

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



AviAsian 2018 Conference

Singapore Aviation Academy

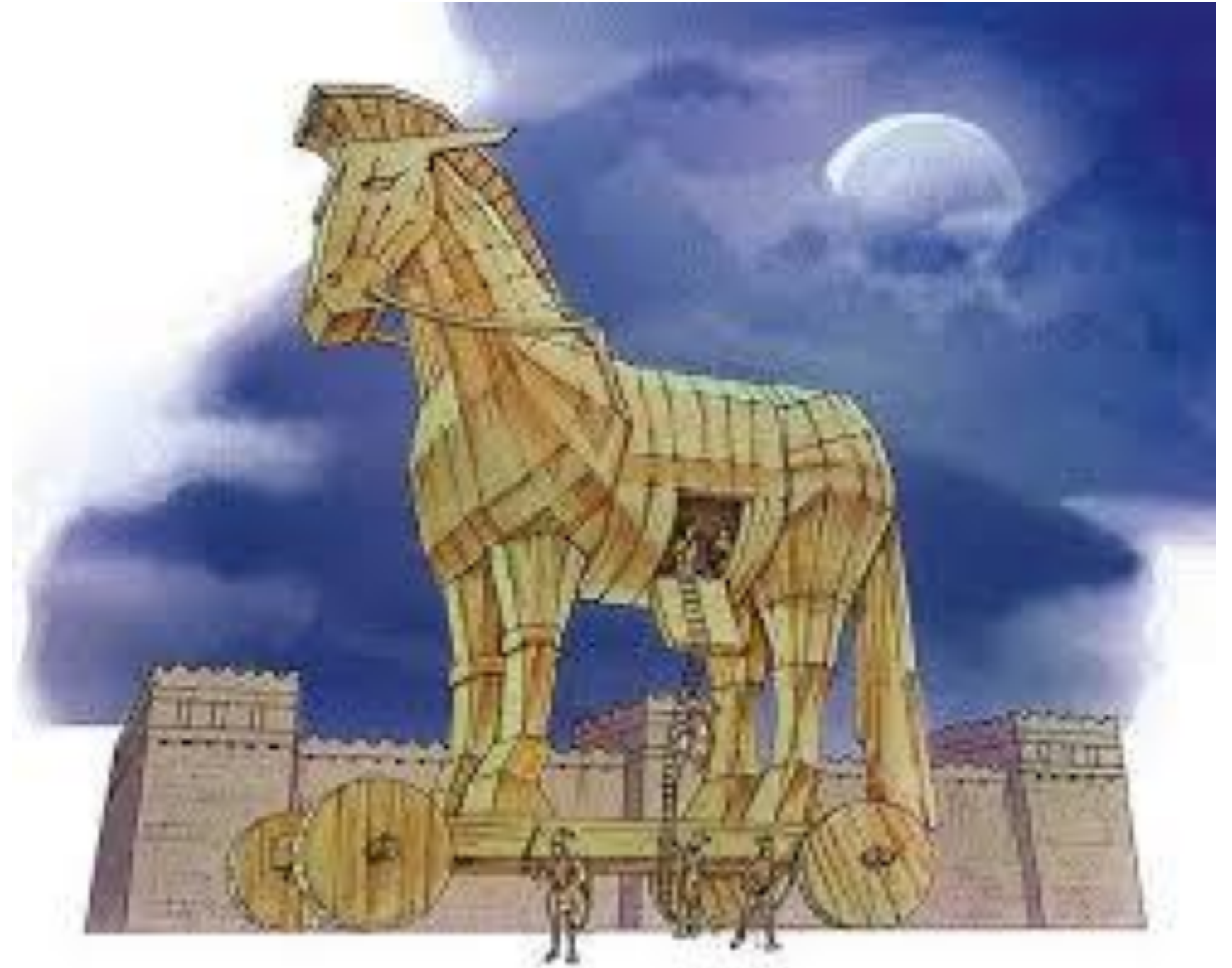
Theatrette, Level 4

1 Aviation Dr, Singapore 499867

5 September 2018

Safety in Aviation

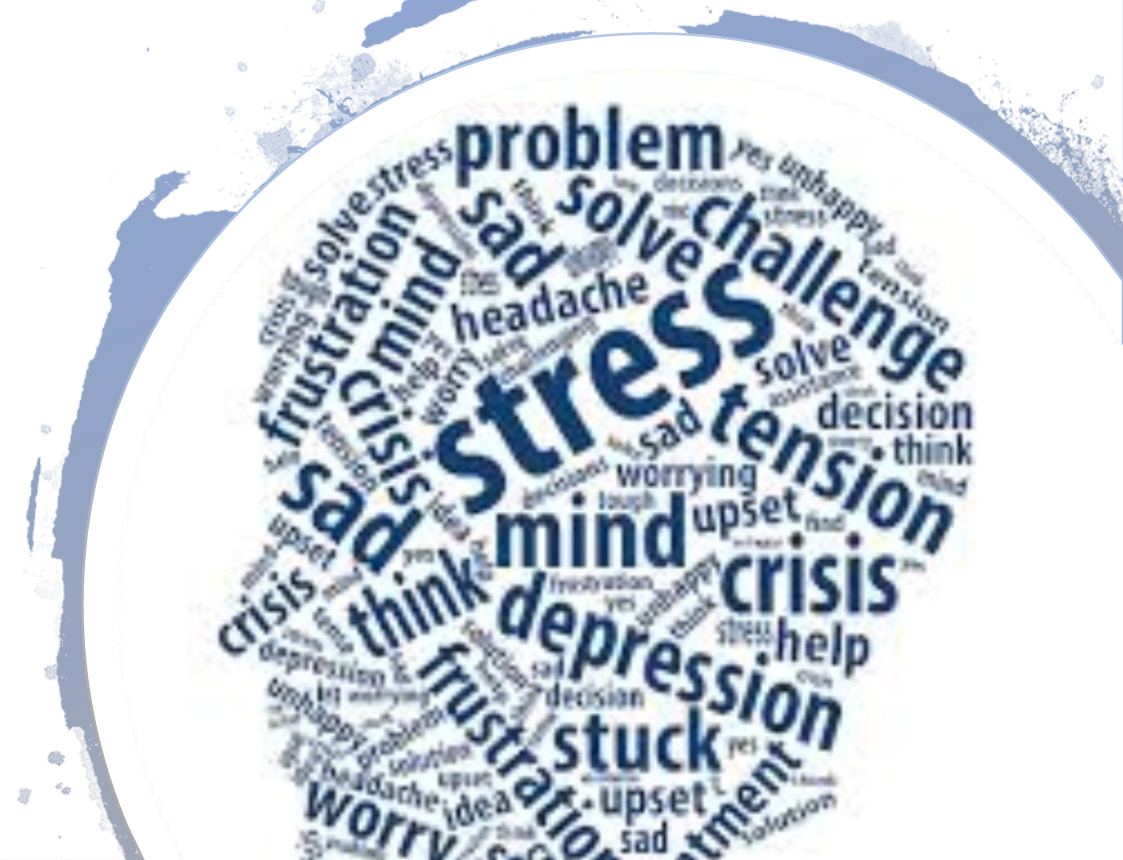
- Mental illness as seen by WHO
- Mental Illness as seen by Aviation professionals
- we will brush on German wing accident
- recommendation from the accident by the European Aviation Safety Agency (EASA)
- future of pilot monitoring.



Mental health

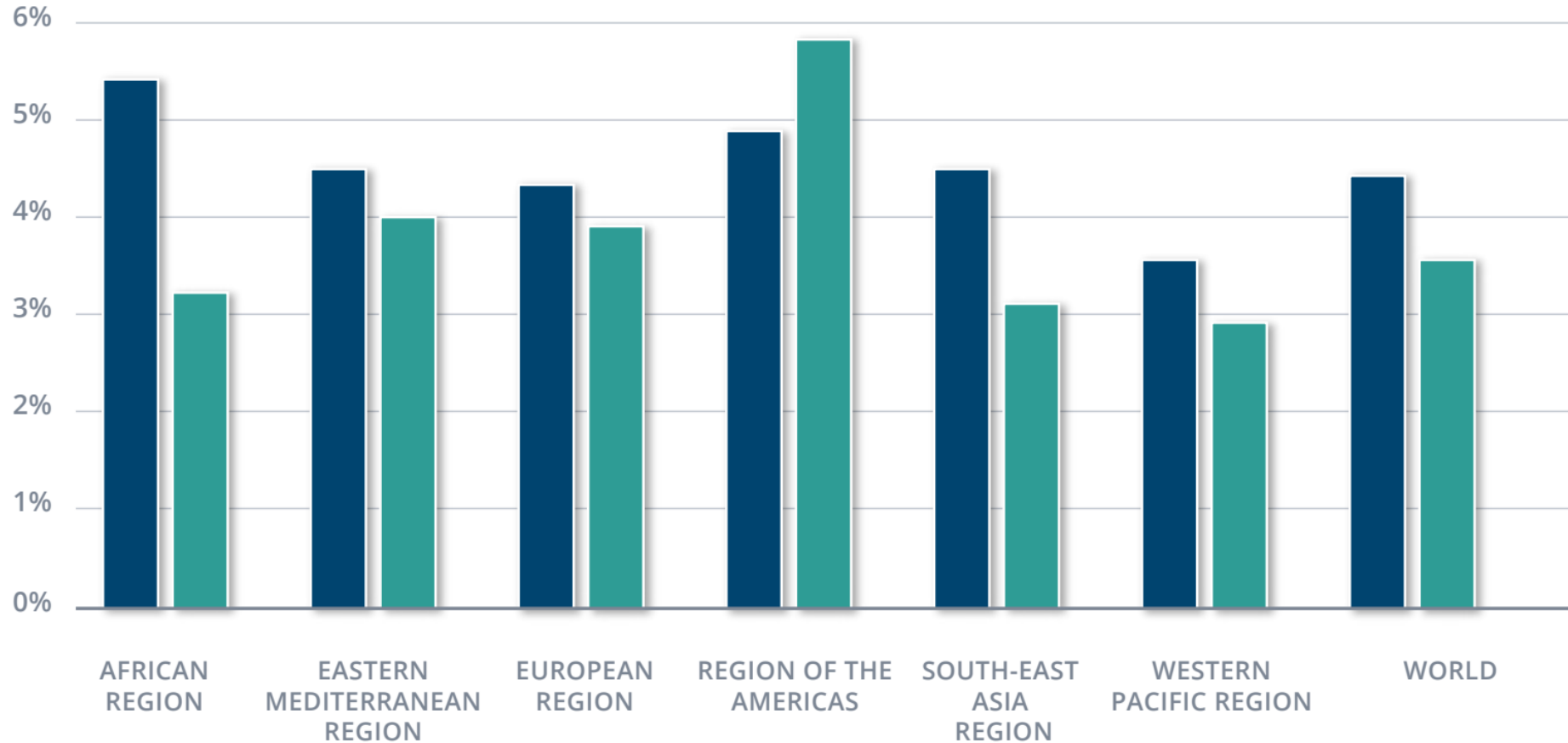
Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

(WHO, 2018)



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

■ Depressive disorders ■ Anxiety disorders



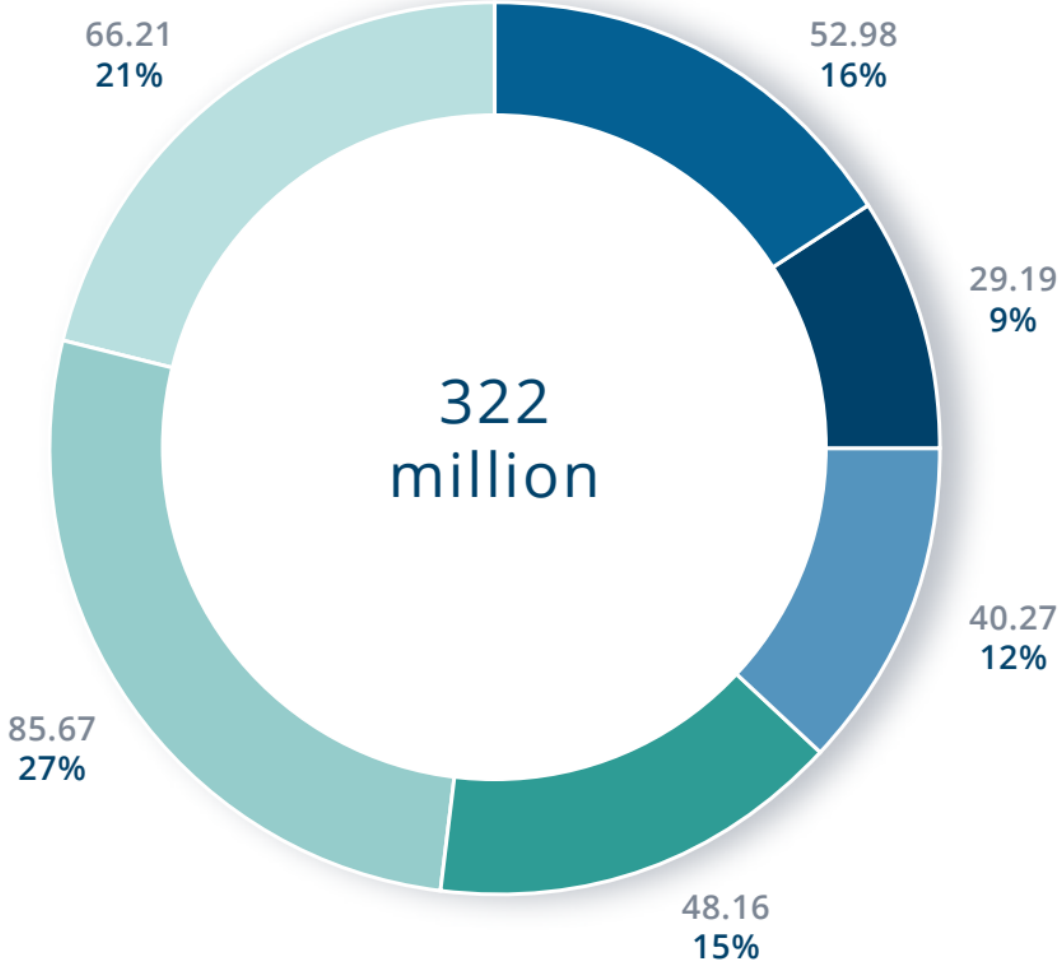
4%
Depressive disorder

3.6%A
Anxiety disorder

Source: Global Burden of Disease Study 2015

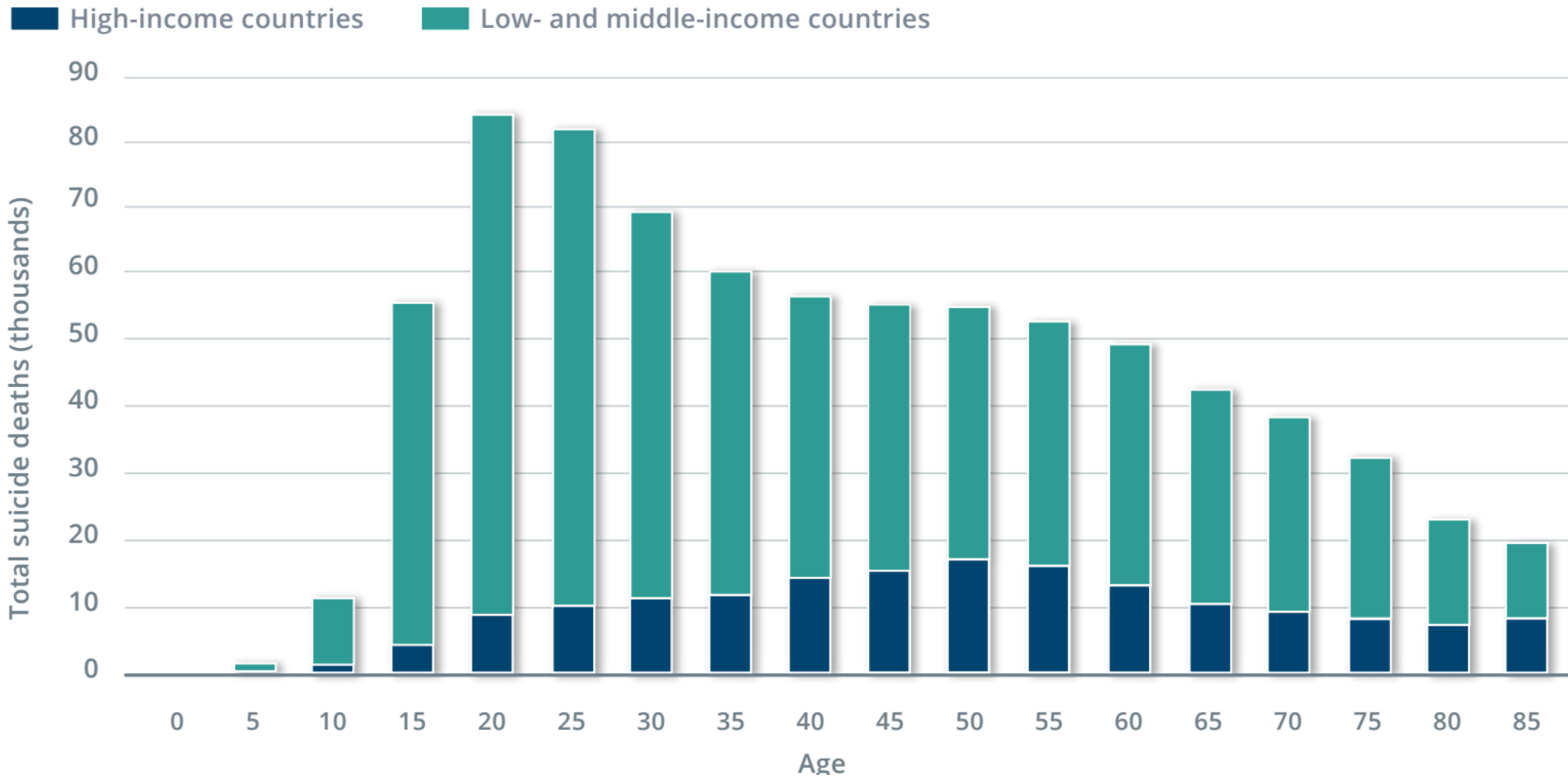
Cases of depressive disorder (millions), by WHO Region

- African Region
- Eastern Mediterranean Region
- European Region
- Region of the Americas
- South-East Asia Region
- Western Pacific Region



Source : WHO 2017

Global suicides, by age and country income level (thousands)



Source : WHO 2017

DEPRESSION



Germanwings Flight 9525

Flight path and last known location



- A320-211 Barcelona – Düsseldorf
- 144 plus 6 crew died



Analysis of NTSB Aircraft-Assisted Pilot Suicides: 1982–2014

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



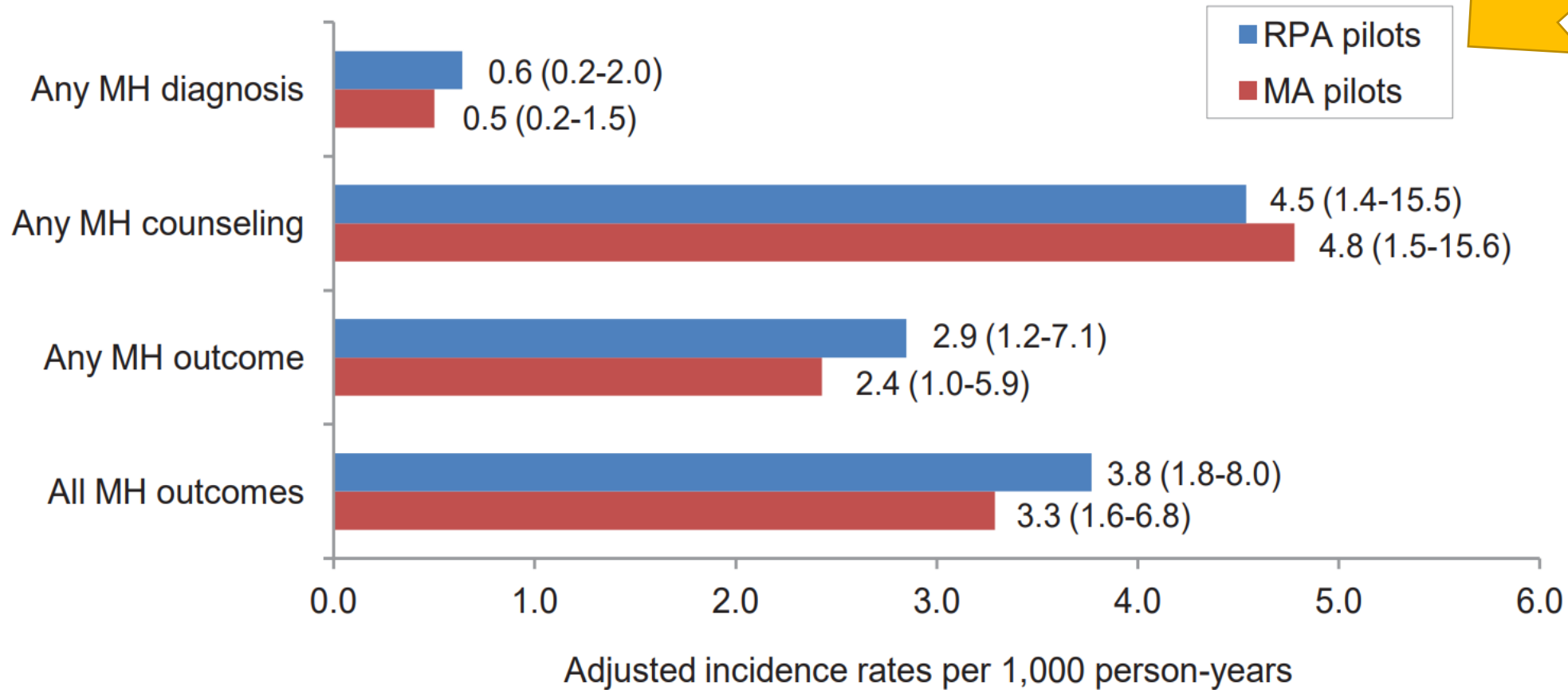
Source: Walton & Politano, 2015

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,



Incidence rates per 1,000 person-years with 95% confidence intervals
Abbreviations: MH, mental health; RPA, remotely piloted aircraft

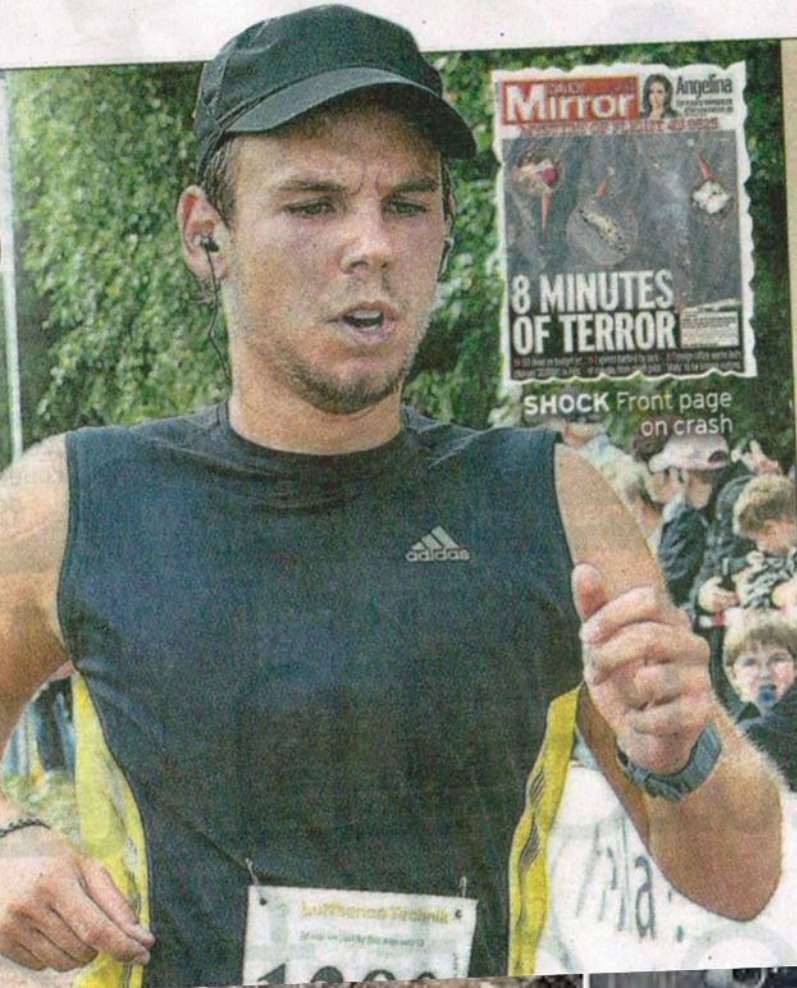
Source: Otto & Webber, 2013

Germanwings Flight 9525

- A320-211 Barcelona

TUESDAY 28.07.2015

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

Spain

European Comi

- International Air Trans
 - European Aviation Saf
 - Civil Aviation Medical
 - European Association
-
- random psychological

THE TOOTHPASTE PERSONALITY TEST



IMPULSIVE,
LIFE OF THE
PARTY



THRIFTY,
PRONE TO
DEPRESSION



STUBBORN,
SLOWWITTED



ANTISOCIAL,
BAD BREATH

EVANISHA

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.

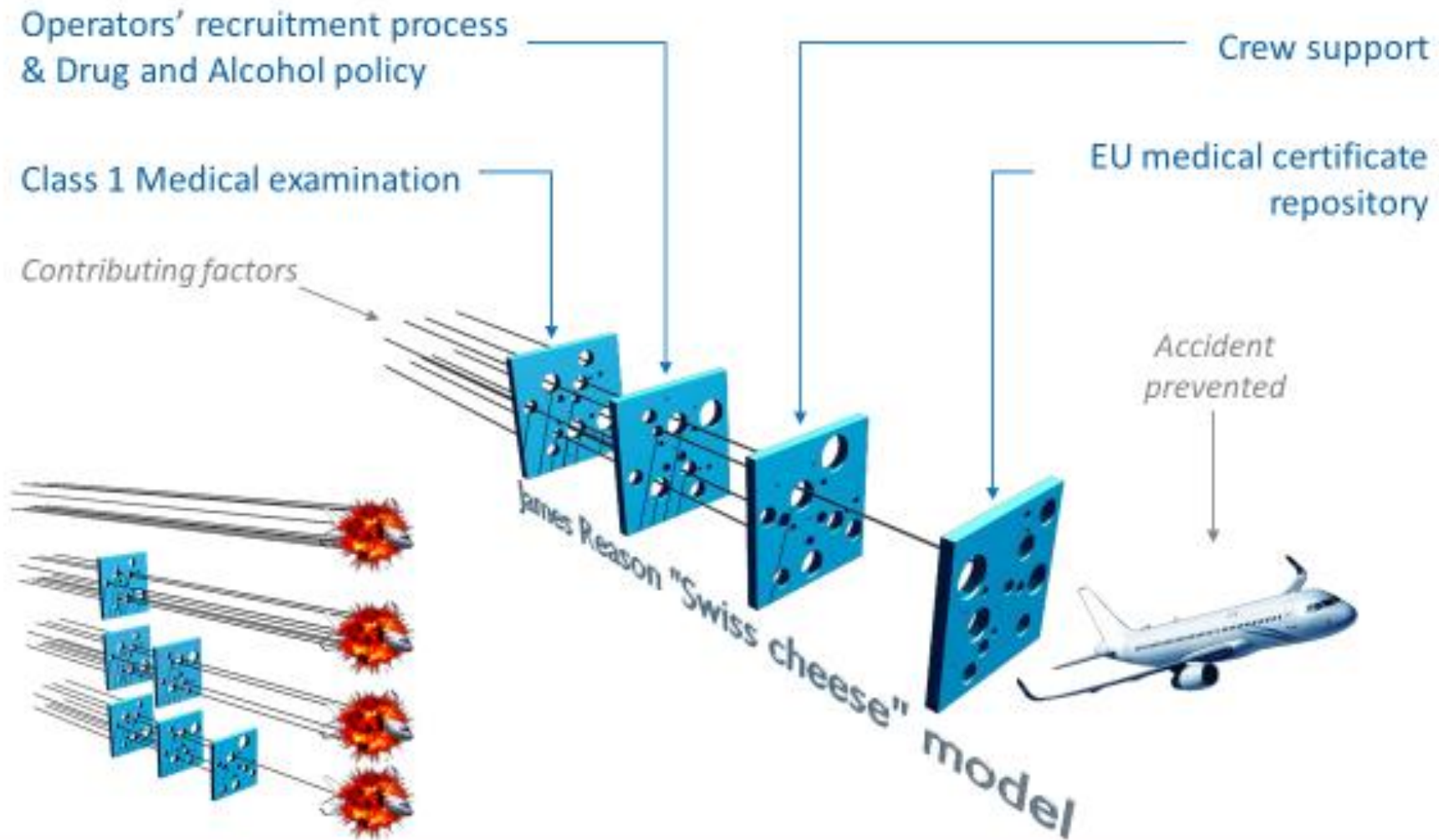
- The Germanwings Task Force examined the findings of the BEA accident report and assessed the adequacy of the European air safety and security rules.

- 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



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**
- <https://www.easa.europa.eu/newsroom-and-events/news/easa-strengthens-medical-requirements-pilots>

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 loose pilots licence.

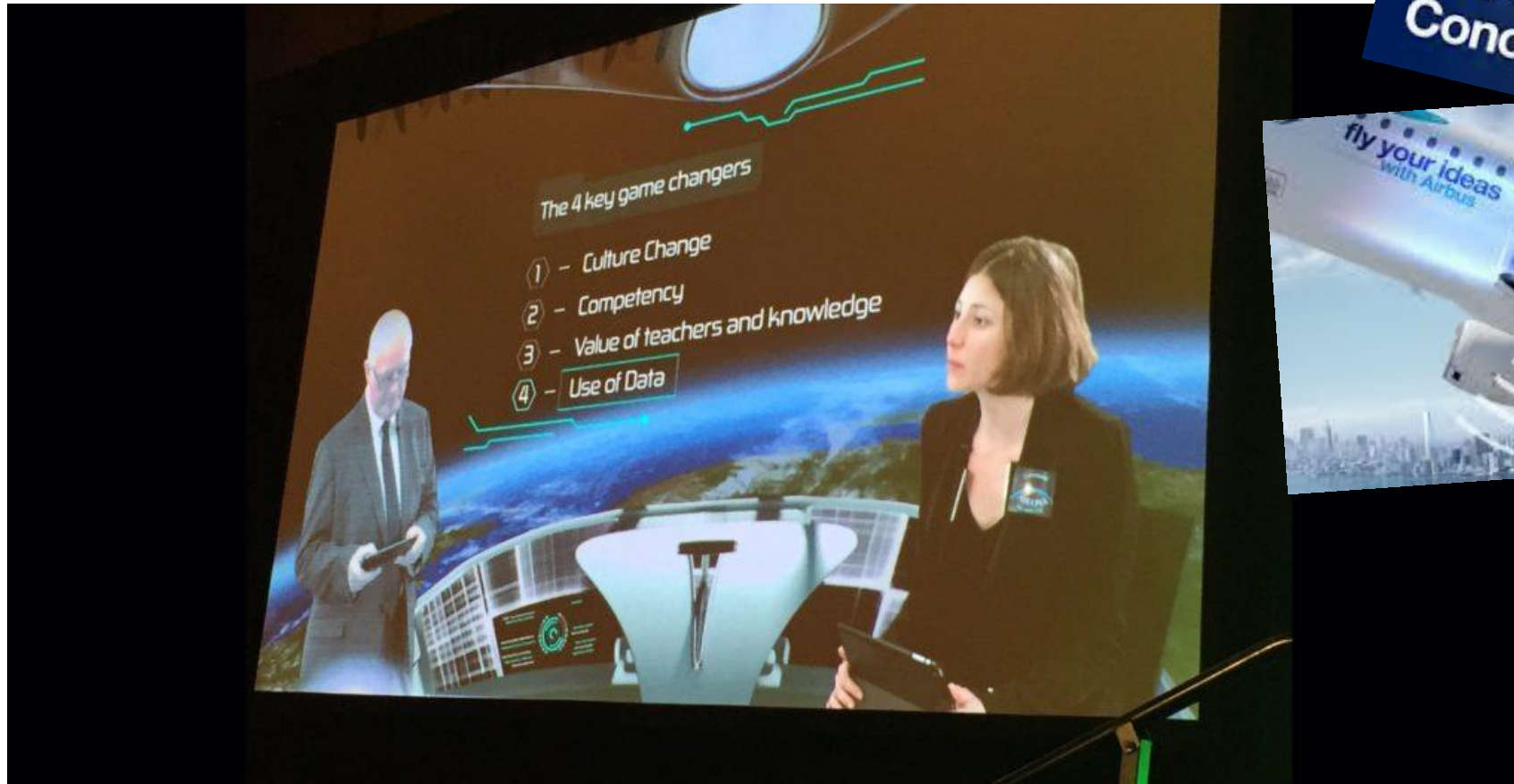
1. cardiovascular disease
2. **mental illness**

Future Growth is in Data Analytics

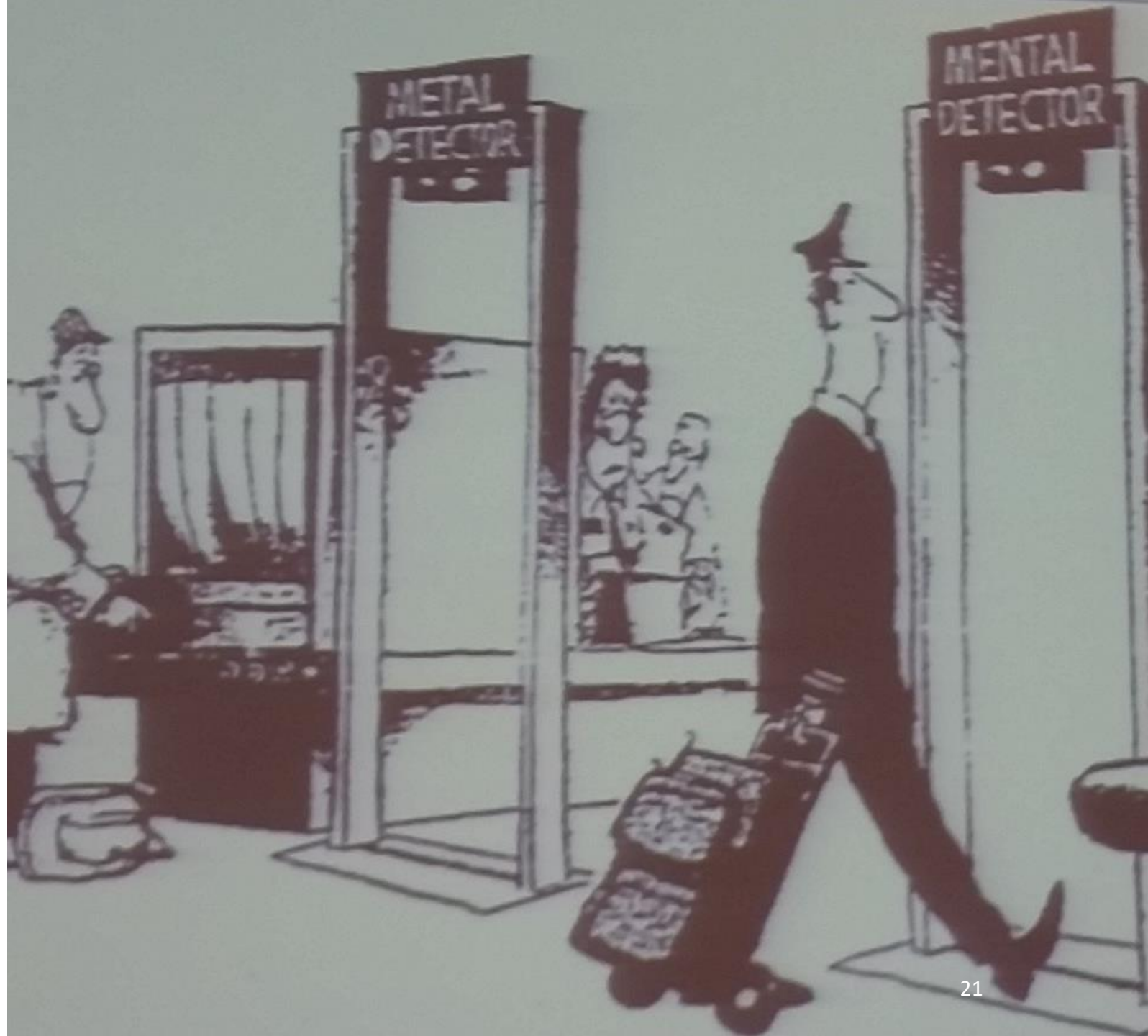
- predictive analytics,
- effective risk factor profiling,
- collecting and utilizing, individualized patient data



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.





EAAP33 Conference: Connecting People, Organisations and Technology in Aviation

- The next EAAP Conference will be held from 24-28 September 2018 at the Hotel Dubrovnik Palace in Croatia.
- www.conference.eaap.net
- www.eaap.net

Thank you

