

**Neurology**

**Surrey Memorial Hospital**

**Rotation Manual**

# DESCRIPTION

The SMH neurology rotation is an elective rotation of the LMPS Hospital Pharmacy Residency program specializing in adult neurology. The unit in which the student will work is a 39-bed adult neurology unit staffed by, hospitalists, pharmacists, physiotherapists, occupational therapists, social workers, and speech/language pathologists, dietitians and neurologists. The Resident will have the opportunity to integrate with the multidisciplinary team operating on the unit and provide pharmaceutical care to the patients and staff there.

# GOAL

The Resident will develop the knowledge and clinical skills required to provide pharmaceutical care on an acute adult neurology ward. Also, the resident will develop insights into ethical issues that impact value systems when providing pharmaceutical care to neurology patients.

# LEARNING OBJECTIVES

Per those listed for all LMPS Direct Patient Care (DPC) Rotations, available on our Evaluation Outcomes page at <http://www.lmpsresidency.com/residents/resident-manual/evaluation-outcomes>

The expected level of resident performance by the completion of this 4-week rotation is outlined in the Direct Patient Care Rotation Assessment of the Resident form.

# ROTATION-SPECIFIC OBJECTIVES

1. Demonstrate competence in discussing the pathophysiology, clinical features, and therapeutics of the following disease states/processes:

Stroke- management of acute stroke and secondary stroke prevention Epilepsy in adults

Parkinsons

Multiple sclerosis Hemorrhagic stroke Traumatic brain injury Neuropathic pain

Optional: Alzheimer’s, ALS, Huntington’s, migraine, hepatic encephalopathy

# RESIDENT’S OWN OBJECTIVES

Residents will identify several of their own objectives for the rotation. These should be documented in their ePortfolio and assessed at evaluation points during the rotation.

1.

2.

3.

# REQUIRED ACTIVITIES

The Resident will:

1. Provide pharmaceutical care to the neurology patients on the ward as per the objectives above.

This involves daily patient evaluation for efficacy and toxicity of existing therapy as well as detecting and solving potential drug-related problems. Patient load will be determined based on the Resident’s previous experience and proficiency and will be modified at the discretion of the preceptor.

1. Assist in the initiation and continuation of appropriate drug therapy.
2. Provide medication counselling and perform medication histories on all patients under his/her care when appropriate.
3. Provide discharge counselling to all patients who require it and liaise with community pharmacist and/or physician whenever indicated (via letter, PharmaNet, verbal).
4. Document all clinical activities in the patient’s health record. Notes should be discussed with the preceptor BEFORE placing them in the chart, or as otherwise discussed. All notes should be photocopied (on fax machine) for later review by the preceptor.
5. Attend pharmacy education sessions (e.g., scheduled presentations).
6. The student may attend medical grand rounds at SMH on Tuesdays at 1200-1300; and neurology grand rounds, Wednesdays, 0800-1000 at JPOCSC. Schedules of topics is available from preceptor.
7. At twice-monthly Pharmacy Clinical Sharing meetings (Wednesdays, 12:30 in rooms TBA), informally present a clinical case, critique of the pharmacotherapeutic literature, or clinical “pearl of wisdom” to the group.
8. Prepare topics for discussion with preceptor as assigned. These include topics pre-selected by the preceptor as well as specific topics on which the student would particularly like to expand their knowledge base.
9. Meet daily with preceptor to discuss the patients being followed, issues of interest, therapeutic controversies, ongoing evaluation, and special topics (outlined in #9).
10. Identify an adverse drug reaction and report it to DPIC using the proper form. The ADR should also be posted on the patient’s PharmaNet profile if appropriate.
11. Present a journal club to SMH pharmacists on a neurology-related topic, using literature critiquing skills.
12. Present a case presentation to the SMH pharmacists.
13. Other activities as assigned by preceptor.

# COMMUNICATION EXPECTATIONS

* 1. The Resident will discuss all written chart notes with the preceptor prior to placing them in the chart, with the exception of medication histories and allergy clarifications, unless otherwise arranged with the preceptor.
	2. The Resident will notify the preceptor in advance of required off-site activities and absences.

# PRECEPTOR RESPONSIBILITIES

1. Introduce the Resident to the department, ward, and health care team.
2. Provide orientation to pharmacy department and neurology ward.
3. Take report of all patients.
4. Be available for consultation with Resident whenever possible.
5. Discuss clinical topics with Resident twice weekly (minimum).
6. Provide feedback on notes written in health record.
7. Schedule dates for presentations.
8. Keep the Resident informed regarding their availability for consultation and meetings.

# EVALUATION PROCESSES

As detailed in the LMPS residency program policies at:

<http://www.vhpharmsci.com/residency/resources/evaluation.html>

# REQUIRED READING & RESOURCES

**Before rotation:**

Liu-DeRyke X, Baldwin KA. Management of acute ischemic stroke and transient ischemic attack. In Pharmacotherapy Self-Assessment Program VII, 2012.

Available at: <http://www.accp.com/docs/bookstore/psap/p7b10sample02.pdf>

Furie KA,Kasner SE, Adams RJ. Guidelines for the Prevention of Stroke in Patients With Stroke or Transient Ischemic Attack *Stroke*. 2011;42:227-276.)

Canadian best practice recommendations for stroke care 2010.

<http://www.strokebestpractices.ca/wp-content/uploads/2011/04/2010BPR_ENG.pdf>

# During rotation:

**Stroke- Management of acute stroke and secondary stroke prevention**

Optional:

Adams HP Jr, del Zoppo G, Alberts MJ. Guidelines for the Early Management of Adults With Ischemic Stroke *Circulation* 2007;115;e478-e534

Saposnik G, Barinagarrementeria F, Brown RD Jr et al. Diagnosis and management of cerebral venous thrombosis. Stroke 2011;42:1158-92.

Management of extravascular (carotid and vertebral diseases) 2011

Adams HP Jr, delZoppo G, Alberts MJ, et al. Guidelines for early management of adults with ischemic stroke Stroke 2007;38:1655-711

Easton JD, Saver JL, Albers GW et al. Definition and evaluation of transient ischemic attack. Stroke 2009;40:2276-93.

Bauby JD. The Diving Bell and The Butterfly, 1997.

# Epilepsy in adults

Rogers SJ, Cavazos JE. Epilepsy. In: Pharmacotherapy: a pathophysiologic approach. DiPiro JT, ed. 8th Ed, pp. 979-1006.

ILAE treatment guidelines: evidence-based analysis of antiepileptic drug efficacy and effectiveness as initial monotherapy for epileptic seizures and syndromes. Epilepsia 2006;47(7):1094-1120.

Fountain NB. Choosing among antiepileptic drugs. Continuum Lifelong Learn Neurol 2010;16(3):121-35.

Britton JW. Antiepileptic drug therapy: when to start, when to stop. Continuum Lifelong Learning Neurol 2010;16(3):105–120.

Tatum WO IV. Antiepileptic drugs: Adverse effects and Drug interactions Continuum Lifelong Learning Neurol 2010;16(3):136–158.

# Parkinsons

Chen JJ, Nelson MV, Swope DM. Parkinson’s Disease. In: Pharmacotherapy: a pathophysiologic approach. DiPiro JT, ed. 8th Ed, pp. 1033-44.

Parkinson’s Disease. In Pharmacotherapy Self-Assessment Program VII, 2012.

Fox SH, Katzenschlager R, Lim SY, et al.The Movement Disorder Society Evidence-Based Medicine Review Update: Treatments for the Motor Symptoms of Parkinson’s Disease Movement Disorders 2011;26(S3):S2-S41

Seppi K, Weintraub D, Coelho M et al. The Movement Disorder Society Evidence-Based Medicine Review Update: Treatments for the Non-Motor Symptoms of Parkinson’s Disease Movement Disorders, 2011;26(S3):: S42-80

Fang JY. Update on the medical management of Parkinson disease. Continuum Lifelong Learning Neurol 2010;16(1):96–109.

# Multiple sclerosis

Bainbridge JL, Corboy JR. Multiple sclerosis. In: Pharmacotherapy: a pathophysiologic approach. DiPiro JT, ed. 8th Ed, pp. 963-78

Markowitz C. Symptomatictherapy of multiple sclerosis. Continuum Lifelong Learning Neurol 2010;16(5):90–104.

Optional:

Complete learning module at: <http://www.edheads.org/activities/brain_stimulation/>

# Hemorrhagic stroke

Rhoney DH, Liu-DeRyke X. hemorrhagic stroke. In Pharmacotherapy Self-Assessment Program VI 2008.

Testai FD, Aiyagari V. Acute hemorrhagic stroke pathophysiology and medical interventions: blood pressure control, management of anticoagulant-associated brain hemorrhage and general management principles. Neurol Clin 2008;26:963-85

Morgenstern LB, Hemphill JC III, Anderson C et al. Guidelines for the management of spontaneous intracerebral hemorrhage in adults: 2010 update. Stroke 2010;41:2108-29.

# Traumatic brain injury

Boucher BA, Timmons SD. Acute management of the brain injury patient. In: Pharmacotherapy: a pathophysiologic approach. DiPiro JT, ed. 8th Ed, pp. 1019-1032.

Available at: <http://www.accp.com/docs/bookstore/psap/p7b10sample03.pdf>

Wood GC, BoucherBA. Management of acute traumatic brain injury. In Pharmacotherapy Self- Assessment Program VII, 2012.

# Neuropathic pain

Attal N. Neuropathic Pain:Mechanisms, Therapeutic Approach, and Interpretation of Clinical Trials. Continuum Lifelong Learning Neurol 2012;18(1):161–175.

Optional

Dworkin RH, O'Connor AB, Audette J. Recommendations for the pharmacological management of neuropathic pain: an overview and literature update. Mayo Clin Proc**.** 2010;85(3)(suppi):S3- S14

Jensen TS, Madsen CS, Finnerup NB. Pharmacology and treatment of neuropathic pains Curr Opin Neurol 2009;22:467–474

Jefferies K. Treatment of Neuropathic pain. Seminars Neurol 2010;30(4):425-32