REFRACTIVE SURGERY – AIR TRAFFIC CONTROL

1. Introduction

At the request of the Nordic Countries, PCX inquired with Eurocontrol and the Head of the Aeromedical Section Switzerland and the ICAO Medical Service – on the legal requirement and the reasons for different application of the regulation in the various countries concerned by ICAO Annex 1 and European Class 1 or 3 Medical Certification.

The request was two-fold:

- why is it that the countries do not apply the same legislation – and can an ATCO be permanently suspended after refractive surgery ?
- what are the reasons for a permanent or temporary suspension of an ATCO having undergone laser surgery in ATC?

2. Legal basis

Reply from Eurocontrol:

Paragraph 13.1(b) of the Requirements for European Class 3 Medical Certification of Air Traffic Controllers (documents available on EUROCONTROL SRU or human factors websites) requires, "an applicant who has undergone refractive surgery shall be assessed as unfit (however see para 13.1.2)".
This requirement is included because of medical experts (ATCO Medical Requirements Task Force) concerns of the side/after effects of laser surgery.

Paragraph 13.1.2 states "certification or re-certification may be considered by the Aeromedical Section twelve months after the date of refractive surgery provided that": - specific medical requirements are met (these are laid out in the Medical document). Laser surgery is one form of refractive surgery.

ICAO Annex 1, Personnel Licensing, paragraph 6..5.3.3 states: "applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges".

It seems that the Requirements for European Class 3 Medical Certification of Air Traffic Controllers are more stringent than Annex 1 in that one year must elapse before consideration can be given to re-certification of the applicant unless specific medical requirements are met.
On the basis of the Requirements for European Class 3 Medical Certification of Air Traffic Controllers and Annex 1 it is not surprising that controllers are declared unfit following laser surgery. However, it must be stated that it is the national supervisory authority (Aeromedical experts) who define in more detail the national regulations based on the above regulations.

Comments (Eurocontrol) :

This requirement also applies to pilots - see ICAO Annex 1 Medical Provisions Class 1 para 6.3.3.3 and Class 2 para 6.4.3.3. My understanding is that as this is still a relatively new

procedure there are still grave medical concerns regarding the outcome or possible side effects. Also in some countries, the United States for example, it is possible to have the procedure carried out without adequate safeguards.

Comments from ICAO

Your main question is about the "sequelae [after eye surgery] which are likely to interfere with the safe exercise etc." These are fluctuating refraction (i.e., visual acuity changes over the 24 hours - a fluctuation of more 0.75 dioptre is unacceptable as correction is impossible and the fluctuation might entail substandard vision during part of the 24 hours), reduced contrast sensitivity, and increased sensitivity to glare, especially at night. Other relevant sequelae may be corneal haze and "ghosting".

Additional comments: The European requirements for air traffic controllers have been based on the JAR-FCL requirements for pilots. Since then, the original version of the JAR-FCL has been updated and in the current version there is no "twelve-month period" - today leading European aviation ophthalmologists recommend recertification three months after successful, uncomplicated laser eye surgery, followed by re-examinations every three months in the first year. The requirements for return to duty are normal mesoptic contrast sensitivity and normal sensitivity to glare. This applies to pilots as well as ATCOs. In the Scandinavian countries, contrast and glare sensitivity is examined and evaluated by means of a mesoptometer ("Oculus", made in Germany). As far as I know all three countries have at least one such device. The Danish Aviation Medicine Centre in Copenhagen has informed me that they no longer receive referrals from Sweden for such examinations.

Your statement about "Sweden has no doctor who can sign the "re-fit" exam and they must go to Denmark to a doctor who can give this certificate, however he has refused..." is difficult to understand and cannot be verified. Most likely, it is based on a misunderstanding. It is true, however, that some Swedish licence holders, living in southern Sweden, find it easier to go to Copenhagen for their renewal examinations than travel up to Stockholm. This is a consequence of the JAA rules that permit licence holders to undergo examinations in any JAA country of their choice. Some choose what it most convenient and closest to their home.

I do not think that the current European requirements concerning recertification after laser surgery are more stringent than the current ICAO provisions. But it is true that some European requirements are more demanding than the corresponding ICAO provisions. In this context it must be remembered that ICAO set **minimum** requirements and that States are free to set higher or more stringent requirements for their own licence holders if for whatever reason they so prefer. I believe that both JAA and EASA have stated that their aim is "best practice" rather than the minimum required for safe operations

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3. Medical concerns

As a reply from the Head of the Aeromedical Section of the Federal Office of Civil Aviation Switzerland I have tried to summarize the medical concerns with regard to this intervention.

The intervention is close to "comfort" and/or plastic surgery. Only patients with a small or medium corrections are operated who normally do support well their correction. The surgery can provoke, on the short-term, damages to the eye which are of non-reversible nature. On

the long – term, no scientific studies exist. The corrections are those which are allowed for pilots and the JAA. In no case the surgery will assist a candidate to suddenly become fit if the initial corrections are beyond the minima required.

The minima are 5 dioptries[1] of short-sightedness, and 5 to 8 in exceptional cases (values existing prior to the surgery). If it is an active ATCO, 6 months of "deficiency" will be declared. Main risk is that the surgery is not successful and that the ATCO will never be fit (medically speaking) to meet the standards again. The long term effects are unknown.

4. Conclusions

4.1. Upon a request from the Nordic Member Association of IFATCA, PCX has requested some background information.

4.2. There is a difference in application between the Annexe 1 and Eurocontrol Medical Class 3 requirements

4.3. Medically speaking this intervention is not that risk free – and there is rather a cautious approach being advocated by the Aeromedical departments of ICAO and the Swiss FOCA.

[1] Translation in English was not found