NEUROPSYCHOLOGY TRACK

COORDINATORS: Dr. Andrea Downie & Dr. Susan Hayman-Abello

Two (2) Resident Positions are available.

NMS Code Number: 181516

1 position with an Adult emphasis, which provides training for residents primarily interested in pursuing a career as an Adult Clinical Neuropsychologist, and

NMS Code Number: 181518

1 position with a Paediatric emphasis, which provides training for residents primarily interested in pursuing a career as a Paediatric Clinical Neuropsychologist

Number of applications in 2019: 29

The Neuropsychology Track respects the spirit of the guidelines outlined at the Houston Conference on Specialty Education and Training in Neuropsychology in which specialty knowledge and skills are acquired throughout one's graduate school training, residency year, and post-doctoral experiences by means of a scientist-practitioner model. The primary goal of the Neuropsychology Track is to prepare residents for practice in providing neuropsychological assessment and consultation in a variety of post-doctoral settings. In order to achieve this goal, the neuropsychology residents are provided with:

- Experiences to advance their theoretical knowledge in neuropsychology and general clinical psychology, and;
- Training in assessment, diagnosis, and consultation with respect to neuropsychological and psychological disorders.

The general structure of the Neuropsychology Track includes the following experiences:

- A seminar series required of residents in all Tracks,
- Neuropsychology Rounds, as well as additional medical/hospital rounds,
- Two Major Rotations within the Neuropsychology Track, and,
- One Minor Rotation outside of the Neuropsychology Track

A strength of the program is the opportunity to work with several different neuropsychologists who offer a variety of perspectives due to their different training backgrounds. The resident is exposed to fixed and flexible batteries of tests, as well as specialized assessment techniques/test batteries to address specific questions or populations on certain services (e.g., capacity assessments, pre-operative assessments for deep brain stimulation or localization of function).

Most Neuropsychology Major Rotations share a common set of clinical experiences. The primary focus of these rotations is to address the referral question using neuropsychological assessment techniques. More specifically, residents will acquire skills in reviewing health records (paper-based and electronic) and neurodiagnostic test results; interviewing; test administration, scoring, interpretation; report writing; and providing feedback to patients and families. Feedback (oral communication of results and recommendations) may be provided to referring physicians, health professionals, patients, families, and on specific rotations, to schools and insurance companies. Clinical assessments typically include evaluation of mood and personality. On some services, residents have the opportunity to work with psychometrists and/or practicum students.

Across the Consortium, opportunities are available to work with patients across the age spectrum, ranging from very young children to the elderly. Referred patients may present with a wide variety of neurological, medical, and psychiatric disorders. Neuropsychology Track residents are exposed to a wide variety of inpatient and outpatient populations, including individuals with very rare disorders. Opportunities also exist for working with individuals from different cultural backgrounds or those with specific disabilities. In addition to these shared experiences, each Neuropsychology Major Rotation offers some unique experiences as outlined in the Rotation descriptions.

Residents in *the* ***Neuropsychology Track, Adult Emphasis*** position complete their two Major Rotations in settings that emphasize provision of neuropsychological services to adult populations. Specifically, the resident participates in two of the following Major Rotations:

- London Health Sciences Centre: Victoria Hospital – Core Services
- London Health Sciences Centre: University Hospital – Core Services or
  Clinical Neurological Sciences
- St. Joseph's Health Care London: Parkwood Institute – Specialized Geriatric Services

Residents in the ***Neuropsychology Track, Paediatric Emphasis*** position complete their two Major Rotations in settings that emphasize neuropsychological assessment and consultation; one Major Rotation will involve working with children and the other with adults. Specifically, the resident participates in two of the following Major Rotations:

- London Health Sciences Centre: Children's Hospital, Neuropsychology (required)
- And one of:
  - London Health Sciences Centre: Victoria Hospital – Core Services
  - London Health Sciences Centre: University Hospital – Core Services or
    Clinical Neurological Sciences
  - St. Joseph's Health Care London: Parkwood Institute – Specialized Geriatric Services

Seminars, Rounds, and Other Training Experiences

Residents in the Neuropsychology Track participate in Neuropsychology Rounds approximately once a month on Wednesday mornings. These meetings encourage and provide the opportunity for discussion of the relevant neuropsychological literature pertaining to assessment issues and particular disorders within the context of case presentations or specific journal articles. Each resident can expect to present once at Neuropsychology Rounds during the course of the year. Attendance at these rounds is required of all residents in the Neuropsychology Track.

Residents in the Neuropsychology Track are expected to develop expertise in working with other health care professionals as independent consultants. Medical teaching rounds are conducted on an ongoing basis by various departments. Attendance at some teaching rounds/team meetings is required for virtually all of the Neuropsychology Major Rotations and varies depending on the specific rotation (e.g., Epilepsy Teaching Rounds are required of residents on the Adult Epilepsy Service in the LHSC: University Hospital Major Rotation). Examples of the numerous teaching rounds occurring on a regular basis include CNS Grand Rounds; SJHC Physical Medicine and Rehabilitation Grand Rounds; Lawson Health Research Institute's Aging, Rehabilitation, and Geriatric Care Learning Luncheons; Specialized Geriatric Services Grand Rounds; Movement Disorders Rounds; Neuroradiology Rounds; Paediatric Neurology Case Rounds; Paediatric Acquired Brain Injury Rounds; Epilepsy Teaching Rounds and Team Meetings; London Regional Cancer Program CNS Disease Site Team Rounds.

Special Requirements for Applicants for the Neuropsychology Track

Because of the specialized nature of the Neuropsychology Track positions, academic preparation and practicum experience within the area of neuropsychology are necessary. We strongly prefer that resident applicants meet the guidelines put forth at the Houston Conference on Specialty Education and Training in Clinical Neuropsychology. Specific requirements for applicants to this track are listed below.

PLEASE NOTE FOR APPLICANTS IN 2020*: As stated above, there are standard requirements and credentials for the Neuropsychology Track at LCPRC, which are set in order to ensure a successful training experience. In previous years, many applicants well exceed these criteria. However, due to the unusual circumstances associated with the COVID-19 pandemic, we recognize that some applicants may have had interruptions in or modifications to their planned practicum training opportunities beginning in March 2020. If pandemic circumstances negatively affected your ability to meet your pre-residency training trajectory, please explain in detail in your cover letter and have your Director of Clinical Training verify the disruption, as well as any modifications, etc. We will take this information into consideration in reviewing your application.*

However, we must ensure that the residents with whom we match have enough clinical and neuropsychological experience and background at entry to benefit from and succeed in meeting the residency competencies and outcome expectations by the end of the residency year in order to continue to the next steps of professional registration. ***Therefore, preference will be given to applicants whose backgrounds best match the standard requirements listed below****.*

In addition to the core minimum requirements on pages 25-26, applicants for positions in the ***Neuropsychology Track: Adult Emphasis*** *must have the following credentials at the time of application:*

- 600 hours of formal neuropsychological practicum experience (with a minimum of 200 hours (300 hours preferred) spent in face-to-face neuropsychological activities) with adults;
- At least 8 comprehensive adult neuropsychological assessment reports completed in neuropsychology practica;
- Demonstrated proficiency in English as evidenced by writing reports or research articles, or pertinent coursework, and;
- Completion of a graduate-level course (or other equivalent documented formal didactic training) in neuropsychological theory or neuropsychological assessment.

To be considered for the ***Neuropsychology Track: Paediatric Emphasis*** *position, in addition to the core minimum requirements on pages 25-26 applicants must have the following credentials at the time of application:*

- 600 hours of formal neuropsychological practicum experiences (with a minimum of 200 hours (300 hours preferred) spent in face-to-face neuropsychological activities; at least 100 of these hours must involve contact with children, and 100 of these hours must involve contact with adult patients);
- At least 8 comprehensive neuropsychological assessment reports involving paediatric patients, plus at least 8 comprehensive neuropsychological assessment reports involving adult patients, completed in neuropsychology practica, and;
- Completion of graduate-level courses (or other documented formal didactic training) in 1) neuropsychological theory or neuropsychological assessment and 2) child development (e.g., developmental psychology, paediatric psychology).

To facilitate our review of your application, please specifically list each of the following separately in your cover letter:

- Number of adult and paediatric comprehensive neuropsychological assessment reports written, in neuropsychology practica, for cases in which you conducted the interview and testing, integrated the test results, and provided a case formulation/interpretation and recommendations;
- Number of hours completed in neuropsychological practica, and;
- Number of hours of face-to-face neuropsychological activity (such as conducting interviews, administering tests, providing feedback, providing neuropsychological interventions) completed in practica; please provide hours involving adults and children separately.

Major Rotations available:

London Health Sciences Centre: Victoria Hospital – Core Services
London Health Sciences Centre: University Hospital – Core Services or Clinical Neurological Sciences
St. Joseph's Health Care London: Parkwood Institute – Specialized Geriatric Services
London Health Sciences Centre: Children's Hospital, Neuropsychology

London Health Sciences Centre: Victoria Hospital - Core Services

The **Neuropsychological Diagnostic Assessment** Service at Victoria Hospital provides consultation to all adult inpatient units at Victoria Hospital. Referrals are received from a variety of medical units such as critical care, trauma, internal medicine, mental health, cardiology, and oncology among others. Patient populations served include individuals with traumatic brain injury, cerebrovascular disorders, anoxia, seizures, metabolic disorders, systemic disorders, sepsis, delirium, psychotic disorders, depression, or suspected dementia. Outpatients are referred primarily from neuro-oncology, the urgent neurology clinic, and psychiatry.

The aim of this Major Rotation is to prepare residents for professional practice in a hospital-based general neuropsychology service. Residents develop the consultation and assessment skills necessary to address the types of referral questions generally posed, including differential diagnosis; capacity to make decisions regarding health care and discharge to long term care; recommendations for current management, home supports, and rehabilitation (cognitive, educational, and/or vocational); and at times providing a better understanding of the neurological underpinnings of behaviour to enhance patient care. Skill development includes providing neuropsychological assessments within the parameters of inpatient medical units, such as tailoring assessments according to the acuity of the patient's medical status and conducting bedside assessments. Residents will also develop an appreciation of how different medical conditions may affect the integrity of the brain. Emphasis is placed on case conceptualization and formulation.

Assessments include interviewing patients and their families, reviewing medical information (e.g., neurodiagnostic test results, medical chart), neuropsychological testing, and reporting of results. Assessments are adapted according to the issues to be addressed, age and medical acuity of the patient, and nature of the medical problem. Testing ideally includes evaluation of intellectual and academic skills, executive functions, attention, memory, visual-perceptual and constructional skills, language abilities, motor functions, and emotional status.

For residents wanting to obtain more comprehensive inpatient experience, the first six-month (four day per week) rotation is recommended, as inpatient experience during the second six-month (three day per week) rotation will be limited by the ability to meet timelines required for urgent inpatient referrals. Residents have the opportunity to work closely with a psychometrist on this rotation and frequently have the opportunity to gain supervisory experience with practicum students during the second six-month rotation.

Supervisor: Dr. Andrea Lazosky

London Health Sciences Centre: University Hospital – Core Services

Adult Core Neuropsychology at University Hospital is primarily an outpatient service that involves comprehensive assessments for individuals with a variety of medical and/or psychiatric presentations, such as dementia, metabolic disorders, endocrine disorders, cancers, schizophrenia, mood disorders and anxiety disorders. Evaluations are typically completed to gauge cognitive strengths and limitations, guide return to work or school programming, help direct rehabilitation services or for diagnostic assistance. Inpatient evaluations are occasionally available.

Strengthening the resident's knowledge of the cognitive, emotional, and behavioural manifestations of different disorders that impact the brain is a goal of the rotation. Residents will enhance their interview and medical chart review skills, ability to administer, score, and interpret neuropsychological tests and write clinically meaningful reports. Case conceptualization occurs with the patient's background and current status in mind. Also integral to the rotation is learning succinct and effective communication skills with physicians, nurses and allied health professionals, as well as learning in-depth communication skills tailored to patients and family members. Overall, this service will provide residents with broad-based skills suitable for a general hospital-based neuropsychology practice.

Supervisor: Dr. Lynn Rennison

London Health Sciences Centre: University Hospital - Clinical Neurological Sciences

To promote breadth of experience, residents who choose this rotation in the first six months (4 days per week) typically spend time on two available services, namely the Adult Neurology/Neurosurgery service and the Adult Epilepsy service. In the second six months (3 days per week) residents may choose to spend time on both services, or may concentrate their time on one of the two services. The Track Coordinator and rotation supervisors create a personalized training program for each resident based on the resident's particular background and interests, as well as supervisors' availability.

The **Adult Neurology/Neurosurgery** Service provides consultation to numerous neurologists and neurosurgeons in the Department of Clinical Neurological Sciences at University Hospital. Experiences within this primarily outpatient service will provide residents with exposure to a wide variety of adult age ranges and a wide variety of syndromes with unique behavioural disturbances. For example, patient populations include cerebrovascular disease (e.g., stroke, aneurysms), cortical and subcortical dementia (e.g., Alzheimer's disease, Parkinson's disease, Huntington's disease), multiple sclerosis, tumours, hydrocephalus, concussion (post-concussion syndrome), and patients seen for pre-operative assessments prior to deep brain stimulation surgery.

The major focus will be on neuropsychological assessment with the goal of diagnosis and/or description and documentation of neuropsychological functioning. More specifically, residents will acquire skills in interviewing, test administration, scoring, interpretation, report writing, and communication of results and recommendations to referring physicians, health professionals, and patients and their families. Opportunities are available to work with a psychometrist in the latter part of the rotation and opportunities to supervise a practicum student are also occasionally available.

Supervisors: Dr. Gloria Grace
Dr. Michael Harnadek
Dr. Ashley Miles

The **Adult Epilepsy** Service provides residents with experience in the neuropsychological assessment of adult and adolescent patients with intractable epilepsy. Most patients are surgical candidates or have had surgical treatment. Patients are seen on an outpatient basis or as inpatients admitted for continuous video EEG monitoring on the 11-bed epilepsy inpatient unit. The goals of a pre-surgical neuropsychological assessment typically include the identification of potential areas of cerebral dysfunction, assessment of hemispheric dominance for language, and communication to the team and the patient the results of the neuropsychological assessment including potential cognitive risks of a proposed resection. Post-surgical/follow-up issues are also addressed where relevant. Assessments include reviewing relevant medical information (including findings from neurological, EEG, and neuroimaging investigations), interviewing, neuropsychological testing, integration and interpretation of the findings, report preparation, communication of the results to the treatment team, and the provision of feedback to the patients and families. In addition, the resident may gain experience in specialized test procedures and investigations, such as the etomidate Speech And Memory (eSAM) test, and/or have the opportunity to observe neurosurgical procedures and cortical mapping, as available. On this service, the resident will benefit from working on an interprofessional team (including neurology, neurosurgery, EEG, clinical psychology, social work and nursing) as well as have the opportunity to attend Epilepsy Teaching Rounds. Later in the rotation, opportunities will be provided to work with a psychometrist, if appropriate.

Supervisors: Dr. Brent Hayman-Abello
Dr. Susan Hayman-Abello
Dr. Ashley Miles

St. Joseph's Health Care London: Parkwood Institute

Neuropsychology in **Specialized Geriatric Services** (SGS) at Parkwood Institute focuses on outpatient services to a wide range of individuals with memory and behavioural concerns aged 55 years and older.

Neuropsychology in SGS focuses on diagnostic assessment referrals in the Aging Brain and Memory Clinic. Diagnostic referrals include normal versus mild cognitive impairment, as well as differential dementia diagnosis, including Alzheimer's disease, Fronto-Temporal Dementia (subtypes of Behavioral Variant, Primary Progressive Aphasia, and Semantic Dementia), Posterior Cortical Atrophy, Herpes Simplex Encephalitis, Alcoholic Dementia and Lewy Body Dementia. Cognitive remediation opportunities may be available with individual patients during feedback sessions, and it may be possible for residents to observe a group cognitive remediation session. There are also opportunities for following patients at Geriatrician/Neurology/Nurse Practitioner clinics to further understand the interface between neuropsychology and other specialist geriatric practitioners.

Supervisor: Dr. Jennifer Fogarty

London Health Sciences Centre: Children's Hospital, Neuropsychology

The aim of this Major Rotation is to provide training for residents primarily interested in pursuing a career as a Paediatric Clinical Neuropsychologist. The resident may have opportunities to work with patients referred from several service areas at the LHSC: Children's Hospital.

The **Paediatric Acquired Brain Injury** service provides neuropsychological assessment and consultation predominantly to outpatients as well as inpatients with acquired injuries to the brain such as traumatic brain injury, stroke, anoxic injuries, and encephalitis. Children may be seen in the acute stage following injury, early in their recovery, or in longer term follow-up.

Supervisor: Dr. Sabrina Freund

Neuropsychology on the **Paediatric Oncology** service provides neuropsychological assessment and consultation to children treated within paediatric oncology (e.g., acute lymphoblastic leukemia, brain tumours). In addition to assessing children undergoing treatment for childhood cancer, long-term follow-up of children who have survived cancer is also a major focus of this service.

Supervisor: Dr. Andrea Downie

On the **Paediatric General Consultation** service, the resident will have opportunities to work with children with known or suspected central nervous system dysfunction referred from the Children's Hospital Neurologists, Neurosurgeons, or Geneticists. Diagnoses include epilepsy, hydrocephalus, congenital anomalies of the brain, and genetic or metabolic disorders.

Supervisors: Dr. Andrea Downie
Dr. Sabrina Freund

The resident will participate in similar activities across these service areas. The neuropsychological assessment focuses on the relationship between brain functioning and behaviour. Using a wide variety of psychometric tests, residents will gain experience assessing a number of cognitive, motor and academic functions, as well as behavioural and socio-emotional domains. The resident will be involved in interviewing children and family members; reviewing pertinent medical, educational, and rehabilitation information; and administering neuropsychological tests to the child. The resident will gain experience in case conceptualization as well as in identifying developmentally appropriate and concrete recommendations and interventions with an emphasis on the guidance of clinical practice through scientific research. The resident will prepare neuropsychological assessment reports and provide feedback to children and their families. Opportunities may also be available to provide consultation to interprofessional hospital teams, rehabilitation workers in the community, and school staff.

TRACK	Neuropsychology- **Adult Emphasis** (see p.61)		
ORGANIZATION	**London Health Sciences Centre**		**St. Joseph's Health Care London**
SITES	**University Hospital - Clinical Neurological Sciences / Core Services (see p. 66)**	**Victoria Hospital - Core Services (see p. 65)**	**Parkwood Institute (see p. 67)**
MAJOR ROTATION/ SERVICE *See list of Minor Rotation options (p. 77-86)	- Adult Neurology / Neurosurgery - Adult Epilepsy - Adult Core Neuropsychology	- Neuropsychological Diagnostic Assessment	- Specialized Geriatric Services

Sample Combinations of Major and Minor Rotation Schedules

Track	1st Six Months	2nd Six Months	
	Major – 4 days/week	**Major – 3 days/week**	**Minor – 1 day/week**
Neuropsychology: Adult Emphasis	Adult Neurology/ Neurosurgery; Adult Epilepsy (2 days each service) (LHSC)	Neuropsychological Diagnostic Assessment (LHSC)	Concurrent Disorders Service (SJHC)

TRACK	Neuropsychology- **Paediatric Emphasis** (see p. 61)			
ORGANIZATION	**London Health Sciences Centre**			**St. Joseph's Health Care London**
SITES	**Children's Hospital (see p. 68)**	**University Hospital (see p. 66)**	**Victoria Hospital (see p. 65)**	**Parkwood Institute (see p. 67)**
MAJOR ROTATION/ SERVICE *See list of Minor Rotation options (p. 77 - 86) Note: Children's Hospital, Neuropsychology rotation is 4 days a week for the first six months	Neuropsychology *REQUIRED ROTATION* - Paediatric Acquired Brain Injury - Paediatric Oncology - Paediatric General Consultation	- Adult Neurology / Neurosurgery - Adult Epilepsy - Adult Core Neuropsychology	Neuropsychological Diagnostic Assessment	-Specialized Geriatric Services

Sample Combinations of Major and Minor Rotation Schedules:

Track	**1st Six Months**	**2nd Six Months**	
	Major – 4 days/week	**Major – 3 days/week**	**Minor – 1 day/week**
Neuropsychology: Paediatric Emphasis	Pediatric Oncology/ Pediatric General Consultation (2 days each service) (LHSC)	Adult Neurology / Neurosurgery (LHSC)	Child and Adolescent Assessment (CPRI)