**AREAS TO REVIEW**

**EMERGENCY ROOM**

* Initial assessment and review of enrollment criteria.
* Enrolling GCS.
* HOB at 30 degrees.
* HOBIT eligibility met pending head CT results.
* Implantable devices identified and cleared for HBO PRIOR TO ENROLLMENT.
* LAR identified.
* CT meets enrollment criteria and subject eligible for enrollment.
* HBO Team is notified.
* LAR consent obtained.
* Patient randomized in WebDCU.

**ICU RN**

* Removing clothing, jewelry, medical patches, etc. in prep for HBO TX.
* Bilateral myringotomies performed.
* CSF drainage used as first method for ICP control.
* Proper IV tubing for monoplace IV pumps. **(ESPECIALLY FOR MONOPLACE)**
* CXR cleared for HBO TX.
* Chest tube(s) for pneumothorax.
* Heimlich placed on chest tube(s) and drain to Foley bag or other method. **(ESPECIALLY FOR MONOPLACE)**
* ETT secure and position noted.
* Proper procedure for changing ETT cuff from air to NS.
* External fixators or sharp objects padded and secured. **(ESPECIALLY FOR MONOPLACE)**
* Ensure dressings are not saturated with wound ointments, e.g., petroleum, glycerin or blood. Minimize ointments.
* Blood sugar one hour prior to transport to HBO.

**Last 30 minutes prior to transport**

* Notify HBO team of ETA in HBO unit.
* Sedate and paralyze subject for transport to HBO.
* Extra meds taken for duration of HBO time and transport back to ICU.
* Equipment ready for transport, IV’s, ventilator, O2 tank, resuscitation bag, transport monitor.
* EVD drained and checked for proper function.
* Subdural drains are clamped off. **(ESPECIALLY FOR MONOPLACE)**
* NG Tube to sputum trap or other device for drainage. **(ESPECIALLY FOR MONOPLACE)**
* Tube feeding off, flushed and clamped for HBO TX. **(ESPECIALLY FOR MONOPLACE)**
* Hep-lock all non-essential IV ports. **(ESPECIALLY FOR MONOPLACE)**
* HOB at 30 degrees for transport.

**TRANSPORT TO HBO**

* ICU and ventilator parameters, BP, HR, ICP etc. verbalized.

**HYPERBARIC RN**

* ICU to HBO briefing on subject’s condition, VS, BS, ICP.
* RT to HBO briefing on subject’s respiratory / ventilator condition; Vt, RR, PEEP, PIP, Sats, ETCO2, Breath sounds, suctioning, etc.
* Bed checked and under subject for contraband items.
* Wrist straps placed.
* Monitor leads connected and ensure working.
* Replace moist wet linen.
* Pressure infuser bags changed to HBO compatible devices.
* Ventric controller set up and tested. **(ESPECIALLY FOR MONOPLACE)**
* NIBP monitoring available.
* For Monoplace or Multiplace chambers – **Subdural Jackson-Pratt (JP) drains must be clamped as close as possible to the insertion site.** All other JP and Hemovac drains should be handled per your Hyperbaric Department’s policies and procedures.
* Verify chest tubes with Heimlich valves and drain into a sterile bag/glove. **(ESPECIALLY FOR MONOPLACE)**
* Verify proper IV tubing. **(ESPECIALLY FOR MONOPLACE)**
* HBO IV Pumps working properly and alarms set.
* NG and Foley bags setup properly for draining during treatment.
* Any HBO safety variants have approved mitigation procedures.

**RESPIRATORY THERAPY & HBO VENTILATOR**

* HBO ventilator is properly set up with subject’s parameters.
* Subject is place on **baseline FiO2** during the hyperbaric preparation time, prior to treatment.
* Tidal volumes are verified by measuring exhaled volumes.
* Verify tidal volumes / minute ventilation after placed on HBO ventilator.
* ABG sample taken after 15-20 minutes after placed on HBO ventilator.
* Verify ETT placement, breath sounds bilateral and equal.
* Suction lungs as needed prior to HBO TX. **(ESPECIALLY FOR MONOPLACE)**
* Verify ETT cuff is filled with NS using proper VAP procedures to change from air to NS.
* Check for proper cuff pressure using the minimal leak technique.
* Ventilator charting completed noting time placed on HBO ventilator.
* Ohmeda Volume Monitor working and alarms set. **(ESPECIALLY FOR MONOPLACE)**
* Mechanical spirometer placed inside the chamber on the exhaust side of vent circuit.

**HYPERBARIC CHAMBER OPERATOR**

* Chamber set up for proper HOBIT treatment profile and rate of descent and ascent (2 fpm).
* Ground strap properly placed and verified. **(ESPECIALLY FOR MONOPLACE)**
* Chamber log ready.
* Treatment timers set.

**SAFETY PAUSE PRIOR TO HBO TX**

* Team together to discuss Safety Pause (HBO MD, ICU RN, study coordinator, HBO RN, RT, HBO tech/operator).
* Chamber operator or designated person conducts Safety Pause.
* ICU RN reviews and verifies checklist is complete.
* HBO RN reviews and verifies checklist is complete.
* RT reviews and verifies checklist is complete.
* Study Coordinator reviews and verifies proper treatment profile.
* Chamber operator reviews and verifies chamber is ready.
* HBO supervising MD reviews and clears subject to be treated in chamber.

**DURING HBO TREATMENT**

* Subject is monitored continuously.
* Ventilator parameters, including PIP’s, are verbalized, especially during pressure changes.
* Tidal volumes and RR are monitored and verified continually during descent and ascent if subject is hand-bagged.
* Ventilator operator is making adjustments during pressure changes.
* Communicate with ICU and transport for ETA back to ICU.
* Charting is completed and HOBIT data is collected during HBO TX.

**AFTER HBO TREATMENT**

* Subject is disconnected and all lines etc. transferred back to normal ICU equipment/monitors.
* Pressure infuser bags transferred back to ICU bags.
* Monitoring leads connected and transport monitored verified to be working properly.
* Subject transferred to transport ventilator and parameters verified along with PIP.
* O2-Sats and ETCO2 (if available) verbalized.

**TRANSPORT AND BACK TO ICU**

* Verbalized transport monitoring and ventilator ready.
* Subject transferred back to ICU bed and debriefing on HBO TX.
* Discussion and preparations for next HBO TX.
* RT verifies vent settings and ETT cuff pressure with minimal leak technique.
* VS, ICP, O2-Sats, and ETCO2 verbalized.

**ALL DISCIPLINES IDENTIFIED AND REPRESENTED**

* Site PI
* ER Physician
* ER RN’s
* Study Coordinator
* Trauma and Neuro Surgeons
* ICU RN’s
* Respiratory Therapist
* HBO Medical Director
* HBO RN’s
* HBO Technician’s