



European Baromedical Association
for nurses, operators and technicians



EBAss is all of you!

EBAss Newsletter

**January-December
2020**

Calendar of Events



Letter from the President

by Angeliki Chandrinou, President of EBAss

Dear members,

For all of us, this year has been extraordinarily hard. I hope that, through the pandemic, you and your loved ones can continue to remain safe and protected.

The EBAss community has been working hard since the COVID-19 emergency was declared in March to advance its mission and assist colleagues through these extraordinary circumstances. In late May, and now in November, our 2020 BD meetings and General Assembly moved online, while all congresses postponed to 2021.

There have also been administrative changes at EBAss since Mr. Pete Atkey retired. PA, a senior DDRC executive, has worked for EBAss since its inception.

In 2006 EBAss and ECHM had established training requirements for hyperbaric personnel as issued in the Resources Manual. PA suggested to Robert Houman that the next logical step was for EBAss to set up a system to examine and accredit personnel as competent; it

was agreed that this system should be concentrating on using European standards and metric measurements only. Also it was agreed to offer the examination in a number of languages. PA was tasked with this role and worked with the European College of Baromedicine (ECB) in order to be able to issue recognized certification for successful personnel. PA then went on to set up an on-line system to carry out theoretical examinations for hyperbaric personnel.

The system was launched in 2010 with a grandfathering system in place for existing personnel which ran for 2 years. Also during this time PA worked with ECB to initiate systems to accredit schools wishing to teach hyperbaric personnel in their own language. This system has gained a very good reputation as an



🕒 *EUBS conference, postponed to September 2020 Prague, Czech Republic, <https://eubs2020.com/>*

🕒 *EBAss General Assembly and meeting for the Board of Directors, 14th November 2020, Online www.ebass.org*

🕒 *UHMS Annual Scientific Meeting, June 10-12, 2021, New Orleans, LA <https://www.uhms.org>*

🕒 *20th International Congress on Hyperbaric Medicine, postponed to 2021, Rio de Janeiro, Brazil <https://www.ichm2020.rio.br>*

independent system which examines all personnel to the same recognized standards.

Since its inception this accreditation system has attracted personnel not only from European countries but also from the Middle East, Far East, Australia and New Zealand.

Thank you Peter for all you have done for all of us!

Words from the Editor

by **Damianos Tzavellas**

Dear reader,

I hope that this time of the year finds you all well and safe. I believe it has been a very challenging time for most of us and at all levels of personal, professional and social life.

In regards to the “Hyperbaric” world, a lot has been discussed and published. Such as, the treatment’s role in fighting COVID-19, new infection control policies or patient triage in acute and elective cases. Our Association has made efforts to empower communication between hyperbaric centres and to circulate COVID-19 recommendations from the international hyperbaric societies, like the ECHM and UHMS. An EBAss recommendation document on patient screening and triage before starting HBOT was also created and is available on our website for anyone interested. While writing these words, Europe is already going into a second COVID-19 wave that will probably be stronger than the first one but hopefully, hyperbar-



ic units are now more prepared to face challenges with the already

available recommendations.

In other areas of interest, EBAss has had another successful Safety Manager course last year in Malta and our Board of Directors cannot thank enough Dr Mario Saliba and his team at the hospital of Gozo island.

Moving forward, EBAss recommendations for Safety Manager education are now available and there is an open invitation for EBAss accredited centres to endorse this course to their list.

Our literature review for topics related to nurses, chamber operators and hyperbaric technicians has provided us with some very interesting information. Some of those are: the UV-C disinfection for hyperbaric facilities, glucose monitoring under hyper-

baric conditions and reported side effects of the treatment.

Unfortunately, most of the hyperbaric conferences have been cancelled or postponed for next year. In saying that a new era of online webinars and meetings has emerged from countries that have already made use of this technology, and with very positive feedback. It is a space that EBAss is looking into with great interest and would like to include in its near future projects. The start has been made with the organizing of our 2020 AGM at an online platform and any ideas from our members are more than welcomed!

Finally, Mr Peter Atkey has decided to step back from his duties in the Association and hand over his great work and tasks to the new generation. A big thank you Peter, for all your passion and knowledge that you have shared with us and good luck with all your future endeavours!

Please send any comments or questions you may have at our email: info@ebass.org

Enjoy your reading!!

COVID-19 pandemic

by **Konstantina Gaitanou**, President of EBAss Education Committee

Dear members,

The EBAss Education Committee almost from the beginning of COVID-19 pandemic produced a TRIAGE QUESTIONNAIRE as recommendation for patients and staff in Hyperbaric Units.

However, it is equally important to emphasize how necessary patient education is considered

on COVID-19 risk and that prevention is an essential step prior to acceptance for treatment.

Patient education should include: Tutorials on the use of personal protective equipment (PPE), if required, Advice on continuation of social distancing and avoidance



of unnecessary human physical contact, Information about symptoms of SARS-CoV-2 / COVID-19 infection or exposure occurrence and Agreement that treatment can be discontinued if the patient encounters a high-risk situation.

Our Education Committee has the task to produce recommendations that will concern the staff to work safely since it seems that the pandemic is not going to end in the near future.

General Assembly (GA) of the 9th November 2019

by EBAss

One of the main discussion topics during our last GA was the production of a document related to recommendations / guidelines on infection control in hyperbaric facilities. Mrs Gaitanou presented reference publications and a proposed skeleton for the document to be produced. Ironically, not long after the GA, infection control became the big topic of discussion for all hyperbaric facilities in Europe and around the world, due to COVID-19. Medical Hyperbaric Associations such as UHMS, ECHM and SPUMS took the initiative and produced infection control documents, specifically related to this pandemic. That is a great opportunity for our association to include all these new additions/proposals from around the globe and

finalize a document that will be relevant to preparedness of the new pandemic normality.



Other topics of discussion included situation of EBAss memberships (full individual, associate/corporate, etc) and the EBAss accounts with a proposal for the 2020 budget distribution. Mr Tzavellas stepped back from the Board of Directors and his duties as a General Secretary due to personal issues. He will still be an active member of the Association and the editor of the newsletter. At the same time, the Board welcomed Mr Mat-

thew Wormleighton from Midlands Diving Chamber (UK) who was assigned the task of the General Secretary. Mrs Chandrinou took over the tasks of Communication Committee where she was already responsible for the tasks of the website and facebook sub-committee.

For more details you can visit the members area and download the minutes of the GA in English and French.

Date and place for our next GA and meeting for the Board of Directors is pending and announcements will be made soon.



EBAss News

EBAss activities of the last year

- ✓ General Assembly and two meetings for the Board of Directors.
- ✓ Successful completion of the EBAss-organised 3rd Safety Manager course in Gozo island, Malta.
- ✓ A triage questionnaire was produced to aid in the screening process of potential COVID patients entering the hyperbaric chamber.
- ✓ Recommendations/guidelines on infection control in the hyperbaric facility are in working progress.
- ✓ EBAss-organised Safety Managers course has been postponed until further notice.



- ✓ EBAss accredited centers can now contact accreditation committee if they want to run the ECHSM course.

Welcome of new members

We would like to welcome onboard and thank for their support, the following personnel who joined EBAss during the last year.

Full members

1. Pamela Quandroy
2. Geoff Munro
3. Matt Ferre
4. Andrew Shaw
5. Charlie Elysee
6. Adrian Williams
7. Phillip McConnell
8. Julie Tuck
9. Oisin Conroy
10. Stephen Stratton
11. Alexander Hannam
12. Steven Kent
13. Margarita Bertolin Solaz
14. Inneke Achten
15. Hedley Mark
16. Ashford Clair
17. Cook Adrienne
18. Dillingham John

19. Hanson Kit
20. Richardson Lee
21. Palazzolo Carmelo
22. Krook JT
23. Guirindola Bella Mia
24. Botond Jozan Biro
25. Chze Hsing Ho
26. Bram Jackers
27. Ellen Kop

Associate members

1. Stephen Munro

Since then, there are another new members that have joined EBAss and are awaiting for official acceptance at the next GA. So, thank you again everyone for your interest and

EBAss Accredited centres for 2020

The following centres are EBAss accredited to run training courses for Chamber Operators, Nurses, ICU Nurses or Attendants (not nurse), specialized to work under Hyperbaric conditions.

1. HBO Cyprus - Cyprus
2. DDRC Professional Services - UK
3. Haux Life Support Germany - Germany
4. Centro Di Medicina Iperbarica, PADOVA - Italy
5. Hyperbaric Health - Australia
6. University of Gdansk - Poland
7. National Hyperbaric Medicine Unit, Ireland
8. Athens Naval Hospital - Greece

DDRC Professional Services has recently gained EBAss accreditation to run a Safety Manager course.

Recent Publications

articles related to Hyperbaric practices including patient management, safety issues, testing of material and operations

keywords: Hyperbaric, oxygen

search machine: Medline

period of search: 12/2019 - 6/2020



1. Efficacy of UV-C Disinfection in Hyperbaric Chambers
Warren BG et. (JUNE 2020)

ABSTRACT:

Ultraviolet C (UV-C) light reduces contamination on high-touch clinical surfaces. We assessed the efficacy of 2 UV-C devices at eradicating important clinical pathogens in hyperbaric chambers. Both devices were similarly efficacious against MRSA but differed significantly

against *C. difficile*. Additionally, direct UV-C exposure was more efficacious against both species than indirect exposure.

2. Middle-ear Barotrauma After Hyperbaric Oxygen Therapy: A Five-Year Retrospective Analysis on 2,610 Patients

William François Oko Pettis Edinguele et al. (JUNE 2020)

ABSTRACT:

Methods: We conducted a five-year retrospective study from

January 2013 to December 2017, where 2,610 patients were selected, in the Hyperbaric Medicine Centre, Sainte- Marguerite Hospital of Marseille, France. Results: 262 patients experienced MEB after HBO2, representing a prevalence of 10.04% and incidence of 0.587%. Their average age was 55 ± 19 years. Women were more affected than men. We have not high-

lighted a seasonality to this condition. Risk factors were: age older than 55 years, female gender, ear, nose and throat history (cancer, radiotherapy, infections or allergies, malformations or benign tumors), general history (smoking, obstructive breathing disorders, thyroid disorders and obesity), HBO2-approved indications of sudden deafness and delayed wound healing, and altered tympanic mobility on initial examination. Although the benign stages of Haines-Harris classification were the most encountered in our study, MEB was responsible for premature discontinuation of HBO2.

3. Sudden Death After Oxygen Toxicity Seizure During Hyperbaric Oxygen Treatment: Case Report

Lalieu RC et al. (JUNE 2020)

ABSTRACT:

Acute cerebral oxygen toxicity (ACOT) is a known side effect of hyperbaric oxygen treatment (HBOT), which can cause generalised seizures. Fortunately, it has a low incidence and is rarely harmful. Nevertheless, we present a case of a 37 year-old patient with morbid obesity who died unexpectedly after an oxygen toxicity seizure in the hyperbaric chamber. Considering possible causes, physiologic changes in obesity and obesity hypoventilation syndrome may increase the risk of ACOT. Obesity, especially in extreme cases, may hinder emergency procedures, both in- and outside of a hyperbaric chamber. Physicians in the hyperbaric field should be aware of the possibility of a fatal outcome after ACOT through the described mechanisms and take appropriate preventative measures. Basic airway management skills are strongly advised for involved physicians, especially when specialised personnel and equipment are not immediately available.

4. Evaluation of the Abbot FreeStyle Optium Neo H Blood Glucose Meter in the Hyperbaric Oxygen Environment

Baines C et al (JUNE 2020)

ABSTRACT:

Method: Ten non-diabetic hyperbaric staff members (age 35-55 years) underwent a standard 243 kPa HBOT exposure for 95 minutes. Blood glucose levels were measured via (i) finger-prick capillary test using the FreeStyle Optium™ Neo H glucometer and (ii) venous serum test using the Cobas 6000 laboratory analyser. Samples were taken at (T1) 0 minutes (pre-HBOT), (T2) 25 minutes, and (T3) 55 minutes into HBOT. Results: All participants were euglycaemic at T1 (BGL 3.8-5.4 mmol·L⁻¹). The highest venous serum value was 5.90 mmol·L⁻¹ at T3 and the highest capillary value was 6.30 mmol·L⁻¹ at T1. Post hoc tests showed a statistically significant difference between the mean capillary result pre-dive (T1) and readings at T2 (P = 0.001) and T3 (P < 0.001) while differences between T2 and T3 capillary results were not statistically significant, illustrating the effect of HBOT on capillary beds. Differences in venous values across the time points were not significant.

5. Treatment of Children With Hyperbaric Oxygenation (HBOT): An Europe-wide Survey

Janisch T et al. (APR2020)

ABSTRACT:

Methods: We sent an internet-based questionnaire to HBO centers in Europe to gain information about their experience with children and HBOT. Results: Out of all HBO-centers who participated in the questionnaire 90 % treat children analogue to adults with regard to indication and HBOT protocol. Most treated children had life-threatening indications or the risk of organ loss. The reported rate of side effects was: 6.8 % anxiety, 2.4 % barotrauma, 0.9 % seizure, 0.2 % retinopathy and no case of pulmonary barotrauma or oxygen toxicity.

6. Safety of a Continuous Glucose Monitoring Device During Hyperbaric Exposure

Bliss C et al. (JAN-MAR2020)



ABSTRACT:

Materials and methods: We evaluated and tested commercially available Dexcom® G6 CGM

transmitters under hyperbaric conditions. Each transmitter contains a 3V, 130-mAh (0.39 Wh) lithium manganese dioxide battery (IEC CR1632) and circuit board that are fully encapsulated in epoxy. Each transmitter is pressurized to 90 pounds per square inch (psi) in an autoclave at 40°C for up to 72 hours during manufacturing to ensure that all enclosed air spaces are eliminated from the epoxy. We compared the CGM components against section 14.2.9.3.17.5 of the 2018 National Fire Protection Association 99 (NFPA 99) Health Care Facilities Code requirements. Six CGM transmitters attached to estimated glucose value generators (EGVGs) underwent 11 pressurization cycles to 45 feet of seawater (fsw). All transmitters were returned to the manufacturer to assess post-exposure structural integrity. G6 sensors, which contain no electrical components or compressible air spaces, do not pose a risk in the hyperbaric environment. Results: There was no observed change in preset EGVG readings during hyperbaric exposures. Post-exposure testing revealed no structural compromise after repeated hyperbaric exposures.

7. The Myopic Shift Associated With Hyperbaric Oxygen Administration Is Reduced When Using a Mask Delivery System Compared to a Hood - A Randomised Controlled Trial

Bennett MH et al. (DEC 2019)

ABSTRACT:

Methods: We conducted a randomised trial of oxygen delivery via hood versus oronasal mask during a course of 20 and 30 HBOT sessions. Subjective refraction was performed at baseline and after 20 and 30 sessions. We repeated these measurements at four and 12 weeks after completion of the course in those available for assessment. **Results:** We enrolled 120 patients (mean age 57.6 (SD 11.2) years; 81% male). The myopic shift was significantly greater after both 20 and 30 sessions in those patients using the hood. At 20 treatments: refractory change was -0.92 D with hood versus -0.52 D with mask, difference 0.40 D (95% CI 0.22 to 0.57, $P < 0.0001$); at 30 treatments: -1.25 D with hood versus -0.63 with mask, difference 0.62 D (95% CI 0.39 to 0.84, $P < 0.0001$). Recovery was slower and less complete in the hood group at both four and 12 weeks.



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SAFETY MANAGER COURSE

FOR HYPERBARIC PERSONNEL

3rd Safety Manager Course in Gozo Island - Malta

The 3rd Safety Manager Course was successfully completed last year at the Hyperbaric Unit of Gozo General Hospital, on the island of Gozo, Malta. Our participants were from the UK, Italy, the Netherlands and of course Malta.

We would like to thank the Executive Director, **Dr. Joseph Fenech**, and local hosts,

Dr M. Saliba, **Dr S. Bigeni** and **Mrs M. Cassar** for their exceptional hospitality and organization of the event.

From now on any accredited training center can include the Safety Manager education in the list of their courses.



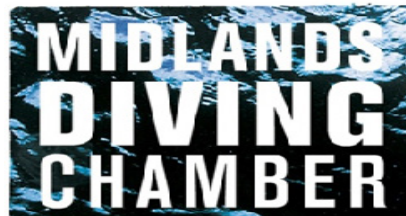
Attention!!

The registration form for becoming a new EBAss member or renew your existing membership you can find online at <http://ebass.org/registration-form/>

The process for members to join the Board of Directors can be found in part IV of the EBAss statutes at <http://ebass.org/statutes/>

We would like to thank our corporate members for their ongoing support to our Association.

Corporate members



EBAss
Newsletter

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