FITNESS TO PARTICIPATE IN ADVENTURE ACTIVITIES: MEDICAL AND LEGAL CONSIDERATIONS ARISING FROM RECREATIONAL SCUBA DIVING

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Introduction

Adventure tourism activities are becoming increasingly popular with international visitors to Australia, as well as for domestic travellers within the country.[1] The 1992 International Visitors Survey, for example, showed that among the most popular activities for overseas tourists were surfing, scuba diving, snorkelling, bushwalking, sailing, rock climbing, fishing and horse riding.[2]

Some of these activities are traditionally categorised as high risk and are considered by sporting organisations as requiring specific safety guidelines and precautions.[3] Unfortunately, very little information is available to show how safe these activities are, or to clarify where risk management might be improved. Australian studies of sporting injuries tend to concentrate on organised team sports,[4,5] or to report the types of injuries treated at metropolitan hospitals.[6] Since these hospitals are usually not in catchment areas where adventure tourists are likely to be treated, their injury profiles generally do not include adventure activities.

One of the most pressing issues for the adventure tourism industry is that of determining candidates fitness to participate in the various activities offered. Scuba diving is one of the few activities in Australia where a medical questionnaire is used to screen people wishing to try diving for the first time (for introductory or resort diving),[7,8] and a full medical examination is required if a person wishes to be trained as a certified diver.[9,10]

The debate about what constitutes an adequate medical examination for divers, and the appropriate training and qualifications for the medical practitioner conducting the examination, has received considerable attention in this journal.[11-18] The debate has generated a medical information base in recreational diving that surpasses any of the other adventure tourism activities. Even so, accurate figures on the number of active divers are still difficult to obtain,[19,20] and medical conditions continue to be a major contributing factor in morbidity and mortality. For example, from a review of 100 consecutive diving fatalities in Australia and New Zealand during the past decade, Edmonds and Walker report that in 25% of the cases there were pre-existing medical contraindications to scuba diving.[21]

In addition to medical considerations, there are legal issues such as professional negligence and statutory "duties of care" to be considered. On the one hand, there are the legal problems for a medical practitioner who certifies a person fit to dive if later it is found that a medical problem which should have been detected was the cause of an injury.[22] On the other hand, a dive instructor or dive supervisor may be caught up in legal proceedings if a client is injured as a result of a medical condition that would normally have excluded them from participating in diving activities. This is the major concern raised with the use of questionnaires as a medical screening measure, since it is well known that some enthusiastic candidates will conceal conditions (such as asthma) that would preclude them from diving.[14]

Available figures for scuba diving suggest that the relative injury rate is very low.[23] This type of information has given underwriters the confidence to make international travel insurance available for diving under certain conditions, while other adventure activities such as mountaineering and polo are specifically excluded from most travel insurance policies.

Two issues have the potential to jeopardise the availability of current travel insurance policies for diving, and create legal problems for tourism operators. The first is the fact that a diving certification (C-card) does not expire, even if the holder does not participate in the sport for years. Rusty and inexperienced licensed divers may therefore be at increased risk for injuries.[24] Secondly, no regular medical examination is required after obtaining an initial diving certification. This means that many licensed divers, over a period of time, may no longer be fit to dive. In one study of Japanese diving accidents, Mano and Shibayama found that poor physical condition was the cause of 4.9% of the diving fatalities.[25] The following analysis of visitors to one island resort demonstrates the importance of considering these two issues.

Heron Island diver profile

Heron Island on the Great Barrier Reef is well known as an international diving destination.[26] All diving guests visiting the island are routinely asked to complete a diving registration form, which is then used by staff as a source of information for dive planning. Profiles generated from a comprehensive review of these record forms have recently been published.[27]

To gain an insight into visitors fitness to dive, a secondary analysis of 2,577 record forms from 1991 was conducted. Of particular interest were the number of dives in the previous 12 months, and the time since the last medical examination. The forms ask about the last medical examination and not whether this examination was specifically for diving. The information is therefore relevant as an indication of the time between medicals for participants in a range of adventure tourism activities.

TABLE 1

HERON ISLAND DIVER PROFILE

Divers from	Queensland	NSW	Victoria	Other Australians	USA	Europe	Other Countries
Average time since last dive (months)	9.0	8.7	12.4	9.9	13.3	8.8	9.5
Number of dives in previous 12 months (%)							
None	24	23	26	27	33	25	27
1-10	35	40	51	34	42	40	40
11-20	18	16	16	17	15	17	18
> 21	23	21	7	22	11	17	15
Months since last medical examination (%)							
Less than 12	52	53	58	49	77	70	67
13-24	26	23	21	18	15	19	19
25-36	12	8	10	14	4	7	8
37-48	3	7	2	10	2	1	3
49-60	4	2	2	7	1	1	1
> 61 months	3	7	7	2	2	2	3
Average time since last medical examination (months)							
	17.6	19.8	19.9	20.1	10.7	11.1	13.1
Number in each group	348	306	100	88	444	204	186

In order to exclude island visitors who were recently certified and may have had a medical as part of their entry level diver program, only divers who had been certified for more than 12 months were included in the sample (N= 1676). Many countries do not require candidates to undertake a medical examination before commencing an open water scuba program, relying instead on a medical questionnaire as a screening measure.[28] However, since medical examinations are required in Australia,[9] and information on place of initial training was not available, a conservative approach was adopted.

Table 1 reveals that approximately one quarter of the sample had not dived in the previous 12 months, while a further third had participated in 10 dives or less in the previous year. Average time since the last dive ranged from 8 to 13 months, suggesting that most visitors do not dive between their annual holidays.

While at least half the visitors in each group reported having a medical examination in the previous year, a substantial proportion had not had an examination for some considerable time. Average time since the last medical ranged from 10 to 20 months.

Implications of these findings

As noted by Edmonds and Walker, many diving accidents are the direct result of medical complications.[21] Having received their initial open water certification card, there is currently no formal requirement for divers to undertake an annual medical examination to confirm their continuing fitness to dive. Health circumstances may change adversely over the years, and with a licence that does not expire some divers may be at risk without a regular medical examination.

A majority of the visitors to Heron Island are specifically seeking a diving holiday, and have excellent staff and facilities available to them. Nonetheless, the substantial proportion who have not had a medical in the past year is suggestive of the large numbers of general tourists taking adventure tourism activities where fitness to participate could be an issue.

Many tourist operators use Liability Release forms in an attempt to exclude or limit their legal liability should an accident occur. These forms often include some statement that the activity contains some degree of risk, and that the candidate should be free from medical

problems before participating. It appears that this practice has been adopted from the United States. There, properly constructed, clearly worded, and signed by the candidate, these forms will often provide a useful defence against claims under certain circumstances.[29]

However, in Australia the obligations cast upon the operator are more onerous. Here disclaimers will generally fail if there is proof that the tourist operator, their staff or agents have failed to meet their statutory "duties of care" to customers. These duties include informing the client of the very real risks of participating in the particular adventure activity. In terms of Workplace Health and Safety legislation, especially in Queensland,[30] this may include a duty to advise customers of the known risks for diving if they are obese, tired, anxious, have been drinking alcohol, or demonstrate any of the identified predisposing factors associated with decompression illness.[31] Any false, misleading or deceptive conduct on the part of the service provider may also lead to a claim for damages under the Commonwealth Trade Practices Act 1974 (ss 52, 53, 55A),[32] or the equivalent sections of the States' Fair Trading Acts.

While this may seem like an onerous burden for a dive operator, much of the problem stems from the two issues of a licence that does not expire and no formal requirement to remain medically fit to dive.

The importance of providing adequate health information for tourists has recently been highlighted in a European Economic Community Directive that health warnings be included in all tourist brochures.[33] While this directive is not binding in Australian law, it nevertheless an indication of the growing attention given to health issues. For adventure tourism operators the best advice is to screen all potential clients before offering services. This may mean that some people may have to be excluded from participating, but it will also avoid unwanted medical and legal complications for both the operator and the customer.

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SUPPOSE THE THREE WISE MONKEYS FACED A CLASS ACTION

A product-liability scenario

Douglas Walker

There is a general perception that those who control the policy directions of the recreational diving organisations live in hope that, if they say and do nothing to draw attention to the misadventures which inevitably occur to divers, they will escape notice and censure when a major accident occurs. Strangely none of their Insurance companies appear to have drawn their attention to the very real dangers of such a policy. The "Three Wise Monkeys" response is fraught with danger to all who seek to follow it. This stems from the product liability aspect of business which holds that a product should be suitable for its intended use and that every care has been taken to discover and remedy faults. Those who have had to appear before a Coroner after the death of a pupil, or of a diver in a group where they were present, will be painfully aware of the interest taken in examining the training and actions of not only the victim and the dive organiser but also the protocols of the parent organisation. Such are not held to be sacrosanct or safe from severe criticism, and liability suits can feed on such a rich diet. So let us consider the "monkeys" one by one.

The term "evil" will be used throughout because the reporting of problems, even those which have been efficiently managed, has long been regarded as both dangerous to the person making the report and lacking real importance "because everything is already known" about the problems affecting divers. In consequence a report is made only when the reporter thinks that a liability claim may be possible and that the Insurance company will ask whether a report was filed. The attitude of the diving organisations has reinforced this view as they often show no response to the reports they do receive. They appear to neither commend good reports nor request more details where the reports are inadequate. My attempts to obtain their active involvement in research into specific problems have failed because the value of the information has not been recognised and there has been a prejudice against asking for information which may not be to the liking of the organisations. Governments avoid this dilemma by careful choice of the chairman and members of any investigatory committee they set up. The diving organisations can avoid being directly identified with complaints and suggestions for changes in diver training and dive management by supporting surveys by those bound by codes of confidentiality.

The "Hear no evil" monkey is the Pontius Pilate option whereby no responsibility is accepted, an avoidance of any attempt to improve safety by taking notice of problems talked about but not formally recorded, an acceptance of "misadventures" because there has been no serious morbidity, in consequence a failure of any alerting of the generality of divers to observed problems which should be receiving attention before serious consequences occur. If problems continue to be accepted and tolerated (not "heard") they will increase and one day reach a critical level.

To take the next monkey "See no evil". If an organisation has a product which during normal and intended use is associated with injury to the user a tort has been committed. There is an implied warranty that the