Managing Emergencies In Mass Participation Events: Medical Triage and Algorithms

2011 Marine Corps Marathon Symposium

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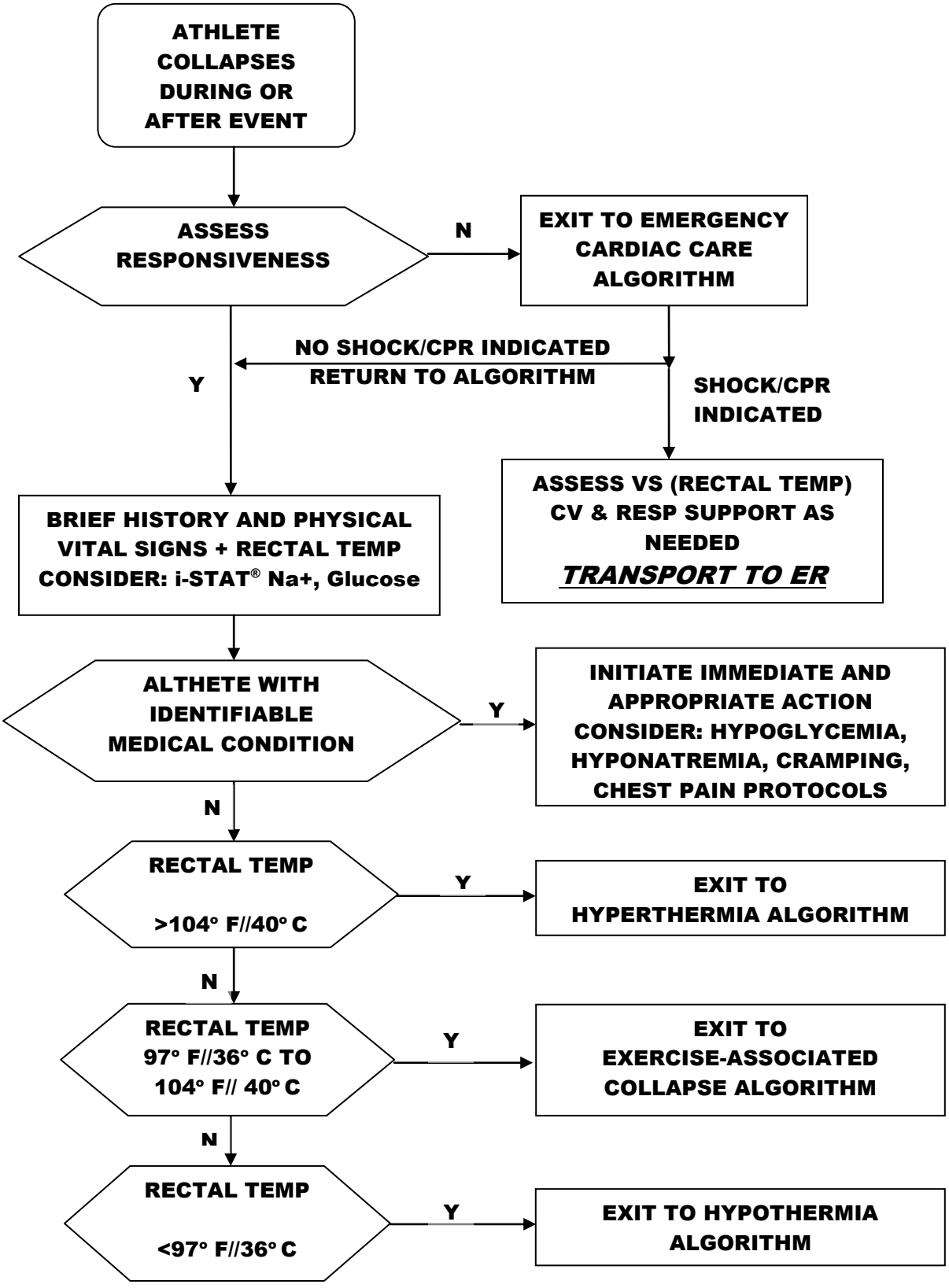
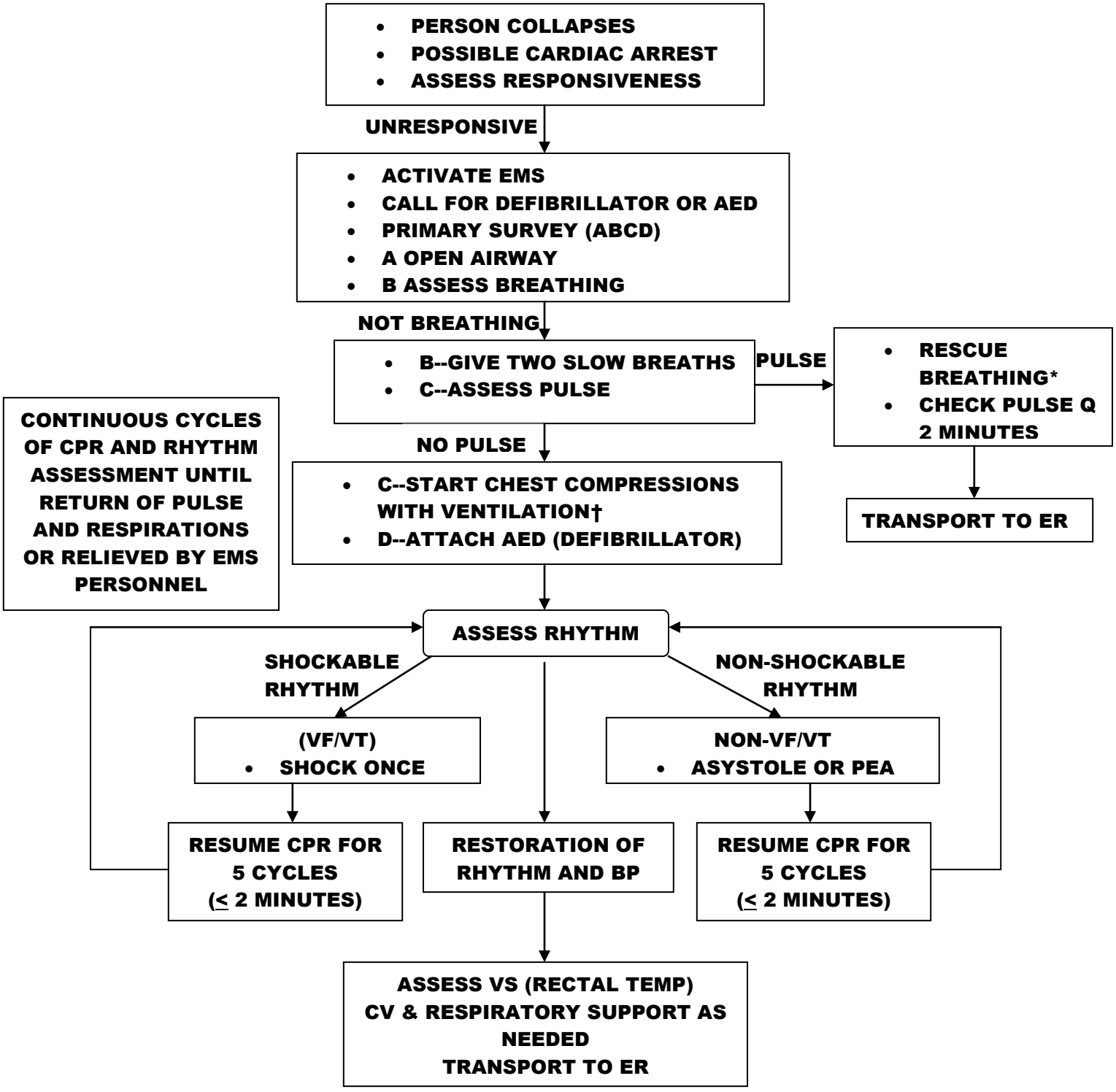
MCM COLLAPSED ATHLETE ALGORITHM

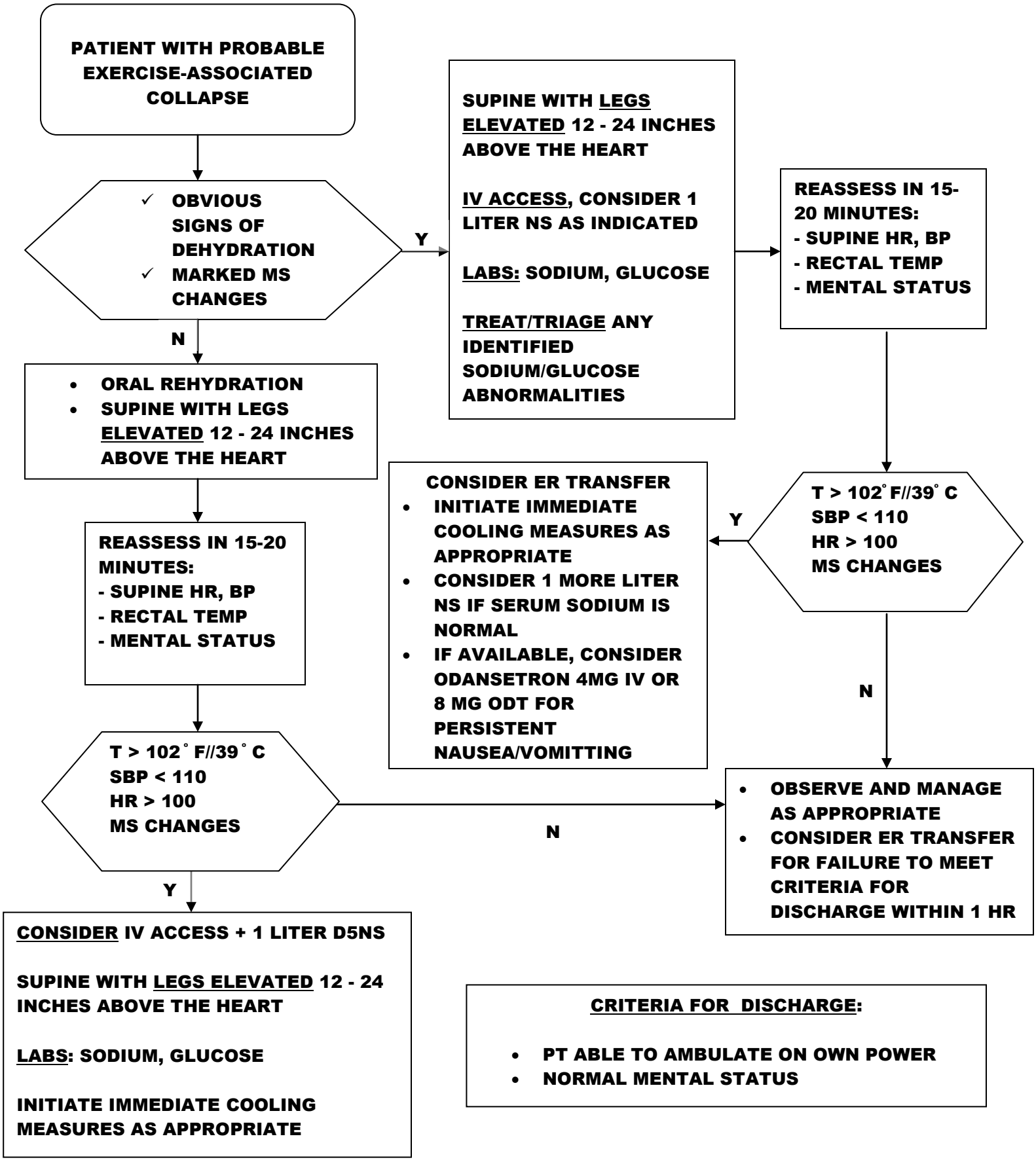


II. MCM EMERGENCY CARDIAC CARE ALGORITHM (BLS SETTING WITH AED)

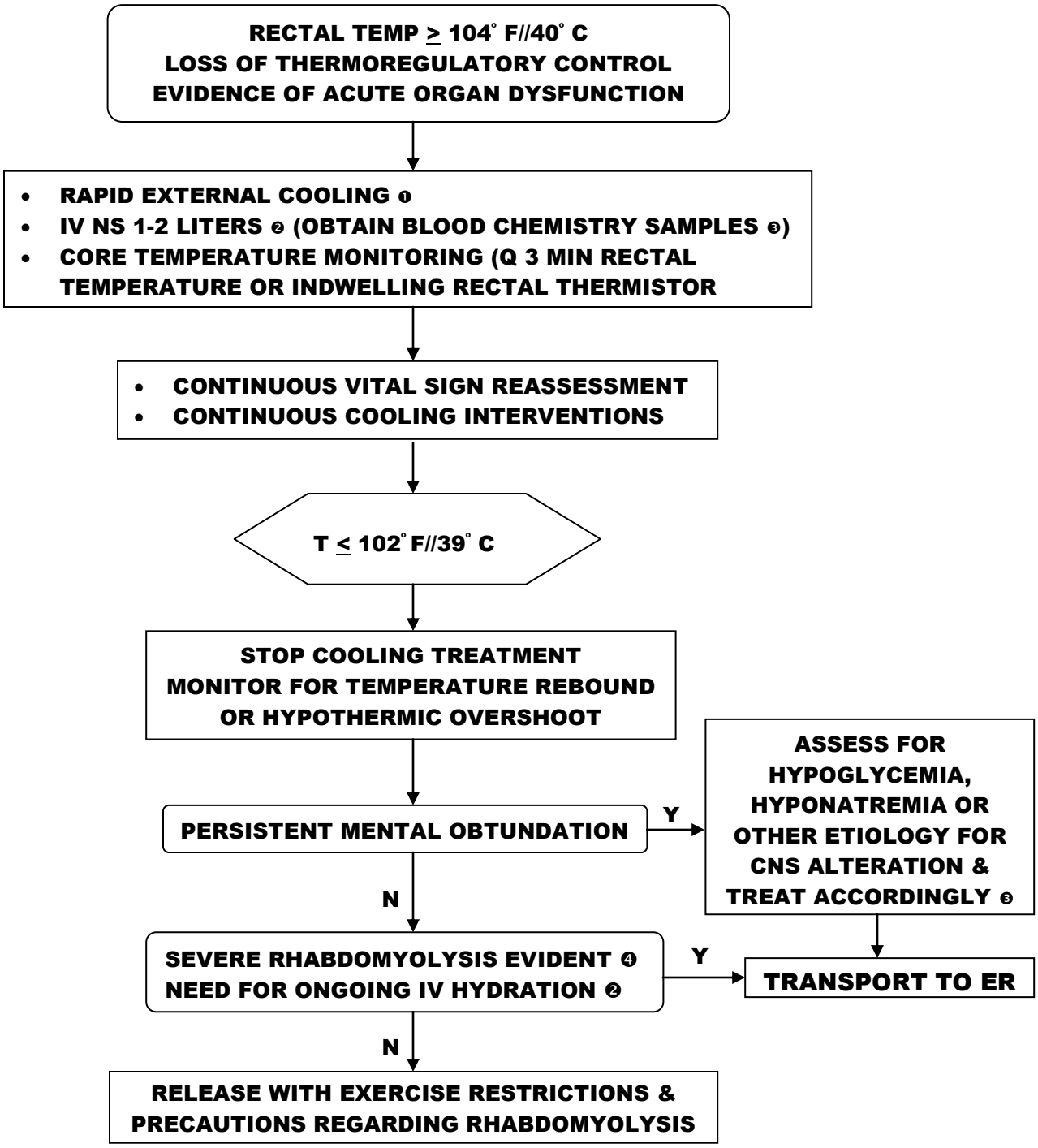


*ADULT RESCUE BREATHING RATE: 1 BREATH EVERY 5-6 SECONDS
†ADULT CPR: 30 COMPRESSIONS PER 2 VENTILATIONS
COMPRESSION RATE = 100/MINUTE
COMPRESSION DEPTH = 2" WITH FULL CHEST RECOIL
(***2005 American Heart Association Guidelines***)

III. MCM EXERCISE-ASSOCIATED COLLAPSE ALGORITHM



IV. MCM HYPERTHERMIA ALGORITHM



ALL TEMPERATURES ARE RECTAL!

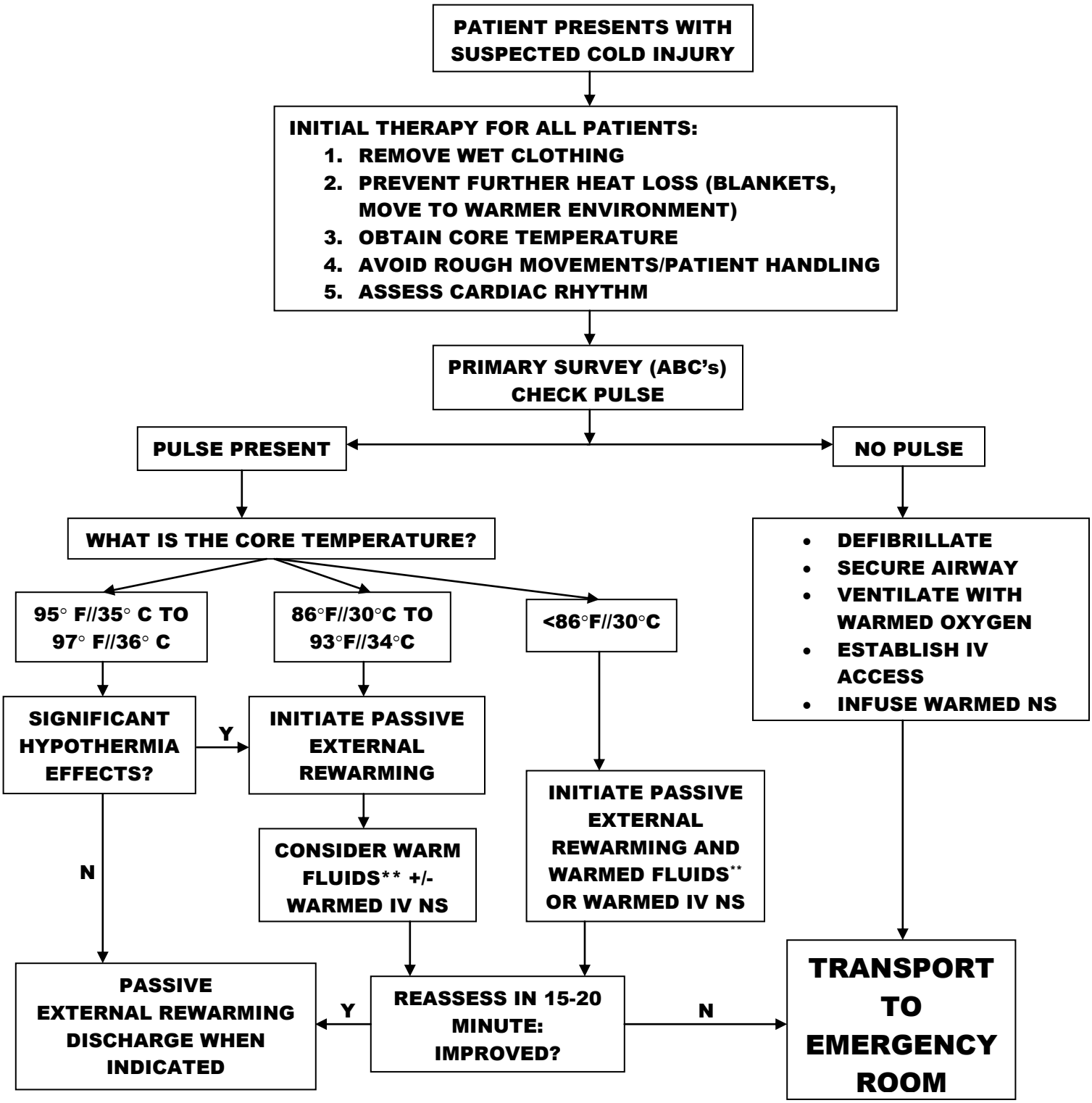
❶ RAPID COOLING OPTIONS: ICE BATH IMMERSION, WHOLE BODY ICE MASSAGE, CONTINUOUS DOUSING WITH ICE WATER &/OR ICE WATER-SOAKED SHEETS. FANS IF AVAILABLE. CONSIDER COOLED IV FLUIDS. STOP COOLING WHEN TEMPERATURE DROPS BELOW 101 - 102.

❷ IVF: NS 2L BOLUS UNLESS SIGNS OF OVER-HYDRATION OR CHF (THEN NS @ KVO RATE); REASSESS ON-GOING IVF NEEDS FROM CLINICAL RESPONSE, URINE OUTPUT, AND LABS. COOLED FLUIDS FOR HEAT CASUALTY.

❸ IMMEDIATE Na, Gluc, K +/- Cr, BUN, Cl & Hct (e.g. i-Stat®); TREAT HYPOGLYCEMIA AND HYPONATREMIA PER PROTOCOLS.

❹ IF RHABDOMYOLYSIS SUSPECTED, NEED CPK, BMP, AST, ALT, LDH, Uric Acid & UA w/ Micro IF AVAILABLE.

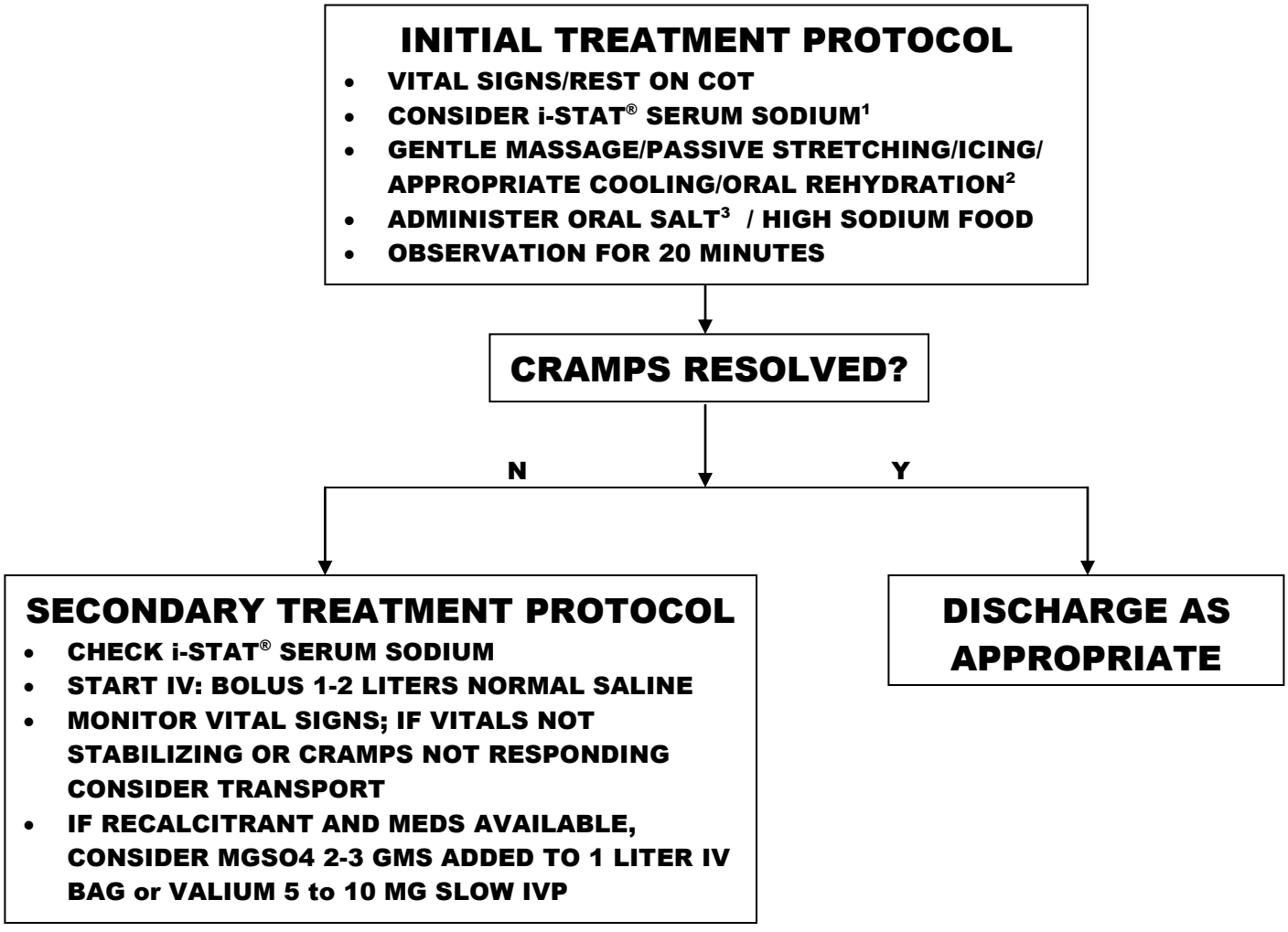
V. MCM HYPOTHERMIA ALGORITHM



*THIS ALGORITHM IS INTENDED FOR THE FIELD MANAGEMENT OF COLD INJURIES IN THE SETTING OF MASS PARTICIAPTION EVENTS

** IF OBTUNDED, NO ORAL FLUIDS.

VI. MCM EXERCISE-ASSOCIATED MUSCLE CRAMPS ALGORITHM

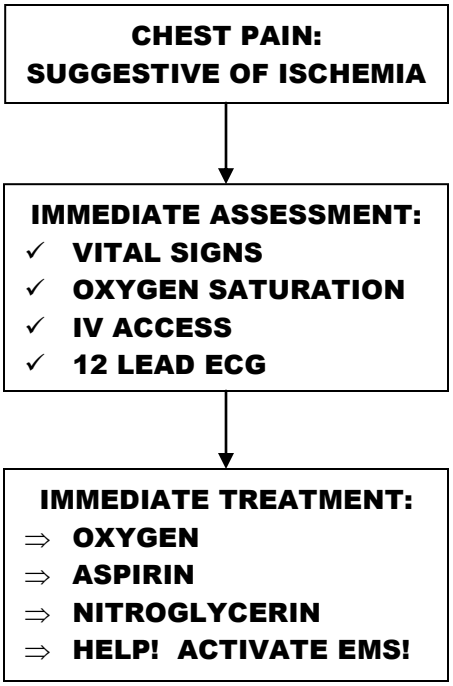


1. AN i-STAT SERUM SODIUM SHOULD BE CONSIDERED FOR PATIENTS WITH SEVERE SYSTEMIC CRAMPING, OR CRAMPING ASSOCIATED WITH NEUROLOGIC COMPLAINTS SUCH AS PERSISTENT NUMBNESS OR TINGLING. THESE SYMPTOMS MAY BE CLUES TO HYPONATREMIA.

2. ORAL REHYDRATION FLUID SHOULD BE A FLUID OF CHOICE; HOWEVER, AN ELECTROLYTE SOLUTION SUCH AS GATORADE, OR A SALTY BROTH, SHOULD BE ENCOURAGED.

3. ORAL SALT INGESTION IF NO CONTRAINDICATIONS. MAY EMPTY SMALL PACKET OR ½ TSP SALT ON TONGUE THEN CHASE WITH WATER/SPORTS DRINK (REPEAT PRN). TRY SALTED CHIPS, PRETZELS, CRACKERS. MAY TRY ELECTROLYTE TABS (OFTEN HAVE LOW SODIUM CONTENT)

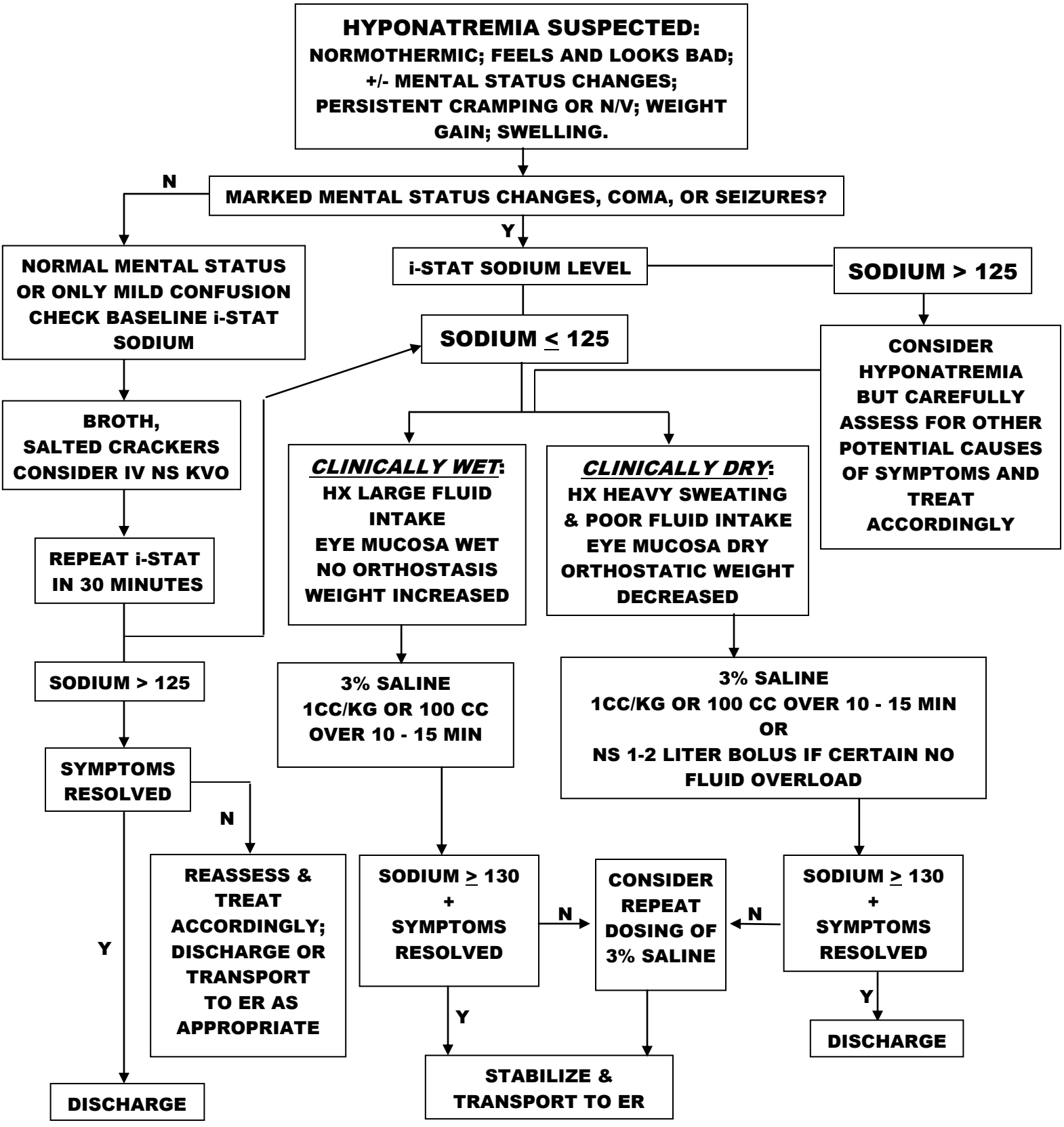
VII. MCM CHEST PAIN ALGORITHM



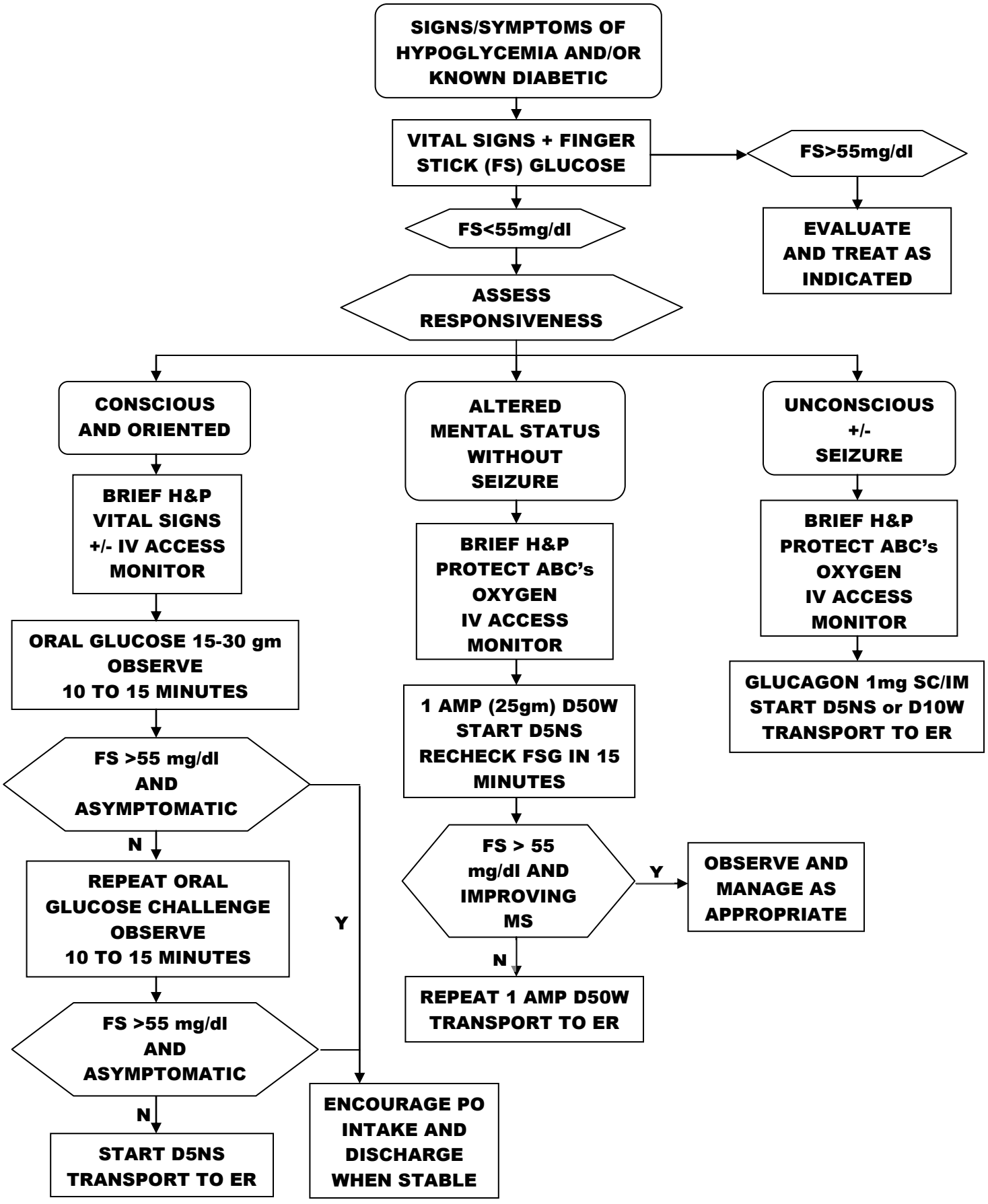
IMMEDIATE GENERAL TREATMENT

- **ACTIVATE EMS**
- **OXYGEN: 4L/MIN BY MASK OR CANNULA**
- **ASPIRIN: 325 MG TABLET SHOULD BE ADMINISTERED (CHEWED)**
- **NITROGLYCERIN: ONE SUBLINGUAL TABLET (0.03 TO 0.04 MG) SHOULD BE ADMINISTERED AND MAY BE REPEATED TWICE AT 5 MINUTE INTERVALS. SYSTOLIC BP SHOULD BE GREATER THAN 90-100 MM HG.**

VIII. MCM HYPONATREMIA ALGORITHM



IX. MCM HYPOGLYCEMIA ALGORITHM



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