



Welcome

to the

# DEPARTMENT OF NEUROSCIENCES

and the

# Section of Adult Neurology!





# Orientation to Neuroscience 251

Clinical Clerkship in Adult Neurology

Learning Unit VI

AY 2017-2018





# Course Description

This is a 2-week course which aims to equip the students with the *knowledge, skill and attitude* in the proper evaluation, management and follow-up care of patients with **common neurological and psychiatric diseases** in the acute, chronic and intensive care settings.



# Learning Objectives

- To acquire knowledge on the **signs and symptoms, and management** of the most common neurological diseases encountered in the hospital **(Inpatient and Outpatient)** setting\*:
  - Cerebrovascular Disease (infarct, ICH, SAH)
  - Seizures and status epilepticus
  - Brain and spinal cord tumors
  - Increased Intracranial Pressure, Brain Herniation
  - CNS Infections (meningitis, encephalitis, brain abscess)
  - Spinal Cord Lesions
  - Acute muscular weakness with/out respiratory compromise (Myasthenia Gravis, Guillain-Barre Syndrome)
  - Demyelinating Diseases



*\*Top **admitting** diagnoses based on the Department of Neurosciences 2016 Annual Report.*



# Learning Objectives

- To perform a **neurologic history and exam** appropriately.
- To **localize** the lesion along the neuraxis
- To discuss **differential diagnoses** based on the history and examination
- To know the appropriate **diagnostic examinations** and to interpret the results.
  - Routine diagnostics: CBC, blood chemistries, ECG
  - Neuroimaging Studies (CT scan, MRI)
  - CSF studies
  - Neurophysiologic Studies (EEG, EMGNCV)



# Learning Objectives

- To formulate a **treatment plan** and appreciate the mechanisms of action and discuss the benefits of treatment
- To monitor **progress of patients and their response to intervention** using daily Neurologic Examination, Glasgow Coma Scale, Functional Outcome Scales (NIHSS, Barthel Indices, Modified Rankin Scale)
- To periodically **reformulate management plan/s** based on the clinical course and treatment response.
- To recognize **neurologic emergencies and initiate supportive measures**
- To recognize the need for subspecialty care for patients with neurologic disorders





# Official Time

- Official Hours:
  - 7 AM – 5 PM during weekdays,
  - 7:30 – 12 noon during weekends and holidays
- Sign in Attendance Paper at Code cart
- **Late**
  - 7:15 AM during weekdays
  - 7:45 AM during weekends
- **Absent**
  - Beyond 7:30 AM during weekdays
  - beyond 8 AM during weekends



# Attendance Sheet

- Sample attendance sheet provided
- Names with duty status (pre, duty, post)



# Schedule Template: Week 1



	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7-8	Neuro orientation	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements
8-9	Psych Orientation	In-patient care				Chief Resident's	In-patient care
9-10	OPD Rm 215	OPD Rm 215	Neuroscience Conference	OPD Rm 215	In-patient care		
10-11							
11-12							
12-1	Lunch					Duty	
1-2	Psych Activities	In-patient care	Service Consultant Rounds	In-patient care	OPD Rm 122		
2-3		Neuroemergency lecture by block consultant					
3-4	Stroke Hour / Neuroemergency Lecture		In-patient care	In-patient care			
4-5							
5 onwards	Duty						



# Schedule Template: Week 2



	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
7-8	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	Morning endorsements	
8-9	In-patient care					Chief Resident's Rounds / Battle of the Brains	Orals by block consultant	
9-10	OPD Rm 215	OPD Rm 215	Neuroscience Conference	OPD Rm 215	In-patient care			
10-11								
11-12								
12-1	Lunch					Duty		
1-2	Psych Activities	In-patient care	Service Consultant Rounds	In-patient care	OPD Rm 122			
2-3		Neuroemergency lecture by block consultant						
3-4	Stroke Hour / Neuroemergency Lecture		In-patient care	Neuroanatomy Lecture				In-patient care
4-5								
5 onwards	Duty							







# Learning Activities

1. Lectures
2. Conferences
3. Oral Examinations
4. Rounds
5. Endorsements
6. In-patient care/Ward Work/Tour of Duty
7. OPD Case Management
8. Public Health Lecture



***Schedules vary depending on consultant's availability***

# Lectures

- Neurologic Emergencies
  - To be given by Block Consultant
- Neuroanatomy lectures
  - Thursdays PM
- Stroke Hour Lectures and Neurologic Emergency lectures
  - Mondays PM
- Neuro Subspecialty Lectures

Priority:

UPCM Activities >> Lectures/Conferences  
>> Service Rounds >> Ward Work/Duty Post



# Conferences

- Grand Rounds, Mortality Conferences, Brain-Cutting
  - Every Wednesday, 9 AM
  - Neurosciences Conference Room, except brain cutting – Pathology (UPCM)



# Outpatient Department

- Twice a week
  - Depending on consultant schedule
  - Monday, Tuesday, or Thursday (9 am - 12 nn)
  - Wed, Friday (1-4 pm)
- History, PE (Systemic and Neurologic)
  - Groups of 2 – 4 clerks
  - Get new OPD cases decked to residents
  - One session with the OPD consultant, one with resident-in-charge (written on chart)



# Examinations

- Oral Examination
  - Actual in-patient case
  - History, PE and Neuro Exam
  - To be evaluated by the Block Consultant
  
- Written Examination
  - At the end of the academic year
  - Finals week of the UPCM



# Rounds

- Service Rounds
  - With the service consultant and residents
- Rounds with the Chief Resident
  - Saturday 8 AM – 12 NN
- Clerk-in-Charge to present patient's
  - History, Neurologic Exam
  - Diagnosis, Updates
  - Theoretical information







# Morning Endorsements

- Post-duty Clerk will endorse a newly-admitted case during his tour of duty, as selected by the Senior Neurologist-on-Duty (SNOD). Call 2401 before 12 midnight.
- If there are no admissions from the previous duty, SNOD may select from among the admitted Ward patients.
- **All clerks are to present at least one case** during their rotation and should be graded by the SNOD.



# Morning Endorsements

- Endorsing Clerk to present **OWN** History, Physical & Neurologic Exam of the case
  - Localization
  - Differentials
  - Management (Diagnostics & Therapeutics)
- 
- Visual aids/PPT are not required, but you may use one if you want to
  - Any clinical clerk may be assigned special topics to report on



# Public Health Lecture (PHL)

- Conduct a PHL for lay persons at the ward OR OPD on any Neurologic condition
- Brochures (submit hard and soft copies)
- Visual aids
- Not graded but required for the rotation





# Chief Residents' Rounds and Battle of the Brains

- Every Saturday morning, the Chief Resident conducts rounds with the clerks
  - Present patients assigned to them and discuss the case
  - Demo-return demo of Neuro PE
  - Sometimes, the rounds can be just a lecture in a special topic (eg. Stroke, TB meningitis)
- The weekend before the end of the rotation, the residents usually conduct a jeopardy-type game (Battle of the Brains) as a fun end-of-rotation activity



# Ward Work/In-patient Care

- Each block will be divided into 2 services-- Service A & B--having 4 clerks each
- Service patients will be divided *equitably* amongst the clerks of the service
- Service Team-in-Charge of a patient consists of:
  - Service Consultant
  - Service Senior
  - Resident-in-Charge
  - Intern-in-Charge
  - Clerk-in-Charge



# Duties and Responsibilities of the Clerk-in-Charge

- **PATIENT DATABASE DBRAIN and hardcopies**
  - ☐ 2 updated **Clinical Abstracts** for all patients
  - ☐ **Summary of Labs** (update daily)
  - ☐ **Incoming Notes** for all patients
  - ☐ **Progress Notes** for all patients
  - ☐ **Outgoing Notes**, on the last day of rotation (for endorsement purposes)
  - ☐ **Discharge Summaries** (updated)







- Carry out orders of the RIC
  - blood extraction, IV insertion, Foley/NGT insertion, etc. for his patients during the day
- Procedures to be done outside office hours are to be endorsed to the Clerks-on-Duty
- Drop formal elective and emergency referrals to co-managing services of his patients (within the day).
- Accompany his patient for procedures (x-ray, CT scan, EEG, etc.) INSIDE\*\* the hospital.

*\*\*RIC accompanies the patients to procedures done outside the hospital or if the clerks are in the lectures (but just inform them)*



# Pre-duty ( 4 students)

## □ Preduty 1 (2 students)

- Monitor Q1 and Q2 patients at the wards during office hours (7 am-5 pm on weekdays, 7-12 on weekends, holidays)
- Otherwise, to be monitored by nurses
- ICU patients to be monitored by nurses

## □ Preduty 2 (2 students)

- Monitor all patients at the ER during office hours (7 am-5 pm on weekdays, 7-12 on weekends, holidays)



# Tour of Duty

- Duty Team:
  - Senior Neurologist-on-Duty (SNOD)
  - Resident-on-Duty
  - Intern-on-Duty
  - Clerk-on-Duty



# Duties and Responsibilities of the Clerk-on-Duty

- Together with the ROD, look at newly-admitted service patients at the ER
- Carry out orders for newly-admitted\*\* service patients at the ER, perform
  - BE/IV/Foley/NGT insertion
  - Accompany patients to procedures in the hospital
  - Provide needed paperwork (Clinical Abstracts, etc) as needed

*\*\* Old patients should already have a student in charge*





# Duties and Responsibilities of the Clerk-on-Duty

- Monitor all neuro patients at the ER
  - Attach a Vital Signs monitoring sheet bedside

Name	BP	HR	RR	T	O2	GCS	Pupils

- Carry a monitoring sheet

Name and Location	BP	HR	RR	T	O2	GCS	Pupils
Examples:							
Med 1	140/90	90	20	37.2	98	E4V5M6	3/3 BRTL
Surg 1							
Med Oven 1							
OU 1							

- Call the SNOD at **2401** at 12am to know the selected patient for endorsement the next day.





# Monitoring Pearls

## ■ Glasgow Coma Score

Eye Opening	4	Spontaneous eye opening
	3	Eye opening to tapping
	2	Eye opening to pain
	1	No eye opening
Verbal Response	5	Oriented
	4	Disoriented
	3	Incomprehensible words
	2	Incomprehensible sounds
	1	No verbal response
Motor Response	6	Follows commands
	5	Localizes to pain
	4	Withdraws to pain
	3	Decorticate
	2	Decerebrate
	1	No motor response





# Monitoring Pearls

- Check pupillary size
- Keep MAP 110-130 for stroke patients; adjust Nicardipine drip by 5cc/hr (maximum dose: 15 mg or 150 cc/hr)

□ MAP: 2DB +SBP

3

- Things to watch out for:
  - Decreasing sensorium
  - Progressing neurologic deficits
  - Persistent headache, vomiting
  - ↑BP + bradycardia + bradypnea (Cushing's Triad)
  - Anisocoria



# Maximize Learning!!!!

- Self directed learning is expected
- Review the complete neurologic examination (LU3)
- Review neuroanatomy
  - Must knows: Corticospinal, Spinothalamic tracts, UMN vs LMN signs, signs of increased ICP and herniation
  - Reference: DeMyer
- Know your patients, read on your cases
- Read the SSP guidelines/Stroke manual





# References

## Required Reading:

1. DeMyer, Technique of the Neurologic Examination, 5th edition (2004)
2. *Guidelines for the Prevention, Treatment, and Rehabilitation of Brain Attack* by the Stroke Society of the Philippines, 2014 Edition
3. Guidelines on the management of headaches in adults and children by the PNA Headache Council
4. Adam and Victor's Principle of Neurology, 10th edition (2014)



For softcopies of references, go see:

<https://www.dropbox.com/sh/gq3apeb1ru7emo5/AADC30Z20SuDkjurZSFLg-oOa?dl=0>

# Evaluation

Ward performance/Service Consultant/ Service Senior/ Morning endorsements	15%
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OPD case management	20%
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Oral Exams	25%
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Psychiatry	20%
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Final Exam	10%
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Comprehensive Exam	10%
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# Evaluation

- Evaluation forms are provided in the neuro kit provided by Ma'am Norma
  - Ward performance grading sheet (1 per student)  
have the RICs grade you **BEFORE** the block shifts out
  - Endorsement grading sheet (1 per student)
  - OPD grading sheet (2 per student)
  - Oral exam (1 per student)
  - Service consultant/senior (1 per student)
  - Block attendance sheet (1 per block)
  - PHL brochure (1 per block)

*Right after each activity, please have the consultant/resident grade you*



# Evaluation

- Deadline: 1 week after shifting out, (Monday 5pm)
  - Block LO to properly fill up the checklist
  - All requirements will be received by Ma'am Norma (Neuro secretary). Date and time should be indicated. RESIDENTS are NOT allowed to receive requirements.
- **LATE SUBMISSION** of requirements will be duly given demerits/make up duties







# Deficiencies and Corresponding Make-up Hours/ Sanctions

- Tardiness on a non-duty day = 4 hours  
Tardiness on a duty day = 8 hours
- Excused\* absence on a non-duty day = 12 hours
- Excused\* absence on a duty day = 24 hours
  - \* *Certification by the college*
- Unexcused absence
  - twice the makeup hours for excused absences



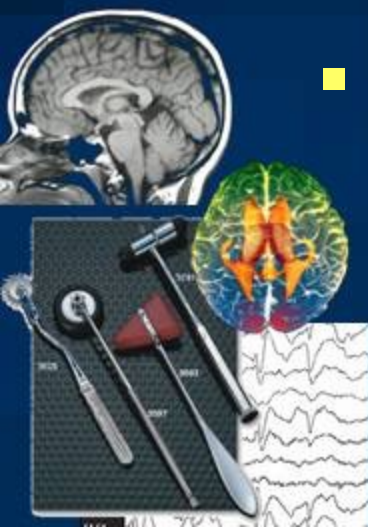


- No clinical abstract/endorsement notes = 4 hours
- No incoming/outgoing notes = 8 hours
- Failure to drop a referral to co-managing service = 4 hours
- Failure to carry out orders – subject to discretion of resident/s involved, depending on gravity of offense





- Tardiness in conferences/lectures= 4 hours
- Absence in conferences/lectures= 8 hours
- No endorsements = Special assignment/4 hours
- Failure to submit evaluation forms on time = 8 hours
- Offenses not covered above - subject to remedial measures as recommended by the resident/s and concurred with the consultant/s involved





# Reminders

- Submit 5x8 index card with the following details:
  - Name, Contact number, Age, Sex, Address, Emergency Contact Number, Hobbies, Motto, Favorite color, planned specialization (if any)
- Keep laptops and other valuables in the callroom (please ALWAYS lock the door)
- When in doubt, call local 2401 to REFER!





# LU6 Monitors

## Consultant Monitors

- Dr. Godfrey Robeniol
  - *Overall LU6 Consultant Coordinator*
- Block Consultant
- OPD Consultant
- Service Consultant



# LU6 Monitors



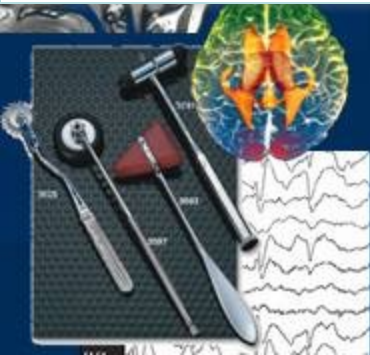
Nicole Bernardo-Aliling M.D.  
Third Year Resident  
Medical School:  
University of the Philippines  
College of Medicine  
Interests: Dementia



Nikolai Reyes M.D.  
Second Year Resident  
Medical School:  
University of the Philippines  
College of Medicine



Nico Dimal M.D.  
First Year Resident  
Medical School:  
University of the East Ramon  
Magsaysay Memorial Medical Center



<http://www.pghneuro.com/>



# Department Chief Resident



Jose Danilo Diestro M.D.  
Department Chief Resident

Medical School:  
University of the Philippine College  
of Medicine  
Interests: Movement Disorders,  
Interventional Neurology,  
Neurocritical Care

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# Ward 5 Nurses and Staff





Again, welcome  
to the  
**NEUROSCIENCES**

Let's all enrich our own brains, so that we can  
heal those of our patients'

