



# PRESSURE

UHMS Membership Newsletter



2018 FIRST QUARTER EDITION



In this **ISSUE** . . .

ASM 2018: A Look Ahead



ASM 2017: A Look Back



June 28-30 ♦ Pre-Courses June 27

**DISNEY'S CORONADO SPRINGS  
RESORT**

Lake Buena Vista, Florida

To register or for location, hotel & travel information see:

<https://www.uhms.org/asm-new.html>



## NEWS:

- ♦ UHMS announces revised credentialing and supervision guidelines
  - ♦ SOCIETY achieves ISO 9001 certification
- ♦ UHMS & the AMA: Lisa Gould joins Laurie Gesell in representation
- ♦ VOTE: BoD Officer and Associate Council elections open March 30

plus **more** Society news 



**VOTE:** BoD Officer and Associate Council elections open March 30

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## WORKING WITHIN THE SYSTEM

### DR. HUANG DISCUSSES CREDENTIALING, SUPERVISION & MINIMUM EDUCATION STANDARDS

ENOCH HUANG, MD, FUHM • E: [enoch.huang@mac.com](mailto:enoch.huang@mac.com) • TWITTER: @POTUHMS

One of the more important topics I have wrestled with during my term as UHMS president has been the question of minimum standards for hyperbaric physician credentialing and supervision. This – along with minimum hyperbaric education standards – is considered by some to be the so-called third rail of hyperbaric medicine, and as such it has been handled in a variety of ways as the nature of our specialty has changed.

#### Why is this a sensitive subject?

The answer is rooted in a field that saw a sixfold increase in hyperbaric facilities between 1995 and 2015. A thousand hyperbaric facilities were created in this 20-year span, creating an unprecedented demand for hyperbaric providers. In addition to growth in the numbers of hyperbaric facilities, there has been a shift in the focus of hyperbaric medicine. While classic hyperbaric programs are located within the four walls of a hospital and offer critical-care hyperbaric services, newer facilities are based in professional buildings with a hospital affiliation and provide elective hyperbaric oxygen therapy for out-patients. Still others are free-standing facilities that are not required to abide by any hospital credentialing standards.

#### How, then, can one guideline

address these different scenarios?

The UHMS credentialing committee identified a single thread that was an essential piece of the fabric of each type of facility – the education and training of the hyperbaric provider.

#### Leading the way

The UHMS led the way in 1998 by creating a standardized curriculum for introducing hyperbaric medicine to medical providers. Shortly thereafter, the American Board of Medical Specialties (ABMS) approved board certification in Undersea and Hyperbaric Medicine (UHM) in 1999. This led to hundreds of physicians seeking and receiving ABMS board certification in hyperbaric medicine. However, the practice pathway for board

The UHMS credentialing committee has adopted a phased, stepwise guideline to improving standardization in hyperbaric provider credentialing, recommending that:

- Within five years (2022), all medical directors of hyperbaric facilities be board-certified in Undersea and Hyperbaric Medicine.
- All providers in the hyperbaric department be enrolled in the UHMS PATH, with attainment of a Certificate of Added Qualification within two years of being granted initial privileges in hyperbaric medicine.

**THE GOAL:** Ensure that all medical directors have the requisite education and experience to supervise the next generation of hyperbaric providers.

certification closed in 2010, and the only means of eligibility now is to complete an ACGME-accredited fellowship program in UHM.

The available training pathways remain limited, however, as the number of hyperbaric fellowship

programs have not been able to match the need for properly trained providers. Until the introduction of the UHMS Program for Advanced Training in Hyperbaric Medicine (PATH), attending a UHMS-approved introductory course in hyperbaric medicine (ICHM) had been the only available option to show formal education in hyperbaric medicine.

To their credit, many insurance companies and hospital credentialing programs have adopted the UHMS-approved introductory training program as the minimum standard required for credentialing, but unfortunately, this is where most formal hyperbaric education has stopped. Very few hyperbaric providers have chosen to take the time off from clinical practice to complete an ACGME-accredited fellowship, and those who do find themselves competing for jobs with providers who have completed only a one-week introductory course.

During the rise of management companies, the wound care/hyperbaric industrial complex developed a staffing model that utilized panels of physicians, each of whom was responsible for a fraction of the schedule. The full-time hyperbaric physician is in danger of becoming a thing of the past, as hospitals and clinics are staffing their facilities with part-time providers who split their hyperbaric duties with their primary clinical responsibilities. Some of these facilities have benefited from strong medical directors who fully embraced the role, immersing themselves in the hyperbaric community and developing their knowledge base. Other less fortunate facilities have been left with providers who have shown less leadership and involvement in hyperbaric medicine. In some facilities, advanced practice providers have not only assumed the role of wound care provider, but are supervising hyperbaric oxygen therapy sessions. Despite the fact that they are not generally qualified to manage systemic medical issues or organ systems above the knee, some podiatrists are offering systemic hyperbaric oxygen therapy, citing state regulations as granting them these privileges.

## The lineup

The hyperbaric landscape now consists of a wide array of providers. We have:

- **the Old Guard** – These are the physicians who literally wrote the books and established the specialty, pioneering the way for the rest of us. This generation of physician has moved largely into the past, however, but they did provide training for . . .
- **the Old Timer** – These physicians worked with the old guard for many years, formalizing and developing the discipline. These apprenticeships predate formal fellowships, and many old timers had military affiliations that afforded them extensive practical experience with undersea operations. These physicians understood the necessity of formalized education, however, and they were instrumental in setting up academic programs, leading to . . .
- **the Academics** – This generation includes fellowship-trained physicians in academic centers as well as non-university based physicians who embraced the academic aspects of hyperbaric medicine. Research interests and evidence-based practice guide decision-making, furthering knowledge in the field.

As the demand for hyperbaric physicians intensified, we were introduced to new types of hyperbaric providers.

- **the Recruit** – These physicians were brought into hyperbaric medicine because a medical facility was convinced to become a provider of hyperbaric oxygen therapy. Instead of an organically developed and home-grown program, turnkey operations require immediate recruitment of physicians who can staff these centers. These physicians are often second- or third-career practitioners who are transitioning from their prior specialty to hyperbaric medicine. As mentioned earlier, these staffing models often utilize panels where physicians are responsible for only a half-day to one day a week in the hyperbaric department, spending the rest of their time in other medical practices or in semi-retirement. Many recruits dutifully see patients and

– continued on Page 7 ➔



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## SAVE THE DATE: ASM 2018 IS ALMOST HERE PLUS, VOTING, EDUCATION, PARTNERS & MORE

JOHN PETERS, MBA, FACHE ♦ E: [jpeters@uhms.org](mailto:jpeters@uhms.org) ♦ T: +561-776-6110 ext. 100

Greetings from the team here at the UHMS!

It's hard to believe that March is nearly over, and the UHMS Annual Scientific Meeting is 90 days away!

### ASM

This month I completed a site visit at the ASM conference venue – the Disney Coronado Springs Resort and Conference Center in Orlando – to see how construction is progressing. I was happy to see the newly renovated rooms where our ASM attendees will be staying. Over 1,100 rooms were completed and only our room block will have access to these rooms. There will still be construction happening on the new tower but that's away from the conference center and our sleeping rooms.

It's very important to note that Disney resorts are at 100% capacity all year long, and if conference attendees want to be on site at the conference venue for the special \$152 per-night rate, they need to make reservations before the cutoff at: [www.mydisneygroup.com/uhms18/](http://www.mydisneygroup.com/uhms18/). There will be no opportunity to extend the early bird rate or obtain rooms outside the room block cutoff. Also, you can get Disney parks discounts if you book through the same conference website listed above.

### VOTE

Voting begins on March 30th for the UHMS Board of Director positions becoming vacant in 2018. They are: *President-Elect; Vice President; Treasurer; Member-at-Large; and Associate Nurse-Elect Representative.*

We encourage ALL members to participate in the election. This is an important process and leads to a rejuvenation of the board and your representation. Remember, these officers and directors work for you! **PLEASE VOTE!**

I have a personal goal for this year's election: to get 30% of the UHMS membership to vote versus our normal 8%-10%. Just consider that the average percentage voting for the President of the United States over the past 16 cycles is 56.48%. Let's do better this year for the UHMS!

Also, we have heard your requests for term limits for the UHMS Board of Directors. The board is working on what those term limits might look like. Hopefully we will present bylaws changes for voting at the ASM.

### Audit completed

The UHMS audit has been completed and the UHMS Board of Directors has voted to accept it. We're pleased to report there were no problems and the UHMS had a positive change in unrestricted assets of \$103,000 on top line revenue of ~\$1.8MM for the fiscal period 2017.

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### BOOK YOUR ROOMS

for the ASM!

CUTOFF:

JUNE 2 at 5 p.m. ET

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That positive change was in large part due to the funding of an unrestricted grant by Healogics to further research in hyperbaric medicine. The UHMS 990 is being compiled by our audit and tax firm and will be posted to the UHMS website as soon as it has been voted on by the Board.

### Corporate Partners

UHMS Corporate Partners, don't miss out on our monthly Town Hall meeting series. It's intended for us to formally focus and listen to you, our stakeholders, to better understand the challenges you face daily, to share with you the efforts the UHMS is making to better the field of undersea and hyperbaric medicine and to create momentum and collaboration with you, our stakeholders.

If you're thinking about joining as a UHMS Corporate Partnership, consider this: It is not just about marketing and advertising; it's about providing an opportunity to educate the membership about the care you provide and/or the services you offer.



## Education

We have launched the UHMS Program for Advanced Training in Hyperbaric Medicine (PATH) for physicians and non-physicians to receive a CAQ (certificate of added qualification) and nurse practitioners and physician assistants to receive a CAE (certificate of advanced education). PATH is an extensive online program with over 100 CME/CEU credits, which allows individuals to earn recognition for the extra effort that they have put into obtaining advanced education in hyperbaric medicine beyond a introductory or basic course in hyperbaric medicine.

We launched the UHMS Online Continuing Education Portal (OCEP) in 2014. This platform offers exceptional value and savings for members versus non-members. There are more than 100 hours of continuing or enduring education, with more hours more being added all the time. The more educational programs you participate in through the years, the bigger the savings for our members. The growth of our UHMS OCEP allows various platforms for learning to include longer Symposiums, Journal-Based CME, Fast-Tracks and just recently poster presentations to accommodate numerous certifications for physicians and non-physician providers, nurses, CHTs, CHRNs, RRTs and others with an interest in Hyperbaric Medicine, Diving and Wound Healing. Also, UHMS members receive discounts to our live meetings/courses versus non-members.

## Publications

We have also revamped our publications process. It's now easier to submit papers to the *UHM* Journal (UHMJ). We have switched to a new, easier-to-use editorial platform for paper submission and review: Manuscript Manager was launched this year, and pending papers and reviews in the previous submissions platform were either finished up or moved over to the new platform.

UHMJ submission fees were eliminated in 2015 and now all members can access the PDF version of the UHMJ from its very first issue. There is improved editorial content, more frequent commentary on current issues like reimbursement and 24/7 access to chambers. The addition of selected MEDFAQs – questions and answers to frequently asked questions – and an often-lively letters section and a new section to announce UHMS policy changes and position statements help round out a new-and-improved UHMJ.

Print-only copies require a subscription to cover printing and mail costs, but we have helped keep our costs in line, with minor increases, by switching to print on demand (POD). We have increased the overall page count, and we are gradually adding more color as we work with authors who are accustomed to submitting mostly greyscale images.

These examples represent just a fraction of the efforts the UHMS is making to bring more value and relevancy to you and your practices.

## Membership value

The UHMS continues to receive feedback from members and others that issues with third-party payers, including CMS and their contractors, continue to dominate their landscape.

The QUARC team has been vigilant in these matters, but we must consider that the members of this and all UHMS committees are volunteers, and we owe them our appreciation. Please consider making a tax-deductible donation to the Funds for Research and Policy Advancement to help in these efforts. Go to: <https://www.uhms.org/funding.html>.

If you want to read more about the challenges the field is facing, log in and visit the QUARC page: <https://www.uhms.org/resources/quarc.html>. Here you will find impending legislation, LCDs and other relevant policies on the provision and limitations of hyperbaric oxygen coverage and the UHMS's responses and guidance.

## Communicate!

I appreciate hearing from you about the challenges you're facing on a regular basis and just as importantly, hearing about your successes, including patient outcomes, new research opportunities and overcoming barriers. I value every call.

If you have a suggestion or comment on how we can serve you better, please send me an email directly at [jpeters@uhms.org](mailto:jpeters@uhms.org) or call me at 561-776-6110 ext. 100. It is my pleasure to serve you, our membership, and I continue to look forward to hearing from you.

*John Peters* ■

supervise hyperbaric oxygen therapy, and if a facility were lucky, one of their recruits may become . . .

- **the Converted** – These physicians embrace hyperbaric medicine as their new specialty and invest significant time and resources in learning as much as they can about the field. They become involved in professional hyperbaric medical societies, participate in conferences, and assume positions of leadership in local, regional and national hyperbaric organizations. Prior to 2010, these physicians could, and frequently did, seek ABMS board certification. Unfortunately, with the closure of the practice pathway, these providers are generally unable to take the year off from clinical practice to complete a fellowship.

- **the Fish Out of Water** – In contrast to the recruit who assumes the mantle of Converted, there are unfortunately some recruits who are more like the proverbial fish out of water. These providers have minimal education beyond the 40-hour ICHM and may be placed in a position where they are under-prepared and underqualified to provide the full breadth and scope of undersea and hyperbaric medicine. They may not even know what they don't know, which could place their patients at risk due to a lack of knowledge.

As for physicians who currently practice hyperbaric medicine, it is difficult to know which category they fall into. Medicare statistics showed that there were 3,186 providers billing for hyperbaric oxygen therapy in 2012. A 2015 UHMS survey yielded only a 9% response rate, and a repeat 2017 survey had slightly fewer responses. These surveys showed that approximately 60%-70% of respondents had completed only a 40-hour ICHM course as their highest level of formal hyperbaric education.

### Past efforts

The UHMS previously addressed credentialing in 2014, but it was clear that our position needed to be updated when the UHMS hyperbaric facility accreditation process revealed a wide variability of practice standards

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UHMS surveys in 2015 and 2017 showed that approximately 60%-70% of respondents had completed only a 40-hour ICHM course as their highest level of formal hyperbaric education.

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in the community. As a result, the credentials committee looked closely at the different physician roles in the hyperbaric department and generated an updated guideline on hyperbaric physician credentialing and supervision that was just published [ [www.uhms.org/images/Position-Statements/UHMS\\_Cred\\_and\\_Priv\\_Guide\\_Jan\\_31\\_2018.pdf](http://www.uhms.org/images/Position-Statements/UHMS_Cred_and_Priv_Guide_Jan_31_2018.pdf) ]. This document, significantly longer and more detailed than its 2014 iteration, takes a thorough look at the practice of hyperbaric medicine in the United States. It breaks down the different roles found within a hyperbaric program, starting at the top with the medical director down to physicians in training.

We recognized that there are two distinct roles in which hyperbaric providers serve, necessitating a re-interpretation of the commonly used nomenclature of hyperbaric “supervision.” The first role is to **attend** hyperbaric treatments in order to ensure that patients are receiving therapy safely and appropriately, and the second is to **supervise** inexperienced hyperbaric providers who are learning the trade. Given the aforementioned lack of fellowship-trained physicians, supervision of physicians in training is one of the most important roles that an experienced hyperbaric physician can fulfill. Unfortunately, the reality is that many facilities lack an experienced hyperbaric physician, filling their positions with willing – and sometimes unwilling – physicians. It seems obvious that the one position in a hyperbaric facility that should have the most accountability and highest standards is that of the medical director; however, there are many cases where this position is being filled with the most economical candidate rather than the most qualified.

While there are some who argue that board certification should be the minimum standard for credentialing, the committee recognized that this would be an untenable standard given the current limited number of UHM fellowship program slots available each year. The committee also recognized arguments that a 40-hour course is insufficient to demonstrate competency in hyperbaric medicine, but heretofore there were no alternatives to the 40-hour ICHM. The recent introduction of the UHMS PATH Program has allowed the first real opportunity to raise the bar with regard to minimal training standards. It allows non-fellowship providers to receive a standardized curriculum and the opportunity for peer-reviewed feedback. While not as extensive as a fellowship experience – and not a substitute for formal UHM fellowship training – this is a significant improvement over a provider who has only completed a one-week course in Undersea and Hyperbaric Medicine.

Change does not come easily, nor does it come quickly. It would be foolish to expect that the UHMS could institute changes overnight, or even in a few years. The credentialing committee therefore adopted a phased, stepwise approach to improving standardization

in hyperbaric provider credentialing. The first step recommends that within five years (2022), all medical directors of hyperbaric facilities be board-certified in Undersea and Hyperbaric Medicine. The second advises that all providers in the hyperbaric department be enrolled in the UHMS PATH, with attainment of a Certificate of Added Qualification within two years of being granted initial privileges in hyperbaric medicine.

The goal is to build upon the current minimum 40-hour ICHM training base to help ensure that hyperbaric facility Medical Directors and senior hyperbaric physicians have the requisite education and experience to supervise the next generation of hyperbaric providers.

In the end, this new credentialing guideline is just that – a guideline. The UHMS has no power to enforce this guideline, nor does the UHMS grant credentials to any provider. However, it helps inform hospital administrators that there is now a new standard by which they may gauge the competency of their hyperbaric providers, and it becomes the road map by which they may raise the level of patient care in their facilities.

*Enoch Huang* ■

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Questions on new coding & billing changes? UHMS can help.

**UHMS HAS LAUNCHED the  
REGULATORY AFFAIRS WEBPAGES**

<https://www.uhms.org/resources/regulatory-affairs.html>

dedicated to hosting information from the  
Quality, Utilization, Authorization and Reimbursement Committee

and a new course:

**New Rules of the Game: An Update on Quality Measures & Board Certifications**

with Laurie Gesell, MD, FACEP, FUHM

<http://www.courses-uhms.org>



# NEW PATHS AHEAD

## HFA DIRECTOR DERALL GARRETT SETS SAIL ON A NEW JOURNEY WITH UHMS

DERALL W. GARRETT, CHT • E: [derall@uhms.org](mailto:derall@uhms.org)

A report from the Hyperbaric Facility Accreditation program

As long-time QARA Director Tom Workman steps into retirement so will the program title Quality Assurance and Regulatory Affairs (QARA) move with him. Tom has been a most vital part of the accreditation program. His influence in our industry has impacted us in so many ways that it's impossible to list them all. I am sure I speak for all of us when I say, "Thank you, Tom" for all you have done for us in the hyperbaric industry.

It's an honor and a privilege to be chosen to for the new position of Director of Hyperbaric Facility Accreditation (HFA). As HFA Director, my focus is to continue growing the program and looking for new ways to improve facility accreditation. There are already several steps in place that will enhance the accreditation process.

This year starts off with a lot of movement in the HFA office. The San Antonio office will close at the end of March. HFA Coordinator Beth Hands and I will be working remotely. All documentation for surveys are to be

submitted electronically via email to both of us: [beth@uhms.org](mailto:beth@uhms.org) and [derall@uhms.org](mailto:derall@uhms.org). All payments are to be sent to the UHMS Payment Center, c/o Laura Stanfield, 631 US Highway 1, Suite 307, North Palm Beach, FL 33408 (note: please do *not* submit documentation to the payment address).

The newly revised Accreditation Manual will be released soon. To those centers on the schedule this year, there are 12 new probes added and some wording changes on the others, as outlined below.

HBOF 9.0	ASME PVHO-1 certification forms are on file for each hyperbaric chamber.
HBOV 13.3	Each Class B monoplace chamber has an independent exhaust pipeline.
HBOE 3.3.1.1	The integrity of the electrical ground of a Class A multiplace chamber is verified at least weekly.
HBOE 3.3.1.2	The integrity of the electrical ground of a Class B multiplace chamber is verified prior to each patient treatment.
HBOE 5.5	Lithium and Lithium ion batteries are not used in the chamber during chamber operations, unless the product has been accepted or listed for use in hyperbaric conditions by the manufacturer or a nationally recognized testing agency.
HBOPC 4.1.6	The Clinical Hyperbaric Medicine Physician is board certified in Undersea and Hyperbaric Medicine (UHM) or possesses a UHMS Certificate of Added Qualification (CAQ).
HBOPC 4.1.7	The Clinical Hyperbaric Medicine non-Physician Practitioner is a nurse practitioner or physician assistant holding a valid diploma from an accredited medical institution.
HBOPC 4.1.8	The Clinical Hyperbaric Medicine non-Physician Practitioner is board certified by the BNA or the NBDHMT.
HBOPC 4.1.9	The Clinical Hyperbaric Medicine non-Physician Practitioner has completed at least a 40-credit-hour UHMS-approved Hyperbaric Medicine Introductory Course.
HBOPC 4.1.10	The Clinical Hyperbaric Medicine non-Physician Practitioner maintains an unrestricted license to practice in the state where the non-physician practitioner delivers hyperbaric therapy.
HBOPC 4.1.11	The Clinical Hyperbaric Medicine non-Physician Practitioner is specifically credentialed to practice clinical hyperbaric medicine in the sponsoring medical facility under the process delineated by the facility's privileging or credentials committee.
HBOPC 4.1.12	The Clinical Hyperbaric Medicine non-Physician Practitioner was allowed to work unsupervised by the Hyperbaric Medical Director after a period of preceptorship where the Clinical Hyperbaric Medicine Physician demonstrated consistent competence in standard clinical hyperbaric treatments, procedures, and safety.



Soon we will be launching a new online process for applying and submitting the presurvey questionnaire. Each facility will login via its Employer Identification Number (EIN) and enter all their facility information. If you are one of the Accredited Facilities and have not submitted your EIN to us, please do so. The online application will roll right into our new FileMaker Pro (FMP) software. This software is what the surveyors will be using to conduct the survey. The surveyors will have

iPads that will give them the ability to move about the facility as they go through the survey.

This is an exciting time to join the UHMS. I look forward to being a part of all the new and upcoming changes.

Can't wait to see what new pathways the future holds.

*Derall Garrett* ■

The **UHMS** clinical hyperbaric medicine facility **accreditation** program recognizes clinical hyperbaric **facilities** that demonstrate their **commitment to patient care and facility safety**.

**Supporting Hyperbaric Nurses Worldwide**  
BAROMEDICAL NURSES  
**BNA**  
Founded in 1985  
ASSOCIATION

# Save the Date

## CELEBRATING Hyperbaric Nurses Day APRIL 3, 2018

Join the Baromedical Nurses Association  
In recognizing Hyperbaric Nurses and their important role  
in our patients' care!  
Live in-service at 6pm Central time for 1 Cat A contact hour (Pending Approval).

## UHMS ACHIEVES ISO 9001 CERTIFICATION

The UHMS has once again achieved ISO 9001:2015 certification.

The announcement was made in early March by the UHMS Hyperbaric Facility Accreditation department.

“This was a big year for the HFA Office,” said Derall Garrett, Hyperbaric Facility Accreditation Director. “Not only have we made a lot of changes in and around the office, we transitioned from the ISO 9001:2008 to the 2015 standards. We in the HFA office as well as the entire the UHMS team are excited to have done so well in receiving this certification.”

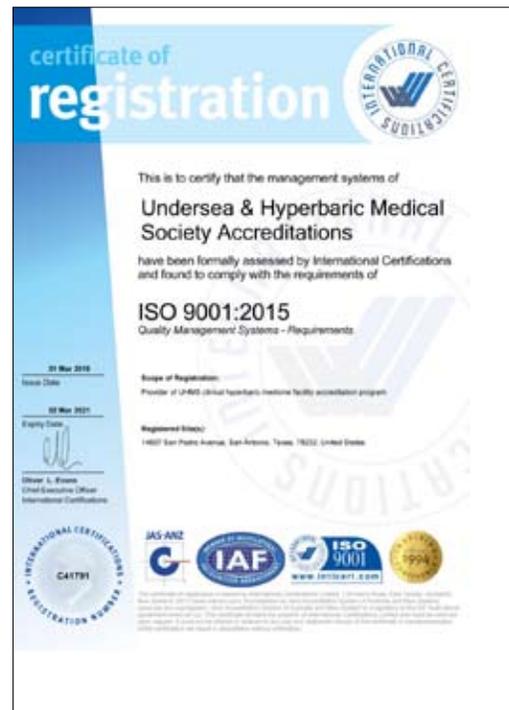
The HFA program works with hyperbaric facilities to ensure that they are meeting the highest standards of care and patient safety through UHMS’ rigorous evaluation of facility, equipment, staff and training to ensure that the utmost quality is maintained within our specialty. The UHMS is committed to providing, promoting, developing and raising the quality of care across the spectrum in scientific communication, life sciences and clinical practices of hyperbaric medicine by promoting high standards of patient care and operational safety.

Certification by the International Certifications Inc. to the ISO 9001:2015 standards demonstrates the UHMS’ dedication and adherence to these goals.

ISO promotes global standardization for specifications and requirements for materials, products, procedures, formats, information and quality management.

Certification under ISO standards is an assurance that the ISO-required management of processes and documentation is in place.

Standards were originally published in 1987 by the International Organization for Standardization (ISO), a specialized international agency for standardization composed of the national standards bodies of more than 160 countries. UHMS is certified under ISO 9001:2015, the most current version of the program.



The ISO 9001:2015 standards of quality management are based on seven quality management principles: customer focus, leadership, engagement of people, process approach in activities, improvement, evidence-based decision-making and relationship management with partners and suppliers.

The goal of ISO 9001 is to embed a quality management system within an organization, increasing productivity, reducing unnecessary costs, and ensuring quality of processes and products.

“These have always been the goals of UHMS,” notes Executive Director John Peters. “We are pleased to have the added guidance, legitimacy and support that comes with ISO 9001 certification.”

The workup to successful certification began with former Quality Assurance and Regulatory Affairs director Tom Workman, who oversaw UHMS’ first certification and provided tutelage and support for this newest effort.

**CONGRATULATIONS to these UHMS-ACCREDITED  
CLINICAL HYPERBARIC MEDICINE FACILITIES**

**NEW ACCREDITATION**

**NOVEMBER 2017**

**LEGACY EMANUEL MEDICAL CENTER**

Portland, Oregon

**ST. PETER'S UNIVERSITY HOSPITAL**

Monroe Township, New Jersey

**REACCREDITATION**

**NOVEMBER 2017**

**\* CHRISTUS ST. VINCENT REGIONAL  
MEDICAL CENTER**

Santa Fe, New Mexico

**ROCHESTER GENERAL HOSPITAL**

Rochester, New York

**ST. MARY'S MEDICAL CENTER**

Blue Springs, Missouri

**ST. PETER'S UNIVERSITY HOSPITAL**

New Brunswick, New Jersey

**UNITED MEMORIAL MEDICAL CENTER**

Batavia, New York

**\* With Distinction**

*~ Reported by Beth Hands, HFA Coordinator*

**DECEMBER 2017**

**ERLANGER HOSPITAL**

Chattanooga, Tennessee

**KENT COUNTY HOSPITAL**

Warwick, Rhode Island

**SOUTHWEST GENERAL HOSPITAL**

San Antonio, Texas

**SUMMERVILLE MEDICAL CENTER**

Summerville, South Carolina

**TRIDENT MEDICAL CENTER**

Charleston, South Carolina

**JANUARY 2018**

**VIRGINIA HOSPITAL CENTER**

Arlington, Virginia





# SAFETY REPORT

## SAFETY IMPROVEMENT: PLANNING TO DO BETTER

FRANÇOIS BURMAN, Pr Eng, MSc ♦ E: [fburman@dan.org](mailto:fburman@dan.org)

### News from the Safety Committee

#### How does your hyperbaric program measure up?

Measurements are a common tool used in business to assess all manner of processes and outcomes – client satisfaction, staff performance, growth, and financial progress, to name a few. An unsafe operation, however, essentially negates all enhancements when the consequences of accidents outweigh the operation's improvements.

On the other hand, measurements can be tedious when they serve alternate agendas. Measurement for the sake of measurement, measurement to satisfy curiosity, and measurement to keep people busy are good examples of where the impact does not warrant the effort.

Safety is key. We can reduce the potential for adverse safety events with effective and well thought-out operational procedures, awareness and training, involvement and commitment, discipline and attention to detail. However, accidents happen in all businesses, including in hyperbaric chambers. A working environment that promotes openness among its employees has a higher potential for wider participation and greater consensus in improving operational safety.

All safety-related anomalies should be considered. This means not only accidents, but also incidents and near-misses. A program that considers all events that have the potential for damage, loss, injury or fatality is a program likely to succeed.

A Safety Improvement Program (SIP) in the hyperbaric facility must contain several elements to ensure success. This article will discuss a progression of steps, illustrate a typical process using a real-life example, provide practical and simple tools to decide on suitable measurements, and offer insights into an effective SIP.

After all, a facility needs to know how it is doing before it can do better.

#### A safety-based monitoring program: the basics

First, know what is important. Events with the potential to cause negative consequences, ranked considering the more severe and the more important, will determine what is at the top of the list. Select a review period to help determine what events have occurred in the past and their frequency. This will help decide if monitoring is in fact needed.

Aspects requiring continuous monitoring – including those with potential for damage, loss, injury or fatality – should be clearly identified. Management should approve the program and then observe progress, with commitment and acknowledgment. Empower those implementing the program and remain interested in the process and the outcomes.

Accidents, incidents and near-misses are obvious and informative indicators, but violations of procedures, lack of attention to detail, ill discipline and ignorance can also illustrate areas of concern. Suitable 'predictors' (used to assist predicting the number of future events and usually referred to as denominators) in the hyperbaric medicine field are usually easy to identify.

Good examples include:

- ♦ number of treatments;
- ♦ number of patients;
- ♦ number of patients received (or considered);
- ♦ number of chamber excursions; and
- ♦ number of operational days.

Possible incidents are numerous. Operations must take care to be practical and realistic. Very low occurrences will not provide meaningful measures. The following list includes some of the potential hazards to consider.



## Note potential hazards

- violation of procedures
- incomplete or lack of emergency action plans
- not practicing drills
- not recording drills
- chamber system start-up or shut-down actions skipped
- contraband entering the chamber
- patients not inspected
- ignorance of rules
- patients denied treatment
- patient non-compliance
- equipment not serviced
- equipment breakdowns
- out of back-up gas
- unauthorized work on facility
- non-suitable materials used
- air contamination
- patient records not completed
- not updating staff
- staff not using personal protective equipment/PPE
- staff injuries/illnesses

## Apply HIRA

The founding principle of HIRA (Hazard Identification and Risk Assessment) should be applied, each hazard assessed considering the probability of an event, the frequency of exposure, and then a realistic measure of the worst-case scenario.

## Identify indicators

Next, we identify type of indicator.

- **Leading indicators** measure the risks where preventive actions can be applied.
- **Lagging indicators** measure the outcome from the risk – i.e., too late to prevent.

Usually the lagging indicator determines the need to measure. However, it would be wise to then select a correlating leading indicator based on the critical control point (CCP).

Sensible ways to select which risks to consider, based on real occurrences experienced in the facility, or, preferably, potential identified occurrences before they have actually occurred, could include:

- Focusing on high-risk and high-impact (significant consequence) events.
- Identifying the CCPs – those steps that control the hazard rather than the outcome: e.g., air quality tests not done rather than air contamination.
- Focusing on processes that could result in multiple outcomes: e.g., possible damage, loss, injury and/or fatality.

## Avoid ‘overkill’

Staff should not be overburdened with measurements that will prove onerous to maintain and consume excessive amounts of their time. Staff have many other obligations, and so often in the hyperbaric unit they are often already overworked.

## The monitoring process: a step-by-step explanation

The monitoring process can be explained through the following 12 steps:

1. Determine the risks using the HIRA process.
2. Decide which risks to measure. Focus on those with the greatest impact.
3. Decide on the appropriate type of indicator – lagging or leading.

4. Develop clear definitions of what is to be measured.
5. Train everyone who will be performing measurements.
6. Implement the monitoring process.
7. Set realistic and achievable safety-related goals.
8. Provide regular feedback.
9. Refine and improve the process.
10. Analyze repetitive events to determine root causes.
11. Use the results to adjust operational procedures to improve safety.
12. Continue to monitor to see if the goals can be achieved.

## Make sure management is actively involved

Without management providing resources, observing, taking an interest in the process and making decisions based on results, the entire monitoring process will likely be a waste of time.

## An adverse event: illustrating the process

Abstract theory does not always explain how to embark on such a process. A real and much-feared but perhaps infrequent risk for a hyperbaric unit, and one that has led to injuries and fatalities, is patients taking contraband equipment or materials into the chamber.\*

Infrequent, however, does not imply negligible. There is always a probability that exposure to inappropriate equipment/materials can lead to very serious consequences.

This is a significant risk. Even one fatality is too many.



\* This is a known issue and National Fire Protection Association. Standard for Health Care Facilities, NFPA 99, Annex A 14.3.1.6.13 recommends that the control measures to prevent patients or staff taking contraband equipment into the chamber, be monitored to ensure that these measures are having the desired effect.



Contraband cannot always be seen, the hazards understood, nor may it even be expected to be there.

**What are the possible causes?** Knowing these can assist in determining preventive measures, and provide indicators for measurement of any exposures or non-compliant activities as well.

### Analyze the problem

Possible causes for contraband can include:

- lack of initial patient orientation
- poor/inadequate initial patient orientation
- lack of patient briefing prior to treatment
- lack of physical pat-down
- client non-compliance due to morbidity or depression
- client lack of understanding (e.g., language)
- client insecure without item
- contaminated clothing used
- inappropriate clothing used
- brand or model of acceptable equipment changed
- ignorance of staff to specific item hazards

It is hard to dispute that a several of these occurrences exist in most situations. Their being missed is the issue. History has shown that these misses have resulted in serious if not catastrophic events.

If known causes can be identified, it is logical to implement suitable risk mitigation strategies prior to commencing with measuring. Risk mitigation would usually imply changes to 'operational' processes, together

with education.

**Next - what indicators could be measured?** We have two choices:

- A lagging indicator, defined as the number of items actually discovered during or after a treatment.
- A leading indicator, defined as the number of items detected prior to patient entering the chamber.

A denominator, or predictor, could be selected from any of the following:

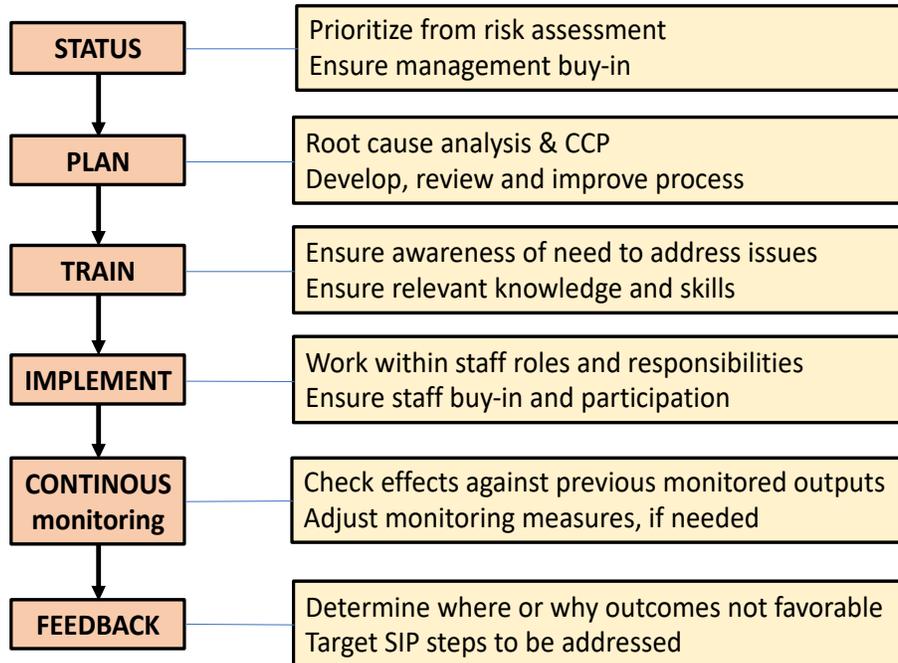
- number of patients treated
- number of treatments given
- number of chamber excursions
- number of operational days

A logical choice would be the number of patients treated each month.

The leading measure could thus be the number of items discovered prior to entering the chamber, including patients assuming that something is safe (after orientation and after preparation for the treatment) measured against number of chamber dives. This measure could be taken per 100 treatments per month (one often needs to multiply the response measure by a suitable factor in order to display a meaningful value).

A busy treatment facility with a clear non-compliance record might thus measure the failure rate as the number of incidents per actual treatments, multiplied by 100. The chart above illustrates a run-chart with certain events recorded to explain changes in failure rates.

## SAFETY IMPROVEMENT PLAN



### Implementation of the SIP: How we can do better

Training is an essential aspect of any improvement program. Staff should be thoroughly briefed, the measures clearly defined and explained, and responsible members identified and trained in how to collect and record the data.

Implementation is usually the most difficult step to achieve. The beginning is usually characterized by much enthusiasm and ambition – everyone wants to be involved. The outcomes will surely reflect well on them, and management acknowledgment carries with it the usual expectations of financial rewards.

The reality is that commitment to the program diminishes with time; especially where results are not as expected and the ‘rewards’ eventually viewed as wishful thinking. It is important to provide regular feedback, display commitment and interest by management, and continue to explain the needs.

Feedback should be given at least monthly, and run-charts updated similarly. Staff should be encouraged to participate. There is some merit to using a carrot-and-stick method to retain commitment. Financial rewards are not the only incentive.

The most important part of this process is determining whether the program is working. The results should be analyzed and perhaps subjected to renewed root cause analyses. Perhaps the CCPs are not really the points around which unfavorable events are centered. Are your targets unrealistic, or even too low?

At this stage, risk mitigation measures could be reassessed for impact, processes further streamlined, and recourse and training reassessed. Monitoring should continue all the while.

### The complete SIP

Simple flow diagrams are often the most effective way of illustrating what might read as a complex and confusing program.

The above illustration is intended to summarize the process in a language that can perhaps be more easily comprehended.

#### So, how does your hyperbaric program measure up?

The answer is multifaceted. It's essential to strike a balance between the effort of monitoring, the quest to know how safe you are and the potential improvement to the safety of the operation. What is the price of failure? Heed the warning signs. ■



## Welcome to **MEDFAQs**

the UHMS Frequently Asked Questions (FAQ) system

[www.uhms.org/resources/medfaqs-frequently-asked-questions-faq.html](http://www.uhms.org/resources/medfaqs-frequently-asked-questions-faq.html)

**Q:** What is current best practice for patients exhibiting changes in their visual acuity? Continue to instruct patients to wait eight weeks, or is there a new suggestion? What is the current protocol?

**A:** There is no single answer to these questions. Standard practice is to inform the patient that the complication might occur and obtain a baseline visual acuity measure.

We recommend checking visual acuity at regular intervals or at a minimum, asking patients if they are experiencing visual changes. This will assist the practitioner in understanding which patients might be experiencing visual changes and when those changes begin to occur.

An example of this process is described here:

“We check vision weekly with a Snellen eye chart. When the visual acuity drops, we inform the patients. If the vision drops below the driving standard, we inform them they should not drive, and have them sign affirming they have been made aware of this. If the visual change is unilateral or more than expected, we refer to the ophthalmology department. We also recommend they consider corrective lenses (glasses). Some choose to get them, knowing their vision will change back to baseline, some choose not to.”

Most practitioners are educating their patients that persistent myopia might last as long as twelve (12) weeks, and that there have been cases of permanent myopia. There is a RCT study wrapping up in Australia that will be relevant to this discussion.

**For more information see:** [www.uhms.org/images/MEDFAQs/UHM\\_43-3\\_MAY-JUNE\\_2016\\_Vision\\_changes\\_in\\_mono-\\_and\\_multiplace\\_chambers.pdf](http://www.uhms.org/images/MEDFAQs/UHM_43-3_MAY-JUNE_2016_Vision_changes_in_mono-_and_multiplace_chambers.pdf)

**Q:** Is history of retinal detachment with prior surgery a contraindication to HBO<sub>2</sub>?

**A:** History of retinal detachment and surgery is an absolute contraindications to HBO<sub>2</sub> during the initial postoperative period.

This allows time for gas resorption, which can take approximately three weeks. It is recommended to have a follow-up appointment with the ophthalmologist prior to being treated in order to make sure the gas is resolved.

**Q:** A free diver was recently diagnosed with open-angle glaucoma. Should he avoid free diving and apnea training in the sea and swimming pool?

A local ophthalmologist recommended the individual not perform any activities that includes vertical jumps (as basketball, downhill running, and similar acts). He is 32 years old, without significant medical history – i.e., no diabetes, hypertension or hyperlipidemia.

**A:** See the review paper “Diving and Hyperbaric Ophthalmology,” which appeared in the March/April 1995 edition of *Survey*.\*

Have a look at page 361: There are some thoughts on glaucoma and diving. A diver at 60 feet has an intraocular pressure of over 2,000 mmHg. Compare this to the 10-20 mmHg intraocular pressures that most people have (or 770-780 mmHg if considering absolute pressure. An acute elevation of ocular pressure to 50 mmHg in a non-diving situation would cause intense pain and loss of vision.

\* [www.uhms.org/images/MEDFAQs/Diving\\_and\\_Hyperbaric\\_Ophthalmology.pdf](http://www.uhms.org/images/MEDFAQs/Diving_and_Hyperbaric_Ophthalmology.pdf)

There is a quote in the glaucoma section of the article from one of the world's foremost glaucoma specialists. It states that the issue with respect to glaucoma is not the absolute pressure, but rather the magnitude of the difference between intraocular pressure and the ambient pressure. That is intuitively true, but this article is the only place that I have seen it in print.

I know of no reports that document that either scuba diving or free diving causes a worsening of glaucoma.

As always, it would be a good idea for this diver take the article and this [response] and discuss them with his ophthalmologist before making his decision about future diving.

Frank Butler, MD  
UHMS and DAN Consultant in Ophthalmology

### MEDFAQs is a benefit of UHMS membership.

Members can see all questions and answers and submit new queries by simply logging in to the UHMS website.

Certain safety-related material is available to non-members as well.

Members may submit new queries by logging in, choosing the Resources tab and clicking on 'MEDFAQs.'

Questions are not answered in real time, but selected queries will be sent to committees and members for answers.

Q&As are archived for future reference and updated periodically.



Note: Neither the Undersea and Hyperbaric Medical Society staff nor its members are able to provide medical diagnosis or recommend equipment over the internet. If you have medical concerns about hyperbaric medicine you need to be evaluated by a doctor licensed to practice medicine in your locale, who can provide you with professional recommendations for hyperbaric medicine based upon your condition. The responsibility of approving the use of equipment resides with the physician and safety director of the facility. Information provided on this forum is for general educational purposes only. It is not intended to replace the advice of your own health care practitioner, and you should not rely upon it as though it were specific medical advice given to you personally.



## MAKE A DIFFERENCE. MAKE A DONATION TODAY.

<https://www.uhms.org/funding.html>

To provide the funding necessary to enhance the UHMS mission in the areas of research and public policy. To have a meaningful impact our goal is to raise \$50,000 annually.

- Donate to:
- Research
  - Public Policy
  - Scientific Writer

## The UHMS Fund for Research and Policy Advancement



June 28-30 ♦ Pre-Courses June 27

## DISNEY'S CORONADO SPRINGS RESORT

Lake Buena Vista, Florida

To register or for location, hotel and travel information see:

<https://www.uhms.org/asm-new.html>

Attendees can receive up to 21 credit hours\* in the latest research in diving, wound care and hyperbaric medicine.

♦ **ABSTRACTS:** Submissions due by Monday, 2 April midnight ET

<https://www.uhms.org/call-for-abstracts-2018?idU=1>

♦ **AWARDS NOMINATIONS:** Submissions due by Sunday, 15 April midnight ET

<https://www.uhms.org/about/annual-awards/about-uhms-awards.html>

### ♦ KEYNOTES ♦

Lambertsen Lecture: June 28: 1:00 pm - 2:00 pm

Dr. Keith Van Meter

“A long shot to a short shot: Hyperbaric oxygen augmented ACLS/ATLS spawned by commercial diving medicine experience”

Kindwall Lecture: June 29: 1:00 pm - 2:00 pm

Dr. Eugene Worth

“HBOT and diabetic foot ulcers: Do we have a leg to stand on?”

\* subject to change

for more info, see the following pages; for credits, see Page 73

## ■ HOW TO PREPARE FOR ACCREDITATION

Program Chair: Derall Garrett, CHT

The purpose of this course is to provide an overview of the UHMS Clinical Hyperbaric Facility Accreditation Program, its structure, survey processes and “insider tips” on preparing to undergo an accreditation survey.

Experienced surveyor faculty members will provide a comprehensive overview of the process to streamline preparation.

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## ■ MAPPING A COURSE THROUGH THE REIMBURSEMENT QUAGMIRE

Program Chair: Marc Robins, DO

### Objectives

- Provide an overview of the documentation elements required for initial and ongoing care in the HBO<sub>2</sub> facility
- Can I bill it? And will I get reimbursed?
- Baseline understanding on NCCI edits & CMS addendum, what these really mean and impact on delivery of care?
- Breaking down MACRA

This course will provide current information related to new changes in coding, billing and documentation for reimbursement in the new MACRA regulatory ERA. The course is organized by both regular and associate members. Sessions will be of special interest to clinicians

and technical staff and are provided in response to requests from the membership for a post-course related to new reimbursement issues related to clinical hyperbaric oxygen therapy. MOC/CME and CEU will be available for this course.

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## ■ DIFFERENTIAL DIAGNOSIS OF DECOMPRESSION ILLNESS

Decompression illness is a diagnosis assigned to a variety of acute conditions where the suspected cause is free gas in circulation and tissues, caused by decompression. Individual manifestations are not specific for DCI, but a time proximity to decompression and some patterns of manifestations suffice to establish diagnosis in most cases. Early recognition of DCI and administration of hyperbaric oxygen (HBO<sub>2</sub>) is important for successful treatment. However, some serious post-decompression manifestations may be coincidental and if mistaken for DCI, precious time to provide proper treatment may be lost – for example, in a case of stroke. Current practice in evaluation of acute post-dive conditions vary from taking medical history and physical examination only, to a routine extensive testing for possible coincidental conditions.

Both approaches can sometimes result in misdiagnosis and lost treatment opportunity.

Additional diagnostic tests, including blood tests and imaging, have been discussed quite extensively in recent years, but no clear guidelines have been provided as yet.

The aim of this workshop is to review the most common coincidental post-decompression conditions that could be confused with DCI and discussion of what additional testing is needed to avoid misdiagnosis.

Topics will include serious neurological conditions, neurological conditions resistant to HBO<sub>2</sub> treatment, serious cardiorespiratory conditions, post-dive abdominal discomfort, cutaneous manifestations, and osteomuscular aches and pains.

*schedules are subject to change*

## ASM 2018 – Speakers: June 28-30

### JUNE 28

#### KEYNOTE 1

##### LAMBERTSEN LECTURE 1:00 - 2:00 pm

- **Dr. Keith Van Meter**

*A long shot to a short shot: Hyperbaric oxygen augmented ACLS/ATLS spawned by commercial diving medicine experience*

#### PLENARIES

##### Hyperbaric Medicine and Cancer 8:30 - 10:00 am

- **John Feldmeier, DO**

*The role of hyperbaric medicine in cancer therapy*  
8:30 - 9:15 am

- **Dick Clarke, CHT**

*Hyperbaric oxygen radiation sensitization of squamous cell carcinomas of the oropharynx*  
9:15 - 10:00 am

##### Mechanisms of HBO<sub>2</sub> 4:00 - 5:00 pm

- **Stephen Thom, MD**

*Cell signaling and mechanisms of action: how does hyperbaric oxygen really work?*  
4:00 - 5:00 pm

### JUNE 29

#### KEYNOTE 2

##### KINDWALL LECTURE June 29 1:00 - 2:00 pm

- **Dr. Eugene Worth**

*HBOT and diabetic foot ulcers: Do we have a leg to stand on?*

#### PLENARIES

##### Research and Registries for Hyperbaric Oxygen Therapy 8:00 - 10:00 am

- **Caroline Fife, MD**

*The Hyperbaric Oxygen Therapy Registry and the role of a qualified clinical data registry in protecting reimbursement*  
8:00 - 8:30 am

- **Jay Buckley, MD**

*The hyperbaric medicine registry at Dartmouth*  
8:30 - 9:00 am

- **Judy Rees, MD, PhD**

*The role of registries in medicine*  
9:00 - 9:30 am

- **Panel discussion – 9:30 - 10:00 am**

##### HBO<sub>2</sub> and DFU 4:00 - 5:00 pm

- **Dirk Ubbink, MD**

*The effectiveness and costs of hyperbaric oxygen therapy for diabetic ischemic ulcers: results of the DAMOCLES multicenter trial*  
4:00 - 4:30 pm

- **Michael Strauss, MD**

*The Long Beach Wound Score as a validated tool for comparative effectiveness research of wounds and objectifying the indications for hyperbaric oxygen*  
4:30 - 5:00 pm

### JUNE 30

#### PLENARIES

##### Emerging Indications for Hyperbaric Oxygen Therapy 8:00 - 10:00 am

- **Enrico Camporesi, MD**

*Hyperbaric oxygen therapy for aseptic necrosis of the femoral head and of the femoral condyle*  
8:00 - 8:30 am

- **Gerardo Bosco, MD**

*Hyperbaric preconditioning* 8:30 - 9:00 am

- **Shai Efrati, MD**

*Brain injury* 9:00 - 9:30 am

- **Panel discussion** 9:30 - 10:00 am

##### New Pearls of Wisdom in the Diving and Hyperbaric Medicine Literature

- **Brian Keuski, MD** *Diving medicine literature update*
- **Lince Varughese, MD** *Hyperbaric medicine literature update* 1:00 - 2:00 pm

##### Clinical and Metabolic Aspects in Breath-Hold Diving 4:00 - 5:00 pm

- **Gerardo Bosco, MD**

*Adaptive mechanisms in breath-hold divers*  
4:00 - 4:20 pm

- **Peter Lindholm, MD**

*Pulmonary pathophysiology in deep breath-hold diving*  
4:20 - 4:40 pm

- **Alessandro Marroni, MD**

*Breaking news on breath-hold diving research*  
4:40 - 5:00 pm

For CME info, see page 73

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## ASM 2018 – Call for abstracts & award nominations

Call for abstracts: Deadline is April 2 – [www.uhms.org/asm-new.html](http://www.uhms.org/asm-new.html)

*On behalf of the Undersea and Hyperbaric Medical Society*, the UHMS Program Committee is pleased to announce its call for abstracts submission to the 2018 UHMS Annual Scientific Meeting, June 28-30, 2018. It will be held at the Disney's Coronado Springs Resort, 1000 West Buena Vista Drive, Lake Buena Vista, FL 32830.

Submit abstracts submitted via the UHMS website at [www.uhms.org](http://www.uhms.org), where you will find the formatting

and submission guidelines. If you are unable to access the UHMS website or if you are having difficulty with the online submission format, contact the UHMS home office for additional assistance.

Authors, please ensure that submission requirements are met, as incomplete submissions may be returned for modification or declined. Deadline for submission is April 2, 2018. Acknowledgment of receipt will be provided normally within one week.

Call for award nominations: Deadline is April 15  
[www.uhms.org/about/annual-awards/about-uhms-awards.html](http://www.uhms.org/about/annual-awards/about-uhms-awards.html)

*UHMS members, you are invited to nominate* any individual of their choice for the following awards.

- ♦ **The Albert R Behnke Award:** This is the premier award of the UHMS, presented to an individual in recognition of outstanding scientific contributions to advances in the undersea or hyperbaric biomedical field.
  - ♦ **Commercial Diving Award:** This award recognizes outstanding contributions to the commercial diving industry in the area of increased productivity or performance of the working diver. The UHMS Commercial Diving Award is sponsored by LSU UHM Fellowship in honor of Keith Van Meter, MD.
  - ♦ **Excellence in Diving Medicine Award:** This is for an outstanding contribution to teaching, education, science and/or safety in the field of Diving Medicine and related fields.
  - ♦ **Excellence in Hyperbaric Medicine Award:** This is for continued diligence and excellence in the practice of hyperbaric medicine, particularly in areas of basic and clinical research as it might impact patient care.
  - ♦ **Young Scientist/Medical Doctor Award:** This award recognizes the work of a young medical doctor or scientist whose performance is consistently outstanding. The recipient can be either a clinician or researcher practicing in hyperbaric and/or diving medicine and must not be older than 40 years of age. The award is sponsored by Dr. Mahito Kawashima in honor of Professor Yoshihiro Mano, Japan.
  - ♦ **The Paul C. Baker Award for Hyperbaric Oxygen Therapy Safety Excellence:** This award is for an Associate Member, in good standing, for outstanding contributions to advancement of safety in hyperbaric oxygen therapy.
  - ♦ **Excellence in Critical Care Hyperbaric Medicine Award:** This is for an Associate member in recognition of all the hyperbaric nurses and hyperbaric technicians who currently spend countless hours on call as well as dealing with the tragedy and trauma of critical cases in life-and-death situations worldwide. The specific focus of this award is on the provision of critical care with 24/7 availability, whether in support of commercial or sport diving, undersea medicine, or in the clinical hyperbaric medicine arena. This award is restricted to a nurse or technical staff member from a 24/7 facility. Previously known as the Ted Gurnee award, this award is sponsored by OxyHeal Health Group.
  - ♦ **Associates Achievement Recognition Scholarship:** This is intended to assist the recipient to attend and present an abstract at the UHMS Annual Scientific Meeting. This scholarship is sponsored by Sechrist Industries and Wound Care Education Partners.
- All nominations will remain confidential and only the successful nominee will be named on the awards night.*

Thanks, Naples. Happy 50th Anniversary, UHMS.



Last year's UHMS 2017 50th Anniversary Annual Scientific Meeting represented a milestone.

As we celebrated our golden anniversary, we looked back at the years of growth, struggle, setbacks, triumphs and the bonds we have forged in our unique field.

We looked ahead, too.

Join us this year as we set out on the next 50-year journey – and look to the century after that.

Our venue moves from the white sands of Naples to the green hills of central Florida and the family fun of Disney's Coronado Springs Resort.

Make a date for learning, with a little luxury on the side.

<https://www.uhms.org/asm-new.html>

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## ASM 2017 – Annual UHMS Awards

The UHMS celebrated its 50th anniversary last year with a robust lineup of speakers and presentations in the beautiful, relaxing venue of the Naples Grande on southwest Florida's Gulf coast. Presented on the final evening, the annual UHMS awards capped a superb gathering of colleagues.



**The Albert R Behnke Award went to Dr. Wayne Gerth** (*second from right*). With Dr. Gerth (*from left*) are UHMS Vice President Dr. Gerardo Bosco; UHMS President Dr. Enoch Huang; and longtime colleague Dr. David Southerland, who nominated Gerth.



**Dr. Tony Alleman** (*right*) won the Commercial Diving Award. Presenting were Dr. Bosco and Dr. Huang.

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## ASM 2017 – Annual UHMS Awards

Excellence was the theme for the UHMS annual awards at the 50th anniversary celebration.



**The Excellence in Diving Medicine Award went to Dr. Petar DeNoble** (*second from right*).  
With Dr. DeNoble (*from left*) are Dr. Bosco, Dr. Huang, and colleague Dr. Simon Mitchell, who nominated DeNoble.



**The Excellence in Hyperbaric Medicine Award went to Dr. Brett Hart** (*second from right*).  
With him (*from left*) are Dr. Bosco, Dr. Huang, and nominating colleague Dr. Lindell Weaver.

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**ASM 2017 – Annual UHMS Awards**

This UHMS annual award is sponsored by Dr. Mahito Kawashima in honor of Professor Yoshihiro Mano, Japan. This year two rising stars were honored.



**The Young Scientist/Medical Doctor Award was made to Dr. Yolanda Michetti (second from left).**  
With Michetti (from left) are Dr. Huang, Dr. Bosco, and Dr. Mahito Kawashima.



**The Young Scientist/Medical Doctor Award was made to Dr. Cory Dubose (second from left).**  
With Dubose (from left) are Dr. Huang, Dr. Kawashima and Dr. Bosco.

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## ASM 2017 – Annual UHMS Awards

The UHMS recognizes Associates who excel, representing the thousands of hours by nurses and technicians in the care of their patients.



**Esacar Agbay, Jr. received the Excellence in Critical Care Hyperbaric Medicine Award.**



**The Associates Achievement Recognition Scholarship went to Nituna Phillips** *(second from left)*.  
With Phillips *(from left)* are Nursing Representative Richard ‘Gus’ Gustavson, Technologist Representative Kaye Moseley and Dr. Kelly Johnson-Arbor who made the nomination.

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## ASM 2017 – Annual President’s Awards

These UHMS annual awards recognize the best in oral and poster presentations.



**Dr. Jay Buckey (left) was awarded Best Overall Oral Presentation**  
& **Best Overall Poster Presentation went to Lushin Huey (pictured with Dr. Huang).**



**Best Overall Trainee/Resident Oral Presentation was awarded to Dr. Takuyn Oyaizu (left)**  
& **Best Overall Trainee/Resident Poster Presentation winner was Cory DuBose (both pictured with Dr. Huang).**

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## ASM 2017 – Annual Associates Awards

These UHMS annual awards recognize the best in Associates presentations.



**The Associates Award for Excellence in Presentation 1st Place was won by Andrew Melnyczenko.**

Accepting for him was Dr. Paul Claus (*middle*), with Kaye Moseley and Gus Gustavson.



**Marc Pullis (*second from left*) and Bill Gearhart received the Associates Award for Excellence in Presentation 2nd Place.** The winners are flanked by Kaye Moseley and Gys Gustavson.

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**ASM 2017 – Awards from the Baromedical Nurses Association**

Friends of UHMS, the Baromedical Nurses Association made two special awards.



**Dr. Eugene Worth received the BNA Circle of Excellence Award**, which honors an individual who exemplifies extraordinary mentoring and professional support to promote the mission and vision of hyperbaric nursing.

Dr. Worth accepted the award by phone (*inset*), presented by BNA representatives and UHMS members  
Connie Hutson (*left*), Annette Gwilliam and Dr. Marc Robins.



**Richard ‘Gus’ Gustavson was honored with the Diane Norkool Award.** The distinction is open to BNA members who are currently be serving in the hyperbaric field or making a significant contribution to the field of hyperbaric medicine.

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**ASM 2017 – Fellows of Undersea and Hyperbaric Medicine**

This UHMS welcomes this year's FUHMs.



**Dr. Tony Alleman (left); Dr. Nicholas Bird.**

Recipients were awarded by Past President Jim Holm and current President Dr. Enoch Huang.



**Dr. Otto F.W. Boneta (left); Dr. David N. Charash.**



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**ASM 2017 – Fellows of Undersea and Hyperbaric Medicine**

This UHMS welcomes this year's FUHMs.



**Dr. Eustorgio A. Lopez; Dr. John R. Clarke**, whose colleague, Dr. Jay Sourbeer, accepted for him.



**Dr. Mark S. Robins (left); Dr. Joseph White**, whose colleague, Carla Bond, accepted for him.



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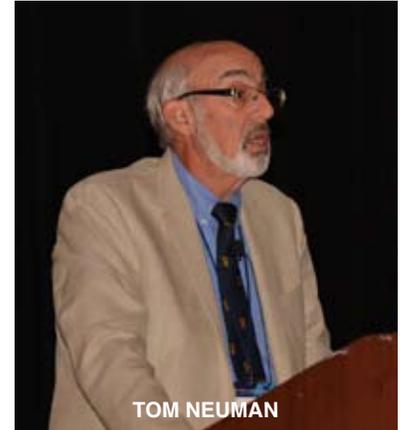
ASM 2017 – Keynote & Plenary Speakers



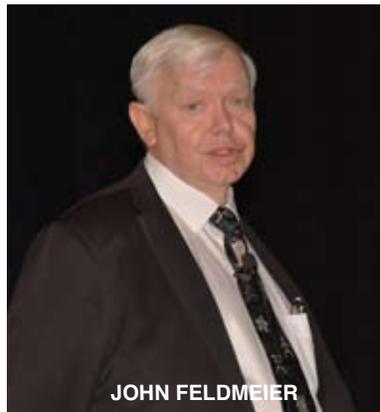
President's Address



Executive Director's Address

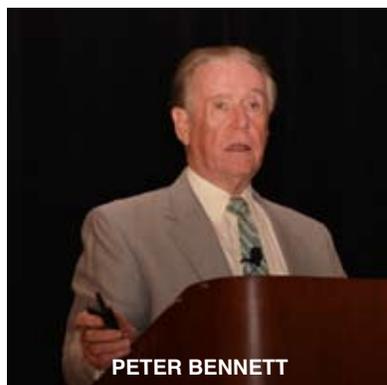


**LAMBERTSEN KEYNOTE**  
Arterial Gas Embolism



**PLENARY LECTURE:** An update on the UHMS Clinical Practice Guidelines ~ with Jaleh Mansouri

**KINDWALL KEYNOTE:** Beams and Bars: Radiation Oncology and Hyperbaric Medicine –  
An Inseparable Story, Past, Present and Future



**PLENARY LECTURE**  
The History of the Undersea and Hyperbaric Medical Society (1967-2017)

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**ASM 2017 – Keynote & Plenary Speakers**



**IAN GROVER**



**PETER WITUCKI**

**PLENARY LECTURE**

Emergency and Critical Care Hyperbaric Medicine: A Lost Art



**FOLKE LIND**



**MAHITO KAWASHIMA**



**GERARDO BOSCO**

**PLENARY LECTURE**

International Perspectives on Hyperbaric Oxygen Therapy



**SIMON MITCHELL**



**STEPHEN THOM**

**PLENARY LECTURE:** A Futurist's Guide to Undersea and Hyperbaric Medicine: Where will we be in another 50 years?

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## ASM 2017 – Thanks, Tom

Tom Workman received a special honor this year for his many years of service as director of the UHMS Accreditation program. Later in the year

Tom announced his retirement, effective New Year's Day 2018.

That meant he could stop working on New Year's Eve.

Party on, Tom.

*PS: We we will be seeing him at this year's ASM and more.*



To read Tom's memorable sign-off to us,  
go to:

[www.uhms.org/publications/pressure/fourth-quarter-pressure/viewdocument.html](http://www.uhms.org/publications/pressure/fourth-quarter-pressure/viewdocument.html)

and see pages 9-10.

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ASM 2017 – It's not all work . . .



For more photos, go to: [www.uhms.org/asm-2017-photos](http://www.uhms.org/asm-2017-photos) – available April 2 onward

All ASM photos by Tom Workman

# MEMBER NEWS & UPDATES

## UHMS COMMUNITY INFO • FIRST QUARTER 2018

[www.facebook.com/UnderseaAndHyperbaricMedicalSociety](http://www.facebook.com/UnderseaAndHyperbaricMedicalSociety)

<https://uhmsblog.wordpress.com> • [www.uhms.org](http://www.uhms.org)

### NEW ONLINE COURSE – ENROLL TODAY!

#### New Rules of the Game: An Update on Quality Measures & Board Certifications

with Laurie Gesell, MD, FACEP, FUHM

<http://www.courses-uhms.org>

#### COURSE OBJECTIVES:

- Understand the factors considered regarding reimbursement for hyperbaric oxygen therapy from the Government (Medicare).
- Understand and define Quality Measures
- Discuss the Physician Quality Reporting System (PQRS) and the effect PQRS performance has on Medicare payments.
- Discuss the pathway for Board Certification in Undersea and Hyperbaric Medicine and limitations with availability of Fellowships.

- Discuss Maintenance of Certification Part 4 now required for Board Certified Physicians through the American Board of Preventive Medicine.
- Review available alternatives to Board Certification to include the CAQ program, which is now the UHMS Program for Advanced Training in Hyperbarics (PATH)

#### Cost: FREE to UHMS members

- Non-Member: \$22.50
- Regular UHMS Member: FREE
- Associate UHMS Member: FREE



**Accreditation statement:** The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**Disclosure:** All faculty members and planners participating in continuing medical education activities sponsored by UHMS are expected to disclose to the participants any relevant financial relationships with commercial interests. Full disclosure of faculty and planner relevant financial relationships will be made at the activity.

**Designation statements: Physician CME:** The Undersea & Hyperbaric Medical Society designates this enduring material for a maximum of 1AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**MOC ABPM:** This activity has been approved by the American Board of Preventive Medicine for up to 1 MOC credit. Claiming ABPM MOC credit is appropriate for those who are ABPM diplomates.

**Nursing/RRT:** This enduring material is approved for 1 contact hour provided by Florida Board of Registered Nursing/RRT Provider #50-10881.

**For NBDHMT:** This enduring material is approved for 1 Category A credit hour by National Board of Diving and Hyperbaric Medical Technology, 9 Medical Park, Suite 330, Columbia, South Carolina 29203

**Disclaimer:** The information provided by this CME material is for Continuing Medical Education purposes only. The lecture content, statements or opinions expressed however, do not necessarily represent those of the Undersea and Hyperbaric Medical Society (UHMS), its affiliates or its employees.

## NEW ONLINE COURSE – ENROLL TODAY!

### Update in Billing, Coding & Reimbursement: ICD-10, MIPS and Bundled Payment System Medicine & Wound Management

Credit Hours: 6.00 (visit education portal for all credit designations)

<http://www.courses-uhms.org>

#### Why register for this course?

Due to recent changes to CMS/LCDs regarding hyperbaric oxygen therapy, there seems to be confusion regarding billing codes: what is covered and how to report it in the new payment system, MIPS. Those who treat with hyperbaric medicine need to be knowledgeable on appropriate billing and reporting for approved indications for treatment.

MIPS scores will be based on performance using two programs that include EHR and Physician Quality Reporting System (PQRS). Physicians and others who report this information must be familiar with how to report the data successfully and the impact it has on reimbursement.

#### Join UHMS today & receive discounts . . .

UHMS Members receive significant discounts off registration using the promo code at the Membership tab on our website ([www.uhms.org](http://www.uhms.org)). Join our Society and receive huge discounts on top of our many other membership benefits!

**Eligible License Types:** Physicians, Nurses, Techs, RRTs, Medical/Safety Directors and anyone with an interest in hyperbaric medicine.

**Prices:** \$75 (Associate Member); \$105 (Regular Member); \$135 (Non-Member)

#### FULL COURSE SCHEDULE:

- ♦ **Making ICD 10 Work With Wound Healing and Hyperbaric Oxygen** / Matthew Schweyer, CHT-A
- ♦ **Bundled Payment & Impact on Wound Care: Bedside to Curbside** / Matthew Schweyer, CHT-A
- ♦ **Merit-Based Incentive Payment System & the Future of US HBOT Reimbursement** / Caroline Fife, MD; Helen Gelly, MD, Marc Robins, DO, MPH

- ♦ **Missing Puzzle Pieces in HBO<sub>2</sub> Clinical Documentation** / Gretchen Dixon
- ♦ **Panel: Coding and Reimbursement in the ICD-10 Era** / Marc Robins, DO, MPH; Helen Gelly, MD, FUHM, FC-CWS, FACHM; Randall Cook, MD, FACS, UHM; Stephanie Williams

#### Objectives:

- ♦ Show the transition from ICD-9 to ICD-10
- ♦ Provide resources for attendees to navigate to and make their journey easier
- ♦ Discuss different governmental audits
- ♦ Provide examples of audit tools
- ♦ Understand common terms in value-based health care
- ♦ Appreciate why our current model cannot sustain itself
- ♦ Insight into value-based health care and what direction wound care may embrace
- ♦ Understand what Merit-Based Incentive Payment System (MIPS) is and its impact on hyperbaric medicine
- ♦ Participants will be able to identify CMS-driven reviews that impact payment
- ♦ Participants will understand the importance of Quality reporting for reimbursement
- ♦ Emphasize the need to build a more accurate patient medical story with cohesiveness of clinical documentation details in the medical record
- ♦ Recognize the complexity assigning ICD-10-CM codes
- ♦ Identify what the key source is to support medical necessity for HBO<sub>2</sub> therapy
- ♦ Understand the rationale for EHR requirements as it applies to reimbursement from CMS
- ♦ Understand impact of severity of illness scoring on reimbursement.
- ♦ Learn how to know if your EMR captures and reports assessment data critical to reimbursement.



## HERE'S ANOTHER LEVEL OF DISTINCTION: Become a Fellow of Undersea and Hyperbaric Medicine

<https://www.uhms.org/members/fuhm.html>

UHMS accepts applications all year for Fellow of Undersea and Hyperbaric Medicine, or FUHM. All applicants must be nominated for recognition by current FUHM awardees, BOD members, or the FUHM Committee. Applications must be received by January 1 for inductees to be awarded at the mid-year Annual Scientific Meeting.

### How to nominate your candidate

Log in to the member site at [www.uhms.org](http://www.uhms.org) and paste the following link in your web browser address bar:  
<https://www.uhms.org/members/fuhm.html>

Or log in to the UHMS website and then paste the following links into your browser:

#### ♦ CLINICIAN APPLICATION

[www.uhms.org/images/UHM-Fellow/FUHM\\_CLINICIAN\\_APPLICATION\\_FINAL.pdf](http://www.uhms.org/images/UHM-Fellow/FUHM_CLINICIAN_APPLICATION_FINAL.pdf)

#### ♦ SCIENTIST APPLICATION

[www.uhms.org/images/UHM-Fellow/FUHM\\_SCIENTIST\\_APPLICATION\\_FINAL.pdf](http://www.uhms.org/images/UHM-Fellow/FUHM_SCIENTIST_APPLICATION_FINAL.pdf)

### What's in a name?

Becoming a FUHM is a special honor, an acknowledgment of achievement and of the high standards of expertise, practice and contribution to the field of UHM.

### Policy and purpose . . .

Recognition as a FUHM is awarded to individual members of the Society whose professional activities and standing are judged to be worthy of recognition. The Undersea and Hyperbaric Medical Society Board of Directors confers this recognition based upon the criteria and procedures set forth in the policy document at:  
<https://www.uhms.org/members/fuhm.html>.

### Who can be a FUHM?

Candidates considered eligible for the FUHM award will be members of the Society in good standing who have devoted significant time and effort to the practice or advancement of Undersea and Hyperbaric Medicine (UHM), achieved the highest level of expertise in their field, and demonstrate professional and ethical standards consistent with the aims and expectations of the UHMS.

**Interested? Get the scoop at the URL at the top of the page.**

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**Billing, Coding & Reimbursement:** *continued from previous page*

**Accreditation statement:** The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

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**Designation Statements: Physician CME:** The Undersea & Hyperbaric Medical Society designates this enduring material activity for a maximum of 6.00 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Nursing/RRT:** This enduring material is approved for 6.00 contact hours provided by Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** This enduring material is approved for 6.00 Category A credit hours by National Board of Diving and Hyperbaric Medical Technology, 9 Medical Park, Suite 330, Columbia, South Carolina 29203.

**MOC ABPM:** The American Board of Preventive Medicine has approved this activity for a maximum of 4.75 LLSA credits toward ABPM MOC Part II requirements.

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## Choose your PATH: Blocks 1–3 are open

### UHMS Program for Advanced Training in Hyperbaric Medicine



Open access: <https://www.uhms.org/education/credentialing/caq-hyperbaric-physician-certification.html>

The UHMS Program for Advanced Training in Hyperbaric Medicine/PATH, a program of self-directed learning, is open to MD, DO, NP and PA candidates who have previously completed a 40-hour introduction to hyperbaric medicine course. Candidates who deferred completion in the Stellenbosch CAQ program in undersea and hyperbaric medicine (UHM) previously offered will be enrolled automatically in the revised program at no charge. Upon PATH completion, MD/DO candidates will receive a Certificate of Added Qualification (CAQ), and NP/PA candidates will receive a Certificate of Advanced Education (CAE).

The PATH does not replace fellowship training or board certification in UHM, considered the gold standard for training in undersea and hyperbaric medicine. The CAQ/CAE is intended to demonstrate that a candidate has completed a formal education program covering advanced topics in UHM, as well as having submitted clinical cases for formal review.

The PATH is intended to take between six to 12 months to complete and represents approximately 100 hours of continuing education credits. The PATH curriculum is divided into the components described below.

#### Components of the UHMS PATH:

- ♦ **Reading assignments** – Participants will read selected textbook chapters, seminal articles and other publications.
- ♦ **Video presentations** – Learners will view selected PowerPoint presentations.

- ♦ **Case presentations/write-ups** – Learners will submit 10 HIPAA-compliant case write-ups from initial consultation to the end-of-treatment summary for peer review by a board-certified UHM faculty member.
- ♦ **Case conferences** – Learners participate in regularly scheduled web-hosted case conferences led by board-certified UHM faculty members to discuss interesting cases and provide feedback on case workups.
- ♦ **Skills lab** – Learners will have to complete the UHMS Hyperbaric Medicine Skills and Emergency Management course that will be offered periodically throughout the year.
- ♦ **Examination** – Learners will have a pre-test and post-test to assess gained knowledge.

#### Requirements:

- ♦ You must be a current UHMS Member and maintain your membership during the duration of your certification. If you are not a member, go to [www.uhms.org](http://www.uhms.org) to join.
- ♦ You must have access to a copy of “Hyperbaric Oxygen Therapy Indications, 13th Edition”. You can purchase a copy at [www.uhms.org](http://www.uhms.org) under the ‘Publications’ tab.

#### Block Topics (9 scheduled):

**Block 1:** Hyperbaric Physiology and Side Effects (9 credits)

**Block 2:** Carbon Monoxide Poisoning (7 credits)

**Block 3:** Chronic Radiation Tissue Injury (11 credits)

**Price:** \$2,000 (does not include registration to skills lab)

[www.uhms.org/education/credentialing/caq-hyperbaric-physician-certification.html](https://www.uhms.org/education/credentialing/caq-hyperbaric-physician-certification.html)

**Accreditation Statement:** The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**Designation Statement:** The Undersea and Hyperbaric Medical Society designates this enduring material for a maximum of 9 (Block 1); 7 (Block 2); 11 (Block 3) *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**MOC ABPM:** This activity has been approved by the American Board of Preventive Medicine for up to 6 (Block 2); 11 (Block 3) MOC credits. Claiming ABPM MOC credit is appropriate for those who are ABPM diplomates.

**Full Disclosure Statement:** All faculty members and planners participating in continuing medical education activities sponsored by Undersea and Hyperbaric Medical Society are expected to disclose to the participants any relevant financial relationships with commercial interests. Full disclosure of faculty and planner relevant financial relationships will be made prior to the activity.

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**Disclosure:** All relevant financial relationships with any commercial interests to disclose are listed below for anyone in control of content (if applicable). Those not listed have no relevant financial relationships with commercial interests to disclose. The content has been reviewed and is free of commercial bias. Any relevant relationships noted have been resolved prior to the start of the activity.

## FAST-TRACK 9 added: Joins FAST-TRACKS 1–8

### Emergency and Critical Care; Challenges of 24/7 Hyperbaric Unit

Open access: <https://www.courses-uhms.org/courses/fast-track-education-courses/product/34-fast-track-education-9-emergency-and-critical-care-challenges-of-24-7-hyperbaric-unit.html>

#### FULL COURSE SCHEDULE:

- ♦ **Access to Emergent Hyperbaric Therapy in the United States** / Walter Chin
- ♦ **Emergency and Critical Care Hyperbaric Medicine: A Lost Art** / Ian Grover, MD; Pete Witucki, MD
- ♦ **Treating the Acute Surgical and Trauma Patient** / Richard Baynosa, MD, FACS
- ♦ **Challenges of an Academic 24/7 Hyperbaric Oxygen Unit (HBO) Without a Wound Center** / Kausik Kar, MD, FACP / Stephen Lobo, MD
- ♦ **Decreasing Emergency Hyperbaric Chamber Availability: A growing risk to diver health** / James Chimiak, MD

#### Objectives:

- ♦ Understand what programs are treating hyperbaric emergencies
- ♦ Understand the limitations of treating a high-acuity patient within the hyperbaric environment
- ♦ The main reasons for 24/7 chambers disappearing
- ♦ Ways we can encourage new 24/7 programs
- ♦ Requirements for 24/7 critical care-capable HBO<sub>2</sub> programs

- ♦ Provide a perspective for an inpatient HBO<sub>2</sub> unit
- ♦ Provide details of acuity of cases / special considerations prior to treatment
- ♦ How to better coordinate referral for appropriate patients to higher-acuity care settings
- ♦ Understand critical care equipment, which can be safely used in a hyperbaric environment
- ♦ Be familiar with compromised grafts/flaps and the rationale for why we should be using these in the field
- ♦ Be familiar with crush injury / acute traumatic ischemias
- ♦ Review clinical cases regarding crush/traumatic skin flaps and compromised flaps/grafts
- ♦ Understand the differences between managing a critical care patient in the hyperbaric environment vs. sea level treatment of these patients
- ♦ To fully realize the declining number of chambers available for diving emergencies
- ♦ Understand the factors that may be influencing this trend
- ♦ List measures that may positively affect this trend

#### Prices:

- ♦ Non-Member: \$112.50
- ♦ Regular UHMS Member: \$87.50
- ♦ Associate UHMS Member: \$62.50

**Accreditation statement:** The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physician.

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**Designation statements: Physician CME:** The Undersea & Hyperbaric Medical Society designates this enduring material for a maximum of 5 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**MOC ABPM:** The American Board of Preventive Medicine (ABPM) has approved this activity for a maximum of 4 LLSA credits towards ABPM MOC Part II requirements.

**Nursing/RRT:** This enduring material is approved for 5 contact hours provided by Florida Board of Registered Nursing/RRT Provider #50-10881.

**For NBDHMT:** This enduring material is approved for 5 Category A credit hours by National Board of Diving and Hyperbaric Medical Technology, 9 Medical Park, Suite 330, Columbia, South Carolina 29203

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### Oxyheal founder Ted Gurnee

Oxyheal founder Ted Gurnee passed away on February 28.

Well known to the hyperbaric medicine community for almost half a century, Gurnee's work in diving operations and the design and construction of hyperbaric equipment was borne out of his career in the U.S. Navy. He graduated from the United States Naval Academy in 1961 and hit the ground running, founding SubSea Surveyors, a dive services company that inspected nuclear fuel pools and underwater facilities for power companies.

When the Navy transferred Ted from the East coast to the West coast, he brought SubSea Surveyors with him. The new branch soon became OxyHeal Health Group, which grew subsidiaries to design and construct hyperbaric equipment, medical specialists for wound care, divers for deep-pressure operations, and university-level training and certifications for hyperbaric operations.

In 2016 OxyHeal Health Group's U.S.-based clinical services business for licensed health care facilities was acquired by CūtisCare LLC, while OxyHeal International continues to manufacture and provide technical support for hyperbaric oxygen systems, as well as clinical, educational, and training services for hyperbaric and wound healing facilities worldwide.

With 45-plus years, OxyHeal International®, Inc. was the longest continually operating, single-owner, national wound healing and hyperbaric oxygen therapy clinical services provider in the United States.

Ted's legacy is a long and distinguished one, which continues even now. In lieu of flowers, Ted's wife, Michelle, has asked that well-wishers send a donation under Ted's name to a charity, suggesting the UHMS as one.

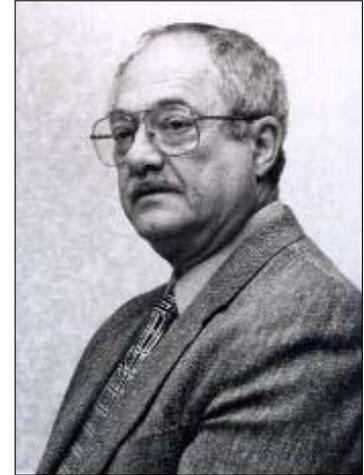
"Thank you so much for the offer," wrote UHMS Executive Director John Peters. "Ted was an incredibly important person and contributor to our field and the Society. I feel blessed to have known him. We are happy to accept gifts in Ted's honor and we will mark them as such."

If you would like to make a donation to the UHMS Fund for Research and Policy Advancement in Ted's memory, visit <https://www.uhms.org/funding.html>, or call John Peters at +561-776-6110 ext. 100.



~Photo and text courtesy of [www.webb.edu/alumni-spotlight-ted-gurnee/](http://www.webb.edu/alumni-spotlight-ted-gurnee/)

## Richard Dean Heimbach, aerospace medicine specialist and former UHMS President



Dr. Richard Dean Heimbach passed away on February 22.

President of the UHMS during 1988-1989 and an icon in hyperbaric medicine, Dr. Heimbach was an aerospace medicine specialist practicing in San Antonio, Texas, with a long and distinguished career.

### First path

Heimbach received his MD at the University of Chicago in 1960, then completed an internship at Presbyterian-St Luke's Hospital in Chicago. He later returned to the University of Chicago for a residency in radiology but was drafted into military service 1962 with the U.S. Air Force under the Doctor's Draft Act. Assigned as Chief of Radiology at Ellsworth Air Force Base, North Dakota for 18 months, he was sponsored by the Air Force for a PhD in Radiobiology at New York University, where he received an Alumni Award for Scholastic Excellence. He was assigned to Kirtland AFB, New Mexico, to conduct radiobiological research.

Heimbach had obtained a commercial pilot's license at an early age, and he remained in the Air Force to become a flight surgeon. He attended a Residency in Aerospace Medicine (RAM) at Brooks Air Force Base, Texas, and was sent to Harvard School of Public Health to obtain a Masters in Public Health. In 1974, Heimbach was board-certified in Aerospace Medicine by the American Board of Preventive Medicine.

An active swimmer, he had become interested in scuba diving at 17. His interest in hyperbaric medicine came through Dr. Jefferson C. Davis, his RAM advisor. Aviation and diving were a perfect fit for his personal and professional interests.

Heimbach was a colleague of Jefferson C. Davis. In 1974, Dr. Davis convinced the Air Force Surgeon General to establish the USAF Hyperbaric Medicine

Center at Brooks AFB, Texas; Dr. Heimbach became the Director of Medical Operations. Preceding the current certification process, he created a Fellowship for Hyperbaric Medicine Physicians and a Fellowship Program for Hyperbaric Nurses and Hyperbaric Technicians. With scientific papers, textbook chapters, and service within professional societies, he made major contributions toward the creation of the hyperbaric medicine specialty. Later Heimbach became Director of the USAF Hyperbaric Medicine Center, where he served until his military retirement.

### Second Path

In 1982, Dr. Heimbach entered private practice with his colleagues, Dr. Jeff Davis and Dr. Jared Dunn. Three years earlier, they had established a wound care and hyperbaric medicine practice at the Southwest Texas Methodist Hospital in San Antonio, Texas – the only civilian wound care and hyperbaric medicine facility in South Central United States at that time. A second chamber was added at Methodist Hospital, and within five years the practice had expanded to the Nix Medical Center in San Antonio. The combined service is known as the San Antonio Wound Care and Hyperbaric Medicine Center. When Davis died in July 1989, Heimbach became Medical Director.

He and Dr. Davis are the only individuals who have served as President of both the Aerospace Medical Association, and the UHMS. He represented AsMA



## Jeffrey Holmes Rudell

Dr. Jeffrey Ruddell, 77, passed away on March 9.

Dr. Ruddell was struck and killed on A1A in St. Johns County, North Florida, as he was crossing the highway. He died instantly.

A resident of Jacksonville, he will be honored with a memorial service at Chabad at the Beaches, Jacksonville, on Sunday, March 25. At posting time the hour had not been finalized.

“He was a wonderful brother, my protector, idea guy, fountain of information and ideas, my shoulder to lean on, witty, sometimes drove me crazy, and so much more. And I adored him,” wrote his sister Linda Rudell in a family posting on Facebook. She noted she is planning a memorial service in May in Long Beach, New York, with details to follow.

“Please keep [my father], my aunt Linda Rudell and my mom, Judy Rudell, in your thoughts and prayers,” wrote son Adam Rudell.




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### HEIMBACH – continued

in creation of the first certification exam in aerospace physiology in 1977 and the UHMS in the development of the first physician certification exam in Undersea Medicine that was administered by the American Board of Preventive Medicine in 1992.

For his clinical contributions, he has been honored with the prestigious Boerema Award from the UHMS, the Jefferson C. Davis Memorial Award from the Gulf Coast Chapter of UHMS, and the Mederi Award from the USAF School of Aerospace Medicine.

Following Dr. Eric Kindwall, Dr. Heimbach became the second Chairman of the UHMS Hyperbaric Oxygen Therapy Committee, taking the lead in developing a method for subject matter experts to have input into the decision-making process to establish the UHMS-Accepted List of Indications for HBO<sub>2</sub>. As Committee Chair, he was instrumental in the Health Care Financing Administration’s acceptance of the UHMS list as approved indications for HBO<sub>2</sub> therapy.

Dr. Heimbach is survived by his wife, Jackie; his brother Hal Lieberman; his daughter Leah Rodarti,

her husband Joe, and their children Jeff, Matt, Jenna and Dominic Rodarti, and grandchildren Sophia and Jayden; and his daughter Marah Moore, her partner Sanjay Poovadan, and their children Aaron, Sam, and Alina Moore and Eli Cain. He was preceded in death by his daughter Rebekah Stapleton who is survived by her daughter, Kristen Stapleton. He is also survived by his daughter Sarah Heimbach Wood; his stepson James Miller and his children, Easton and Bailey Miller; and his stepdaughter Karen Miller and her children, Abbey and Riley Francis.

Dr. Heimbach’s memorial service will take place Friday April 27, 2018, at Fort Sam Houston National Cemetery in San Antonio, Texas, at 11:00 am. In lieu of flowers, please send donations to Meals on Wheels San Antonio or Southern Poverty Law Center in Dr. Heimbach’s name.



*~ Information courtesy of the National Board of Diving and Hyperbaric Medical Technology and Nix Medical Center*

## John B. Berte

Dr. John Berte, age 90, died on November 15, 2016, at Hope Hospice in Cape Coral, Florida.

Berte was born in Brooklyn, New York, in 1926. He went to Xavier Military High School and then to Spring Hill Jesuit College in Alabama, joining the Jesuits as a seminarian for nine years. Later he went back to school at Georgetown University to become a doctor.

When he finished medical school, he returned to New York to practice pulmonary medicine, practicing at St. Raphael's and Yale New Haven in the 1960s. He was also a professor at Yale and started a respiratory therapy department at St. Raphael's.

When he retired in 1989, Berte and his wife, Jody, moved to Cape Coral, Florida, where he was involved in numerous activities within the community and his church. He will be greatly missed by all who knew him.



Dr. Berte was preceded in death by his beloved wife of 56 years, Josephine "Jody" Berte and son, Joel Berte. He is survived by daughter, Carol Cruz, and son, Kevin Berte, as well as many loving family and friends.

~ Courtesy of The News-Press

I am a doctor - it's a profession that may be considered a special mission, a devotion.  
It calls for involvement, respect and willingness to help all other people.

~ Dr. Ewa Kopacz

former Prime Minister of Poland, Minister of health, pediatrician and general practitioner



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MAKE A DONATION TODAY.**

<https://www.uhms.org/funding.html>

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**UHMS Fund for Research and Policy Advancement**



## A NEW DAY FOR THE AMA?

Dr. Lisa Gould discusses why AMA representation by hyperbaric medicine practitioners is important

I will be the first to say that I am not usually a willing participant in organized medicine, religion or politics.

It was around this time that the American College of Surgeons emerged as one of the major organizations that did not support the AMA. Thus, as I was finishing my surgical residency, joining the AMA was not high on the list of recommendations. In fact, the AMA has a history of deep conservatism and anyone who knows me recognizes that I am a card-carrying tree hugger – i.e., probably not conservative.

However, when past UHMS President Laurie Gesell asked if I'd be willing to represent the UHMS as an alternate to the House of Delegates to the American Medical Association, I felt obligated to at least entertain the idea.

So, I delved into the history of the AMA and explored whether my basic distrust of the organization was legitimate. I started with the following questions:

1. *What is my distrust based on?*
2. *Is the AMA really the voice of American Medicine? If so, do they represent MY voice?*
3. *Does the AMA make policies that will help my patients?*
4. *Does the AMA oppose or agree with the positions of the societies that I am already a member of, specifically the American College of Surgeons and the American Society of Plastic Surgeons?*

I was surprised by my findings.

Established in 1847, the AMA is the nation's oldest and largest medical organization. Growth was strong through the 1960s, but the organization fell into serious financial difficulties by the 1990s. Although it was encouraging membership of residents and students at reduced rates, the rate for physician members was over \$400 in the 1990s, and many younger physicians felt they could not afford to join, particularly when involvement in specialty societies was on the rise.

Concurrently the AMA was taking increasingly conservative political stances, and its political involvement in Washington appeared to have mixed motives.

So how do I reconcile: a) joining the AMA; and b) representing UHMS in the House of Delegates?

Having explored the AMA website and multiple online forums, I arrived at the conclusion that the AMA has changed. Although historically the AMA did not support health insurance or Medicare, in the past decade the AMA has become more aggressive about expanding access to health care and decreasing the number of uninsured. It embraced the Affordable Care Act in 2009 and passed resolutions in support of transgender rights in 2014. In 2016 the AMA declared gun violence a public health crisis and began lobbying for gun control measures. In 2017, in conjunction with many state medical societies, the AMA mounted a successful effort to block the Aetna-Humana and the Anthem-Cigna mergers. It is attacking the opioid crisis, taking on issues about physician well-being and the burden of the electronic health record.

Since 2012 memberships have been increasing – perhaps due to growing numbers of medical students and residents – but that is also part of the reason for change. There is growing political polarization among doctors, now split almost evenly between Republicans and Democrats. Thus, the AMA of today is decidedly more bipartisan and more democratic than the one I learned about in residency.

The system of representation by the House of Delegates (HOD), established in the early 1900s, continues. Today the AMA's HOD is the principal policy-making body, represented by more than 190 medical organizations, including the UHMS.

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Reports and resolutions from the society representatives are brought to the HOD. Once adopted, AMA resolutions have the support of a tremendously powerful lobby. Examples from the 2017 meeting include policies to make the process of maintenance of certification less burdensome for physicians while affirming that lifelong learning is a fundamental obligation of the profession, proposals that focus on transparency in drug pricing, reducing the burden of prior authorization on physicians, insurance network termination without notice, scope of practice for non-physicians and development of a rural medicine caucus.

I'd like to highlight a policy that immediately grabbed my attention because it is a common problem in wound care. Some may know that Anthem Blue Cross had proposed a 50% cut in reimbursement for evaluation and management (E/M) services provided in conjunction with a procedure, coded with the -25 modifier. In 2017 the HOD adopted policy opposing any pay reduction for E/M services that are provided on the same day a procedure is performed. The HOD directed the AMA to "aggressively and immediately advocate" that when an E/M code is appropriately reported with a -25 modifier, that both the procedure and the E/M service are paid at the allowable rate without reduction.

As a result of the efforts of the AMA and other societies, Anthem rescinded their proposed cuts for same-day service, originally reducing the cut from 50% to 25%. However, the AMA pushed back, feeling that this was not enough and noted other concerns regarding Anthem's payment policies.

Thus, it was announced recently that the AMA and Anthem Blue Cross Blue Shield will work collaboratively in the following areas:

- ◆ enhance consumer and patient health care literacy;
- ◆ develop/enhance and implement value-based payment models for primary and specialty care physicians;
- ◆ improve access to timely, actionable data to enhance patient care; and
- ◆ streamline and/or eliminate low-value prior authorization requirements.

I'm sure that I won't agree with all of AMA's policies. However, in this era of increasing fragmentation and subspecialization, we need a society that can speak with a broad voice for the issues that impact the majority of physicians and our patients. And, the AMA needs to hear from specialists who know what is important to their patients. Representation in the HOD is apportioned based on the percentage of AMA members in the organization. Thus UHMS has only one delegate and one alternate. The practice of wound care and hyperbaric medicine is highly interdisciplinary yet fragmented, and reimbursement for our services is constantly threatened. With more representation the AMA will better understand our unique needs and challenges in getting services that will benefit our patients and can harness their power to overcome these obstacles. ■

*Lisa Gould, MD, PhD, FACS is Associate Medical Director for South Shore Health System Center for Wound Healing and the UHMS alternate to the House of Delegates to the American Medical Association. She joins UHMS delegate Dr. Laurie Gesell.*

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**UHMS: Raising the Quality of Practice  
One Member at a Time**

*After the posting of the 2017 fourth-quarter issue of Pressure, we received the following letter from a colleague addressing one of our columns.*

*While this is an unexpected first for Pressure, the fresh bluntness of Dr. Davis' perspective from abroad casts an eye toward how the United States is perceived in the arena of guns and violence.*

*The fact we are publishing this is acknowledgment of a divide in attitudes toward guns in general, not a criticism of either the letter-writer or the author of the column.*

*~ Renée Duncan, Editor*

### Dear UHMS,

Reading the latest *Pressure* [fourth quarter 2017], I was thankful that I do not live in the USA. I am referring to the "Safety Report – Active shooter event: Do you and your staff have a plan?" [ [www.uhms.org/publications/pressure/fourth-quarter-pressure/viewdocument.html](http://www.uhms.org/publications/pressure/fourth-quarter-pressure/viewdocument.html) ]

What a sad reflection on your nation's appalling attitude to guns and gun control. So many mass shootings. I doubt whether many U.S. citizens take much notice of the implications of the first part of the 2nd amendment: "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed."

The days of flintlock muskets and inaccurate single-shot pistols are long gone, not the here and now of automatic rifles and machine guns, and you have a trained standing military, not a militia.

I live in a society here in New Zealand where shootings are rare, the police do not openly bear arms in the routine course of their duties and the worst mayhem we tend to see in our hospitals is that caused by unarmed, drunken idiots in the ER on Friday and Saturday nights. In all my years (30+) as an anaesthetist and intensive care physician in the UK, Sweden, the USA and New Zealand, the only country in which I ever had to deal with deliberate gunshot wounds was in the USA (yes, we have hunters who have mistakenly shot their buddies or gun owners leave loaded weapons accessible to children, but these are very rare cases).

Here are some comparative stats:

- Gun-related deaths per 100,000 population per year (based on 2014 data) in New Zealand (1.07) are 10 times fewer than in the USA (10.54).
- A tenth of these (0.11) are homicides compared to a third (3.6) in the USA – a rate that is 33 times less per 100,00 population than in the USA.
- Nearly 80% of New Zealand's gun-related deaths are suicides.
- The number of guns per 100 inhabitants is 30 in New Zealand and 100 in the USA and the number of deaths per gun is roughly the same ratio – i.e., New Zealand's is one-third of the rate in the USA.

We have a community in New Zealand with a moderate gun ownership rate, because of being a relatively high agrarian and hunting community, combined with much stricter gun controls than that in the USA.

These rates are similar to those in Australia (2013 data) though the homicide rate is a little higher in Australia.

I lived and worked as a physician in Seattle, Wash., and Worcester, Massachusetts, for 15 months in the mid-1970s, during which time I had a knife drawn on me once by a (white) male in the street (fortunately the wielder fell over, he was so drunk/stoned). A white security guard drew his gun on me at LAX airport when I politely asked the way to a particular place. The guard replied: "Use your f\*\*\*\*\*g eyes", to which I responded somewhat angrily. At which point the gun was drawn.

*~ Mike Davis*

*Christchurch, New Zealand  
simo01@xtra.co.nz*

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## QUERIES, CRITIQUES & EXPOSITIONS . . .

Direct all questions or comments on matter appearing in the UHMS newsletter *Pressure* to [uhms@uhms.org](mailto:uhms@uhms.org) or write the editor directly.

- Renée Duncan, Managing Editor  
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**To: All UHM Journal contributors and reviewers**

**Re: Change in editorial platform** for online submissions and reviews: <https://www.manuscriptmanager.net/uhm>

**Dear Contributors to and Reviewers of the UHM Journal:** UHMS has moved moving to Manuscript Manager editorial platform for all new submissions. Current authors and reviewers are aware of the change.

**Make all new submissions at:**

<https://www.manuscriptmanager.net/uhm>

As for pending submissions in progress, all remaining papers will be dealt with directly by Editor-in-Chief Dr. Enrico Camporesi and Managing Editor Renée Duncan.

Aside from the platform change, we have kept our basic guides and requirements.

We will do our very best to make this transition smooth for you (and us). Please be patient with us during this move.

If you have questions, send them to [renee@uhms.org](mailto:renee@uhms.org)

## **Speaking of the Journal . . .**

**Here's a look at the JANUARY-FEBRUARY 2018 issue (45-1) titles:**

**Available at:** [www.uhms.org/publications/uhm-journal/download-uhm-journal-pdfs/uhm-journal-vol-45/number-1.html](http://www.uhms.org/publications/uhm-journal/download-uhm-journal-pdfs/uhm-journal-vol-45/number-1.html)

### **CLINICAL PAPERS**

**The Hyperbaric Oxygen Therapy Registry: Driving quality and demonstrating compliance** by Caroline E. Fife, Kristen A. Eckert

**Impact of hyperbaric oxygenation on oxidative stress in diabetic patients** by Sandra Tepic, Anica Petkovic, Ivan Srejavic, et al.

**An anti-barotrauma system for preventing barotrauma during hyperbaric oxygen therapy** by Moon Song, Se Hoon Jeon, Tae Min Shin

**Hyperbaric oxygen therapy as adjuvant for treating wound complications after extensive resection for vulvar malignancy** by André Lopes, Ronaldo Lúcio Rangel Costa, Gabriel Lowndes de Souza Pinto, et al.

### **DIVE PAPERS**

**Analysis of factors related to failure in the pressure test: a six-year experience in Taiwan** by Wei-Shih Tseng, Man-Yuan Huang, Hui-Chieh Lee, et al.

**A case-control questionnaire survey of decompression sickness risk in Okinawa divers** by Naoko Suzuki, Kazuyoshi Yagishita, Mitsuhiro Enomoto, et al.

**Influence of exposure in hyperbaric chambers on selected parameters of oxidative stress in professional divers** by Mariusz Kozakiewicz, Kornelia Kedziora-Kornatowska, Dorota Kaczerska, et al.

**Blood lactate accumulation during competitive freediving and synchronized swimming** by Lara Rodríguez-Zamora, H.K. Engan, Angelica Lodin-Sundström, et al.

**Cervicocranial artery dissection and scuba diving: Is there a link or is it serendipity?** by Gerald K. Walters

**Do not fear the Framingham: Practical application to properly evaluate and modify cardiovascular risk in commercial divers** by Rahul Suresh, James Pavela, Marcin S. Kus, et al.

### **CASE REPORTS**

**Hyperbaric oxygen for late sequelae of carbon monoxide poisoning enhances neurological recovery: case report**  
Lon W. Keim, Sreekanth Koneru, Vesper Fe Marie Ramos, et al.

**An approach to treating a patient with a HeartMate II™ left ventricular assist device in a multiplace hyperbaric chamber**  
D. Orwig, C. Logue, S. Hendriksen, et al.

**Hemiplegia and bilateral globus pallidus infarcts after carbon monoxide poisoning: case report**  
Douglas G. Sward, Travis W. Austin

**Management of central retinal artery occlusion following successful hyperbaric oxygen therapy: case report**  
F.K. Butler, C. Hagan, K. Van Hoesen, H. Murphy-Lavoie

### **BOOK REVIEW, LETTERS & POLICY**

**Book Review: *Gas Bubble Dynamics in the Human Body*** – Goldman, Solano-Altamirano, Ledez by S.M. Egi, A Marroni

**Letter: Re: Evaluation of regulator performance in polar diving** by N.W. Pollock

**Letter: Response Re: Evaluation of regulator performance in polar diving** by M.A. Lang, J.R. Clarke

**Letter: Commentary on article in *Diabetes Care*** by R. Clarke, J.R. Hussey

**Policy: *UHMS Guidelines for Credentialing, Privileging and Supervision of Hyperbaric Oxygen Therapy in the U.S.A.***



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## Questions?

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#### Get MEDFAQs in each issue.

Selected questions and answers from the UHMS' popular medical frequently asked questions portion of the website highlight vital issues the Society is addressing: reimbursement, patient care, credentialing, safety, quality assurance and more. Log in and see what's what at:

[www.uhms.org/resources/medfaqs-frequently-asked-questions-faq.html](http://www.uhms.org/resources/medfaqs-frequently-asked-questions-faq.html)

#### Author guides have changed.

Not a lot, but enough that you should read them again. Go to:

[www.uhms.org/publications/uhm-journal/about-the-uhm-journal.htm](http://www.uhms.org/publications/uhm-journal/about-the-uhm-journal.htm)

In the meantime, here are some other points to ponder . . .

#### Paper specs.

You'll see greater detail in descriptions of each type of document that appears in *UHM*, including suggested word counts and numbers of references and figures. As always, the editorial team, plus our invaluable reviewers, will consider the merits of each paper.

#### Title page requirements.

You'll see that for clarity, requirements for the title page are more clearly indicated. For example, authors' full names and highest academic degree will be used, and you'll find character counts for titles and running heads/subheads.

#### Reference musts.

Note that reference citations appearing in the *UHM* Journal are to be in the form used by the U.S. National Library of Medicine and Index Medicus, as seen here:

*Thorsen E, Risberg J, Segadal K, Hope A. Effects of venous gas microemboli on pulmonary gas transfer function. Undersea Hyperb Med. 1995; 22: 347-353.*

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### 2018 EVENTS

- participation in the 26th European Diving Show with diving simulation by virtual and augmented reality. Bologna 2-4 March 2018 <https://www.eudishow.eu/site/en/informative-brochure/>
- XXIII SIMSI Annual Meeting at the headquarters of the Italian Navy combat divers. Le Grazie-Portovenere, 18-20 October 2018 [www.simsi.it](http://www.simsi.it)
- “SIMSI on Tour” (diving experience and “Meet the experts” session) will stop in Palermo, Caserta, Sperlonga (LT), Argentario (GR), Milan, Porto San Elpidio (Fermo) and in the Republic of San Marino
- four training courses on HBO<sub>2</sub> in wound care;
- three editions of the Diving Medical Advisory Committee (DMAC) Level 1 “Medical Examiner of Divers.” The courses will be in English (based on videoconference and a practical residential course).

## TRICON2018

2nd Tricontinental Scientific Conference  
on Diving and Hyperbaric Medicine  
Durban, South Africa

<http://www.tricon2018.org>

A Joint Organizing Committee from EUBS, SPUMS, SAUHMA and the Scott Haldane Foundation are at work with the local Durban Hyperbaric Centre staff and a South Africa Conference & Event Management Bureau on a full week of scientific days interspersed with diving workshops and social events.

The academic programme includes presentations, workshops, discussion sessions, and special-topic conferences. Our social calendar encompasses a welcome cocktail party, a gala dinner and the ever-popular post-conference happy hour.

Plus, you'll have opportunities to dive the nearby Aliwal Shoal, visit wildlife game parks, take in a local rugby match and explore Zulu culture, all in a family-friendly venue.

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[www.bestpub.com](http://www.bestpub.com)

**Center for Wound Healing  
and Hyperbaric Medicine**  
Taylor, Michigan  
[www.healthgrades.com/group-directory/mi-michigan/taylor/the-center-for-wound-healing-and-hyperbaric-medicine-y53hph](http://www.healthgrades.com/group-directory/mi-michigan/taylor/the-center-for-wound-healing-and-hyperbaric-medicine-y53hph)

**Fink Engineering Pty Ltd**  
Warana, Queensland, AUSTRALIA  
[www.fink.com.au](http://www.fink.com.au)

**Mayo Clinic Hyperbaric  
& Altitude Med. Program**  
Rochester, Minnesota  
[www.mayoclinic.org](http://www.mayoclinic.org)

**Restorix Health Inc.**  
White Plains, New York  
[www.restorixhealth.com](http://www.restorixhealth.com)

### GOLD LEVEL

**CutisCare, LLC**  
Boca Raton, Florida  
[www.cutiscareusa.com](http://www.cutiscareusa.com)

**The Diver Clinic**  
Poole, Dorset, UK  
[www.thediverclinic.com/](http://www.thediverclinic.com/)

**Divers Alert Network**  
Durham, North Carolina  
[www.dan.org](http://www.dan.org)

**Environmental Tectonics Corp.  
Hyperbaric Division**  
Southampton, Pennsylvania  
[www.etcBioMedical.com](http://www.etcBioMedical.com)

**International ATMO, Inc**  
San Antonio, Texas  
[www.hyperbaricmedicine.com](http://www.hyperbaricmedicine.com)

### SILVER LEVEL

**Anacapa Technologies**  
San Dimas, California  
[www.anacapa-tech.net/](http://www.anacapa-tech.net/)

**Aurora Health Care**  
Milwaukee, Wisconsin  
[www.aurorahealthcare.org/](http://www.aurorahealthcare.org/)

**Centro Medico Hiperbárico  
de Estepona**  
Estepona, Málaga SPAIN  
[centrohiperbarico.com](http://centrohiperbarico.com)

**Christus St. Vincent Regional**  
Santa Fe, New Mexico  
[www.stvin.org/](http://www.stvin.org/)

**Diving Diseases Research Centre/  
DDRC Healthcare**  
Devon, UK  
[www.ddrc.org/](http://www.ddrc.org/)

**Healogics Inc.**  
Jacksonville, Florida  
[www.healogics.com](http://www.healogics.com)

**HyOx Medical Treatment Center**  
Marietta, Georgia  
[www.hyoX.com/](http://www.hyoX.com/)

## UHMS CORPORATE PARTNERS:

*Thank you for your support as we celebrate our 50th anniversary.*



### SILVER LEVEL ~ continued

#### **Hyperbaric Medical Services**

Republic of Singapore

[www.hyperbaric-singapore.com](http://www.hyperbaric-singapore.com)

#### **HyperbaRXs**

Marietta, Georgia

[www.hbomdga.com/](http://www.hbomdga.com/)

#### **Innovative Healing Systems**

Tampa, Florida

<http://innovativehealingsystems.com>

#### **Kingsbridge Healthcare**

Lake Forest, Illinois

<http://kingsbridgehealthcare.com/>

#### **LDS Hospital, Critical Care**

**Medicine / Intermountain**

**Hyperbaric Medicine**

Salt Lake City, Utah

<http://intermountainhealthcare.org>

#### **Life Support Technologies Group**

Tarrytown, New York

[www.lifesupport-usa.com](http://www.lifesupport-usa.com)

#### **Mayo Clinic Health Systems- Albert Lea**

Albert Lea, Minnesota

[http://mayoclinichealthsystem.org/  
locations/albert-lea](http://mayoclinichealthsystem.org/locations/albert-lea)

#### **Mon Health Wound Care**

Morgantown, West Virginia

[www.monhealthsys.org](http://www.monhealthsys.org)

#### **Mountain View Hospital – Advanced Wound Care & Hyperbarics**

Idaho Falls, Idaho

[www.mountainviewhospital.org/  
wound-care](http://www.mountainviewhospital.org/wound-care)

#### **The Ottawa Hospital**

Ottawa, Ontario, CANADA

[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)

#### **Peninsula Regional Medical Center**

Salisbury, Maryland

[www.peninsula.org](http://www.peninsula.org)

#### **Precision Health Care Inc.**

Boca Raton, Florida

<http://precisionhealthcare.com/>

#### **Shared Health Services Inc.**

Johnson City, Tennessee

[www.sharedhealthservices.com](http://www.sharedhealthservices.com)

#### **Wesley Center for Hyperbaric Medicine**

Toowong, Queensland, AUSTRALIA

<http://wesleyhyperbaric.com.au>

#### **Wound Care Education Partners**

North Palm Beach, Florida

[www.woundeducationpartners.com](http://www.woundeducationpartners.com)

#### **Wound & Hyperbaric Medicine Center of Beverly Hospital**

Beverly, MA

[www.beverlyhospital.org/locations-  
-services/health-services/wound-  
and-hyperbaric-medicine/hyperbaric-  
oxygen-therapy](http://www.beverlyhospital.org/locations-services/health-services/wound-and-hyperbaric-medicine/hyperbaric-oxygen-therapy)



# UHM FELLOWSHIPS

## Undersea & Hyperbaric Medicine

diversity in education and action

Undersea and hyperbaric medicine is a diverse specialty that offers opportunities to practice clinical, academic, research and administrative aspects of hyperbaric and diving medicine.

Medical patients are referred from critical care, surgery, plastics, medicine, orthopedics, ophthalmology, podiatry and emergency medicine. Diving patients hail from recreational, commercial, research, scientific, military and technical diving backgrounds. *Your future awaits.*

### CONTACT INFO:

#### **DUKE UNIVERSITY MEDICAL CENTER** Durham, N.C.

Contact: John Freiburger, MD, FUHM

E-mail: [john.freiberger@duke.edu](mailto:john.freiberger@duke.edu)

Phone: (919) 684-6726

Home page: [http://anesthesiology.duke.edu/?page\\_id=828766](http://anesthesiology.duke.edu/?page_id=828766)

#### **HENNEPIN COUNTY MEDICAL CENTER** Minneapolis, Minn.

Contact: Stephen Hendriksen, MD

E-mail: [stephen.hendriksen@hcmcd.org](mailto:stephen.hendriksen@hcmcd.org)

Phone: (612) 873-7420

Home page: [www.hcmc.org/education/fellowships/hyperbaric-fellowship/index.htm](http://www.hcmc.org/education/fellowships/hyperbaric-fellowship/index.htm)

#### **KENT HOSPITAL** Warwick, R.I.

Contact: Todd May

E-mail: [twmay99@gmail.com](mailto:twmay99@gmail.com)

Phone: (401) 736-4646

Home page: [www.kentri.org/](http://www.kentri.org/)

#### **LOUISIANA STATE UNIVERSITY** New Orleans, La.

Contact: Tracy Leigh LeGros, MD, PhD, FACEP, FAAEM, FUHM

E-mail: [tlegros1@cox.net](mailto:tlegros1@cox.net)

Phone: (504) 366-7638

Home Page: [www.medschool.lsuhsu.edu/emergency\\_medicine/fellowship\\_hyperbarics.aspx](http://www.medschool.lsuhsu.edu/emergency_medicine/fellowship_hyperbarics.aspx)

#### **THE SAN ANTONIO UNIFORMED SERVICES HEALTH EDUCATION CONSORTIUM (SAUSHEC)** San Antonio, Texas

Contact: Michael F. Richards, MD

E-mail: [michael.richards.1@us.af.mil](mailto:michael.richards.1@us.af.mil)

Phone: (210) 292-3483

Home page: [www.bamc.amedd.army.mil/saushec/](http://www.bamc.amedd.army.mil/saushec/)

#### **SUNY UPSTATE MEDICAL UNIVERSITY** Syracuse, N.Y.

Contact: Marvin Heyboer III, MD, FACEP, FUHM

E-mail: [heyboerm@upstate.edu](mailto:heyboerm@upstate.edu)

Phone: (315) 464-4363

Home page: [www.upstate.edu/emergency/education/fellowships/hyperbaric.php](http://www.upstate.edu/emergency/education/fellowships/hyperbaric.php)

#### **UNIVERSITY OF CALIFORNIA SAN DIEGO** San Diego, Calif.

Contact: Peter Witucki, MD, FACEP

E-mail: [pwitucki@ucsd.edu](mailto:pwitucki@ucsd.edu)

Phone: (619) 543-6463 or (619) 543-6218

Home page: <http://emergencymed.ucsd.edu/education/fellowships/hyperbaric>

#### **UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER** Philadelphia, Pa.

Contact: Kevin Hardy, MD and Wendy Kelly

E-mail: [wherrman@mail.med.upenn.edu](mailto:wherrman@mail.med.upenn.edu)

Phone: (215) 898-9095

Home page: [www.uphs.upenn.edu/ifem/hbofellowshipoutline.pdf](http://www.uphs.upenn.edu/ifem/hbofellowshipoutline.pdf)



# EDUCATION: UHMS DIRECTLY SPONSORED ACTIVITIES

Directly sponsored activities fully involve the UHMS in organization, planning, selecting Directors, Faculty and submission for CME Certification.

## UHMS ONLINE CONTINUING EDUCATION PORTAL

### ■ UHMS PROGRAM FOR ADVANCED TRAINING IN HYPERBARIC MEDICINE



**UHMS PATH BLOCKS 1-3** are open to MD, DO, NP and PA candidates who have previously completed a 40-hour introduction to hyperbaric medicine course. Upon completion, MD/DO candidates receive a Certificate of Added Qualification (CAQ) and NP/PA candidates earn a Certificate of Advanced Education (CAE).

The PATH does not replace fellowship training or board certification, considered the gold standard for training in undersea and hyperbaric medicine. The CAQ/CAE is intended to demonstrate that a candidate has completed a formal education program covering advanced topics in UHM, as well as filing clinical cases for formal review.

The PATH is intended to take between six to 12 months to complete and represents approximately 120 hours of continuing education credits. The PATH curriculum is divided into five (5) main components.

**NOTE:** Blocks 1-3 are open for enrollment, with plans for a total of nine blocks.

- **Block 1:** Mechanisms of action of hyperbaric medicine  
9 AMA PRA Category 1 Credits™\*
- **Block 2:** Carbon monoxide poisoning  
7 AMA PRA Category 1 Credits™\*
- **Block 3:** Chronic radiation tissue injury  
11 AMA PRA Category 1 Credits™\*

For complete info and to sign up, see

[www.courses-uhms.org/courses/uhms-path.html](http://www.courses-uhms.org/courses/uhms-path.html)

\* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

+ Claiming ABPM MOC credit is appropriate for those who are ABPM diplomates.

### ■ NEW 2016 SYMPOSIUM ON HYPERBARIC MEDICINE & WOUND MANAGEMENT UPDATE

#### CONTENT:

- NFPA 99 and PVHO-2: What You Need to Know and What May Be Changing
- Hyperbaric Safety: Issues, Cases and Discussion
- Role of Non-Physician Providers in Hyperbaric Medicine and Wound Care
- New Rules of the Game: An Update on Quality Measures and Board Certification
- Wound Clinic vs. Multidisciplinary Limb Salvage Program – What's the Difference?
- Clinical Cases
- Iatrogenic Gas Embolism: Bubble Trouble in the Hospital
- Treatment of Radiation Tissue Injury with HBO<sub>2</sub>
- Wound Care: The Basics and Beyond
- Dosing of Hyperbaric Oxygen: What Protocol and How Many Treatments are Needed?
- Integration of Fluorescence Angiography into a Wound and Hyperbaric Practice
- Update on the UHMS Clinical Practice Guidelines for use of HBO<sub>2</sub> and Diabetic Foot Ulcers
- Oxygen and Infection: What do we Know and What Can We Treat?
- Critical Care in the Multiplace Chamber
- HBO<sub>2</sub> and Necrotizing Soft Tissue Infections
- Human Decision-Making Limitations and Automatic Computer Protocol Control of Patient Care
- Frostbite Injury and Role for HBO<sub>2</sub>

**PHYSICIAN CME:** 20 AMA PRA Category 1 Credits™\*

**NURSING/RRT:** 20 contact hours provided by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 16 Category A and 4 Category B credit hours by the National Board of Diving and Hyperbaric Medical Technology.



# UHMS ONLINE CONTINUING EDUCATION PORTAL

**MOC ABPM Board-Certified Docs:** Up to 16 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

<http://www.courses-uhms.org/courses/symposium-on-hyperbaric-medicine-and-wound-management-new.html>

## ■ MAYO CLINIC HYPERBARIC MEDICINE

**PHYSICIAN CME:** Max. 15.50 *AMA PRA Cat. 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 11.25 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 15.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 15.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

[www.courses-uhms.org/courses/mayo-clinic-hyperbaric-medicine-2015-new.html](http://www.courses-uhms.org/courses/mayo-clinic-hyperbaric-medicine-2015-new.html)

## ■ FAST TRACK 1: Best Practices in Hyperbaric Medicine and Wound Care: GRADE, CPGs, Future Research

**OBJECTIVES:** Describe how regulatory agencies are restricting coverage and reimbursement of HBO<sub>2</sub>; develop strategies to promote evidenced-based use of HBO<sub>2</sub> using CPGs and high-quality research; understanding of the basic principles and best practices of wound care and hyperbaric medicine.

**PHYSICIAN CME:** Max. 4 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 4 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 4 contact hours by Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 4 Category A credit hours by National Board of Diving & Hyperbaric Medical Technology.

## ■ FAST TRACK 2: Wound Care: NPWT, Surgical Treatment of Wounds, Case Studies

**PHYSICIAN CME:** Max. 4.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 3.5 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 4.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** Acceptable for CHT and CHRN recertification requirements of Cat 'B' level (not directly related to HBO<sub>2</sub>).

## ■ FAST TRACK 3: Diver Fatalities, Fitness to Dive, Stresses in Diving and Case Studies

**PHYSICIAN CME:** Max. 4.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 3.75 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 4.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 4.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ FAST TRACK 4: Hyperbaric Facility Operations (Staffing Roles, UHMS Accreditation, Practice Models and NFPA Update)

**PHYSICIAN CME:** Max. 4.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 2 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 4.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 4.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ FAST TRACK 5: Diabetic Foot Ulcers (DFU) Venous Ulcers and Fluorescence Vascular Angiography (FVA) in Hyperbaric Medicine and Wound Care

**PHYSICIAN CME:** Max. 5.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 4.25 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 5.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 5.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.



\* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

+ Claiming ABPM MOC credit is appropriate for those who are ABPM diplomates.

# UHMS ONLINE CONTINUING EDUCATION PORTAL

## ■ FAST TRACK 6: The Role of Hyperbaric Oxygen for Radiation Injury, Cancer and Calciphylaxis

**PHYSICIAN CME:** Max. 6.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 5.0 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 6.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 6.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ FAST TRACK 7: Hyperbaric Medicine for Mild Traumatic Brain Injury (DoD Randomized Controlled Trials), Angiogenesis, Critical Limb Ischemia, Orthotic & Prosthetic Devices and Wound Care Essentials

**PHYSICIAN CME:** Max. 5.50 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** 4.50 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 5.50 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** 5.50 Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ FAST TRACK 8: Updates on Pressure Vessels, Disordered Decompression, Novel Wound Scoring System, Lung Injury and Decompression Stresses

**PHYSICIAN CME:** Max. 5 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** 4 LLSA credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 5.0 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** TBA Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ FAST TRACK 9: Emergency and Critical Care; Challenges of 24/7 Hyperbaric Unit

**PHYSICIAN CME:** Max. 5 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** TBA MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** 5.0 contact hours by the Florida Board of Registered Nursing/RRT Provider #50-10881.

**NBDHMT:** TBA Category A credit hours by the National Board of Diving and Hyperbaric Medical Technology.

## ■ JOURNAL-BASED CME EDUCATIONAL ACTIVITIES ONLINE

**PHYSICIAN CME:** Max. 2 *AMA PRA Category 1 Credits*<sup>TM\*</sup>

**MOC ABPM:** Up to 4.0 MOC credits by the American Board of Preventive Medicine.<sup>+</sup>

**NURSING/RRT:** Up to 4.0 hours; License types: RN, LPN, CNS, ARNP, CAN. Provided through the Florida State Board of Nursing.

**NBDHMT:** 2 Category A credit hours by National Board of Diving and Hyperbaric Medical Technology.

### ■ UHM Journal-Based CME Vol. 42, Issue 2

- **Suicidal carbon monoxide poisoning has decreased with controls on automobile emissions**

**Faculty:** N.B. Hampson, J.R. Holm

- **Simvastatin decreases incidence of decompression sickness in rats**

**Faculty:** Kun Zhang, Dong Wang, Jiajun Xu, Runping Li, Zhiyu Cai, Kan Liu, Juan Zheng, P.J. Denoble, Yiqun Fang, WG Xu

### ■ UHM Journal-Based CME Vol. 42, Issue 3

- **HBO<sub>2</sub> for diabetic ulcers unaffected by hyperglycemia**

**Faculty:** P. Bakhtiani, O. Mansuri, A. Yadav, C. Osuoha, P. Knight, R. Baynosa, R. McLafferty, M. Jakoby

- **Glycosylated hemoglobin and HBO<sub>2</sub> denials**

**Faculty:** A.D. Moffat, E.R. Worth, L.K. Weaver

### ■ UHM Journal-Based CME Vol. 42, Issue 4

- **CO and CO<sub>2</sub> analysis in the diving gas of the fishermen of the Yucatan Peninsula**

**Faculty:** W. Chin, O. Huchim, G.H. Wegrzyn, S.E. Sprau, S. Salas, G.H. Markovitz

- **Delayed visual disturbances in carbon monoxide poisoning: Identification and evaluation**

**Faculty:** J.R. Stabile, L.K. Weaver, K. Deru, R. Price

### ■ UHM Journal-Based CME Vol. 42, Issue 5

- **Low forced expiratory flow rates and forceful exhalation as a cause for arterial gas embolism during submarine escape training: a case report**

**Faculty:** Francis J. Hartge, Thomas L. Bennett

- **Continuous bladder irrigation in the monoplace hyperbaric chamber: Two case reports**

**Faculty:** J.S. Cooper, P. Allinson, D. Winn, L. Keim, J. Sippel, P. Shalberg, K. Fowler



## ■ UHM Journal-Based CME Vol. 42, Issue 6

- **Efficiency of hyperbaric oxygen and steroid therapy in treatment of hearing loss following acoustic trauma**  
Faculty: M. Salihoglu, H. Ay, H. Cincik, E. Cekin, E. Cesmecici, A. Memis, G. Uzun, A. Altundag, K. Simsek
- **Measurement and modeling of oxygen content in a demand constant mass ratio injection rebreather**  
Faculty: Oskar Frånberg, Mikael Gennser

## ■ UHM Journal-Based CME Vol. 43, Issue 1

- **Cost and mortality data of a regional limb salvage and hyperbaric medicine program for Wagner Grade 3 or 4 diabetic foot ulcers**  
Faculty: J.V. Eggert, E.R. Worth, C.C. Van Gils
- **Seizures during hyperbaric oxygen therapy: retrospective analysis of 62,614 treatment sessions**  
Faculty: A. Hadanny, O. Meir, Y. Bechor, G. Fishlev, J. Bergan, S. Efrati

## ■ UHM Journal-Based CME Vol. 43, Issue 2

- **The evolution of scuba divers pulmonary edema**  
Faculty: C. Edmonds
- **Changes in vasomotion – effect of hyperbaric oxygen in patients with diabetes Type 2**  
Faculty: D. Balaz, A. Komornikova, P. Sabaka, E. Leichenbergova, K. Leichenbergova, M. Novy, D. Kralikova, L. Gaspar, A.j Dukat

## ■ UHM Journal-Based CME Vol. 43, Issue 3

- **Hyperbaric oxygen therapy in the treatment of osteonecrosis of the femoral head: a review of the current literature**  
Faculty: G Uzun, M Mutluoglu, Ö Ersen, S Yildiz
- **A deep-sea diver with cement pulmonary embolism**  
Faculty: R Memarpour, B Tashtoush, F Nasim, D Grobman, BK Upadhyay, F Rahaghi

## ■ UHM Journal-Based CME Vol. 43, Issue 4

- **A favorable outcome despite a 39-hour treatment delay for arterial gas embolism: case report**  
Faculty: D. Covington, A. Bielawski, C. Sadler, E. Latham
- **Applying quality improvement methods in a hyperbaric oxygen program: reducing unnecessary glucose testing**  
Faculty: SL Stevens, A Sorita, AJ Narr, PL Claus, A Tescher, MP Millman, RC Shields, WG Buchta, R Haddon, M Hassan Murad

## ■ UHM Journal-Based CME Vol. 43, Issue 5

- **Executive summary: The Brain Injury and Mechanism of Action of Hyperbaric Oxygen for Persistent Post-Concussive Symptoms after Mild Traumatic Brain Injury (mTBI) (BIMA) Study**  
Faculty: LK Weaver, A Chhoeu, AS Lindblad, S Churchill, SH Wilson
- **Hyperbaric oxygen for mild traumatic brain injury: Design and baseline summary**  
Faculty: LK Weaver, A Chhoeu, AS Lindblad, S Churchill, SH Wilson
- **Baseline neurological evaluations in a hyperbaric trial of post-concussive syndrome**  
Faculty: CS Williams, LK Weaver, AS Lindblad, S Kumar, DR Langford
- **Baseline EEG abnormalities in mild traumatic brain injury from the BIMA study**  
Faculty: CS Williams, MC Spitz, JF Foley, LK Weaver, AS Lindblad, MR Wierzbicki
- **Linear analysis of heart rate variability in post-concussive syndrome**  
Faculty: S Mirow, SH Wilson, LK Weaver, S Churchill, K Deru, AS Lindblad
- **Sleep assessments for a mild traumatic brain injury trial in a military population**  
Faculty: JM Walker, NT James, H Campbell, SH Wilson, S Churchill, LK Weaver
- **Baseline vestibular and auditory findings in a trial of post-concussive syndrome**  
Faculty: A Meehan, E Searing, LK Weaver, A Lewandowski
- **Neuropsychological assessments in a hyperbaric trial of post-concussive symptoms**  
Faculty: SH Wilson, LK Weaver, AS Lindblad
- **Hyperbaric oxygen for persistent post-concussive symptoms: long-term follow-up**  
Faculty: LD Skipper, S Churchill, SH Wilson, K Deru, RJ Labutta, BB Hart
- **Review of recent non-hyperbaric oxygen interventions for mild traumatic brain injury**  
Faculty: SH Wilson, M Rothe, AS Lindblad, LK Weaver

## ■ UHM Journal-Based CME Vol. 43, Issue 6

- **Long-term diving-related lung damage:**

# UHMS ONLINE CONTINUING EDUCATION PORTAL

## an editorial perspective

Faculty: D Hostler, DR Pendergast

- **Rapid analysis of hyperbaric oxygen therapy registry data for reimbursement purposes: Technical communication**

Faculty: CE Fife, H Gelly, D Walker, KA Eckert

- **The validity of transcutaneous oxygen measurements in predicting healing of diabetic foot ulcers**

Faculty: H Moon, MB Strauss, SS La , SS Miller

- **Pulmonary function changes in Navy divers during their professional careers**

Faculty: M Voortman, PJAM van Ooij, RA van Hulst, P Zanen

## ■ UHM Journal-Based CME Vol. 43, Issue 7

- **Carbon monoxide poisoning in Utah: 1996-2013**

Faculty: L Weaver, K Deru, S Churchill, J Legler, G Snow, T Grey

- **Transient osteoporosis of the hip treated with hyperbaric oxygen therapy: a case series**

Faculty: K Yagishita, T Jinno, D Koga, T Kato, M Enomoto, T Muneta, A Okawa



# UHMS ONLINE CONTINUING EDUCATION PORTAL

## Journal CME: How it works

Each participant is expected to read and reflect on the provided *Undersea and Hyperbaric Medicine* Journal papers and answer three questions after each, with a score of 60% or higher to receive CME credit.

### Journal CME credits/costs:

Non-Member:	\$22.50 per credit hour
Regular UHMS Member:	\$17.50 per credit hour
Associate UHMS Member:	\$12.50 per credit hour

### HERE'S A SAMPLE QUESTION:

1. **Choosing the closest answer, in Utah, from 1996 to 2013, how many individuals were diagnosed with carbon monoxide poisoning?**

- |           |           |
|-----------|-----------|
| a. 10,000 | c. 8,000  |
| b. 2,000  | d. 12,000 |

As you can see, we've provided no answer.

You need to take the quiz and answer correctly to take a step toward CME credits at

[www.courses-uhms.org/courses/uhm-journal-based-cme-courses/product/29-uhm-journal-based-cme-volume-43-issue-7.html](http://www.courses-uhms.org/courses/uhm-journal-based-cme-courses/product/29-uhm-journal-based-cme-volume-43-issue-7.html)



### From:

### Carbon monoxide poisoning in Utah: 1996-2013

Lindell Weaver, MD; Kayla Deru, BA; Susan Churchill, APRN-NP; Joshua Legler, MS; Greg Snow, PhD; Todd Grey, MD

Undersea Hyperb Med. 2016; Nov-Dec; 43(7): 747-758.



# EDUCATION: UHMS DIRECTLY SPONSORED ACTIVITIES

Directly sponsored activities fully involve the UHMS in organization, planning, selecting Directors, Faculty and submission for CME Certification.

## UHMS LIVE COURSES/MEETINGS

### UHMS/NOAA PHYSICIANS TRAINING IN DIVING MEDICINE 2018

**Dates:** Oct. 15 – 26, 2018  
**Where:** Silver Cloud Hotel, Seattle, Washington  
**Credits:** 84 AMA PRA Category 1 credit hours™  
[www.uhms.org/education/courses-meeting/directly-sponsored/uhms-noaa-course.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/uhms-noaa-course.html)

### ASM 2018 UHMS ANNUAL SCIENTIFIC MEETING

**Dates:** June 28-30, 2018  
**Where:** Disney's Coronado Springs Resort, Lake Buena Vista, Florida  
**Credits:** Up to 21 CME credit hours  
<https://www.uhms.org/asm-new.html>

### DAN-UHMS FALL 2018 DIVING & HYPERBARIC MEDICINE COURSE

**Dates:** September 8-15, 2018  
**Where:** Anse Chastanet, St. Lucia, Lesser Antilles  
**Credits:** 24 AMA PRA Category 1 credit hours™  
<https://www.diversalertnetwork.org/?a=events&eventNo=1405>

### UHMS MEDICAL EXAMINER OF DIVERS 2018

**Dates:** September 20-23, 2018  
**Where:** Loews New Orleans Hotel, New Orleans, Louisiana  
**Credits:** 32 AMA PRA Category 1 credit hours™  
[www.uhms.org/education/courses-meeting/directly-sponsored/medical-examiner-of-divers-course.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/medical-examiner-of-divers-course.html)

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## UHMS LIVE COURSES/MEETINGS

### CHAPTERS

#### PACIFIC CHAPTER 2018

**Dates:** November 16-18

**Where:** Sheraton Kona Resort & Spa Keauhou Bay  
Kailua-Kona Hawaii

[www.uhms.org/education/courses-meeting/directly-sponsored/pacific-chapter.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/pacific-chapter.html)

#### NORTHEAST CHAPTER 2018

**Dates:** October 20-21

**Where:** Harrah's Resort & Casino, Atlantic City, New Jersey

[www.uhms.org/education/courses-meeting/directly-sponsored/northeast-chapter.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/northeast-chapter.html)

#### GULF COAST CHAPTER 2018

**Dates:** August 24-25

**Where:** Doubletree, New Orleans, Louisiana

[www.uhms.org/education/courses-meeting/directly-sponsored/gulf-coast-chapter.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/gulf-coast-chapter.html)

#### MID-WEST CHAPTER 2018

**Dates:** TBD

**Where:** TBD

[www.uhms.org/education/courses-meeting/directly-sponsored/mid-west-chapter-registration.html](http://www.uhms.org/education/courses-meeting/directly-sponsored/mid-west-chapter-registration.html)

FOR MORE INFORMATION

SEE PAGES 52-53

and go to:

[www.uhms.org/about/affiliates.html](http://www.uhms.org/about/affiliates.html)

[www.uhms.org/about/chapters/about-uhms-chapters.html](http://www.uhms.org/about/chapters/about-uhms-chapters.html)

### SPECIAL EVENT

#### TRICONTINENTAL SCIENTIFIC CONFERENCE 2018 on DIVING & HYPERBARIC MEDICINE

with

EUROPEAN UNDERWATER &  
BAROMEDICAL SOCIETY (<http://www.eubs.org>)

+

SOUTH PACIFIC UNDERWATER  
MEDICINE SOCIETY (<http://www.spums.org.au>)

+ SAUHMA and the Scott Haldane Foundation

**Dates:** September 23-29

**Where:** Durban, South Africa

<http://www.tricon2018.org>

### AFFILIATES EVENTS IN PLANNING

CANADIAN UNDERSEA &  
HYPERBARIC MEDICAL ASSOCIATION

<https://cuhma.ca>

SOCIETÀ ITALIANA DI MEDICINA SUBACQUEA  
E IPERBARICA / SIMSI

[www.simsi.it](http://www.simsi.it)

SOCIEDADE BRASILEIRA DE MEDICINA  
HIPERBÁRICA / SBMH

[www.sbmh.com.br](http://www.sbmh.com.br)



# UHMS-APPROVED INTRODUCTORY TRAINING COURSES\*

♦ [www.uhms.org/education/courses-meeting/introductory-courses.html](http://www.uhms.org/education/courses-meeting/introductory-courses.html) ♦

## AN INTRODUCTION TO HYPERBARIC MEDICINE

Wound Care Advantage – Sierra Madre, California

**Karen Redmond, Director**

Contact: [karenredmond@thewca.com](mailto:karenredmond@thewca.com) / 888-484-3922  
[www.woundcareadvantage.com](http://www.woundcareadvantage.com)

## ESSENTIALS OF HYPERBARIC MEDICINE

Baromedical Partners, LLC – Las Vegas, Nevada

**Barry Phillips, Director**

Where: Las Vegas, Nevada

Credits: 40 AMA PRA Category 1 Credits™ / physicians

Contact: [bmpllc2017@gmail.com](mailto:bmpllc2017@gmail.com) / +702-882-2003

## FUNDAMENTALS OF HYPERBARIC OXYGEN THERAPY IN THE SURGICAL AND WOUND CARE CLINIC CO-SPONSORSHIP: CME provided through host organization

Section of Acute and Critical Care Surgery, Washington Univ.

School of Medicine – St. Louis, Missouri; **John P. Kirby, Director**

Credits: 40 hours AMA PRA Category 1 Credits™ / physicians

Contact: Christa Donald +314-747-4185

[christa.donald@wustl.edu](mailto:christa.donald@wustl.edu)

## FUNDAMENTALS OF HYPERBARIC MEDICINE

Simon Fraser University – Burnaby, BC, Canada

**Sherri Ferguson, Director**

Credits: 40 AMA PRA Category 1 Credits™ / physicians

Contact: [sferguson@sfu.ca](mailto:sferguson@sfu.ca) / +778-782-3782

## HYPERBARIC MEDICINE TEAM TRAINING

International ATMO – San Antonio, Texas

**Paul Sheffield, Director**

Credits: 31.08 contact hours – Texas Nurses Association

Contact: [education@hyperbaricmedicine.com](mailto:education@hyperbaricmedicine.com) / +210-614-3688

## INTRODUCTION TO HYPERBARIC MEDICINE

Life Support Technologies – Tarrytown, New York

**Glenn Butler, Director**

Contact: [info@lifesupport-usa.com](mailto:info@lifesupport-usa.com) / +914-333-8412

[www.LifeSupport-USA.com](http://www.LifeSupport-USA.com)

## INTRODUCTION TO HYPERBARIC MEDICINE AND WOUND CARE

Long Beach Memorial Medical Center – Long Beach, California

**Stuart Miller, M.D., Director**

Credits: 40 AMA PRA Category 1 Credits™ / physicians

Contact: [cpua@memorialcare.org](mailto:cpua@memorialcare.org) / +562-933-6950

[http://longbeachhyperbaricmedicine.com/intro\\_to\\_hyperbaric\\_medicine\\_course\\_for\\_health\\_care.html](http://longbeachhyperbaricmedicine.com/intro_to_hyperbaric_medicine_course_for_health_care.html)

## INTRODUCTION TO HYPERBARIC MEDICINE AND WOUND CARE CHALLENGES

Serena Group, Inc. – **Jack Marnoni, Director**

Contact: [jmarnoni@serenagroup.net](mailto:jmarnoni@serenagroup.net) / +814-688-2002

## INTRODUCTORY COURSE IN HYPERBARIC MEDICINE

Wound Care Education Partners – *Conducted on-site per request*

Credits: 41 AMA PRA Category 1 Credits™ / physicians

40 contact hours by the Florida Board of Nursing

40 Category A credit hours credit hours by the NBDHMT

Contact: [info@woundeducationpartners.com](mailto:info@woundeducationpartners.com)

[www.woundeducationpartners.com](http://www.woundeducationpartners.com) / +561-776-6066

## INTRODUCTORY HYPERBARIC TRAINING\*

Restorix Health (Poseidon International), Round Rock, Texas

Contact: [kevan.corson@gmail.com](mailto:kevan.corson@gmail.com) / +512-924-4266

## PRIMARY HYPERBARIC MEDICINE COURSE

International ATMO – *Conducted on site per request*

**Paul Sheffield, Director**

Contact: [education@hyperbaricmedicine.com](mailto:education@hyperbaricmedicine.com) / +210-614-3688

[www.hyperbaricmedicine.com](http://www.hyperbaricmedicine.com)

## PRIMARY TRAINING IN HYPERBARIC MEDICINE

National Baromedical Services, Inc. – Columbia, S.C.

**Dick Clarke, Director**

Credits: 40 hours Category A Credits / NBDHMT

40.8 contact hours – RNs

40 CRCE hours – RTs

Contact: [registration@baromedical.com](mailto:registration@baromedical.com) / +803-434-7101

## PACIFIC NORTHWEST INTRODUCTORY COURSE IN HYPERBARIC MEDICINE

(Co-Providership with Accredited Provider)

Undersea and Hyperbaric Medical Society/ Legacy Emanuel  
Medical Center

Credits: 40 AMA PRA Category 1 Credits™ / physicians

Contact: [mhorner@lhs.org](mailto:mhorner@lhs.org) / +503-413-3244

[www.legacyhealth.org](http://www.legacyhealth.org)

\* 40-hour courses

FOR A

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## ADVANCED DIVING AND HYPERBARIC MEDICAL TEAM TRAINING PROGRAM WITH CHAMBER OPERATION

Hyperbarics International – Key Largo, Fla.

*Dick Rutkowski, Director*

**Credits:** 40 AMA PRA Category 1 Credits™ / physicians

This course is approved for CHMT and Hyperbaric Facility Safety Supervisor Directors. This course is approved by the International Board of Undersea Medicine for DMTs. This course is approved by American College of Hyperbaric Medicine (ACHM) for CHTS.

**Contact:** [dick@hyperbaricsinternational.com](mailto:dick@hyperbaricsinternational.com) / +305-451-2551  
[www.hyperbaricsinternational.com](http://www.hyperbaricsinternational.com)

## INTRODUCTION TO EPIDEMIOLOGY

AsMA 89th Annual Scientific Meeting – Dallas, Texas

**When:** May 6 – 9 a.m. to 5 p.m.

**Credits:** 8 AMA PRA Category 1 Credits™

**Register:** <https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration>

## AIRCREW FATIGUE: CAUSES, CONSEQUENCES AND COUNTERMEASURES

AsMA 89th Annual Scientific Meeting – Dallas, Texas

**When:** May 6 – 9 a.m. to 4 p.m.

**Credits:** 6 AMA PRA Category 1 Credits™

**Register:** <https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration>

## AEROSPACE MEDICINE FACULTY DEVELOPMENT WORKSHOP

AsMA 89th Annual Scientific Meeting – Dallas, Texas

*Mark Coakwell, Richard Allnut, Chairs*

**When:** 12 noon to 3 p.m.

**Credits:** 3 AMA PRA Category 1 Credits™

**Register:** <https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration>

## BASIC WOUND CARE

Columbia Wound Care Consortium – Portland, Oregon

**Credits:** 6 AMA PRA Category 1 Credits™

**Contact:** Geoff Cameron – [gcameron@columbiawound.org](mailto:gcameron@columbiawound.org)  
+503-505-1591 / [www.columbiawound.org](http://www.columbiawound.org)

## BIOFILM: A MICRO-REVOLUTION

Southwest Regional Wound Care Center – Lubbock, Texas

**Credits:** 1 hour AMA PRA Category 1 Credit™ / physicians

**Contact:** Lisa Morrow [lisa@randallwolcott.com](mailto:lisa@randallwolcott.com) / +806-793-8869

## THE BUSINESS OF WOUND CARE AND HYPERBARIC MEDICINE: PLANNING YOUR CLINIC'S LONG-TERM SUCCESS

Wound Care Education Partners – North Palm Beach, Florida  
*Helen Gelly, MD, Director; Jaclyn Mackey, Administrator*

**Where:** Various venues

**Date:** TBD

**Credits:** 16 AMA PRA Category 1 Credits™ / physicians

**Contact:** [jmackey@bestpub.com](mailto:jmackey@bestpub.com) / +561-776-6066  
[www.woundeducationpartners.com](http://www.woundeducationpartners.com)

## COLUMBIA WOUND CARE CONSORTIUM QUARTERLY SYMPOSIUM

Columbia Wound Care Consortium- Portland, Oregon

**Credits:** 3 AMA PRA Category 1 Credits™

**Contact:** Geoff Cameron – [gcameron@columbiawound.org](mailto:gcameron@columbiawound.org)  
+503-505-1591 / [www.columbiawound.org](http://www.columbiawound.org)

## DAN-UHMS DIVING MEDICINE & HYPERBARIC MEDICINE COURSE

**Contact:** [cme@dan.org](mailto:cme@dan.org) – 800-446-2671 x 1506  
[www.diversalernetnetwork.org/](http://www.diversalernetnetwork.org/)

## DIVING SCIENCES SYMPOSIUM

Beneath the Sea, Inc. – Seacaucus, New Jersey

*David Charash, Director*

**Credits:** 5.5 AMA PRA Category 1 Credits™ / physicians

**Contact:** [info@beneaththesea.org](mailto:info@beneaththesea.org) / +914-664-4310  
[www.beneaththesea.org](http://www.beneaththesea.org)

## EMERGENCY DIVING ACCIDENT MANAGEMENT (EDAM)

USC Catalina Hyperbaric Chamber, Avalon, California

*Robert W. Sanders, Director*

**Credits:** 34 hours AMA PRA Category 1 Credits™ / physicians

**Contact:** [huggins@usc.edu](mailto:huggins@usc.edu) – +310-510-4020  
<http://dornsife.usc.edu/hyperbaric/>

## ESSENTIALS OF ICD-10-CM CODING AND CLINICAL DOCUMENTATION IMPROVEMENT FOR THE HYPERBARIC TEAM

Wound Care Education Partners, North Palm Beach, Florida

*Gretchen Dixon, Faculty*

**Credits:** 5 hours AMA PRA Category 1 Credits™ / physicians

**Contact:** [jmackey@bestpub.com](mailto:jmackey@bestpub.com) – +561-776-6066  
[www.WoundEducationPartners.com](http://www.WoundEducationPartners.com)



# UHMS JOINT PROVIDERSHIP ACTIVITIES

• [www.uhms.org/education/courses-meeting/jointly-co-sponsored.html](http://www.uhms.org/education/courses-meeting/jointly-co-sponsored.html) •

## GREAT LAKES WOUND CARE AND HYPERBARIC: HYPERBARIC UPDATE

The University of Toledo Physicians Group

*Munier Nazal, Director*

**Credits:** 6 AMA PRA Category 1 Credits™ / physicians

**Contact:** [olivia.jones@utoledo.edu](mailto:olivia.jones@utoledo.edu) / +419-383-6810

## HYPERBARIC OXYGEN UPDATES

Wound Care Education Partners, North Palm Beach, Florida

*Helen Gelly, Director*

**Credits:** 8 AMA PRA Category 1 Credits™

**Contact:** [jmackey@bestpub.com](mailto:jmackey@bestpub.com) – +561-776-6066  
[www.WoundEducationPartners.com](http://www.WoundEducationPartners.com)

## INTRODUCTORY HYPERBARIC MEDICINE COURSE

Toronto General Hospital – Toronto, Ontario, Canada

*Ray Janisse, Director / Administrator*

**Date:** March 19-23, 2018 (future dates TBD)

**Credits:** 40 AMA PRA Category 1 Credits™

**Contact:** [Ray.Janisse@uhn.ca](mailto:Ray.Janisse@uhn.ca) / +416-340-4800 ext 3345

## UPDATE ON DIVING MEDICINE

Gary Rose Scuba, Inc. - San Salvador, Bahamas

**Dates:** June 26-July 3, 2016

**Credits:** 10 AMA PRA Category 1 Credits™

**Contact:** [garyrosescuba@gmail.com](mailto:garyrosescuba@gmail.com) / +561-504-5503

# JOINTLY PROVIDED ENDURING MATERIALS

• [www.uhms.org/education/courses-meeting/jointly-co-sponsored.html](http://www.uhms.org/education/courses-meeting/jointly-co-sponsored.html) •

## UNDERSTANDING LYMPHADEMA

Wound Care Education Partners – North Palm Beach, Florida

*Jaclyn Mackey (Admin)*

**Credits:** 1.5 AMA PRA Category 1 Credits™ / physicians

**Contact:** [jmackey@bestpub.com](mailto:jmackey@bestpub.com) / +561-776-6066  
[www.WoundEducationPartners.com](http://www.WoundEducationPartners.com)

## LATENT EFFECTS OF RADIATION AND THE USE OF HYPERBARIC OXYGEN THERAPY

Wound Care Education Partners – North Palm Beach, Florida

*Helen Gelly, Director - Live webinar and recorded online course*

**Credits:** 1 hour AMA PRA Category 1 Credits™ / physicians

**Contact:** Jaclyn Mackey [jmackey@bestpub.com](mailto:jmackey@bestpub.com) / +561-776-6066  
[www.WoundEducationPartners.com](http://www.WoundEducationPartners.com)

## FUNDAMENTAL THEORIES AND PRIMARY PRACTICES IN HYPERBARIC MEDICINE

Wound Care Education Partners – North Palm Beach, Florida

*Jaclyn Mackey (Admin)*

**Credits:** 40 AMA PRA Category 1 Credits™ / physicians  
(partially live and partially online)

**Contact:** [jmackey@bestpub.com](mailto:jmackey@bestpub.com) / +561-776-6066  
[www.WoundEducationPartners.com](http://www.WoundEducationPartners.com)



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## HYPERBARICS INTERNATIONAL

[www.hyperbaricsinternational.com](http://www.hyperbaricsinternational.com)

**1-305-451-2551**

[dick@hyperbaricsinternational.com](mailto:dick@hyperbaricsinternational.com)

**NEW LOCATION:** 98840 Overseas Highway, Key Largo Fla.

### ADVANCED UNDERSEA HYPERBARIC MEDICAL TEAM TRAINING PROGRAM *with* RECOMPRESSION CHAMBER OPERATIONS *for*

- Physicians
- Diving Medical Officers (DMOs)
- Advanced Diving Medical Technologists (DMTs)
- Certified Hyperbaric Specialists (CHS)
- Clinical Hyperbaric Medical Technologists (CHMTs)
- Hyperbaric Facility Safety Directors
- All medical & non-medical personnel may apply

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- Undersea & Hyperbaric Medical Society (UHMS)
- American Medical Association (AMA) thru UHMS
- American College of Hyperbaric Medicine (ACHM)
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- International Board of Undersea Medicine (IBUM)
- Hyperbarics International CHMT



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### UHMS Guidelines for Hyperbaric Facility Operation

2nd Edition

Editor: W.T. Workman, M.S., CAsP, CHT-A, FAsMA  
Director, Quality Assurance & Regulatory Affairs  
Undersea and Hyperbaric Medical Society

[www.bestpub.com/books/new-book-titles/product/421-uhms-guidelines-for-hyperbaric-facility-operation-2nd-edition.html](http://www.bestpub.com/books/new-book-titles/product/421-uhms-guidelines-for-hyperbaric-facility-operation-2nd-edition.html)

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89th Aerospace Medical Association  
Annual Scientific Meeting**

**Hilton Anatole Hotel, Dallas, TX  
May 6 - 10, 2018**



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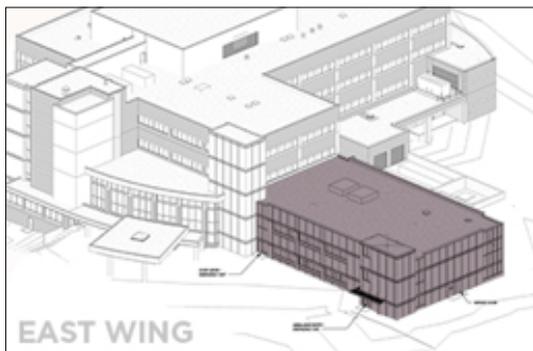
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## Wound Surgeon Desired for New Multi-Place Center!

**Marshfield Clinic - Marshfield Center is seeking a Hyperbaric Medicine/Wound Surgeon.**

New Multi-Place Center for Hyperbaric Medicine opening in summer 2018! It will be the only center of its kind between Milwaukee and the Twin Cities and one of less than 10 in the country. The individual selected for this position will be responsible for the performance and application of diagnostic and therapeutic procedures related to chronic non-healing wounds and all accepted indications for Hyperbaric Medicine. The successful applicant is well educated in pathogenesis; pathology; risk factors; natural history; diagnosis by history, physical examination and laboratory methods; medical and surgical management, complications and prevention of chronic non-healing wounds, (including neuropathic, ischemic, pressure, venous, calciphylactic, iatrogenic and other causes). The individual will be also skilled in surgical techniques of debridement, management of necrotizing soft tissue infections, and wound closure including skin grafting, use of skin substitutes, flap techniques, delayed closure, and minor and major amputations.

The qualifications for this position include at least 3 years of wound surgery experience and active certification by the American Board of Surgery. Certification in basic hyperbaric medicine by attending a UHMS certified course is required. Board certification in Hyperbaric Medicine is a plus. In addition to clinical skills, the individual must possess excellent interpersonal skills, effective communication and professionalism with an emphasis on integrity, a commitment to excellence and ethical principles of clinical care.



**Marshfield Clinic - Marshfield Center**

Marshfield Clinic is part of Marshfield Clinic Health System, and is committed to enriching the lives of others through accessible, affordable compassionate healthcare. Successful applicants will listen, serve and put the needs of patients and customers first.

Marshfield Clinic is overseen by an 11-member physician Board of Directors and a physician executive director. Marshfield Clinic physicians and staff serve more than 350,000 unique patients each year through accessible, high-quality health care, research and education. With over 700 physicians in 86 medical specialties and subspecialties as well as 6,800 employees in more than 50 locations in Wisconsin, Marshfield Clinic is nationally recognized for innovative practices and quality care.

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- \* Two year guaranteed salary, then production-based
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- \* Health, dental, life, disability and occurrence-based malpractice insurance
- \* 401(k) with match; 457(b); outstanding employer-funded retirement plan
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### Please Contact:

**Jennifer Waters-Plemon**

Marshfield Clinic - Physician Recruiter

715-221-5773 or [waters-plemon.jennifer@marshfieldclinic.org](mailto:waters-plemon.jennifer@marshfieldclinic.org)

Marshfield Clinic is an Equal Opportunity / Affirmative Action employer.

All qualified applicants will receive consideration for employment without regard to sex, gender identity, sexual orientation, race, color, religion, national origin, disability, protected veteran status, age, or any other characteristic protected by law.

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♦ EDUCATION IN STYLE ♦



**DAN-UHMS Fall 2018**  
Diving and Hyperbaric Medicine Course  
September 8-15 at Anse Chastanet in St. Lucia



[www.diversalernetnetwork.org/?a=events&eventNo=1405](http://www.diversalernetnetwork.org/?a=events&eventNo=1405)



**MEDICAL  
EXAMINER  
OF DIVERS**



**NEXT COURSE DATE:**  
September 20-23, 2018



This is a specific training course preparing physicians to examine commercial, sport, research and related public service divers, and to determine their fitness to dive. For details and online registration see:

**SAVE THE DATE!**



**UHMS/NOAA  
PHYSICIANS TRAINING  
IN DIVING MEDICINE**



**NEXT COURSE DATE**  
October 15-26, 2018



This course brings together the best of UHMS and NOAA and is based on the internationally accepted training objectives from the Diving Medical Advisory Committee (DMAC). For details and online registration see:

**WATCH THE WEB!**

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+1-919-490-5140 from outside the U.S.

### UHMS BOARD OF DIRECTORS

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UHMS: Raising the quality of practice  
one member at a time.

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### About Pressure:

**PRESSURE** is a quarterly electronic newsletter of the Undersea and Hyperbaric Medical Society posted on its website at [www.uhms.org](http://www.uhms.org). **PRESSURE** is open-access, and UHMS members are notified via email when it is posted.

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#### UHMS 2018 Annual Scientific Meeting Live Course Credits – from Pages 19 & 21

**Accreditation Statement:** The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**Designation Statements:** The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 21 *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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- Registered Respiratory Therapist
- Certified Respiratory Therapist

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