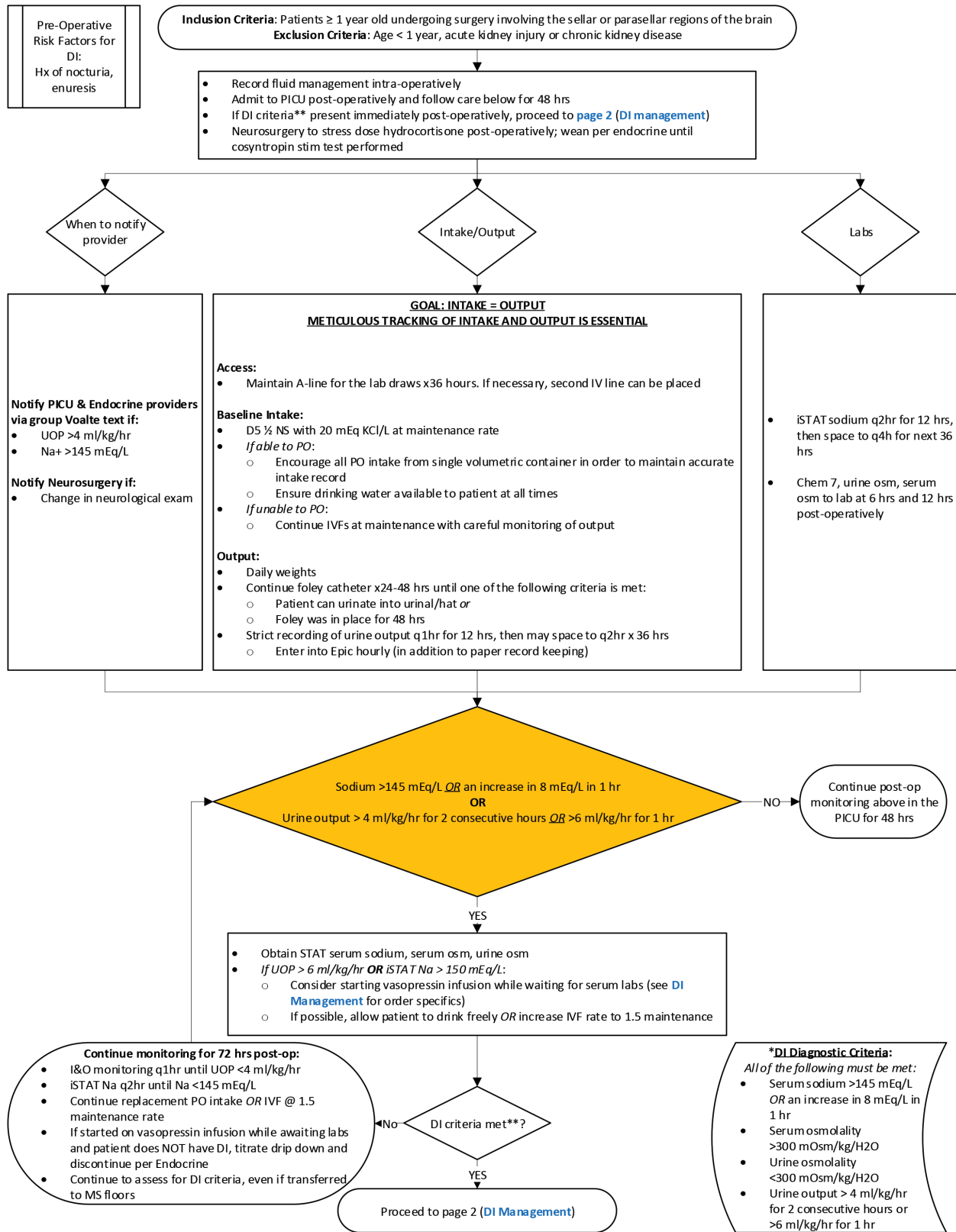


CLINICAL PATHWAY: Diabetes Insipidus (DI) Post-operative Neurosurgical Management PICU Post-operative Monitoring for DI

THIS PATHWAY
SERVES AS A GUIDE
AND DOES NOT
REPLACE CLINICAL
JUDGMENT.



NEXT PAGE



CLINICAL PATHWAY: Diabetes Insipidus (DI) PICU Management of DI

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Diabetes Insipidus diagnosed if all of the following are met:

- Serum sodium >145 mEq/L OR an increase in 8 mEq/L in 1 hr
- Serum osmolality >300 mOsm/kg/H₂O
- Urine osmolality <300 mOsm/kg/H₂O
- Urine output > 4 ml/kg/hr for 2 consecutive hours or >6 ml/kg/hr for 1 hr

MEDICATION	INTAKE/OUTPUT GOAL: INTAKE = OUTPUT METICULOUS TRACKING OF INTAKE AND OUTPUT IS ESSENTIAL	LABS
<ul style="list-style-type: none"> • Order STAT Vasopressin IV infusion at 0.5 mU/kg/hr (max vasopressin dose of 5 mU/kg/hr) <ul style="list-style-type: none"> ○ Call pharmacy in order to ensure timely (<30 min) delivery of the medication <p>Titration of Vasopressin</p> <ul style="list-style-type: none"> • Titration for UOP: <ul style="list-style-type: none"> ○ Increase vasopressin by 0.5 mU/kg/hr every 30-60 min until UOP <3 ml/kg/hr (max vasopressin dose of 5 mU/kg/hr) • If UOP <1 ml/kg/hr x2 hrs: <ul style="list-style-type: none"> ○ Decrease vasopressin by 0.2 mU/kg/hr each hour, to no lower than 0.2 mU/kg/hr • If UOP increases while decreasing vasopressin: <ul style="list-style-type: none"> ○ Increase infusion back up to the last rate <p><i>*If UOP remains >4 ml/kg/hr after 4 hr on vasopressin: notify endocrine</i></p>	<p>Access:</p> <ul style="list-style-type: none"> • Maintain A-line and foley catheter as long as patient is on vasopressin <p>Baseline intake: record q1hr</p> <ul style="list-style-type: none"> • <i>If able to drink PO reliably¹:</i> <ul style="list-style-type: none"> ○ Discontinue/wean IVFs with goal of matching intake to output ○ Encourage all PO intake from single volumetric container in order to maintain accurate intake record ○ Ensure drinking water available to patient at all times • <i>If unable to PO:</i> <ul style="list-style-type: none"> ○ Change IVFs to D5 ½NS w/20 mEq KCl/L at maintenance rate ○ Once tolerating PO, allow PO intake to thirst and discontinue/wean IVFs with goal of matching intake to output ○ If unable to maintain PO (ie, input is <50% of output in the last 4 hours), use D5 ½NS to replace 1:1 (in ml) UOP minus PO intake, every 4 hours or sooner if needed (i.e., younger children have larger outputs) <p>Output: measure q1hr</p> <ul style="list-style-type: none"> • Strict recording of urine output (UOP) q1hr <p>**If Na >155 mEq/L:</p> <ul style="list-style-type: none"> • Place 2nd line for access • Calculate free water deficit and replace with D5W over 12 hours ONE TIME within 24 hours, to a goal serum Na of 150 mEq/L <ul style="list-style-type: none"> ○ Rate of serum sodium decrease should be approximately ≤0.5 mEq/L/hr 	<ul style="list-style-type: none"> • Serum sodium q2hr in the first 24 hrs after diagnosis; then can space out to q4hr <ul style="list-style-type: none"> ○ If Na >155 mEq/L at any time, must obtain 2nd access and replace free water deficit** • Urine Osm q12hr

¹Signs of reliable PO drinking (i.e. intact thirst):

- Has accurate thirst with Na > 145 and significant thirst with Na > 150
- Is not thirsty if Na is < 135
- Is awake and alert without significant sedation
- Is allowed to PO ad lib (e.g. is not NPO for procedure)

UOP 2-3 ml/kg/hr
x6-12 hours?

Continue care above

INTAKE/OUTPUT	MEDICATIONS	LABS
<ul style="list-style-type: none"> • Intake: <ul style="list-style-type: none"> ○ Continue above care • Output: <ul style="list-style-type: none"> ○ Assess for voiding and record volume q1hr beginning 2 hours before, and continuing 2 hours after, DDAVP dosing 	<ul style="list-style-type: none"> • If sodium ≥140 mEq/L, start Desmopressin (DDAVP): <ul style="list-style-type: none"> ○ ≥4 yrs old: <ul style="list-style-type: none"> ▪ Initial: 0.05 mg PO once to twice daily ▪ Titrate to optimal daily dose range: 0.1 – 0.8 mg/day in 2 divided doses ○ <4 yrs old: <ul style="list-style-type: none"> ▪ DDAVP subQ ▪ SubQ initial dosage: 0.05 mcg BID ▪ Dosing range of 0.1 – 1 mcg/day daily-BID • If sodium <135 mEq/L: <ul style="list-style-type: none"> ○ HOLD DDAVP and call endocrine 	<ul style="list-style-type: none"> • Serum sodium q4hr

Criteria for transfer to Med/Surg:

- Patient is stable with input = output and stable sodium levels on scheduled DDAVP (subQ or PO) for 24 hours after the last titration in the PICU
- See page 3 for Med/Surg care



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THE BEGINNING



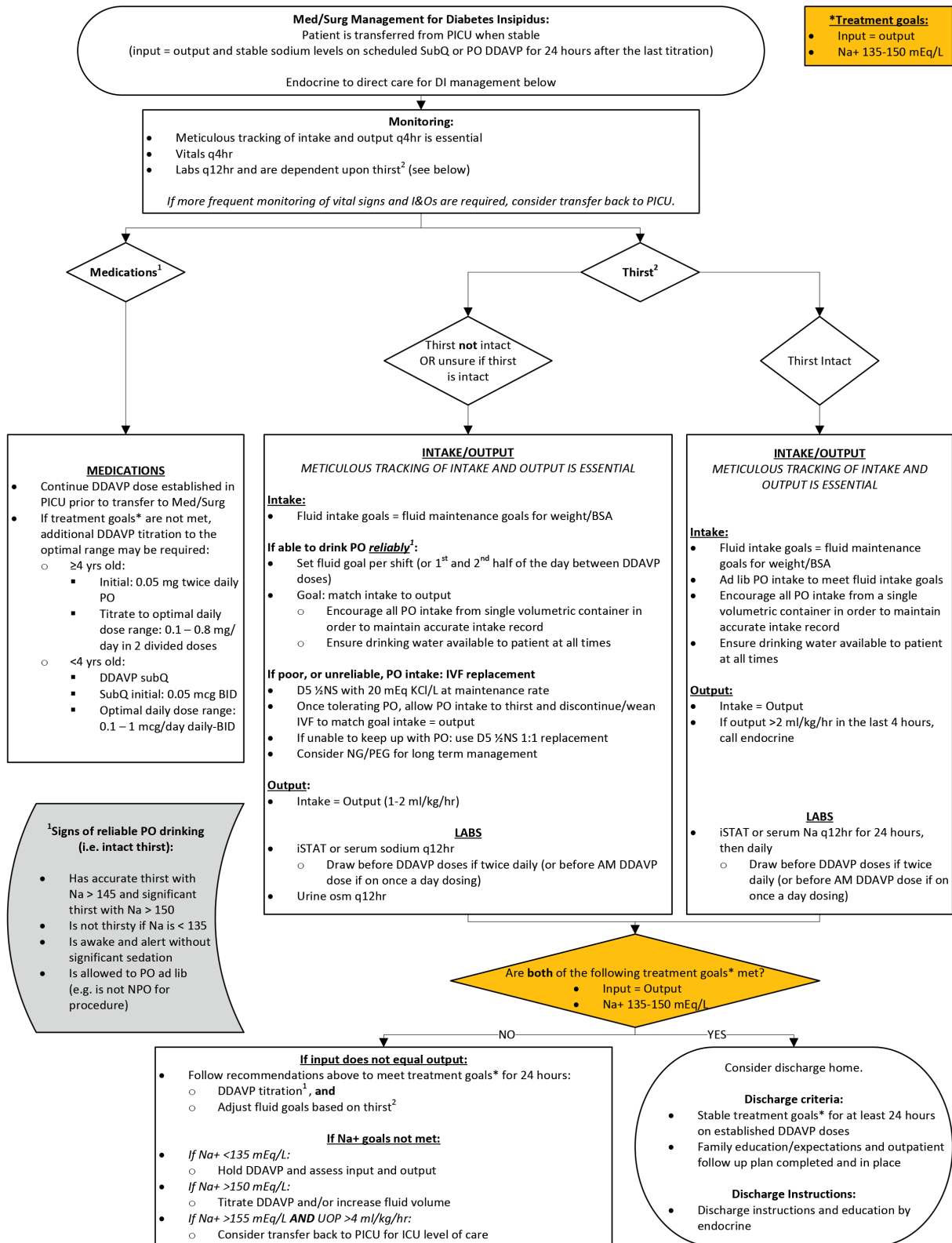
CONTACTS: CEM DEMIRCI, MD | REBECCA RIBA-WOLMAN, MD | DAVID HERSH, MD | JONATHAN MARTIN, MD
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LAST UPDATED: 12.10.24



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