

**WESTERN UNIVERSITY
NEPHROLOGY ROTATION OBJECTIVES
GENETICS CLINIC ELECTIVE – VICTORIA HOSPITAL**

Created: November 21, 2024

Reviewed and Approved by Residency Program Committee: March 25, 2025

Next review date: September 2025

Preamble:

This rotation is designed to ensure that the Nephrology Trainee develops experience in the assessment of renal genetic diseases.

- On Genetics Clinics at Victoria Hospital, the Trainee is expected to attend **ALL** genetics clinics. The morning clinics are scheduled from 8:45 am to 12:00 pm on Monday mornings. Prior to these clinics, trainees should pre-review patients that will be seen (the Friday afternoon before). This includes reviewing any available genetics results that will assist with management plans (i.e. reverse phenotyping). Monday afternoon should be reserved for completing analysis of patients seen in clinic and developing a genetic testing plan and ordering genetic testing.
- Trainees should attend a clinical genetics clinic or paediatric nephrology clinic as scheduled at the start of the rotation (exact date to be confirmed).
- When the trainee is not scheduled for Genetics clinics, they will be scheduled to the Transplant Recipient Work-up on Wednesday and Living Donor clinics scheduled on Friday afternoon.
- The Nephrology Trainee will need to attend a lab meeting on Wednesday afternoon to review genetic analysis at the University Hospital site.
- Trainees will also need to dedicate 1.0 days for genetic testing and analysis training. By the end of the rotation, trainees are expected to perform exome analysis on 3 patients.
- All clinics are conducted under the supervision of a staff Nephrologist. Genetics clinics deal with patients with possible genetic causes of their kidney diseases. There is also a multidisciplinary team consisting of: a genetic counsellor, sequencing researcher, research nurse and nurse specialist.
- The Trainee is expected to dictate notes on all patients seen in the clinic within 24-hours of seeing the patients, and to follow-up on any laboratory or imaging tests ordered during the clinic.
- The Trainee is expected to attend the noon hour Journal Club Rounds held on Mondays from 1200 - 1300 hours.
- The Trainee is expected to attend the Medical Genetics Case Rounds from 0900 - 1000 hours, Friday mornings and to present one case during these rounds.
- The Nephrology Trainee will participate in the Nephrology Resident Call schedule (home call), as per PARO guidelines.

ROTATION FREQUENCY:

- 1) The Genetics Elective is an optional rotation.

EVALUATION:

- 1) ITER completion through One45.

- 2) EPA completion through Elentra.
- 3) Multi sourced feedback evaluations from allied health team.

EDUCATIONAL RESOURCES:

- 1) Library facility.
- 2) Textbook- Renal Physiology 6th Edition and Handbook of Dialysis 5th Edition.
- 3) GeneReviews Database <https://www.ncbi.nlm.nih.gov/books/NBK1116/>
- 4) KidGen Course Modules [Course Content — KidGen](#)
- 5) Online Mendelian Inheritance in Man
- 6) There is also a list of required reading the Dr. Connaughton will provide which encompasses 20 peer reviewed scientific journal articles and review articles in the field of Kidney Genetics. This will be provided in advance to the trainee.

EXPECTED OUTPUTS:

1. 3 case presentation on patients with potential genetic kidney disease including detailed genotype-phenotype correlation and details of genetic testing undertaken
2. A 1-hour lecture on a specific subtype of genetic kidney disease to be provided to other trainees
3. The trainees are also encouraged to submit a case report to the Department of Medicine Research Day Meeting

Achievable Entrustable Professional Activities

The following EPAs have been identified as being achievable during this training experience:

Transition to Discipline

- EPA 1: Assessing patients with known kidney disease, identifying the unique concerns seen in Nephrology patients.

Foundations

- EPA 3: Assessing and providing an initial plan for investigation and management for patients with hematuria and/or proteinuria.

Core

- EPA 4: Assessing and providing an initial investigation and management plan for patients with complex fluid and electrolyte abnormalities.
- EPA 5: Assessing the suitability of potential living donors for kidney transplantation.
- EPA 7: Assessing the eligibility of patients with renal disease for kidney transplantation.
- EPA 16: Supporting vulnerable patients to improve their health literacy and engage them to become partners in their care.
- EPA 18: Managing longitudinal aspects of care in a clinic.
- EPA 19: Working with the interprofessional team to coordinate the care of patients with renal disease.
- EPA 20: Advancing the discipline through scholarly activities
- EPA 21: Delivering scholarly teaching to a variety of audiences, including peers, junior trainees, and/or other health professionals.

- EPA 22: Identifying and analyzing patient- and/or system-level health care delivery for the purposes of quality assurance or improvement.

Transition to Discipline

- EPA 1: Managing the multidimensional aspects of nephrology practice.

Over the course of the Adult Nephrology Training Program at Western University, trainees will cover the competencies and objectives outlined in the Royal College Nephrology Competencies found [here](#). In this rotation, the following competencies will be emphasized:

MEDICAL EXPERT (the integrating role):

- 1) Demonstrates an understanding of genetics as they relate to the inheritance and transmission of diseases that affect the kidney.
- 2) Understanding the epidemiology of genetic kidney diseases, including conditions that commonly cause chronic kidney disease and end-stage renal failure.
- 3) Understands the impact of genetic diagnoses on mental health.
- 4) History and physical examinations are complete, accurate and well organized.
- 5) Gathers and uses all the pertinent information to arrive at complete and accurate clinical decisions.
- 6) Obtains and documents informed consent for genetic testing.
- 7) Determines appropriate genetic testing for investigation of hereditary renal disorders (i.e. cystic, metabolic, tubular, or nephritis).
- 8) Accurately interprets findings in patients with genetic kidney disease.
- 9) Establishes a patient-centred management plan following the diagnosis of genetic kidney diseases.
- 10) Implements a patient-centred care plan that supports ongoing care and follow-up, for patients with genetic kidney disease, including coordination of care with other health care providers.

COMMUNICATOR:

1. Establishes therapeutic relationships with patients with genetic kidney disease.
2. Uses a patient-centred approach to encourage patient trust and autonomy in conversations regarding investigation of genetic kidney disease, initiating renal replacement therapy, or choosing conservative care.
3. Uses effective interviewing skills to gather relevant medical and psychosocial information from the patient and family.
4. Demonstrates the ability to synthesize the patient encounter into a clear and comprehensive plan.
5. Accurately documents the clinical encounter in a timely manner in compliance with regulatory and legal requirements.

COLLABORATOR:

1. Establishes and maintains positive relationships with other health care professionals to support patient-centred collaborative care.
2. Negotiate overlapping and shared responsibilities with other physicians and colleagues with respect to comprehensive care for patients with genetic kidney disease.

3. Engages in respectful decision making with physicians and other health care professionals for patients with genetic kidney disease.

LEADER:

1. Apply evidence and management practices to achieve cost-effective investigation for patients with potential genetic kidney disease at the level of the health care system.

HEALTH ADVOCATE:

1. Works with patients with genetic kidney disease and their families to adopt healthy behaviours and increase self-care/independence.
2. Ability to incorporate disease prevention and health promotion during interactions with patients.

SCHOLAR:

1. Identifies opportunities for learning by reflecting on their performance during clinical interactions with patients and health care providers.
2. Recognises knowledge gaps in clinical encounters and generates a plan to address them.
3. Identifies pre-appraised clinical resources and critically evaluates the reliability and applicability of the information to apply in their practice.

PROFESSIONAL:

1. Demonstrates honesty, integrity, humility, commitment, compassion, respect, and maintenance of confidentiality in all clinical encounters.
2. Recognizes and addresses ethical issues encountered in patients with genetic kidney disease including genetic counselling.
3. Demonstrates commitment to patient safety in clinical decision making.
4. Fulfils and adheres to the professional and ethical codes of conduct, standards of practice, and applicable laws.