

# Achieved Consensus for Training of Medical Doctors in Diving and Hyperbaric Medicine

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## 1) Background

Most European countries have some form of post graduate training in diving medicine and to a lesser extent in hyperbaric medicine but this is, in most cases, not university based and even in those countries where a university degree in diving/hyperbaric medicine is offered, this often does not lead to the possibility of being officially registered as a Medical Specialist in the field because of the absence of a specialist register.

Although a couple of countries do have an official medical specialist register in Diving and Hyperbaric medicine and the speciality is accepted by the EU as existing in that country, this is not yet officially recognised by the European Union as one of the medical specialities benefitting from Freedom of Movement and Establishment as stated in Annex V, points 5.1.1 and 5.1.4 of the EU Directive 2005/36/EC as less than 2/5 of the EU member states have such a nationally recognised speciality in either diving medicine, hyperbaric medicine or baromedicine.

The ECHM together with the EDTC has been key in trying to achieve a level of conformity in the training and practice of diving and hyperbaric medicine through its consensus conferences, the COST B14 exercise, and the joint sub-committees and reports. The successful completion of a commonly acceptable minimal standard in training and practice is a critical first step towards achieving recognition of the speciality both nationally as well as at EU institutional levels,

## 2) Introduction

Training in hyperbaric and diving medicine is a major goal of the European Committee for Hyperbaric Medicine (ECHM) and the European Diving Technology Committee (EDTC). As the number of doctors involved in this field will always remain small and training institutions are rare, getting appropriate competence is difficult.

A joint medical subcommittee (JMS) composed of representatives of ECHM and EDTC medical subcommittee has been formed and has been studying over several years which qualifications are needed by our medical and industrial partners and how training should be organised in order to produce credible certification in the operational competences they need. The crucial points for such training have been identified as being:

- Because of the small number of potential students and available trainers, international cooperation is needed in order to organise and carry out proper training and obtain international recognition of the qualifications issued on

successful termination of such training. For this, well defined training objectives and educational levels are crucial

- coordination of the pathways to various end points of such training, be it more clinically oriented such as for HBO therapy, be it more work and task oriented such as for occupational diving and tunnelling, is perceived to be a major step towards mutual recognition and efficient cooperation.
- A satisfactory quality of service needs also maintenance of such acquired competences and therefore continuous professional development (CPD) must be an integral part of such standards.

### **3) Results of the consensus process by JMS**

Based on the first issue of the common training standards for medical doctors in diving and hyperbaric medicine in 1997, the new JMS has achieved a consensus for a first revision which was published in 2011. In summary these state that:

- a) the training objectives for hyperbaric medicine and for diving medicine are agreed on and joined to the 1997 document as annexes. In another annex the scopes of diving are defined in order to clarify some semantic confusion (the "working diver", as opposed to the "recreational diver", now covers all categories of commercial and professional divers. "Commercial divers" tend to be employed full time by industry or aqua culture companies, while "professional divers" include those with a non diving main employment but who will dive at varying frequencies during their work or as a separate part-time occupation such as search and rescue personnel, recreational dive instructors, marine scientists and others).
- b) the knowledge levels are defined as
  - Level 1 : Medical examiner of divers (MED)
  - Level 2D: Diving medicine physician (DMP)
  - Level 2H: Hyperbaric medicine physician (HMP)
- c) Each of these levels represents a specific spectrum of knowledge and experience, which is considered to be needed in order to get competence for examining divers or hyperbaric workers (MED), for advising diving companies or institutions (DMP) or for conducting hyperbaric oxygen sessions in a hyperbaric centre (HMP).

- d) The standards distinguish between knowledge levels and degrees of competence for the above mentioned jobs. Competence (as attested by a certificate of competence) needs various practical skills and some minimal professional experience as well as the need to maintain this competence over the years thus a documented CPD is necessary.
- e) The need for recognition of higher levels of competence (called Level 3) is recognised but up to this edition of the standards there was no agreed consensus for that step till now but work on this 'Expert' level 3 standard is ongoing.

**4) The educational and training standards for physicians in diving and hyperbaric medicine rev 1 - 2011:**

The revised standards version, as agreed by the ECHM and the EDTC, together with DMAC, proposes an iterative way to acquire the required knowledge and competence levels, as shown in figure 1.

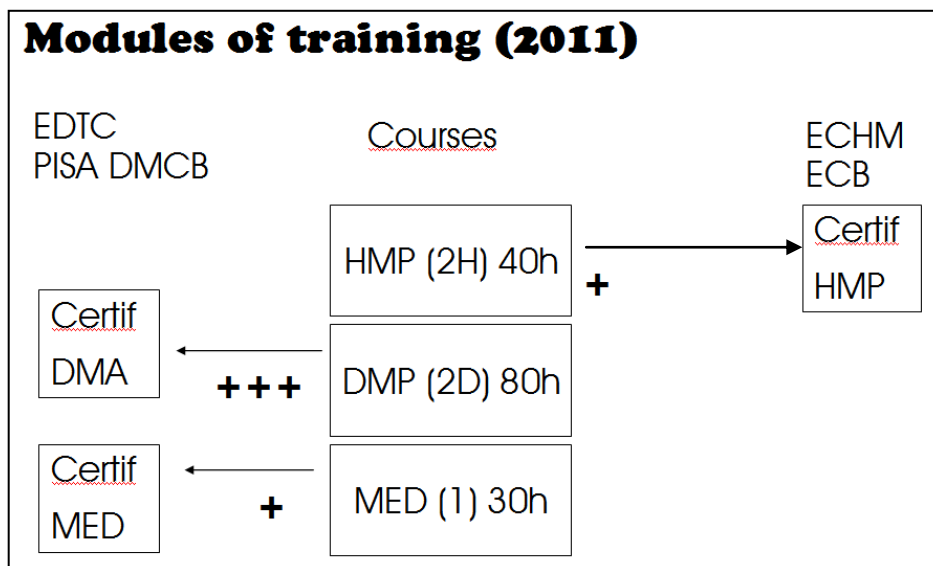


Fig 1. Flowchart of the iterative competence development (for more details see [www.edtc.org/documents](http://www.edtc.org/documents)) Certif med: Certified medical examiner of divers for working divers, Certif DMA: Certified diving medicine physicians/advisors, certified by the Diving Medical Certifying Board (DMCB) (initiative of the Scuola Superiore St. Anna Pisa together with EDTC and DMAC). Certif HMP: Certified hyperbaric medicine physicians, certified by the European College for Baromedicine (ECB) of the ECHM. "+" means additional, mostly practical, conditions as defined in the standards.

The syllabus for the training modules is defined in the standards on the basis of the training objectives and the estimated number of training hours per topic is indicated. Such modular training will allow sharing educational processes between different organisations.

The JMS is aware of the fact that modern education has developed into a splitting between web-based components and face-to-face training units. However, while recognising the advantages of distance learning, the importance of interactive sessions and hands-on training must not be neglected.

In order to estimate the quality of CPD the use of a logbook is proposed and an assessment of the logged activities using a score will allow the certifying body to appreciate the value of various activities appropriately.

## **5) Outlook to the consensus-revision**

The JMS is aware of the need to revise the standards on a prefixed periodical basis. As the previous version (described here) has been published in 2011, the next revision is planned for 2016/2017.

The assessment of competence levels and recognition of qualifications is of importance for mutual international recognition and should be transparent also for those engaging diving and hyperbaric specialist doctors. Such certifying instances and databanks are building up and may be integrated as part of future training standards.

Competence of trainers and higher qualified specialists (Level 3) is another topic to be agreed. The proposal prepared by ECHM is to introduce recognition of a Level 3 competence which would be somehow similar to a senior specialist/consultant competence. Besides the need of having a Level 2 (2h or 2d) competence the candidate will need to have worked at least 5 years in the speciality thus acquiring expert knowledge, skills and experience in the field. It is further supposed that such Level 3 doctor will be participating in education and research.