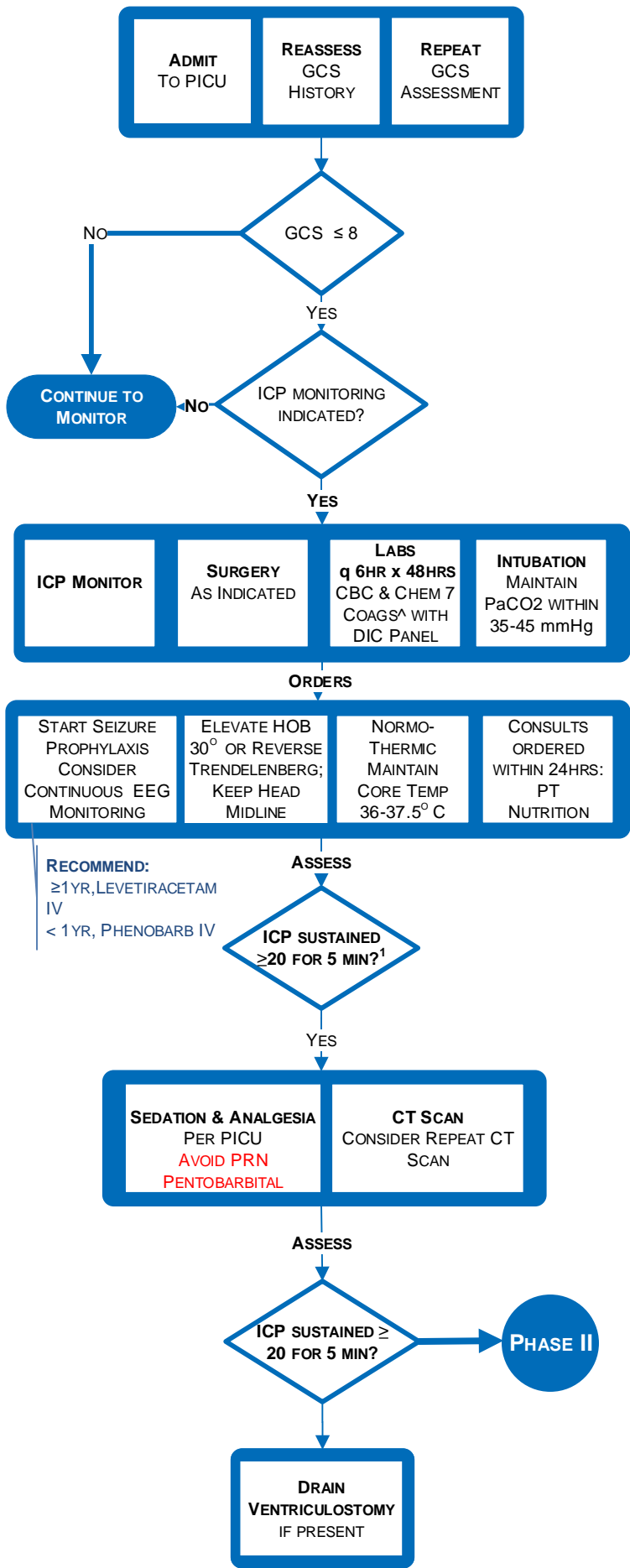
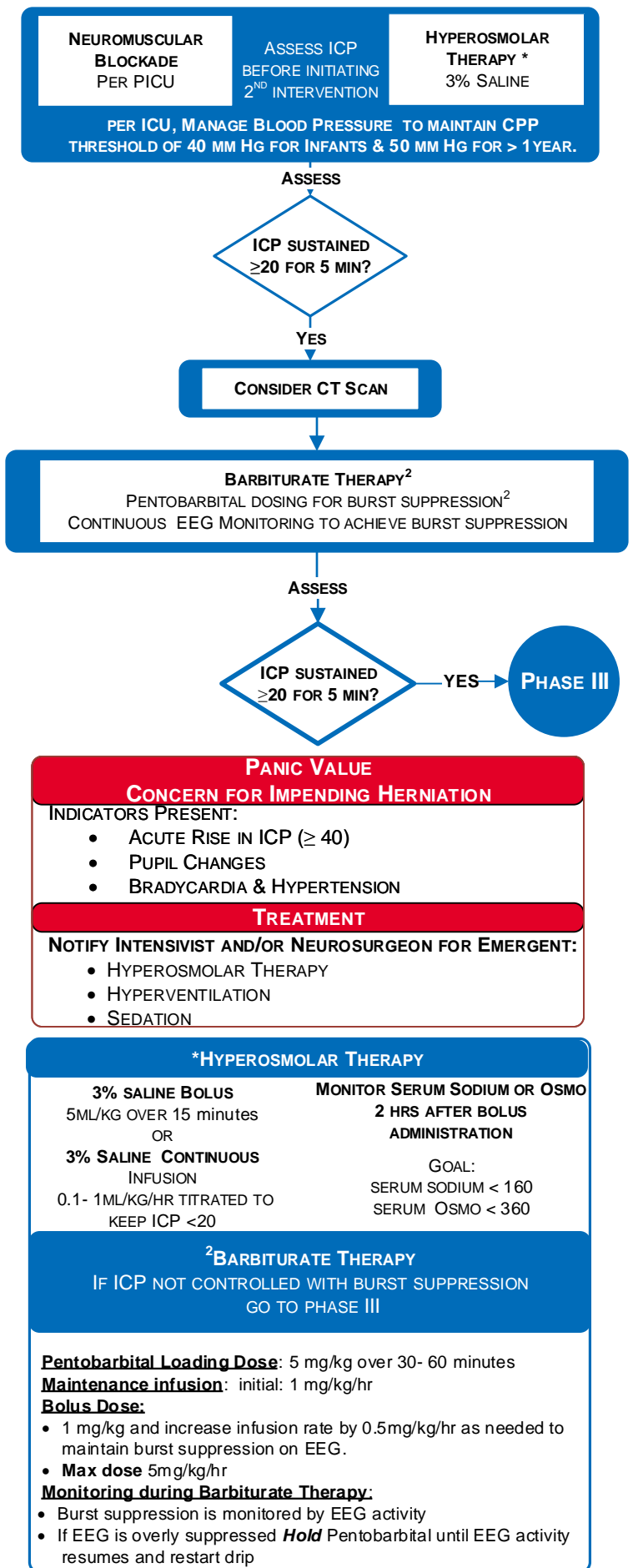


**PHASE I – INITIAL TREATMENT**

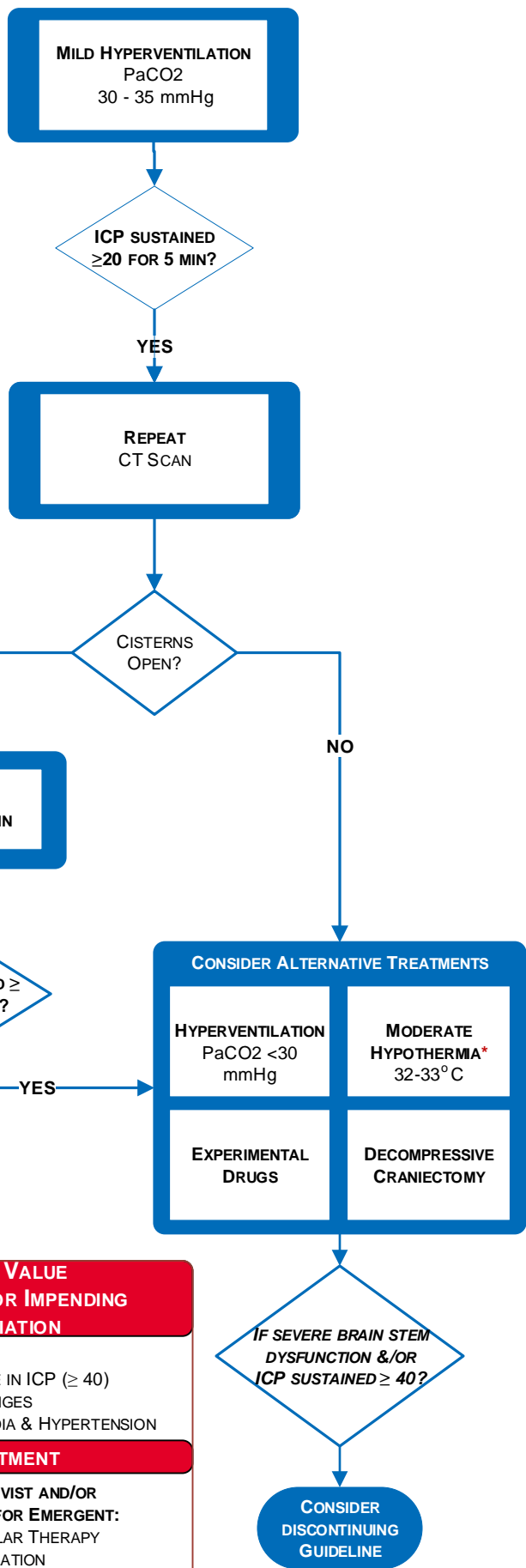


**PHASE II – ICP NON-RESPONSIVE TO PHASE I THERAPY**



PHASE III – ICP NON-RESPONSIVE TO PHASE II THERAPY

KEY INFORMATION



**\*INCLUSION**

- TRAUMATIC BRAIN INJURY WITH GCS OF  $\leq 8$  SCORED IN THE FIELD, TRANSPORT, OR ED.
- TRAUMATIC BRAIN INJURY PATIENT ADMITTED WITH INITIAL SCORE  $> 8$  AND DETERIORATES TO GCS  $\leq 8$
- SCORE ACCEPTED IS ONE SCORED **PRIOR** TO INTERVENTIONS REQUIRING SEDATION.

**\*EXCLUSION**

- GCS  $> 8$ , OR SURGICAL INTERVENTION WITHOUT INSERTION OF ICP MONITORING DEVICE.
- PATIENT IS NOT SALVAGEABLE (INITIATE CALL TO LIFE LINK)

**^COAGULATION LABS**

- DIC PANEL q 6HOURS TIMES 48 HOURS IF PATIENT NOT ON MASSIVE TRANSFUSION PROTOCOL(MTP)
- IF PATIENT IS ON THE MASSIVE TRANSFUSION PROTOCOL, FOLLOW MTP LAB SCHEDULE AS INDICATED UNTIL TRANSFUSION PROTOCOL IS ENDED; THEN RESUME TBI PATHWAY COAGULATION LABS

**STEPS FOR ICP  $\geq 20$**

1. AVOID STIMULATION INCLUDING SUCTIONING, NOISE, MOVING, TREATMENTS
2. LIMIT ENVIRONMENTAL STIMULATION: NOISE, STIMULATION, MOVING.
3. VERIFICATION THAT HOB IS ELEVATED  $30^\circ$
4. VALIDATE ICP READING IS ACCURATE (SEE BELOW)
5. ENSURE PRIOR TREATMENTS, INCLUDING SEDATION, ARE OPTIMIZED BEFORE ADVANCING TO NEXT PHASE OF INTERVENTION.
6. AT ANY STEP IN THE PROCESS, PRIOR TREATMENTS MAY BE REPEATED
7. AT ANY POINT ALONG THE ALGORITHM, IF THE ICP IS **SUSTAINED**  $\geq 20$  MIN AND NOT RESPONSIVE TO THERAPY, CONSIDER:
  - A. REPEAT CT SCAN
  - B. SURGERY AS INDICATED

**<sup>1</sup>VALIDATION OF ICP VALUES**

- CHECK CALIBRATION WITH EACH ICP ELEVATION AND PRN
- IF EVD IS PRESENT:
  - CHECK STOPCOCK POSITION FOR DRAIN OR MONITOR
  - CHECK EVD DRAIN FOR PATENCY AND FLOW
  - CHECK ACCURATE LEVEL FOR EVD DRAIN

**CONSIDER REVERSAL OF THERAPY**

- IF THE ICP IS  $< 20$  FOR 24HRS, CONSIDER WITHDRAWING TREATMENT IN REVERSE ORDER
- IF PATIENT REMAINS STABLE CONSIDER REMOVING THE MONITORING DEVICE
- \*If Moderate Hypothermia was used and re-warming is initiated, it should be done at a rate of  $0.5$  to  $1^\circ\text{C}$  every 12-24hours

**ABBREVIATIONS:**

CPP –CEREBRAL PERFUSION PRESSURE (MAP – ICP)  
 HOB- HEAD OF BED  
 ICP – INTRACRANIAL PRESSURE  
 MAP- MEAN ARTERIAL PRESSURE (ARTERIAL LINE RECOMMENDED)  
 OSMO- SERUM OSMOLALITY LEVEL  
 TBI – TRAUMATIC BRAIN INJURY

**PANIC VALUE  
CONCERN FOR IMPENDING  
HERNIATION**

INDICATORS PRESENT:

- ACUTE RISE IN ICP ( $\geq 40$ )
- PUPIL CHANGES
- BRADYCARDIA & HYPERTENSION

**TREATMENT**

**NOTIFY INTENSIVIST AND/OR  
NEUROSURGEON FOR EMERGENT:**

- HYPEROSMOLAR THERAPY
- HYPERVENTILATION
- SEDATION