

Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____ CP – End Date: _____

Date:	Triage Phase (0-6 hours) Interventions	Evaluation of Expected Outcomes/Goals		
STAT Nursing Care & Assessment	<ul style="list-style-type: none"> Onset of deficit s/s Date/Time: _____ STAT NIHSS: Score _____ (refer to page 2) Obtain a STAT Brain Attack CT then notify MD (Reason: Stroke) Ensure Stroke Team pager (750-3541) is called Collect STAT labs (refer to "Emergency Department Stroke Orders" or "Stroke (Acute) Inpatient Protocol") Order diagnostic tests (refer to "Emergency Department Stroke Orders" or "Stroke (Acute) Inpatient Protocol") Initiate peripheral IV. Start IV fluids as ordered & initiate second IV saline lock if t-PA candidate (if not present already). Perform FSBS. Notify MD if <60 or >110. Notify MD if patient on oral anticoagulants Obtain wt. on admission Ensure "Emergency Department Stroke Orders" are initiated, if in ED Ensure "Stroke (Acute) Inpatient Protocol Orders" are initiated, if an in-patient stroke 	<ul style="list-style-type: none"> s/s onset verified Initial NIHSS done Stat head CT done Stroke Team is notified Labs collected Diagnostics completed. MD notified of abnormal findings IV's initiated FSBS obtained Home meds reviewed Weight _____ (Stated/Measured) Orders initiated 		
Respiratory Therapy	<ul style="list-style-type: none"> Initiate respiratory therapy protocol if needed Pulse oximetry: Titrate O₂ to maintain SPO₂ >92% Obtain ABG if in respiratory distress 	<ul style="list-style-type: none"> Pulse Oximetry >92% No s/s of respiratory distress Treatment implemented for respiratory distress 		
Nursing Care & Assessment cont.	<ul style="list-style-type: none"> If initial NIHSS exam score is 0-4, do exam q4h. If score is 5-14, do exam q2h. If score is >14, do exams q1h. Notify MD if >+2 points change in score. VS every 1 hour and PRN. Notify MD if SBP >185 or DBP >110. Telemetry monitoring NPO – initiate "Aspiration Precautions" Perform "Nursing Dysphagia Screen" prior to ANY PO intake, including medications (refer to page 3) HOB @ 30 degrees at all times Bedrest Initiate fall risk assessment Assess for pain Offer toileting q2h and PRN or place foley catheter prior to t-PA, if ordered Reposition q2h and PRN. Do not pull on affected limb(s). 	<ul style="list-style-type: none"> Neurological deficits identified NIHSS improved or reported SBP <185 and DBP <110 Abnormal rhythms identified and reported Dysphagia Screen performed HOB @ 30 degrees Safety measures implemented Pain Management SOCP implemented if applicable. Elimination is managed 		
Medication	<ul style="list-style-type: none"> Consider t-PA/anticoagulant therapy – print "Inclusion & Exclusion Criteria for IV Thrombolytic Therapy Stroke t-PA" and place on chart Consider antihypertensives if indicated 	<ul style="list-style-type: none"> Medication regime determined by MD 		
Medication <u>If t-PA given</u>	<ul style="list-style-type: none"> Use manual blood pressure cuff Initiate "Bleeding Precautions" No arterial or central venous punctures or access unless necessary No foley catheter or NG tube unless already placed 	<ul style="list-style-type: none"> No s/s of bleeding 		
Education	<ul style="list-style-type: none"> Provide pt/family education 	<ul style="list-style-type: none"> Pt/family teaching initiated 		
D/C Planning	<ul style="list-style-type: none"> If t-PA given or to be given, obtain Neuro ICU bed STAT. If no t-PA given, obtain bed status. 	<ul style="list-style-type: none"> Assigned bed within 1 hour Assigned bed within 1 hour 		
ED Only	<ul style="list-style-type: none"> See T-System for pathway documentation Initials: _____ 	<ul style="list-style-type: none"> T-System documentation done 		
Variance Documentation				
Time/Initial	Variance	Intervention	Desired Outcome	Date Achieved
Initials and Signatures				

Forsyth MEDICAL CENTER
**Ischemic and Hemorrhagic CVA and TIA
 Clinical Pathway**

NIHSS Score	Date											
		Time										
1a. Level of consciousness (alert, drowsy, etc.)	Alert	0										
	Drowsy	1										
	Stuporous	2										
	Coma	3										
1b. LOC questions (month, age)	Answers both	0										
	Answers one	1										
	Incorrect	2										
1c. LOC commands (open eyes, close eyes, make fist, let go)	Obeys both	0										
	Obeys one	1										
	Incorrect	2										
2. Best gaze (Eyes open-follows examiner's finger or face)	Normal	0										
	Partial gaze palsy	1										
	Forced deviation	2										
3. Visual (Introduce visual stimulus / threat to visual field)	No visual loss	0										
	Partial Hemianopia	1										
	Complete Hemianopia	2										
	Bilateral Hemianopia	3										
4. Facial palsy (Show teeth, raise eyebrows and squeeze eyes shut)	Normal	0										
	Minor	1										
	Partial	2										
	Complete	3										
5a. Motor arm - Left (Elevate extremity to 90° and score drift / movement) (Amputation, joint fusion score an X)	No drift	0										
	Drift	1										
	Can't resist gravity	2										
	No effort against gravity	3										
	No movement	4										
5b. Motor arm - Right (Elevate extremity to 90° and score drift / movement) (Amputation, joint fusion score an X)	No drift	0										
	Drift	1										
	Can't resist gravity	2										
	No effort against gravity	3										
	No movement	4										
6a. Motor leg - Left (Elevate extremity to 30° and score drift / movement) (Amputation, joint fusion score an X)	No drift	0										
	Drift	1										
	Can't resist gravity	2										
	No effort against gravity	3										
	No movement	4										
6a. Motor leg - Right (Elevate extremity to 30° and score drift / movement) (Amputation, joint fusion score an X)	No drift	0										
	Drift	1										
	Can't resist gravity	2										
	No effort against gravity	3										
	No movement	4										
7. Limb ataxia (Finger-nose, heel down shin)	Absent	0										
	Present in one limb	1										
	Present in two limbs	2										
8. Sensory (Pin prick to face, arm, trunk and leg - compare side to side)	Normal	0										
	Partial loss	1										
	Severe loss	2										
9. Best language (Name items, describe picture and read sentences)	No aphasia	0										
	Mild to moderate aphasia	1										
	Severe aphasia	2										
	Mute	3										
10. Dysarthria (Evaluate speech clarity by patient reading listed words) (Intubated/Barrier score an X)	Normal	0										
	Mild to moderate	1										
	Near to unintelligible	2										
11. Extinction and inattention (Use information from prior testing to identify neglect or double simultaneous stimuli testing)	No neglect	0										
	Partial neglect	1										
	Complete Neglect	2										
	Total Score											
X=Untestable: Note areas in progress notes	Initials											
Signature	Initials	Signature	Initials	Signature	Initials							



**Ischemic and Hemorrhagic CVA and TIA
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Nursing Dysphagia Screen

If one of the below is checked, STOP. Do not continue screen. Notify SLP of patient's status.

- 1. Present feeding status: PEG NG
- 2. Consciousness: Unresponsive
- 3. Intubated? Yes

If none of the above is checked, position the patient at a **90-degree** angle prior to **Dysphagia Screen** to allow the patient to achieve the best screen possible. Assess the patient for the items below.

- 1. History of aspiration: Yes
- 2. Controls of Secretions: Drools Coughs Requires Suctioning
- 3. Voice Quality: Wet / Gurgly (wet sounding voice)
- 4. Speech: Severely Slurred
- 5. Spontaneous Cough: Absent

If any of the above boxes are checked, maintain the patient **NPO**, notify SLP to evaluate the patient **ASAP** at extension **8-3422**. Leave the patient's name, room number and the nurse's name making the referral.

If no items above are checked, give the patient 1 to 2 sips (no more than three ounces) of **room temperature water**.

If any item below is checked, maintain the patient **NPO** and notify the SLP at extension **8-3422**.

- Choke Cough Wet sounding voice Pocketing / Holding in mouth

If no items above are checked, give the patient 1 spoonful of **applesauce** and observe for the same. If any item below is checked, maintain the patient **NPO** and notify the SLP at extension **8-3422**.

- Choke Cough Wet sounding voice Pocketing / Holding in mouth

If NO boxes are checked above, you may advance patient's diet as ordered.

Nurse notified SLP that patient **failed** Nursing Dysphagia Screen on Date: _____ Time: _____

If patient is **NPO**, re-evaluate in 24 hours. Place order on Nursing Kardex to "Re-Evaluate Nursing Dysphagia Screen." Document the follow up screen and results.

Aspiration Pneumonia Evaluation: On admission, did the patient show evidence of:

Patient's admission temperature: _____

Breath Sounds: Abnormal Normal

Request order for CXR from MD if abnormal breath sounds or fever.

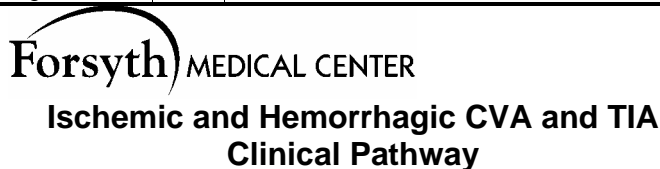
Nurse completing the screen: _____ Date: _____ Time: _____

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**Ischemic and Hemorrhagic CVA and TIA
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Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____ CP – End Date: _____

Date:	Day 1 Interventions		Evaluation of Expected Outcomes/Goals
Nursing Care & Assessment	<p>Post t-PA (Neuro ICU only)</p> <ul style="list-style-type: none"> NIHSS on admission then q30min x 2 hours, then q1h x 6 hours, then q2h x 16 hours. Notify MD and obtain STAT head CT (Reason - Stroke) if NIHSS >+2 point change. VS q15min x 2 hours, q30min x 6 hours, q1h x 16 hours. Use manual BP cuff. Refer to "Stroke t-PA Orders and Criteria" for BP management Bedrest Bleeding precautions No arterial & central venous punctures unless necessary Do not place foley or NG tube unless ordered 	<p>No - t-PA/TIA/Hemorrhagic CVA</p> <ul style="list-style-type: none"> NIHSS on admission then q2h x 8 Hours, q4h x 16 hours. Notify MD if NIHSS >+2 point change. VS per unit routine Refer to "Stroke Path Admission Orders" for BP management Telemetry monitoring Activity level per orders 	<ul style="list-style-type: none"> If t-PA given, SBP <185 and DBP <110 If t-PA given, manual BP cuff used If t-PA given, no invasive lines, foley or NG tube placed If t-PA given, no s/s of bleeding NIHSS improved or reported No s/s of complications Neurological deficits identified If no t-PA, SBP <185 and DBP <110 Labs obtained Activity level maintained
	<ul style="list-style-type: none"> HOB @ 30 degrees at all times Keep pt NPO until "Nursing Dysphagia Screen" performed. If pt failed, place note on Kardex to re-do screen in 24 hours. Assess for pain Obtain wt. on admission Intake and output Saline lock or infuse IV fluid per MD order Toilet q2h. If foley present, obtain order to D/C in 24 hours. Assure pt has bowel movement every 2-3 days. Implement Bowel Protocol. Continue fall risk assessments DVT prophylaxis per MD order Device: _____ FSBS on admission to unit. Notify MD if <60 or >110. Ensure that pt is placed on appropriate Hospital Glycemic Management Orders, if needed. Turn q2h and PRN. Do not pull on affected limb(s). Assess skin and initiate appropriate skin care SOCP if needed. Place skin care kit @ bedside if needed. ROM as indicated Obtain STAT EKG for dysrhythmia if no EKG done. Notify MD of results. Evaluate patient's ability to communicate needs NIHSS prior to D/C _____ 		<ul style="list-style-type: none"> HOB elevated Dysphagia screen performed Pain Management SOCP implemented if applicable Elimination needs are met Safety maintained DVT prophylaxis initiated FSBS within limits specified Skin integrity maintained Pt is able to make basic needs known D/C NIHSS completed
Respiratory Therapy	<ul style="list-style-type: none"> Initiate respiratory therapy protocol if on O₂ Pulse oximetry Titrate/wean O₂ to maintain SPO₂ >92% Obtain ABG if respiratory distress Encourage cough, deep breathing and IS 		<ul style="list-style-type: none"> Pulse oximetry >92% No s/s of respiratory distress or atelectasis
Consults	<ul style="list-style-type: none"> Stroke Team (OT, PT, SLP) • Rehab Medicine Case Management FMC Sleep Center Consult – Apnea Link 		<ul style="list-style-type: none"> Consults initiated
Diagnostics	<ul style="list-style-type: none"> Verify that diagnostic studies have been ordered: MRI (can be done at any time) and Head CT - Re: Stroke (done 24 hrs post stroke) Enter labs per MD orders for Day 2 (include PT/PTT for any anticoagulants) If temp > 101 degrees F, obtain blood, sputum, and urine cultures. See orders for clarification. Verify fasting lipid profile, serum pre-albumin and HgbA1C done If <55 years old, add Stroke Panel & homocysteine level to labs, if ordered 		<ul style="list-style-type: none"> Diagnostic studies ordered MD notified of abnormals Temp <101 degrees F Labs obtained and on chart
Initials and Signatures			



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CP – Start Date: _____ CP - End Date: _____

Date:	Day 1 - Continued Interventions	Evaluation of Expected Outcomes/Goals
Medication	<p>Post t-PA</p> <ul style="list-style-type: none"> Do not give any anticoagulants, ASA or antiplatelet medications for 24 hours post t-PA infusion. <p>No t-PA</p> <ul style="list-style-type: none"> If CT negative for hemorrhage, clarify order for anti-platelet therapy If administering heparin drip, do not bolus and place patient on Bleeding Precautions 	<ul style="list-style-type: none"> Pharmacological therapy initiated
PT/OT/SLP	<ul style="list-style-type: none"> PT _____ OT _____ SLP _____ 	<ul style="list-style-type: none"> PT _____ OT _____ SLP _____
Nutrition	<ul style="list-style-type: none"> If NG tube in place and pt failed dysphagia screen, initiate tube feedings per MD order. Maintain HOB >45 degrees for all meals and for 30 minutes after meals. Check pt for pocketing of food during meals or meds 	<ul style="list-style-type: none"> Nutrition is initiated No s/s of aspiration No pocketing of food or meds First meal is monitored
Education	<ul style="list-style-type: none"> Provide pt/family with: <ul style="list-style-type: none"> Stroke education book Plan of care Tobacco cessation education Stroke class schedule / caregiver group schedule Stroke risk factor education (RN: Document education on "Interdisciplinary Patient Plan of Care") Initiate education of medications (anticoagulants, anti platelets, etc.) Encourage questions 	<ul style="list-style-type: none"> Pt/family teaching initiated
D/C Planning	<ul style="list-style-type: none"> Assess level of care needed post D/C Assess family's ability to meet level of care needs post D/C 	<ul style="list-style-type: none"> D/C plan is initiated Potential home needs are identified

Variance Documentation				
Time/Initial	Variance	Intervention	Desired Outcome	Date Achieved

Initials and Signatures				

Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____

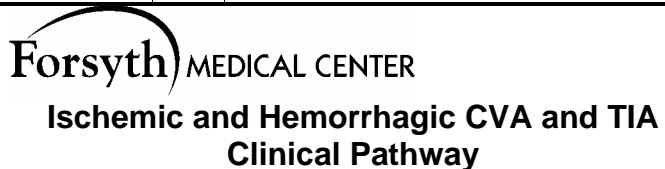
CP – End Date: _____

Date:	Day 3 Interventions	Evaluation of Expected Outcomes/Goals
Nursing Care & Assessment	<ul style="list-style-type: none"> • NIHSS PRN neurological change • VS per unit routine and PRN • Obtain order to D/C telemetry if no dysrhythmias. • Assess for pain • Saline lock or continue IV fluid per MD order • If foley still in place, obtain order to D/C • Assure pt has bowel movement every 2-3 days. Notify MD if no BM. • Continue fall risk assessment • Continue DVT prophylaxis • Continue FSBS monitoring • OOB in chair BID 1: _____ 2: _____ • Provide periods of rest • NIHSS prior to D/C 	<ul style="list-style-type: none"> • NIHSS improved or reported • SBP <185 and DBP <110 • Pain Management SOCP implemented if applicable • Elimination needs are met • Safety maintained • No s/s of DVT • FSBS within limits specified • Activity level progresses to OOB BID • Adequate periods of rest • D/C NIHSS completed
Respiratory Therapy	<ul style="list-style-type: none"> • Continue Respiratory Therapy Protocol and titrate/wean O₂ to maintain saturation of >92% • Continue to encourage cough, deep breathing and IS 	<ul style="list-style-type: none"> • Pulse oximetry >92% • No s/s of respiratory distress or atelectasis
Consults	<ul style="list-style-type: none"> • Verify GI consult if PEG required • Verify Rehab evaluation has been completed 	<ul style="list-style-type: none"> • Consults completed
Diagnostics	<ul style="list-style-type: none"> • Pre-albumin, PT/PTT/INR completed • Verify labs for Day 4 are ordered: PT/PTT/INR 	<ul style="list-style-type: none"> • All labs are completed • Notify MD of abnormal
Medication	<ul style="list-style-type: none"> • Antiplatelet and/or anticoagulant therapy continued per MD order • Monitor PT. If INR > 3 and patient is on coumadin, notify MD and obtain order to hold Coumadin. • Provide prn medication for sleep if needed 	<ul style="list-style-type: none"> • Pharmacological therapy initiated and effective
PT/OT/SLP	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____ 	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____
Nutrition	<ul style="list-style-type: none"> • Continue with MD/Nutrition/SP orders • Monitor meals for percent ingested. Notify dietician if patient consumes <50% of all meals for >48 hours. 	<ul style="list-style-type: none"> • Pt. consumes 50% or more of all meals • Wt. within 10lbs. of admission wt.
Education	<ul style="list-style-type: none"> • Post hospital care and education needs discussed • Identify anticipated D/C medication education needs • Implement/continue medication education 	<ul style="list-style-type: none"> • Pt/family attends Stroke Education Classes • Education is verbalized or demonstrated by pt/family
D/C Planning	<ul style="list-style-type: none"> • Review plans and answer questions as needed • D/C options identified 	<ul style="list-style-type: none"> • Pt/family aware of D/C needs and options

Variance Documentation

Time/Initial	Variance	Intervention	Desired Outcome	Date Achieved

Initials and Signatures					



Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____ CP – End Date: _____

Date:	Day 4 Interventions	Evaluation of Expected Outcomes/ Goals
Nursing Care & Assessment	<ul style="list-style-type: none"> • NIHSS PRN neurological change • VS per unit routine and PRN • Saline lock or continue IV fluid per MD order • Continue fall risk assessment • Continue DVT Prophylaxis • Continue FSBS monitoring • OOB in chair BID 1: _____ 2: _____ • NIHSS prior to D/C _____ 	<ul style="list-style-type: none"> • NIHSS improved or reported • VS within normal limits and stable • Safety maintained • No s/s of DVT • FSBS within limits specified • OOB BID • NIHSS done and documented
Respiratory Therapy	<ul style="list-style-type: none"> • Continue respiratory therapy protocol and titrate/wean O₂ to maintain saturation of >92% • Continue to encourage cough, deep breathing and IS 	<ul style="list-style-type: none"> • Pulse oximetry >92% • No s/s of respiratory distress or atelectasis
Consults	<ul style="list-style-type: none"> • Verify that all consults have been followed up 	<ul style="list-style-type: none"> • Consults completed
Diagnostics	<ul style="list-style-type: none"> • PT/PTT/INR completed • Verify labs for Day 5 are ordered: PT/INR 	<ul style="list-style-type: none"> • All labs are completed • Notify MD of abnormal
Medication	<ul style="list-style-type: none"> • Antiplatelet and/or anticoagulant therapy continued per MD order • Monitor PT. If INR >3 and patient is on coumadin, notify MD and obtain order to hold Coumadin. • Provide prn medication for sleep if needed 	<ul style="list-style-type: none"> • Pharmacological therapy initiated and effective
PT/OT/SLP	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____ 	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____
Nutrition	<ul style="list-style-type: none"> • Continue to monitor meals 	<ul style="list-style-type: none"> • Wt. within 10lbs. of admission wt.
Education & D/C Planning	<ul style="list-style-type: none"> • Direct pt/family to Stroke Support Group • Continue with previously identified education needs • Order equipment required • Finalize discharge plans • D/C plan reviewed with patient and family • Stroke support network reviewed 	<ul style="list-style-type: none"> • Pt/family verbalizes understanding and participated in Stroke Support Group • Family aware of D/C needs • Anticipated D/C date identified

Variance Documentation				
Time/Initial	Variance	Intervention	Desired Outcome	Date Achieved

Initials and Signatures				

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Ischemic and Hemorrhagic CVA and TIA Clinical Pathway

Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____ CP – End Date: _____

Date:	Day 5 Interventions	Evaluation of Expected Outcomes/Goals
Nursing Care & Assessment	<ul style="list-style-type: none"> • NIHSS PRN neurological change • VS per unit routine and PRN • Saline lock or continue IV fluid per MD order • Continue DVT Prophylaxis • Continue FSBS monitoring 	<ul style="list-style-type: none"> • NIHSS improved or reported • VS within normal limits and stable
Respiratory Therapy	<ul style="list-style-type: none"> • Continue to encourage cough, deep breathing and IS 	<ul style="list-style-type: none"> • No s/s of respiratory distress or atelectasis
Diagnostics	<ul style="list-style-type: none"> • PT/PTT/INR completed 	<ul style="list-style-type: none"> • All labs are completed and MD notified of abnormalities
Medication	<ul style="list-style-type: none"> • Antiplatelet and/or anticoagulant therapy continued per MD order • Monitor PT. If INR >3 and patient is on coumadin, notify MD and obtain order to hold Coumadin. • Provide prn medication for sleep if needed 	<ul style="list-style-type: none"> • Pharmacological therapy initiated and effective
PT/OT/SLP	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____ 	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____
Nutrition	<ul style="list-style-type: none"> • Continue with MD/Nutrition/SP orders 	<ul style="list-style-type: none"> • Wt. within 10lbs. of admission wt.
Education & D/C Planning	<ul style="list-style-type: none"> • Continue medication education with pt/family • Review mobility plan with pt/family • Review D/C plans with pt/family 	<ul style="list-style-type: none"> • Pt/family verbalizes how to perform ADL's and prevent falls at home, if applicable • Pt/family verbalizes understanding activity instructions and follows –up with therapist if applicable • D/C plans complete

Variance Documentation				
Time/ Initial	Variance	Intervention	Desired Outcome	Date Achieved

Initials and Signatures				

Ischemic and Hemorrhagic CVA and TIA Interdisciplinary Clinical Pathway

CP – Start Date: _____ CP – End Date: _____

Date:	Day 6 Interventions	Evaluation of Expected Outcomes/ Goals
Nursing Care & Assessment	<ul style="list-style-type: none"> • Discuss with pt/family discharge instructions • Verify follow-up appointments are made as indicated • Answer any questions • Review discharge medications with pt/family • NIHSS prior to D/C _____ 	<ul style="list-style-type: none"> • Pt/family verbalizes understanding of D/C instructions • NIHSS done and documented
PT/OT/SLP	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____ 	<ul style="list-style-type: none"> • PT _____ • OT _____ • SLP _____
Education & D/C Planning	<ul style="list-style-type: none"> • Complete any D/C forms • Follow-up on any educational needs • Ensure that equipment needs are verified 	<ul style="list-style-type: none"> • Pt/family verbalizes understanding of D/C instructions • All D/C planning needs are met

Variance Documentation				
Time/Initial	Variance	Intervention	Desired Outcome	Date Achieved

Initials and Signatures				

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