Mental health issues among pilots and the impact on the security. Scarecrow or threat?

AviAsian 2018 Conference

Singapore Aviation Academy
Theatrette, Level 4
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Safety in Aviation

- Mental illness as seen by WHO
- Mental Illness as seen by Aviation professionals
- we will brush on German wing accident
- recommendation from the accident by the European Aviation Safety Agency (EASA)
- future of pilot monitoring.
Mental health

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

(WHO, 2018)
Prevalence of common mental disorders (% of population by WHO Region)

- Depressive disorders
- Anxiety disorders

Source: Global Burden of Disease Study 2015

4% Depressive disorder

3.6% Anxiety disorder
Cases of depressive disorder (millions), by WHO Region

- African Region: 21% (66.21 million)
- Eastern Mediterranean Region: 16% (52.98 million)
- European Region: 9% (29.19 million)
- Region of the Americas: 12% (40.27 million)
- South-East Asia Region: 27% (85.67 million)
- Western Pacific Region: 15% (48.16 million)

Total: 322 million

Source: WHO 2017
Global suicides, by age and country income level (thousands)

- High-income countries
- Low- and middle-income countries

Source: WHO 2017
• A320-211 Barcelona – Düsseldorf
• 144 plus 6 crew died

- 74,573 aviation accidents and incidents in the database.
- 75
- **51**
- 32

military Unmanned Aircraft System (UAS) pilots v. manned aircraft pilots

Source: Otto & Webber, 2013
Adjusted incidence rates of MH outcomes, by pilot type, U.S. Air Force,

<table>
<thead>
<tr>
<th>Outcome</th>
<th>RPA pilots</th>
<th>MA pilots</th>
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<tbody>
<tr>
<td>Any MH diagnosis</td>
<td>0.6 (0.2-2.0)</td>
<td>0.5 (0.2-1.5)</td>
</tr>
<tr>
<td>Any MH counseling</td>
<td>4.5 (1.4-15.5)</td>
<td>4.8 (1.5-15.6)</td>
</tr>
<tr>
<td>Any MH outcome</td>
<td>2.9 (1.2-7.1)</td>
<td>2.4 (1.0-5.9)</td>
</tr>
<tr>
<td>All MH outcomes</td>
<td>3.8 (1.8-8.0)</td>
<td>3.3 (1.6-6.8)</td>
</tr>
</tbody>
</table>

Incidence rates per 1,000 person-years with 95% confidence intervals

Abbreviations: MH, mental health; RPA, remotely piloted aircraft

Source: Otto & Webber, 2013
Germanwings Flight 9525

• A320-211 Barcelona –

350 PILOTS GROUNDED
BY MENTAL PROBLEMS

Number of pilots who said they had suffered from mental illness when applying for their medical certificate to fly
2010: 75
2011: 82
2012: 77
2013: 100
2014: 113

Number of these pilots who were suspended or denied medical certificate
2010: 65
2011: 52
2012: 53
2013: 78
2014: 102

Number of these pilots who later had their medical certificate to fly reinstated
2010: 53
2011: 51
European Commission

- International Air Transport Association (IATA)
- European Aviation Safety Agency (EASA)
- Civil Aviation Medical Association
- European Association for Aviation Psychology
- Random psychological tests
European Commission Safety Concerns

- International Air Transport Association (IATA)
- European Aviation Safety Agency (EASA)
- Civil Aviation Medical Association and
- European Association for Aviation Psychology (EAAP)

- The regulatory proposal addresses the safety issues identified by the EASA-led Germanwings Task Force.

- The Germanwings Task Force examined the findings of the BEA accident report and assessed the adequacy of the European air safety and security rules.

- As a result of this work, 6 recommendations were addressed to the European Commission on 16 July 2015

- Urgent action via:
  - ‘Special rulemaking procedure: direct publication’
The multi-layer risk mitigation concept

- Operators’ recruitment process & Drug and Alcohol policy
- Class 1 Medical examination
- Contributing factors
- Crew support
- EU medical certificate repository
- Accident prevented

James Reason "Swiss cheese" model
EASA published a proposal to the European Commission

• Ensuring that all pilots have access to a support programme;
• Mandating airlines to perform a psychological assessment of pilots before the start of employment;
• Introducing systematic Drug & Alcohol (D&A) testing of flight and cabin crew upon employment, after a serious incident or accident, with due cause (i.e. following reasonable suspicion), as well as
• Unannounced D&A testing after rehabilitation and return to work;
• As an additional safety barrier for airlines which are not already subject to a national programme for psychoactive substance testing: mandatory random alcohol screening of flight and cabin crew within the EU RAMP inspection programme
Stiftung Mayday - Mayday Foundation
http://www.stiftung-mayday.de/

- The Mayday Foundation maintains a worldwide network of carers, assisted by experienced and specially trained peers, both pilots and flight attendants as well as mental health professionals and professional psychologists.

- This worldwide network supports pilots and crew members after critical and stressful incidents and/or accidents.
Aviation license

Reasons to lose pilots licence.

1. cardiovascular disease
2. mental illness
Future Growth is in Data Analytics

- predictive analytics,
- effective risk factor profiling,
- collecting and utilizing, individualized patient data
When health monitoring really will mean people’s health?
• Ockham's razor solution
Developing new digital mental health services

• Innovation: Hide Inside Trojan Horses
• Every citadel has gates to keep the foreign element at bay.
The next EAAP Conference will be held from 24-28 September 2018 at the Hotel Dubrovnik Palace in Croatia.

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Thank you