removed). Illustrations updated and new section (Transplantation added). | | | | | |
| | | LO4 reworded. KC4 reworded and KC5 added. Illustrations removed and amended. | | | | | |
| | | LO5 removed. Assessment Grid updated to reflect the above changes to the KCs. | | | | | |
| Version 3 | August 2023 | Updated from Progress to Progress+. | | | | | |
| | | Using the syllabus (page 3) updated: reference to Level 1, 2 and 3 removed and replaced with Core and Specialty training. | | | | | |
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This information is correct and up to date at time of publication. $\ensuremath{\text{@RCPCH}}$ 2023

Introduction

This syllabus supports the completion of the RCPCH Progress+ curriculum and should be used with the curriculum document and Assessment Strategy.

The purpose of the curriculum is to train doctors to acquire a detailed knowledge and understanding of health and illness in babies, children and young people. The curriculum provides a framework for training, articulating the standard required to work at Consultant level, through key progression points during their training, as well as encouraging the pursuit of excellence in all aspects of clinical and wider practice.

The curriculum comprises Learning Outcomes specifying the standard trainees must demonstrate to progress in training and attain a Certificate of Completion of Training (CCT). The syllabi supports the curriculum by providing further instructions and guidance on how the Learning Outcomes can be achieved and demonstrated.

In the context of clinical training and service the term "babies, children and young people" is a common term used by those working in paediatric and child health areas to mean any of those instances in context with clinical training or service. Therefore, in relation to the assessment, the trainee needs to achieve the capabilities for either a baby, child or young person.

Using the Syllabus

Paediatric trainees are required to demonstrate achievement of generic and sub-specialty or General Paediatric Learning Outcomes throughout their training period.

For core trainees (ST1 – 4), there are 11 generic paediatric Learning Outcomes. For specialty training (ST5 – 7), there are a further 11 generic paediatric Learning Outcomes and several additional Learning Outcomes in either General Paediatrics or the sub-specialty to which the trainee has been appointed.

This syllabus contains five interlinked elements, as outlined in Figure 1, which illustrates how each element elaborates on the previous one.

Elements of the Syllabus

The **Introductory Statement** sets the scene for what makes a Paediatric Nephrologist doctor.

The **Learning Outcomes** are stated at the beginning of each section. These are the outcomes which the trainee must demonstrate they have met to be awarded their Certificate of Completion of Training (CCT) in Paediatrics. Progress towards achievement of the Learning Outcomes is reviewed annually at the Annual Review of Competence Progression (ARCP).

Each Learning Outcome is mapped to the General Medical Council (GMC) Generic Professional Capabilities framework. Each trainee must achieve all the Generic Professional Capabilities to meet the minimum regulatory standards for satisfactory completion of training.

The **Key Capabilities** are mandatory capabilities that must be evidenced by the trainee, in their ePortfolio, to meet the Learning Outcome. Key Capabilities are therefore also mapped to the GMC Generic Professional Capabilities framework.

The **Illustrations** are examples of evidence and give the range of clinical contexts that the trainee may use to support their achievement of the Key Capabilities. These are intended to provide a prompt to the trainee and trainer as to how the overall outcomes might be achieved. They are not intended to be exhaustive and excellent trainees may produce a broader portfolio or include evidence that demonstrates deeper learning. It is not expected that trainees provide ePortfolio evidence against every individual illustration (or a set quota); the aim of assessment is to provide evidence against every Key Capability.

The **Assessment Grid** indicates suggested assessment methods, which may be used to demonstrate the Key Capabilities. Trainees may use differing assessment methods to demonstrate each capability (as indicated in each Assessment Grid), but there must be evidence of the trainee having achieved all Key Capabilities.

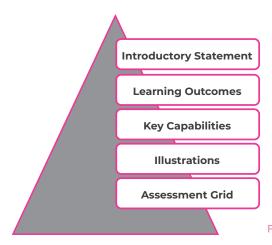


Figure 1: The five elements of the syllabus

Using the Syllabus with ePortfolio

The ePortfolio is used to demonstrate a trainee's progression using assessments, development logs and reflections. Events should be linked to the Progress+ curriculum specifically against the key capabilities at the appropriate level.

Further guidance on using the ePortfolio is available on our website: https://www.rcpch.ac.uk/resources/rcpch-eportfolio-guidance-doctors

Paediatric Nephrology Introductory Statement

A Paediatric Nephrologist is a doctor who deals with the diagnosis, investigation and management of chronic and acute kidney disease, including the provision of dialysis and renal transplantation. Paediatric Nephrologists have a detailed knowledge of renal physiology, including fluid management and disturbances in electrolytes and acid-base balance. They are skilled in the management of acute kidney injury (AKI), which may be managed conservatively or with kidney replacement therapy (KRT), including peritoneal dialysis (PD), haemodialysis (HD) and continuous venovenous haemodialysis (CVVHD) and continuous venovenous haemodiafiltration (CVVHF). They are also skilled in the management of chronic kidney disease (CKD), including the pre-dialysis phase, peritoneal dialysis, haemodialysis and transplantation.

Paediatric Nephrologists also develop expertise in the management of babies, children and young people with congenital anomalies of the renal tract, nephrotic syndrome, glomerulonephritis, vasculitis, inherited and acquired forms of tubulopathy, urinary tract infection (UTI) and vesicoureteric reflux (VUR), renal stone disease, hypertension, inborn errors of metabolism and inherited nephropathies. CKD is a life-long condition and Paediatric Nephrologists are frequently involved in the care of patients from birth all the way through to the successful transition into adult renal care.

| | Sub-specialty Learning Outcomes | GMC Generic Professional Capabilities |
|----|---|---|
| 1. | Demonstrates extensive knowledge of renal physiology, including fluid management and disturbances in electrolytes and acid-base balance. | GPC 2, 3 |
| 2. | Manages the diagnosis, investigation and management of acute and chronic kidney disease. | GPC 3, 6 |
| 3. | Demonstrates proficiency in the management of babies, children and young people requiring kidney replacement therapy (KRT), including acute and long-term dialysis as well as demonstrates competence in peritoneal dialysis, haemodialysis, continuous venovenous haemodialysis and continuous venovenous haemodiafiltration, managing all aspects of paediatric kidney transplantation. | GPC 1, 3, 6 |
| 4. | Manages babies, children and young people with congenital anomalies of the renal tract, nephrotic syndrome, glomerulonephritis, vasculitis, inherited and acquired forms of tubulopathy, urinary tract infection, vesicoureteric reflux, renal stone disease, hypertension, inborn errors of metabolism and inherited nephropathies. | GPC 1, 3, 6 |

Demonstrates extensive knowledge of renal physiology, including fluid management and disturbances in electrolytes and acid-base balance.

GPC 2, 3

Key Capabilities

| Assesses and manages fluid status. | GPC 3, 6 |
|--|----------|
| Assesses and manages derangements in electrolytes and acid-base balance. | GPC 3, 6 |

Illustrations

| | Renal physiology: disorders of fluid, electrolyte and acid-base regulation, including inherited tubulopathies and rarer metabolic disease. | | | | | | |
|-----|--|--|--|--|--|--|--|
| Den | nonstrates the following skills: | | | | | | |
| 1. | Applies knowledge of the pathophysiology of fluid balance, electrolyte and acid-base abnormalities. Uses this to support the clinical management of acquired and inherited tubulopathies, including genetic and metabolic disorders, such as cystinosis and methylmalonic acidaemia. | | | | | | |
| 2. | Assesses, investigates and manages disorders of fluid, electrolyte and acid-base homeostasis. | | | | | | |
| 3. | Assesses fluid status through clinical assessment and the use of adjunct parameters. | | | | | | |
| 4. | Interprets the results of biochemical investigations in order to identify the cause of tubular dysfunction and instigates appropriate treatment. | | | | | | |
| 5. | Manages all aspects of care in patients with inherited tubulopathies, including children and young people with underlying metabolic disease, in conjunction with other specialist paediatricians, surgeons, dietitians, biochemists and geneticists. | | | | | | |

| Manages the diagnosis, investigation and management of acute and chronic kidney disease. | GPC 3, 6 |
|--|----------|
|--|----------|

Key Capabilities

| Assesses children and young people with renal impairment and manages both acute kidney injury and chronic kidney disease, including investigation, diagnosis and treatment. | GPC 1, 2 |
|---|----------------|
| Counsels children, young people, families and carers on all aspects of the management of acute and chronic kidney disease within the multi-disciplinary team (MDT) setting. | GPC 3, 5, 7 |
| Works with multi-disciplinary colleagues to support the conservative or palliative management of children and young people with chronic kidney disease, where kidney replacement therapy is not deemed to be in the patient's best interests. | GPC 1, 5 |
| Manages the transition of a renal patient to adult services. | GPC 1, 3, 5, 6 |

Illustrations

Acute Kidney Injury (AKI)

- 1. Recognises patients at risk of AKI and appropriately minimises the risk. Applies knowledge of the definition, causes and pathophysiology of AKI, including the epidemiology and public health aspects of verocytotoxin-producing Escherichia coli infection.
- 2. Investigates and manages underlying cause of AKI and correctly interprets the renal biopsy result.
- 3. Counsels the patient, family and carer regarding the long-term outcome following an episode of AKI.
- 4. Applies knowledge of the aetiology of haemolytic uraemic syndrome (HUS), including atypical HUS (aHUS). Recognises, investigates and manages diarrhoea-associated (D+) HUS and diarrhoea-negative (D-) or atypical HUS, including by using biologics.

Chronic Kidney Disease (CKD)

- 5. Applies knowledge of the presentation, clinical course and prognosis of different causes of CKD in childhood and uses estimated glomerular filtration rate (eGFR) in CKD.
- 6. Assesses and manages growth and nutrition in CKD, including the use of enteral feeding and growth hormone treatment.
- 7. Identifies and treats potential reversible causes of CKD and slow progression of CKD.
- 8. Applies knowledge of the pathophysiology and complications of CKD metabolic bone disease (CKD-MBD). Instigates appropriate treatment to prevent and treat CKD-MBD, including dietary restrictions (with support from renal dieticians). Understands the use of biochemical parameters in detecting and monitoring CKD-MBD.
- 9. Applies knowledge of the pathophysiology and complications of anaemia secondary to CKD. Manages anaemia secondary to CKD, including the use of erythropoiesis-stimulating agents (ESAs), oral and parenteral iron therapy. This includes the monitoring required with haematological parameters and the potential complications.
- 10. Manages cardiovascular risk factors, including hypertension and hyperlipidaemia in CKD.
- 11. Manages fluid balance, electrolyte and acid-base abnormalities in CKD.
- 12. Stages CKD, monitors progression and instigates kidney replacement therapy, when required.

Transplantation

13. Recognises the complexity of transitioning patients with kidney disease to adult care and the particular risks associated with non-concordance, for example, the transplant failing.

Demonstrates proficiency in the management of babies, children and young people requiring kidney replacement therapy (KRT), including acute and long-term dialysis as well as demonstrates competence in peritoneal dialysis, haemodialysis, continuous venovenous haemodialysis and continuous venovenous haemodiafiltration, managing all aspects of paediatric kidney transplantation.

GPC 1, 3, 6

Key Capabilities

| Assesses and manages patients on dialysis, including the prescription of haemodialysis and peritoneal dialysis. | GPC 2, 3, 6 |
|---|-------------|
| Advises on the use of continuous venovenous haemodialysis. | GPC 2, 3, 6 |
| Assesses and manages patients undergoing kidney transplantation, including pre-transplant assessment and work-up, peri-operative management and long-term transplant follow up. | GPC 2, 3, 6 |

Illustrations

Dialysis: haemodialysis, continuous venovenous haemodialysis, continuous venovenous haemodiafiltration and peritoneal dialysis

Applies knowledge of:

- 1. The indications, contraindications and relative efficiencies of different dialysis modalities relative to each other.
- 2. The choices of vascular access for haemodialysis, the relative merits and the potential complications related to access.
- 3. The surgical procedure for insertion of a peritoneal dialysis catheter, the associated risks and the complications related to access.

Demonstrates the following skills:

- 4. Counsels the patient, family and carer on the risks and benefits of different dialysis modalities.
- 5. Principles of haemodialysis, including home haemodialysis as well as plans, prescribes and adjusts haemodialysis and monitors adequacy.
- 6. Principles of peritoneal dialysis, including plans, prescribes and adjusts peritoneal dialysis and monitors adequacy.
- Principles of continuous venovenous haemodialysis and continuous venovenous haemodiafiltration, including supports intensivists in the management of a patient requiring continuous venovenous haemodialysis or continuous venovenous haemodiafiltration in the intensive care setting.
- 8. Manages patient with AKI requiring both dialysis and plasmapheresis, in conjunction with an apharesis team.
- 9. Recognises and manages specific complications of haemodialysis, including those related to vascular access.
- 10. Recognises and manages specific complications of peritoneal dialysis, including those related to the peritoneal dialysis catheter.

Transplantation

Applies knowledge of:

- 1. The role of kidney transplantation in the management of children and young people with CKD, including the principles of kidney transplantation and the medical, surgical, ethical and potential social contraindications.
- 2. The different types of kidney transplants and the relative risks and benefits, the principles of blood group typing, HLA typing and cross-matching prior to kidney transplantation.
- The ethical and legal framework governing kidney transplantation, including the Human Tissue Act. Understands the principles of allocation of donor organs in the United Kingdom, including deceased donor allocation and living donor kidney sharing schemes.

- 4. The potential acute and long-term complications and their management following a kidney transplant, including factors in the early post-transplant stage that influence long-term graft function. Counsels families and carers about these risks prior to transplantation.
- 5. The mode of action of immunosuppressive agents post-transplant, the monitoring required and potential complications. Monitors and adjusts immunosuppression in the long term according to kidney transplant function and other comorbidities.

Demonstrates the following skills:

- 6. Assesses and investigates acute deterioration in kidney transplant function.

 Understands the role of renal biopsy in the diagnosis of kidney transplant dysfunction and recognises the available management strategies for acute rejection.
- 7. Counsels the patient, family and carer on all aspects of transplantation, including pre-emptive transplantation, different types of deceased and living donors, the post-transplant course, complications and side effects of treatment.
- 8. Detects, investigates and where required, treats recurrence of primary disease following kidney transplant.
- 9. Manages all aspects of care in a patient with failing kidney transplant or chronic allograft nephropathy, including the preparation for dialysis and re-listing for a second transplant.
- 10. Manages patients acutely following kidney transplant, particularly in relation to acute fluid management and the assessment of delayed graft function.

Manages babies, children and young people with congenital anomalies of the renal tract, nephrotic syndrome, glomerulonephritis, vasculitis, inherited and acquired forms of tubulopathy, urinary tract infection, vesicoureteric reflux, renal stone disease, hypertension, inborn errors of metabolism and inherited nephropathies.

GPC 1, 3, 6

Key Capabilities

| Counsels families and carers on urinary tract abnormalities diagnosed antenatally. | GPC 3, 5, 6 |
|---|----------------|
| Measures and assesses blood pressure in babies, children and young people, including the interpretation of ambulatory blood pressure monitoring. | GPC 3, 5, 6 |
| Establishes the indications for renal biopsy, the potential complications and their management, including interpretation of the histopathological findings. | GPC 1, 3, 5, 6 |
| Interprets investigations relevant to kidney disease, including blood tests and radiological imaging of the kidney and urinary tract to enhance management. | GPC 3, 5, 6 |
| Demonstrates competence in the prescribing of all medication used in paediatric renal disease, including immunosuppression and new biologic agents. | GPC 4, 6 |

Illustrations

Urinary tract: disorders of micturition, UTI, obstructive uropathies and renal stone disease Applies knowledge of: The development and anatomy of the urinary tract, the importance of genital abnormalities and their association with renal disease and counsels parents in fetomaternal medicine. The types of reconstructive procedures undertaken in children and young people with bladder abnormalities and their relevance to future kidney transplantation. The causes and pathophysiology of renal stone formation, including association with renal tubular and inherited disorders. Understands the clinical presentation, investigation and treatment of renal stones disease and associated complications, including dietary treatment measures.

Demonstrates the following skills:

- 4. Counsels parents on abnormalities of kidney and urinary tract detected antenatally, in conjunction with colleagues in feto-maternal medicine.
- 5. Assesses, investigates and manages children and young people with kidney stone disease in conjunction with dietitians, radiologists, biochemists and urologists.
- 6. Counsels the patient, family and carer in conjunction with a urologist with regards to the interventions available to manage urinary tract obstruction and complex bladder dysfunction, especially in relation to kidney transplantation.
- 7. Interprets radiological investigations in children and young people with obstructive uropathy, a UTI or vesicoureteral reflux. Applies knowledge of the causes of obstructive uropathy, including posterior urethral valves.
- 8. Interprets urodynamic studies and instigates appropriate management. Understands the physiology of normal micturition and acquisition of bladder control, including disturbed micturition and the role of urodynamics in the investigation of this.
- 9. Investigates and manages children and young people with recurrent and atypical UTIs, including those with vesicoureteric reflux and renal parenchymal defects.

 Applies knowledge of the epidemiology and microbiology of UTIs and host defence mechanisms. Understands the evidence base linking UTI, vesicoureteric reflux and reflux nephropathy to the progression to CKD.
- 10. Investigates and manages complex disorders of micturition.
- 11. Investigates and manages patients with urinary tract obstruction, including the management of fluid and electrolyte disturbance following relief of obstruction.

Glomerular disorders: haematuria, proteinuria and nephrotic syndrome, glomerulonephritis and vasculitides

Applies knowledge of:

- 1. The aetiology of nephrotic syndrome, including congenital nephrotic syndrome.
- 2. The investigation of proteinuria and nephrotic syndrome (including renal biopsy) and the treatment options available, including the potential side effects of treatment and the on-going surveillance required.
- 3. The causes of glomerulonephritis, including systemic disease and connective tissue disorders, such as systemic lupus erythematosus and vasculitis.
- 4. The investigations required to identify the cause of glomerulonephritis or vasculitis, including relevant immunological tests and the role of renal biopsy.
- 5. The management strategies available for the treatment of glomerulonephritis and vasculitis, including immunosuppression, biologics, cytotoxic drugs and plasmapheresis.
- 6. The aetiology of inherited abnormalities in the glomerular basement membrane, including Alport's syndrome as well as counsels patients, families and carers with this information.
- 7. The role of complement in acquired and inherited glomerular disease, including C3 nephropathy.

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- 8. The pathophysiology and presentation of thrombotic microangiopathies (TMA), including haemolytic uraemic syndrome.
- 9. The potential treatment options for TMA and HUS and other complement-mediated renal diseases, including the use of immunosuppression, plasmapheresis and biologics.

Demonstrates the following skills:

- 10. Formulates a differential diagnosis, investigates and manages a child and young person with microscopic and macroscopic haematuria.
- 11. Formulates a differential diagnosis, investigates and manages a child and young person with proteinuria or nephrotic syndrome.
- 12. Institutes appropriate treatment for a child and young person with glomerulonephritis or vasculitis, in conjunction with other specialities, for example rheumatology.
- 13. Interprets histological findings on renal biopsy in a child and young person with haematuria, proteinuria or nephrotic syndrome and instigates appropriate treatment.
- 14. Manages the complications of nephrotic syndrome.
- 15. Manages fluids, electrolytes and hypertension in children and young people with glomerular disease.
- 16. Provides supportive management for children and young people with steroid-resistant nephrotic and congenital nephrotic syndrome.

Hypertension and renovascular disease

Applies knowledge of:

- 1. The definition of hypertension according to normal blood pressure data in children and young people. Assesses a patient with hypertension, including the use of ambulatory blood pressure monitoring.
- 2. The pathophysiology of primary and secondary hypertension, including relevant first and second line investigations.
- The causes and methods to investigate and treat renovascular disease and recognises the potential risks of these investigations.

Demonstrates the following skills:

- 4. Detects and manages complications following angiography or angioplasty.
- 5. Initiates and monitors treatment for hypertension. Understands the importance of lifestyle measures to manage primary hypertension and the mechanism of action and potential side effects of antihypertensive agents.
- 6. Understanding of the long-term consequences of untreated hypertension in relation to kidney and other end-organ damage. Counsels patients, families and carers with this knowledge.
- 7. Instigates the investigation and treatment of renovascular disease, in conjunction with vascular surgeons and interventional radiologists.
- 8. Provides long-term care to patients with renovascular disease, including the management of blood pressure and detection of recurrent disease.

Cystic kidney disease

Applies knowledge of:

- 1. The different forms of inherited and sporadic cystic kidney disease, including autosomal dominant polycystic kidney disease, autosomal recessive kidney disease, Hepatocyte Nuclear Factor-1beta (HNF-1beta)-associated renal disease and diabetes.
- 2. The screening tools available for the detection of cystic kidney disease in parents, siblings and relatives, including counsels families and carers with this knowledge.
- 3. The available treatments for the different forms of cystic kidney disease.

Demonstrates the following skill:

4. Investigates and manages all aspects of care for children and young people with cystic kidney disease, liaising with geneticists and hepatologists.

Tubulo-interstitial disease

Applies knowledge of:

1. The pathophysiology of interstitial nephritis and tubulo-interstitial disease, their causes and links with systemic disease. Assesses and investigates a patient with tubulo-interstitial disease, including the use of laboratory tests and the interpretation of a renal biopsy.

Demonstrates the following skills:

2. Manages tubulo-interstitial nephritis, including initiating treatment and monitoring for extra-renal manifestations.

Renal biopsy

Demonstrates the following skills:

- 1. Organises necessary investigations to minimise risk from biopsy and understands the contraindications to performing a biopsy.
- 2. Understands the indications for renal biopsy and the potential complications with relative frequency. Obtains informed consent from the patient, family or carer for native and transplant renal biopsies.
- 3. Detects and manages post-renal biopsy complications.
- 4. Interprets renal biopsy findings in conjunction with a histopathologist.
- 5. Discusses the results of renal biopsy, treatment options and prognosis with patient, family or carer.

Performs an ultrasound-guided renal biopsy with or without radiological assistance (optional).

Assessment Grid

This table suggests assessment tools which may be used to assess the Key Capabilities for these Learning Outcomes. This is not an exhaustive list and trainees are permitted to use other methods within the RCPCH Assessment Strategy to demonstrate achievement of the Learning Outcome, where they can demonstrate these are suitable.

| Key Capabilities | | , | Assessmer | nt / Sup | ervised | Learning | g Event | suggest | ions | |
|---|--|--|--|-----------------------------------|------------------------------------|--|--------------------------------|---|---|-------|
| | Paediatric Mini Clinical Evaluation (Mini-CEX) | Paediatric Case-based Discussion (CbD) | Directly Observed Procedure / Assessment of Performance (DOP/ AoP) | Acute Care Assessment Tool (ACAT) | Discussion of Correspondence (DOC) | Clinical Leadership Assessment Skills (LEADER) | Handover Assessment Tool (HAT) | Paediatric Multi Source Feedback (MSF) | Paediatric Carers for Children Feedback (Paed CCF) | Other |
| Assesses and manages fluid status. | ✓ | ✓ | | | | | | | | |
| Assesses and manages derangements in electrolytes and acid-base balance. | ✓ | ✓ | | | ✓ | | | | | |
| Assesses children and young people with renal impairment and manages both acute kidney injury and chronic kidney disease, including investigation, diagnosis and treatment. | ✓ | ✓ | | | ✓ | ✓ | | | | |
| Counsels children, young people, families and carers on all aspects of the management of acute and chronic kidney disease within the multi-disciplinary team (MDT) setting. | ✓ | ✓ | | | ✓ | | | ✓ | √ | |
| Works with multi-disciplinary colleagues to support the conservative or palliative management of children and young people with chronic kidney disease, where kidney replacement therapy is not deemed to be in the patient's best interests. | ✓ | ✓ | | | ✓ | | | ✓ | | |
| Manages the transition of a renal patient to adult services. | ✓ | ✓ | | | ✓ | | ✓ | | | |
| Assesses and manages patients on dialysis, including the prescription of haemodialysis and peritoneal dialysis. | ✓ | ✓ | | | ~ | ✓ | | | √ | |
| Advises on the use of continuous venovenous haemodialysis. | ✓ | ✓ | | | ✓ | | | | | |
| Assesses and manages patients undergoing kidney transplantation, including pre-transplant assessment and work-up, peri-operative management and long-term transplant follow up. | | ✓ | | | ✓ | ✓ | | | | |
| Counsels families and carers on urinary tract abnormalities diagnosed antenatally. | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | |

| Key Capabilities | Assessment / Supervised Learning Event suggestions | | | | | | | | | |
|--|--|--|--|-----------------------------------|------------------------------------|--|--------------------------------|--|---|-------|
| | Paediatric Mini Clinical Evaluation (Mini-CEX) | Paediatric Case-based Discussion (CbD) | Directly Observed Procedure / Assessment of Performance (DOP/ AoP) | Acute Care Assessment Tool (ACAT) | Discussion of Correspondence (DOC) | Clinical Leadership Assessment Skills (LEADER) | Handover Assessment Tool (HAT) | Paediatric Multi Source Feedback (MSF) | Paediatric Carers for Children Feedback (Paed CCF) | Other |
| Measures and assesses blood pressure in babies, childen and young people, including the interpretation of ambulatory blood pressure monitoring. | ✓ | ✓ | ✓ | | | | | | | |
| Establishes the indications for renal biopsy, the potential complications and their management, including interpretation of the histopathological findings. | ✓ | ✓ | | | ✓ | | | | | |
| Interprets investigations relevant to kidney disease, including blood tests and radiological imaging of the kidney and urinary tract to enhance management. | ✓ | ✓ | | | ✓ | | | √ | | |
| Demonstrates competence in the prescribing of all medication used in paediatric renal disease, including immunosuppression and new biologic agents. | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | |

