CIMP

Interim report by CIMP President.

As with last year, it is probable that much of our time in June will be taken up with the developments in Europe and the European Aviation Safety Agency. By that date the EASA proposals should be out for public consultation. When these appear I would like all members of CIMP to make a response based on their own experience and this also applies to delegates from non EU nations. Informed comments derived from real experience of other systems are especially valuable.

During March 2008, the European Parliament passed the revised aviation regulation 216/2008. This changed in some respects the previous 1592/2002. This law is generally to be commended and makes proper provision for the reduced requirements of sporting aviation. For those interested the full document can be downloaded from the Official Journal of the European Union. While our discussions may seem to suffer a Eurocentric emphasis, the establishment of EASA has changed the political balance governing world aeronautics. Previously the FAA was totally dominant, controlling directly or indirectly about half of the world's aviation. Historically the Chicago Convention of 1944 had put into international law with ICAO what had been American domestic law because at that date no civil aviation existed elsewhere. The FAA is taking a very close interest in EASA because we now have two big civil aviation regulatory organisations. However it is in the interest of all those recreational pilots represented by CIMP that EASA and the FAA do not diverge and that any control placed upon recreational pilots is based upon sound scientific evidence.

Last year CIMP discussed internal EASA papers with some disquiet and passed a resolution that EASA should establish standards of fitness, but leave it to National Authorities to ensure that pilots met these standards. Unfortunately I was warned that formal submission of this to EASA might be counter-productive because it was not yet officially open to public consultation. Nevertheless I took steps to ensure that our views were made known unofficially to EASA officials. Our resolution was perceptive, it concurred with the Europe Air Sports policy that EASA should not stop anyone from doing what they were presently both legally and safely doing. It also corresponds with the rules of the International Maritime Organisation in respect of the health of seamen.

The new law permits a general medical practitioner who has sufficient knowledge of the applicant to certify leisure pilot fitness. It will be important to define what is meant by "sufficient detailed knowledge". I have suggested access to three years of clinical records but this has not been reflected in the proposed Implementing Rules.

The new regulation 216/2008 continues to exclude certain aircraft under Annex 11 as did the earlier 1592/2002 regulation. These are largely micro-light aircraft and hang or para gliders. This perpetuated what had been French national law, but EASA officials are now openly stating that these exceptions will not be permanent and that all aircraft should be under EASA rules. The reaction, especially from the French micro-light Federation, FFPULM, is hostile and their attitude with that of other Associations suggests that EASA has not yet become popular. If those left under national control by Annex 11 had thought that EASA was an advantage, they themselves would have proposed the abolition of the Annex.

As with both previous European law and ICAO, AMEs are required to have knowledge and experience of aviation. This is a wise provision but in the past it has too often been ignored or treated with minimal consideration. The lack of trust that many pilots have in the medical assessment is in part due to a failure to implement this Essential Requirement.

The pilot population can be considered as a pyramid, with commercial pilots at the top with the larger mass of recreational pilots forming the bottom. There is little dispute over the fitness of Class 1 pilots and their medical regulations closely follow ICAO. The lower in the pyramid one descends; the greater have been the national variations with resultant controversies, although these must be unimportant to public safety. As Pedro Ortiz showed many years ago, accident rates are similar despite differences in regulations. As is admitted by EASA, regulations are very effective in suppressing activity, but ineffective in creating safety.

Below the level of European regulation, there are Implementing Rules, Acceptable Means of Compliance and finally Guidance Material. Drafting these has not been easy; it is an expression in English that 'the devil is in the detail'. EASA selected members of advisory groups to assist in drafting and these were supposed to comprise a balance between 'industry' and 'regulators'. For the

medical group I was selected to represent non commercial aviation and Virgilijus Valentukevicius is now employed by EASA, so CIMP is well represented. However it has not been easy, the work load was heavy so my German colleague representing commercial aviation resigned leaving me as the only one of the Group who was not from an Authority. Too often I was arguing from a lonely position.

The medical fitness of pilots is regulated at three levels, Class 1 commercial pilots, Class 2 private pilots and the new proposed non ICAO licence, variously called 'Recreational' 'leisure' and 'light aircraft'. Regulation 216/2008 has now passed into law and must be followed. In this frequent references are made to ICAO and it is clearly the intention of the European Parliament that with the exception of the new licence, ICAO should be the guide. This may prove inhibiting, major authorities such as EASA or the FAA should be leading, not following ICAO.

There many references to medical matters in the new law but I am only mentioning those that may cause serious controversy. For commercial pilots there is little change and the one difficult area relates to activities belonging to recreational aviation in which a few people may earn money. Under a strict reading of ICAO this means that they should hold commercial licences although the activity itself is encompassed by lower licences. An example could be a very experienced but elderly retired test pilot assessing a new design. Does he need to hold a Class 1 medical certificate and should he be excluded because he is less fit?

When the JAA established the Class 2, the standards were intentionally set above ICAO. The reasons stated at the time were that Europe should have higher standards and for many a private licence was the first step on a flying career, although France with some 10% of non commercial pilots never accepted the JAR-FCL Class 2. The JAA had no licences for balloon or glider pilots so if a JAA Class 2 had been imposed on these pilots there would have been a strong reaction as had happened in Germany with JAA-Contra. Therefore it was agreed that the EASA Class 2 standards will follow ICAO. Periodicity of examinations had been reduced by ICAO for both Class 1 & 2, but leaving the higher frequency as a recommendation. The JAA implemented the change for Class 1 but not Class 2. It is arguable whether more frequent examinations are needed in those nations with well developed population health care. Pilots who become unfit are diagnosed and treated. They seldom persist in flying until the next examination date.

For leisure or recreational pilots the position is uncertain. The JAA Class 2 medical certificate never applied to balloon and glider pilots although many EU nations implemented this. The French retained their national Class 2. The British introduced a NPPL medical declaration and the Netherlands established an ICAO compliant medical examination administered by doctors appointed through the air sports organisations. The Swiss had their own independent system. Outside the EU, many nations have established sub ICAO medical assurance for recreational pilots, notably Canada with a Class 4, South Africa, Australia and New Zealand. In the USA, a valid driver's licence provides adequate evidence of medical fitness for the holder of a Sport Pilot Licence.

EASA established the MDM.032 group with the task of drafting simple regulations to cover air sport pilots. The outcome has been the AMC/GM to Part Medical, Draft version 3.0. This document bears no relation to any of the existing aero-medical assurance systems in Europe or elsewhere. There is no evidence that the medical member of the Group made any attempt to evaluate extant systems or to gain wider support for his proposals. These were discussed during early 2007 at a meeting of the UK CAA Medical Forum at which he was present where they were said to be unworkable. A copy provided by the Swiss Aero Club was discussed and much criticised at our meeting of CIMP last year. The outcome of that meeting was a formal and constructive resolution, but on the advice of Europe Air Sports the submission of that resolution to EASA was postponed until the RIA. Unofficially the EASA group was informed of the resolution but have made no change.

Whatever is to be implemented by EASA, it must comply with the Essential Requirements legislated by the European Parliament in 216/2008. It also should comply with past European Directives, notably the one that requires that disabled persons may not be discriminated against without good reason and also respect the Directive on medical confidentiality. The Europe Air Sports policy is that no pilot should be stopped by EASA from doing what is present safe practice and to deny this will result in serious political opposition. To be successful any EASA sponsored legislation must be recognised as reasonable by all parties. Pilots must trust that they will not be grounded or limited without good cause and doctors must trust that pilots inform them of everything that might be relevant to their flying fitness. If mutual trust does not exist the system will fail, as has been exposed by a Congressional Report in the USA [Committee on Transportation and Infrastructure,

FAA Oversight of Falsifications on Airmen Medical Certificate Applications, March 27 2007].

It is necessary to define the criteria by which any proposed policy is judged. Inevitably these mutually conflict and compromises have to be struck. The three criteria are safety, exclusion and cost.

Safety: Medical examinations of pilots consider two fields, function and risk. Military medical services were first concerned with predicting success in training. Measurements of function such as anthropometry, physical ability, eyesight and hearing were important. However defects of these lead to failures in training rather than accidents because student pilots are observed by flying instructors and must perform to satisfaction. Function should be reviewed, especially at the initial stage, if only to establish whether any special measures or limitations are required. Risk concerns diseases that are responsible for sudden changes of capability such as heart attacks, strokes, epileptic attacks and also side effects of medication. Aviation accidents from medical causes almost all arise from risks rather than defects of function.

Exclusion: The sole action consequent on the medical screening of pilots is grounding or a limitation. Medical accidents are reduced by a high exclusion rate, but if those excluded are the older and more influential pilots and medical accidents are only a small proportion of the whole, a high exclusion rate will increase the overall accident rate. The use of mitigating limitations is permitted by the Essential Requirements and judicious use of these would enable most pilots to keep flying.

Cost: The cost arises from the medical time spent and to a small amount by the time and travel costs of the applicant. It should be noted that an AME is not a specialist and that the hourly rate is likely to be similar to that of a GMP. To reduce overall costs, the medical time expended must be kept to a minimum. This means that only those things that have to be done in the presence of a doctor should be done in that presence.

For a medical assessment to be valid, the doctor has to be in possession of all medical information. Any medical review has two potential problems, non disclosure of known disease and failure to recognise existing but previously undiagnosed disease. All EU nations have developed health care systems and so the vast majority of disease will be diagnosed, treated and recorded by these

services. The sources of medical information are that provided by the applicant and such medical records as may be available. When a certifying doctor is closely associated with the air sport organisation, additional and vital information may come from this source, especially concerning psychiatric disease.

An option offering either validation by reference to records or an examination could follow practice in New Zealand and is identical in principle to the continued airworthiness of aircraft. For aircraft there is a choice between a long term relationship with a maintenance organisation or an independent survey.

The qualifications for General Medical Practitioners are set out in Subparts C & D [MED.D.001]. These do not reflect any extant aeromedical practice in Europe or even comply with the essential requirements of 216/2008. The UK NPPL requires the GMP to have access to past clinical records and this facility automatically discloses an accurate medical history. The Netherlands have appointed doctors with experience of the air sports to conduct medical examinations. The availability of medical records varies throughout Europe. All doctors keep records but only in the UK are there a long standing national system of transferable records. Recently these have been introduced in France to reduce health care costs and four nations can encode voluntary electronic records on the European Health Card. It is suggested that for any GMP to certify fitness, there must be access to at least three years of past clinical records and that no other special qualification is required. Regrettably the proposed regulations would make it possible for a few unscrupulous doctors to adopt a lax approach in order to attract trade and take advantage of this open EASA policy. Unlike the governance of AMEs, no provision has been made to discipline or exclude such offenders. The average GMP can have only a few pilots as patients, so their activities are not open to extended abuse. Existing AMEs would be entitled to issue LPL medical certificates and additionally as in the Netherlands, doctors specifically appointed by the National Aero Club to certify applicants from the air sports. In summary, those doctors qualified to assure the fitness of pilots holding a LPL could be:

1. Authorised Medical Examiners.
2. GMPs with access to three years clinical records.
3. GMPs authorised by an air sport organisation for certification of members of that organisation.

8. The requirements applicable to the applicant [AMC to MED.A.040] are set out in legalistic jargon that will not

be understood by the vast majority of applicants. The section 2 contains a long questionnaire that is far more detailed than that contained in the JAR-FCL 3 for commercial or private pilots. In the original version there were 66 separate questions that have to be put by the doctor to the applicant and this will take much expensive medical time. Later proposed amendments reduce this somewhat. The existing form for Class 1 or 2 medical certificates [JAR-FCL 3 Subpart A 2-A-15] contains about half the number of questions and can be filled up in advance by the applicant. For simplicity I would commend the New Zealand gliding medical form as a model [www.gliding.co.nz/]. What the doctor must know from the any applicant is:

1. Age of applicant?
2. Whether the application is initial or renewal?
3. Has any prior medical certificate been denied?
4. What is the history of disease or injury?

To minimise costs and for an applicant without medical problems and where records are at hand, approval should be achievable within a few minutes. Basic details can be contained on one side of paper. On initial medical examinations basic function can be confirmed but only if disease is present are further questions required. For these cases, additional and specific forms would be needed. The New Zealand Civil Aviation Authority has an additional sheet for private pilots over the age of 70 years and this highlights the problems of the older pilot.

Sad experience in the USA and elsewhere has shown that medical examinations suffer limitations as a method of validating medical fitness. Significant disease such as epilepsy may not be declared and cannot be discovered. Conventional urinary sugar tests for diabetes expose undiagnosed disease but would not identify a dishonest individual who was on insulin and had not disclosed their history. However when examinations are conducted they should utilise an existing medical report form rather than the ridiculous physical examination proposed that demands the capability of rowing a boat and opening a bottle with a corkscrew! As with the New Zealand gliding medical form, the report should indicate whether pilot fitness has been confirmed from the records or by examination.

When adverse disease is disclosed or discovered, a decision on the aero-medical risk has to be made. The regulations have been set out in AMC to MED.B.001. The problem is that these are too proscriptive and will prove controversial. Nowhere is mentioned the adverse effects

of age despite the proven association with much disease. Different experts will argue either that these EASA regulations are over stringent or too liberal. Few cardiologists would accept that a 'fit assessment' can be made only six weeks after a pacemaker implantation. While implantation may be only a minor operation, the reason for which it is implanted is always serious underlying disease. To set out these measures in AMC rules that cannot easily be changed will cause trouble when advances in medical science enable previously disqualifying disease to be cured. ICAO [Annex 1, Chap 6] avoids this difficulty by using the word 'likely'. An adverse medical condition causing aero-medical problems is either disqualifying or will require mitigating limitations. If the word 'likely' is used, advances in medical science will automatically change the likelihood of adverse events without need to change the regulations. The JAR-FCL 3 in the Manual of Civil Aviation addressed this problem by introducing the concept of aero-medical risk [MANUAL-GENERAL-1]. The predicted and accepted risk of incapacity may not exceed 1% in the coming year thereby defining in statistical terms the word 'likely'. Unfortunately, the JAA set the same risk level for Class 1 professional pilots as for Class 2 private pilots and that never met with popular acceptance. Nevertheless the methodology is sound and all that is required is to define the appropriate risk levels. For the implementation of the EU Directive on driving licences, the UK driving licence authority uses a 2% risk level for professional drivers and this approximates to an ICAO Class 2. For private drivers an order of magnitude greater risk is acceptable and that same level could be used for those pilots to whom mitigating limitations are applied. It has already been agreed that for EASA Class 2 pilots the ICAO requirements are adequate and the higher JAA [JAR-FCL 3.250-260] section need not be applied. All that is needed for the EASA and the LPL is to cite ICAO and define how the word 'likely' is to be interpreted.

When adverse disease is discovered in an applicant, many of the draft AMCs then mandate referral to a specialist. While this may be appropriate for an airline pilot, it is needlessly costly to a leisure pilot. If the disease was previously unknown, the ethical course is to refer the applicant to the normal medical facilities for further investigation and treatment. Until the medical question is resolved a pilot can be temporarily limited or even grounded. Only if a pilot wishes to appeal against the limitation are the costs of specialist aero-medical investigations justified. If the disease is one tending

to improve, then a temporary limitation and later review would be appropriate.

Limitations are the tool by which mitigating measures are applied. These are listed [AMC to MED.A.045] and are similar to, but not identical to those written by the JAA [JAR-FCL 3 Subpart A 2-A-32]. The JAA limitations were allocated code designations, are already in use and have been translated into the various languages. Therefore the same existing limitations and codes should be used for the LPL. Unlike the JAR-FCL 3, the procedures for the LPL must be simple and authorisation to place or remove a limitation given to the certifying doctor. Only if an applicant objects to a limitation need the matter be taken to a higher aero-medical authority. Guidance material will be required informing doctors of the circumstances in which the various limitations can be used.

It is common practice for AMEs to seek the advice of their Authority when assessing difficult or borderline cases. To reduce the task of officials who may have little experience of the air sports, it is suggested that national aviation authorities in conjunction with air sports federations appoint medical advisers to assist both AMEs and GMPs in assessing applicants. In turn these medical advisers become professionally responsible to the authority.

In summary the medical proposals from the MDM.032 are disappointing and much criticism can be expected. Indeed there is a risk of total failure. While the concept of a basic common standard of fitness with those pilots who fail to meet these being subject to limitations is sound, the rules are over complex and the methods by which this is to be achieved are neither safe nor cheap. For those needing to be examined a simple medical form is required of which the existing French national Class 2 provides a prototype. Supplementary medical history sheets are suggested for the following circumstances but will not apply to the majority of applicants:

- Initial examination.
- Cardio-vascular disease.
- Neurological disease [epilepsy].
- Diabetes
- Renal disease
- Neoplastic disease
- Applicants over the age of 70 years.

Guidance material will be needed to explain the concept of aero-medical risk and define risk levels. The use of limitations will also have to be explained.

EC Regulation 216/2008 permits the use of mitigating measures when pilots are not fully fit. These mitigating measures are implemented by applying a limitation to the pilot licence. Because there is no age limit for private or leisure pilots, it can be expected that all old pilots if they remain flying will become limited towards the end of their flying career. Limitations and associated codes are contained in JAR-FCL 3 Subpart A [2-A-32]. These are adequate to provide all possible mitigating measures. For the LPL it is proposed that these limitations may be imposed by any AME or a GMP, perhaps after seeking advice. Temporary and verbal limitations can be appropriate in the management of short term illness. To assist in the application of limitations, guidance material is required and the following notes are offered as a proposal.

CODES with LIMITATIONS as set out in JAR-FCL 3.

TML VALID ONLY FOR ..... MONTHS
This limitation is applied when the applicant is suffering from a condition that may deteriorate prior to the next routine periodic review. It can also be used when the condition may improve when it is usually associated with another limitation, although there is nothing to prevent a pilot with a limitation from seeking a review at any date.

VDL SHALL WEAR CORRECTIVE LENSES
The applicant requires a refractive correction of vision in order to meet the prescribed standard. With this limitation it is also a requirement that a spare pair of spectacles is carried.

VNL SHALL HAVE AVAILABLE CORRECTIVE LENSES
The applicant has good distance vision but requires correction for certain close tasks such as map reading. It is the usual limitation for older pilots suffering presbyopia.

VCL FLIGHTS ONLY WITHIN FIRS OF A MEMBER STATE, VFR FLIGHTS BY DAY ONLY.
The applicant does not meet ICAO standards, usually in respect of the ability to discriminate colour. For an EASA licence, this would be within the Flight Information Regions of EASA member nations.

OML VALID ONLY AS OR WITH QUALIFIED CO-PILOT

This limitation is applied when there is a risk of incapacity that is greater than normal but not so high as to warrant grounding. It only applies to pilots flying aircraft certified for two pilot operation and would be unusual for non commercial pilots.

OCL VALID ONLY AS CO-PILOT
A similar limitation to OML, but this limitation also precludes flying as aircraft captain.

OSL VALID ONLY AS SAFETY PILOT AND IN AIRCRAFT WITH DUAL CONTROLS.
A pilot with this limitation has few privileges over an unlicensed pilot and it is not an equivalent to the OML for private pilots. It can be applied as a temporary limitation while recovering from illness.

OAL RESTRICTED TO A DEMONSTRATED AIRCRAFT TYPE
This limitation is applicable to a pilot with an anthropometric or orthopaedic limitation that might make control difficult. Commonly pilots with a lower limb abnormality find the operation of the wheel brakes is difficult with some designs but not others. Pilots with such a limitation must seek flying instructor clearance and an entry in their flying log book for each type that is to be flown.

OPL VALID ONLY WITHOUT PASSENGERS
This limitation is applied when there is a risk of incapacity that is greater than normal but not so high as to warrant grounding. By excluding inexperienced passengers the major third party risk is removed, the ground risk being very remote following incapacity. Continued solo flight or flying with another pilot is permitted with this limitation. Unless there is evidence that the disqualifying disease has improved, this limitation should be applied to all LPL pilots who have been previously denied a Class 2. Elderly pilots can expect to be limited OPL as they age.

APL VALID ONLY WITH APPROVED PROSTHESIS
This limitation is to be applied to pilots with a prosthesis that could affect their ability to control an aircraft. It would commonly be combined with an OAL limitation.

AHL VALID ONLY WITH APPROVED HAND CONTROLS
This limitation is applied to paraplegic pilots or those with lower limb defects that prohibit normal rudder pedal control. In this case the aircraft has to be modified to

meet the needs of that pilots and only aircraft so modified may be flown.

AGL VALID ONLY WITH APPROVED EYE PROTECTION
This limitation has been applied to monocular pilots flying open cockpit aircraft. However dust or debris can adversely affect both eyes and protective goggles are recommended for all pilots in these aircraft.

SSL SPECIAL RESTRICTIONS AS SPECIFIED
This limitation permits any restriction to be written in. These could be geographical, climatic or altitude limits. One useful application concerns suspected or minor psychiatric disease when a recreational pilot can be restricted to a named club where responsible officials have been informed, in confidence and with the consent of the applicant, of possible problems. Subsequent reports from these officials become a vital contribution to a sensible and fair medical decision.

SIC SPECIAL INSTRUCTIONS - CONTACT AMS
This does not affect the privileges of a licence but is a warning to an AME not to revalidate without consulting the AMS. This limitation might be applied in a case of past psychiatric disease or previous misdemeanour by the applicant.

VAR VARIATION - ICAO ANNEX 1 PARA 1.2.4.8
This does not affect the privileges of a licence but indicates that the provisions of ICAO are not met, although the pilot is considered fit. It is only applicable to ICAO compliant licences.

AMS ISSUED BY AMS
This does not affect the privileges of a licence but is a hint to an AME that there may have been some special consideration in the past.