

Risk management in recreational diving: the PADI approach

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Key words

Risk, safety, scuba diving, training, PADI

Abstract

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The activity of scuba diving, whether in the context of an instructional class or recreational diving, contains some inherent risks. Water depth, limited visibility, cold, adverse weather conditions, dangerous marine life, buddy separation or diving under the influence of alcohol or drugs all represent risks of harm that may potentially be realised. It is imperative that these risks are recognised, understood and appreciated by the provider (dive centre, dive training organisation, instructor or dive master) and the consumer (certified diver or diver student). As dive educators we have a responsibility towards providing divers with safe diving experiences. To this end, we must educate our dive professionals accordingly. In other words, risk management begins with us – the providers.

Introduction

It is only natural that the question of 'risk' in diving in medical terms automatically concerns the physical eligibility of an individual to undertake diving. The 2003 SPUMS Conference focused on the diving medical, the associated risks and how these risks can be managed. We are, of course, aware that medical risk management is part of a multitude of types of risk management necessitated by the inherent risks of diving. The previous year's conference further explored one area of risk that, though resulting in medical complications, was initiated by inappropriate diving practices, in this case by inadequacies in the selection and the use of various types of diving equipment.¹

There are numerous fun and interesting recreational activities available to us, and though different in their designs and objectives, they all have two specific things in common. Firstly, each activity carries certain risks; and secondly, effective risk management helps reduce those risks to manageable levels, to a level where we can say 'OK, I can deal with that. Let's do it!' Effective risk management has done exactly that for recreational diving, which in its infancy was widely regarded as a 'dark and dangerous' activity.

In spite of vastly enhanced risk management, however, people still get hurt and we still, regrettably, experience diving fatalities. The medical community is doing its share to enhance diver safety whilst other sectors of the dive industry do likewise through different procedures. Richardson discussed earlier the rationale for risk management from a diver educator's standpoint and how structured diver training can help reduce risks to manageable and acceptable levels.² With that in mind, this paper reviews the measures the Professional Association of Diving Instructors (PADI) has introduced to enhance effective risk management in recreational diving and how they are distributed.

Rationale for risk management in recreational diving

WHAT IS A RISK?

A risk is the chance of something happening as a result of a hazard or threat, which will impact on your business activity or planned event. Risk arises out of uncertainty. It is measured in terms of the likelihood of an event happening and the consequences if it does happen.³

The associated risks, divided into two main categories, safety and commercial, identify appropriate risk management. Safety risks relate primarily to medical considerations, diver inexperience, absence of appropriate emergency medical systems and rescue procedures, and violation of diver training standards and safe diving practices. Commercial risks typically involve loss of business opportunities from negative perceptions of diving, financial losses from claims, lawsuits and inappropriate insurance cover, loss of continued association with a reputable diver-training organisation and inappropriate government legislation.

The primary concern is diver safety. Safety precedes all other considerations. Effective risk management strives to keep the diving public out of harm's way whilst ensuring diving remains an attractive and enjoyable activity. PADI has over the years developed several important tools available for dive professionals and divers to enhance safety through effective risk management.

Risk management: the PADI approach

Diving consumers expect to have safe and enjoyable dive experiences. Effective risk management tools and techniques make this possible and practical. Some prominent tools we have developed include:

- dive training standards
- safe diving practices

- quality management
- risk management seminars and member forums
- educational consultancy
- legal support
- insurance schemes and
- involvement in government legislation.

The issue of medical examinations will be discussed in the next issue, and will not be considered in any detail in this paper. However, to emphasise that medical considerations are regarded as indispensable in proper risk management, the Association has a self-imposed medical screening process, identified internationally through application of the Recreational Scuba Training Council's (RSTC) medical examination guidelines.⁴

Diver training standards

Our philosophy of diver training is based on a systematic approach through a modular instructional system. This approach helps the student diver achieve the intended learning outcomes described in a specific set of objectives. The associated training standards present the foundation on which the system has been built. These standards are based on considerations for student diver safety, student diver learning and prudent instructor conduct.

An instructional system provides excellent risk management for several reasons:

- Diver safety: the system has been thoroughly researched, in theory and in practice;
- Training efficiency: time sensitive; globally applied to local conditions;
- Legal protection: burden of proof of the system's validity shifts to the system developers;
- Achievement of learning outcomes: measurable objectives;
- Validated through field tests: developed by divers for divers;
- Accommodation of various learning styles: performance based; conforms to the needs of the student.

Through the Instructor Development Course (IDC), candidates learn about the advantages of adhering to an instructional system and its associated standards. For the dive professional, following prescribed training standards is the single most important step in risk management.

All standards and regulations are, of course, as appropriate and viable as the individual imposing them. Training standards apply to a variety of situations but the dive professional must ultimately apply sound judgement, based on many variables, including diving conditions, training objectives, divers' experiences, location of emergency medical services and so on. Specific standards and safe diving practices, combined with sound judgement and application, make for effective risk management.

Safe diving practices

As a diver-training organisation we are particularly concerned with the needs of the diver professional, the student diver and the diver. In other words, safe diving practices apply to all divers. We receive inquiries from all categories of divers requesting advice on safe diving practices in a multitude of situations. Our association with a variety of organisations, such as SPUMS, Diver Alert Network, RSTC and many local diving federations, has enabled us to establish that we are regarded as a prudent organisation with acceptable safe diving practices. These practices are taught extensively throughout the diver training programmes, thus providing all divers with a tool for effective risk management.

Quality management

The ability to recognise dive professionals for a job well done, manage the quality of an instructional system and enhance diver safety is considered indispensable in risk management. Quality management, assurance and recognition programmes, in place since PADI was established over 36 years ago, are applied proactively to meet these objectives.

The 'Recognition of Excellence Program' acknowledges members who excel in their work. We recognise their efforts in writing, based on input received from their student divers as well as through field observations by regional managers. In the past 12 months, over 175 certificates of recognition were issued to members in the Asia-Pacific region alone. The certificates are a reminder and an encouragement to dive professionals to strive for excellence.

To help members manage risks through a consistently high level of quality dive training and diver services, our Quality Management Department (QMD) monitors diver training courses for quality control. Of particular use is a wide distribution of 'Course Evaluation Surveys' (CESs), which are routinely, and at times selectively, sent to student divers having completed a diving course. The CES contains specific questions pertaining to the level of training completed. Any indications of possible non-compliance with our standards will result in an inquiry. Other types of written complaints may also form the basis for further inquiries. All inquiries are conducted in confidence and according to standardised procedures, based on equal application and process.

In 2001, PADI America's QMD mailed 140,000 CESs (one in four divers), of which 32,200 (23%) were returned and reviewed. The review resulted in 2,200 inquiries being initiated. The vast majority of inquiries expose simple misunderstandings that are quickly and successfully addressed. Few require further investigation and even fewer result in re-training, suspension or expulsion. In order to protect the public from any further harm, the names of

suspended or expelled members are published in the in-house quarterly, *The Undersea Journal*. In addition, the names of expelled members are forwarded to other training organisations.

Risk management: member forums and seminars

PADI regularly distributes information on risk management via publications, annual member forums and dedicated risk management seminars conducted worldwide. These seminars, which are 'living' programmes, are designed in such a way as to allow for local adaptation, but at the same time ensure their validity. For instance, risk management issues in Taiwan and Korea differ from those in Australia and Indonesia. In general, topics include medical considerations, why diving incidents happen, negligence, accident and liability insurance, legal considerations and a review of specific situations. Several seminars include widely popular 'mock' court proceedings over theoretical diving incidents, not unlike the Pugwash scenario.⁵ Risk management seminars have been conducted throughout Asia-Pacific since March 2000 (45 seminars with a total of 1,700 members in the audience) and continue in high demand. The seminars are supported by our insurance broker who often participates actively in them, adding an important element to the message of risk management.

Educational consultants

Educational consultants are employed worldwide and play an important role in fielding questions from members and non-members alike. Questions focus on training standards, different training situations, safe diving practices and diving opportunities. During the IDC, candidates learn about this important service and how it may benefit their daily activities. PADI Asia-Pacific currently employs five educational consultants of which three also function as instructor evaluation (IE) examiners, an important addition to their responsibilities that allows for close interaction with other members.

Legal risk management⁵

A legal risk is the possibility of a legal decision that requires the dive professional to pay another party to compensate for damages caused by the dive professional's action or inaction. Our Legal Department serves several purposes to ensure the legal validity of the diver training system. Legal advice to members is limited to referrals to the appropriate profession, much like the policy on medical advice. Throughout the IDC, candidates learn to apply training procedures that are commonly referred to as 'defensive teaching', i.e., following a set of recommendations directly related to legal risk.

Insurance in risk management

In certain geographical areas, instructors, dive masters and

assistant instructors are required to carry professional liability insurance. In spite of this not being a worldwide requirement, it is strongly recommended at all times. For instance, instructors conducting diver training in Australia are required to carry liability insurance whereas those in New Zealand and Thailand are not, although many have chosen to do so. We live in an increasingly litigious climate that imposes risk for high legal costs. A legal defence can be very expensive, even if the dive professional wins. The liability insurance provides cover for such expenses.

Other insurance schemes are in place to support risk management for PADI members. Student divers may be insured through the 'Student Protection Program', certified divers through the 'Protection Program', and several insurance schemes are available to dive centre, resort and boat owners. We recommend that all members, regardless of their level, carry appropriate insurance.

Involvement in government legislation

Members benefit from PADI's direct involvement with government bodies responsible for introducing legislative measures. The Association supports appropriate legislation and endeavours to render assistance and advice whenever required, and this involvement helps members adhere to local laws and requirements. We have been actively involved in legislative matters in several countries, including Australia, Malaysia, New Zealand, Singapore, Korea, UK, France, USA, Germany, Spain etc.

Implementation and outcomes

How well are all of these measures implemented, and what are the ensuing results? Our direct contact with the market through our various seminars, programmes and direct field observations, forms the basis for strong evidence that the vast majority of members apply prudent risk management procedures. Successful implementation of risk management procedures is, of course, ultimately reflected in diving incident statistics that vary from region to region, country to country. From statistics available, and when compared with the number of dives undertaken daily, it is apparent that the safety record has improved greatly over recent decades, and will continue to do so. Risk management plays a substantial role in these improvements.

Conclusions

We cannot avoid risk altogether, but we can strive to reduce risk to manageable levels. Once the diver has satisfied medical prerequisites, there are many opportunities for the dive professional to further enhance the diver's safety. The primary and most important need for risk management is to keep divers safe by preventing incidents from happening. This must be reflected in everything dive professionals and divers do. Reducing risks helps ensure that recreational diving remains a fun, attractive and reasonably safe activity.

References

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- 2 Richardson D. Dive safety and risk management: never let your guard down. *SPUMS J.* 2004; 34: 88-9.
- 3 *Definition of risk management.* Queensland Government, 2003.
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- 4 RSTC medical statement. *SPUMS J.* 2002; 32:226-30.
- 5 Coren ES. The law and the diving professional. *Undersea Journal.*
- 6 Bennett MH. Risk, perception and sport – the doctor as policeman? *SPUMS J.* 2004; 34: 75-80.

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Errata

SPUMS Diplomates

We have been advised of a number of errors in the diplomates list held by the Society and published in the last issue of the journal (*SPUMS J.* 2004; 34: 47.). Would all diplomates please check their entry for errors and forward a copy of their diploma to the Secretary so the records may be corrected. A revised list will be published.

Dr Simon Mitchell

In the article by David J Doolette and Simon J Mitchell “A biophysical basis for inner ear decompression sickness”

(*SPUMS J.* 2004; 34: 15-21.) reprinted with permission from *J Appl Physiol.* 2003; 94: 2145-50, copyright The American Physiological Society, Dr Mitchell’s biographical note did not identify that he was a consultant in the Department of Diving and Hyperbaric Medicine, Prince of Wales Hospital, Sydney, at the time of writing.

Book Review - NOAA Diving Manual

The *NOAA Diving Manual* reviewed in *SPUMS J.* 2004; 34: 53-4 was previously reviewed by John Pennefather in *SPUMS J* 2002; 32: 26-7. The two reviewers’ opinions do not differ in any important way.

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