Name and Description of Procedure/Treatment/Intervention Being Ordered: **Diagnostics and Therapeutics**		**Date Developed:**	**Revised 1 Reviewed:**	**Number**	**Medical Directive #** **Category-#-Revision-#** **e.g. OR-001-0**
Category: e.g. OR, ICU, CCU, Paed, Medicine: **Neurology**				**1 of 8**	**Medical Directive PA-Neuro-002-01**
Next Review:	Issuing Authority:	Status	Approval By:		
	Professional Practice Committee Medical Advisory Committee				

Approvals:	Signature	Approval Date:
Physician group supporting the delegation Name: Neurology		
Professional Group accepting the delegation Name: Physician Assistants		
Program Director, Medical Director (Program Governing Council) Name:		
Director, Professional Practice (Professional Practice Committee) Name:		
Chair, Pharmacy & Therapeutics Committee Name: Director Laboratory Medicine Name: Director Diagnostic Imaging Name:		
Medical Advisory Committee Name:		

Name and Description of Procedure/Treatment/lntervention Ordered:

☐ Management of Acute Neurological Illness s

Physician Assistants (PAS) may implement order for and/or perform diagnostic and therapeutic procedures as ordered on the appended Order Table, in accordance with the condition identified in this directive. (May further identify orders, e.g. Orders for procedures include those for:

- Labwork (Blood, Urine, Stool and Swab specimens)
- Diagnostic Procedures (e.g. EEG, spinal tap, ECG, etc)
- Diagnostic Imaging (different modalities of CT scan or B.lfRI)
- Medications (No narcotics at this time due to Controlled Drug and Substances Act) Therapeutic
- Interventions

Clinical Conditions Required: [Must be detailed and specific]

See appended Order Table

Situational Circumstances Required: [If necessary — must be detailed and specific] i.e. Consent

Medical Directives (continued)	**Page Number**	**Document Number**
Filename	2 of 8	

☐ Consent

PAS implementing the directive will obtain consent in accordance with any relevant hospital policies and procedures. If a patient or legal substitute decision maker is unable to provide consent, or if obtaining proper informed consent exceeds PA competencies as identified during the Level 1 Assessment, the PA will contact the supervising physician prior to implementing any orders or performing any procedures.

Indications / Contraindications: [should be very thorough, detailed and comprehensive]

1. Patients must have a request for consultation of Neurology service from the most responsible physician or referring physician and/or have presenting complaints as identified on the appended Order Table
2. Unless noted on the Order Table:
    a. Diagnostic orders may be implemented for patients referred for consultation to a supervising physician.
    b. Therapeutic orders may only be implemented for registered patients.
3. Indications for medications are as noted in the following Order Tables.
4. See appended Order Table for specific presenting complaints, working diagnoses and indicators.

Physician's Order:

See appended Order Table

To Professional Group Authorized to Implement the Medical Directive: (Identified by Name and Professional Designation:

☐ Physician Assistants-Medicine/Neurology

Names and Signatures of Physician(s) Authorized Responsible for the Medical Directive and Date Effective

All Staff Neurologists

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics
Neuro-002-01

Presenting **Complaints**	Order	Indications/Contra-indications and Guidelines
Acute focal Neurological Deficit	PAS may implement an order for any of the following tests if indicated after physical assessment (see: Neuro-001-01): Complete Blood Count CT scan, B,'TRI scan head or/and neck (including angiography) 2D ▪ Cardiac Echo ▪ Carotid Doppler ▪ 24h or 48h Holter monitor ▪ Serial EKG ▪ Blood Sugar ▪ Lipids profile ▪ Cardiac enzymes ▪ Coagulation study, hypercoagulation work-up ▪ Vasculitis work-up ▪ EEG PA may implement stat order for ASA oral or rectal: 81-325 mg or Aggrenox 200/25 oral BID or Plavix 300 mg loading dose, then 75 mg oral daily	**Indications**: Adult patients, for Suspected stroke to establish causation. **Contraindications**: Patient refusal **Guidelines**: Canadian guidelines of diagnosis and treatment/prevention of stroke
Acute confusion/Delirium	PAs may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): ▪ Electrolytes, including Calcium ▪ Complete Blood Count ▪ Blood Sugar (Accucheck) ▪ LFTs, BUN, Creatinine ▪ Serum drug level (if suspected) ▪ Urine toxicity screen ▪ Urine C&S, ▪ CT/N,RI scan Head ▪ Chest x-Ray ▪ EEG ▪ ▪ Blood C&S ▪ ▪ CT scan, MRI scan head or/and neck (including angiography) ▪ Spinal Tap (ensure competency assessment completed) PAs should review patient PMH, SH, list of past and current medication, baseline functioning in connection with clinical findings.	**Indications**: Adult patients on the ward or in the ER with acute change from baseline level of cognition or disturbance of consciousness. **Contraindications**: Patient refusal **Guidelines**: PAs contact MD immediately to provide information and discuss further management

Medical Directives (continued)	Page Number	Document Number
Filename	4 of 8	

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics Neuro-002-01

Presenting Complaints	Order	Indications/Contra-indications and Guidelines
Acute shortness of breath	PAs may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): ▪ Check vitals (Stat) ▪ 12 leads EKG (Stat) ▪ Complete Blood Count ▪ BUN, Creatinine, Electrolytes ▪ Chest X-ray (PA/LAT or portable) ▪ Cardiac Enzymes (Stat)	**Indications**: Adult patients, for suspected acute onset shortness of breath. **Contraindications**: Patient refusal **Guidelines**: Call MD immediately after orders
Acute non-traumatic chest pain	PAs may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): ▪ Check vitals (Stat) ▪ 12 leads EKG (Stat) ▪ Complete Blood Count ▪ BUN, Creatinine, Electrolytes ▪ Chest X-ray ▪ Cardiac Enzymes (Stat) ▪ Give patient ASA 325 mg orally x I (Stat)	**Indications**: Adult patients with acute onset of chest pain. **Contraindications**: Patient refusal **Guidelines**: Call MD immediately after orders

Medical Directives (continued)	Page Number	Document Number
Filename	5 of 8	

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics
Neuro-002-01

Presenting Complaints	Order	Indications/Contra-indications and Guidelines
Acute LOC/Suspected Seizure	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01) and assure patient's safety: ▪ AED drug level ▪ Blood sugar ▪ CBC, Lytes, LFTs, C&S, ▪ CT scan ▪ Urine toxic screen, Urine R&M, C&S ▪ Spinal Tap (ensure competency assessment completed) ▪ EKG (routine or serial) ▪ Cardiac Enzymes ▪ Holter Monitor ▪ EEG PA will review all clinical finding, medication profile altogether with results of investigation and interview patient or witnesses of LOC/Seizure,	**Indications**: Adult patients with acute LOC/Seizure **Contraindications**: Patient refusal **Guidelines**: Call supervising or most responsible physician immediately for emergency intervention if "status epilepticus" suspected or propose treatment option if indicated
Dyslipidemia	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): • Fasting total cholesterol, LDL, HDL, TG	**Indications**: Adult patients with history of Dyslipidemia or to diagnose Dyslipidemia as a risk factor in patients with HTN, [HD, DM or Stroke **Contraindications**: Patient refusal **Guidelines**: PA will call MD after writing orders to report findings and to discuss further diagnostic or management plan

Medical Directives (continued)	Page Number	Document Number
Filename	6 of 8	

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics Neuro-002-01

Presenting Complaints	Order	Indications/Contra-indications and Guidelines
HTN (SBP > 14() mm Hg and or DBP > 90 mm Hg	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): ▪ 12 leads EKG ▪ Complete Blood Count ▪ Creatinine, Electrolytes ▪ Chest X-ray (PA/Lat or Portable)	**Indications**: Adult patients 2 18 yrs, with known case of HTN or Patient develops HIN during hospital stay. (SBP > 140 and or DBP **Contraindications**: Patient refusal Chest x-ray: Pregnant female patient **Guidelines**: PAs will call MD after writing orders to report findings and to discuss further diagnostic or management plan PAS will report MD on the same day about the results of the investigations (if they become available on the same day)
Elevated fasting or random Blood Sugar	PAs may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): ▪ Accucheck q 6 hr ▪ Fasting Blood glucose ▪ HbAIC ▪ Diabetic Diet ▪ Urine for micro albumin ▪ Fasting- Cholesterol, LDL, HDL and Triglyceride	**Indications**: Adult with: History of Diabetes Mellitus To diagnose DM in patients who already has high (> 11 mmol/l Random Blood Sugar) on initial screening To diagnose DM as a risk factor in patients with HTN, Hyperlipidemia, THI) or Stroke **Contraindications**: Patient refusal **Guidelines**: PAs will call MD after writing orders to report findings and to discuss further diagnostic or management plan PAS will notifr MD immediately if capillary or blood sugar is > 1 1 mmolJL or < 4 mmol/L Pas will report MD on the same day about the results of the investigations (if they become available on the same day)

Medical Directives (continued)	Page Number	Document Number
Filename	7 of 8	

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics Ortho-002-01

Presenting Complaints	Order	Indications/Contra-indications and Guidelines
Acute low Back Pain (suspected "cauda equina" syndrome/cord compression)	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): - X-Ray (AP and Lat) - NIRI spine - Septic work-up (if indicated) - Onco work-up if indicated - Foley catheter, postvoid in and out to assess for retention, with Foley to remain in >300 cc	**Indications**: acute onset of low back pain with red flags indicating cords compressions (saddle anesthesia, decrease rectal tone, urinary retention) **Contraindications**: Patient's refusal **Guidelines**: -PA will notify supervising physician or most responsible physician about clinical problem in order to arrange urgent referral PA will follow Patient according to direct orders from supervising physician
Cognitive decline	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): -MMSE, Montreal cognitive scale examination - CT or MRI ofbrain - TSH, B12, Folate deficiency, VDR_L, other reversible conditions including thiamin deficiency - HIV (where risk factors are identified)	**Indications**: Acute or chronic decline in cognitive functioning **Contraindications**: Patient's refusal **Guidelines**: -PA will notify supervising physician or most responsible physician about clinical problem, findings and proposed treatment - PA will follow Patient according to direct orders from supervising physician

Medical Directives (continued)	Page Number	Document Number
Filename	8 of 8	

Order Table

This table should not be relied upon in the absence of: Diagnostics and Therapeutics Ortho-002-01

Presenting Complaints	Order	Indications/Contra-indications and Guidelines
Peripheral Neuropathy (acute or chronic)	PAS may implement an order for any of the following tests, if indicated after physical assessment (see: Neuro-001-01): - Fasting glucose - CBC, B12, TSH, CK - ESR, C3, C4, HbA1c, - HIV (where risk factors are identified) - Protein immunoelectrophoresis - Vasculitic work-up, - ACE level, - CXR, - Abdominal ultrasound, - MRI spine ±gadolinium, - NCS or EMG, - LP (with indications) - 24 hours urine study	**Indications**: Acute or chronic distal weakness/sensory symptoms with no findings suggesting cord compression/"cauda equina" **Contraindications**: Patient's refusal **Guidelines**: -PA will notify supervising physician or most responsible physician about clinical problem, findings and proposed treatment - PA will follow Patient according to direct orders from supervising physician

PRACTICE OUTLINE

Professional Designations: Physician Assistant in inpatient Medicine Service (Neurology)

Area of Practice: - Inpatients Wards and Intensive Care Units, Emergency Department at [*hospital name*];

- Outpatient Neurology Service including Stroke Clinic, Memory Clinic and General Neurology Clinic

Roles & Responsibilities:

Physician Assistant provides consultation with thorough history and relevant physical exam of the Patients admitted to *[hospital name]* as requested by referring physician for a Neurological Consultation. Physician Assistant then document findings and report them to supervising physician. Based on clinical scenario PA may implement Diagnostic and Therapeutic Medical Directive in order to establish diagnosis or initiate treatment.

Practice Arrangements:

Supervision and Reporting Structure/Requirements:
(i.e. Supervising Physician, Area Manager)
Supervision and Reporting:
Administrative Lead:
Supervising Physician:

Clinical Duties & Authority:
Under direct supervision

Under Medical Directives (History and Physical assessment, Diagnostic and Therapeutics)

Under Direct Order

Care Coordination:
(Include the process for implementing a physician's direct order and the process for implementing a physician's order using a medical directive)

1. Assessment of patients. Complete history and physical examination (as per Medical Directive 001).
2. Document (consultation note or progress note): ▪ findings of assessment ▪ results of laboratory and diagnostic tests ▪ differential diagnosis and a working diagnosis ▪ proposed diagnostic and therapeutic interventions
   Discuss all of above with supervising physician and dictating a full consultation report
3. Order Diagnostic and Therapeutic procedures (as outlined in Medical Directive Neurology-002). All clinical skills to have been supervised and approved by Neurology staff physicians.
4. Implement telephone orders from supervising physicians in collaboration with other members of the team. Ensure physician cosigns orders within 24 hours.
5. Liaise between supervising physician and other members of the interdisciplinary team regarding relevant changes to individual care of the patient. Attend and participate in unit based patient rounds to ensure consistency in plan of care and proactive discharge planning.
6. Teach and counsel patients and families regarding diagnosis, prevention/reduction of risk factors, follow-up plan and expected date of discharge after discussing with supervising physician.
7. Follow patients as needed or as delegates by supervising physician.
8. Prepare written or dictated discharge recommendations, arrange follow-up appointments with Neurology service Educational Facilitator:

1. Provide in service teaching within area of expertise to multidisciplinary team members, health care students including medical students, physician assistants and nursing staff.
2. Aim of teaching to improve symptoms recognition and treatment of common neurological presentation

Process for resolving differences in opinion: Consult and refer to _____
(Administrative Lead)

Competency Indicators:
Competency Checklists (Core & Procedural): To be completed and attached to Practice outline
Supporting Protocols: PA should be versed in: **Common Medical Neurological Diagnoses and their Treatment (as per supervising physicians)** **Medical Directive Neurology-001** **Medical Directive Neurology-002**
References:
Signatures
Physician Sponsor(s): Name(s): Signature(s): Administrative Sponsor(s): Name(s): Signature(s):

Underlying Principles:

1 . In the absence of supervising physician, the PA will work within his/her scope of practice in collaboration with most responsible physician towards initiating/continuing the patient's plan of care.
2. The expectation is that the PA has a direct conversation with their supervising physician outlining the patient's status and symptoms to receive a direct order to be initiated.
3. Competency indicator documentation must be completed and attached to the Practice outline.
4. If an issue arises on the Inpatient Unit, the PA will be paged back to the unit.
5. The PA role is not intended to duplicate roles of work is already being done.
6. Identified gaps in services are to be priority.
7. PA practice allocation is as follows:

Inpatient Units: 75%

- Emergency Department 20%

Outpatient Service 5%

AUTHORIZER APPROVAL FORM

Title of Directive: Neurology Diagnostics & Therapeutics

Contact Person: Neurologists

Name of Authorizing Physicians/HCPs	Signature	Date