OVERVIEW

The Section of Pediatric Neurology offers a unique opportunity for the student to experience the specialty of pediatric neurology. The student will be exposed to both in-patient and out-patient pediatric neurology consultation service, sub-specialty didactic rounds and opportunities to learn some pediatric neurology related procedures, especially lumber puncture, and basic electrophysiology. Teaching within the department is done one to one and each student will be assigned, for several consecutive days to a Pediatric Neurology Staff during in-patient service and to a different staff person in out-patient clinics.

INTRODUCTION

Location(s):
Section of Pediatric Neurology, AE 308, 820 Sherbrook Street, Children’s Hospital Winnipeg
Children Clinic, Unity Y, Children’s Hospital Winnipeg
Inpatient Units, Children’s Hospital Winnipeg

Preceptors:
Dr. Frances Booth
Dr. Michael Salman
Dr. Mubeen Rafay
Dr. Edward Leung
Dr. Samantha Marin

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LEARNING OBJECTIVES (CanMEDS)

Medical Expert
As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills and professional attitudes in their provision of patient-centered care.

The student can expect to be actively involved in the service. This will encompass:

- Demonstrate knowledge of the clinical, socio-behavioural, developmental and fundamental biomedical sciences relevant to resolving common pediatric neurology clinical problems.
- Have reasonable understanding of etiology, diagnosis, management, natural history and prognosis of common neurologic disorders. These may include, but not limited to, the following:
Elective: Pediatric; Neurology

- Classification and management of seizures and epilepsy, including management of status epilepticus, and differential diagnosis of children presenting with episodic events such as breath holding spells, faints, tics and other movement disorders
- Diseases presenting with sudden change in neurological status which could include coma, brain death, expanding intracranial lesions, raised intracranial pressure and cerebrovascular diseases including intracranial hemorrhage and strokes
- Diseases of muscle, neuromuscular junction and peripheral nerves (e.g. muscular dystrophies, myopathies, floppy infant)
- Approach to developmental delay and regression
- Congenital malformations of the nervous system, including the skull
- Localization of lesions in the central nervous system
- Neurocutaneous syndromes
- Headaches in childhood, including migraine
- Infections (meningitis/encephalitis/abscess) and autoimmune disorders of the CNS (autoimmune encephalitis/CNS vasculitis).
- Nystagmus, dizziness, vertigo and sensory deficits, i.e. blindness, deafness

- Practice and develop skills of clinical examination and presentation (i.e. summary of history, physical examination with discussion of differential diagnosis and management).
- Gain knowledge of the principles of neurophysiological, neuroradiological and neurometabolic investigations pertinent to Pediatric Neurological practice.
- Develop skills in working with pediatric patients, parents/caregivers and other involved physicians.

Communicator

Physicians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

As Communicators, students will facilitate the doctor-patient relationship:

- Gather information appropriate to pediatric neurology problems from children, adolescents, and families in a manner that is culturally sensitive, developmentally appropriate and family focused. Gather information not only about the disease but also about the patient’s beliefs, concerns and expectations about the disorder.
- Present pediatric neurology case history and examination to his/her supervising staff and other team members in a clear, concise and accurate manner.
- Prepare written documentation for patients seen on both in-patient and out-patient pediatric neurology service in a clear, timely, accurate and organized manner.
- Demonstrate the ability to counsel parents appropriately and effectively regarding a new neurological diagnosis or disorder and its prognosis.
- Demonstrate appropriate interviewing skills; communicate at an appropriate level with patients and families.
- Demonstrate compassion and empathy by listening attentively, respond humanely to the concerns of patients and family members, understanding and recognizing their emotional and personal needs.
**Elective: Pediatric Neurology**

**Collaborator**
Physicians effectively work within a healthcare team to achieve optimal patient care.

As Collaborators, students will work effectively within the surgical team to achieve optimal patient care:

- Establish and maintain a productive and responsible relationship with patients and families seen both on inpatient and outpatient pediatric neurology services.
- Obtain and provide information and collaboration with the patient’s primary care provider(s) in the community for continuity of care for patients with pediatric neurological problems and conditions.
- Collaborate effectively and appropriately with other members of the health care team, demonstrating respect for their professional roles.

**Leader**
Physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

As Leaders, students will participate in the activities of the surgical service, making decisions, allocating resources, and contributing to the effectiveness of the health care team:

- Demonstrate commitment to complete an accurate medical record for patients seen during the pediatric neurology rotation.
- Demonstrate the ability to effectively coordinate the work with pediatric neurology team members, including nurse clinicians, secretaries, clinical clerks, and EEG technologists.
- Recognize the importance of patient flow and increased efficiency, both on in-patient and outpatient neurology clinics.
- Demonstrate an understanding of the importance of time management. Exhibit appropriate time management skills, with ability to prioritize, delegate and manage tasks.
- Use information technology to effectively optimize patient care.
- Demonstrate knowledge of the Canadian health care system and use of health care resources as it relates to complex pediatric neurological disabilities.

**Health Advocate**
Physicians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations.

As Health Advocates, students will responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations:

- Recognize opportunities to advocate for patients and their families children with complex and chronic neurological problems in improving the flow of patients through the health care system.
- Recognize the importance of community services for patients with complex and chronic neurological problems (school, recreation, transportation) in the health of a community.
- Demonstrate and promote active involvement of patients and families in medical decision-making and comprehensive care of the child.
- Work with the patient and family to obtain needed services for care and ongoing family support.
- Recognize that the health care needs of children are different from adults and change throughout the developmental continuum.
Elective: Pediatric; Neurology

Scholar
Physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

As Scholars, students will demonstrate a lifelong commitment to learning:

- Contribute to the creation, dissemination, application and translation of new medical knowledge and practice relevant to pediatric neurological disorders.
- Facilitate the learning of patients, families, students, residents, other health professionals, the public and others as appropriate.
- Evaluate information and its sources critically and apply this appropriately to practice decisions.
- Recognize gaps in knowledge and expertise and develop strategies for improvement.
- Seek out and receive feedback well with a goal of incorporating constructive feedback into clinical practice.

Professional
As Professionals, physicians are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behavior.

As Professionals, students are committed to health and well-being of individuals through ethical practice, profession-led regulation and high personal standards of behavior:

- Demonstrate personal and professional attitudes consistent with a pediatric neurology subspecialist’s role, including honesty, integrity, commitment, compassion and respect.
- Have a basic understanding of the principles of medical ethics and application to the care of pediatric neurology patients, and related to the issues of best interest, confidentiality, conflict of interest and access to care for children with complex and chronic neurological disorders.
- Demonstrate respect for others and diversity, including but not limited to patients, families, other physicians and professional colleagues; treat all persons with respect and regard for their individual worth and dignity in a fair and non-discriminatory manner; demonstrate awareness of emotional, personal, family and cultural influences on patient well-being and patients’ rights and choices of medical care.
- Recognize personal limitations and act upon them to always optimize patient care and safety. Demonstrate willingness to accept responsibility for errors.
- Seek advice when necessary and accept advice graciously.
- Show motivation and ability to learn.
- Demonstrate a commitment to delivering the highest quality of care and to maintenance of competence.

INFORMATION
These are locations, readings, evaluations, call responsibilities, etc.

Required Reading

- Neurological Examination Made Easy – Fourth Edition by Geraint Fuller
- Aids to the Examination of the Peripheral Nervous System – Fifth Edition
Elective: Pediatric; Neurology

- Textbooks of Child Neurology: a) Fenichel, b) Menkes; c) Swaiman;
- Neurology of the Newborn: Volpe.
- Netter’s Concise Neuroanatomy - Michael Rubin and Joseph E. Safdieh
- Childhood Epilepsy, Management from Diagnosis to Remission - Richard Appleton and Peter Camfield.
- Epilepsies of Childhood (3rd Edition) - O’Donohue.
- Selected videotapes and books available through Pediatric Neurology office.

Evaluations

The Teaching Coordinator in the Section of Pediatric Neurology reviews the expectations, goals and objectives for the rotation, particularly in relationship to the CanMEDS competencies.

An interim evaluation is provided midway through each rotation. A final face to face evaluation is provided at the end of the rotation. The resident is evaluated by each service attending with whom he or she has been on-service. The supervising faculty (Teaching coordinator/Program director in the Section of Pediatric Neurology) will be responsible for obtaining and reviewing these evaluations and providing face-to-face feedback to the trainee at the end of each rotation. Academic credit for this rotation will only be granted upon the completion of the evaluations of the trainee within ten business days of the end of the rotation.

Call Responsibilities

On call is not required

WARD ACTIVITIES

These are examples of schedules, expectations, rotation details, etc. All the details below are subject to change.

Expectations

Clerkship Elective Duration

Variable length of time from a minimum of two weeks to a maximum of four weeks, in the Section of Pediatric Neurology at the Children’s Hospital Winnipeg.

Availability of Clerkship Elective

In general, the rotation is available throughout the year, however, if two trainees are already assigned to a given period of rotation, we will not be able to accept another trainee during that time to ensure adequate one in one learning experience.
Elective: Pediatric; Neurology

Clinic

Out-Patient Clinics

These are held on Monday and Wednesday mornings, 8:30am – 12:00pm, in Childrens Clinic, Unit Y. Additional clinics are held on Friday mornings. You will be assigned to one staff person for Monday and Wednesday clinics.

In-Patient Consult Service

All new inpatient consultations to Pediatric Neurology Service will be reviewed by the on call Pediatric Neurologist. You will be assigned see new inpatient consultation on a daily basis, average 1-2 consults per day, with expectation to complete the new consults in not more than 60-70 minutes. You will also be assigned follow-up care of inpatients followed by Pediatric Neurology Service.

Ward rounds with the on call Pediatric Neurologist generally commence around 9:00 am on non-clinic days. On clinic days, the rounds may occur after clinic in the afternoon around 1:00 p.m. Trainees are expected to have rounded on the patients prior to formal rounds with the on-call staff, between 8:00 am - 9:00 am on non-clinic days and 7:30 - 8:30 am on clinic days. It is expected that during the rotation, trainee has rounded on time, written progress notes in patients charts (mainly for sick patients or patients with acute issues).

Teaching Sessions

- Clinical pediatric neurology rounds are held on Tuesdays at 3:00 p.m. in Room CH181-3. You will be asked to present a topic of your choice once monthly (presentation for 45 minutes with 15 minutes for discussion). Please discuss the topic as necessary with one of the staff. A schedule for these rounds will be circulated.
- Radiology Rounds are held on Thursdays, from 12:00 to 1:00 pm, in Children’s radiology reporting room to review patients CT and MRI scans will be reviewed.
- Combined Neurosciences Rounds are held for 2 hours every Friday beginning at 8:00 a.m. Approximately three to four rounds per year are devoted to Pediatric Neurology. Attendance is optional for electives trainees.
- The neurological examination in infants and children will be reviewed.
- In addition to bedside teaching, brief discussions can be held throughout the rotation on topics of interest to you. Please discuss with the appropriate staff person topics you would like covered.
- Aspects of electroencephalography of relevance to the trainee will be discussed during the rotation.