Scientific Writer

I. Proposal summary

The Undersea and Hyperbaric Medical Society (UHMS) is seeking funding to contract with a scientific writer specifically to conduct hyperbaric oxygen therapy (HBO₂) comparative effectiveness research to be used by UHMS for government agency interaction and subsequent publication.

II. Organization description and history

The Undersea and Hyperbaric Medical Society (UHMS) is an international scientific organization that was founded in 1967 to foster exchange of data on the physiology and medicine of commercial and military diving. Over the intervening years, the interests of the Society have enlarged to include clinical hyperbaric oxygen therapy. The Society has grown to more than 2,400 members and has established the largest repository of diving and hyperbaric research collected in one place. Clinical information, an extensive bibliographic database of thousands of scientific papers, as well as books, and technical reports that represent the results of over 100 years of research by military and university laboratories around the world are contained in the UHMS Schilling Library, holdings that are now part of the Duke University Library in Durham, N.C. The results of ongoing research and clinical aspects of undersea and hyperbaric medicine are reported annually at scientific meetings and in the *Undersea and Hyperbaric Medicine Journal*, published bimonthly.

The UHMS is a non-profit 501(c)(3) corporation. The board of directors (board), elected by the membership, oversees the organization’s mission and adherence to its bylaws. The president of the board is responsible for choosing the UHMS committees’ chairs. There are numerous standing committees and several ad hoc arms as well. The board hires the executive director, who oversees the organization and executes the policy of the board.

The Society shall be international in scope. Its primary purposes shall be:

1. to provide a forum for professional scientific communication among individuals and groups involved in basic and applied studies concerned with life sciences and human factors aspects of the undersea environment and hyperbaric medicine;
2. to promote cooperation between the life sciences and other disciplines concerned with undersea activity and hyperbaric medicine;
3. to develop and promote educational activities and other programs that improve the scientific knowledge of matters related to undersea and hyperbaric environments and the accepted applications of hyperbaric oxygen therapy for the membership, as well as for physicians and allied health professionals, divers, diver technicians and the public at large;
4. to provide a source of information and support in the clinical practice of hyperbaric medicine and to stay abreast of legislative, legal and regulatory changes in the field; and
5. to provide a means by which hyperbaric facility directors/owners will have an opportunity to request an accreditation survey of their facility for safety, staffing and verifying the adequacy of the professional medical application of hyperbaric therapy.

The UHMS has long been regarded as the pre-eminent scientific organization in the fields of undersea and hyperbaric medicine. The UHMS continues to shoulder the burden of producing the scientific rationale that allows the field to progress. However, over the past few years, globally the fields and medicine in general have been beleaguered with regulatory changes, and the UHMS is underfunded to be able to adequately respond with the scientific information needed for each issue being presented.

The UHMS can be a central force, as it has in the past, for positive change but needs additional and external funding to accomplish this goal.

III. Background

The UHMS has historically been the organization regulatory bodies have referenced, including the Centers for Medicare and Medicaid Services (CMS) and the Food and Drug Administration (FDA), particularly with regard to the scientifically backed indications for HBO2.

Since 1976, the Hyperbaric Oxygen Therapy Committee of the UHMS has met annually to review research and clinical data. From the 28 indications for which third-party reimbursement was recommended in the 1976 and 1979 reports, the number of approved indications has been refined to 14 in the 2014 report. These indications are those for which in vitro and in vivo pre-clinical research data as well as extensive positive clinical experience and study have become convincing.

Evidence considered by the committee includes sound physiologic rationale; in vivo or in vitro studies that demonstrate effectiveness; controlled animal studies; prospective controlled clinical studies; and extensive clinical experience from multiple recognized hyperbaric medicine centers.

The committee also reviews cost-effectiveness and has established guidelines for each entity. Results show that, in addition to its clinical efficacy, HBO2 therapy yields direct cost savings by successfully resolving a high percentage of difficult and expensive disorders, thereby minimizing prolonged healthcare interventions.

The committee recommends third-party reimbursement of HBO2 for the disorders included in the accepted conditions category. Currently, most insurance carriers have established HBO2 reimbursement policies however, in recent years 3rd party-payers (insurers) have begun to systematically challenge the accepted literature for the UHMS indications.

Due to the increased challenges, the UHMS board authorized a new committee be formed to address theses. Since then, the Quality, Utilization, Authorization and Reimbursement Committee (QUARC) has been spearheading the effort to educate the UHMS leadership, members and others about the impacts of the changes. Despite the subtleness of some actions by insurers, they can have significant deleterious effects on patients’ access to appropriate care.

Specifically, the major issues being experienced at this point are insurers’ challenges to the
UHMS-approved indications, including these listed below:

- misinterpretation of UHMS diagnoses, which do not meet the intent of the author(s);
- deletion of indications potentially without proper analysis;
- deletion of indications as a result of a poorly defined crosswalk between ICD-9 and ICD-10;
- and the negative impact on patient care as a result of poorly implemented utilization-limiting programs.

The need to support undersea and hyperbaric medicine with scientific literature is unprecedented at this point in the fields’ existence and just as important is disseminating that information to the appropriate individuals and insurers so they are educated when making decisions that do impact patient care.

It’s important to note, the work performed by these two and all the committees of the UHMS is done by non-compensated professionals, i.e. volunteers and there is no additional capacity to do additional work or expend financial resources without the assistance of a funding event.

**IV. Project**

To address the challenges, the UHMS is seeking to fund a scientific writer to assist the UHMS committee chairs (QUARC and the HBO2) in authoring comparative effectiveness research to be used by UHMS for government agency interaction and subsequent publication that will have a positive and meaningful impact on individuals participating in the field of hyperbaric medicine.

The program will begin immediately as funding comes into the program for the scientific writer and will conclude after the publication of the effectiveness study.

When funded, the scientific writer will begin compiling scientific literature and performing analysis on the indications most at risk for challenge by insurers.

**V. Budget**

The cost of the position is estimated to be eighty thousand dollars – US ($80,000.00) annually for a full time equivalent staff member.

100% of the contributions going to this restricted grant request will be used for the project as it is described however, it is critical that the funding agent describes the funds use by category, i.e., scientific writer fund.

**VI. Responses**

Individuals or organizations wanting to contribute to this specific grant, please mail funds to the UHMS office specifically as described below. Checks will be made out to the UHMS and in the memo line please write *Scientific Writer Fund*.
Contributions to the Undersea and Hyperbaric Medical Society—a 501(c)(3) charitable organization—are tax-deductible for federal income tax purposes as provided under the Internal Revenue Code.

Donors should consult their own tax advisor regarding the specific deductibility of their charitable contributions.