

**Jeffrey Bertsch and Associates**  
**Hyperbaric Training Activities and Deliverables**

Section I describes learning objectives for participants in hyperbaric operations training and mentoring provided by Jeffrey Bertsch and Associates (Contractor) to the Customer. Section II contains service deliverables to be performed during hyperbaric operations training. Section III of this document contains conditions required for Contractor to perform the services set out in Sections I, and II of this document.

The services to be performed by the Contractor relate to the teaching of operational hyperbaric medicine in order to educate, train and mentor appropriate team members (technical, nursing and medical staff) in both didactic and practical skills required for the safe and effect use of hyperbaric medicine.

**I. Operational Hyperbaric Medicine Course Objectives**

*Upon successful completion of this course, the participant will be able to:*

- A. Define Hyperbaric Oxygenation (HBO)
- B. Describe the basic historical events leading to the current use of HBO.
- C. Discuss the physics and physiology of gas laws as they apply to HBO.
- D. Name the three types of hyperbaric chambers and describe and the advantages and disadvantages of each.
- E. List the clinical applications for HBO therapy along with the rationales for its use.
- F. Describe the hazards and contraindications of HBO therapy
- G. Describe and competently perform the responsibilities specifically related to the care of patients within the hyperbaric environment.
- H. Describe and perform safety and emergency procedures within the guidelines established by the hyperbaric department.
- I. Identify medical activities indicated in the management of patients who have undergone or are receiving HBO treatment
- J. Demonstrate procedures required to set-up, administer and complete routine and emergency treatments.
- I. Qualify the participant to sit for the Board Exam for CHT and CHRN

**II. Operational Hyperbaric Medicine Course Schedule**

**Session One (8 hours)**

Introductions and course overview	(00:10::00)
Introduce staff and participants	(00:10::00)
Course objectives	(00:10::00)
Brief history of hyperbaric oxygen therapy (HBO)	(00:30::00)
Minimum qualifications for Hyperbaric Technicians	(00:30::00)
Hyperbaric Staffing	(00:30::00)

*BREAK*

Hyperbaric terminology and definitions	(00:30::00)
Effects of pressure	(01:00::00)

<i>LUNCH</i>	
Mechanisms of injury	(01:00::00)
Tour of hyperbaric unit and chamber	(00:30::00)
<i>BREAK</i>	
Operational overview	(01:00::00)
<i>Practical Hyperbaric Chamber Training</i>	(02:00::00)
<b>Session Two</b> (8 hours)	
Knowledge review from session one	(00:10::00)
Physiology and Pharmacology of Hyperbaric Oxygen	(01:10::00)
Side Effects of High Pressure Oxygen	(00:50::00)
Contaminant Gas Physiology	(00:50::00)
<i>BREAK</i>	
Current Indications for HBO Therapy	(00:45::00)
Investigational Indications	(00:30::00)
Special Considerations for working in the Hyperbaric Environment	(01:00::00)
<i>LUNCH</i>	
Hyperbaric Chamber Operations	(01:00::00)
Hyperbaric Chamber Safety	(01:00::00)
<i>BREAK</i>	
Emergency Procedures	(01:00::00)
<i>Practical Hyperbaric Chamber Training</i>	(01:00::00)
<b>Session Three</b> (8 hours)	
Knowledge review from session two	(00:10::00)
Treatment Tables	(00:50::00)
Hyperbaric Patient Care Guidelines	(00:50::00)
<i>BREAK</i>	
Patient Preparation and Consideration	(00:20::00)
Contraindications for HBO Treatment	(00:20::00)
Special Considerations for Hyperbaric Patients	(00:30::00)
Diabetic patient special procedures	(00:20::00)
Treatment Documentation	(00:30::00)
<i>LUNCH</i>	
Infection Control	(00:45::00)
Oxygen Delivery Systems	(01:15::00)
<i>BREAK</i>	
Special Equipment (ventilators, pumps, infusers)	(01:10::00)
<i>Practical Hyperbaric Chamber Training</i>	(01:00::00)
<b>Session Four</b> (8 hours)	

Knowledge review from session three	(00:10::00)
Hyperbaric Care Plans	(01:00::00)
Psycho/social Interventions	(00:50::00)
<i>BREAK</i>	
Recreational Therapy/Special Needs	(00:40::00)
Hyperbaric Polices and Procedures	(01:00::00)
<i>LUNCH</i>	
Hyperbaric Staffing/Team Approach	(01:00::00)
Professional Societies and Resources	(00:30::00)
<i>BREAK</i>	
More Special Equipment (ventilators, pumps, infusers)	(01:00::00)
<i>Practical Hyperbaric Chamber Training</i>	(02:00::00)
<b>Session Five (8.5 hours)</b>	
Knowledge review from session four	(00:10::00)
Transcutaneous Oximetry	(00:20::00)
Introduction to equipment	(00:40::00)
Terminology and Definitions	(00:20::00)
<i>BREAK</i>	
Standardized Technique	(00:45::00)
Interpretation	(00:45::00)
TCPO <sub>2</sub> Mapping	(01:00::00)
<i>LUNCH</i>	
Hyperoxic & Hyperbaric Challenge	(00:30::00)
TCPO <sub>2</sub> Reporting	(00:30::00)
TCPO <sub>2</sub> Procedure Demonstration	(01:00::00)
<i>BREAK</i>	
TCPO <sub>2</sub> Practical Application and Assessment	(01:30::00)
Review/Written Exam/Critique and Certificate	(01:00::00)

### III CONDITIONS UPON WHICH SERVICES ARE BASED:

#### A. “Course Date”:

It is understood and agreed that the Customer and JEFFREY BERTSCH & ASSOCIATES will mutually agree upon the date to start the course and that the schedule will allow for the course to be completed in five (5) consecutive days, regardless of the days chosen.

B. “Teaching Locations”:

It is understood and agreed that JEFFREY BERTSCH & ASSOCIATES, based on consultation with Customer, should select on or off site locations for teaching of customer’s personnel. This space should consist of a classroom area capable of allowing slide projection and access to a code-compliant hyperbaric chamber.

C. “Video taping or audio recording”:

It is understood by both parties that absolutely no video taping or audio recording of any program or course presented by Jeffrey Bertsch and Associates will be allowed at any time. All courses and presentations are copyrighted. Any unauthorized recording of a program constitutes a breach of this agreement and an immediate termination of the contract with compensation to Jeffrey Bertsch and Associates.

D. “Maximum number of participants”:

The maximum number of participants for any Operational Hyperbaric Course offered on site is fifteen (16). Additional participants can be added for a fee of \$400 per student but only after an agreement has been obtained prior to the start of the course.

D. Included Course Materials:

- Hyperbaric Medical Review for Board Certification Exams
- Select handouts
- Forms (designed, customized to program)
- Certificate

#### IV COMPENSATION

##### Fees and Expenses to be paid to Contractor

1. Contractor will be compensated as follows for the services to be rendered.
2. The fee for the providing the course “Operational Hyperbaric Medicine” program at the customer’s location will be \$6,500, plus travel and accommodations, to be paid to the Contractor using the payment schedule listed below.

##### *Fees and Payment Schedule*

<b>PAYMENT SCHEDULE—\$6500.00 PLUS TRAVEL</b>	
Upon execution of contract	\$2,500
Upon start of the course	\$4,000
<b>TOTAL</b>	<b>\$6,500</b>

- ❖ Customer will reimburse Contractor for all travel, lodging and related expenses incurred in furtherance of the services to be performed.\*
- ❖ Customer will also pay the reasonable travel expenses of other Companies utilized by the Contractor with the Customer’s prior approval. Payment for travel and accommodations will be made upon completion of program.
- ❖ Above fee includes an additional 4 hours of telephone or on-line support after course is complete.

- ❖ Any spare or replacement items, which may be required for the operation of the hyperbaric chamber program or service, are not provided in this quote.

\* if traveling by air is required, contractor shall travel business class on trips of 2.0 hours or more.

- ❖ **Cancellation policy:** If course is cancelled notification must be made in writing to the Contractor at least 30 days prior to the course start date. The Customer’s deposit will be refunded, less a \$500 cancellation fee.
- ❖ If notification is less than ten (10) days prior to the scheduled course date, the entire deposit shall be forfeited, plus the cost of any expenses incurred for this project or program.

**Additional Services –**

1. The fee for service to be performed in support of the Customer’s facility will be negotiated as follows:
  - a. On site \$80 per hour, plus travel and accommodations, not to exceed eighty (80) hours per month.
  - b. \$50 per hour for work performed on-line or for phone consultations.
  - c. Contractor may also provide hyperbaric operational services as though Contractor were a member of the staff of Customer in order to instruct or mentor. In the event that Contractor is obligated to provide staff relief, then, in any such event, Customer shall pay to Contractor the sum of \$80 per hour for all such hours of staff relief services.
  - d. In addition, Customer will reimburse Contractor for all travel and related expenses in the same manner as specified hereinabove.

\_\_\_\_\_  
Jeffrey J. Bertsch

\_\_\_\_\_  
Date

\_\_\_\_\_  
Customer

\_\_\_\_\_  
Date