

Entrustable Professional Activities for Adult Nephrology

2019
VERSION 2.0

This document is to be used in conjunction with the *Entrustable Professional Activity User Guide*, which is available on the Royal College's website.

Nephrology: Transition to Discipline EPA #1A

Assessing patients with known kidney disease, identifying the unique concerns seen in Nephrology patients

Key Features:

- This EPA focuses on the application of Internal Medicine/Pediatric competencies related to clinical assessment and decision making to the care of patients with established kidney disease
- This EPA may be observed in any clinical setting

Assessment Plan:

Direct or indirect observation by nephrologist

Use Form 1. Form collects information on

- Direct observation: yes; no
- Type of patient: CKD; ESRD, Transplant

Collect two observations of achievement

- At least one direct observation

Relevant Milestones:

- 1 ME 2.2 Elicit a history and perform a relevant physical exam**
- 2 COM 2.1 Use patient-centred interviewing skills to effectively gather all relevant information**
- 3 COM 2.3 Seek and synthesize relevant information from other sources**
- 4 ME 2.2 Develop a differential diagnosis relevant to the patient's presentation**
- 5 ME 2.2 Select and/or interpret appropriate investigations**

- 6 ME 2.2 Focus the clinical encounter performing it in a time-effective manner, without excluding key elements**
- 7 ME 2.4 Develop and implement initial management plans**
- 8 ME 5.2 Use cognitive aids, such as pre-printed orders or care paths**
- 9 P 1.1 Complete assigned responsibilities**

Nephrology: Transition to Discipline EPA #2A

Recognizing Nephrology-specific emergencies/urgencies, demonstrating insight as to own limits and knowing when to seek appropriate help

Key Features:

- This EPA focuses on the initial management of patients with medical emergencies (e.g., urgencies or emergencies related to: blood pressure, electrolyte, acid-base, dialysis, cardiac condition, poisoning) as well as timely and appropriate calls for additional assistance
- In addition to the competencies of Internal Medicine/Pediatrics, this EPA includes the application of knowledge of the local institution, its protocols and resources.
- This EPA may be observed in a simulation setting

Assessment Plan:

Indirect observation by nephrologist

Use form 1. Form collects information on

- Setting: clinical; simulation

Collect one observation of achievement

Relevant Milestones:

- 1 ME 1.4 Recognize urgent problems that may need the involvement of more experienced colleagues and seek their assistance**
- 2 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 3 ME 2.2 Develop a differential diagnosis relevant to the patient's presentation**
- 4 ME 2.2 Select and/or interpret appropriate investigations**
- 5 ME 2.4 Apply emergency care protocols for Nephrology-specific patient emergencies**
- 6 ME 5.2 Use cognitive aids, such as pre-printed orders or care paths**
- 7 COL 1.3 Communicate effectively with physicians and other health care professionals**
- 8 L 2.1 Apply knowledge of local resources for optimal patient care**
- 9 P 1.1 Exhibit appropriate professional behaviours**

10 COL 3.1 Identify patients requiring handover to other physicians or health care professionals

Nephrology: Foundations EPA #1A

Assessing and providing an initial management plan for patients with AKI

Key Features:

- This EPA focuses on the initial diagnostic approach to patients with AKI as well as initial orders for treatment of complications, fluid, electrolyte and nutritional management, and adjustment of medications.
- This EPA includes recognizing those patients that require renal replacement therapy and selection of appropriate modality, but does not include the prescription or monitoring of renal replacement therapy.
- This EPA may be observed in patients with any etiology of AKI, in any clinical setting

Assessment Plan: Adult

Indirect observation by nephrologist (e.g., case review +/- verification of clinical findings)

Use Form 1. Form collects information on:

- Type of patient: native kidneys; transplant
- Likely etiology: pre-renal; post-renal; ATN; nephrotoxicity; GN; other

Collect 3 observations of achievement

- At least one native kidney and one transplant
- A variety of case mix

Assessment Plan: Peds

Indirect observation by nephrologist (e.g., case review +/- verification of clinical findings)

Use Form 1. Form collects information on:

- Type of patient: native kidneys; transplant
- Likely etiology: pre-renal; post-renal; ATN; nephrotoxicity; GN; other
- Age: newborn/infant; child

Collect 3 observations of achievement

- At least one native kidney and one transplant
- A variety of case mix
- At least one newborn/infant

Relevant Milestones:

- 1 ME 2.2** Perform focused clinical assessments
- 2 ME 2.2** Ascertain volume status
- 3 ME 2.2** Ascertain indications for urgent dialysis

- 4 ME 2.2 Interpret the results of investigations in the context of the patient's presentation**
- 5 ME 2.2 Select additional investigations, as appropriate**
- 6 ME 2.2 Identify patients who require renal biopsy**
- 7 ME 2.3 Establish goals of care**
- 8 ME 1.3 Apply knowledge of clinical pharmacology as it pertains to drug prescribing in renal disease**
- 9 ME 2.4 Order fluids to optimize volume status and/or renal recovery**
- 10 ME 4.1 Prevent and/or manage complications of kidney disease**
- 11 ME 3.1 Identify indications, timing and suitable modality for initiation of renal replacement therapy**
- 12 COM 4.3 Answer questions from the patient and family about next steps**
- 13 COL 1.3 Integrate the patient's perspective into the care plan**

Nephrology: Foundations EPA #2A

Assessing and providing an initial plan for investigation and management for patients with CKD

Key Features:

- This EPA focuses on the initial medical care of patients with chronic kidney disease including assessment, and medical management of acute and anticipated secondary complications
- This EPA includes differentiating acute kidney injury from chronic kidney disease

Assessment: Adult

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Setting: inpatient; clinic
- Presumptive diagnosis: hypertension; diabetes; glomerulonephritis; structural; hereditary; other

Collect 3 observations of achievement

- At least one in each setting
- A range of diagnoses

Assessment: Peds

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Setting: inpatient; clinic
- Presumptive diagnosis: glomerulonephritis; structural; hereditary; other

Collect 3 observations of achievement

- At least one in each setting
- A range of diagnoses

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Interpret the results of investigations in the context of the patient's presentation**
- 3 ME 2.2 Select additional investigations, as appropriate**
- 4 ME 2.2 Synthesize patient information to determine diagnosis**

- 5 ME 2.2 Determine the severity and/or stage of the patient's renal status and risk of progression**
- 6 ME 1.3 Apply knowledge of clinical pharmacology as it pertains to drug prescribing in renal disease**
- 7 ME 4.1 Prevent and/or manage complications of chronic kidney disease**
- 8 ME 2.4 Prescribe strategies for renal protection**
- 9 ME 3.1** Identify indications, timing and suitable modality for initiation of renal replacement therapy
- 10 COM 3.1** Provide information to patients and families clearly and compassionately
- 11 COM 4.3** Answer questions from the patient and family about next steps
- 12 HA 1.1 Work with patients to identify and implement strategies for health promotion and/or future options for vascular access, dialysis or transplantation**

Nephrology: Foundations EPA #3A

Assessing and providing an initial plan for investigation and management for patients with hematuria and/or proteinuria

Key Features:

- This EPA focuses on the initial diagnostic approach to patients with hematuria and/or proteinuria and includes consideration of the need for renal biopsy

Assessment: Adult

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Presentation: isolated proteinuria; hematuria/proteinuria
- Urine microscopy done: yes; no

Collect 3 observations of achievement

- At least one of each presentation

Assessment: Peds

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Presentation: isolated proteinuria; hematuria/proteinuria, isolated hematuria
- Urine microscopy done: yes; no
- Biopsy planned: yes; no

Collect 3 observations of achievement

- At least one of each presentation
- At least one with biopsy planned

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Interpret urine microscopy**
- 3 ME 2.2 Interpret the results of investigation in the context of the patient's presentation**
- 4 ME 2.2 Select additional investigations, as appropriate**
- 5 L 2.1 Use clinical judgment to minimize wasteful practices**

- 6 ME 2.2 Develop a differential diagnosis relevant to the patient's presentation**
- 7 ME 2.2 Identify patients who require renal biopsy**
- 8 ME 3.2 Obtain informed consent for a renal biopsy, as indicated**
- 9 ME 3.3 Triage procedures or therapy taking into account clinical urgency and potential for deterioration**
- 10 COM 3.1** Provide timely, accurate information and explanations to the patient and/or family
- 11 COM 4.3** Answer questions from the patient and family about next steps
- 12 COL 1.3 Integrate the patient's perspective into the care plan**

Nephrology: Foundations EPA #4A

Ordering and adjusting dialysis prescriptions for uncomplicated patients with ESRD

Key Features:

- This EPA focuses on the assessment of patients with end stage renal disease and the prescription and adjustment of routine dialysis orders. This EPA includes both hemodialysis and peritoneal dialysis treatment modalities
- This EPA does not include patients with AKI, or ESRD patients with acute medical conditions.
- This EPA may be observed by the supervisor or a delegate, such as a nurse practitioner or physician assistant
- For pediatric Nephrology only, this EPA may be observed in a simulation setting

Assessment Plan:

Direct or indirect observation by nephrologist or delegate (e.g., review of orders, chart)

Use form 1. Form collects information on:

- Modality: hemodialysis; CAPD; CCPD
- Type of orders: new chronic start; adjust chronic orders

Collect 4 observations

- At least one each hemodialysis and peritoneal dialysis
- At least one each new chronic start and one adjust chronic orders
- At least one observation by a nephrologist

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Ascertain volume status and determine dry weight/target weight for dialysis**
- 3 ME 2.2 Synthesize patient information to determine dialysis adequacy**
- 4 ME 1.3 Apply knowledge of mechanisms of fluid delivery, machine mechanics and membrane physiology as they relate to dialysis modalities**
- 5 ME 3.4 Write dialysis orders for uncomplicated patients with ESRD, including all relevant components**
- 6 COM 5.1 Document dialysis prescriptions as per local standards and health records**
- 7 COL 1.3 Communicate effectively with the dialysis team**

- 8** **COL 2.1** Show respect towards other members of the health care team
- 9** **S 3.4 Integrate best evidence and clinical expertise into decision-making**

Nephrology: Foundations EPA #5A

Providing consultative care for patients with known renal disease admitted with other medical or surgical problems

Key Features:

- This EPA focuses on adjusting/monitoring usual renal therapy during acute illness and advising the primary treating physician(s) regarding presentations, investigations or treatments that are altered due to the presence of renal disease
- An important aspect of this EPA is the effective communication and collaboration required when working in a consultant role

Assessment Plan:

Indirect observation by nephrologist

Use form 1. Form collects information on

- Stage of renal disease: chronic kidney disease; transplant; dialysis patient (hemodialysis or peritoneal dialysis)

Collect 4 observations of achievement

- At least one CKD
- At least one patient requiring dialysis

Relevant Milestones:

- 1 ME 1.4 Adapt the clinical assessment to the expectations and boundaries of the consultant role**
- 2 ME 2.2** Focus the clinical encounter performing it in a time-effective manner, without excluding key elements
- 3 ME 2.2 Ascertain indications for urgent dialysis**
- 4 ME 1.3 Apply knowledge of clinical pharmacology as it pertains to drug prescribing in patients with renal disease**
- 5 ME 3.4 Adjust dialysis prescriptions as appropriate for changing clinical circumstances**
- 6 COM 5.1 Document clinical encounters to convey clinical reasoning and the rationale for decisions**
- 7 COL 1.3 Communicate effectively with physicians and other health care professionals**
- 8 COL 2.2 Collaborate with colleagues in resolving conflicts**

9 P 1.1 Exhibit appropriate professional behaviors

Nephrology: Foundations EPA #6A

Assessing and providing initial management for patients with common complications of PD

Key Features:

- This EPA focuses on the initial diagnostic approach as well as initial orders for treatment (e.g., empiric antibiotics).
- This may include complications related to dialysis access (peritonitis, exit site infection, tunnel infection) as well as the dialysis procedure (volume status, inflow/outflow problems including leaks and hernias)

Assessment Plan:

Indirect observation by nephrologist or delegate (nurse practitioner, physician assistant)

Use form 1. Form collects information on:

- Type of complications: infectious; non-infectious

Collect 2 observations of achievement

- At least one infectious
- At least one non-infectious
- At least one observation by nephrologist

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Select and/or interpret appropriate investigations**
- 3 ME 2.2 Synthesize patient information to determine diagnosis**
- 4 ME 1.3 Apply knowledge of clinical pharmacology as it pertains to drug prescribing in renal disease**
- 5 ME 2.4 Develop and implement initial management plans**
- 6 ME 4.1 Ensure follow-up on results of investigation and response to treatment**
- 7 COM 3.1 Provide timely, accurate information and explanations to the patient and/or family**
- 8 COM 4.3 Answer questions from the patient and family about next steps**
- 9 COL 1.2 Consult as needed with other health care professionals, including other physicians**

Nephrology: Foundations EPA #7A

Assessing and providing initial management for patients with common complications of HD

Key Features:

- This EPA focuses on the initial diagnostic approach as well as initial orders for treatment (e.g., empiric antibiotics).
- This may include complications related to dialysis access (e.g., thrombosis, malfunction, infection) as well as the dialysis procedure (e.g., hypotension)

Assessment Plan: Adult

Indirect observation by nephrologist or delegate (nurse practitioner, physician assistant)

Use form 1. Form collects information on:

- Type of complication: access malfunction; fever/infection; hemodynamic instability
- Type of access: line; fistula; graft

Collect 3 observations of achievement

- At least one of each type of complication
- At least one patient with a line
- At least one patient with a fistula or graft
- At least one observation by nephrologist

Assessment Plan: Peds

Indirect observation by nephrologist or delegate (nurse practitioner, physician assistant)

Use form 1. Form collects information on:

- Type of complication: access malfunction; fever/infection; hemodynamic instability
- Type of access: line; fistula; graft

Collect 3 observations of achievement

- At least one of each type of complication
- At least one patient with a line
- At least one observation by nephrologist

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Select and/or interpret appropriate investigations**
- 3 ME 2.2 Synthesize patient information to determine diagnosis**

- 4** **ME 1.3** Apply knowledge of clinical pharmacology as it pertains to drug prescribing in renal disease
- 5** **ME 2.4 Develop and implement initial management plans**
- 6** **ME 4.1 Ensure follow-up on results of investigation and response to treatment**
- 7** **ME 5.2** Use cognitive aids, such as pre-printed orders or care paths
- 8** **COM 3.1 Provide timely, accurate information and explanations to the patient and/or family**
- 9** **COM 4.3** Answer questions from the patient and family about next steps
- 10** **COL 1.3 Communicate effectively with the dialysis team**
- 11** **COL 1.2** Consult as needed with other health care professionals, including other physicians
- 12** **COL 2.1** Show respect towards other members of the health care team

Nephrology: Foundations EPA #8A

Admitting patients to undergo renal transplantation

Key Features:

- This EPA focuses on clinical assessment as well as the decision regarding recipient fitness for surgery. It also includes preoperative treatment such as dialysis and fluids, as well as the initial immunosuppression orders according to local protocols.
- This EPA may be observed with patients admitted for living or deceased donor transplant

Assessment Plan:

Indirect observation by nephrologist (case review with verification of findings)

Use Form 1. Form collects information on

- Donor type: living donor; deceased donor

Collect 2 observations of achievement

Relevant Milestones:

- 1 ME 2.2 Focus the clinical encounter performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Ascertain indications for urgent dialysis**
- 3 ME 2.2 Interpret the results of tissue typing and cross match**
- 4 ME 2.2 Determine a patient's fitness for renal transplant surgery and immunosuppression**
- 5 ME 2.4 Prescribe induction immunosuppression**
- 6 COM 3.1 Provide timely, accurate information and explanations to the patient and/or family**
- 7 COL 1.3 Communicate effectively with physicians and other health care professionals**

Nephrology: Foundations EPA #9A

Providing post-operative care for renal transplant recipients with an uncomplicated course

Key Features:

- This EPA focuses on fluid management, prescription and adjustment of immunosuppressive and non-immunosuppressive medications, communication with the surgical team and preparation of the patient for discharge.
- This EPA does not include patients with a complicated hospital stay such as those with delayed graft function or surgical complications.

Assessment Plan:

Indirect observation by nephrologist or delegate (physician assistant, nurse practitioner, transplant fellow) based on chart review/review of discharge plans

Use Form 1. Form collects information on

- Resident case involvement (*select all that apply*): first 24 hours; post-op care; discharge

Collect 2 observations of achievement

- At least two different timepoints in case involvement

Relevant Milestones:

- 1 ME 2.2 Assess post-operative status and progress**
- 2 ME 2.2 Ascertain indications for urgent dialysis**
- 3 ME 1.3 Apply knowledge of clinical pharmacology as it pertains to transplantation and immunosuppression**
- 4 ME 2.4 Prescribe induction immunosuppression**
- 5 ME 2.4 Order fluids to optimize volume status and/or renal recovery**
- 6 ME 4.1 Coordinate investigation, treatment and follow-up plans**
- 7 COM 3.1** Provide timely, accurate information and explanation to the patient and/or family
- 8 COM 3.1 Verify and validate the understanding of the patient and family with regard to the management and discharge plan**
- 9 COL 1.2** Consult as needed with other health care professionals, including other physicians

- 10** **COL 1.3** Communicate effectively with physicians and other health care professionals
- 11** **COL 3.2** Summarize the patient's issues in the discharge summary
- 12** **HA 1.2** Select patient education resources related to Nephrology

Nephrology: Foundations EPA #10A

Assessing and providing initial management for patients with common complications of renal transplantation

Key Features:

- This EPA focuses on the initial diagnostic approach as well as initial orders for treatment (e.g., fluids, empiric antibiotics).
- This may include conditions related to graft function as well as common infections in the immunocompromised host

Assessment Plan:

Indirect observation by nephrologist or delegate (e.g., transplant fellow, physician assistant)

Use Form 1. Form collects information on:

- Timing post-transplant: first 3 months; after first 3 months

Collect 2 observations of achievement

- At least one in first 3 months post-transplant
- At least one observation by nephrologist

Relevant Milestones:

- 1 ME 2.2 Perform focused clinical assessments**
- 2 ME 2.2 Select and/or interpret appropriate investigations**
- 3 ME 2.2 Synthesize patient information to determine diagnosis**
- 4 ME 2.2 Identify patients who require a renal biopsy**
- 5 ME 1.3 Apply knowledge of microbiology as it pertains to infectious complications of renal transplantation**
- 6 ME 2.4 Develop and implement initial management plans**
- 7 ME 4.1 Ensure follow-up on results of investigation and response to treatment**
- 8 COM 3.1 Provide timely, accurate information and explanations to the patient and/or family**
- 9 COM 4.3 Answer questions from the patient and family about next steps**
- 10 COL 1.2 Consult as needed with other health care professionals, including other physicians**

Nephrology: Foundations EPA #11A

Obtaining central venous access for dialysis

Key Features:

- This EPA focuses on the procedural aspects of ultrasound guided central line insertion, but also includes appropriate patient selection, site selection, risk optimization and informed consent.
- This includes any patient, including line insertions in complex scenarios such as agitated patients, obese patients or patients with coagulopathy or abnormal vascular anatomy
- This EPA may be observed by any supervisor (e.g., nephrology, anesthesia, critical care etc.)

Assessment Plan:

Direct observation by supervisor

Use Form 2. Form collects information on

- Setting: clinical; simulation
- Complex patient: yes; no

Collect 2 observations of achievement

- No more than one in simulation

Relevant Milestones:

- 1 ME 3.1 Determine the appropriate site for line insertion**
- 2 ME 3.2 Obtain and document informed consent, explaining the risks and rationale for the procedure**
- 3 ME 3.4 Set up and position the patient for the procedure**
- 4 ME 3.4 Prepare and cleanse the procedural site**
- 5 ME 3.4 Maintain universal precautions**
- 6 ME 3.4 Perform the insertion of a central venous line, using ultrasound guidance as appropriate**
- 7 COM 5.1 Document the encounter to convey the procedure and outcome(s)**

Nephrology: Core EPA #1A

Establishing a comprehensive treatment plan for patients with AKI

Key Features:

- This EPA builds on the competencies of the Foundations stage to focus on definitive investigation (e.g., biopsy), clinical reassessment and development of the treatment plan including renal replacement therapy, discontinuation of therapy and/or immune-modulating therapy, as appropriate
- The observation of this EPA is divided into two parts: establishing a plan; and shared decision-making with the patient and family

Assessment Plan: Adult

Part A: Establishing a Plan

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Type of patient: native kidneys; transplant
- Biopsy: yes; no
- RRT: yes; no
- Immune-modulating therapy: yes; no

Collect 8 observations of achievement

- At least 3 of each type of patient
- At least 3 requiring biopsy
- At least 3 requiring RRT
- At least 2 requiring immune modulating therapy

Part B: Communication

Direct observation by nephrologist

Use form 1. Form collects information on

- Issue: dialysis initiation; dialysis discontinuation; immune modulating therapy

Collect 3 observations of achievement

- At least one immune modulating therapy
- At least two different issues

Assessment Plan: Peds

Part A: Establishing a Plan

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Type of patient: native kidneys; transplant
- Biopsy: yes; no
- RRT: yes; no

- Immune-modulating therapy: yes; no
- Age group: Infant; child/adolescent

Collect 4 observations of achievement

- At least 1 of each type of patient
- At least 1 requiring biopsy
- At least 1 requiring RRT
- At least 1 requiring immune modulating therapy

Part B: Communication

Direct observation by nephrologist

Use Form 1. Form collects information on

- Issue: dialysis initiation; dialysis discontinuation; immune modulating therapy

Collect 3 observations of achievement

- At least one immune modulating therapy
- At least two different issues

Relevant Milestones:

Part A: Decision making

- 1 ME 2.2 Assess the indications for renal replacement therapy and modality**
- 2 ME 2.2 Select additional investigations, including serology and renal biopsy if indicated**
- 3 ME 2.2 Interpret the results of investigations in the context of the patient's presentation**
- 4 ME 2.2 Synthesize clinical information to determine diagnosis and prognosis**
- 5 S 3.4 Integrate best evidence and clinical expertise into decision-making**
- 6 ME 2.4 Establish a patient-centred management plan**
- 7 ME 4.1 Implement a plan for ongoing care and response to treatment**
- 8 COL 1.3 Engage in respectful shared decision-making with other physicians and/or health care professionals**
- 9 HA 1.1 Facilitate timely patient access to services and resources**

Part B: Communication

- 1 ME 2.3 Establish goals of care which may include dialysis, immune-modulating therapy, supportive care and/or palliative care**
- 2 ME 4.1 Establish plans for ongoing care, which may include monitoring, active treatment, renal replacement therapy and/or end of life care**

- 3 COM 1.6 Adapt communication to the unique needs and preferences of the patient**
- 4 COM 2.2** Manage the flow of challenging patient encounters
- 5 COM 3.1 Provide information to patients and families clearly and compassionately**
- 6 COM 4.3 Use communication skills and strategies that help the patient make informed decisions**
- 7 HA 1.2** Recognize potential barriers such as illness, health literacy, cultural practice/belief and language skills

Nephrology: Core EPA #2A

Ordering and adjusting prescriptions for patients with AKI and other acute/urgent indications for extracorporeal therapy

Key Features:

- This EPA focuses on medical decision making regarding indications for extracorporeal therapy, choice of modality and appropriate prescribing to optimize patient outcomes
- This EPA includes patients with AKI as well as those with poisonings or metabolic disorders
- This EPA may be observed at any time point in the course of the patient's care (i.e., initial prescription of extracorporeal therapy, adjustment of prescription, change in modality)

Assessment Plan:

Indirect observation by nephrologist based on case review

Use Form 1. Form collects information on

- Indication: AKI; poisoning; metabolic disorder; other
- Modality: Acute hemodialysis; SLED; CRRT, other

Collect 4 observations of achievement

- At least two AKI
- At least one indication other than AKI
- At least 2 different modalities

Relevant Milestones:

- 1 ME 1.4** Perform clinical assessments that address all relevant issues
- 2 ME 2.2 Assess the indications for extracorporeal treatment**
- 3 ME 2.2 Select and/or interpret appropriate investigations**
- 4 ME 3.1** Ascertain the efficacy of extracorporeal treatment in the context of the patient's presentation
- 5 ME 2.4 Provide and/or adjust extracorporeal treatment prescriptions**
- 6 ME 4.1** Determine the necessity and appropriate timing of referral to another health care professional
- 7 ME 4.1 Establish plans for monitoring the patient and treatment efficacy**
- 8 COL 1.2** Consult as needed with other health care professionals, including other physicians

- 9 COL 1.3 Engage in respectful shared decision-making with other physicians and/or health care professionals**
- 10 L 2.1 Demonstrate stewardship of acute dialysis resources**

Nephrology: Core EPA #3A

Assessing and treating patients with difficult to control or suspected secondary hypertension

Key Features:

- This EPA focuses on clinical assessment, investigation and treatment
- This EPA includes pharmacologic management as well as patient counselling
- The observation of this EPA is divided into two parts: patient assessment and management; patient counselling

Assessment Plan:

Part A: Patient assessment and management

Indirect observation by nephrologist based on case review

Use form 1. Form collects information on

- Type of visit: consult; followup

Collect 3 observations of achievement

- At least one of each type of visit

Part B: Patient counselling

Direct observation by nephrologist or delegate (nurse)

Use form 1. Form collects information on

- Focus: non-pharmacologic treatment; adherence; other

Collect 1 observation of achievement

Relevant Milestones:

Part A: Patient assessment and management

1 ME 1.4 Perform clinical assessments that address all relevant issues

2 ME 2.1 Identify indications to investigate for secondary hypertension

3 ME 2.2 Interpret measures of blood pressure, including automated blood pressure monitoring

4 ME 2.2 Select and/or interpret appropriate investigations

5 ME 2.4 Establish a patient centered management plan

6 ME 4.1 Determine the necessity and appropriate timing of referral to another health care professional

7 ME 4.1 Implement a plan for ongoing care and response to treatment

- 8 S 3.4.1 Integrate best evidence and clinical expertise into decision-making**
- 9 COM 5.1 Document clinical encounters to convey clinical reasoning and the rationale for decisions**
- 10 COL 3.2** Communicate with the patient's primary care provider about the patient's care

Part B: Patient Counselling

- 1 COM 2.1 Use patient-centered interviewing skills to effectively gather all relevant information**
- 2 COM 3.1 Share information and explanations that are clear and accurate while checking for understanding**
- 3 COM 4.3** Use communication skills and strategies that help the patient make informed decisions
- 4 HA 1.1 Identify barriers to access in the health care and social service system for individual patients**
- 5 HA 1.2 Apply the principles of behaviour change during conversations with patients about adopting healthy behaviours**
- 6 HA 1.2 Work with the patient to increase opportunities to adopt healthy behaviours**

Nephrology: Core EPA #4A

Assessing and providing an initial investigation and management plan for patients with complex fluid and electrolyte abnormalities

Key Features:

- This EPA focuses on the diagnostic approach to patients with fluid, acid-base and electrolyte disorders and includes emergency management.
- This EPA does not include the basics of hyperkalemia management with AKI or CKD; these are skills of the primary entry specialty

Assessment Plan:

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Presentation (*select all that apply*): sodium; potassium; metabolic acid/base disorder; other
- Setting: clinical; simulation

Collect 3 observations of achievement

- One each of a sodium, potassium and acid/base disorder

Relevant Milestones:

- 1 ME 2.1** Identify clinical emergencies and prioritize response
- 2 ME 1.3** Apply knowledge of the physiology and pathophysiology of regulation of acid-base, electrolyte and/or water homeostasis
- 3 ME 2.2** Perform focused clinical assessments
- 4 ME 2.2** Select and/or interpret appropriate investigations
- 5 ME 2.4** Develop and implement initial management plans
- 6 ME 4.1** Establish plans for monitoring the patient and treatment efficacy
- 7 COM 2.3** Seek and synthesize relevant information from other sources
- 8 COM 4.3** Answer questions from the patient and family about next steps

Nephrology: Core #5A

Assessing the suitability of potential living donors for kidney transplantation

Key Features:

- This EPA focuses on the clinical assessment and counseling of healthy individuals volunteering for kidney donation, as well as the medical decision making regarding suitability for donation and transplantation
- This EPA may be observed on the basis of a clinical assessment or, recognizing that some donors are rejected based on screening information, on the basis of clinical documentation

Assessment Plan:

Indirect observation by nephrologist based on case discussion and/or chart review

Use Form 1. Form collects information on

- Suitable to donate: yes; no

Collect two observations of achievement

- One suitable to donate
- One not suitable

Relevant Milestones:

- 1 ME 1.4 Perform clinical assessments that address all relevant issues**
- 2 ME 2.2 Interpret measures of renal function**
- 3 ME 2.2 Assess the risk of transmissible disease**
- 4 ME 2.2 Synthesize donor information to determine suitability for transplantation**
- 5 COM 1.6 Assess a patient's decision making capacity**
- 6 ME 3.2 Obtain informed consent for living kidney donation**
- 7 COM 3.1 Share information and explanations that are clear and accurate, checking for patient understanding**
- 8 L 2.2 Apply evidence and guidelines with respect to organ transplantation**
- 9 P 1.3 Recognize and respond to ethical issues encountered in the clinical setting**

Nephrology: Core EPA #6A

Assessing the suitability of deceased donors for kidney transplantation

Key Features:

- This EPA focuses on the decision to accept or reject a deceased donor based on the information available at or before the time of organ retrieval
- This EPA may be observed in the clinical setting or as a simulation

Assessment Plan: Adult

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Type of donor: SCD; DCD; ECD; exceptional distribution
- Decision: accept; reject

Collect 3 observations of achievement

- At least one exceptional distribution
- At least one reject

Assessment Plan: Peds

Indirect observation by nephrologist

Use form 1. Form collects information on:

- Type of donor: SCD; DCD; ECD; exceptional distribution
- Decision: accept; reject
- Use of pediatric kidney donor: yes; no
- Discussion of size discordance between donor and recipient: yes; no

Collect 3 observations of achievement

- At least one exceptional distribution
- At least one reject

Relevant Milestones:

- 1 ME 2.2 Gather relevant clinical information about the potential donor**
- 2 ME 2.2 Interpret measures of renal function**
- 3 ME 2.2 Request additional history or investigations, as appropriate**
- 4 ME 2.2 Assess the risk of transmissible disease**
- 5 ME 2.2 Synthesize donor information to determine suitability for transplantation**

- 6 L 2.1 Use clinical judgment to make optimal use of finite resources, such as donor organs**
- 7 L 2.2 Apply evidence and guidelines with respect to organ transplantation**
- 8 P 1.3 Recognize and respond to ethical issues encountered in the clinical setting**

Nephrology: Core EPA #7A

Assessing the eligibility of patients with renal disease for kidney transplantation

Key Features:

- This EPA focuses on synthesizing all relevant clinical information, including all investigations and opinions from other disciplines, to determine whether the candidate meets eligibility criteria for the transplant surgery, proposed donor (as applicable) and initiation of immunosuppressive treatment.
- This EPA may be observed in the nephrology, dialysis or transplant recipient evaluation clinic setting.
- For Peds only: The observation of this EPA is divided into two parts: decision making re eligibility; discussion of risks/benefits

Assessment Plan: Adult

Indirect observation by nephrologist based on case review

Use form 1. Form collects information on:

- Eligible for transplant: yes; not now

Collect 2 observations of achievement

- At least one eligible
- At least one not eligible at this time

Assessment Plan: Peds

Part A: Decision-making

Indirect observation by nephrologist based on review of case or pre-transplant assessment document

Use form 1.

Collect 2 observations of achievement

Part B: Communication

Direct observation by nephrologist

Use form 1

Collect 1 observation of achievement

Relevant Milestones (Adult) (Peds Part A: Decision-Making)

- 1** **ME 1.3** Apply knowledge of the risks and benefits of renal replacement therapy options

- 2 ME 1.4 Perform clinical assessments that address all relevant issues**
- 3 COM 2.1** Use patient-centred interviewing skills to effectively gather all relevant information
- 4 ME 2.2 Synthesize patient information to assess peri-operative risk**
- 5 ME 2.2 Synthesize patient information to assess risk of immunosuppression**
- 6 ME 2.2 Identify patient-specific clinical features that influence transplant eligibility and/or outcomes**
- 7 ME 2.4 Develop management plans for transplantation and/or the waiting list**
- 8 ME 4.1 Determine the necessity and appropriate timing of referral to another health care professional**
- 9 COM 3.1** Share information and explanations that are clear and accurate while checking for understanding
- 10 COM 5.1 Document clinical encounters to convey clinical reasoning and the rationale for decisions**
- 11 L 2.2 Apply evidence and guidelines with respect to organ transplantation**
- 12 HA 2.3** Promote organ donation and access to renal transplantation

Relevant Milestones (Peds) Part B: Communication

- 1 ME 1.3 Apply knowledge of the risks and benefits of renal replacement therapy options**
- 2 COM 1.6 Adapt communication to the unique needs and preferences of the patient**
- 3 COM 3.1** Share information and explanations that are clear and accurate while checking for understanding
- 4 COM 4.1 Encourage discussion and questions**
- 5 COM 4.3 Use communication skills and strategies that help the patient make informed decisions**

6 HA 1.2 Select patient education resources related to Nephrology

7 HA 2.3 Promote organ donation and access to renal transplantation

Nephrology: Core EPA #8A

Managing new renal transplant recipients with a complex post-operative course

Key Features:

- This EPA builds on the previously achieved competencies of managing patients with an uncomplicated course to include complex patients as well as patients with a complicated course in the first days/weeks following transplantation. This EPA focuses on clinical assessment, resuscitation (as applicable) and initial management targeted to the presumptive diagnosis.
- Examples may include the recipient of a multiple organ transplant, the highly sensitized recipient or patients who experience bleeding, infection and delayed/altered graft function (rejection, recurrent disease or thrombotic microangiopathy)

Assessment Plan: Adult

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Type of issue: DGF; other graft dysfunction; post-op bleeding; post -op infection; other post-op complication; highly sensitized patient; multi-organ recipient; other

Collect 3 observations of achievement

- At least one DGF
- At least one other type of issue

Assessment Plan: Peds

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Type of issue: DGF; other graft dysfunction; post-op bleeding; post -op infection; other post-op complication; highly sensitized patient; multi-organ recipient; other

Collect 3 observations of achievement

- At least two different types of issues

Relevant Milestones:

- 1 ME 1.4** Perform clinical assessments that address all relevant issues
- 2 ME 2.2** Select and/or interpret appropriate investigations
- 3 ME 2.2** Synthesize patient information to determine diagnosis
- 4 ME 2.2** Identify patients who require a renal biopsy

- 5 ME 2.4 Establish a patient-centred management plan**
- 6 ME 2.4 Prescribe and monitor immune modulating therapies**
- 7 ME 4.1 Prevent and/or manage complications of immune modulating therapies**
- 8 ME 4.1 Determine the necessity and timing of referral to another health care professional**
- 9 COM 3.1** Share information and explanations that are clear and accurate while checking for understanding
- 10 COL 1.3** Engage in respectful shared decision –making with other physicians and health care professionals
- 11 S 3.4 Integrate best evidence and clinical expertise into decision-making**

Nephrology: Core EPA #9A

Monitoring patients receiving immune modulating therapy and managing complications

Key Features:

- This EPA focuses on the ongoing care of patients receiving immune modulating therapies for a variety of underlying conditions. It includes surveillance for treatment efficacy and consideration of change in management based on response, adverse effects and/or complications.
- This EPA may be observed when treating patients with immune mediated disease in their native kidneys as well as in those receiving immunosuppression due to renal transplantation.

Assessment Plan:

Indirect observation by nephrologist based on case review

Use Form 1. Form collects information on:

- Type of patient: native kidneys; transplant

Collect 4 observations of achievement

- At least two of each type of patient
- At least two assessors

Relevant Milestones:

- 1 ME 1.4 Perform clinical assessments that address all relevant issues**
- 2 ME 2.2 Select and interpret the results of investigations performed to monitor treatment**
- 3 ME 2.2 Synthesize patient information to determine response to treatment and/or toxicity**
- 4 ME 2.2 Differentiate signs and symptoms of disease and/or disease progression from adverse effects of treatment**
- 5 ME 2.4 Adjust management plans based on clinical status and/or response to treatment**
- 6 ME 4.1 Prevent and/or manage complications of immune modulating therapies**
- 7 ME 4.1 Determine the necessary and timing of referral to another health care professional**
- 8 ME 4.1 Coordinate treatment and follow-up plans**

- 9** **COL 1.3** Engage in respectful decision-making with other physicians and/or health care professionals
- 10** **HA 1.1** Facilitate timely patient access to services and resources
- 11** **HA 1.3 Incorporate prevention, health promotion and health surveillance into patient interactions**

Nephrology: Core EPA #10A

Monitoring and providing medical management for patients with stable renal disease

Key Features:

- This EPA includes patients with the full breadth of renal conditions and focuses on surveillance of renal function and the secondary prevention of renal progression and cardiovascular disease.
- This EPA will be observed in the outpatient setting
- The observation of this EPA is divided into two parts: patient assessment and management; and written communication

Assessment Plan: Adult

Part A: Patient Assessment and Management

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Diagnosis: hypertension; diabetes; glomerulonephritis; PCKD, other structural; hereditary; other
- Stage of CKD: 2;3;4;5

Collect 10 observations of achievement

- At least 4 different diagnoses
- At least one patient at stage 4 or 5

Part B: Written Communication

Review of written documentation by nephrologist

Use Form 1

Collect 3 observations of achievement

Assessment Plan: Peds

Part A: Patient Assessment and Management

Indirect observation by nephrologist

Use Form 1. Form collects information on:

- Diagnosis: glomerulonephritis; structural; hereditary; other
- Stage of CKD: 2;3;4;5

Collect 10 observations of achievement

- At least 4 different diagnoses
- At least one patient at stage 4 or 5

Part B: Written Communication

Review of written documentation by nephrologist

Use Form 1

Collect 3 observations of achievement

Relevant Milestones (Part A): Patient Assessment and Management

- 1 ME 1.4 Perform clinical assessments that address all relevant issues**
- 2 ME 1.3 Apply knowledge of physiology and pathophysiology of renal dysfunction and its complications**
- 3 ME 2.1 Prioritize which issues need to be addressed**
- 4 ME 2.3 Establish goals of care, which may include slowing disease progression, improving function and palliation**
- 5 ME 2.4 Prescribe strategies for renal protection, including but not limited to control of blood pressure, minimization of proteinuria and prevention of renal injury (contrast/NSAIDs)**
- 6 ME 2.4 Apply strategies for cardiovascular disease prevention**
- 7 ME 4.1 Implement a plan for ongoing care, follow-up on investigations, response to treatment and monitoring for disease progression**
- 8 COM 5.1 Document clinical information in a manner that supports intra- and inter-professional care**
- 9 COL 3.1 Determine when care should be transferred back to the primary health care provider**
- 10 COL 3.2 Communicate with the patient's primary health care provider about the patient's care**
- 11 HA 1.2 Work with the patient to increase opportunities to adopt healthy behaviours**

Relevant Milestones (Part B): Written Communication

- 1 COM 5.1 Organize information in appropriate sections**
- 2 COM 5.1 Document all relevant findings and investigations**
- 3 COM 5.1 Convey clinical reasoning and the rationale for decisions**

- 4 COM 5.1 Provide a clear plan for ongoing management**
- 5 COM 5.1 Complete clinical documentation in a timely manner**

Nephrology: Core EPA #11A

Providing comprehensive care for patients with progressive kidney dysfunction

Key Features:

- This EPA focuses on slowing progression and treating complications of kidney dysfunction as well as supporting patients in their choice with regards to treatment modality
- This EPA may be observed in any patient with progressive renal dysfunction, at any stage of CKD, including those with a renal transplant
- The observation of this EPA is divided into two parts: clinical management of patients with progressive CKD; and education of patients regarding treatment options.

Assessment Plan:

Part A: Clinical Management

Indirect observation by nephrologist

Use Form 1. Form collects information on

- Progression to ESRD: yes; no

Collect 4 observations of achievement

- At least one patient that progresses to ESRD

Part B: Patient Education Regarding Options

Direct observation by nephrologist or nurse educator

Use Form 1. Form collects information on

- Topic: modality options; transplantation; conservative care

Collect 2 observations of achievement

- At least two different topics

Relevant Milestones (Part A): Clinical Management

- 1 ME 1.4** Perform clinical assessments that address all relevant issues
- 2 ME 1.3** Apply knowledge of physiology and pathophysiology of renal dysfunction and its complications
- 3 ME 2.1** Prioritize which issues need to be addressed
- 4 ME 2.2** Assess the indications for renal replacement therapy and modality
- 5 ME 2.2** Interpret the results of investigations in the context of the patient's presentation

- 6 ME 4.1 Prevent and/or manage complications of kidney disease**
- 7 ME 3.1 Integrate all sources of information to develop a plan for renal replacement therapy or end of life care**
- 8 ME 4.1 Determine the necessity and timing for referral to another health care professional**
- 9 HA 1.1 Identify barriers to access in the health care and social services systems**

Relevant Milestones (Part B): Patient Education Regarding Options

- 1 COM 1.6 Adapt communication to the unique needs and preferences of the patient**
- 2 HA 1.2 Recognize potential barriers to learning such as illness, literacy and language skills**
- 3 ME 2.3 Establish goals of care, which may include slowing disease progression, improving function and palliation**
- 4 COM 3.1 Provide information to patients and families clearly and compassionately**
- 5 COM 3.1 Share information and explanations that are clear and accurate while checking for understanding**
- 6 COM 4.3 Use communication skills and strategies that help the patient make informed decisions**
- 7 HA 1.2 Select patient education resources related to Nephrology**
- 8 HA 2.3 Promote organ donation and access to renal transplantation**

Nephrology: Core EPA #12A

Facilitating patients' transition to an ESRD treatment modality, or to end of life care

Key Features:

- This EPA refers to the transition of patients from nephrology clinic to dialysis, from one dialysis modality to another, from renal transplantation to dialysis, from AKI to ESRD and from any treatment modality to end of life care
- This focus of this EPA is communication with the patient/family

Assessment Plan:

Direct observation by nephrologist

Use Form 1. Form collects information on

- Type of transition: CKD to ESRD; ESRD modality to another; Transplant to ESRD modality; AKI to ESRD; to end of life care

Collect 2 observations of achievement

- Two different types of transition

Relevant Milestones:

- 1 ME 4.1 Establish plans for ongoing care**
- 2 COM 1.6 Tailor approaches to decision-making to patient capacity, values and preferences**
- 3 COM 3.1 Provide information to patients and families clearly and compassionately**
- 4 COM 1.5 Recognize when strong emotions are impacting an interaction and respond appropriately**
- 5 COM 2.2 Manage the flow of challenging patient encounters**
- 6 COM 4.3 Use communication skills and strategies that help the patient make informed decisions**
- 7 COL 1.2 Consult as needed with other health care professionals, including other physicians**
- 8 COL 3.2 Organize the handover of care to the most appropriate physician**
- 9 HA 1.1 Facilitate timely patient access to services and resources**

- 10** **P 4.1** Recognize the personal impact of caring for patients with organ failure and at the end of life
- 11** **COM 4.3** Answer questions from the patient and family about next steps

Nephrology: Core EPA #13A

Providing longitudinal management for patients receiving chronic dialysis

Key Features:

- This EPA focuses on long-term management of patients with end stage renal disease including dialysis access and adequacy, surveillance for and treatment of complications of ESRD as well as oversight of the management of other medical conditions in patients with end stage renal disease
- This includes the longitudinal view of a patient's clinical course, incorporating previous and current health status, and anticipating future needs (e.g., changing residual renal function, increasing frailty, growth and development)

Assessment Plan: Adult

Indirect observation by nephrologist

Use Form 1. Form collects information on

- Modality: in-center hemodialysis; home hemodialysis; peritoneal dialysis

Collect 5 observations of achievement

- At least 2 different modalities

Assessment Plan: Peds

Indirect observation by nephrologist

Use form 1. Form collects information on

- Modality: in-center hemodialysis; home hemodialysis; peritoneal dialysis

Collect 3 observations of achievement

- At least 2 different modalities

Relevant Milestones:

- 1 ME 2.2** Gather clinical information to assess current health status and symptoms
- 2 ME 2.2** Assess the patient's clinical course and anticipate future health needs
- 3 ME 2.2 Examine and assess the dialysis access, and monitor access function**
- 4 ME 2.2 Interpret the results of investigations assessing dialysis adequacy and complications of CKD**
- 5 ME 2.4 Prescribe and adjust dialysis orders to optimize patient outcomes and/or quality of life**

- 6 ME 2.4** Apply strategies for disease prevention and health promotion
- 7 ME 4.1** Prevent and/or manage complications of kidney disease
- 8 ME 2.4** Manage common medical co-morbidities in patients with end stage renal disease
- 9 ME 2.4** Manage common symptoms in patients with end stage renal disease
- 10 ME 1.3** Apply knowledge of clinical pharmacology as it pertains to drug prescribing in renal disease
- 11 ME 4.1** Develop long-term plans for access, transplantation and/or independent dialysis
- 12 COL 1.3** Integrate the patient's perspective into the care plan
- 13 COL 1.3** Engage in respectful shared decision-making with other physicians and/or health care professionals
- 14 HA 1.2** Work with the patient to increase opportunities to adopt healthy behaviours
- 15 HA 1.2** Work with patient to increase opportunities for self-care
- 16 C HA 2.3** Promote organ donation and access to renal transplantation

Nephrology: Core EPA #14A

Assessing and managing the care of patients with complex complications of dialysis access

Key Features:

- This EPA builds on the competencies of the Foundations stage to focus on less common, more complex and/or severe complications including those that may require access manipulation or removal, or change in dialysis modality
- This EPA includes assessment, decision making and collaboration with the interprofessional team.

Assessment Plan:

Indirect observation by nephrologist

Use Form 1. Form collects information on

- Modality: hemodialysis; peritoneal dialysis
- Type of complication: infectious; non-infectious
- Recommendation: preserve existing access; change access; change modality

Collect 3 observations of achievement

- At least one of each modality
- At least two different recommendations

Relevant Milestones:

- 1 ME 2.2. Examine and assess the dialysis access, and monitor access function**
- 2 ME 2.2. Select and/or interpret appropriate investigations**
- 3 ME 2.2. Determine if the patient requires transition to another dialysis access or modality**
- 4 ME 2.4 Develop and implement management plans**
- 5 ME 3.3 Prioritize a procedure or therapy taking into account clinical urgency and available resources**
- 6 ME 4.1 Determine the necessity and appropriate timing of referral to another health care professional**
- 7 COM 3.1 Share information and explanations that are clear and accurate while checking for understanding**
- 8 COL 1.3 Integrate the patient's perspective into the care plan**
- 9 COL 1.2 Consult as needed with other health care professionals, including other physicians**

- 10 COL 1.3 Engage in respectful shared decision-making with other physicians and/or health care professionals**
- 11 HA 1.1. Facilitate timely patient access to services and resources**
- 12 P 1.1 Exhibit appropriate professional behaviours**

Nephrology: Core EPA #15A

Assessing and managing patients with acute complications of the dialysis procedure

Key Features:

- This EPA builds on the competencies of the Foundations stage to focus on more complex and/or unusual complications
- Some examples related to peritoneal dialysis include hydrothorax, drain pain and perforation. Some examples related to hemodialysis include air embolus, hemolysis, disequilibrium and dialyzer reactions
- This EPA may be observed in the clinical setting or in simulation

Assessment Plan:

Indirect or direct observation by nephrologist

Use Form 1. Form collects information on:

- Modality: hemodialysis, peritoneal dialysis
- Patient disclosure: yes; no
- Issue: hydrothorax; drain pain; perforation; air embolus; hemolysis; disequilibrium; dialyzer reaction; other

Collect 3 observations of achievement

- At least one of each modality
- At least one with patient disclosure
- At least two different issues

Relevant Milestones:

- 1 ME 2.1 Identify clinical emergencies and prioritize response**
- 2 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 3 ME 5.1 Incorporate, as appropriate, into a differential diagnosis, harm from health care delivery**
- 4 ME 2.2 Select and/or interpret appropriate investigations**
- 5 ME 5.1 Mitigate further injury from adverse events**
- 6 ME 2.4 Develop and implement initial management plans**
- 7 COM 3.2 Communicate the reasons for unanticipated clinical outcomes and disclose patient safety incidents**
- 8 COM 3.2 Document harmful patient safety incidents as per institutional processes**

- 9** **COM 4.3 Answer questions from the patient and family about next steps**
- 10** **COL 1.2** Consult as needed with other health care professionals, including other physicians

Nephrology: Core EPA #16A

Supporting vulnerable patients to improve their health literacy and engage them to become partners in their care

Key Features:

- This EPA focuses on the identification of patients at risk for poor outcomes due to social determinants of health, non-adherence or low health literacy. Examples include pediatric patients at the time of transition to adult care and patients of any age with poor or limited social supports.
- This EPA focuses on recognizing the individual risks, and working with the patient and their families to improve autonomy and health literacy as well as facilitating access to resources
- The nature of the renal condition is not relevant for this EPA

Assessment Plan:

Direct and/or indirect observation by nephrologist

Use Form 1. Form collects information on:

- First Nations: yes; no

Collect two observations of achievement, one of which must involve a patient of First Nations origin

Relevant Milestones:

- 1 ME 2.2 Assess the patient's health literacy**
- 2 ME 2.2 Assess psychosocial issues that may affect health and/or access to services**
- 3 ME 2.2 Assess adherence to treatment and monitoring plans**
- 4 HA 1.2 Work with the patient to increase their understanding of their illness and health care needs**
- 5 HA 1.2 Work with the patient to increase opportunities for self-care**
- 6 COM 4.3 Use communication skills and strategies that help the patient make informed decisions**
- 7 COL 1.2 Make effective use of the scope and expertise of other health care professionals**

Nephrology: Core EPA #17A

Integrating knowledge of the effects of pregnancy, pregnancy outcomes, renal disease, and its treatments in the care of women with renal disease

Key Features:

- This EPA focuses on the effects of kidney disease on fertility, pregnancy and fetal outcomes, as well as the effects of pregnancy on healthy and diseased kidneys
- This EPA may include pre-conception counselling or care of the pregnant patient
- This EPA may be observed at any stage of chronic kidney disease or with any of the ESRD treatment modalities
- This EPA may be observed by any supervisor: nephrologist, maternal fetal medicine specialist, obstetrician, obstetric medicine physician

Assessment Plan:

Indirect observation by supervisor (e.g., case discussion, review of consult letter or other documents, chart review)

Use Form 1.

Collect one observation of achievement

Relevant Milestones:

- 1 ME 1.3 Apply knowledge of the effects of kidney disease on fertility, pregnancy and fetal outcomes**
- 2 ME 1.4** Perform clinical assessments that address all relevant issues
- 3 ME 2.2 Interpret clinical information and investigations in the context of the physiology of pregnancy**
- 4 ME 2.3 Address the impact of the medical condition on the patient's ability to pursue life goals**
- 5 ME 4.1** Determine the necessity and appropriate timing of referral to another health care professional
- 6 ME 4.1 Implement a plan for ongoing care, and response to treatment**
- 7 COM 3.1 Provide information to patients and families clearly and compassionately**
- 8 COM 4.3** Use communication skills and strategies that help the patient make informed decisions

- 9 COL 1.3 Engage in respectful shared decision-making with other physicians and/or health care professionals**
- 10 P 1.3** Recognize and respond to ethical issues encountered in the clinical setting

Nephrology: Core EPA #18A

Managing longitudinal aspects of care in a clinic

Key Features:

- This EPA focuses on the efficient management of a longitudinal outpatient clinic in the role of the physician most responsible for patient care.

Assessment Plan:

Indirect observation by nephrologist, with input from nurse, clerk +/- other health care professionals

Use Form 3.

Every 3-6 months during Core; at least twice

Relevant Milestones:

- 1 ME 2.2 Select investigation strategies demonstrating awareness of availability and access in the outpatient setting**
- 2 ME 2.4 Formulate treatment plans that are suitable for implementation in the outpatient setting**
- 3 S 3.4 Integrate best evidence and clinical expertise into decision-making**
- 4 COL 1.3 Address the questions and concerns of the referring/primary care physician when acting in the consultant role**
- 5 COL 1.3 Provide accurate, timely and relevant written information to the referring/primary care physician**
- 6 L 4.1 Manage time effectively in the outpatient clinic**
- 7 ME 5.2 Use systems to track and follow-up on clinical data, such as studies and laboratory tests**
- 8 L 4.1 Review and act on test results in a timely manner**
- 9 P 1.1 Respond punctually to requests from patients or other health care providers**

Nephrology: Core EPA #19A

Working with the interprofessional team to coordinate the care of patients with renal disease

Key Features:

- This EPA focuses on the role of the Nephrologist in coordinating the complex care needs of patients with renal disease. This includes collaboration with an interprofessional team as well as ensuring continuity across care settings.
- The observation of this EPA is not based on a single patient encounter, but rather on the resident's performance over a period of time. Feedback will be collected and collated from multiple observers at intervals, on at least 3 occasions.

Assessment Plan:

Multiple observers provide feedback individually, which is then collated to one report

Use Form 3. Form collects information on:

- Observer role: nephrologist; nurse; head/charge nurse; social worker; dietician; pharmacist; physiotherapist; occupational therapist; other physician/surgeon; other health professional

Collect feedback on interprofessional interactions on at least 3 time points during training (at least 3 months apart) to include once during Foundations and twice in Core

- At least 5 observers at on each occasion
- At least 2 supervisors and 2 other health professionals on each occasion

Relevant Milestones:

- 1 ME 4.1 Coordinate treatment and follow-up across care settings**
- 2 COL 1.2 Make effective use of the scope and expertise of other health care professionals**
- 3 COL 1.1 Respond appropriately to input from other health care professionals**
- 4 COL 1.3 Communicate effectively with physicians and other health care professionals**
- 5 HA 1.1 Facilitate timely patient access to services and resources**
- 6 P 1.1 Respond punctually to requests from patients or other health care professionals**
- 7 P 1.1 Exhibit appropriate professional behaviors**

Nephrology: Core EPA #20A

Advancing the discipline through scholarly activities

Key Features:

- This EPA includes all aspects of performing scholarly work: identification of a question for investigation, literature review, data gathering, data analysis, reflective critique and dissemination
- This may include scholarly research, quality assurance, or educational projects
- The assessment of this EPA is based on the submission of a completed scholarly project, and may also include observation of the presentation of the scholarly work

Assessment Plan:

Direct and/or indirect observation by supervisor

Use Form 1

Collect one observation of achievement

Relevant Milestones:

- 1 L 4.1 Organize work to manage clinical, scholarly and other responsibilities**
- 2 S 4.4 Identify, consult and collaborate with content experts and others in the conduct of scholarly work**
- 3 S 4.4 Generate focused questions for scholarly investigation**
- 4 S 3.3 Critically evaluate the integrity, reliability, and applicability of health-related research and literature**
- 5 S 4.5 Summarize the findings of a literature review**
- 6 S 4.4 Select appropriate methods of addressing a given scholarly question**
- 7 S 4.2 Identify ethical principles in research**
- 8 S 4.4 Collect data for a scholarly project**
- 9 S 4.4 Perform data analysis**
- 10 S 4.4 Integrate existing literature and findings of data collection**
- 11 S 4.4 Identify areas for further investigation**

Nephrology: Core EPA #21A

Delivering scholarly teaching to a variety of audiences, including peers, junior trainees and/or other health professionals

Key Features:

- This EPA focuses on the skills of critical appraisal as well as presentation and teaching skills

Assessment Plan:

Direct observation by nephrologist

Use Form 1. Form collects information on

- Type of activity: journal club; grand rounds; case presentation; other

Collect 2 observations of achievement

Relevant Milestones:

- 1 S 2.4 Identify the learning needs and desired learning outcomes of others**
- 2 S 2.4 Develop learning objectives for a teaching activity**
- 3 S 3.3 Critically evaluate the integrity, reliability and applicability of health related research and literature**
- 4 S 3.4 Integrate best evidence and clinical expertise**
- 5 S 2.4 Present the information in an organized manner to facilitate understanding**
- 6 S 2.4 Use audiovisual aids effectively**
- 7 S 2.4 Provide adequate time for questions and discussion**

Nephrology: Core EPA #22A

Identifying and analyzing patient- and/or system-level health care delivery for the purposes of quality assurance or improvement

Key Features:

- This EPA includes the review and analysis of a set of events, data or outcomes to ascertain the quality of health care delivery
- It focuses on an analysis of the reasons for any gap in desired outcomes, and may include suggestions for potential improvement
- The observation of this EPA requires that the resident complete the analysis but it is not necessary for the resident to implement or participate in the implementation of any changes
- Examples may include quality assurance of outcome measures in the dialysis unit, an analysis of a patient safety event, or a review of a series of patient outcomes
- This EPA may be observed via presentation of findings (e.g., at rounds or to a committee) or via submission of a report

Assessment Plan:

Direct and/or indirect observation by supervisor

Use Form 1

Collect one observation of achievement

Relevant Milestones:

- 1 L 1.1 Gather information for the purposes of quality assurance or improvement**
- 2 S 4.4 Perform data analysis**
- 3 L 1.1 Integrate existing standards for health care delivery with findings of data collection**
- 4 L 1.1 Identify potential improvement opportunities**
- 5 L 1.1 Identify the impact of human and system factors on health care delivery**
- 6 L 3.1 Demonstrate an understanding of the operations of renal programs**
- 7 S 3.4 Integrate best evidence and clinical expertise into decision-making**
- 8 P 2.2 Demonstrate a commitment to patient safety and quality improvement initiatives within their own practice environment**

Nephrology Core EPA #23A

Providing telephone consultation to health care providers requesting nephrology assessment

Key Features:

- This EPA focuses on communication with the requesting physician and provision of medical advice
- This includes collecting the information necessary to provide recommendations for patient management and/or transfer to an appropriate setting and level of care, or triage to an outpatient clinic assessment based on urgency of need.

Assessment Plan:

Direct observation, case discussion and/or review of clinical documentation by supervisor

Use Form 1. Form collects information on

- Case complexity: medium; high
- Type of disposition: manage at existing site; transfer to acute care setting with high resource intensity; transfer to acute care setting with low resource intensity; schedule into outpatient nephrology clinic
- Setting: clinical; simulation
- Consulting physician: community-based; hospital-based acute care; hospital-based chronic care

Collect 2 observations of achievement

- No more than one simulation

Relevant Milestones:

- 1 COM 2.3 Request and synthesize patient information gathered by another health professional**
- 2 ME 2.2** Interpret the results of investigations in the context of the patient's presentation
- 3 ME 2.2 Integrate information from the clinical assessment to determine the patient's clinical status and health care needs**
- 4 ME 2.1 Identify clinical emergencies and prioritize response**
- 5 L 2.1** Apply knowledge of health care resources in different settings to provide optimal patient care

- 6 ME 2.4 Determine the setting of care appropriate for the patient's health needs**
- 7 ME 2.4 Establish a plan for ongoing care in the local setting and/or for care prior to and during transfer, as relevant**
- 8 COL 1.3 Communicate effectively with physicians and other health care professionals**
- 9 ME 2.4 Provide anticipatory guidance for management of changes in the patient's clinical status while awaiting nephrology assessment**
- 10 HA 1.1 Facilitate timely patient access to services and resources**

Nephrology: Transition to Practice EPA #1A

Managing the multidimensional aspects of nephrology practice

Key Features:

- This EPA focuses on managing the caseload of a Nephrologist: providing quality care for individual patients, triaging and prioritizing between patients and amongst patients and other occupational demands, and demonstrating judicious use of resources
- This EPA may be observed in any clinical setting and must be based on a block of time of at least a week during which the resident has both inpatient and outpatient responsibilities (e.g., clinic, outpatient dialysis)

Assessment Plan:

Direct and/or indirect observation by nephrologist based on a block of time (e.g., week, block of service)

Use Form 1.

Collect 1 observation of achievement

Relevant Milestones:

- 1 ME 1.4** Perform relevant and time-effective clinical assessments
- 2 ME 1.5** Prioritize patients based on the urgency of clinical presentations
- 3 ME 1.5** Carry out professional duties in the face of multiple, competing demands
- 4 L 2.1** Allocate health care resources for optimal patient care
- 5 S 3.4** Integrate best evidence and clinical expertise into decision-making
- 6 ME 2.4** Establish a patient centered management plan
- 7 L 4.1** Set priorities and manage time to fulfil diverse responsibilities
- 8 L 4.1** Integrate supervisory and teaching responsibilities into the overall management of the clinical service
- 9 P 4.1** Manage the mental and physical challenges that impact physician wellness and/or performance in demanding or stressful clinical settings