

COVID-19: Mental Health of Aircrew

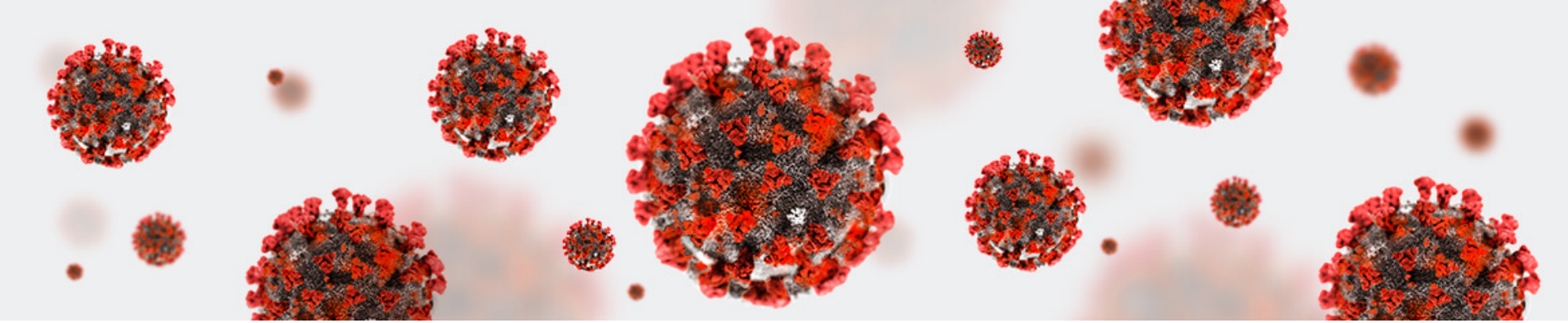


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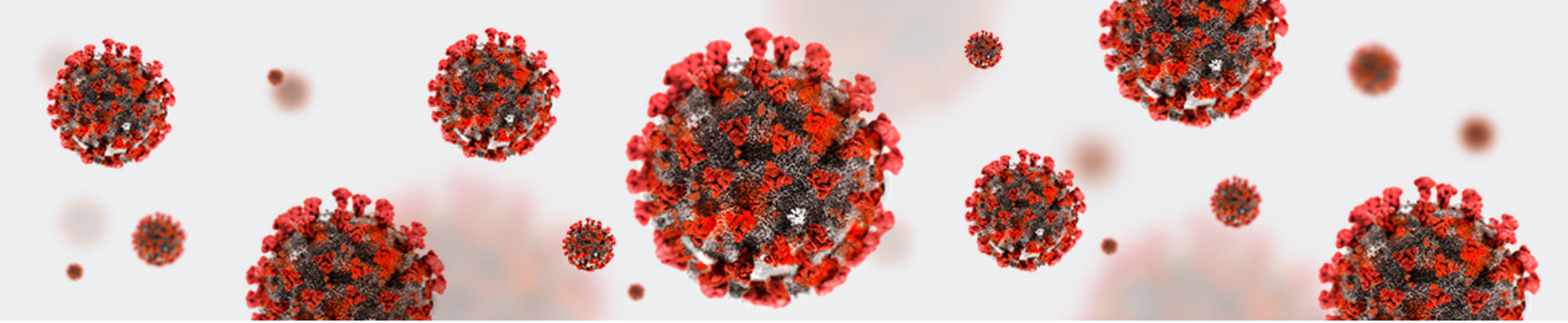
Senior Medical Advisor TNO



The Coronavirus Disease 2019 (COVID-19) Outbreak and Mental Health Current Risks and Recommended Actions

JAMA Psychiatry Published online June 24, 2020

‘this outbreak presents substantial risk for widespread
mental health problems and psychological fear-related
responses’



Suicide Mortality and Coronavirus Disease 2019— A Perfect Storm?

JAMA Psychiatry Published online April 10, 2020

‘Secondary consequences of social distancing may increase the risk of suicide.

It is important to consider changes in a variety of economic, psychosocial, and health-associated risk factors’

Aircrew who have been affected by Covid-19 infection



A severe course of COVID-19 is a pan-organ medical condition, with widespread vasculopathies as a common denominator.



Neurological and neuropsychiatric complications of COVID-19 in 153 patients: a UK-wide surveillance study

N = 125 complete data sets of COVID-19 in-hospital patients

62% (77) cerebrovascular event:

- 57 ischaemic stroke,
- 9 intracerebral haemorrhage
- 1 CNS vasculitis

18% patients with cerebrovascular events younger than 60 yrs

[Varatharaj et al., Lancet June 2020]

Neurological and neuropsychiatric complications of COVID-19 in 153 patients: a UK-wide surveillance study

31% (39/125) presented with altered mental status

- 9 unspecified encephalopathy
- 7 encephalitis.
- 23 psychiatric diagnoses - 92% new diagnoses
 - 10 new-onset psychosis
 - 6 neurocognitive (dementia-like) syndrome
 - 4 affective disorder

49% patients with altered mental status younger than 60 yrs

[Varatharaj et al., Lancet June 2020]

Psychiatric outcomes in SARS, MERS, and COVID-19

- acute psychiatric outcomes (predominantly delirium)
- late psychiatric outcomes:
 - new-onset depression,
 - anxiety disorders,
 - PTSD,
 - neuro-cognitive impairment

Late psychiatric/neuro-cognitive symptoms caused by:

- self-perpetuated immune mechanism (eg, autoimmune),
or
- priming of cellular neuro-immune substrates,
or
- persistence of the virus inside the CNS
(within endothelial cells, resident macrophages) or
monocytes.

[Rogers et al., 2020]

Corona viruses directly invade the CNS via:

Neural pathways:

transport of the virus to the CNS from the nasal cavity and rhinopharynx via the olfactory and trigeminal nerves and from the lower respiratory tract via the vagus nerves

Hematogenous routes:

- leukocytes (monocytes) serving as a vehicle of dissemination into the CNS
- endothelial cells of the blood-brain barrier
- endothelial cells of the blood–cerebrospinal fluid barrier located in the ventricles of the brain

[Postolache, Benros & Brenner, 2020]

“Long Haulers”

Overall, approximately 10% of people who have recovered from COVID-19 experience prolonged symptoms

[Practice Pointer BMJ 2020;370:m3026]



Paul Garner, professor of infectious diseases at Liverpool School of Tropical Medicine

“For 7 weeks I have been through a roller coaster of ill health, extreme emotions, and utter exhaustion”

A US colleague: “It feels like COVID has eaten my brain, because I can’t remember how to remember words, keep track of medication”.
“My brain just feels like there’s a fog.”

1500 Long Haulers: most common prolonged symptoms:

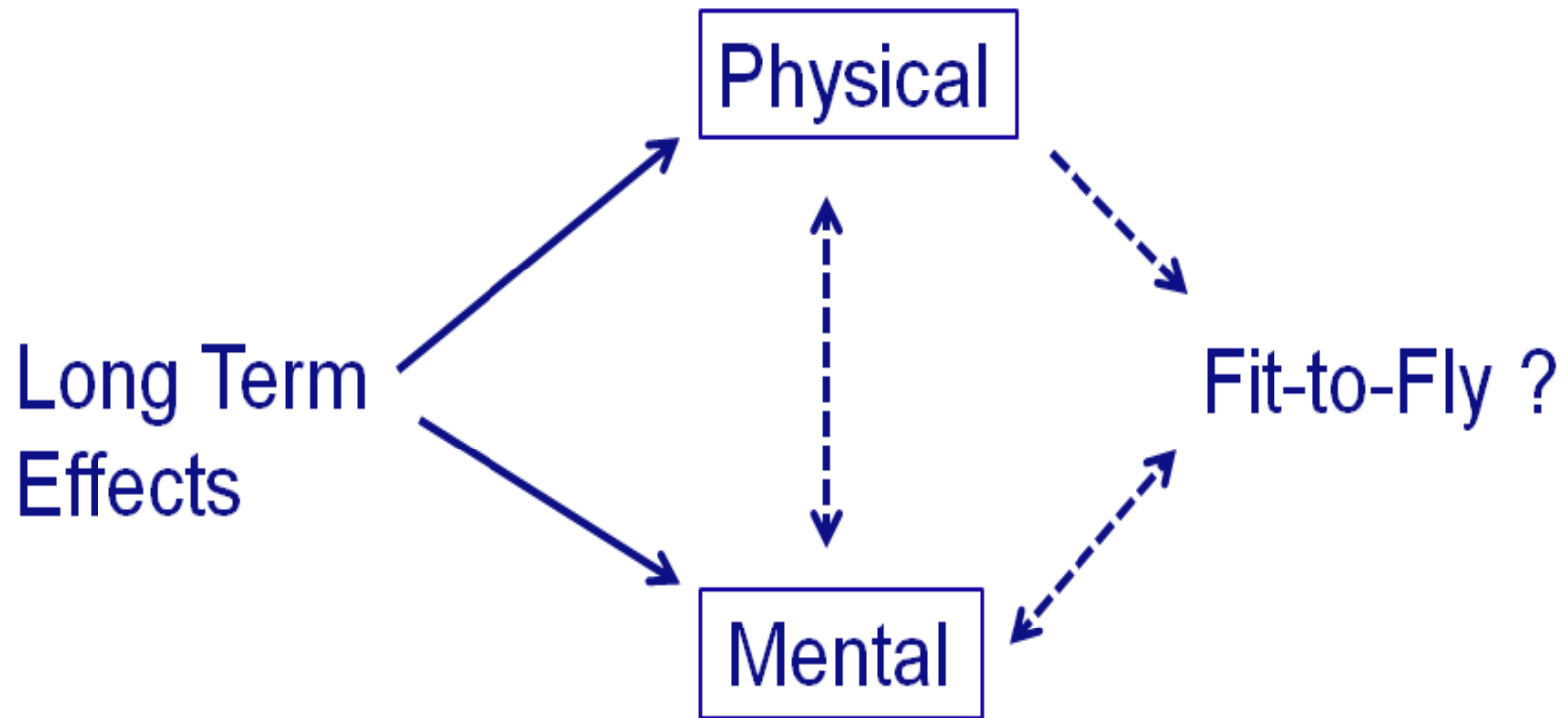
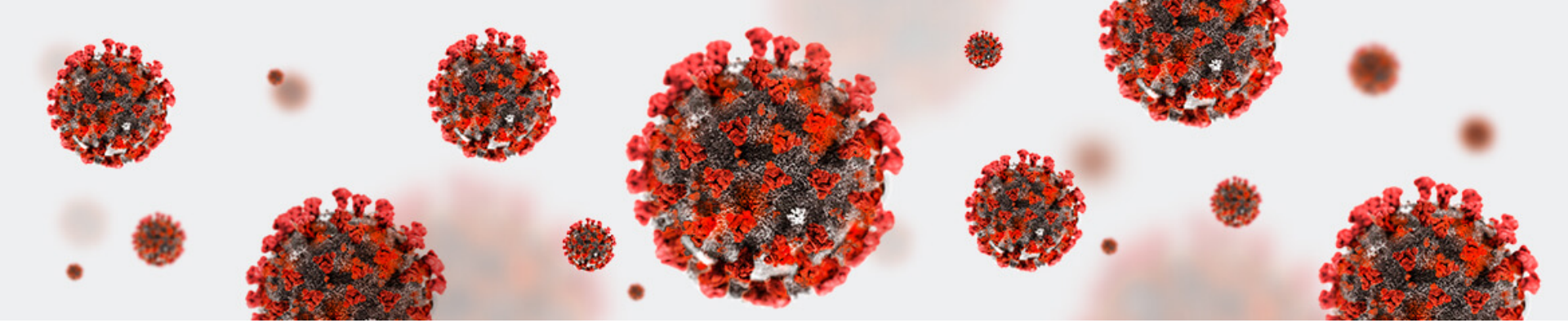
- fatigue
- muscle or body aches, chest pain
- shortness of breath or difficulty breathing
- headaches
- difficulty concentrating
- neurocognitive difficulties
- gastrointestinal upset
- skin rashes
- metabolic disruption
- thromboembolic conditions
- depression and other mental health conditions

Screening pilots who were affected by COVID-19

Some might have prolonged mental health problems

AME's risk assessment should address:

- Difficulty concentrating
- Neurocognitive difficulties
- Depression and other mental health conditions
- Severe fatigue





Aircrew who were not infected
but who have suffered from the
social and economic
consequences of COVID-19



Impact on Flight Safety

Impact on Mental Wellbeing

United Says 36,000 Workers Could Be Furloughed

Last Updated Jul 21, 2020. 10:20 p.m. ET

British Flybe files for bankruptcy

Coronavirus will bankrupt nearly all the world's airlines in a matter of weeks, aviation experts say.
[dailymail.co.uk/news/a...](https://www.dailymail.co.uk/news/a...)

2:38 a.m. ET, May 11, 2020
The world's second-oldest airline just filed for bankruptcy because of the coronavirus pandemic
by CNN's Majla Ehlinger in Atlanta and CNN's Natalie Gallón in Mexico City

• PERSPECTIVES •

5 ways Covid-19 will challenge airlines for years

By Geoff Murray and Tom Stalnaker for [CNN Business Perspectives](#)

Updated 1239 GMT (2039 HKT) August 13, 2020





FTL Temporary exemptions under Article 71(1) of Regulation (EU) 2018/1139 (the Basic Regulation)

Guidelines in relation to the COVID-19 pandemic

E.g. FRA-JFK-FRA with minimal turnaround time using augmented crew

Stress due to the isolation and mitigation measures



Furlough has both positive and negative effects

Stress of a long break from flying: a majority of pilots may be losing their proficiency

Job insecurity, loss of income and potential loss of employment.

Many of the pilots are laid off and some of the companies might go bankrupt. Many pilots will be struggling with their loans and income.







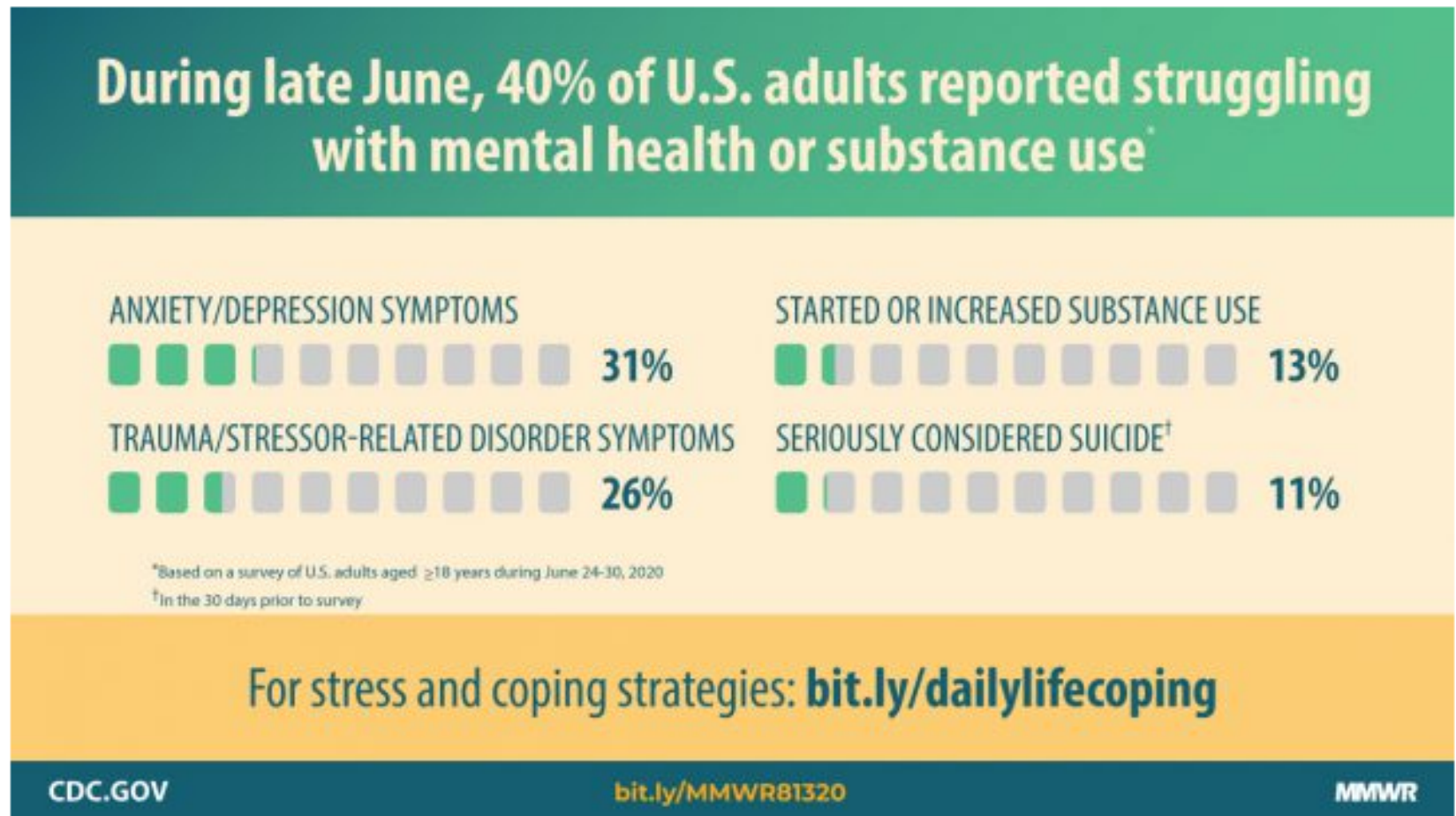
Lack of Future Perspectives



POSTPONED

CANCELED

CDC Report Reveals “Considerably Elevated” Mental Health Toll from COVID-19 Stresses



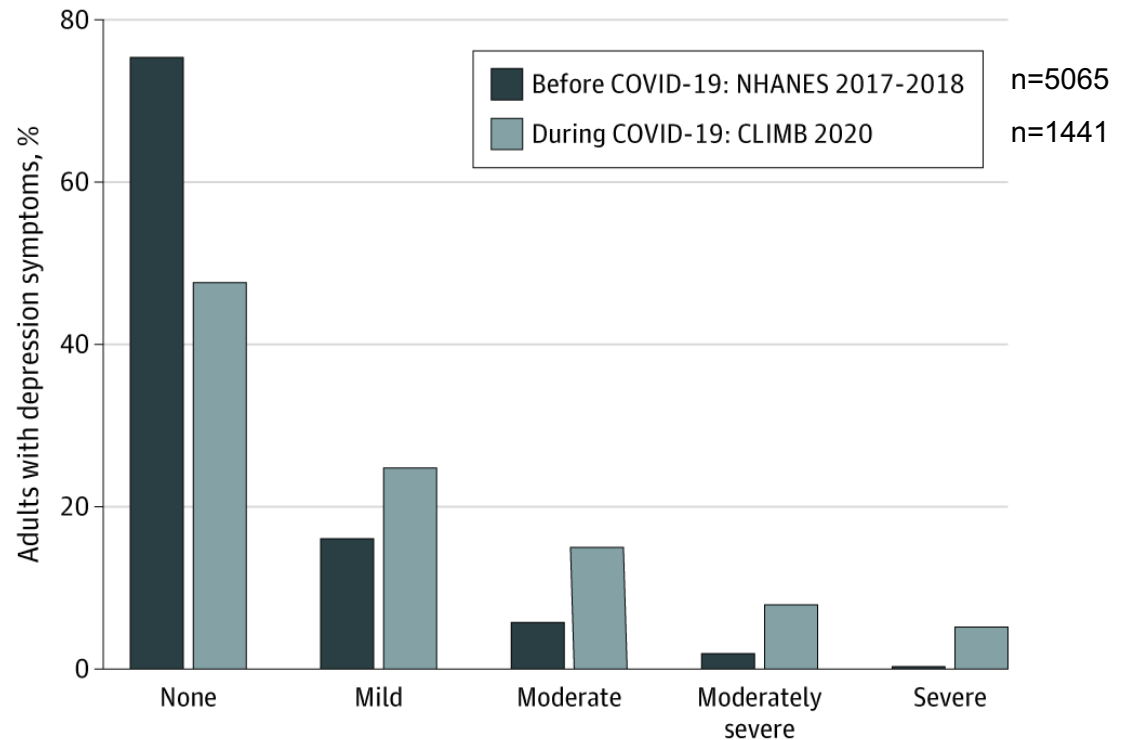
N = 5,412

[Czeisler MÉ, Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1049–1057]

From: **Prevalence of Depression Symptoms in US Adults Before and During the COVID-19 Pandemic**

JAMA Netw Open. 2020;3(9):e2019686. doi:10.1001/jamanetworkopen.2020.19686 [Ettman et al., September 2020]

Depression symptom prevalence was > 3-fold higher during the COVID-19 pandemic than before



Depression Symptoms in US Adults Before and During the Coronavirus Disease 2019 (COVID-19) Pandemic Before COVID-19 estimates from the National Health and Nutrition Examination Survey (NHANES) from 2017-2018. During COVID-19 estimates from the COVID-19 and Life Stressors Impact on Mental Health and Well-being (CLIMB) study collected from March 31 to April 13, 2020. Depression symptoms categories calculated using the Patient Health Questionnaire–9: none (0-4), mild (5-9), moderate (10-14), moderately severe (15-19), and severe (≥ 20). Percentages weighted to the population of noninstitutionalized US adults aged 18 years or older.

Online Survey among ALL aviation workers July/August 2020

[Cahill et al., 2020 – Trinity College-Dublin]

Method: validated depression (PHQ 9) & anxiety (GAD 7) scales.

Total 2050 - 1796 completed depression and anxiety scales

Pilot (38%), Cabin Crew (19%), ATC (11%) , Maintenance (8%)

Evidence for :

- moderate depression (17.7%),
- moderately severe depression (7.4%)
- severe depression (4.5%)
- anxiety 36% (mild), 12.8% (moderate), 11.3% (severe)
- 51 % of respondents have lost jobs
- 78% indicate a lack of willingness to disclose MH Issues to employer



A Second Wave of COVID-19 may crush newly regained
HOPE and FUTURE PERSPECTIVES

Reduced performance of staff and increased risk in the system

- Fear
- Uncertainty about the situation and future
- Increased stress
- Increased pressures
- Distraction
- Fatigue
- Psychological reasons
- Physiological reasons



**Guidelines for handling exemptions
to flight crew recent experience requirements
in the field of commercial air transport operations**

There may be a negative impact on the performance of aviation personnel after months of inactivity, and with continued uncertainty about the industry recovery and their jobs.

Aircraft operators, ANSPs and other stakeholders having employees performing aviation safety sensitive tasks should:

- Whenever needed to make changes in their employment schemes and/or personnel policies, consider in their risk assessments and change management processes the impact of COVID induced stress.
- As a result of their risk assessment they should implement mitigating actions that will ensure that safety is not adversely affected by the potential deterioration of staff's well-being and human performance

- Companies should evaluate previous risks assessments in order to ascertain that the underlying assumptions concerning personnel's stress and well-being are still valid in the current context.
- Ensure access to their employees performing safety critical tasks to support programs and/or counselling
- Support programs should be developed in coordination with appropriate specialist (e.g. aviation psychologists, AMEs) and should refer the hazardous cases to the appropriate specialists and AMEs for assessment of fitness.



Pilot Peer Support Programmes

The EPPSI Guide

Vol 1: Design and Implementation

vs. 8.2 October 2020

Pilot Peer Support: Why ?

Everybody Happy?



Life stress that can form part of any pilot's "carry on luggage"

- work related problems
- financial worries
- health concerns
- bereavement issues
- relationship / family difficulties
- separation from family
- social demands

May lead to impaired performance and to significant mental health problems in some cases

[e.g. Hammen, 2005; Young, 2008]

The COVID-19 pandemic may be a trigger for mental health problems to emerge or worsen



Before COVID: 70% increase in number of people
in age group 20-30 yrs seeking
psychological, or psychiatric help

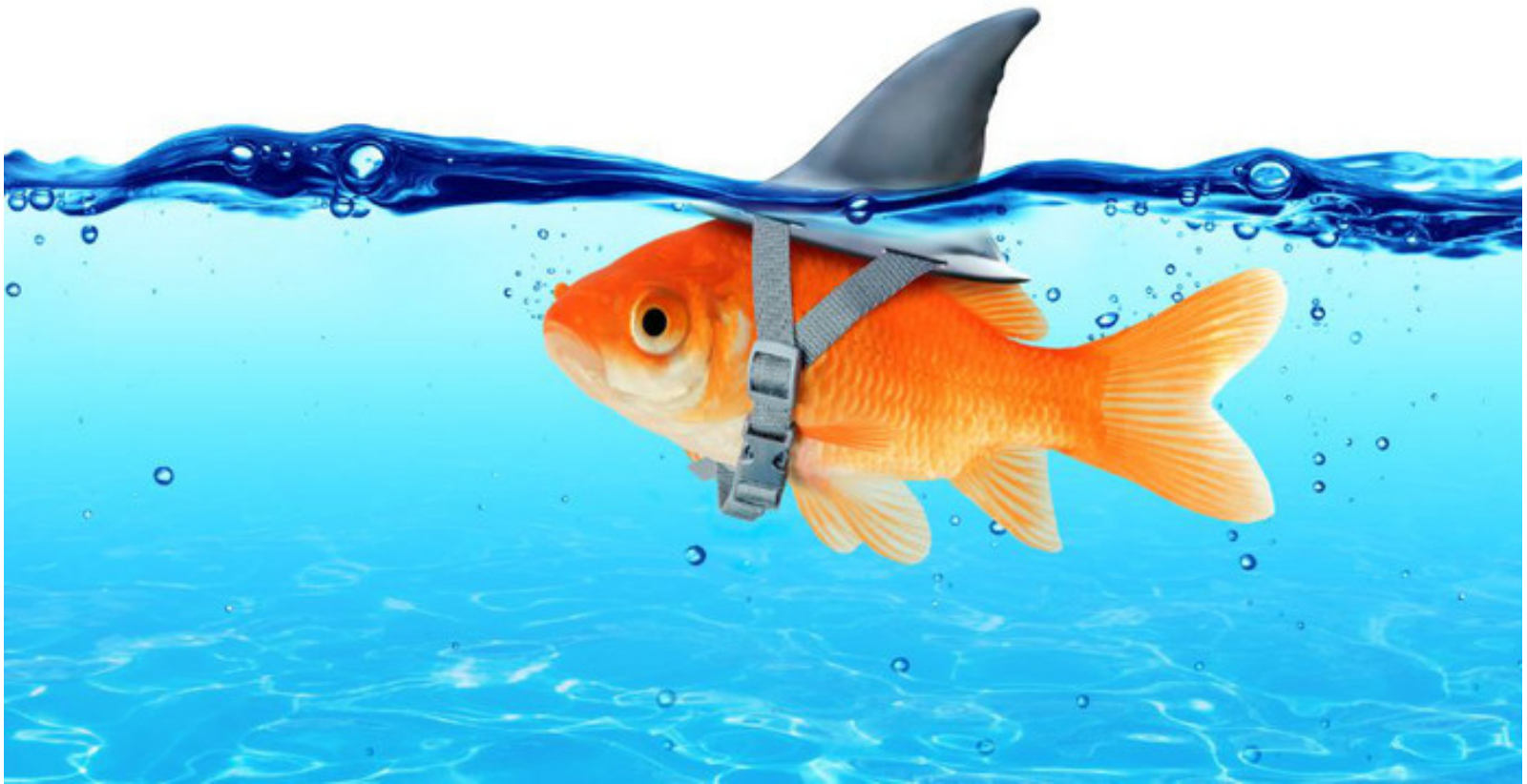
Increasing Social and Job Demands



Mismatch between job demands and social demands:
STRESS

Peer Pressure





Mental Health Stigma and Unawareness

- Pilots are reluctant to report Mental / Emotional Issues to AMEs
- Pilots are reluctant to tell colleagues about their problems or seek help



Stigma of mental problems is widespread in all strata of society

Stigma - we've got it mapped

Regulations that stigmatise people with mental health problems around the world

time to change
let's end mental health discrimination
www.time-to-change.org.uk

UNITED KINGDOM



Until recently, laws prevented people with mental health problems from carrying out jury service or becoming a company director. This was only overturned in July 2013.

LITHUANIA



Some people with long term mental health problems are unable to own their own home.

JAPAN



A sign outside a museum in Japan reads 'Those with mental disease are declined to enter the museum'.

In some areas, certain leisure facilities imposed restrictions on those with mental health problems, forbidding them to use the fitness centre.

Anti-stigma campaigns

in order of initiation

- | | |
|--|--|
| 1997 New Zealand
Like Minds Like Mine
mentalhealth.org.nz | 2009 Canada
Opening Minds
mentalhealthcommission.ca |
| 2000 Australia
Beyond Blue
beyondblue.org.au | 2010 Catalonia, Spain
Programa de Salud Mental
decada4.es |
| 2002 Scotland
See Me
seemescotland.org | 2010 Ireland
See Change
seechange.ie |
| 2007 England
Time to Change England
time-to-change.org.uk | 2011 The Netherlands
Samen Sterk tegen Stigma
samensterktegenstigma.nl |
| 2009 USA
BringChange2Mind
bringchange2mind.org | 2011 Denmark
One of Us
one-of-us.nu |
| 2009 Sweden
Hjärnkoll
hjärnkoll.se | 2011 Wales
Time to Change Wales
timetochangewales.org.uk |

KOREA



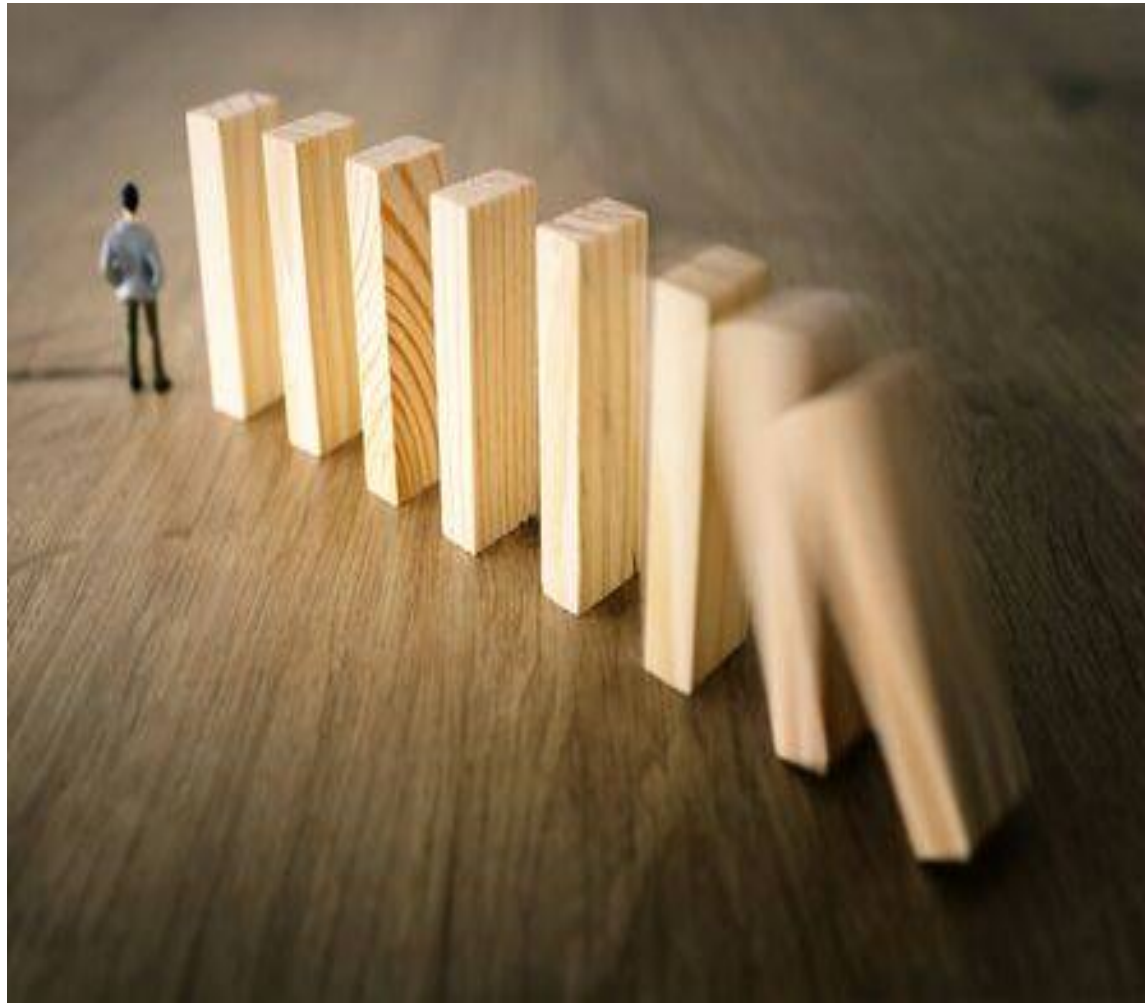
In certain areas, people with mental health problems are not permitted to enter a swimming pool.

ASIA



Three major airlines in asia refused to allow passengers with mental health conditions on to flight unless they were accompanied by a psychiatrist.

Pilots are often unaware about the impact of their problems
on professional performance and health



The Medical Perspective

PSP can help to prevent performance impairment and escalation of mental health problems



Key objectives for a PPSP

1. To make it as easy as possible for pilots to have a conversation about issues which could potentially affect their safe professional performance
2. To direct the pilot effectively towards appropriate help



KAMAGURKA

A PPSP does not offer an emergency service



For medical/psychiatric emergencies, the first point of contact should always be an appropriate medical emergency service

A PPSP allows us to address issues that we all have conveniently put under the carpet



APPLICATION FORM FOR AN AVIATION MEDICAL CERTIFICATE

Complete this page fully and in block capitals - Refer to instructions pages for details.

	YES	NO
118 Psychological trouble of any sort		X
119 Alcohol/drug/substance abuse		X
120 Attempted Suicide		X

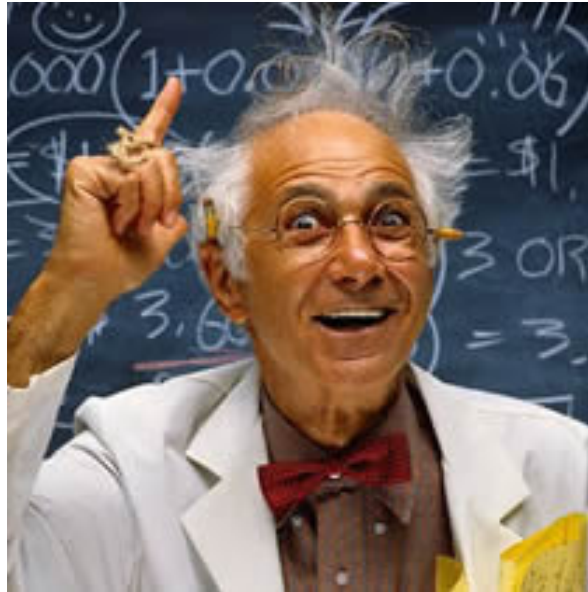
(31) Declaration: I hereby declare that I have carefully considered the statements made above and to the best of my belief they are complete and correct and that I have not withheld any relevant information or made any misleading statements. I understand that if I have made any false or misleading statements in connection with this application, or fail to release the supporting medical information, the Licensing Authority may refuse to grant me a medical certificate or may withdraw any medical certificate granted.

The decision to take the first step in opening up about mental health issues will always be a voluntary choice by the pilot . . .



The whole point of PPSPs is making that step as easy and safe as possible

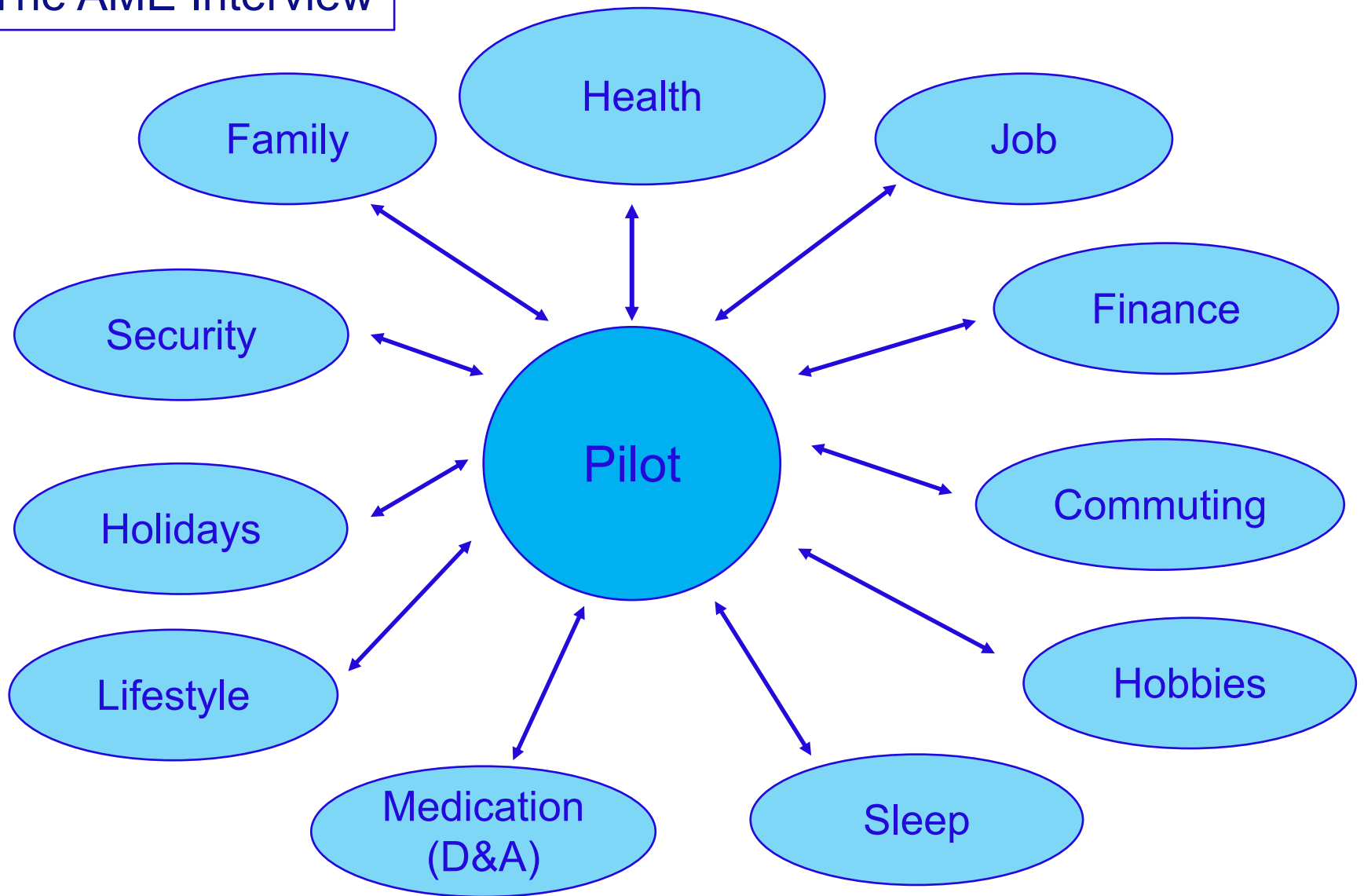
Physicians should be informed about the opportunities provided by a PSP



AMEs should be trained to know the key–principles and the aims of the local PSP(s) and fully utilize the opportunities

AMEs and AeMCs performing medical examinations to aircrew and ATCOs during the COVID-19 pandemic should pay particular attention during such examinations to mental health and wellbeing issues.

The AME Interview



[adapted from Hudson & Herbert, 2017]

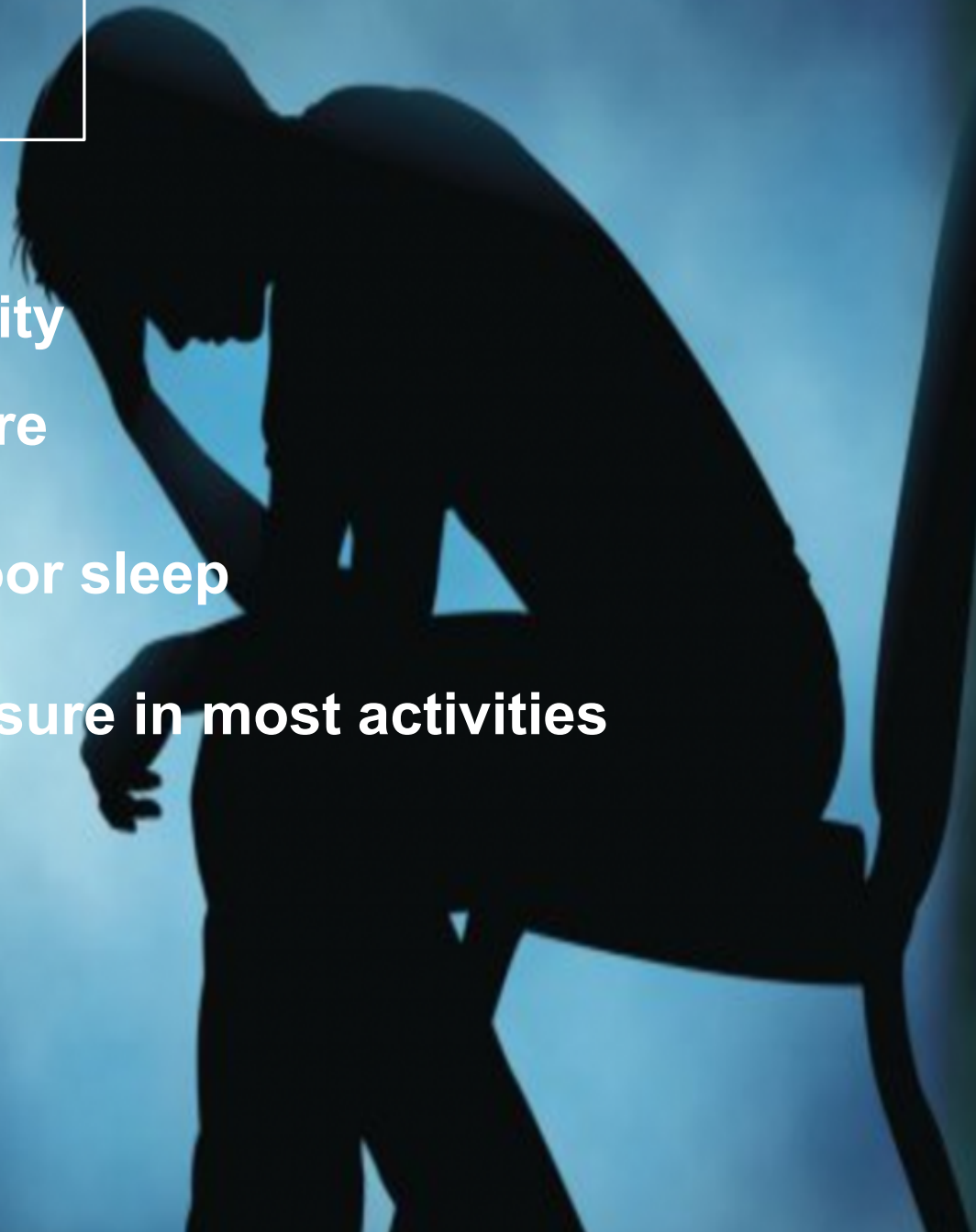
GPs and AMEs may consider referral to a PSP:

- In case of suspicion that a pilot's circumstances and/or life-stresses might lead to unfavourable developments in the pilot's mental health status or professional career
- In case of alarm signs or red flags (consider direct referral to psychiatrist or clinical psychologist plus Peer Support)

In all cases, the AME or treating physician should clearly explain to the pilot which considerations/worries were the reason to recommend referral to a PSP

FO – age 33 yrs
Interview by AME

- **Employment insecurity**
- **Uncertain about future**
- **Poor appetite and poor sleep**
- **Less interest or pleasure in most activities**



A silhouette of a person, likely a woman, is shown in a distressed pose. She is leaning forward with her head buried in her hands, suggesting deep thought, worry, or despair. The background is a soft, out-of-focus blue, which contrasts with the dark silhouette. The overall mood is somber and reflective.

FO – age 33 yrs
Self-referral to PSP via AME

- Employment insecurity
- Uncertain about future
- Marital problems emerging during lock-down
- Difficulty to concentrate

The background image is a seascape at sunset or sunrise. The sky is filled with dark, heavy clouds, with some light breaking through near the horizon. The horizon line is low, showing the silhouettes of distant land or structures. The water is dark and calm, with a small boat visible on the right side. The overall mood is somber and dramatic.

Removed from roster for 4 weeks

Referral to socio-psychological support / marriage counseling

Feedback to MHP, airline's Occup. Health dept. and AME





- Suicidal thoughts, intention, plans or acts and / or any form of self harm
- Misuse of alcohol or drugs
- Risky or sensation-seeking behaviours
- Agitation, preoccupation, psychomotor retardation
- Noticeable changes in affect (or flat affect), mood, anxiety and behaviour
- Anhedonia, hopelessness and feelings of despair
- Self neglect
- Harm or threat to others
- Threat or actual harm or abuse from others

AMEs should explain the opportunities of a PSP to their pilots

- A PSP offers a “safe harbour zone” where they can be open without fear of retribution or endangering their pilot career and livelihood
- Pilots can learn to cope with their mental health problems and this may prevent more severe problems and improve wellbeing and job satisfaction



PPSP: Benefit for Flight Safety

1. Identification of thus far hidden problems that might be significant for flight safety
2. Prevention of performance impairment and disqualifying mental health problems

Crew members with psychological problems:
20% need professional support



The 'medical' route: MHP keeps an oversight of the initial
referral via the Peer



The pilot self-refers to the relevant medical/psychological care,
while the MHP will guide this process in the right direction.

- The MHP makes the judgement about a pilot's fitness to fly or what constitutes a threat to flight safety in conjunction with the consulting AME or company medical person.
- The only bodies able to remove a pilot from the roster for medical reasons: the operator's medical department; the pilot's AME; or the NAA.

Pilot's name and case protected by medical confidentiality,
Flight Ops will be informed that the pilot is 'sick'. No details.

Confidentiality is Key Element for PPSPs

- Confidential information should not be available for operator's management, NAAs, colleague pilots, family, spouses, and clergy



Breaching confidentiality

Confidentiality can be disclosed to the Appropriate Authority in case of:

- Imminent and high risk of harm to others
- Risk of bodily harm
- Failure to disclose would cause harm



- The threshold for breaching confidentiality is high
- Consent to disclosure is the preferred option
- Correctness of disclosure can be tested in court

What about confidentiality when flight-safety is endangered and a case should be reported to the authority?

Breaching of the confidentiality is only possible in cases where relief of flight duties is not sufficient to ensure safety, because of immediate danger to the individual or others, or significant risk to public safety

Every effort shall be made to get consent of the pilot concerned

PSP and SMS

- Data de-identified
- Only statistical data: # cases in treatment, # returns to flying status, # relapses
- NO individual cases and NO identifiable information
- Only cases > 3-5% of the pilot population reported

Balance between gathering useful data and compromising anonymity should be considered



PSPs: Much needed in times of the Corona pandemic



EASA Regulation 1048/2018 implementation date
delayed by 6 months – due to COVID-19
New implementation date is 14 February 2021

PROBLEMS

Peer support programmes not yet available in many EASA member states

400,000 Cabin Crew and Pilot Jobs Have Already Been Wiped Out by the COVID-19 Pandemic

Who cares for aviation personnel who lost their jobs?



www.eppsi.eu



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