Intravenous Administration of 3% Sodium Chloride (3% NaCl)
(Agent Patients)
Seton Family of Hospitals

Date: _______________ Time: _______________ Weight: _______________ kg Height: _______________ in

ALLERGIES and REACTIONS:
Admit: ☐ Observation: Requires min. 8 hour stay. Discharge anticipated within 24 hours.
☐ Admission: Must document specific medical necessity.

ITEMS WITH BOXES MUST BE CHECKED TO BE ORDERED
Orders that have been changed (additions, deletions, or strike outs) must be initialed by the ordering physician for
the order to be valid. Strike outs are defined as a single line thru section to be stricken.

Diagnosis:

I. Exclusions to the 3% Sodium Chloride Protocol (Check appropriate box below):
☐ Ordered by nephrology
☐ Ordered by trauma surgeon as bolus dose for use in adult trauma patients with serum Na ≥ 135 mmol/L
☐ Ordered by neurosurgeon/intensivist for elevated ICP (Triple H Therapy)

II. Check box for 3% NaCl indication below:
☐ Hyponatremia with severe neurological abnormalities or actively seizing. Proceed with the following:
  1. Start infusion of IV 3% NaCl solution a rate of _________ ml/hr*  
     (Pharmacy will only dispense one 500ml bag of 3% sodium chloride infusion at a time)
  2. Consult nephrology service if needed. (Name of Nephrologist if known: ________________________)
  3. Check BMP-7 STAT three (3) hours after infusion is started
  4. Once patient is stabilized or has stopped seizing, proceed with Infusion Orders (Section V) or follow nephrology
     recommendations.

*This aggressive initial correction may be at a rate of 1 - 2ml/kg/hr (use LBW- see calculation on page 2) for the first 3
to 4 hours or until the symptoms resolve. This should only be used in patients who present with seizures or other severe
neurological abnormalities due to untreated and usually acute hyponatremia. Plasma sodium concentration should
probably not be raised by more than 10% in the first 24 hours, since partial cerebral adaptation has already occurred.

☐ Patient has a serum Na⁺ of less than (<) 125 mmol/L OR
☐ Patient has a normal serum Na⁺ but one that is consistently decreasing.

III. Laboratory orders: STAT
  1. BMP-7 – Notify physician immediately of lab results.
  2. Serum osmolality
  3. Urine creatinine
  4. Urine osmolality
  5. Urine sodium

While awaiting lab results, 3% Sodium Chloride may be initiated at a rate of 20ml/hr for up to 4 hours. If lab
results are not available within 3 hours of ordering them, notify physician for additional orders.

Labs sent at: _______________ (time) _______________ (nurse initials)

Once lab results are available:
Calculate the Fractional Excretion of Sodium (FENa) and check one of the boxes below. (FENa calculations in box on
page 2)

☐ FENa less than (<) 1% (commonly indicates pre-renal depletion: dehydration, CHF, liver disease or nephrotic
syndrome)
  STOP! FENa less than (<) 1% excludes patients from receiving 3% NaCl.
  Please use 0.9% Normal Saline or fluid restriction as indicated.

☐ FENa greater than (> ) 1% (SIADH, ATN, or salt-losing nephropathy).
  Proceed to sodium requirement calculation in box on page 2.
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ORDERS CONTINUED:

IV. CALCULATIONS BOX: To be completed by Physician and Pharmacist

Fractional Excretion of Sodium (FENa)

\[
\text{FENa} = \frac{\text{Urine Na}^+ (\text{mmol/L}) \times \text{SCr (mg/dL)}}{\text{SNa}^+ (\text{mmol/L}) \times \text{UrIne Cr (mg/dL)}} \times 100\%
\]

Lean Body Weight Calculation:

- LBW (male) = (2.3) (height in inches – 60) + 50
- LBW (female) = (2.3) (height in inches – 60) + 45.5

Sodium Requirement Calculation: (Select desired correction below-Complete equation using that number)

- Desired serum Na\(^+\) 122 mmol/L  SEE ITALICIZED STATEMENT BELOW
- Desired serum Na\(^+\) 140 mmol/L  SEE ITALICIZED STATEMENT BELOW

Use clinical judgment.

\[
\text{Desired serum Na}^+ - \text{measured serum Na}^+ \times 0.5 \times \text{LBW} \times 0.95 = \text{ml Na}\(^+\) \times \text{infusion (total mls of 3% NaCl needed for correction)}
\]

V. Infusion Orders: (Please enter calculated rate of infusion in space provided)

1. Administer intravenous 3% NaCl (\(\bullet\) above) \(\bullet\) ml/hr (recommended rate is 25-50 ml/hr, not to exceed 50 ml/hr) – if rate requirement exceeds 50ml/hr, consult nephrology.
2. BMP- 7 Every 3 hours STAT. If rate change, then BMP- 7 every 3 hours STAT after rate change. Notify physician immediately of results.
3. A central line is required for 3% Sodium Chloride infusions. If a central line is not available at the time of infusion initiation, use the largest possible vein and a small bore needle and obtain a central line as soon as possible.
4. Maintain strict I&O’s.
5. Assess patient for mental status changes (confusion, alertness, etc), pulmonary edema, and phlebitis/extravasation. Report any concerns to physician immediately.

Physician Signature  Date/Time  RN Signature  Date/Time

- Faxed to Pharmacy  Initials  Date and Time
- Verified by Pharmacist  Initials  Date and Time