PEER SUPPORT

Substance Abuse Support in Aviation

'When everything seems to be going against you, remember that the airplane takes off against the wind, not with it.' Henry Ford

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Peer Support Training Syllabus for Substance Abuse Support in Aviation
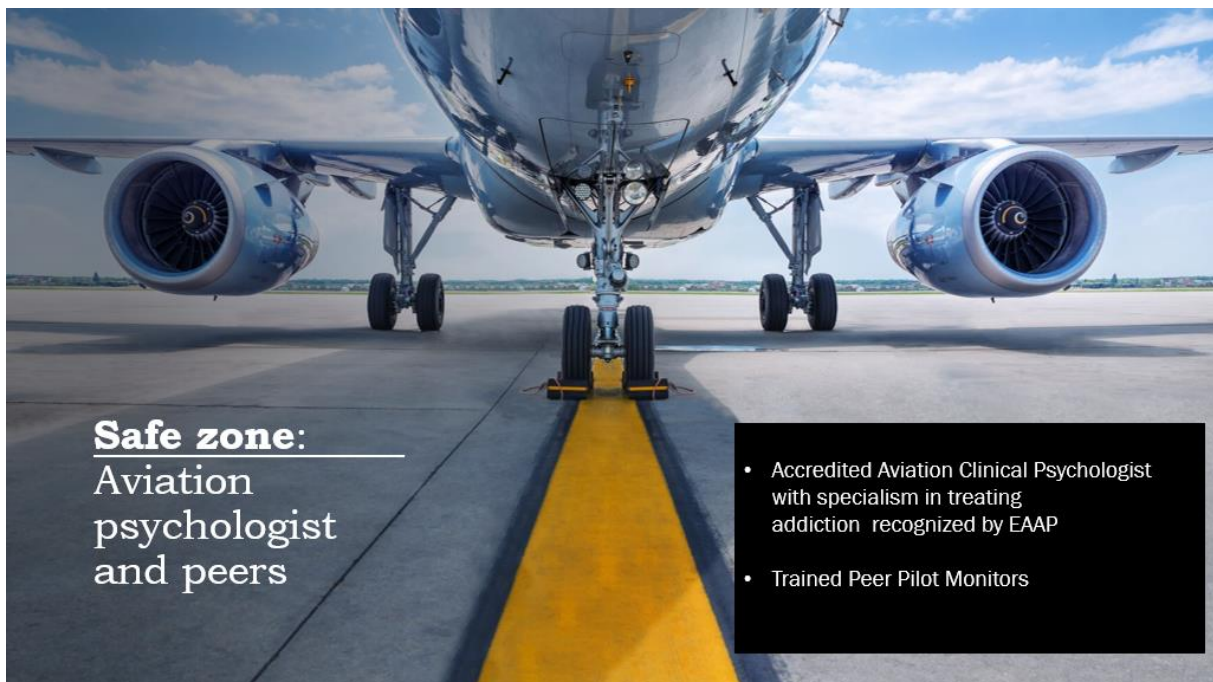
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0 CREWMIND PEER SUPPORT

Since the Germanwings accident in 2015 (Pasha & Stokes, 2018) the European Union published new safety rules on air operations, including new provisions to better support the mental fitness of air crew. In July 2018 Regulation EU 2018/1042 was published with the Acceptable Means of Compliance and Guiding Material following in November 2018 by an EASA ED Decision 2018/012/R. One of these new provisions require airlines to provide flight crew members access to a peer support programme that will assist pilots in recognising, coping with, and overcoming problems that might negatively affect their ability to safely exercise the privileges of their license. Although the regulation at this time only mandates these provisions for flight crew members, more and more airlines decided to extend this support programme to cabin crew and flight engineers.

1. CREWMIND Peer Support Principles

a. Confidentiality – 'SAFE ZONE'

Safe zone:
Aviation
psychologist
and peers

• Accredited Aviation Clinical Psychologist with specialism in treating addiction recognized by EAAP

• Trained Peer Pilot Monitors

The peer support programme (PSP) is a formal structure whereby a crew member needing help can get support with mental wellbeing or life stress issues from a dedicated and trained colleague in a confidential setting. The PSP is also accessible to colleagues or other persons who have serious concerns someone's mental fitness to fly.

Confidentiality is the cornerstone of CREWMIND PSP. A 'Safe Zone' which is protected by confidentiality provides a safe and confidential method for an air crew member to raise concerns and receive support. The only persons allowed to enter this Safe Zone are the crew members asking for help, the peers and the accredited aviation psychologist supervising the PSP. The peers sign a confidentiality agreement with CREWMIND.

Except in exceptional circumstances detailed below, no details of any conversations will go outside the safe zone without the crew member's consent.

There are certain rare circumstances whereby it is permissible to break the confidentiality of the safe zone. They are clearly defined and follow standard General Medical Council Guidelines. They refer to a 'public interest in disclosing information to protect individuals or society from risks of serious harm'. These circumstances can be translated in aviation terms as:

1. Threat to self
   Indications of a likely attempt at suicide will be treated as a threat to self.

2. Threat to safety of others
   In the context of aviation 'safety of others' can be substituted with 'flight safety'. Serious threat to safety of others is justification for breaching confidentiality of the safe zone and disclosing confidential personal data without the explicit consent of the air crew member: namely when the air crew member refuses to self-report to operational and/or medical authorities.
   Three important notes:
   First: before a decision is taken to break confidentiality EVERY effort shall be made to get the consent of the air crew member first, breaking confidentiality no longer being the issue if successful.
   Second: the judgement of 'threat of safety of others' shall be made very carefully based on input form the peer(s) and the accredited clinical aviation psychologist. Last mentioned will make a judgement about an air crew members' fitness to fly in conjunction with the consulting AME or company doctor.
   Third: the only bodies actually able to decide to remove a pilot from the roster for medical reasons are: the operator's medical doctor; the air crew members' AME or the National Aviation Authority. The key point here is that such decision is still protected by medical confidentiality. The reason for the air crew member being removed from the roster shall not be disclosed to management.

3. Legal reasons
   When a peer becomes aware that a criminal act has occurred or is likely to occur, he or she will contact the aviation psychologist who will follow professional guidelines to disclose this to the relevant authorities.

b. *Pathways to professional help – Escalation protocol*

The Safe Zone set up of the peer support system will help the majority of the crew members contacting the programme without the need for external professional assistance. Talking to a colleague with the expert back up of the AT will often be sufficient to help the crew member. The accredited aviation psychologist will decide when and if the escalation protocol needs to be activated.

In case external professional assistance is required, three clear pathways are defined:
1. Medical or psychological help
2. Time off work to deal with immediate problems
3. Other kinds of help

c. Peers

At the heart of the programme are peers: motivated fellow pilots and cabin crew members who are trained in basic listening and counselling skills. They share a common professional qualification and experience and encounter similar situations, problems or conditions with the person seeking assistance from the support programme. Peers do not hold any managerial nor pilot representative body position as there should be no perceived authority gradient between the crew member contacting the programme and the peer. Peers must just be colleagues, no more. CREWMIND requires operators to provide a minimum number of peers of 1% of the population served by the programme. Peers are working on a voluntary base and are normally not numerated for peer interventions. Each company may decide their own way of compensating peer interventions by for instance substituting this work for an extra day off. The role of the peer in the programme is central and requires certain characteristics: peers must be good listeners. Peers shall listen in a non-judgemental fashion, should not offer solutions, as the desired outcome of any conversation in this field must be for the crew member themselves to come up with solutions to their own problems. This quality requires professional training, provided by the accredited aviation psychologist based on principles of Solution Focused Brief Therapy.

Peers are recruited by the airline. Qualities which should be looked for are:
- Care for/desire to help colleagues
- The ability to be a confidante and a friendly ear to those who reach out for help
- Empathy and compassion
- Highly discreet and respectful of confidentiality
- Good listening and interviewing skills
- Ability not to accept something on a face value, a wish to understand others
- Ability to differentiate between a denial and a genuine explanation
- Ability to piece together a clear picture from different bits of information
  About a person's situation, about their fitness to operate, about the safety of the operation
- Being non-judgemental ethically
- Ability to tolerate, understand and cope with emotions of others (frustration, anxiety, anger, sadness, etc).
- Ability to accept an adverse reaction to a conversation and understand rather than reacting to it, not take things personally
- Knowing own limitations and asking for help where necessary, willingness to consult when there is doubt
- Being prepared to pursue cases in their own time
- A desire to learn and improve by reading about psychological subjects and sharing experience with fellow peers

d. Accredited Clinical Aviation Psychologist (AP)

These peers are trained, mentored, supported and supervised by an Accredited Clinical Aviation Psychologist who is bound to a Code of Conduct and Ethics and confidentiality rules for health care providers in Belgium and Europe.
The European Association of Aviation Psychology (EAAP) follows strict rules and requirements before issuing an accreditation as Aviation Psychologist to a psychologist. EAAP accreditation is meant as a professional peer recognition for psychologists who actively deal with human factors applications in their day-to-day work. It requires relevant proof of qualification, education and activities in aviation psychology and/or human factors. As a minimum an aviation psychologist holds a university degree

(Masters) in psychology, has 3 years and 3000 hours experience in applying aviation psychology, can proof continuous professional education in aviation psychology and is able to document knowledge of the technical field by for instance a pilot license or achievements or publications in the aviation related research field.

The CREWMIND AP has following qualifications:
- Master Degree in Clinical Psychology
- Postmaster Solution Focused Cognitive Systemic Psychotherapy
- Specialist training in Addiction, personality disorder, trauma, mood disorder, suicide
- Work experience in a psychiatric residential clinic for the treatment of addiction
- Training in mental health first aid
- Trained in Individual and Group Crisis Interventions
- Advanced training in Aviation Psychology, Aviation neuropsychiatry and Aviation medicine by the American college of Professional neuropsychology: certification as a FAA approved HIMS psychologist received
- Continuous education on Aviation Psychology in accordance with EAAP requirements
- Previous experience in applying aviation psychology and human factors in. Worked at Safety department – Nominated person Flight operations – Pilot recruitment – Peer support
- Commercial ATPL and type ratings: Fokker 50, Fokker 100, Gulfstream 550, Falcon 2000(S), Beechjet 400, Global Express, Boeing 747, Boeing 737

e. Link to the airline safety management system

The Aviation Psychologist will provide de-identified annual statistics on peer support cases to the safety management system.

f. Data responsibility and protocol for handling personal data

All data for all support cases that are being supported via the programme will be stored on a GPDR approved healthcare platform for psychologists in Belgium and will only be accessible to the Aviation Psychologist.

I WELL-BEING PEER SUPPORT

1. General

a. Most common psychological issues amongst flight crew

In 2011 the first consolidated data was published on the size and burden of mental disorders and neurological disorders in Europe. Every year over 38.2% of the total EU population suffer from a mental disorder, corresponding to an estimated 164.7 million persons. Across all ages the most frequent mental disorders are: anxiety disorders (69.1 million), unipolar depression (30.3 million), insomnia (29.1 million), somatoform disorders (excluding headache symptoms) (20.4 million), alcohol (14.6 million), opiate (1.0 million) and cannabis dependence (1.4 million), dementia (6.3 million), mental retardation (4.2 million) and childhood/adolescent disorders, such as attention-deficit hyperactivity disorders (ADHD) and other hyperkinetic disorders (3.3 million) (Wittchen et al., 2011).

The most common psychological problems amongst flight crew are
- substance abuse (DeJohn et al., 2020; Franzos et al., 2012; Kraus & Li, 2006; Li et al., 2010; Maxwell & Harris, 1999; Porges, 2013),
- mood disorder (Jones & Ireland, 2004; O'Hagan et al., 2017) ,
- anxiety (Johansson & Melin, 2018),
- occupational stress (Cahill et al., 2020),
- sleep disorder (Coombes et al., 2020) and
- relationship problems (Picano & Edwards, 1996).

In 2021 an EASA commissioned study analysed the medical causes of grounding European pilots in order to formulate recommendations to reduce the risk of pilot incapacitation. Data provided by 6 National Aviation Authorities were analysed to determine the most frequent causes to ground pilots in Europe using diagnoses classified according to the definitions as described in Commission Regulation (EU) No. 1178/2011 Part Med. The result of this study revealed cardiovascular conditions (19%) as the most frequent cause for grounding a pilot, followed by psychiatric (11%), neurological (10%) and psychological (9%) causes with psychiatric and psychological diagnoses most frequent in the age 20-40 cohort (Simons et al., 2021).

b. Psychiatric – psychological and neurological RED flags

Annex I to ED Decision 2019/002/R contains clear guidelines on the mental health requirements of flight crew holding a Class 1/2 /LAPL medical license.
Serious psychiatric and psychological issues that will always require an assessment and referral decision to a psychiatrist/psychologist/AME are:
- psychotic disorder
- organic mental disorder
- use of psycho active medication
- schizophrenia, schizotypical or delusion disorder
- mood disorder
- neurotic, stress-related or somatoform disorder
- personality or behavioural disorder
- substance use disorder
- deliberate self-harm and suicide attempt

Serious neurological issues that will always require an assessment and referral decision to a psychiatrist/psychologist/AME are:

- epileptic seizures
- neurological disease
- migraine
- episodes of disturbance of consciousness
- head injury
- spinal or peripheral nerve injury
- vascular deficiencies

Peers are not qualified to recognize these issues and should always contact the AP if they have doubt on whether the crew member asking for help has symptoms of possible Red Flag issues.

c. *Psychopharmacological information*

Hypnotics

Temazepam has been used in military and civilian aircrew for the short-term treatment of insomnia associated with circadian rhythm disturbance for many years. Specific treatment should be directed towards other underlying causes of insomnia such as adjustment disorder' Temazepam is short acting and hangover effects are uncommon. However, drowsiness or light-headedness the next day, confusion, Ataxia and amnesia are possible side-effects so the medication should be started for the first time when it is certain licence privileges will not be exercised the following day. Thereafter, it should be taken no less than 12 hours before exercising licence privileges. Aircrew should not take Temazepam continuously for more than one week because of the risk of dependency developing. Zaleplon is also acceptable for EASA medical certification subject to the same considerations as Temazepam.

zolpidem 5 mg is acceptable. It should be taken no less than 8 hours before exercising licence privileges.

All other hypnotics including zopiclone and "over the counter" preparations such as diphenhydramine and promethazine are disqualifying for EASA medical certification.

Melatonin is a hormone produced nocturnally by the pineal gland. It serves as a circadian time cue promoting sleep. With age, melatonin production declines and the prevalence of sleep disorders, particularly insomnia, increases. Prolonged release melatonin has shown good results in treating insomnia in older adults and the European Medicines Agency has approved Circadin 2 mg (prolonged release melatonin) for patients aged 55 or over for the short-term treatment of primary insomnia. Melatonin preparations are not always pure pineal extract and may contain herbs such as valerian and chamomile, together with amino acids, calcium and magnesium. These preparations are not acceptable for EASA medical certification.

CNS stimulants

Modafinilis a central nervous system stimulant prescribed for narcolepsy and daytime sleepiness due to obstructive sleep apnoea. Common side-effects (>1:100) include anxiety, depression, dizziness and impaired concentration. Both obstructive sleep apnoea associated with significant daytime drowsiness despite CPAP treatment and narcolepsy are disqualifying and so any applicant taking this medication is unfit for flying duties.

Smoking cessation medication

Nicotine replacement therapy is acceptable.

Varenicline is a selective nicotine receptor partial agonist used for smoking cessation' Common side effects include drowsiness, dizziness and sleep disorder. Less commonly (1:1000 - 1:100) it can cause atrial fibrillation, palpitations, panic attacks, mood swings, incoordination, visual disturbance,

myocardial infarction, anxiety, depression, irrational behaviour, psychosis and suicidal ideation. Varenicline is not compatible with aeromedical certification.

Bupropion is used for smokinq cessation though its mode of action is unknown. Common side effects include anxiety. depression, dizziness and impaired concentration. Less commonly it can cause confusion and visual disturbance. Pilots are 'unfit whilst taking this medication.

Antidepressants

The SSRI's Sertraline, Citalopram and Escitalopram are the only antidepressants permitted for EASA medical certification.

Citalopram and escitalopram are associated with dose-dependent QT interval prolongation and should not be used in those with congenital long QT syndrome, known pre-existing QT interval prolongation or in combination with other medicines that prolong the QT interval. ECG measurements should be considered and electrolyte disturbances should be corrected before starting treatment.

For citalopram, the maximum daily doses are: 40 mg for adults and 20 m9 for patients older than 65 years. For Escitalopram, the maximum daily doses are: 20 mg for adults and 10 mg for patients older than 65 years.

The SNRI duloxetine is not permitted as an antidepressant or as medication for neuropathic pain. The half-life of amitriptyline is 18 to 24 hours and active metabolites have a longer half-life. Sedation occurs at all dose levels. It is not compatible with EASA medical certification even at the low doses used for treating neuropathic pain.

Anti-epileptics and Medications for Neuropathic Pain

Epilepsy is disqualifying so these drugs are incompatible with EASA medical certification. Gabapentin, pregabalin and carbamazepine prescribed for neuropathic pain and valproate for migraine prophylaxis are disqualifying for EASA medical certification because of the risk of unacceptable side effects.

Antipsychotic drugs

Antipsychotic drugs are not compatible with EASA medical certification because the condition for which they are prescribed is to be disqualifying. However, low dose sulpiride (less than 40omg daily) is acceptable for the treatment of Gilles de la Tourette's syndrome (unlicensed indication) provided a clinical report confirms treatment is successful without significant side-effects and a medical flight test gives a satisfactory result. The use of donazepam for treating tics is disqualifying.

Lithium is disqualifying for EASA medical certification because of the risk of unacceptable side effects.

II SUBSTANCE ABUSE SUPPORT

1. Substance abuse in aviation

   a. Aviation Case Story – Lyle Prouse

'Life can change so suddenly – an auto accident, a random shooting, a tornado or hurricane, or some other completely unanticipated happening. Each time I watch the six o'clock news I see the faces of people whose lives have suddenly been unalterably changed in the blink of an eye.
For me, it was none of those events, but mine was just as surreal and shocking. One moment I was an airline captain, a husband and a father, and thought I was doing well. The next moment I felt as though I'd stepped on a land mine. The explosion confused and bewildered me; I was bleeding from a hundred wounds, dazed, alone, and dying from the inside out. But it was my alcoholism that triggered the blast. I never thought I'd ever be an alcoholic…. '

This story began on the morning of March 7, 1990, with no hint that this would be the last day of one life and the beginning of another. It would mark a before and after that would find me drowning in the depths of a personal hell before slowly and painfully emerging into a new life in a new world.
I landed in Fargo, North Dakota, that day as the captain of a Northwest Airlines Boeing 727. A former Marine Corps pilot and Vietnam veteran, I was living out my dream of reaching the highest pinnacle in commercial aviation. The previous two years had been difficult for our family, but my wife Barbara and I had survived it together and we were two days away from our 27th anniversary.
I had no reason to think it would be anything but a typical layover; I'd have some drinks, get a meal somewhere, and get back to my hotel room in time to rest up for the early morning flight the next day. But I stayed at The Speak Easy and I drank way too much.
When the alarm sounded at 4:15 the next morning, I was hung over. I shaved, showered, put my uniform on, and headed downstairs for crew pickup at 5:15 AM. As the door swung closed behind me there was no way to know nothing in my world would be routine again. A mere two hours later my nightmare would begin.
As we turned for the final approach, I had no idea what lay waiting for me upon landing. When Northwest Airlines Flight 650 touched down in Minneapolis I was arrested. Mere months later I was the first airline pilot ever convicted of flying while impaired – in other words, drunk.' LYLE PROUSE

On March 7, 1990, Lyle Prouse and his two co-pilots got arrested upon landing in Minneapolis. His story exploded on the national and international news where it remained a front-page item for weeks. He became a national pariah, the object of scorn, contempt and anger. Shame, disgrace, humiliation, pain, horror, and hopelessness became his daily companions in the days and years that followed. Media and comic shows used the topic to provoke laughter.
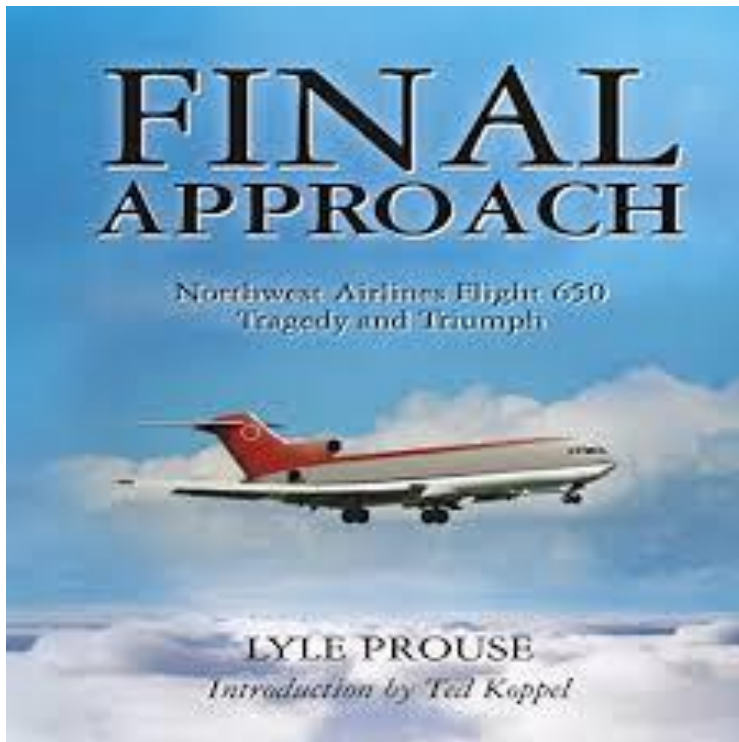
'Within days of the arrest in Minnesota, I found myself planning my own demise as the only available way to stop the pain that quickly reached an intolerable level. There can be no greater sense of hopelessness than when suicide becomes seductively attractive.
I was a proud man. Humility had never been a character attribute I had sought but it came to me through another form of the word – humiliation. I watched nearly everything I'd worked in a lifetime to achieve evaporate within a thirty day period after the arrest. My descent to the bottom was almost instantaneous – everything was destroyed and lost overnight.'

Lyle Prouse was convicted to federal prison on December 5, 1990. He was broken, publicly stripped of his airline career, his FAA flying certificates and his FAA medical license.

'The judge put sanctions on me that guaranteed I would never fly again. It was an extra layer of concrete over the top of my coffin and sealed my fate.'
'Suffering more than I thought was humanly possible, the publicity firestorm pushed me toward the dark abyss of suicide. I never thought myself capable of such thoughts. I had a reputation of being durable and I'd survived many difficult experiences. In a brief time, I moved beyond the point of thinking about suicide to actively planning it. I had reached the point of unbearable suffering. It had to end and any means to accomplish that was acceptable.

In 1990 a successful support programme for pilots with a substance abuse problem existed already in the US. However, Northwest had not signed into the programme.

'Alcohol is an equal-opportunity disease and there is no vocation or profession, no line of work anywhere that is free of alcoholism. Northwest did not join the rest of the industry by implementing a program: "Northwest didn't have any alcohol pilots", and if they did, they'd fire them.'

Movie about HIMS US
https://youtu.be/WpSrZkOvyCU 8 min
https://www.youtube.com/watch?v=WpSrZkOvyCU&t=334s

Movie about Lyle:
https://www.youtube.com/watch?v=xpPtTU6Bw7M (3 min)
https://youtu.be/Dz6vcd_5hDY HIMS movie 23 min

b. EASA Regulations

In the early days of aviation, the diagnosis of a substance use disorder led to a permanent loss of a flight crew license and hence the end of a flying career.
Nowadays if a flight crew member is diagnosed with substance use disorder, his/her medical license will be revoked by the competent Aviation Authority. The flight crew member can re-apply for a medical certificate after a documented period of two years of sobriety or after initial treatment while being monitored and supported by a recognized substance support programme. Depending on the National Authority issuing the license, a maximum number of relapses may be defined that lead to a permanent loss of license.
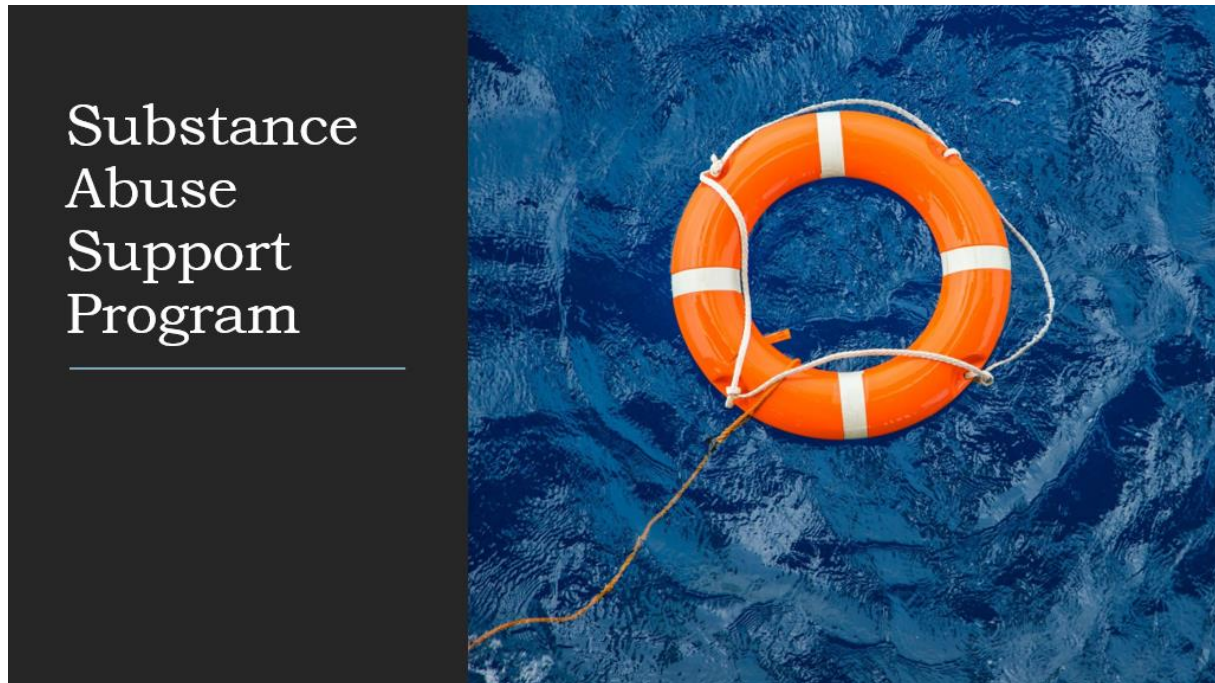
Part MED Annex I
ED Decision 2019/002/R

Mental or behavioural disorder due to substance use or misuse, with or without dependancy should be assessed as unfit.

Fit assessment after 2 years of documented sobriety. Earlier may be considered with OML after treatment, evaluation and inclusion into a support program.

2. Substance abuse support programme

### a. *The need for a dedicated support programme for substance abuse in aviation*

Substance abuse/dependency in aviation often remains undetected, difficult to treat and it needs a lot of aftercare and monitoring to mitigate relapse and warrant flight safety (Bühringer, 2019). Substance dependency is a lifetime disease with high relapse rates. Due to the complexity of substance use disorder, there is a need of a much more intensive support system than the already existing PSP's that focus on well-being support and critical incident stress management support. A substance support system (SSP) requires collaboration with different parties involving expert psychiatrist and psychologists, Aero Medical Examiners (AME) with specific knowledge on substance use disorder, in-patient and out-patient treatment centres, hospitals, substance testing facilitators, peer monitors, aftercare groups, airline managements and National CAA. In order for SSP systems to be successful they have to gain trust by pilots and they must be supported by pilot representative bodies. Only a few substance support systems exist to date. In the US there is the Human Intervention Motivational Study (HIMS) (Kay, 2013) with success rates as high as 85%, in Germany there is Antiskid Germany with success rates as high as 88%. Average success rate of any other substance support programmes is as low as 40%. A non-experimental study in 2016 compared pre- and post-treatment scores on cognitive change with significant gains on all measures after treatment for alcohol use disorder with airline pilots. This study supports existing support programme practises with regard to returning airline pilots to work following rehabilitation and sufficient period of abstinence (Hamilton, 2016).

Why do we need a Substance Support Programme in aviation?

In 2011 the first consolidated data was published on the size and burden of mental disorders and neurological disorders in Europe. Every year over 38.2% of the total EU population suffer from a mental disorder, corresponding to an estimated 164.7 million persons. Across all ages the most frequent mental disorders are: anxiety disorders (69.1 million), unipolar depression (30.3 million), insomnia (29.1 million), somatoform disorders (excluding headache symptoms) (20.4 million), alcohol (14.6 million), opiate (1.0 million) and cannabis dependence (1.4 million), dementia (6.3 million), mental retardation (4.2 million) and childhood/adolescent disorders, such as attention-deficit hyperactivity disorders (ADHD) and other hyperkinetic disorders (3.3 million) (Wittchen et al., 2011). Data suggests that pilots do not differ with regards to the use of substances in regard to the rest of the population. Substance abuse is in fact one of the most common psychological problems amongst flight crew (DeJohn et al., 2020; Franzos et al., 2012; Kraus & Li, 2006; Li et al., 2010; Maxwell & Harris, 1999; Porges, 2013), next to mood disorder (Jones & Ireland, 2004; O'Hagan et al., 2017) , anxiety (Johansson & Melin, 2018), occupational stress (Cahill et al., 2020), sleep disorder (Coombes et al., 2020) and relationship problems (Picano & Edwards, 1996).
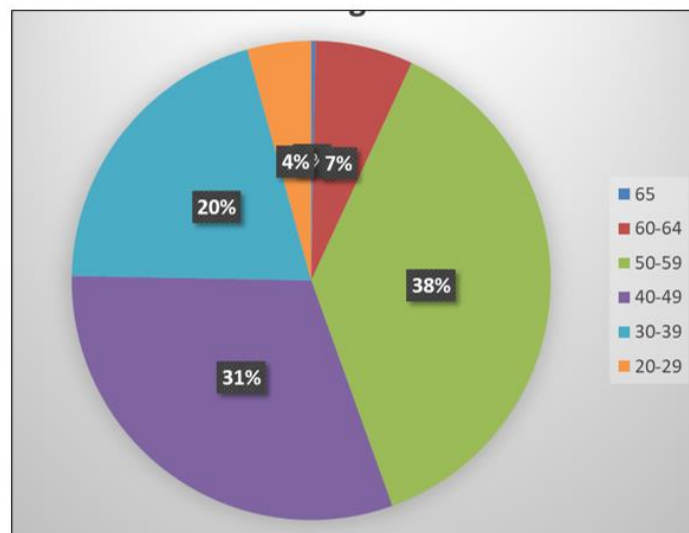
According to statistics provided by a well-established Substance Support Programme in the US that was founded in the early 1970's the most preferred substance to be used by flight crew is alcohol (92,9%), followed by opioids (2.1%), THC (1.8%) and Cocaine (1.7%). On average the age group between 50 and 59 years is mostly impacted (37.6%), followed by the age group between 40 and 49 (30.8%) and 30 to 39 years of age (20.4%) with the highest relapse rate for opioids (39.3%) followed by cocaine (16.0%) and alcohol (13.1%).

What is addiction/substance use disorder?

Substance use disorder is a slow and progressive disease. By the time the disease is detected it is often already in a severe phase. The disease had complex genetic, environmental and individual influences explaining why some people are more disposed to develop addiction than others. More than 50% of all addiction cases can be attributed to a genetic predisposition. Often addiction co-

occurs with other psychiatric and medical conditions and social and environmental factors play an important role in the onset of the disease (Behrendt et al., 2021).

Substance usage affects the central nervous system causing short term impairment to coordination, reasoning, decision making, reaction times and balance (Bor et al., 2017; Porges, 2013). On the longer-term substance abuse may lead to dependency. In the stage of dependency, neuro adaptation has taken place in the brain-reward-pathway of the brain, making the disease irreversible. Loss of control over the use of the substance takes place, compulsive use continues despite adverse consequences. Life becomes unmanageable. Relationships are lost, jobs are affected and when not treated the disease will lead to serious irreversible consequences to body and brain (Behrendt et al., 2021).

In the early days of aviation, the diagnosis of a substance use disorder led to a permanent loss of a flight crew license and hence the end of a flying career. Nowadays European Commission Regulation (EU) No. 1178/2011 Part Med allows flight crew to return to their flying jobs when the disease is treated and considered to be in stable remission. Identification and treatment of substance abuse should be critical elements of aerospace psychological practise (Porges, 2013).

b. Support Process

6 Steps

- Prevention
- Identification
- Treatment
- Evaluation
- Aftercare
- Monitoring
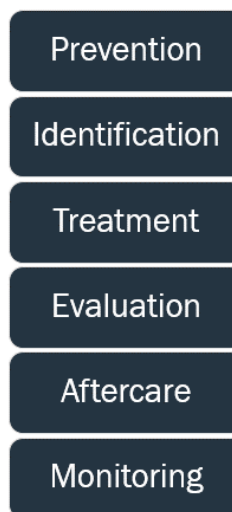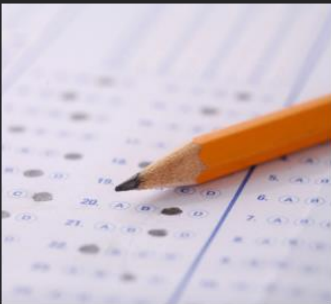
1.Prevention

A substance support system assists airlines in the design of preventive educational guidelines on substance use and its associated risks on short and longer term. It provides tools to detect problematic substance use that may lead to the development of substance use disorder. Information on the availability and advantages of early psychotherapy are crucial (Bühringer, 2019) and details of treatment and support trajectory should be provided to the entire pilot population. The SSP should be promoted in order to gain confidence of pilots with the ultimate goal of self-referral. The SSP motivates others (colleagues, peers, management) to refer someone to the support system in case of doubt or worry.

2. Identification

First 'triage' within 'safe zone' by Aviation Clinical Psychologist

DSM diagnose by clinical psychologist or psychiatrist

FIT/Unfit by AME

As addiction is a slowly progressive disease, the ability that a flight crew member will self-disclose the addiction problem to the AME decreases over time. Any sign of addiction should always be taken seriously in aviation due to its negative effect on cognitive, personal and interpersonal functioning presenting a serious threat to aviation safety (Porges, 2013).

Ideally the pilot will self-refer to the support programme, but any other party with concerns should refer someone to the substance support programme where every case will be treated in a safe and confidential environment with clear protocols. The SSP protocol will protect the flight crew member from losing his/her medical license permanently with severe consequences to the aviator job. In case of doubt anyone can contact the support programme for advice (peers, colleagues, management). Until the substance support programme has gained trust and confidence in the flight crew population, the majority of cases may be addressed by a third party instead of self-referral. In case of concerns about a pilot the initial goal of the substance support programme will be to bring the case into a 'confidential safe zone' independent on how and by whom the case was reported.

This safe zone is guarded by an accredited clinical aviation psychologist who is bound to a Code of Conduct and Ethics and confidentiality rules for health care providers in Belgium and Europe. The European Association of Aviation Psychology (EAAP) follows strict rules and requirements before issuing an accreditation as Aviation Psychologist to a psychologist. EAAP accreditation is meant as a professional peer recognition for psychologists who actively deal with human factors applications in their day-to-day work. It requires relevant proof of qualification, education and activities in aviation psychology and/or human factors. As a minimum an aviation psychologist holds a university degree (Masters) in psychology, has 3 years and 3000 hours experience in applying aviation psychology, can proof continuous professional education in aviation psychology and is able to document knowledge of the technical field by for instance a pilot license or achievements or publications in the aviation related research field.

Any substance abuse concern is initially investigated within the substance support system by the clinical aviation psychologist with expertise in addiction within the confidential 'safe zone' to estimate the validity of the case. If the case is considered to be invalid (clear sub-clinical symptoms), the case will be closed and saved anonymously by the support system for possible future concerns and statistics. In case the concern was addressed by airline management, management will be informed that the concern was classified as invalid. Should there be indication that the person concerned may benefit preventive psychological treatment, the support programme will refer the person to a clinical psychologist with expertise in addiction, who will assist the pilot with psychological education on substance use to prevent future development of a substance use disorder. These cases will remain in the safe zone of the support programme.

If the concern is considered to be a valid concern the pilot will be motivated to agree to a medical and psychological evaluation to investigate severity. When the flight crew member agrees to the evaluation the case will remain in the 'safe zone' until there is evidence of a diagnose or absence of diagnose. If the flight crew member refuses to agree to these evaluations, the SSP will advise the AME.

Evaluation before treatment

In order to judge the severity of the valid concern and propose a treatment plan evaluation is required by a psychiatrist specialised in addiction/addiction doctor and a clinical psychologist with expertise in addiction. In order to protect the flight crew member, the evaluation will be performed by two individuals instead of one. The SSP will refer the flight crew member to a psychiatrist/ addiction doctor and clinical psychologist who have a cooperation agreement with the support system to perform the evaluation as soon as possible. The evaluation shall require argumentation on whether the case is a substance use disorder in accordance to the latest version of the Diagnostic

and Statistical Manual of Mental Disorders (DSM 5) definition with an indication of mild (2 to 3 symptoms), moderate (4 to 5 symptoms) or severe (6 or more symptoms) (Schuckit & Saunders, 2006).

The SSP will liaise with the evaluators to coordinate the required documentation making sure that the required evaluation forms will adhere to the requirements of the National CAA issuing the medical license of the flight crew member. As national rules and definitions with regards to substance use disorder may differ (be more stringent) than the DSM 5 definition of substance use disorder the SSP will liaise with the National CAA when necessary.

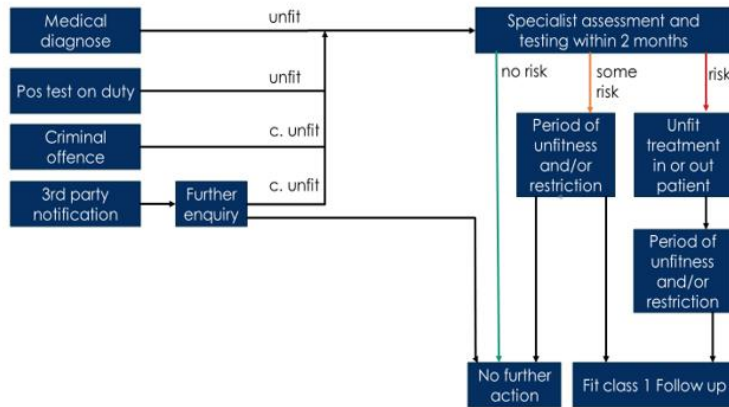In case a concern leads to a validated substance use disorder (mild, moderate or severe) the SSP will advise the Aeromedical Examiner (AME) of the flight crew member about the psychiatric diagnose and will propose a treatment and support plan based on the psychiatric and psychological evaluation. The AME will perform additional alcohol/drug testing as per National Aviation Authority requirements.

Based on the psychiatric and psychological evaluation and the outcome of the biomarker testing, the medical assessor/AME will decide if the flight crewmember will be unfit for a specific period of time, or fit with an OML (Valid only as, or with, a qualified co-pilot) as per Commission Regulation (EU) No. 1178/2011 Part Med. The flight crew member will then be offered the option to be helped by the support programme in order to support early recovery and increase chances of medical recertification after treatment. Belgian national patient law states that anyone is free to accept or deny any medical/psychological help unless there is a clear and imminent danger to own life or life of others. This means the flight crew member will in most cases by allowed to refuse help. In case the flight crew member refuses help from the support system, the AME will advise the SSP. Alternative means of help can then be investigated. Should the crew member refuse any help from any other party the AME will revoke the medical certificate in order to protect flight safety.
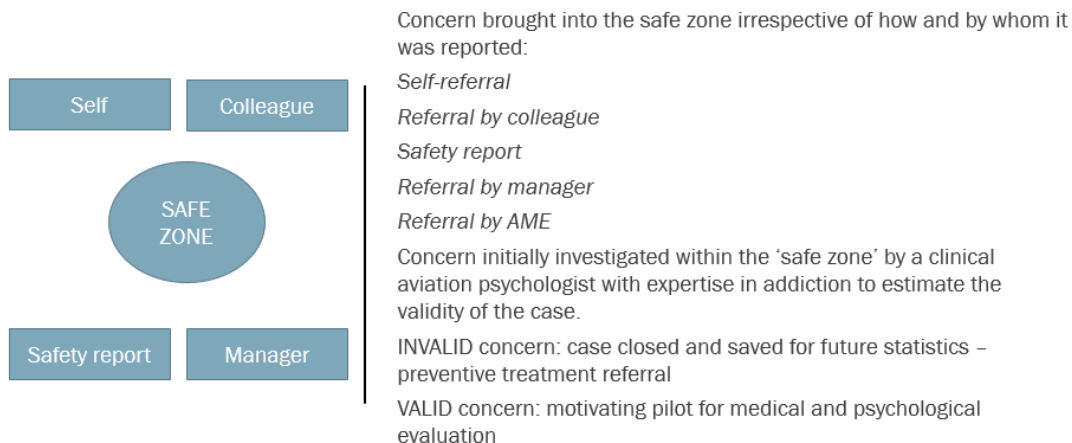
Concern brought into the safe zone irrespective of how and by whom it was reported:

Self-referral

Referral by colleague

Safety report

Referral by manager

Referral by AME

Concern initially investigated within the 'safe zone' by a clinical aviation psychologist with expertise in addiction to estimate the validity of the case.

INVALID concern: case closed and saved for future statistics – preventive treatment referral

VALID concern: motivating pilot for medical and psychological evaluation

Treatment

The most severe cases of substance use disorder will require medical care during the detoxification process offered by an in-patient treatment in either a psychiatric department of a hospital or a specialized in-patient treatment centre for addiction. The choice of treatment centre will not only depend on the severity of the case, but also on therapeutic method and/or specialization in treating comorbid psychiatric or psychological problems. In general, an in-patient treatment centre for addiction will require 4 to 8 weeks of treatment depending on the individual case. The SSP will assist the flight crew member to choose the best treatment centre and will liaise with the treatment centre

about necessary documented treatment plan to allow medical recertification when the disease is in remission.

Cases that do not require medical care during detoxification may be proposed an in-patient or out-patient treatment plan. Out-patient treatment may be organized as ambulatory care. This can be intensive day care in a treatment centre or ambulatory care with a clinical psychologist or psychotherapist specialised in treatment for addiction. The SSP will assist the flight crew member in choosing the health care provider and will liaise with the health care provider with regards to the documenting of the treatment to allow medical recertification when the disease is in remission. According to DSM 5 the disease is in early remission when no more criteria apply (with exception of criterium 4) since at least three months but less than a year. The disease is in long lasting remission when no more criteria apply (with exception of criterium 4) since at least a year.

The substance support programme has referral agreements with some treatment centres and clinical psychologists with expertise in treatment of addiction, however the choice of care provider will always be decided by the pilot in accordance with Belgian patient law.

Psychological and psychiatric evaluations after treatment
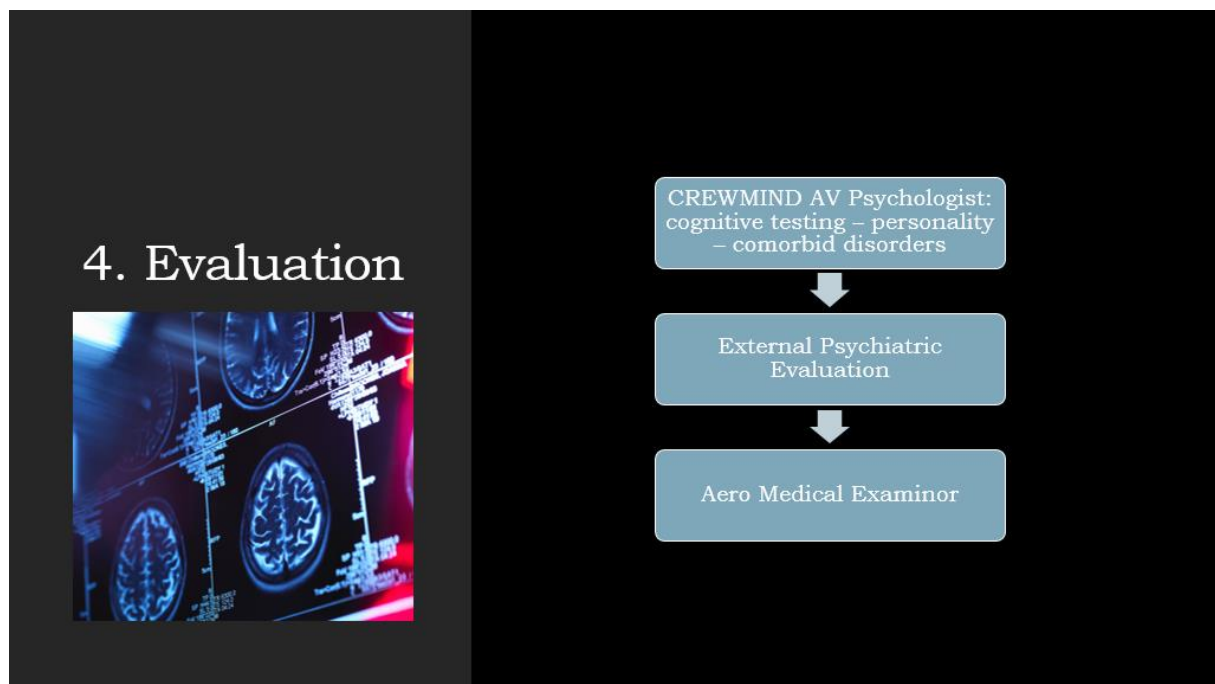
Depending on the severity of the initial diagnose prior to treatment (mild/moderate/severe), the flight crew member will need to submit a psychiatric and/or psychological evaluation after treatment to the AME in order to apply for medical recertification. The SSP will refer the flight crew member to a psychiatrist and/or accredited aviation clinical psychologist and will aid in the documentation process of both evaluations. These evaluations after treatment are different (much more detailed) to the evaluation before treatment. At least one of the evaluators (psychiatrist or clinical psychologist) should have profound knowledge and experience in aviation to formulate an expert opinion and advice as per Commission Regulation (EU) No. 1178/2011 Part Med.

Psychiatric evaluations after treatment must be conducted by a qualified psychiatrist with expertise in addiction psychiatry or a psychiatrist that has received training in Substance Abuse Support Systems in aviation (with a preference of last option).

Cognitive testing

Dimensions	Tests	Test forms	Duration in min.
Total length if all dimensions are presented			approx. 63
Attention			
Alertness, visual	WAF	S1	approx. 2
Divided attention	WAF	S1	approx. 6
Processing speed	TMT-L	S2/Part A	approx. 1
Memory			
Subdimension: Learning ability	FGT	S12	approx. 10
Subdimension: Short-term recall	FGT	S12	approx. 1
Subdimension: Long-term recall & Recognition	FGT	S12	approx. 13
Executive functions			
Cognitive flexibility	TMT-L	S2/ Part B	approx. 1
Planning ability	TOL-F	S2	approx. 16
Working Memory, verbal	NBV	S2	approx. 9
Additional information			
Response Inhibition	INHIB	S14	approx. 4
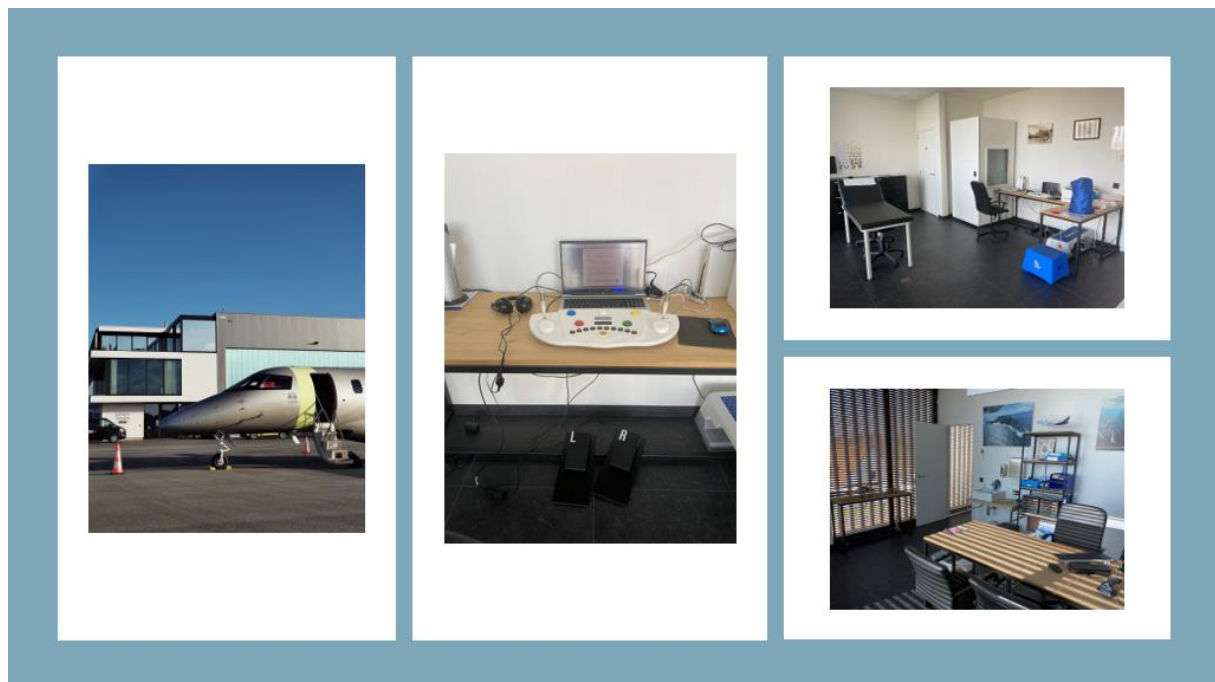
Psychological evaluations after treatment must be conducted by an accredited aviation clinical psychologist with expertise in addiction treatment. This in order to adhere to aviation specific protocols for neurological and personality testing after the diagnose of substance use disorder or other mental disorders (Kay, 2013). Specific tests shall be used to assess cognitive decline relevant to cognitive and executive functions required to operate an aircraft.

An accredited aviation psychologist and/or psychiatrist with expertise and knowledge of aviation are allowed to formulate an expert psychological or psychiatric expert advice and opinion on the mental status of the pilot. It is the AME who will take all decisions on medical fitness (with or without) or unfitness.

Aftercare

After initial in-patient or intensive ambulatory care, periodic psychological aftercare sessions are needed to reduce the chances for relapse until the disease is in long term remission. The SSP will refer the flight crew member to a multi health professional with expertise in addiction providing ambulatory care as aftercare. This aftercare will focus on relapse prevention strategies and possible comorbid psychological problems that may have plaid a role in the onset of the disease. Several psychological problems are known to co-occur with substance abuse such as: depressive symptoms, anxiety symptoms, personality problems, trauma, The SSP will liaise with the health professional to ensure that special attention is paid to comorbid psychiatric or psychological problems that may remain and need additional treatment and are potentially restrictive with regards to the medical license of a flight crew member (Nunes & Rounsaville, 2006).

Recovery programme

Several recovery programmes exist in Europe and attending these programs aids in preventing relapse. The most widely known recovery programme is the worldwide Alcoholics Anonymous (AA), but other programmes (mostly national) are also known to decrease chances for relapse. A recovery programme specifically designed for flight crew members is Birds of Feather, a worldwide network of meetings (including online) based on the programme of Alcoholics Anonymous. It was established for flight crew members active or inactive in private, commercial or military aviation. It was formed in response to the need for meeting places for flight crew members where the subject of addiction might be discussed with impunity and anonymity. The SSP will assist the flight crew member in choosing a preferred recovery programme that will aid in the process of recertification.

Peer pilot monitoring

The SSP is responsible for the training of peer pilot monitors. These pilots are preferably pilots that have been supported by the SSP themselves and are in long term remission. In the absence of available experience experts, other pilots may be selected to act as peers with a preference for pilots that have some experience with addiction (for instance family members) or who have a special interest in the disease and are able to build respectful relationships with pilots in recovery. The SSP will train the peer pilot monitors in the basics of the SSP, understanding of the disease, treatment, aftercare and monitoring requirements with special emphasis on listening and questioning skills. Until a flight crew member is in stable long-term remission, peer pilot monitors will contact the flight crew member at least 14 times in 12 months, with a minimum of 1 time each calendar month. This contact is preferably face by face (at least 4 times a year) or via videocall. Reports of these support calls/meetings will be submitted to the SSP where they will be added to the documentation package for the AME who is responsible for medical recertification. Depending on the national requirements of the Civil Aviation Authorities issuing the medical license of the flight crew member, a longer period of peer pilot monitoring may be required.

Substance testing
Substance testing requirements are according to the National Aviation Regulations and as per AME or Medical Assessor demand. The medical assessor of the applicable Aviation Authority will decide if full abstinence is required for a limited period of time or permanently.

Collaboration AME and SSP
The entire process of the Substance Support Programme requires a solid cooperation between AME and SSP. At all times the most important task will be to ascertain all cases remain into the zone of medical confidentiality during treatment and aftercare. With agreement of the flight crew member the SSP will gather, store and process all documents that need to be submitted to the AME for revalidation of the medical certification. The clinical aviation psychologist of the SSP meets the specialist requirement for providing expertise opinion and advise as per 'AMC1 MED.B.055 Mental health'. In case a psychiatric opinion and advise is needed the SSP collaborates with a psychiatrist who has received training in aviation specifics.

The most important aim of the programme is to protect and support the flight crew member and allow him/her to return to the cockpit as soon as possible.

3. Substance use disorder

a. Legal and illegal Substances

Substances

Different types of substances exist with different effects when being used.

Legal Substances

- Alcohol (ethyl)
- Tobacco
- Analgetics
- Sedatives
- Stimulants

Illegal Substances

Cannabis

MDMA

LSD, XTC

Cocaine

Heroine

Diagnose of substance use disorder

Each specific substance (other than caffeine, which cannot be diagnosed as a substance use disorder) is addressed as a separate use disorder (e.g., alcohol use disorder, stimulant use disorder, etc.), but nearly all substances are diagnosed based on the same 11 overarching criteria. For instance DSM 5 describes an Alcohol Use disorder as problematic pattern of alcohol use leading to clinical significant limitations or suffering, with a minimum of at least two symptoms that have occurred within a year: (1) alcohol is being used in bigger volumes or more frequently than planned; (2) there is a persistent wish or several attempts have been made to reduce the amount of alcohol intake or several attempts have been made to maintain the current alcohol use; (3) a lot of time is invested in activities to obtain alcohol, use alcohol or recover from the use of alcohol; (4) craving or strong wish to use alcohol; (5) recuring use of alcohol resulting in failure to adhering to role obligations at work, school or home; (6) persisting alcohol use despite persisting or recurring social or interpersonal problems caused or impaired by the use of alcohol; (7) important social, professional or leisure activities have been reduced or stopped because of the use of alcohol; (8) recurring alcohol use in situations where the use of alcohol leads to a threat to physical safety; (9)
the use of alcohol is being continued despite the knowledge that there is a persisting or recurring physical or psychological problem that is most likely caused by or worsened by the use of alcohol; (10) tolerance defined by one of the following characteristics (a) need for a significant increased amount of alcohol to reach a level of intoxication or desired effect, (b) a clearly diminished effect with continued use of the same amount of alcohol; (11) withdrawal symptoms defined by at least one of the following symptoms (a) typical withdrawal syndrome of alcohol, (b) alcohol (or a similar substance like benzodiazepine) is being used to prevent or alleviate withdrawal symptoms.

11 CRITERIA (MILD (2-3) MODERATE (4-5) SEVERE (>6):

Substance use disorder DSM 5 diagnose

1. Higher volume or frequency than planned
2. Persistant wish or severeal attempts to maintain/reduce current amount of intake
3. A lot of time invested to obtain/use or recover from use
4. Craving
5. Recuring use resulting in failure to adhere to role obligations at work/school/home
6. Persisting use despite persisting or recurring social problems caused or impaired by use
7. Social, professional or leisure activities have been reduced or stopped because of the use
8. Recurring use in situations where the use leads to a threat to physical safety
9. Continued use despite persisting or recurring physical or psychological problem most likely caused by or worsened by the use
10. Tolerance
11. Withdrawal symptoms

NO BIOMARKER included: carefull with blood samples short detection window + only 8-10% cirrhosis

b. Why do certain people end up with substance abuse problems, while others don't?

Different factors play a role in the onset of substance use disorder.

1. Genetics

More than 50% of the people with a substance use disorder have a genetic vulnerability for the disease. Complex genetic factors cannot be attributed to a single gene. More than half of the persons with addiction problems have family members with similar addiction problems. The genetic vulnerability means that people are less sensitive to substances, meaning they will need to consume more of the substance to experience the same effect than somebody who is not genetically vulnerable.
Genes only are very rarely sufficient to create the onset of addiction. Additional psychological and/or social factors are often needed.

Biological factors

More then **50%** of people with a substance use disorder are genetically pre-disposed.

Genetic vulnerability cannot be attributed to a single gene: **less sensitive** to substance, so need to consume more to experience same effect.

More then 50% have **family members** with similar addiction problems.
Children (sons) of alcoholics are 3-4 times more likely to develop alcoholism.
Disease sometimes skips one generation.

Genes only are **very rarely sufficient** to create the onset of addiction. Additional psychological and/or social factors are often needed.

2. Psychological/personality factors

Certain psychological and personality factors can play an important factor in the development of substance misuse/dependency.
Known personality factors are:
- Impulsive personality
- Elements of low self-control, often already shown in childhood
- People that tend to be sensitive to developing depressive symptoms, anxiety symptoms
- People that often ruminate
- Thinking faults: overestimation of effects, underestimation of effects, overestimating judgement

Psychological factors

- Impulsive personality
- Elements of low self-control, often already shown in childhood
- People that tend to be sensitive to developing depressive symptoms, anxiety symptoms
- People that often ruminate
- Thinking faults: overestimation of effects, underestimation of effects, overestimating judgement
- Major depression, Anxiety disorders and PTSD
- Bipolar disorder and Schizophrenia
- Personality Disorders
- Chronic pain
- Terminal medical conditions

3. Social factors

These are factors that depend on the environment of people. For instance:
- long term un-employment is a known risk factor especially for male to develop substance abuse problems
- poverty
- welfare
- higher education often means there is access to more social events, more availability of the product (networking, receptions, lunches, dinners,)
- social drinking habits
- baby boom generation with certain drinking habits/culture
- untreated trauma
- childhood neglect/abuse
- co-occurring psychiatric and medical conditions: major depression and anxiety disorder, ADHD, bipolar disorder and schizophrenia, personality disorders (for instance borderline), chronic pain, terminal medical conditions
- stressing environment
- social pressure

Social factors

- Long term un-employment
- Poverty or welfare
- Higher education often means there is access to more social events, more availability of the product (networking, receptions, lunches, dinners,.....)
- Baby boom generation with certain drinking habits/culture
- Untreated trauma
- Childhood neglect/abuse
- Stressing environment
- Peer pressure
- Drug availability

c. The disease

The brain disease model
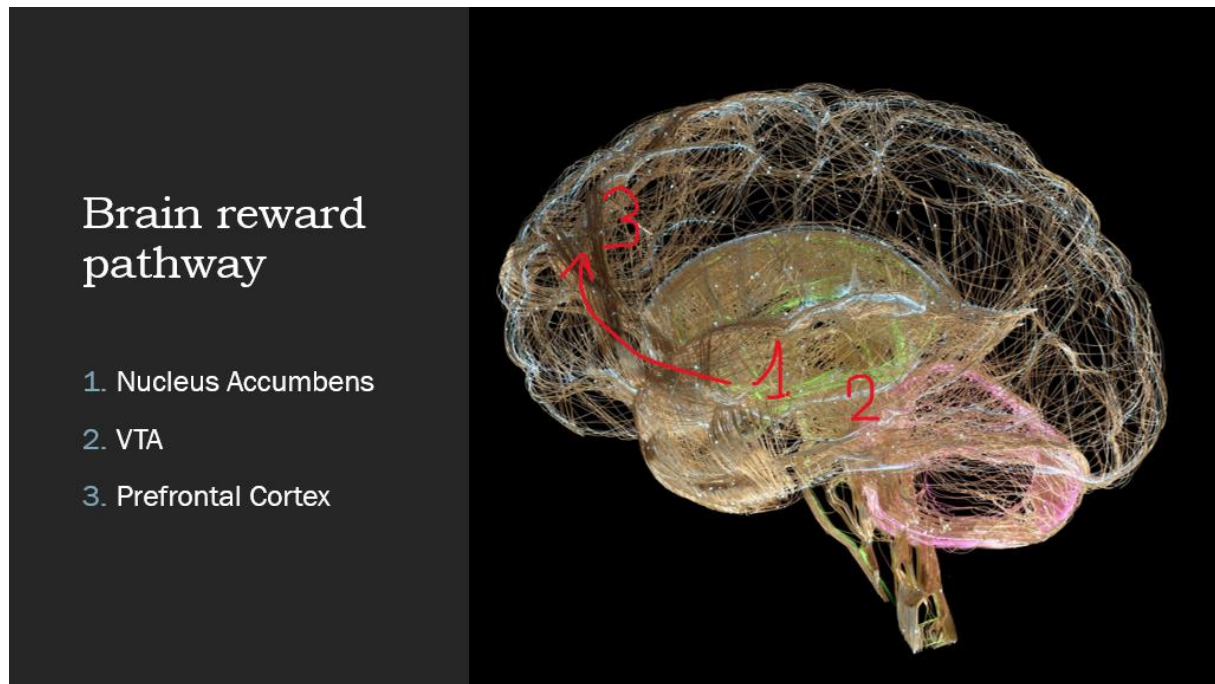
The mesolimbic dopamine system in the brain is the brain's reward pathway and is an important circuit that connects a number of different structures of the brain and promotes motivation and survival. Dopaminergic cells of the brain release dopamine in response to natural rewards, such as eating food, drinking water, engaging in sex, thus positively reinforcing those behaviours. Signals are being sent to the prefrontal cortex giving a feeling of 'pleasure'. Dopamine also communicates with the memory centres of the brain, soring the pleasurable feeling and associate it with the activity so it will be remembered and can be repeated in the future.

Substance like alcohol, legal and illegal drugs hijack the brain's reward pathway. When someone abuses a substance, an excessive amount of dopamine is released into the synapse, leading to euphoria. Over time, the brain begins to adapt to the overflow of dopamine by both decreasing the amount of dopamine receptors at the synapse and becoming more efficient at transporting or clearing dopamine from the system. This means that without the substance, a substance user will find less pleasure from natural rewards. The drug will move up the ladder of motivation and will bypass natural needs like the need to eat, raise children, etc. Eventually it will become more important than eating, drinking, having sex and raising children. People will continue using even if it means they will die. The pre-frontal cortex responsible for the executive functions of the brain changes having an impact on inhibition capacity, impulse control of unwanted behaviour, decision making, working memory, focused attention, planning, response-inhibition (think before you do), regulation of emotions, development of realistic self-image, self-perception, … When these executive functions of the brain have altered, the person gets stuck in a vicious circle with little or no insight of the problem.
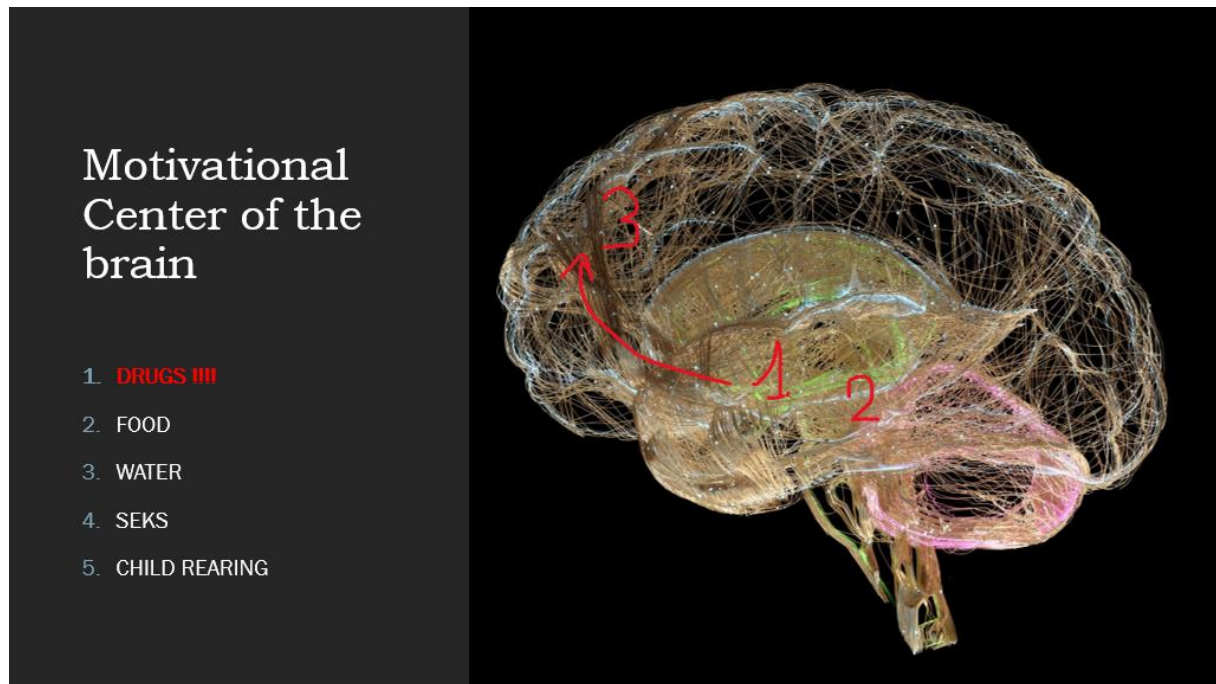
When someone gets 'trapped' into substance abuse/dependency there are signs of:
1. Control loss
2. Increased tolerance
3. With drawel symptoms

SLOW and PROGRESSIVE:

'As the years passed, alcohol slowly became more and more important to me. The event with my daughter did not push me into alcoholism; I was already well on my way. Alcoholism is a slow and progressive disease and how I dealt with my daughter's departure certainly accelerated that. I desperately needed relief and alcohol was the only thing I knew that would answer the call.
I drank alone and in distant places. I no longer wanted to go out with the flight crew and enjoying the evening; all I wanted to do was isolate and drink. Yet perversely, the alcohol quit working and I was unable to find relieve. I lived like this for two years...
... I recognize the dichotomy of talking about good flying performance on one hand while drinking alcoholically on the other. I know doctors, sports superstars, attorneys, ministers, priests, factory workers, plumbers, electricians, and myriads of others who performed brilliantly but were alcoholics. The progressive nature of this disease guarantees that excellent performance eventually deteriorates to unacceptable performance and finally the bottom falls out. The time element can vary with each alcoholic, but the end result is almost always the same.' (Lyle Prouse)

CONTROL LOSS

'The FAA had a "bottle to throttle" rule – no alcohol consumption within eight hours of flight. Northwest had a twelve hour requirement. For much of my career I played by the rules and honoured the twelve hour requirement. As the years slid by and my alcoholism progressed, I found myself compromising that rule, sometimes a little and sometimes a lot. I didn't always do it and tried not to, but there were times when drinking became more important than the rule'.
'I realized that I'd lost the ability to control my drinking; that I was no longer ably to "just have a few" and leave.' (Lyle Prouse)

https://m.youtube.com/watch?v=aqXmOb_fuN4 misunderstanding dopamine
https://m.youtube.com/watch?v=jX2btaDOBK8 the pleasure trap (from min 5 till 9.21)
https://m.youtube.com/watch?v=CWjf7azVbuk Webinar het gekaapte brein
https://www.youtube.com/watch?v=WXbttnDkp7E
https://www.youtube.com/watch?v=NxHNxmJv2bQ

At what stage are we talking about abuse or dependency? (De Bisscop E., 2018**)**
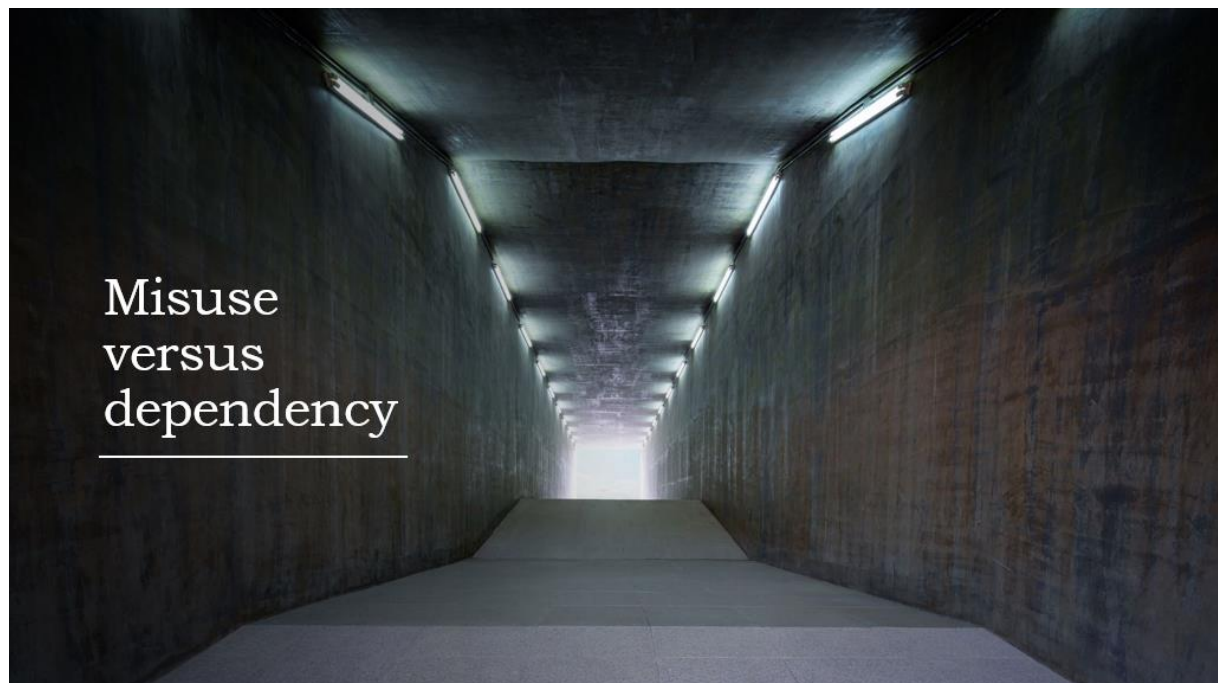
Slow and progressive
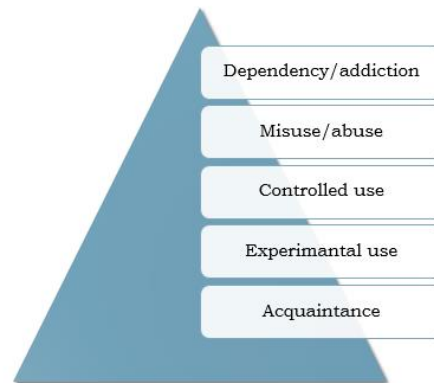
1. *Acquaintance*
   Alcohol: In our Western culture drinking alcohol is socially accepted. Western kids and adolescents grow up in this culture where alcohol is present all the time. Generally, the first encounter with alcohol is during puberty. Adolescents want to get to know the effects of alcohol. Some decide to integrate alcohol into their lives.
   Illegal drugs: Although illegal drugs are not socially accepted, adolescents grow up in an environment where at some stage they will be facing the opportunity to try soft/hard drugs.

2. *Experimental phase*
   Alcohol: While some adolescents decide to quit drinking, the majority learns to continue drinking. They learn it is not acceptable to drink and drive and learn positive and negative effects of alcohol. Everyone gets a preference for certain tastes of alcoholic beverages. For many the experimental phase leads to controlled use.
   Illegal drugs: Some adolescents will decide not to continue using drugs, others will continue to use soft drugs and may even decide to also use hard drugs.

3. *Controlled use*
   Alcohol: Most people stop here. This is the phase where alcohol is consumed in a controlled matter which is socially acceptable. The use confirms the unwritten social norm according to the age of the consumer. Controlled drinking does not lead to any kind of harm to the consumer or his/hers' context. The drinking has become a habit. Whenever there is something to celebrate, most likely drinking alcohol will take place. Whenever someone is for instance enjoying a diner in a restaurant, a beer or glass of wine will be consumed.
   Illegal drugs: some people will get into the habit of regularly using drugs while going out for instance in the weekend.

4. *Abuse/Misuse*
   Alcohol: This is a phase where one will start drinking more than the unwritten social norm expects. Drinking is no longer just sometimes, but it is done on a regular base and it

escalates. Friends and family may at this stage ask themselves the question whether the person is drinking too much. Drinking starts to be risky and may get negative consequences for health, financial situation and social contacts. When someone in this stage stops drinking or reduces the amount, he/she is drinking, there may be first signs of withdrawal symptoms. Illegal drugs: In this stage the person will use more and more of the drugs and looses control over how, when and how much drug is being used. It is done on a regular base and escalates.

5. *Addiction/dependency*
   Alcohol: In this last phase there is obvious dependency on alcohol. The freedom to decide to drink has disappeared. Life starts to get concentrated on drinking. There is specific control loss over when and how much drinking will be done. There is increased tolerance towards alcohol and the body and mind needs more and more of it to have the same effects. The alcohol use has negative effects on body, mind and social environment.
   Withdrawal symptoms and 'craving' are strongly present when the person does not drink for a certain amount of time. Symptoms may include: tremor, sweating, sleeping problems, nausea, epileptic insults, delirium tremens, anxiety, stress, depressive symptoms and excitement.
   Illegal drugs: The same dependency for drugs develops and there is control loss over the amount, timing and frequency of using the substance.

When somebody reaches the stage of dependency, the person gets trapped in four vicious circles that sustain the abusive behaviour and even increases the use of the substance. All vicious circles influence and reinforce each other. When someone is trapped in these four circles it becomes extremely difficult to reduce the drinking/drug taking, let alone stop. The person will WANT to stop but will tell they CAN NOT stop. The person will need help to exit the first vicious circle before an attempt can be done to exit the other vicious circles.

We will describe here what happens when someone enters the vicious circle because of alcohol abuse and dependency. For drug use the three last vicious circles are similar, with absence of the first vicious circle. Alcohol dependency has a strong physical vicious circle. In a late stage of the alcohol

use disorder people will reduce/stop eating reducing the vitamin B level with possible severe withdrawal symptoms.

1. *Physical or pharmacological vicious circle*
    The first vicious circle is related to tolerance, withdrawal symptoms and loss of control. The alcohol abuse induces changes to the metabolism, causing the liver cells to adjust to the alcohol use. The tolerance against alcohol will increase, meaning the person will have to drink more and more to experience the same effect. When the person stops drinking withdrawal symptoms appear causing the person to drink again. As the person drinks again, the metabolic changes remain and the body gets more and more used to alcohol.
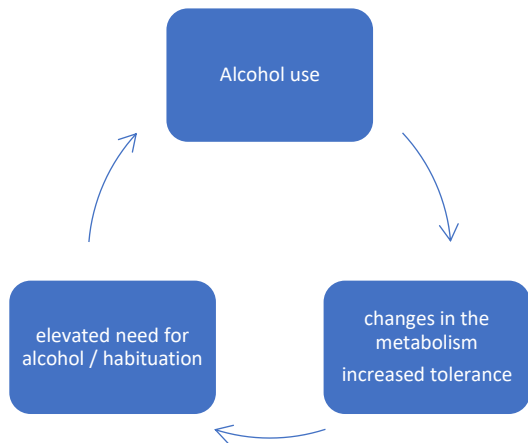
2. *Psychological vicious circle*
    The second vicious circle concerns the self-image and psychological issues. The person has learned that the consumption of alcohol use reduces feeling of anxiety, stress and tension. After a while though these feelings increase again and the person needs to drink again to reduce anxiety, stress and tension. People will have feelings of guilt and shame about their alcohol use and have learned that by drinking, these negative feelings reduce. The person will know by now that attempting to stop or reduce the drinking is very likely to fail.
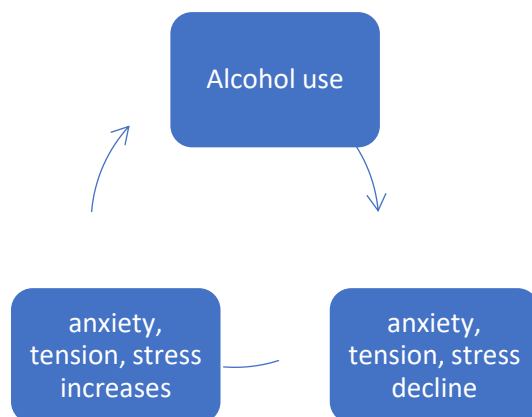
3. *Social vicious circle*
    The excessive alcohol use causes tension, conflict and incomprehension in relationships at home, at work or in other social contexts. People get more and more isolated and increased feelings of shame and guild will lead to more alcohol use.
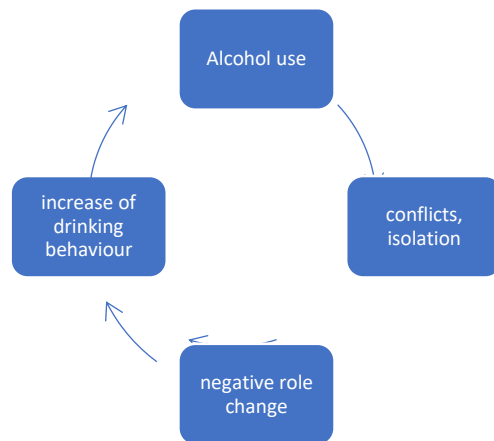
4. *Cerebral vicious circle*
   Excessive alcohol use has effects on brain functioning. Quantity and duration of the abuse and reduced vitamin and egg white intake will cause brain damage. Because of the impact the brain damage has to the capacity to regulate behaviour, the person will have reduced resistance to the impulse to drink. More drinking will occur causing more brain damage sustaining this forth vicious circle.

https://www.youtube.com/watch?v=HUngLgGRJpo animation dependency
https://www.demorgen.be/podcasts/hoe-gevaarlijk-is-recreatief-cocainegebruik-hoe-vroeger-je-ermee-stopt-hoe-beter~b7d08069/
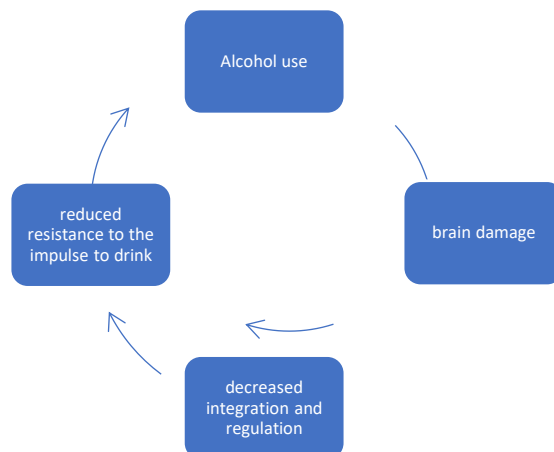
Dependency

Loss of control

Increased tolerance

Withdrawal symptoms

Craving

d. *Withdrawal symptoms*

If somebody has become dependant of a substance, withdrawal symptoms will appear when the person stops using or significantly reduces the use.
Withdrawal symptoms can be:
- Sweating
- Trembling
- Insomnia
- Heart rhythm problems
- Stomach and intestine problems
- Nausea
- Vomiting
- Increased tension/agitation/grumpy behaviour
- Depressive symptoms
- Anxiety symptoms
- Concentration problems

Withdrawal symptoms

SWEATING -TREMBLING

INSOMNIA

HEART RHYTHM PROBLEMS

STOMACH AND INTESTINE PROBLEMS

NAUSEA- VOMITING

INCREASED TENSION/AGITATION/GRUMPY BEHAVIOR

DEPRESSIVE AND/OR ANXIETY SYMPTOMS

CONCENTRATION PROBLEMS

EPILEPTIC INSULTS - DELERIUM TREMENS – COMA

e. *Consequences long term abuse*

Medical
consequences

LONG TERM EFFECTS

All substances

Heart: tachycardia/arrythmia, arteriosclerosis and high blood pressure

Cancers: kidney cancer, liver cancer (alcohol), lung cancer, pancreas cancer, mouth/throat/esophagus/stomach cancer, breast cancer

Strokes: CVA Cardio Vascular Attacks

Accidents

Suicidal behavior

Alcohol specific

Liver: infection – fatty liver - cirrhosis – liver transplant

Ceased breathing (5 promille)

Epileptic insults

Polyneuropathy

Delirium tremens - coma

Syndrome of Wernicke

Korsakov Syndrome

Reduced brainvolume in frontal lobe 10-15% (pilot!)
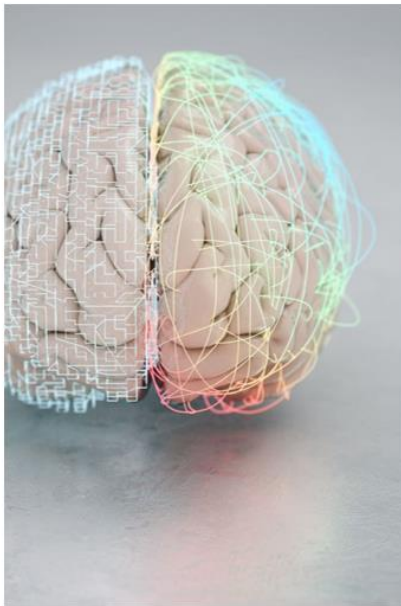
Brain damage

Frontal lobe:

Short term memory problems: no more transfer to long term memory

Decreased planning capacity and decision making

Intellectual decline, concentration problems

Reduced self-control, increased impulsive behavior

Cerebellum: reduced psychomotor capacity, coordination and balance

Medulla: autonomic functions (breathing and heartbeat)

Liver
Alcohol: The liver may get infected, fattened with long term life-threatening irreversible cirrhosis as a consequence. About 1 out of 10 heavy drinkers will develop cirrhosis after approximately 10 years of heavy drinking.

Other organs
The heart may suffer from tachycardia or arrythmia, arteriosclerosis and high blood pressure may exist. Severe drinkers have increased chances for strokes, kidney cancer, liver cancer, lung cancer, pancreas cancer, mouth/throat/oesophagus/stomach cancer. For women there is also an increased chance for breast cancer due to heightened levels of oestrogen.
Drug users have increased chances for cardio vascular attacks.

Breathing may cease when there is 5 promille of alcohol in the body.

Epileptic insults may be triggered as a withdrawal symptom when a heavy drinker suddenly stops drinking.

Wounds may arise due to aggressive behaviour or suicidal behaviour.

Infections may arise due to the impact of alcohol on the immune system.

Polyneuropathy can develop causing tickling feelings in feet and fingers with paralyzing symptoms. The cause of polyneuropathy can be defined by a lack of vitamin B1 or thiamine.

Brain
Excessive use of alcohol can reduce the brain volume (10 to 15 %), reduce the amount of white brain matter and may cause the loss of neurons in the frontal brain lobe. Problematic users often experience concentration problems and memory problems especially in the short term memory. The influence of alcohol on the frontal lobe may have severe consequences to planning capacities and decision making capacities. Intellect is reduced, a reduced ability to self-control exists, there is a higher chance for impulsive behaviour and short term memory is no longer transferred to the long

term memory. Long term drinking may cause disturbances in the cerebellum leading to loss of motor capacities, coordination and balance. When the drinking has had an impact on the medulla (brain stem) autonomic functions like breathing and heartbeat may get disturbed leading to coma or death. It is clear that alcohol has severe consequences on the brain that may be irreversible for executive functions of the brain that are all needed when flying an airplane. The importance of neurological testing of pilots who have been diagnosed with alcohol use disorder must be clear.

Wernicke-Korsakov syndrome
A lack of vitamin B may cause an acute Syndrome of Wernicke. This acute syndrome causes general confusion, memory loss, apathy, ataxy, eye muscle paresis and nystagmus (uncontrollable eye movements) and straddled walk.
The chronic component of the syndrome is called Korsakov. This is an irreversible disease with symptoms of memory loss, disorientation in time and space, judgement disorder and confabulations.

Delirium Tremens
Delirium tremens is a syndrome with symptoms of reduced consciousness with disorientation, hallucinations, confusion, motor restlessness and anxiety. This syndrome is caused by reduced or stopped alcohol intake and may develop between 24 and up to 72 hours after the last alcohol consumption. Heavy drinkers and drinkers who have reduced their eating have more chances to develop this syndrome.
Delirium tremens is extremely severe and life threatening if not treated.

4. General Peer intervention techniques

a. 4 Fundamentals

Join

"The most important thing is to speak the experiental language of your colleague. The most important thing to do is to put one feet in his/her's world and leave one foot in your own." Milton H. Erickson
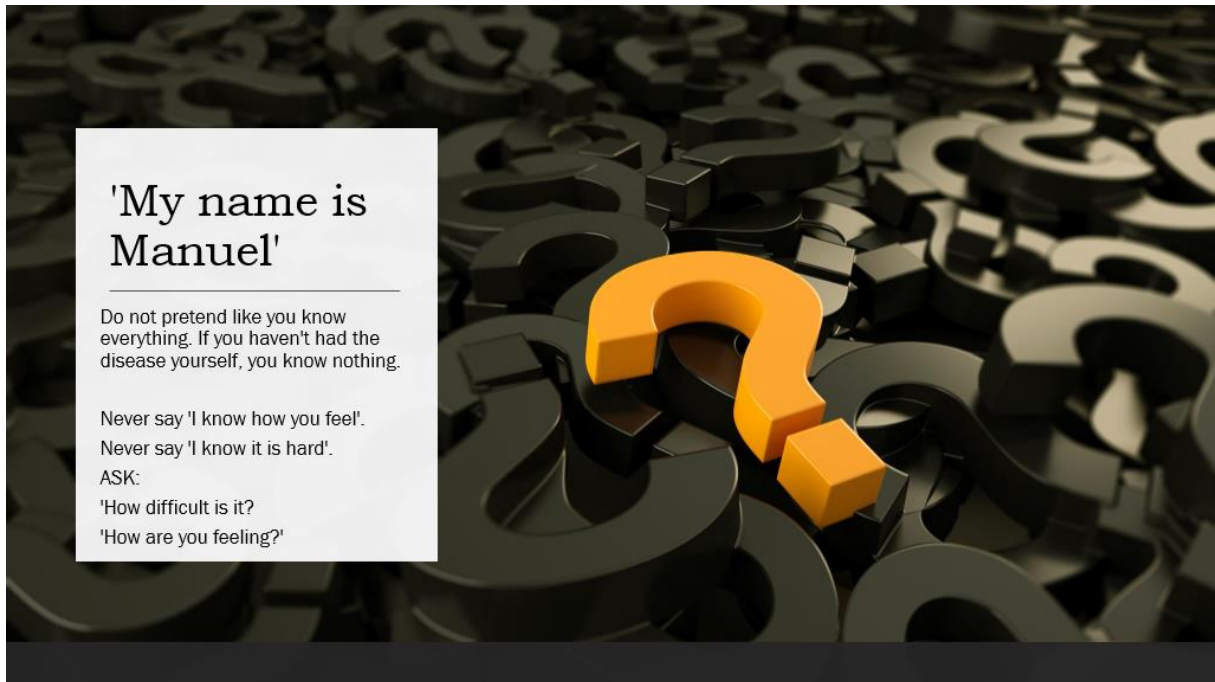
'Walk a mile in their shoes'

"Walk a mile in my shoes..
See what I see,
Hear what I hear,
Feel what I feel...
Than maybe you'll understand
Why I do what I do...
Till then don't judge me."

Be aware that whatever you say and the way that you say it has an impact on how your colleague will perceive your message.

Show interest in the person, not only in the problem. 'Love' your colleague as a person for whom alcohol/drugs/medication has been helpful to cope with life....

'My name is Manuel'

Do not pretend like you know everything. If you haven't had the disease yourself, you know nothing.

Never say 'I know how you feel'.
Never say 'I know it is hard'.
ASK:
'How difficult is it?
'How are you feeling?'

Show deep respect for suffering

"At the time of the arrest: 'Of all the feelings that overwhelmed me that day, shame was the greatest. Although I experienced a surreal sense of fear and dread, shame and humiliation surged through my very marrow. How had my life come to this? I worked hard to establish and achieve an honorable trajectory through life. Suddenly my life had been hijacked and I found myself in a smoking crater with wreckage all around me. I came a long way in life, through many struggles, and thought I had emerged victorious. A lifetime of effort was gone and all I could feel was shame, disgrace, and dishonor." Lyle Prouse

b. *10 Basic solution focused principles for working with peers*

We will adhere to 10 basic solution-focused principles while we listen to colleagues in need for support and/or help. We will build a strong supportive relationship by showing excellent listening skills and by asking the right questions keeping the 10 basic principles in mind. (De Bisscop E., 2018; Isebaert L., 1999)

Foundation principles

1. Focus on Health

   A colleague who contacts the peer support system will want to talk about specific 'problems' to a peer. The initial dynamic of the conversation will therefore tend to focus on the 'problems' that a colleague in need encounters. While it is very important to show respect to the colleagues worries and problems by listening to his/her story, it is equally important to listen very carefully with a focus on our colleagues' strengths and resources while they talk about their problem or worries.

   What strengths is my colleague showing?
   How has he/she been able to continue showing up for work while having these difficulties at home?
   When does he/she feel less stressed?
   What is he/she doing different then?

2. Utilise

   LISTEN to your colleague. He/she already knows the solution to the problem. DO NOT TRY TO FIX HIS/HER PROBLEM. This may be a difficult task for a peer. Especially for pilot peers as pilots are trained to take control of problems and find solutions. This natural attitude to 'fix' problems as they arise may make it difficult to step back in a peer conversation and LISTEN without offering a solution.

3. Change is unavoidable

   Assume that the problems and sorrows the colleague in need for support encounters are not always equally hard or bad. He/she will always encounter moments where the problem/sorrows are less present. These moments will show what the colleague in need is already doing successfully to cope better with the problem.

   What moments is your colleague feeling better?
   What is he/she doing different then?
   Who is supporting him/her during these moments?

4. Focus on the future
   Colleagues in need for support will focus on all the things that go wrong during the conversation and will have the tendency to talk and keep on talking about everything that has gone wrong in the past. While we show respect and listen to their problems, we can bend the focus towards the future. Solutions will be found in the future, not in talking about the past.
   What would my colleague like to achieve?
   What will he/she do different when he/she is less stressed?
   Where does he/she want to end up in 6 months from now?

5. Clear goals
   Talk about clear, small and realistic goals your colleague can work on.
   What can be a first small step to prepare for work again after absence?

6. Alliance
   As a peer you need to build a strong alliance with the colleague in need. 'Join' with a colleague by listening, showing deep respect, build a safe and confidential relationship with mutual understanding. The fact that you do the same job will help in building this safe zone to discuss problems and issues. As a peer you already have a solid understanding of the job and the context in which you both work, you can use your professional language without having to explain specific aviation terms. AVOID however talking about yourself. Do not say for instance 'Yeah I understand you entirely, I can hardly sleep before an early duty', but say:
   'Yes, sleeping before an early duty can be a real challenge'.

7. Focus on choices
   Focus the content of the conversation on possibilities and choices, rather than on the problems and all the difficulties or limitations your colleague encounters.
   What can he/she do to become more relaxed with the LPC/OPC check?
   What has helped him/her in the past?
   What can he/she do different? What else? What else?

8. Mandate
   As a peer ask yourself if you have a mandate to help your colleague. Is he/she relaxed and at ease to talk to you? Are you the right peer to help or do you know another peer that might be better, who has more commonalities (for instance another peer is also a young father like this colleague encountering problems combining the job with new parentship).
   Ask yourself the question if you believe you can handle this case as a peer, or if it is better to refer to professional help instead.

9. Valorise efforts
   Show particular attention and respect to all the efforts your colleague has already done to try and solve the problems he/she experiences. Specifically talk about them and praise your colleague for it.
   How did he/she manage the situation until now?

10. Involve important others
    Talk about the friends/family/professional network of your colleague to extend his/her external resources and motivate them to ask or use support of others.
    Who is important to him/her?
    Who has helped him/her in the past/in this difficult situation?
    How can I help?
    Who else can help? (psychologist/doctor/AME/manager/scheduling/HR)

c. 5 Listening skills

Effective peer conversations are only possible when we learn to listen to the other and show the other that we are in fact paying attention to all what is being said. (Gespreksvoering Van der Molen, Hommes, Kluijtmans)
Active listening requires a lot of energy from a peer. We all have some 'bad' listening habits that should be avoided during any peer conversation.

https://www.youtube.com/watch?v=4oK6-agsPaY

- **External distraction**: Avoid planning any conversation that will not allow you to fully focus and concentrate on the conversation. Make sure that you are sitting in a quiet space with little or no distraction. Make sure you have sufficient time to execute the conversation, don't let yourself be distracted because of time pressure and tasks you have planned to do after the conversation.

- **Selective listening**: Make sure you don't focus your attention towards part of the conversation that seems important to yourself as a peer. Avoid making your own interpretation out of what is being said. Instead: check if you understood well and put your own opinion on hold.

- **Filling in lacunes**: We may be tempted to fill in the gaps of the story ourselves while we listen. Avoid filling in the details thinking we as a peer know exactly what the other person is thinking or struggling with. Instead: ask details and check if you understood your colleague well by paraphrasing and summarizing (see below).

- **Assimilation of messages**: Don't interpret the message of your colleague in terms of your own experience and knowledge. Avoid to use sentences like: 'I know what you mean, 'I know how you feel' and do not start talking about yourself. Instead use paraphrasing or reflect emotions (see below).

Five important skills are needed in order to be a good listener and peer. As a peer we learn to master 5 basic listening/conversation skills:

1. Show attention
2. Ask open questions
3. Paraphrase
4. Reflect emotions
5. Summarize

1. Show attention

    Active listening requires the ability to fully focus on the other and his/her story without being occupied with yourself. We can show somebody that we are paying attention in several subtle ways depending on the setting of the conversation (face-to-face or via phone).

    Non-verbal attention:
    - Eye contact:

Stimulating eye contact lies somewhere in the middle of 'fixating' eye contact and no eye contact at all. Fixating the other may introduce some anxiety to speak, while a total absence of eye contact may give the impression of not being interested. With stimulating eye contact the listener (the peer) will look more at the speaker then the speaker itself. Near the end of a sentence or argumentation the speaker will generally search for eye contact with the listener.

- Body position:
  In general, a conversation is made where the body angle between speaker and listener is 120 degrees. This allows the speaker to make eye contact but also allows the speaker to look away. Head to head conversation often give a hierarchical impression, side to side conversations are often used in negotiations to emphasize equal positions.

- Body attitude:
  Tipping the shoulder towards the speaker and slightly leaning forward as a listener will give the impression that you as a listener are giving the speaker your full attention. Crossed legs and arms may come across as defensive and may create a certain barrier, however if the peer conversation is open and constructive the latter may not disturb the conversation at all.

- Stimulating attitude:
  Hand signals and head nodding may stimulate the speaker to talk if not used in excess.

Verbal attention:

- Small encouragements:
  Especially important when you have a peer conversation over the phone is to use small verbal cues to let the other know that you are (still) listening. Small encouragements placed at the right timing and with sufficient frequency will encourage the speaker to continue: 'mm…', 'go on…', 'yes…', 'I see…'.

- Silence:
  When you see that the speaker is searching for words or being emotional, silence can be a valuable tool to allow the other to think or feel. In case silence feels uncomfortable for the peer it can help to be honest and say something like 'I see you are very sad; it touches me and I don't know what to say right now'.

2. Open questions

The aim of asking open questions is to:
- Give your colleague space in the conversation
- Show interest and obtain information
- Invite your colleague to self-examine the situation

Example:
A closed question will allow answering with yes/no or factual information, while and open question will require more extensive thinking and answering.
Closed question: '*Did you react angry?', 'When is your next flight?'*
Open question: *'How did you react?', 'What does your flight roster look like?'*

Technique:
Do not start with a verb as this will generate a closed question. *'Is he a nice colleague?'*

Start the question with *how* or *what*. *'How would you describe him as a colleague?'*
Be careful starting the question with *why*, as why may sound as some sort of judgment. Use *'What made you'….* instead.
'Why did you react like that?' versus *'What made you decide to react like that?'*
'Can you tell me what happened?'
'How did that make you feel?'

3. <u>Paraphrase</u>

Paraphrasing is a technique to make sure you understand your colleague right. The only way to see if we as a peer understood our colleague well is to submit our interpretation to our colleague and ask. Our colleague can then react and correct the peer. A paraphrase is a handy tool to do this, as it is a short repetition (in own words) of what the other one just said.
Example:
Colleague: *'I had to rush in the morning to drop the kids at school before hitting the traffic jam to Brussels airport. The more you rush the kids, the slower they become. And on top of it we arrive at school and my eldest tells me she forgot to pack her lunch. So, I had to drive back home. What a fuss. To end up on the highway way too late causing a massive delay for sign in and a rushed pre-flight with a colleague showing annoyed'.*
Peer: *'So you show up late at work after a hectic family rushed morning bringing the kids to school, arriving late and stressed at the airplane, right?'*.

Colleague: *'What I can't cope with anymore are the tough commuting rosters to and from home, with very little time and opportunity to recover at home. After all the kids have to school during weekdays, so sleeping in is not an option. My wife takes her hands off when I get home and expects me to take over from her as soon as I cross the doorstep when I get home from Spain'.*
Peer: *'You do the best you can to take care of your family when you get home, but the heave commuting roster leaves you with insufficient recovery from work? Is that right?'*

4. <u>Reflect emotions</u>

When a colleague talks about something and what he/she says mainly expresses a certain emotion, a powerful way of showing that you are listening actively is to reflect the emotion by simply stating it. By doing so your colleague will feel understood and accepted. Don't be afraid to state the wrong emotion. If you've got it wrong, your colleague will tell you. This will give him/her the opportunity to clarify.

Colleague: *'We were preparing the galley for the full meal service while all of a sudden, we heard a loud bang and the airplane started to shake like hell. Passengers started to scream and the trolleys were moving all over the place so we needed to take care of securing everything as soon as possible. The banging noise kept on going and my younger colleague looked at me with this fear in her eyes, not knowing what was going on. My heartbeat went up and I had difficulty breathing'.*

Peer: *'You were scared and afraid what would happen next'.*

Colleague: *'Scared? I was terrified, I thought we were going to die'.*

5. <u>Summarize</u>

A summary is meant to structure (part of) a conversation by mentioning the most important headlines and connect the most important aspects. A good summary is phrased tentative to allow the speaker to correct or complement. You can also use it to interrupt someone who is talking rapidly with no pause making it difficult for the peer to follow.

Peer: *'Hang on, that is a lot of information: so, you get to the airport, find a plane without techlog, you try to call maintenance, then ops and nobody answers. Just to find out half an hour later when the passenger bus is waiting at the aircraft already that the aircraft is AOG since last night and nobody informed you?'*

d. Solution Focused Peer Intervention Model

There are many forms and models for providing psychological First Aid. Crewmind uses a solution focused model based on the SAFER-R model developed by Everly in 1995 It is a step-by-step model to assist peers in structuring peer intervention calls with a colleague in crisis. It is extended with specific Solution Focused intervention techniques in order to encourage effective coping with the person concerned.

SAFER-R

Solution focused peer intervention model.

Monthly conversation between pilot and peer pilot monitor.

S - A - F - E - R - R
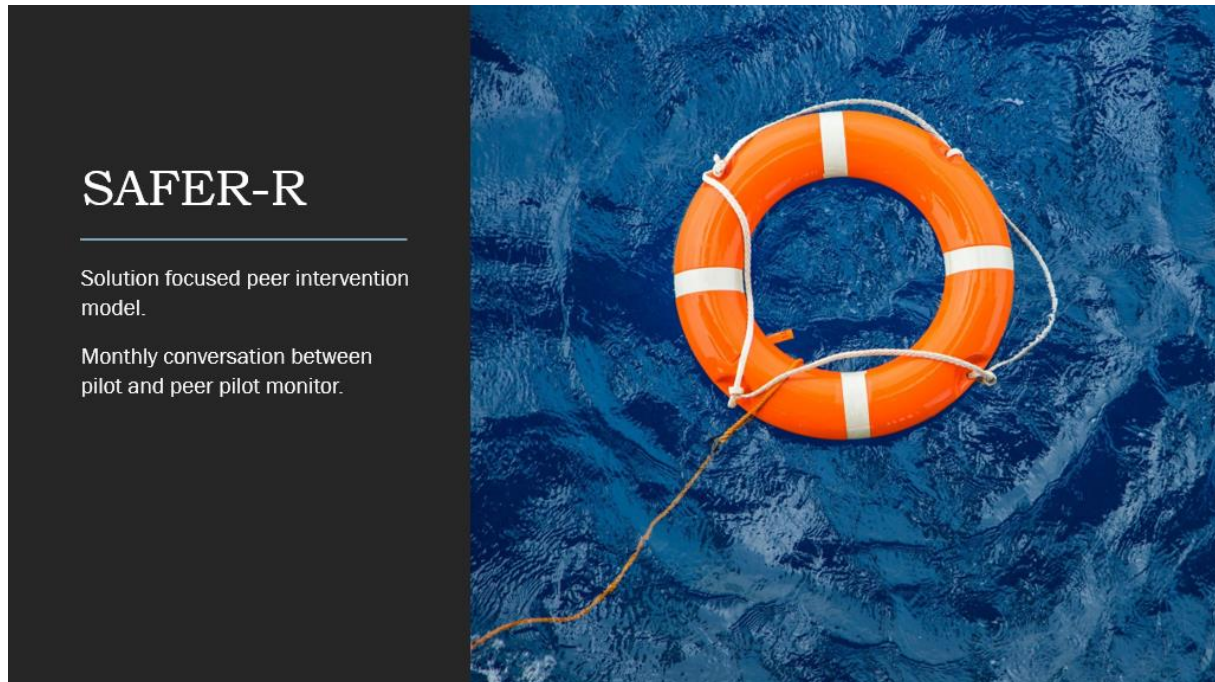
S -   Stabilize

Create a 'safe' environment for the colleague in need.
1. Introduce yourself
2. Explain conversation is confidential
3. Meet basic needs
4. Mitigate acute stressors

A -   Acknowledge the crisis

Let people tell their story: facts and reactions. Provide normalization and reassurance.
Use active listening skills and allow person to tell his/her story. 'Join' with your colleague.

F -   Focus on the future

Your colleague may have the tendency to talk about his problems and the past.

Direct him/her focus on the future in order to motivate him/her into an 'actor-role' instead of a 'victim-role'.
I hear you have gone through a tough time. How
are you coping with the situation now? What is going better since the last time we spoke?
What changes would you like to achieve within the next coming weeks? What have you
allready done to reach that goal?

What would he/she like to achieve? What is the goal for the coming hours/weeks/months?
Focus on strengths of your colleague that will help to reach his/her goal?

E -   Encourage effective coping

Now focus on 'survival strategies':
1. What have you done till now to keep on going?
2. What have you done that has helped you in the past?
   Who has helped you in the past? What did this person do?
3. How can I help?
4. Who else can help you?

R -   Recovery or Referral

Assess the need for professional referral. Facilitate access to continued care when it is evident that colleague has insufficient access to resources to handle the situation.
OR schedule a follow up call (Recovery).

5. Specific Peer interventions for substance abuse cases
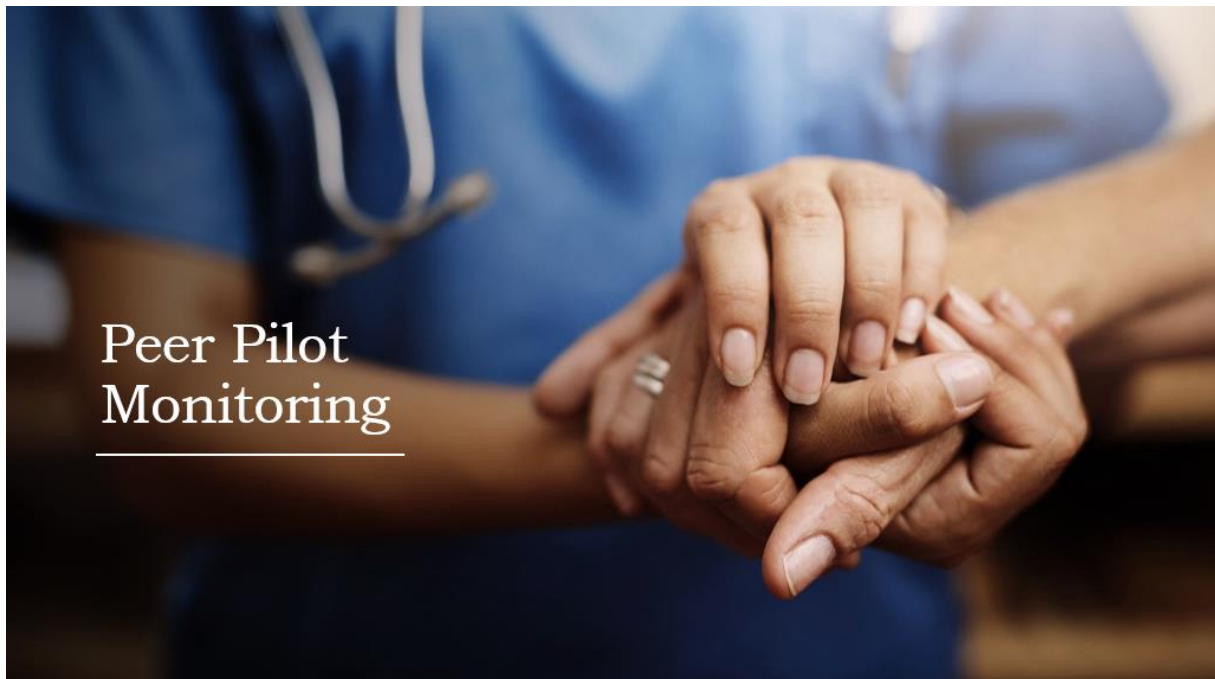
Once a pilot with substance use disorder has been treated and the disease is considered to be in stable remission, he/she can receive a medical license again while being monitored by the support

programme. The aero medical examiner will request biomarker testing for as long as needed and peer pilot monitors will contact the pilot at least 14 times in 12 months to check on how the pilot is recovering when he is flying again. At all times the peers are being supported by the aviation psychologist of the programme.

When concerns are raised of a possible substance abuse case, they will also be the first ones in line to contact the pilot and convince them to get help from the support system.

a. *Recognizing symptoms*

How to recognize early symptoms of a substance abuse problem?

If we look at 100 people that are regularly using alcohol, about 10 to 15 percent will end up having abuse problems. About 1 to 2 percent will have a severe addiction problem that will require intensive and long term treatment. Media will often focus on these 1 to 2 percent, making it look like every alcohol problem should be treated in a clinic. This gives a wrong impression on how alcohol use disorder should be treated. When recognized early, addiction problems can be treated fairly easy by the use of motivational interventions, psycho-education, family support and therapeutic interventions.

The earlier it is recognized, the easier it can be treated.

About 8 to 10 percent of recreational cocaine users will develop a cocaine dependency. For illegal drug use, the same principle applies: the sooner the disease is treater the greater the chance for successful treatment.

A substance abuse problem with a pilot is often difficult to detect. Pilots may cover up the problem by their professional appearance and the loyalty amongst flight crew members prevents pilots to report concerns. Flight schedules promote binge drinking during absence from home and pilot personality and motivation to get the job done hinders pilots to admit when a substance use develops into misuse or dependency.

Pilots often interpret mental problems -and substance use problems in particular- with 'personal weakness' and may not dare to inform aviation physicians out of fear of losing their medical license temporary or permanently. Treatment may be asked very late and only when being motivated or pressed by colleagues or airline management (Bühringer, 2019).
Just like any other people with addiction pilots struggle with denial, fear, lack of trust, ego or unwillingness to stop.

The first signs of a substance abuse problem might be noticed by:
- increased sickness rate,
- health issues,
- family problems,
- peer concerns,
- layover incidents,
- training issues or
- failed alcohol tests
- alcohol smell
- police intervention
- concerns of airport authorities

Any of these factors may be a first sign of a developing substance abuse problem.

Other signs that may indicate control loss over the drinking habits:

- pre drinking
- drinking in secret
- hiding drinks/ empty bottles
- altering drinking patterns (early flight tomorrow, so I drink at noon the day before)
- change to strong liquors
- loads of drinking at once
- binge drinking during time off
- drinking at earlier times of the day

- daily drinking

Possible signs of relapse

Recognizing signs of relapse

- Excuses for not attending monitoring calls
- Excuses for not attending psychological sessions
- Changes in behaviour (more signs of stress/being nervous/restless/agitated)
- Significant and sudden changes in mood (overly positive mood versus more neutral before, or frustrated versus calm before)
- Minimizing substance abuse of the past
- Changed frequency of calls (less calls or more calls)
- Externalizing problems: blaming others for difficulties at home or at work
- Absence of details in conversations ('all' is going well)
- Being overly optimistic about recovery
- Not reporting any difficulties staying sober
- Complaining about not being understood or supported by professionals/friends/family/manager

b. Initial conversation with a colleague with suspected substance abuse problem

When a colleague is suspected to have an addiction problem, the first conversation can be very difficult. As a peer it is important to follow the guidelines below as to how to structure and deal with this difficult topic. In all cases you get the full support of the supervising clinical psychologist, who will take over peer handling of the first call if necessary.

1st call

At the right timing

Non-judgemental attitude

Be specific when sharing concern

Give referral advise

Four important factors for this conversation:

1. At the right moment

Choose a moment and/or location where it is safe to talk about the topic, without disturbance or time pressure. Try to schedule the conversation at a moment where the person concerned has not been using alcohol/medication/drugs. Only do this when your colleague is sober.

2. Non-judgemental attitude

There is a big stigma on substance abuse problems, even more so in the context of aviation. Be prepared to be faced with feelings of:
- Denial
- Shame
- Guilt

It may help to talk about 'drinking habits that have possible gone out of control' rather than talking about possible 'addiction/dependency'.

DENIAL: 'One subject was never discussed – my drinking. I made no attempt to hide or avoid it because I was convinced it wasn't a problem. I didn't think I drank any more than many of my friends. I didn't drink every night, rarely ever drank in the morning, didn't get drunk every weekend, hadn't had a DUI since 1976, and was at the top of my game professionally. So how could alcohol possibly be a problem? However, I deliberately varied my drinking patterns and did so very consciously. Normal drinkers don't do that; they don't need to.
… I was reacting as any alcoholic would and was willing to do anything to avoid the consequences and escape the situation.''

SHAME:
'At the time of the arrest: 'Of all the feelings that overwhelmed me that day, shame was the greatest. Although I experienced a surreal sense of fear and dread, shame and humiliation surged through my very marrow. How had my life come to this? I worked hard to establish and achieve an honourable trajectory through life. Suddenly my life had been hijacked and I found myself in a smoking crater with wreckage all around me. I came a long way in life, through many struggles, and thought I had emerged victorious. A lifetime of effort was gone and all I could feel was shame, disgrace, and dishonour.'

3. Be specific when sharing concern

Talk about your concerns and be very specific about behaviour that has been observed.
' We have known each other now for many years, and I highly appreciate you as a colleague and/or friend. Lately I am very concerned about how you are behaving. I/ these colleagues have noticed that you are drinking more than before on lay overs and that you are carrying drinks in your suitcase when you leave on a flying trip….'

4. Give referral advise

Without any prejudice explain that there is a support system for substance abuse in aviation and that you believe it is a good idea to contact the support system. The sooner substance abuse can be treated, the better. When the disease is in an early stage it may even be possible to continue flying if the drinking/using habit can be kept under control.

https://www.podbean.com/ew/pb-9ih4v-d16392

c. SAFER-R for substance abuse cases

S -   Stabilize

Create a 'safe' environment for the colleague who is being monitored
1. Introduce yourself as peer pilot monitor
2. Explain conversation is confidential, however the monitoring programme requires the peer to send their personal opinion to the Clinical Director of the monitoring programme responsible for the supervision of the programme (explain this during the first monitoring call).
3. Create a 'safe' environment to talk and discuss the recovery of the pilot.

Stabilize

| | Create a 'safe' environment to talk and discuss the recovery of the colleague who is being monitored |

| | Introduce yourself as peer pilot monitor. |

| | Explain conversation is confidential, however the monitoring programme requires the peer to send their personal opinion to the Aviation Psychologist in the 'safe zone' of the monitoring programme responsible for the supervision of the programme (explain this during the first monitoring call). |

A -   Acknowledge

Let the pilot tell their story: facts and reactions.
Use active listening skills and allow person to tell his/her story. 'Join' with your colleague.

1. How have you experienced the last couple of weeks after initial treatment/or in between calls?
2. How is the psychologist/therapist/doctor assisting you in your recovery? What steps of treatment are you working on that have been helpful to you?
3. What are the things/situations that you feel are still difficult to cope with?

Acknowledge

📱 Let the pilot tell their story: facts and reactions.

👥 Use active listening skills and allow person to tell his/her story. '**Join**' with your colleague.

📞 *How have you experienced the last couple of weeks after initial treatment/or in between calls?*

👤 *How is the psychologist/therapist/doctor assisting you in your recovery? What steps of treatment are you working on that have been helpful to you?*

😵 *What are the things/situations that you feel are still difficult to cope with?*

F -   Focus on the future

What would he/she like to achieve? What is the goal for the coming hours/weeks/months? Focus on strengths of your colleague that will help to reach his/her goal?
'How are you handling the days you spend away from home?', 'How are you handling the nights out with colleagues?'.

Focus on the future

Your colleague may have the tendency to talk about his problems and the past.

Direct him/her focus on the future in order to motivate him/her into an 'actor-role' instead of a 'victim-role'.

I hear you have gone through a tough time. How are you coping with the situation now? What is going better since the last time we spoke?

What changes would you like to achieve within the next coming weeks? What have you allready done to reach that goal?

E -   Encourage effective coping

Now focus on 'recovery strategies':
1. What have you done till now to stay sober?
2. How confident do you feel that you can stay sober during the next coming days and weeks?
3. What is going better now that you are sober?
4. What have you done that has helped you in the past?
   Who has helped you in the past? What did this person do?
5. Who else can help you?
6. How can I help?

Encourage effective coping

Focus on 'recovery strategies':	What have you done till now to stay sober?	How confident do you feel that you can stay sober during the next coming days and weeks?	What is going better now that you are sober?
What have you done that has helped you in the past?	Who has helped you in the past? What did this person do?	Who else can help you?	How can I help?

R -   Recovery or Referral

Assess if you believe the pilot is drinking/using again or is still sober. Do you as pilot peer monitor see/notice any signs that may indicate a possible relapse? If you have concerns: tell the pilot and refer him to the aviation psychologist monitoring the programme if needed in order to evaluate if more professional help is needed (Referral). When you have no concerns about the recovery process: schedule a follow up call (Recovery). In case of relapse: the quicker we react, the better.

Recovery or Referral

Assess if you believe the pilot is drinking/using again or is still sober. Do you as pilot peer monitor see/notice any signs that may indicate a possible relapse?

You cannot and will never be held accountable for possible misjudgement. We simply ask your personal opinion.

When you have no concerns about the recovery process: schedule a follow up call (Recovery).

If you have concerns: tell the pilot and refer him to the aviation psychologist monitoring the programme if needed in order to evaluate if more professional help is needed (Referral).

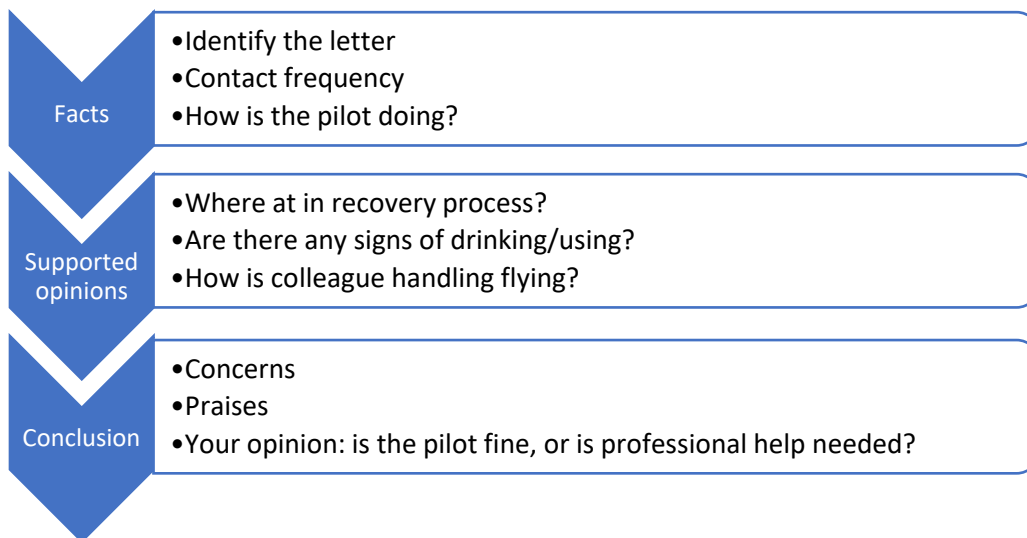In case of relapse: the quicker we react, the better!

d. How to write a peer pilot monitoring letter?

It is important to stress that as a monitoring peer, you are not being asked to formulate an expert evaluation, but 'your' opinion on the pilot's recovery. As a peer you will never be held responsible for not recognizing relapse. Monitoring letters shall be submitted to the AP of the support program after every contact with the monitored pilot. A monthly pilot monitoring letter shall contain the following topics:

1. Report the facts
2. Any signs of drinking or using?
3. Verbal and non-verbal communication
4. Situations where recovery was utilized

As a guideline this format can be used:

Facts
- Identify the letter
- Contact frequency
- How is the pilot doing?

Supported opinions
- Where at in recovery process?
- Are there any signs of drinking/using?
- How is colleague handling flying?

Conclusion
- Concerns
- Praises
- Your opinion: is the pilot fine, or is professional help needed?

Example of a positive monitoring letter

Miss …..   *3/31/2023*

(FACTS:)
This letter serves as my monthly monitoring report for Pete Mitchell for March 2023. I had phone contact with Pete this month and met with him once in person for about an hour over coffee. He tells me he sees his psychologist every two weeks face to face. He attends AA meetings twice a month.

(SUPPORTED OPINIONS:)

Pete has been very open with me concerning his recovery. He described how he is working on strategies to prevent relapse with his psychologist. He has increased the time he spends on doing sports to un-stress. He has now been flying again for two months and describes it is often hard to refrain from drinking while being with colleagues on a trip who drink during lay overs.

He focuses on doing sports while he is abroad on a flying trip and has been open and honest to his pilot colleagues that he is no longer drinking any alcohol. He believes it helps when others know that he doesn't drink. At least then they don't keep asking whether he joins for a beer. I feel Pete is dealing well with the stress of getting back to work, while still making the requirements of his aftercare a priority. During his week off from work he is seeing his psychologist. When I saw Pete, he seemed relaxed and at peace.

(CONCLUSION:)

I have no concerns about Pete's sobriety. I feel he is working hard on his recovery and is focusing on his sports while being away from home. This is demonstrated to me not just by what he says, but by how he acts during our conversations. He is very aware about the triggers that might trick him into starting to drink again.
Please let me know if you have any questions or require any more information.
Sincerely, Tom Kazansky

Example of a negative monitoring letter

Miss ….   *3/31/21*

(FACTS:)

This letter will serve as my monthly monitoring report for Pete Mitchell for March 2023. I had phone contact with Pete 1 time this month and he was unable to meet with me in person. His explanations are that he has too many commitments at home, such as remodeling his basement.

(SUPPORTED OPINIONS:)

He tells me he has frequent contact with his psychologist, but when pressed for details he cannot provide a coherent history. When asked what feedback he receives from his psychologist, he reports that his psychologist tells him that he has a "great" recovery. He attends AA meetings "all the time". He cannot remember any event or insight he heard in any of the meetings, he attends. He does not mention any difficulties now while being on duty and away from home for several days. He says he

has no problems at all coping with difficult situations such as diner or drinks with colleagues while on a flying trip.

(CONCLUSION:)

Pete has been very guarded with me concerning his recovery and has had several excuses for why he cannot meet with me or call me as required. I have the impression Pete is minimizing his problem with alcohol in the past. I feel that since Pete has returned to work, he has no longer made the requirements of his aftercare a priority.

Pete's lack of contact with me and his guarded stance are obvious concerns. I believe he needs help. Please let me know if you have any questions.
Sincerely,
Tom Kazansky

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