Dear RT:

Your patient has been enrolled in the Hyperbaric Oxygen Brain Injury Treatment (HOBIT) Trial: A Multicenter, Randomized, Prospective Phase II Adaptive Clinical Trial Evaluating the Most Effective Hyperbaric Oxygen Treatment Paradigm for Severe Traumatic Brain Injury.

Study interventions will consist of 1 of the following treatment profiles listed below. The treatment paradigm will be continued twice a day for a total of 10 treatments or until the subject is following commands or determined to be brain dead (whichever comes sooner).

 Your patient is in the treatment group\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Treatment Arms**                                                             |
| 1.     1.5 ATA for 60 minutes twice a day                                 |
| 2.     2.0 ATA for 60 minutes twice a day                                 |
| 3.     Normobaric hyperoxia [NBH] (100% O2 at 1.0 ATA) 4.5 hours twice a day  |
| 4.     2.5 ATA for 60 minutes twice a day         |
| 5.     1.5 ATA for 60 minutes followed by NBH for 3 hours. This will be performed twice a day |
| 6.     2.0 ATA for 60 minutes followed by NBH for 3 hours. This will be performed twice a day |
| 7.     2.5 ATA for 60 minutes followed by NBH for 3 hours. This will be performed twice a day |
| 8.     Control (no hyperoxia treatment) |

Each treatment will be for 60 minutes at the specified pressure.  NBH following HBO will consist of the subject breathing 100% O2 for 3 hours following HBO2 decompression. The NBH without HBO2 treatment arm will likewise be ventilated with 100% O2 for 4.5 hours at normobaric pressure twice a day in the ICU.

**Please help ensure complete data collection by charting NBH treatment start and stop times.**

**Subject transport to the HBO2 chamber/treatment may not occur if the subject is judged to be unstable** by the team of providers (neurointensivist, neurosurgeon, and hyperbaric staff physician). This may include situations where: ICP is labile or persisting over a level of 22 mmHg despite treatment, CPP is persistently < 60 mmHg, MAP is persistently <70 mmHg, the P/F ratio is < 200 after corrective interventions, or if PEEP requirements are > 10 cm of water.

Pre-HBO treatment prep tips: Endotracheal tube cuff is replaced with normal saline to achieve an appropriate seal with minimum pressure; suction secretions above the cuff before deflating to prevent aspiration pneumonia; endotracheal tube is secure and at the proper location. For monoplace chambers: chest tubes are connected to a Heimlich valve and drained passively into a container such as a Foley bag/sterile glove.

**RT/ABG clinical goals: PaCO2 of 40-45 mmHg, PaO2 > 100 mmHg unless redirected by the clinical provider. Only protocol altered vent parameter *may be* Fi02 (if subject randomized to an NBH study arm) transiently.**

HBO vent tips: 15 minutes after placing the patient on the HBO vent (using the patient’s “normal” vent setting), check an ABG to verify that the ventilator parameters are appropriate (Pa02/Fi02 greater than 200). The baseline FiO2 will be changed to 100% O2 just prior to pressurization.

Coordinator name, contact number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ For immediate emergency assistance from a National PI for medical or protocol questions, you may call the Principal Investigator Hotline 833-HOBIT-PI (833-462-4874).