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Civil Aviation Authority

Nelson

Case Studies in Aviation and Travel Medicine - Concurrent Workshop

Saturday, 22 June 2013 Start 4:30pm Duration: 60mins Skellerup

Case Studies in Aviation Medicine

GP – CME 2013 workshop

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Case Studies in Aviation Medicine

Disclaimer

- Senior Medical Officer with CAA
- No financial interest in any of my presentations

Case Studies in Aviation Medicine

- Your patient holds a CAA Medical Certificate
  - Your obligations
  - Avoiding unruly situations for your patient
  - Case discussions
- Certification of recreational pilots by GPs
  - How does it works
  - Your responsibilities

CAA medical certificate holder

- Change in Medical Condition
- Altering treatment
- Surveillance conditions
- Providing information

Change in Medical Condition Duty to report to CAA

(s27C Civil Aviation Act)

- If reasonable grounds to suspect pilot "may be unable to ….exercise safely"
- Must inform the Director (i.e. the CAA doctors) and the pilot of doing so
  - Low threshold (suspect….may be)
  - Indemnified Act

What may make the pilot unable to exercise safely ?

- Impairment of functional capacity
- Impairment of cognitive function:
  - medication
  - drug / alcohol
  - organic brain disease
  - sleep apnoea
- Likelihood of incapacitation
- Behaviour
  - dangerous act
  - drug and alcohol

Case 1

- Pilot with depression
- Started on Fluoxetine
- Can he / she fly ?

Case 1

- May be !
- Two issues:
  - Condition
  - Medication
- Meanwhile must be grounded

Case 1

- A complex environment
- Multi-tasking / 4 D

Case 1

- Depression in full sustained remission ~ 3 months
- Medication acceptable
  - Fluoxetine acceptable
  - Citalopram acceptable
  - Sertraline acceptable

  - Venlafaxin less acceptable
  - Aropax less acceptable
  - TCA generally not acceptable
  - Multiple medication generally not acceptable

- Case by case assessment by CAA

Case 2

Pilot with chronic pain

- Severity of condition
  - Functional capacity
  - ADL ? i.e. sitting tolerance
  - Sleep ?
  - Mood / Fustration ?
  - Distraction
- Medication
  - Cognitive function?
  - Impairment / Incapacitation

Pilot with renal colic

- Acute renal colic
- Treated with medication
- Pain settled
- Can this pilot fly ?

Case 3

Pilot with renal colic

- Has the stone passed ? → stone analysis
- Any other stone ?
- History or recurrent stone ? → metabolic work out
- Lithotripsy → small residual stones need to pass
- CT is the gold standards (95% Sensitivity)

Pilot grounded until we have answers to these questions.

Case 4

- Pilot with Ischaemic Heart Disease
- Treatment by CABG or Stenting

- Can he/she fly ?
- When ?

Coronary artery disease

- No flying while has ischaemia
- 6 months grounding following re-vascularisation – stent or CABG
- We need to see all information, includes angiography pictures
  - No ischaemia
  - Cardiac function
  - CV risk controlled (BP / lipids / aspirin etc)

Some Conditions of Concern

- Cardiovascular
  - CAD, Tachyarrhythmia (AF), Vasovagal syncope etc.
- Neurological
  - Migraine
  - Stroke
  - Epilepsy
  - Transient Global Amnesia
- http://www.caa.govt.nz/medical/Med_Info_Sheets/Med_info_sheets.htm

Some conditions of concern

- Metabolic / Endocrine
  - Diabetes on insulin or sulfonylurea
- Psychiatric
  - Depression / psychosis
- Other incapacitating conditions
  - Crohn, Ulcerative colitis, Cholelithiasis
  - Renal lithiasis
  - Asthma (prevention ?)
  - COPD

CAA medical certificate holder

- Change in Medical Condition
- Altering treatment
- Surveillance conditions
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Altering treatment

- Absence of side effects:
  - Period of observation on the ground
- Do the change when pilot able to have down time
  - i.e. increasing BP treatment or Metformin
- Some medication not acceptable
  - Psychoactive medication
  - Medication with risk of incapacitation / impairment

Some examples

- Isotretinoin
- Alpha-blocker
- Anticholinergics
- Sulphonylurea
- Etc…

CAA medical certificate holder

- Change in Medical Condition
- Altering treatment
- Surveillance conditions
- Providing information

Surveillance conditions

- Request to provide regular information:
  - Psychiatrist report
  - Psychologist report
  - Drug and Alcohol counsellor report
  - Oncologist report
  - Cardiologist report……etc
  - GP report
  - Biochmestry / blood count

GP report

- Mr X was seen today, he is well and continues to be fit to fly,
- Mr X was seen today. He is in good spirit, he reports sleeping well and having no problem with concentration. He has resumed and enjoys sailing. He continues taking Fluoxetine 20 mg per day. He takes no other medication. On examination…..or,
- Write your notes in details and give a copy to your patient.

Take Home Message

- Duty to inform CAA
- Condition may be limiting factor
- Medication / treatment may be limiting factor
- Remains factual with information (no advocacy)
- Ethical dilemma
  - Best treatment for the condition, ? or
  - Acceptable treatment for certification ?

Questions / Discussion

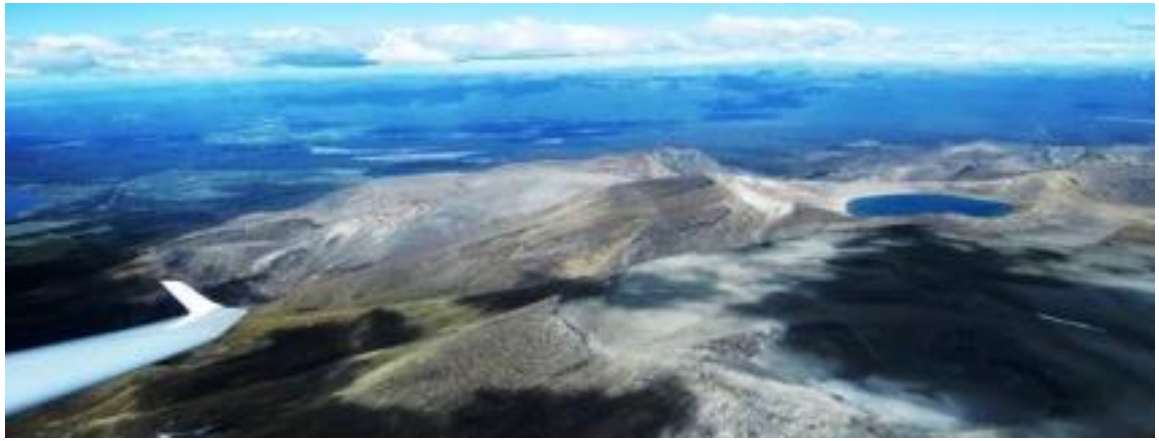
Recreational Pilot licence (RPL)

- Licence issued by CAA
- Your average Cessna / Piper
- 1 Passenger only
- No night flying / no instrument flying

- Commercial Driving Medical Certificate (P endorsement) by GP
  - NZTA guidelines
  - CAA Medical Adviser check on compliance with guidelines

Other Recreational Aviation Activities

- Microlight (SAC and RAANZ)
  - Hang-glider pilot
  - Glider pilot
  - Balloon
  - etc



Self regulating organisations

Civil Aviation Rules – Part 149

You are the certifying Doctor

- Microlight
  - Medical declaration
  - Medical advisors
    - Dr Hugh Tapper (Invercargill) – RAANZ
    - Dr. Krishnen Pillay, Cambridge – SAC
- Gliders
  - Medical declaration (Gliding NZ)
    - Dr David Powell
- Parachute
- Hang Glider

Case 1 – Glider

Case 1

- Glider pilot with medical condition
- GP advises not to carry passenger
- Glider crashed while attempting a 1000 km flight. Pilot killed on impact

- “While operating in this mountainous area the glider pilot most likely experienced significant turbulence and probable downdraughts”.
- “The pilot had a known medical condition which could have led to pilot incapacitation”.

Case 2

- Hang-glider pilot with history of alcohol abuse
- Launch late from the hills, after driving for one hour + preparation to launch. Crash and killed
- The pilot had not disclosed to the NZHGPA, that he may have suffered from alcoholism.
- At the time of the accident the pilot was under the influence of alcohol.

Case 3 – Gyrocopter

Case 3

- Gyrocopter
- “The owner suffered a recent X and had a Y related medical history. This history increased the likelihood of the owner suffering an incapacitating medical event such as another X or Y”.
- “A handling error by the owner probably resulted in a “bunt-over/PPO” from which the gyrocopter could not be recovered”.
- “The handling error could have been caused by the owner suffering a medical event”.

Take Home message

- GP have an important safety role when certifying patients for any recreational activity (flying, diving).
- Flying Organisations medical advisers can give assistance when in doubt.
- Inform patient of “risk” if incapacitated, i.e. fatal accident”.
- Stay factual, advocating may put the patient himself at risk.

Questions / Discussion

- Please share your experience