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**EASA CONCEPT PAPER: IMPLEMENTATION OF THE GERMANWING
TASK FORCE RECOMMENDATIONS.
STATISTICAL DATA FROM THE
*AEROMEDICAL CENTRE- ROME***

**AEROSPACE MEDICAL INSTITUTE
ROME
*ITALIAN AIR FORCE***

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DISCLOSURE

« *NO CONFLICT OF INTEREST
TO DECLARE* »

Introduction

After the tragedy of the flight GA-9525 in march 2015 a Task Force led by the European Aviation Safety Agency (EASA) delivered a set of 6 recommendations:

#1) Two-people in the cockpit

#2) Pilots psychological evaluation

#3) Drug and Alcohol (D&A) testing

#4) Aero-Medical Examiners: role/duties, training/preparation, network

#5) European aeromedical data repository- appropriate balance between confidentiality and protection of public safety

#6) Aircrew Support and Reporting Systems

In this presentation are shown the data regarding the implementation of the following recommendations done at the Aeromedical Centre of Rome in 2016

#1) Two-people in the cockpit

#2) Pilots psychological evaluation

#3) Drug and Alcohol (D&A) testing

#4) Oversight of aero-medical examiners —Networks of Aero-Medical Examiners

#5) European aeromedical data repository- appropriate balance between confidentiality and protection of public safety

#6) Aircrew support and reporting systems

Methods

(Rec. #2) **comprehensive mental health evaluation at the initial class 1 medical examination;**

- *Psychological and / or psychiatric interview*
- *Personality testing (MMPI-2)*
- *Neurocognitive testing (vigilance, attention, visual reaction time)*

(Rec. #3) **urinary screening for drugs and evaluation of haematological indicators for alcohol misuse, done for 1.850 pilots during their recurrent class 1 aeromedical check.**

(Rec. #6) **questionnaire** (*individual, anonymous*)...

*administered to 27 **italian airline pilots** during their recurrent class 1 aeromedical check, in order to collect subjective impressions on issues related to **mental problems, use of psychotropic medications, etc** (in the view of its implementation by the airline operators)*

Results

comprehensive mental health evaluation

for the initial medical examination of Class 1 certificate

126 applicants examined (*all Italian*):

- 96 fit (76%)
- 30* unfit (24 %)

The main diagnosis found were (*in some case dual*):

- Mood disorder, 3 (*hypertymia*)
- Anxiety disorder, 16
- Personality disorders or traits, 29 (*emotional instability, impulsivity, obsessivity, rigidity, immaturity, introversion*).

No psychotic illnesses were found in this population.

*(29 male - 1 female. Mean age 22)

Results

drug and alcohol screening

No cases of drug and alcohol misuse were found at the screening among the population examined (*1.850 pilots*)

Results

mental issues....

The analysis of the answers collected through the questionnaire showed that:

- **2** (3%) admitted to have taken psychotropic medication without AME control
- **17** (62%) admitted to be coping with stressors related to flight/company issues ;
- **9** (33%) admitted to have attended flying duties, in some occasions, while not in good mental conditions;
- **7** (25%) admitted to have flown, **at the time of the survey**, while not in good mental conditions;
- **19** (70%) considered useful the implementation of a peer support
- **21** (77%) considered useful the implementation of an independent aircrew support and reporting system.

Discussion

About Rec. # 2.

The prevalence of disqualifying mental conditions, as reported, appear to be significant in the population examined.

About Rec. # 3

A screening for D&A misuse performed on regular bases seem to be not cost-effective. Better a random programme.

About Rec. # 6.

Conditions such as:

- attending flying duties while not in good mental status
- coping with stressors related to flight/company issues
- use of psychotropic medication out of medical control...

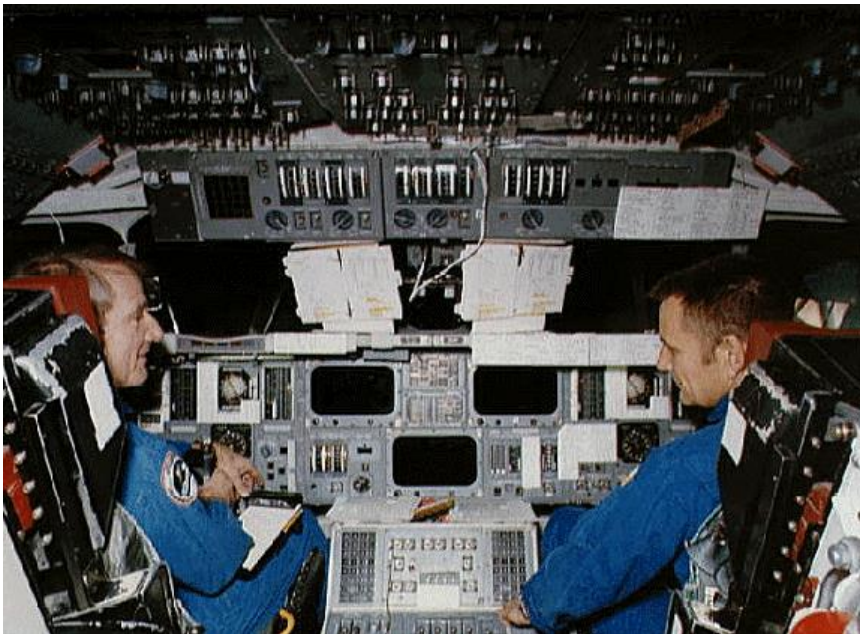
... seem to NOT be rare !!!
(according to other observations)

What's behind every human performance ???

.... especially like these



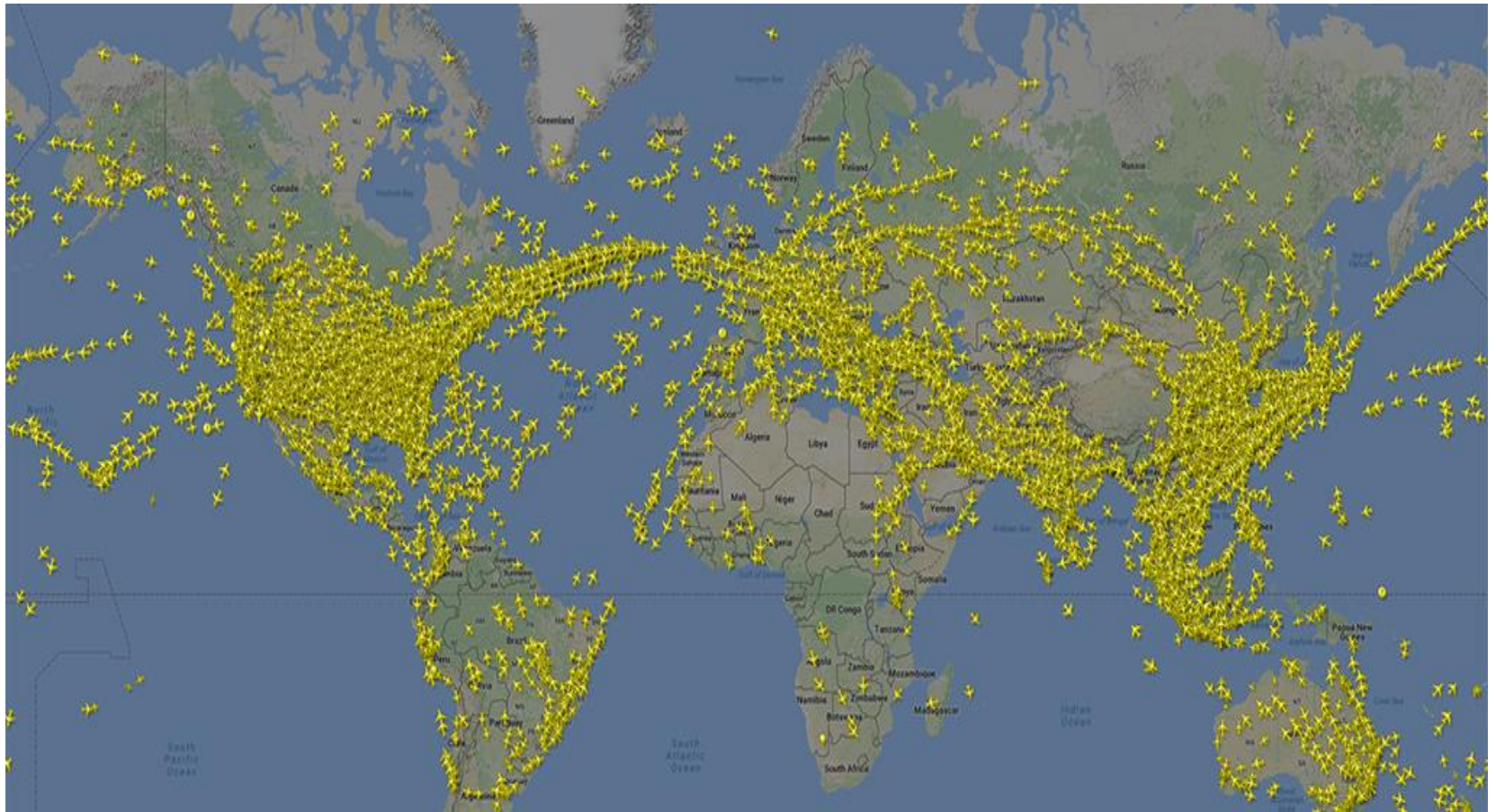
... or these ?



... always a human brain !!!



*With its structural complexity,
and sophisticated biological
mechanisms.*



W.H.O. warnings :

“depression is leading cause of disability worldwide !!! ”

***INCIDENCE OF PSYCHOLOGICAL DYSFUNCTIONS
IS INCREASING,
EVEN IN THE AIRCREW COMMUNITY....***

.... mainly those related to stress !!!

THE CAUSES OF STRESS ARE INCREASING ...
... and, perhaps, they are infinite too !!!

... BECAUSE

- **nowdays human performances
are very demanding**
 - ***in all aspects of life*** -
- **the way people react to the problems is**
“individual” and “subjective”

factors in aviation ...

“ORDINARY”

Environmental

Psychosocial

Family

Economic

“OPERATIONAL”

Training/Mission/”Fatigue”

Objective risks

Organization/Hierarchy

Most common
psychological dysfunctions

MOOD DISORDERS:

Depression, Dysthymia, Bipolar

ANXIETY DISORDERS:

General Anxiety

Phobia

Panic

Obsessive

ADJUSTMENT DISORDERS

All these conditions/dysfunctions can seriously compromise the flight safety and the operativeness !!!

Impairment in working memory or in cognitive work

Weakness and difficulties in physical activities

Irritability with low tolerance to others or to errors of others; Isolation

Sleeping, Eating disorders

Reduced Situational Awareness !!!

Problems arise when...

***... pilots or crew members,
who are suffering from
stress related dysfunctions, could :***

- hide the condition...***
- fail to seek treatment...***
- get a treatment out of control...***

WHY DOES THIS HAPPEN ?

- ***fear*** to be grounded or to be removed from the active duty
- ***medical policy/rules*** that don't allow to fly/operate under treatment with psychotropic medication
- ***lack of time and/or available structures***
- ***cultural bias, reluctance to accept treatments, mistrust in psychological therapy***

Consequences

DELAYED or ANY TREATMENT

CRONICITY

AUTOTHERAPY

*(herbal products, homeopatics,
alchool and/or drug use/abuse)*



target for AME ?

Nontreathening environment ...

Good relation and approach ...

Help to report ...

Provide assistance, Advise ...

Enhance the culture of safety!!!

***most common SYMPTOMS
related to mental health issues ...***

Anxiety
Sadness
Isolation
Tiredness
Irritability
Introversion
Helplessness
Hopelessness
Eating disorders
Sexual disorders
Sleeping disorders
Lack of attention
Memory impairment

... easy to be detected during an aeromedical assessment !

Conclusion

The implementation of an initial, specific psychological/psychiatric evaluation for Class 1 medical examination is useful to reduce the recruitment of unfit people

The implementation of an independent aircrew support and reporting system could offer the possibility to provide an early treatment for the case they need it and mitigate all the risks related to untreated or unrecognized psychological issues.

Both could significantly contribute to enforce the operational safety in a demanding activity !!!

**Thank you
for your attention !**

.....QUESTIONS ?