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Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy

Admission	Diagnosis:									
	Attending Phy	sician:				Time Notified:		Admit to	:	
	Estimated We	ight (kg):	(g): Weight (kg): Height (t (cm):	<u>'</u>		
	ALLERGIES:	ERGIES: ☐ NO KNOWN ALLERGY ☐ MEDICATIONS ☐ FOOD ☐ EN					VIRONM	FNTA	L □LATEX	
			NS/FOOD				REAC			
					I					
Bypass fron	n Another Hos	pital:		☐ Ye	s 🔲 1	No Name of h	nospital			
Date and Time Last Seen Normal::::								_		
		1				n/yyyy		(hours:n	ninute	s)
Acute Strok Time notifie			:	20)		Stroke Physician f assessment:		(ho	:_	inutaa)
Time notifie			ours:minute eria for Th					Yes	No	inutes) Unknown
								163	NO	Olikilowii
	riteria: (criteria									
						who is greater tha	n or			
						iatric Neurologist)	/5			
Onset of symptoms or the last time patient was known to be well is less than 4.5 hours. (for patients beyond 4.5 hours refer to EVT Inclusion/Exclusion Criteria)										
						o" to continue)				
						rease the risk of ma	aior			
	after alteplase a			ii liial C	ould life	rease the risk of the	ajui			
	age on brain im		2011							
	clusion Criteria		should b	e checl	ked "No	" to continue)				
	racranial hemor	•								
	ious head injury		l trauma wi	thin the	last thre	ee months				
Major surger	y (cardiac, thora	acic, abdo	minal, or o	rthoped	dic) withi	n the last 14 days				
	ture at a non-co				ast sever	n days				
	uggestive of sub									
						al deterioration (i.e				
						r hyperglycemia	46.04			
						ve treatment such ood pressure is les				
	e achieved or n			id/Oi die	astolic bi	ood pressure is les	3 tilali			
	ntly prescribed			ral antio	coagular	nt (DOAC)				
	early sign of ext									
	se less than 2.7r			an 22.2	mmol/L					
	tial-thromboplas									
	Normalized Ra									
Platelet coun	t less than 100,	000 per c	ubic millim	etre						
Prescriber's	name (print):				Sig	nature:				
				Date	::		Т	ime:		
RVH-PPO-02	55 					(dd/mm/yy)	·		(24	400hr)

PPO Title: Acute Stroke Physician Assessment of R.PPOASPA Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)



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Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy

Eligibility Criteria for Endovascular Therapy (EVT)	Yes	No	Unknown
Inclusion Criteria for EVT (criteria should be checked "Yes" to continue)			
Diagnosis of ischemic stroke causing disabling neurologic deficit who is greater than or			
equal to 18 years of age (if no, consider calling Criticall for Paediatric Neurologist)			
Functionally independent and life expectancy greater than three months			
Small to moderate ischemic core (Alberta Stroke Program Early CT Score [ASPECTS] of			
six or higher)			
Intracranial artery occlusion in the anterior circulation, including proximal large vessel			
occlusions in the distal ICA or MCA and immediate branches			
Basilar artery occlusions with consideration of potential benefits and risks of therapy, in			
consultation with Stroke Endovascular Team with patient and/or substitute decision-maker			
Time from last known well is within 6 hours of onset of stroke symptoms or last known well			
to initiation of treatment (onset to puncture)			
Special Considerations:	•		

- Highly selected patients with disabling acute ischemic stroke and large artery occlusions may be eligible for EVT up to 24 hours from onset of stroke symptoms (i.e. arterial access within 24 hours of onset) including patients with stroke discovered on awakening. Patients should be rapidly screened and neurovascular imaging completed.
- Pregnancy is not an absolute contraindication. Pregnancy is a condition where the risk of administering alteplase may be increased and should be weighed against the anticipated benefits.
- Patients on non-warfarin anticoagulants such as dabigatran, rivaroxaban and apixaban require special consideration.
- Patients with diabetes AND prior stroke being considered for alteplase may have increased risk and this risk should be weighed against the anticipated benefits.

PF All orders shall	ACTIVATE ORDER, PLACE AN X or CHECK IN BOX or FILL RE-CHECKED UNWANTED ORDERS MUST BE FULLY CRO be DATED, TIMED, and SIGNED – All orders shall be either typed or Legend: EOL-Entered online PMO-Profile Made Out K-Entered on	OSSED OUT written legibly in black ink.	n Initial Date Time
Assessment	 National Institutes of Health Stroke Scale (NIHSS) (Refer to NIHSS: Appendix I) ✓ Alberta Stroke Program Early CT Score (ASPECT 		
	Eligibility for Acute Thrombolysis	Therapy	
Patient Outcome/ Consent/ Consultation	□ Patient is a candidate for Acute Thrombolysis T Verbal or written informed acknowledgement has b □ Patient or □ Substitute Decision Maker, spec □ Verbal or written informed consent was not obta clinical presentation and/or substitute decision or the patient is NOT a candidate for Acute Thromboly reason: (Note: Patient may be a candidate for EVT)	peen obtained from: cify ained due to patient's maker not available .	
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	Date:	Time:	
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Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy

	Eligibility for Endovascular Therapy	
	Patient is a candidate for Endovascular Therapy	
	Verbal or written informed acknowledgement has been obtained from:	
	Patient or Substitute Decision Maker, specify	
	☐ Verbal or written informed consent was not obtained due to patient's	
	clinical presentation and/or substitute decision maker not available.	
	Proceed with the Endovascular Therapy Transfer Order Set PPO-0312	
	Patient is NOT a candidate for Endovascular Therapy,	
	reason	
	Telestroke Consultation	
		+
	with Telestroke Neurologist prior to requesting consultation for EVT	
	(refer to the Telestroke manual and Procedural Manual)	
	Dosage Calculation (Acute Stroke Physician to complete this section)	
Thrombolysis	a) Actual Weight Estimated Weight kg lbs	
Therapy		
	b) Total alteplase dose: 0.9 mg/kg=mg (maximum dose = 90 mg) c) BOLUS DOSE (10% of total dose):mg IV bolus over 1 minute	
	d) MAINTENANCE INFUSION (90% of total dose):mg IV over 1 hour	
	e) Independent double check to verify prescribed alteplase dose, volumes, and	
	rates prior to administration.	
	(Note :Refer to Acute Stroke Alteplase Infusion Chart: Appendix II)	
	Preparation and Administration of Alteplase	
	f) Reconstitute 100 mg vial of alteplase with 100 mL sterile water	
	(final concentration equals 1 mg/ml).	
	g) Withdraw and label the bolus dose as ordered above	
	h) Flush saline lock with 3 to 5 mL of 0.9% sodium chloride prior to bolus	
	i) Independent double check to verify prescribed alteplase bolus dose,	
	volumes, and rates prior to bolus administration	
	Administrating Registered Nurse Signature #1:	
	Registered Nurse Signature #2:	
	j) Start maintenance infusion using vented IV set, hang vial for the infusion	
	dose over 1 hour as ordered above by Acute Stroke Physician.	
	k) During one hour infusion, check and document every 15 minutes if the	
	infusion pump and tubing are functioning correctly.	
	Document bolus, maintenance infusion initiation and completion time.	
	m) When the one hour infusion is complete and the vial is empty, replace with	
	50 mL IV bag of 0.9% sodium chloride and infuse to flush alteplase remaining in tubing.	
	n) Independent double check to verify prescribed alteplase maintenance dose, volume, and rate prior to maintenance infusion being initiated.	
	Administering Registered Nurse Signature #1:	
	Registered Nurse Signature #1:	
December 2		
Prescriber's name	e (print): Signature:	
	Date: Time:	
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pest practice.	e a clinical decision aid based on All orders should be reviewed ndividualized where appropriate	
Acute St	roke Physician Assessment of Thrombolysis and/or Endovascular The	rapy
	BOLUS DOSE ADMINISTERED TIME::(hh:mm) (administered by Acute Stroke Physician)	
	MAINTENANCE INFUSION DOSE START TIME::(hh:mm)	
Vitals & Monitoring	 □ Canadian Neurological Scale (CNS) for alert, drowsy or aphasic stroke patients, or Glasgow Coma Scale (GCS) for comatose or stuporous patients, Heart Rate, Respiratory Rate, Blood Pressure, Pulse Oximetry Saturation (SpO2): □ Every 15 minutes x 2 hours, then □ Every 30 minutes x 6 hours, then □ Every 1 hour x 16 hours, then □ Resume as directed within 24 hours post alteplase infusion □ Notify MRP if patient develops additional deficits OR the CNS score decreases greater than one point □ Temperature every 4 hours and PRN x 48 hours. If temperature is greater than 37.5°C, notify MRP. □ Continuous SpO₂ monitoring □ Maintain SpO₂ greater than%. If FiO₂ requirements are greater than 50% or 6 lpm, notify MRP and RRT	

(maximum acetaminophen from all sources 4,000 mg in 24 hours) Management acetaminophen 650 mg PO/PR every 4 hours PRN x 48 hours for temperature greater than 37.5°C, then reassess by MRP (maximum acetaminophen from all sources 4,000 mg in 24 hours) **Blood Pressure Management for patients prior to Thrombolysis Therapy: Blood Pressure** Notify MRP, if systolic blood pressure is greater than 185 mmHg and/or Management diastolic blood pressure is greater than 110 mmHg. ☐ labetalol 10 mg IV push over 1 minute for target systolic blood pressure less than 185 mmHg and/or diastolic blood pressure less than 110 mmHg (total maximum daily dose 300 mg) repeat after 10 minutes labetalol 10 mg IV x 1 dose over 1 minute for target systolic blood pressure less than 185 mmHg and/or diastolic blood pressure

and Pain

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	less than 110 mmHg (maximum daily dose 300 mg)		
	then		
	labetalol IV infusion 1 mg/minute then titrate up to 8 mg/minute for target	,	
	systolic blood pressure less than 185 mmHg and/or diastolic blood pressure less than 110 mmHg (maximum 8 mg/minute)	,	
	or	i	
	hydrALAZINE 20 mg IV every 4 hours PRN for target systolic	i	
	blood pressure less than 185 mmHg and/or diastolic blood pressure less	1	
	than 110 mmHg (total maximum daily dose 40 mg)	i	
	or	i	
	Other Antihypertensive:	,	
	Blood Pressure Management during and after Thrombolysis Therapy:		
	Notify MRP, if systolic blood pressure is greater than 180 mmHg and ■		
	diastolic blood pressure is greater than 105 mmHg for 24 hours during and	i	
	after alteplase infusion.	1	
	☐ labelotol 10 mg IV push over 1 minute for a target systolic blood	i	
	pressure less than 180 mmHg and/or diastolic blood pressure greater than	i	
	105 mmHg (total maximum daily dose 300mg)	i	
	then	i	
	repeat after 10 minutes labetalol 10 mg IV x 1 dose over 1 minute for target	,	
	systolic blood pressure less than 180 mmHg and/or diastolic blood	i	
	pressure less than 105 mmHg (maximum daily dose 300 mg)	i	
	then	,	
	☐ labetalol IV infusion 1 mg/minute then titrate up 8 mg/minute for target	i	
	systolic blood pressure less than 180 mmHg and/or diastolic blood	i	
	pressure less than 105 mmHg (maximum 8 mg/minute)	i	
	Or District A ZINIC 20 mag IV events 4 hours DDN for torget evetalis blood	i	
	hydrALAZINE 20 mg IV every 4 hours PRN for target systolic blood	i	
	pressure less than 180 mmHg and/or diastolic blood pressure less than 105 mmHg) (total maximum daily dose 40 mg)	i	
	or	i	
	Other Antihypertensive:	i	
	Blood Pressure Management for patients NOT eligible for Thrombolysis		
	Therapy:		
	Notify MRP, if systolic blood pressure is greater than 220 mmHg or ■		
	diastolic blood pressure is greater than 120 mmHg. Avoid rapid or		
	excessive lowering of blood pressure. Blood pressure should not be	,	
	lowered greater than 15%, and not more than 25%, over the first 24 hours	,	
	from symptom onset.		
	☐ labetalol 10 mg IV push over 1 minute for target systolic blood pressure	,	
	less than 220 mmHg and/or diastolic blood pressure less than 120 mmHg	,	
	(total maximum dose 300 mg)	,	
	then		
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	repeat after 10 minutes labetalol 10 mg IV	v 1 dogo over 1 minute for	
	target systolic blood pressure less than 220) mmHg and/or diastolic blood	
	pressure less than 120 mmHg (maximum of	daily dose 300 mg)	
	then		
	labetalol IV infusion 1 mg/minute then titrat		
	systolic blood pressure less than 220 mmH		
	pressure less than 120 mmHg (maximum 8	s mg/minute)	
	or ☐ hydrALAZINE 20 mg IV every 4 hours PRN	for target eyetolic	
	blood pressure less than 220 mmHg and/or		
	than 120 mmHg (total maximum daily dos		
	or	3,	
	Other Antihypertensive:		
	(Note: Treatment of hypertension in acute ischemic stroke	or TIA patients who are not eligible for	
Seizure	Thrombolytic Therapy should not be routinely treated) Notify MRP if new onset seizures observed	·	
Management	Trought in now onocconzeros observes		
Glucose	Notify MRP if capillary blood glucose is less	s than or equal to 4 mmol/L and	
Management	greater than or equal to 10 mmol/L	y man or oqual to 1 mmon2 and	
J	☐ Capillary blood glucose QID (before meals	and hs) x 24 hours then	
	reassess		
	Refer to Hypoglycemia Management RVH	PPO-0298	
	0.9% sodium chloride atmL		
IV Therapy	0.9% sodium chloride at 10 mL/hour for thr		
	0.9% sodium chloride with 20 mEq KCI/L F	Rate:mL/nour	
	0.9% sodium chloride with 40 mEq KCI/L Rlactated ringers (LR) at		
	saline lock	IIIL/IIOUI	
	Other:		
	NPO (including no water, ice chips or oral r	nedications) until Toronto	
Nutrition	Bedside Swallowing Screening Test (TOR-		
	alternative medication routes while patient i		
(To obtain a	Obtain a trained Swallowing TOR-BSST ©		
trained screener,	☐ TOR-BSST© Screening Test completed as		
place on	hours of hospital arrival and prior to dischar	rge (if applicable)	
MEDITECH and	If patient Fails TOR-BSST © screening: ☑ Maintain NPO		
call staffing office)	☐ Maintain NPO☐ ☐ Oral care every 4 hours and PRN		
office)	Speech Language Pathologist for swall	lowing assessment (diet as per	
	SLP recommendations)	zg accessinoni (dioi do poi	
	□ Consult Registered Dietitian as needed	l	
	☐ Trained screener may repeat TOR-BSS	ST© every 24 hours or if	
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cochoch o manne (Jighatt		
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Acute Stroke Physician Assessm	ent of Thrombolysis	s and/or Endovascular	Therapy
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Mobility	condition changes while awaiting SLP swallowing assessment If patient Passes TOR-BSST © screening, order: DIET: Healthy Heart Diet TEXTURE: Chopped/soft and bite sized texture, regular liquids Monitor/observe patient for first three meals Oral care after meals, at bedtime and PRN (Note: Refer to the Swallowing Screening for Stroke Patients Policy) Bed rest for 24 hour post alteplase administration, then Activity as tolerated if no evidence of hemorrhage on 24 hour CT scan post alteplase administration Elevate head of bed to 30 degrees Up In Chair Assess patient's sitting and standing blood pressure to detect postural	
	 hypotension (patient must be able to stand for 2 minutes prior to taking standing BP) ☑ Initial screening and assessment should be done within 48 hours admission by rehabilitation specialist ☑ Alpha FIM® to be completed within 72 hours post-stroke (Note: Frequent, brief, out-of-bed activity involving sitting, standing, and walking, beginning within 24 hours of stroke onset is recommended if there are no contraindications.) 	
Diagnostics Investigations/ Cardiac Investigations	Does patient have an allergy to contrast media? ☐ YES, specify: ☐ NO ☐ Unknown/Unable to ask ☐ CT Perfusion head ☐ MRI/MRA brain ☐ CT head non contrast 24 hours following completion of alteplase infusion ☐ Notify MRP when CT scan is completed	
	Date and time CT head to be completed (24 post alteplase administration)	
Lab Investigations	Lab investigations to be completed minimum of 12 hours after alteplase administration (if not completed in Emergency Department, add to ICU admission blood work) ☐ CBC (Complete Blood Count with Differential) every 3rd day x 5 days ☐ EUC (LYTES, BUN, CRE) x 2 days if patient on IV fluids ☐ PT (Prothrombin Time aka INR)	
Prescriber's name (print): Signature:	
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Regional Health Centre	
Order sets are a clinical decision aid based on	
best practice. All orders should be reviewed	
carefully and individualized where appropriate	
Acute Stroke Physician Assessment of Th	nrombolysis and/or Endovascular Therapy
☐ PTT (Partial Thromboplastin Time	
TRANS (Transferrin)	
ALBUM (Albumin)	
FEPROF [Iron Profile (Iron, TIBC,	% Sat)]
FER (Ferritin)	
B12 (Vitamin B12)	
AST (Aspartate Aminotransferase) ALT (Alanine Transferase)	
CK (Creatine Kinase)	
TPNI (Troponin I)	
LIPID (fasting, Cholesterol, Triglyc	erides, HDL, LDL)
$oldsymbol{1}$	e –fT4 reflexed based on abnormal TSH)
HBA1C (Hemoglobin A1c)	
TS (Type and Screen) CA (Calcium)	
☐ GA (Galcidiff) ☐ MG (Magnesium)	
PHOS (Phosphorus)	
HIV, syphilis serology	
In AM:	
LIPID (12 hour fasting, Cholestero	
☐ GLUF (Random Glucose) 12 hour ☐ CBC (Complete Blood Count Inclu	
CBC (Complete Blood Count Incluon VTE Prophylaxis (as per RVH-I	
EUC (LYTES, BUN ,CRE) x 2 day	
POC Random	
	om QID (before meals and hs) x 24
hours	
Coagulopathy screen (consider Hen	natology consultation if clinically
indicated): ☐ ANTICARDIOLIPIN ANTIBODY (se	and out test, results available in
2-6weeks)	ond out toot, requite available iii
HOMOCYSTEIINE (send out test,	results available in 2-6 weeks)
<u> </u>	out test, results available in 2-6 weeks)
SIC (Sickle Cell Screen)	
Beta 2 glycoprotein-1	
☐ Protein C and S Cultures:	
l	ture greater than 38.5 ° x 48 hours and
PRN	talo grouter than one x to hours and
	oility) for temperature greater than 38.5°



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Royal Victoria Regional Health Centre	
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Acute Stroke Physician Assessment of Thrombol	ysis and/or Endovascular Therapy

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	then acetylsalicylic acid (ASA) 81 mg PO daily or acetylsalicylic acid (ASA) 325 mg PR daily or clopidogrel (Plavix®) 300 mg PO x 1 dose or dipyridamole 200 mg/acetylsalicylic acid 25 mg (Aggrenox®) one capsule PO twice daily or enteric coated acetylsalicylic acid (EC ASA) 81 mg PO daily plus clopidogrel (Plavix®) 75 mg PO daily (Note: All patients with ischemic stroke or TIA should be received antiplatelet therapy unless contraindicated)	
Secondary Prevention Medications	Antiplatelet Therapy	
VTE Prophylaxis Management	has excluded intracranial hemorrhage and/or systemic hemorrhage dalteparin 5,000 units subcutaneous once daily at 1700 hours dalteparin 2,500 units subcutaneous once daily at 1700 hours if weight is less than 40 kg or dalteparin 5,000 units subcutaneous twice daily at 0600 hours and 1700 hours (Note: for high risk patients, weight greater than 100kg) or heparin 5,000 units subcutaneous every 12 hours (use if patient awaiting surgery) or heparin 5,000 units subcutaneous every 8 hours (if weight is greater than 100 kg) VTE prophylaxis not indicated, reason:	

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	Anticoagulation Therapy		
	excluded intracranial hemorrhage and if patient did not receive alteplase		
	apixiban (Eliquis®) 2.5 mg PO twice daily		
	apixiban (Eliquis®) 5 mg PO twice daily		
	or	ı	
	dabigatran (Pradaxa®) 110 mg PO twice daily		
	dabigatran (Pradaxa®) 150 mg PO twice daily		
	or		
	rivaroxaban (Xarelto®) 15 mg PO daily		
	rivaroxaban (Xarelto®) 20 mg PO daily		
	(Note: Patients with TIA or ischemic stroke and nonvalvular atrial fibrillation should receive oral anticoagulation unless contraindicated)		
	Management of Intracranial Hemorrhage following Thrombolysis		
Management of	Administration		
Complications	Monitor for signs and symptoms of Intracranial Hemorrhage within 24 hours		
Compiloations	following Altplase administration		
	 Notify MRP if there is a decrease in level of consciousness, or CNS 		
	decreases by greater than 1 point, new acute headache or worsening		
	severity of headache, new hypertension, nausea, vomiting and seizures.		
	Discontinue alteplase infusion (if still being administered)		
	Monitor vital signs and CNS as outlined above		
	 ✓ Monitor vital signs and CNS as outlined above ✓ CT non contrast head STAT ✓ PT (Prothrombin Time aka INR) STAT ✓ PTT (Partial Thromboplastin Time) STAT ✓ CBC (Complete Blood Count with Differential) STAT ✓ Fibrinogen STAT 		
	☐ PT (Prothrombin Time aka INR) STAT		
	☐ PTT (Partial Thromboplastin Time) STAT		
	☐ CBC (Complete Blood Count with Differential) STAT	ı	
	☐ Sibrinogen STAT	ı	
	☐ TS (Type and Screen) STAT	ı	
	Notify MRP, if systolic blood pressure is greater than 180 mmHg and		
	diastolic blood pressure is greater than 105 mmHg	ı	
	Refer to Blood Pressure Management during and after Thrombolysis	ı	
	Therapy section in PPO	ı	
	Refer to management of Intracranial Hemorrhage following Thrombolysis		
	Therapy Algorithm: Appendix III		
	Management of Systemic Hemorrhage following Thrombolysis Therapy		
	Monitor for signs and symptoms of Systemic Hemorrhage within 24 hours		
	following Altplase administration		
	Notify MRP if systemic bleeding is identified or suspected		
	Discontinue alteplase infusion (if still being administered)		
	Monitor vital signs and CNS as outlined above		
	CBC (Complete Blood Count with Differential) STAT		
	PT (Prothrombin Time aka INR) STAT		
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	 ☐ Fibrinogen STAT ☐ TS (Type and Screen) STAT ☐ If a compressible site compress for 15 minutes ☐ Refer to Management of Hemorrhage following Thrombolysis Therapy Algorithm: Appendix IV) Management of Angioedema following Thrombolysis Therapy 	
	 Monitor for facial, tongue and/or pharyngeal angioedema every 15 minutes until 75 minutes following thrombolysis administration and PRN for 24 hours afterwards Notify MRP if new onset of facial, tongue, and/or pharyngeal Angioedema Discontinue alteplase infusion (if still being administered) Apply 100% oxygen via facemask Obtain Angioedema Kit Administer: diphenhydrAMINE 50 mg IV push x 1 dose over 10 minutes and raNITIdine 50 mg IV x 1 dose hydrocortisone (Solu-Cortef) 100 mg IV x 1 dose infused over 1-3 minutes (if severe) methylPREDNISolone 120 mg IV x 1 dose, infuse over 15 minutes Refer to Management of Angioedema following Thrombolysis Therapy Algorithm: Appendix V) (Note: Consider NOT using epinephrine due to potential increase risk of Intracerebral hemorrhage) 	
	Management of Contrast Dye Allergic Reaction	
Admission/	Admission	
Transfer/ Repatriation/ Discharge	Admission to RVH Intensive Care Unit (if applicable): If patient is not an EVT candidate, has received alteplase and/or is clinically unstable admit to ICU for 24 hours Acute Stroke Physician to notify ICU MRP for transfer of care Name of MRP:	
	Admission to Integrated Stroke Unit (if applicable): If patient is not an EVT candidate, did not receive alteplase and is clinically stable, admit to Integrated Stroke Unit	
Prescriber's name (print): Signature:	
	Date: Time:	
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	 ☐ Acute Stroke Physician to notify appropriate physician to admit to designated unit who will complete Acute Ischemic Stroke/Transient Ischemic Attack (TIA) PPO-0254 Name of MRP:	
	Tuemeten	
	Transfer	
	☐ If patient requires neuro-surgical care , Acute Stroke Physician to arrange	
	transfer to receiving center	
	☐ If patient is an EVT candidate, refer to the EVT Transfer <i>RVH PPO-0312</i>	
	Repatriation/Discharge	
	☐ If patient is not an EVT candidate, did not receive alteplase, and is clinical stable, Acute Stroke Physician to arrange repatriation to receiving center (if	
	applicable)	
	☐ Complete Physicians Report for Stroke/TIA Bypass Patients	
	Communication Form and send with patient.	
	☐ Complete SPC Referral form and provide to patient/family	
	Document TOR-BSST © screening results in the Physicians Report for	
	Stroke/TIA Bypass Communication Form	
	Patient/family Education (if applicable)	
	☐ Provide patient/family with swallowing educational brochure & counselling	
	as needed, ensure patient and family are aware of NPO status if applicable	
	□ Provide stroke education package	
	□ Educate patient and family of symptoms using FAST acronym of stroke/TIA	
	and when to contact 911	
Referrals/	☐ Enter Stroke Protocol in EMR (if not already completed) (Stroke Nursing	
Consults	Team, Occupational Therapist, Physiotherapist, Speech-Language	
	Pathologist, Pharmacist, Social Worker, Registered Dietitian)	
	Diabetes Educator	
	Spiritual Care	
	Palliative Care Team	
	NSM LHIN: Discharge Planning	
	☐ Urgent consultation with Vascular Surgery for Stroke, TIA and Nondisabling	
	Stroke with 50-99% carotid stenosis or elective referral for remotely	
	symptomatic or asymptomatic stenosis (e.g. greater than 6 months) and	
	complete vascular referral form.	
Additional	☐ ACE Inhibitors or ARB	
Orders	Ctotic	
	Antihyperglycemic	
	Other:	
Prescriber's name (print): Signature:	
	Date: Time:	
RVH-PPO-0255	(dd/mm/yy)	(2400hr)

PPO Title: Acute Stroke Physician Assessment of R.PPOASPA Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)

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Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy

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Appendix I: National Institutes of Health Stroke Scale (NIHSS)

Date:/ Examiner:	Time:	
	Signature 24 hour clock	
Instructions	Scale Definition	Score
1a Level of Consciousness.	0 = Alert: keenly responsive	
Patients who score 2 or 3 on this item should be	1 = Not alert: but arousable by minor stimulation	
assessed using the Glascow Coma Scale (GCS)	to obey, answer or respond	
	2 = Not alert: requires repeated stimulation to	
A score of 3 is only given if the patient fails to respond	attend, or is obtunded and requires strong or painful stimulation to make movements	
(other than reflexive posturing) after noxious	3 = Responds only with reflex motor or	
stimulation.	autonomic effects or totally unresponsive, flaccid	
	and areflexic	
1b LOC Questions. The patient is asked the month	0 = Answers both questions correctly	
and his/her age.	1 = Answers one question correctly	
Score only the initial answer. Patients unable to speak	2 = Answers neither question correctly	
due to intubation, orotracheal trauma, severe		
dysarthria, language barrier, etc., are scored 1. Aphasic		
and stuporous patients are scored 2.		
1c LOC Commands. Open/close eyes, make fist,	0 = Performs both tasks correctly	
release fist).	1 = Performs one task correctly	
Substitute another command if hands cannot be used.	2 = Performs neither task correctly	
Score only first attempt. Patients too weak to complete		
the command can be scored if they've made an		
unequivocal attempt to follow the command. If unresponsive, task should be demonstrated.		
·	0 = Normal	
2. Best gaze. Patient follows examiner's finger or face through full horizontal field.	1 = Partial gaze palsy: gaze is abnormal in one	
Appropriate for aphasic patients. Patients with	or both eyes, but forced deviation or total gaze	
conjugate deviation of the eyes (overcome by voluntary	paresis is not present	
or reflexive activity) and those with isolated peripheral	2 = Forced deviation, or total gaze paresis not	
nerve paresis (CN III, IV, or VI) are scored 1	overcome by the oculocephalic manoeuvre	
3. Visual Fields. Introduce visual stimulus/threat to	0 = No visual loss	
patient's visual field quadrants.	1 = Partial hemianopia	
Use confrontation, finger counting, or visual threat.	2 = Complete hemianopia	
Confront upper/lower quadrants of visual field. Patients	3 = Bilateral hemianopia (blind including cortical	
with clear-cut asymmetry, including quadrantanopia,	blindness)	
are scored 1. Blind patients are scored 3. Test again	,	
using double stimulation. Score 1 for extinction and		
record under item 11.		
Prescriber's name (print):	Signature:	
Date	: Time:	
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PPO Title: Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)

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Appendix I: National Institutes of Health Stroke Scale (NIHSS)

down: elevated arm to 90 degrees if patient is sitting, 45 degrees if supine and score drift/movement over 10 seconds Score untestable (UN) only for patients with amputations or joint fusions of shoulder. 1 = Drift; limb holds, but drifts down before full 10 seconds. Does not hit bed or other support 2 = Some effort against gravity; limb cannot get to or maintain 90 (or 45) degrees, drifts down to bed, but has some effort against gravity. 3 = No effort against gravity; limb falls. Test shoulder movement for any evidence of movement. 4 = No movement. UN = Amputation or joint fusion	
down: elevated arm to 90 degrees if patient is sitting, 45 degrees if supine and score drift/movement over 10 seconds Score untestable (UN) only for patients with amputations or joint fusions of shoulder. 6. Motor Leg. Test each limb independently: With patient supine, elevate extremity to 30 degrees and score drift/movement over 5 seconds 1 = Drift; limb holds, but drifts down before full 10 seconds. Does not hit bed or other support 2 = Some effort against gravity; limb cannot get to or maintain 90 (or 45) degrees, drifts down to bed, but has some effort against gravity. 3 = No effort against gravity; limb falls. Test shoulder movement. UN = Amputation or joint fusion 0 = No drift; leg holds 30-degree position for full 5 seconds 1 = Drift; leg falls by the end of the 5-second period but does not hit bed 2 = Some effort against gravity; leg falls to bed by 5 seconds, but has some effort against gravity; leg falls immediately to bed. Check for effort/flexion at hip. 4 = No movement. UN = Amputation or joint fusion 7. Limb Ataxia. Finger-nose, heel-shin Score 0 for patients who are paralyzed or cannot understand. Score 1 or 2 only if ataxia is	
seconds score drift/movement over 5 seconds 1 = Drift; leg falls by the end of the 5-second period but does not hit bed 2 = Some effort against gravity; leg falls to bed by 5 seconds, but has some effort against gravity; 3 = No effort against gravity; leg falls immediately to bed. Check for effort/flexion at hip. 4 = No movement. UN = Amputation or joint fusion 7. Limb Ataxia. Finger-nose, heel-shin Score 0 for patients who are paralyzed or cannot understand. Score 1 or 2 only if ataxia is seconds 1 = Drift; leg falls by the end of the 5-second period but does not hit bed 2 = Some effort against gravity; leg falls immediately to bed. Check for effort/flexion at hip. 4 = No movement. UN = Amputation or joint fusion 0 = Absent 1 = Present in one limb 2 = Present in two limbs	Right
Score 0 for patients who are paralyzed or cannot understand. Score 1 or 2 only if ataxia is 1 = Present in one limb 2 = Present in two limbs	Right
8. Sensory. Pin prick to face, arm, trunk and leg –compare side to side. Look at grimace in aphasic patient. Score sensory loss due to stroke only. Stuporous and aphasic patients are scored 0 or 1. Patients with brainstem stroke and bilateral sensory loss, quadriplegic patients who do not respond, and comatose patients are scored 2. A score of 2 is only given when severe or total sensory loss is demonstrated. O = Normal, no sensory loss; pt feels pinprick is less sharp or is dull on the affected side, or there is a loss of superficial pain with pinprick, but patient is aware of being touched 2 = Severe to total sensory loss; patient is not aware of being touched in the arm, face and leg Prescriber's name (print): Signature:	

Implementation: (03/19)

Date: (dd/mm/yy) PPO Title: Acute Stroke Physician Assessment of R.PPOASPA Thrombolysis and/or Endovascular Therapy (03/19)

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Appendix I: National Institutes of Health Stroke Scale (NIHSS)

9. Best Language. Name item, describe a picture and read sentences (see below). Patients with visual loss can be asked to identify and describe objects placed in the hand. Intubated patients should be asked to write their answers. Comatose patients are scored 3. A score of 3 is only given if the patient is mute and unable to follow one-step commands.	 0 = No aphasia; normal 1 = Mild - mod aphasia; reduced fluency or comprehension 2 = Severe aphasia; communication exchange very limited 3 = mute, global aphasia; no usable speech or auditory comprehension. 	
10. Dysarthria. Do not tell the patient why he/she is being tested.Patients with severe aphasia can be scored based on the clarity of articulation of their spontaneous speech.	 0 = Normal 1 = Mild - mod dysarthria; can be understood 2 = Severe dysarthria; unintelligible or is mute/anarthric UN = intubated or other physical barrier 	
11. Extinction and Inattention. Information to identify neglect may be obtained during the prior testing, and/or double simultaneous stimulation. Lack of patient response and inattention may already be evident from the previous items. Score 0 if the patient has a severe visual loss preventing visual double simultaneous stimulation, but the response to cutaneous stimuli is normal, or if the patient has aphasia but does not appear to attend to both sides. The presence of visual spatial attention or anosognosia may also be evidence of abnormality	 0 = No abnormality 1 = Visual, tactile, auditory, spatial, or personal inattention or extinction to bilaterally simultaneous stimulation in one of the sensory modalities 2 = Profound hemi-inattention or extinction to more than one modality; does not recognize own hand or orients to only one side of space. 	
	TOTAL SCORE	

Prescriber's name (print):		Signature:		
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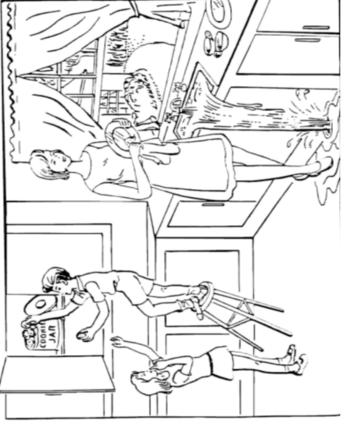
PPO Title: Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)





Appendix I: National Institutes of Health Stroke Scale (NIHSS)





You know how.

Down to earth.

I got home from work.

Near the table in the dining room.

They heard him speak on the radio last night

MAMA TIP-TOP FIFTY-FIFTY THANKS HUCKLEBERRY

BASEBALL PLAYER

Prescriber's name (print): _____ Signature: ____ Date:

(dd/mm/yy)

(2400hr)

PPO Title: Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)



Appendix II: Acute Stroke alteplase (tPA) Infusion Chart

Weight lb	Weight Kg	Total Dose (mg)	Bolus Dose Over 1 minute By MD (mg)	Bolus Amount (mL)	Infusion Dose (mg) to run over 1 hour	SET IV PUMP Volume	SET IV PUMP Rate	Amount Left in Vial (and IV tubing)
90-94	41-42	37	4	4	33	33	33	63
95-98	43-44	39	4	4	35	35	35	61
99-104	45-47	41	4	4	37	37	37	59
105-109	48-49	44	4	4	40	40	40	56
110-113	50-51	45	5	5	40	40	40	55
114-120	52-54	48	5	5	43	43	43	52
121-124	55-56	50	5	5	45	45	45	50
125-129	57-58	52	5	5	47	47	47	48
130-133	59-60	54	5	5	49	49	49	46
134-137	61-62	55	6	6	49	49	49	45
138-142	63-64	57	6	6	51	51	51	43
143-146	65-66	59	6	6	53	53	53	41
147-151	67-68	61	6	6	55	55	55	39
152-155	69-70	63	6	6	57	57	57	37
156-159	71-72	64	6	6	58	58	58	36
160-164	73-74	66	7	7	59	59	59	34
165-168	75-76	68	7	7	61	61	61	32
169-173	77-78	70	7	7	63	63	63	30
174-177	79-80	72	7	7	65	65	65	28
178-181	81-82	73	7	7	66	66	66	27
182-186	83-84	75	8	8	67	67	67	25
187-190	85-86	77	8	8	69	69	69	23
191-195	87-88	79	8	8	71	71	71	21
196-199	89-90	81	8	8	73	73	73	19
200-203	91-92	82	8	8	74	74	74	18
204-208	93-94	84	8	8	76	76	76	16
209-212	95-96	86	9	9	77	77	77	14
213-217	97-98	88	9	9	79	79	79	12
218-219	99	89	9	9	80	80	80	11
220 & UP	100 & UP	90	9	9	81	81	81	10

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PPO Title: Acute Stroke Physician Assessment of Thrombolysis and/or Endovascular Therapy (03/19) Implementation: (03/19)



Addressograph/Label

Order sets are a clinical decision aid based on best practice. All orders should be reviewed carefully and individualized where appropriate

Appendix III: Management of Intracranial Hemorrhage following Thrombolysis Therapy

Algorithm (Note: Algorithm is only a guide for Physician decision making and individual case basis) Suspected Intracranial Hemorrhage following alteplase administration Symptoms of Intracranial Hemorrhage within 24 hours following thrombolysis administration such as: a decrease in level of consciousness, or CNS decreases by greater than 1 point, new acute headache or worsening severity headache, new hypertension, nausea, vomiting and seizures. Discontinue alteplase infusion if still being administered Immediate CT non contrast head Blood work: PT/PTT, INR, CBC, Fibrinogen, Type and Screen STAT Avoid systolic blood pressure greater than 180 mmHg and diastolic blood pressure greater than 105 mmHg (refer to Blood Pressure Management during and after Thrombolysis Therapy section in PPO) Intracranial Hemorrhage present on CT NO YES Hemorrhage not present Consider urgent consultation with: on CT scan. End Hematologist Neurosurgery via CritiCall algorithm. Evaluate laboratory results Platelet count, Fibrinogen, PT, Consider giving 10 units of Consider giving 6 to 8 units of Consider giving tranexamic acid 10-For patient receiving cryoprecipitate immediately (over 15 mg/kg IV over 20 minutes platelets for patients with unfractionated heparin (UFH): thrombocytopenia Consider giving 1 mg of protamine 10-30 mins) and more as needed OR (Platelet count less than for every 100 units of UFH given Aminocaproic acid 4-5 grams IV to obtain fibrinogen level of 100, 000 microL) in the preceding 4 hours during first hours, followed by 1 gram greater than or equal to 2 until bleeding is controlled gram/litre Consider second CT scan to assess size change and repeat CBC, INR, PTT, fibrinogen after blood products Prescriber's name (print): Date: _____ Time: ____

PPO Title: Acute Stroke Physician Assessment of R.PPOASPA Thrombolysis and/or Endovascular Therapy (03/19)

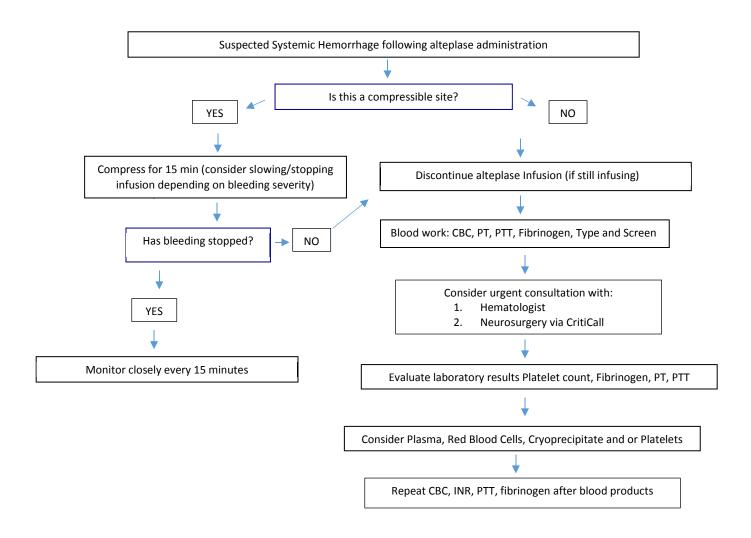
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Order sets are a clinical decision aid based on best practice. All orders should be reviewed carefully and individualized where appropriate

Appendix IV: Management of Systemic Hemorrhage following Thrombolysis Therapy Algorithm (Note: Algorithm is only a guide for Physician decision making and individual case basis)



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PPO Title: Acute Stroke Physician Assessment of R.PPOASPA Thrombolysis and/or Endovascular Therapy (03/19)
Implementation: (03/19)



Addressograph/Label

Order sets are a clinical decision aid based on best practice. All orders should be reviewed carefully and individualized where appropriate

Appendix V: Management of Angioedema following Thrombolysis Therapy Algorithm

(Note: Algorithm is only a guide for Physician decision making and individual case basis)

	Suspected signs of Angioedema following alteplase administration	
	<u> </u>	
Symptoms of Angio	oedema within 24 hours following alteplase administration such as: facial, tongu pharyngeal angioedema	ie and/or
	+	
	Discontinue alteplase infusion if still being administered	
	<u> </u>	
	Apply 100% oxygen via facemask (if required)	
	<u> </u>	
	Inquire if patient has experienced angioedema in the past	
	↓	
	Take an Angiotensin Converting Enzyme Inhibitor history and Angiotensin II (ATII) receptor antagonist history	
	↓	
	Refer to PPO for Management of Angioedema following Thrombolysis Therapy	
Avoid using epineph	hrine due to possibility of increasing risk of intracerebral hemorrhage seconda rise in blood pressure)	ry to sudden
L	<u> </u>	
ontinue to observe patien	it every 15 minutes until 75 minutes following alteplase administration and perio	odically for 24 hours
Conting	ue to monitor oxygen saturation for 24 hours following alteplase administration	
er's name (print):	Signature:	
		
	Date: Time) :

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