# *Aviation medical decisions – judicial determinations (Part 1)*

In this and the following issue of *The Legal Lounge*, I will summarise some recent judicial determinations on aviation medical decisions on both sides of the Tasman, starting with Australia.

**Australian medical certification regime – brief overview and comparison**

In Australia, appeals against adverse medical decisions by the Civil Aviation Safety Authority (CASA) may be taken to the Administrative Appeals Tribunal of Australia (AATA). As with any appeal to the District Court in New Zealand, the AATA may affirm, reverse or modify any decision made, and/or revert it back to CASA for further determination.

While their legislative regime has broad similarities to ours, one key difference is that while an initial medical assessment is made by a DAME (equivalent to a ME), the final decision as to whether to issue a medical certificate in each case is made by the CASA medical unit.

The key criteria in relation to issue of a medical certificate are that either:

(i) The applicant meets the relevant medical standard; or

(ii) If the applicant does not meet that medical standard, the extent to which he or she does not meet the medical standard is not likely to endanger the safety of air navigation

Here is a summary of two recent determinations of the AATA reviewing medical decisions made by CASA, one upholding the decision, and one reversing the decision.

***Jones* and *Civil Aviation Safety Authority*** [2010] AATA 795, 15 October 2010

*The Facts*

Mr Jones was the holder of a student pilot licence who wished to pursue his dream to fly. Unfortunately, in his late teens to early twenties Mr Jones portrayed something of a tendency for drugs and alcohol, and was convicted three times for drink driving related matters between the ages of 19 to 21. He also had a conviction for supplying drugs at around the age of 19.

Mr Jones stated in response to these matters that he had never used drugs (pointing out that the conviction related to supply of drugs), and that all of the drink driving offences were in the minor range. While medical reports forwarded to CASA by the DAME confirmed the low readings of the drink driving offences, Mr Jones had admitted to taking cocaine and amphetamines and to being a user for about two years. He had also admitted to two other practitioners to having used ecstasy in the past, although differing accounts were given on each occasion.

Nonetheless it was noted and apparently accepted by the DAME, and other medical practitioners involved, that he had refrained from using drugs for possibly as long as five years, at the time of application. The DAME accordingly suggested that a regime of random drug testing might be an appropriate means of deterrence and monitoring of any potential drug use, and that the alcohol related driving offending appeared not to represent an on-going problem. However, CASA declined to issue a medical certificate on the grounds he did not meet the relevant medical criteria.

*AATA Decision*

Where a person has a history of substance abuse, this is considered to be a "safety-relevant" medical condition. However, the person may yet obtain a certificate if they demonstrate:

> (a) abstinence, certified by an appropriate specialist medical practitioner; and
> (b) no evidence of suffering from any safety-relevant sequel; and
> (c) that they are undertaking, or have successfully completed, an appropriate course of therapy.

The AATA was satisfied that, whatever the current position, there was clearly a past history of substance abuse and as such that he had a "safety-relevant" medical condition. In this regard the AATA expressed serious concerns about Mr Jones' honesty about his history of drug use. Mr Jones not only denied taking drugs despite signing the medical form declaring his previous drug use, but his various accounts about past drug use had changed at least three times. His claim that he had never used drugs despite being convicted for supply was also at odds with his previous admissions.

While accepting that the alcohol related offences occurred during a period as a young man when he was apparently under personal stress, and that the evidence as to current drug consumption was at best "equivocal", the AATA stated that the fact a person is a greater risk than the general population is the appropriate focus for aviation safety purposes. The AATA considered in light of the above factors that it could not be satisfied that there was the level of current abstinence claimed.

The AATA also highlighted medical evidence suggesting that a tendency to deny or minimise substance abuse was itself indicative of a lack of insight and self-awareness of the person's problem, and that this could itself be a bar to dealing with the problem. The AATA expressed concern that there was no clear evidence that Mr Jones had undertaken or successfully completed an appropriate course of therapy, and that he had declined a protocol suggested by CASA which included a requirement to undergo such therapy. The AATA held that in the absence of Mr Jones undertaking a course of rehabilitation, it considered that the extent to which Mr Jones failed to meet the relevant medical standard was "likely to endanger the safety of air navigation" and accordingly the decision to decline to issue a medical certificate was upheld.

***Hazelton* and *Civil Aviation Safety Authority*** [2010] AATA 693, 10 September 2010

*The Facts*

Mr Hazleton is a 40 year old airline captain. In November 2008 he attended a high school reunion in Sydney. While returning by foot to his hotel, he and a friend were attacked from behind. Mr Hazelton fell to the ground and hit his head on the pavement. He was then kicked in the head on the right side of his skull above his eye. CT scans revealed some initial bleeding into the right frontal area of his brain. Following further medical assessments over a period of eighteen months, CASA declined to issue him a Class 1 and Class 2 medical certificate to fly "as or with co-pilot" , citing an unacceptable risk of post traumatic epilepsy (PTE).

*AATA decision*

It was not in dispute that Mr Hazelton suffered a "medically significant condition". But in assessing whether it is a "safety relevant condition", the AATA stated that it was necessary to consider *"whether the condition, in light of all of the evidence from the time of injury to its present state of development, has reduced or is likely to reduce Mr Hazelton's capacity to operate an aircraft and* ***specifically, whether any likelihood of PTE is within acceptable limits".***

The undisputed medical factors were that: he had made a full recovery from the injury; there had been bleeding into the brain as a result of two cerebral contusions, which is accepted to be a significant indicator of the risk of PTE; there had been no incidence of PTE within the first eighteen months post-accident; while greater than the general population, his risk of PTE continues to decline over time; and Mr Hazelton had abstained from alcohol since his injury which was accepted as further reducing the likelihood of PTE.

However, the expert opinion divulged from this point as to: the assessment of whether the original head injury was mild or severe; the methodology and approach to calculating his level of risk of PTE; and consequently, whether his risk of PTE was now at a level that was within acceptable limits (to fly as or with co-pilot). A substantial body of expert evidence was called on both sides, and it is not possible within the scope of this article to go into any detail on those matters. However, I have attempted as best I can to summarise the key propositions of the experts for each side, and the findings of the AATA.

CASA's expert evidence was led by Dr Wallis (a New Zealand Neurologist often consulted by CAA in New Zealand), and was supported by Dr Navāthé and Dr Drane (both formerly employed by the CAA and now with the CASA medical unit). Dr Wallis contended that the severity of the head injury should be considered on the basis of his imaging scans to be severe. Further, that the risk of PTE should be calculated on an "absolute risk" basis, with regard solely to the imaging criteria. Absolute risk indicates the probability of a person experiencing an outcome such as PTE, during a specified period, expressed as a figure or percentage. Dr Wallis obtained a set of figures from a British neurologist which constructed a regressing risk profile of PTE, based on previous studies following head injury patients who had developed epilepsy, using an absolute risk methodology. Applying this methodology to a person with two contusions, Dr Wallis calculated a 35% initial risk of PTE, falling to 19% one year post accident, and to 14% after two years. Mr Wallis therefore estimated Mr Hazelton's risk 18 months post injury as lying between 14 to 19%. On this basis Dr Drane had concluded that Mr Hazleton's level of risk was not acceptable for the issue of the medical certificates.

On the other hand, the expert evidence called by Mr Hazelton, which was led by Dr Hastings and Dr Appleton, US and Australian Neurologists respectively, and accepted aviation medicine experts with considerable credentials, contended that a balanced approach, considering both clinical and imaging criteria, and using relative risk as the appropriate method, would better determine the level of risk and would satisfy the rigorous standards of evidence-based medicine. The relative risk methodology is customarily used in aeromedical decision making, and is often referred to as the so-called 1% rule. In this context, it involves comparing the risks of developing epilepsy between head-injured individuals on the one hand, and the general population on the other, with specific reference to individuals of Mr Hazelton's age group.

Applying this methodology, he calculated the risk factor for the general population in this age group to be 35 to 40 per 100,000 of the population per year. This would mean that a person with more than 25 times the risk of the normal population would exceed the 1% rule. Assuming Mr Hazleton's head injury (taking into account clinical factors) to be mild, Dr Hazelton calculated his risk to be 10 times that of the normal population, or 0.40 per cent, less than half the 1% rule. Even applying a severe head injury analysis, Dr Hazelton calculated his risk to be within the range of 0.5%, or 0.9% at the most upper range (although considered unlikely to be this high).

Of particular note in considering the expert evidence, the AATA noted that while Dr Wallis was also an experienced neurologist of some 30 years, under cross examination, he conceded that the figures he had used for his calculations were not absolute figures, but guides, which in the view of the AATA substantially undermined the reliability of his calculations. Further, the AATA commented that his aeromedical experience did not match that of Dr Hastings or Dr Appleton, and somewhat surprisingly, given how often he has been consulted by authorities on both sides of the Tasman, that Dr Wallis acknowledged in his evidence that *"he did not regard himself as a consultant on a pilot's risk of having a seizure, or when Mr Hazelton would be fit to fly; and under cross examination he remarked that he did not wish to involve himself in questions of aviation safety".*

The AATA accordingly accepted and preferred the evidence and the approach and methodology adopted by the experts for Mr Hazelton. Although not pertinent in this case, the AATA also noted that international literature suggested that in a multi crew environment, the 1% test may even be relaxed to a 2% basis. On the basis of Dr Hastings' calculations, the AATA accepted that Mr Hazelton was well below the 1% threshold and accordingly that he was fit to hold a Class 1 and Class 2 medical certificate. The matter was referred back to CASA to consider the imposition of conditions, if any.

These cases may be viewed in full on my website, although I hasten to add the latter decision is 145 pages, and best read on a cold miserable day in front of a cosy fire. In the next edition of *The Legal Lounge,* I will continue my discussion of recent aviation medical decisions.

**Angela Beazer is a lawyer and Director of AMC Legal Services Ltd, a law firm specialising in aviation and public law matters. Previous articles from *The Legal Lounge* series may be viewed at www.amclegal.co.nz**