reasonable minimum threshold aerobic capacity consistent with operational safety. The authors mention the often invoked 13 MET capacity identified as a threshold for US Navy divers. What is typically ignored, however, is the fact that the Navy has far more applicants for dive school than posts to be filled, making very stringent selection standards feasible even if not truly operationally necessary. It is not at all clear that this is a reasonable threshold for the broader diving community. Despite this, the RSTC documentation adheres to the traditional position. "*Formalized stress testing is encouraged if there is any doubt regarding physical performance capability. The suggested minimum criteria for stress testing in such cases is at least 13 METS [sic]. Failure to meet the exercise criteria would be of significant concern*." This is contrary to the available data. A review of 14 studies in which the aerobic capacity of divers was measured found that mean aerobic fitness ranged from 37–57 $mL \cdot kg^{-1} \cdot min^{-1}$ (10.6–16.3 MET).[4] The lowest individual scores were below 5.0 MET. The threshold of 13 MET was exceeded by the group mean in only six of the 14 studies described. This certainly does not support 13 MET as a meaningful threshold for participation.

Our current work was intended as a simple effort to begin to assess the aerobic demands of recreational diving. It is our hope to promote discussion that is willing to risk the heresy of challenging conventional wisdom and to stimulate additional research.

We certainly agree with the authors and feel strongly that enhanced in-water evaluation of physical fitness is desirable to establish diver readiness. We would not, however, refer to this as a "medical examination" since it is likely that it

Diving and hyperbaric medicine: an undergraduate's experience

As part of my undergraduate medical degree and as a keen scuba diver, I undertook my clinical elective at the Hyperbaric Medical Centre, Sharm el Sheikh, Egypt (Figure 1). The Centre first opened in 1993, and its hyperbaric chamber quickly became one of the busiest in the world. This was mainly owing to the popularity of Sharm with both scuba and free divers for the pristine reefs and rich underwater wildlife. The Centre offers consultations and diving medical examinations, as well as a 24 h emergency service. In recent years the number of divers has been affected, with diving eligibility examinations and injuries halved to around 1,200 each year, owing to the country's political climate.

During my elective, I learnt about diving physiology and hyperbaric chamber use, how to diagnose and treat common and severe diving injuries, and become proficient in diving medical eligibility assessment. Diving medicine and hyperbaric oxygen therapy are not covered in the core medical curriculum, despite doctors frequently certifying divers. Most days' work involved carrying out several diving medicals for instructors and training course candidates, or those who declared a pre-existing medical condition on their medical statement.[1] After observing the diving medical specialists, I was able to conduct my own consultations, which involved taking a focused history, a physical examination and, if necessary, cardiopulmonary exercise testing. The most useful skill I gained was confidence counselling divers on how to manage and prevent further injuries. Certain conditions (such as sinus congestion,

asthma, diabetes and certain prescription medications) are known to increase the risk of diving injuries, and these are not always obvious. Finally, I observed and participated in the diagnosis and treatment of a wide range of diving injuries, from middle ear barotrauma, pulmonary barotrauma and animal stings to decompression illness (DCI).

Later, I reported a case of *cutis marmorata*.[2] Interestingly within days of being published online, this case report and the accompanying image appeared on a popular diving forum, with divers commenting on the usefulness of seeing first-hand such a common clinical sign of DCI.

On one of my general practice placement visits, I saw a patient who had developed a middle ear barotrauma. Following appropriate advice, she wanted to discuss her daughter's diving problems and I referred her to the UK Sports Diving Medical Committee website for contact details of local, approved diving medical referees.[3] Potential divers requiring a medical clearance often present to their own doctor (general practitioner), who may not be aware of the diving regulations and contra-indications so they can counsel patients appropriately.[4] With this in mind, I have set out to raise awareness amongst general practitioners (Modell MM, Glew S, Sornalingam S, Cooper M, unpublished work) on how to provide onward referral to diving medical specialists.

I would highly recommend such an elective to both medical students and qualified doctors interested in emergency medicine or sports medicine. With dive trips to remote locations easily accessible, both divers and doctors should be aware of severe diving-injuries.

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Figure 1
Fourth-year UK medical student Michael Modell at the Hyperbaric Medical Centre, Sharm el Sheikh, Egypt

Immersion pulmonary oedema and diving fatalities

The report by Smart et al is very interesting.[1] They note that "*forensic pathologists should be properly trained in and have guidelines for the conduct of post-immersion and post-diving autopsies*." In the medical curriculum, there is little on diving medicine and many pathologists have little knowledge on this issue.[2,3] For example, in coastal Thailand, a very popular region for scuba diving, there are no pathologists with a specific training in diving medicine, and the issue here is how to improve their knowledge. The investigation of diving fatalities is well summarised by Busuttil and Obafunwa: "*a multi-disciplinary approach that involves co-divers and instructors, the rescue team, the police, forensic scientists, diving equipment suppliers, underwater physiologists and physicians, decompression chamber personnel, general practitioners, relatives and the forensic pathologist*" is required for any investigation of diving deaths.[3]

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