Lived Experience
Wellbeing Project
BIOLOGICAL - PSYCHOLOGICAL - SOCIAL
Introduction

1. Big picture/opening remarks
2. About Project
3. Lived Experience & WRS
4. Mental health (Self reported, PHQ, GAD, )
5. Problem Space, Stakeholders & Aviation Org Supports/Culture
6. Peer Support
7. Stress Coping (individual level)
8. COVID Situation & Need for Resilience
9. Research Roadmap & Next steps
10. Conclusions
11. Resources & Supports
12. Acknowledgements
13. Questions
– Understanding lived experience & behavior.

– Understanding & measuring impact of Work-Related Stress (WRS) on wellbeing, performance and safety.

– Resilience: Why do some workers cope better than others?

– Change: Solutions for aviation workers and industry.

Should Mental Health be feared or embraced?
What Mental Health used to be defined as:
What Mental Health used to be defined as (and still is in some circles):

- Mental Wellness
- Mental Illness

Us vs Them
What Mental Health actually is:

Mental Illness → Mental Wellness

All of us on an ever fluctuating continuum
What Mental Health actually is:

All of us

On an ever fluctuating continuum

Mental Illness

Mental Wellness
Mental Wellness

Mental Illness

Us

Them
Mental Wellness

Mental Illness

Us

Them
Out of your **vulnerabilities** will come your **strength**.

- Sigmund Freud
## Research Overview

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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
Preliminary Field Research

- 2015
- Informal Interviews
- n=103
- No agenda, just curiosity...
- “Why were some pilots suffering?”
3 Pillars of Health

Wellbeing

Biological
- Sleep
- Exercise
- Diet

Psychological
- Attitude to life
- Stress Management & Coping Techniques
- Meaning & Purpose

Social
- Interpersonal relationships
- Support Network

Increased risk of Burnout

Increased risk of Fatigue

Dehydration

Night steps away from home

Dry air

Postponed defaecation

Restrictions on Toilet breaks

Increased risk of Gastrointestinal (GI) issues

Tight hamstrings

Seated for prolonged periods

Caffeine consumption

Irregular hours*

High stress & responsibility*

Disrupted sleep

Irregular meal times

Displaced sleep

Increased risk of Cancer

Increased risk of Diabetes & Metabolic Syndrome (MetS)

Increased risk of Cardiovascular Disease (CVD)

Increased risk of Obesity

Highly processed Diet

Confined to the cockpit*

Restrictions on Toilet breaks

Postponed defaecation

Bio Pillar of Pilot Wellbeing

Confined to the cockpit*

Restrictions on
Toilet breaks

Postponed defaecation

Burnout

Bio Pillar of Pilot Wellbeing

Source of Work Related Stress (WRS)

Symptom of WRS

Health Outcome

2015-2016

n=103
Germanwings
March 2015
Harvard Study (2016)

- Clinical Depression / Major Depressive Disorder (MDD) symptoms within last 2 weeks (n=1848)
  - 12.6%
- Having Suicidal Thoughts within last 2 weeks (n=1848)
  - 4.1%
Hazard Identification

“Say ... what’s a mountain goat doing way up here in a cloud bank?”

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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
Biological

“...different environment from the 90’s... health issues emerging now, not seen as often in the past, or not at all... young captains needing back surgery...”

“I’m a night owl, and when on early duties, stay awake early in the morning using coffee. Still can’t get to sleep until late, and end up only getting about 4 hours sleep...”

“...not simply sedentary, but effectively impaled into the seat... need to get permission to use the bathroom”
“...restricted movement due to locked cockpit door... can’t rotate in the chair... can’t stretch out or stand up straight... muscle cramps and stiffness”

“I never had IBS until I started work as a pilot...”

“...lack of breaks, including bathroom breaks. Postponed defecation is a big stress”
Psychological

“...feel dehumanised by management, referred to as a ‘fulltime equivalent’...just a staff number... feel objectified...”

“Get to ops, go to aircraft, get things moving, 30-minute turn-around, do it all over again. Don’t get 5 minutes to myself...”

“I’m not proud of my company...”
Psychological

- “Battle with management a constant source of stress and anxiety... they are bonus chasers and don’t experience the impact of their decisions... they’re not on the same team as the pilots”

- “The vagueness of some rules is a source of stress...”

- “We’re always understaffed...”
Social

– “...come home and your body clock is out of sync with the rest of the family”

– “...fixed-pattern roster has benefits, predictability, but can be very inflexible... missing major family and social events...”

– “We’re 5 miles up, hanging onto a pair of wings. It’s unnatural but we’ve normalised this... can’t just step out for a minute...”
Social

“...dragging your life behind you in a suitcase”

“We’re not special or unique, but our job is unique...”

“As a foreigner, it’s hard to make new friends, in a new country... cultural differences... hard to fit in”

“...fixed -pattern roster has benefits, predictability, but can be very inflexible... missing major family and social events...”
**Workshop Findings**  
(n=33)

**Impact Scenarios Identified by Pilots**  
(Cahill, Cullen & Gaynor, 2018)

1. **Pilot mostly coping well**
2. **Pilot mostly coping well but impact on physical health**
3. **Pilot experiencing difficulty but mostly coping well**
4. **Pilot mostly coping but long-term impacts**
5. **Pilots not coping**
6. **Extreme Cases**

**Safety Impact**

- None – pilot self-corrects
- None – pilot self-corrects
- Errors leading to a near-miss. Picked up by other pilot.
- N/A (operational/safety – but impacts in personal life)
- N/A (operational/safety – but impacts in personal life)
- Potential for Serious incident/Fatal Accident

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Trinity College Dublin  
Coláiste na Tríonóide, Baille Átha Cliath  
The University of Dublin

Workshop Findings (n=33)

Impact Scenarios Identified by Pilots

1. Pilot mostly coping well
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6. Extreme Cases

Safety Impact

- Errors leading to a Serious Incident or Fatal Accident
  - None – pilot self-corrects
  - N/A (operational/safety – but impacts in personal life)
  - Potential for Serious incident/Fatal Accident

(Cahill, Cullen & Gaynor, 2018)

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**Susceptibility vs Resilience**

**Wellbeing I vs Wellbeing II**
Lived Experience of a Pilot survey (n=1,059)

MENTAL HEALTH ISSUES?

SOME PEOPLE ARE RESILIENT, OTHERS ARE SUSCEPTIBLE...

WHY?
Sources of Work Related Stress (2018/2019 – Pre COVID)

- Anti-social hours
- Changing nature of job
- Fresh food?
- Divergence of values
- Inflexible annual leave
- Irregular hours
- Roster uncertainty
- Lack of engagement
- Long duties
- Sedentary nature of job
- Time away from home

Wellbeing Issues suffered due to job (2018/2019 – Pre COVID)

- Musculoskeletal: 73.5%
- Digestive: 58.5%
- Sleep difficulties: 81.0%
- Respiratory: 32.3%
- Cardiovascular: 14.5%
- Marital discord: 42.9%
- Loneliness: 49.9%
- Psychological distress: 36.9%

Pilots are suffering, but they are also adapting and coping (2018/2019 Survey)
How to Fly Straight & Level in Turbulent Times

Turbulent Times

How to Fly Straight & Level in Turbulent Times

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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
3 Big Questions

- Change
- Morale & Wellbeing of Safety-Critical Staff
- Lack and/or Delegation of Safety Oversight
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<th>Operational Scenario</th>
<th>Positives</th>
<th>Sources of Stress</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>In work</td>
<td>Salary and financial wellbeing.</td>
<td>Flying in a different environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Getting out of the house.</td>
<td>Keeping track of changing schedule</td>
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<td>Purpose obtained from job.</td>
<td>Managing childcare while working</td>
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<td>Financial wellbeing – reduced salary</td>
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<td></td>
<td>Uncertainty as to future financial security</td>
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<td>Different treatment of colleagues – guilt, discrimination</td>
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<td>Uncertainty about status of co-pilot (severity of suffering)</td>
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<td>Potential bereavement</td>
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<td>Social isolation</td>
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<td>Loss of social network</td>
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# COVID 19: Wellbeing – Positives & Challenges

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<tr>
<td>2</td>
<td>Off work</td>
<td>Improved sleep.</td>
<td>Financial wellbeing – reduced salary and or unemployment</td>
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<tr>
<td></td>
<td></td>
<td>Improved diet.</td>
<td>Uncertainty as to financial security</td>
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<td>More time with family.</td>
<td>Social isolation</td>
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<td>Opportunity to take exercise (albeit limited</td>
<td>Loss of social network</td>
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<tr>
<td></td>
<td></td>
<td>with government rules/2km).</td>
<td>Difficulties maintaining social network</td>
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<td></td>
<td></td>
<td></td>
<td>Loneliness</td>
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<td></td>
<td>Not enough ‘me time’</td>
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<td></td>
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<td>Too much time with family</td>
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<td>Lack of routine</td>
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<td>Returning to work</td>
<td>Getting out of the house.</td>
<td>Emotional instability</td>
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<td>Loss of social network</td>
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<td></td>
<td>Social interaction.</td>
<td>Job proficiency and potential loss of confidence</td>
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<td>Training and competency – out of practice</td>
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The Impact of COVID-19 Pandemic on Aviation Workers & The Aviation System

- Anonymous online survey
- Involved Stakeholders in survey design
- PHQ-9 and GAD-7
- Snapshot (3 weeks – August 2020)
- Diverse sample
  - Age
  - Gender
  - Experience
- Targeted all Safety-Critical workers in Aviation
  - 2,050 participants
  - 38% Pilots
  - 19% Cabin Crew
  - 11% Air Traffic Control
  - 8% Maintenance/Engineering
Harvard (2016) - Pilots Only
TCD (2019) - Pilots Only
TCD (2020) - Pilots Only
TCD (2020) - All Aviation Workers

Having suicidal thoughts

COVID-19
Wellbeing Questions

How am I feeling?

How am I coping?

What can I do for myself and others?


Workplace issues associated with a greater risk of developing common mental health problems

Mental Health Difficulties

- Occupational uncertainty
- Imbalanced job design
  - High job demands
  - Low job control
  - High effort-reward imbalance
- Lack of value and respect
  - Low relational justice
  - Low procedural justice
  - Role stress
  - Bullying
  - Low social support

Self Reported Mental Health (2020 Survey)

- Very good
- Good
- Fair
- Bad
- Very bad
- Don’t know
- Prefer not to say

Categories: All, Pilots, Cabin Crew, ATC, MX, Others

2020 (COVID)
My Mental Health Has Worsened Since COVID-19 Pandemic

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

2020 (COVID)
2020 (COVID)
HAS YOUR JOB STATUS CHANGED DURING THE COVID-19 PANDEMIC? (PHQ-9)

- None
- Mild
- Moderate
- Moderately Severe
- Severe

2020 (COVID)

- YES (N=889):
  - None: 24.5%
  - Mild: 37.6%
  - Moderate: 21.5%
  - Moderately Severe: 9.4%
  - Severe: 7.0%

- NO (N=907):
  - None: 44.2%
  - Mild: 34.5%
  - Moderate: 13.9%
  - Moderately Severe: 5.4%
  - Severe: 2.0%
ARE YOU RECEIVING REDUCED SALARY? (PHQ-9) (N=440)

- None
- Mild
- Moderate
- Moderately Severe
- Severe

- **YES** (N=423):
  - None: 28.1%
  - Mild: 37.1%
  - Moderate: 9.7%
  - Moderately Severe: 5.0%
  - Severe: 0.0%

- **NO** (N=17):
  - None: 0.0%
  - Mild: 17.6%
  - Moderate: 0.0%
  - Moderately Severe: 0.0%
  - Severe: 11.8%

2020 (COVID)
ARE YOU RECEIVING REDUCED SALARY? (PHQ-9) (N=440)

- **NONE**: 28.1% (Yes n=423), 0.9% (No n=17)
- **MILD**: 37.1% (Yes n=423), 70.6% (No n=17)
- **MODERATE**: 20.1% (Yes n=423), 17.6% (No n=17)
- **MODERATELY SEVERE**: 9.7% (Yes n=423), 0.0% (No n=17)
- **SEVERE**: 5.0% (Yes n=423), 11.8% (No n=17)

2020 (COVID)
ANXIETY LEVELS PER AGE GROUP (GAD)

None/Little  |  Mild  |  Moderate  |  Severe

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<th>Moderate</th>
<th>Severe</th>
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<tr>
<td>&lt;25 (N=84)</td>
<td>25.0%</td>
<td>30.5%</td>
<td>44.9%</td>
<td>9.6%</td>
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<tr>
<td>25-35 (N=499)</td>
<td>21.6%</td>
<td>37.3%</td>
<td>38.0%</td>
<td>2.5%</td>
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<tr>
<td>36-45 (N=536)</td>
<td>23.8%</td>
<td>37.8%</td>
<td>38.6%</td>
<td>0.8%</td>
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<td>46-55 (N=427)</td>
<td>19.8%</td>
<td>37.5%</td>
<td>37.5%</td>
<td>5.2%</td>
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<tr>
<td>56-65 (N=228)</td>
<td>28.9%</td>
<td>44.4%</td>
<td>44.4%</td>
<td>4.8%</td>
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2020 (COVID)
HAS YOUR JOB STATUS CHANGED DURING THE COVID-19 PANDEMIC? (GAD)

- None/Little
- Mild
- Moderate
- Severe

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2020 (COVID)
ARE YOU RECEIVING REDUCED SALARY? (GAD) (N=440)

- **Yes (N=423)**
  - None/Little: 29.8%
  - Mild: 40.7%
  - Moderate: 12.8%
  - Severe: 16.8%

- **No (N=17)**
  - None/Little: 35.3%
  - Mild: 41.2%
  - Moderate: 5.9%
  - Severe: 17.6%

2020 (COVID)
Significant increases in Mental Health difficulties post-COVID

Self-report data from a nationally representative Irish sample (N = 1,041) collected in April 2020.
- positive for depression (22.77%)
- generalized anxiety (20.00%)
- anxiety/depression (27.67%)
- Screening positive for anxiety/depression was associated with
  - younger age
  - female sex
  - loss of income due to COVID-19
  - COVID-19 infection
  - higher perceived risk of COVID-19 infection.

Hyland et al. (pre-print)

Self-report data from a nationally representative UK sample (N = 2025) collected in March 2020.
- depression (22.12%)
- anxiety (21.63%)
- Anxiety/Depression (27.75%)

Screening for anxiety or depression, and trauma symptoms was associated with
- younger age
- presence of children in the home
- high estimates of personal risk
- low income
- loss of income, and pre-existing health conditions in self/others

Shevlin et al. (pre-print)
Problem Space, Stakeholders & Aviation Org Supports/Culture

Defining/understanding the problem

Identifying and testing solutions

Choosing and implementing a solution
Problem Space, Stakeholders & Aviation Org Supports/Culture

Defining/understanding the problem

- Identifying and testing solutions
- Choosing and implementing a solution

HUMAN FACTORS ACTION RESEARCH

STAKEHOLDER EVALUATION

Understanding Problem | Evaluating Lived Experience & Existing Solutions | Recommendations
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Understanding Problem | Evaluating Lived Experience & Existing Solutions | Recommendations
### Stakeholders & Problem Space

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<tr>
<td>1. Aviation workers</td>
<td>1. Job demands, managing WRS &amp; home/work interface</td>
</tr>
<tr>
<td>2. Aviation organisations supporting them</td>
<td>2. Attitudes to mental health and reporting problems</td>
</tr>
<tr>
<td>3. People &amp; community supporting them</td>
<td>3. Coping strategies &amp; behaviours</td>
</tr>
<tr>
<td>4. Regulator</td>
<td>4. Aviation organisation: culture &amp; design of existing supports (training, EAP, peer support etc)</td>
</tr>
<tr>
<td>5. Aviation industry</td>
<td>5. Aviation organisation: approach to risk/safety management</td>
</tr>
<tr>
<td>7. Government</td>
<td>7. COVID 19 Pandemic</td>
</tr>
</tbody>
</table>
Stakeholders: Principles & Values

1. Aviation Workers
2. Aviation Organisations supporting them
   - Airlines
   - MRO
3. Regulator
   - EASA

Professionalism | Duty of care/responsibility | Compassion | Safety Oversight | Responsible work

WELLBEING
### States (Aviation Workers)

<table>
<thead>
<tr>
<th>State to Promote/Support</th>
<th>Manage/Mitigate/Reduce</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellness in work</td>
<td>Work related stress/WRS, Anxiety in work, Pressure, Poor mental health in work</td>
<td>Worsening of health in work, Work contributing to health problems, Poor mental health, Presenteeism, Absenteeism</td>
</tr>
<tr>
<td>Psychological wellbeing in work</td>
<td>Work related stress/WRS, Anxiety in work, Pressure, Poor mental health in work</td>
<td>Worsening of health in work, Work contributing to health problems, Poor mental health, Presenteeism, Absenteeism</td>
</tr>
<tr>
<td>Fit for work (fatigue levels)</td>
<td>Fatigue</td>
<td>Exhaustion &amp; Burnout</td>
</tr>
<tr>
<td>Healthy behaviour</td>
<td>Unhealthy behaviour</td>
<td>Unhealthy behaviour</td>
</tr>
<tr>
<td>Coping/adaptive coping, Self-management of health</td>
<td>Maladaptive coping</td>
<td>Maladaptive coping, Self-harm</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Loss of control/agency</td>
<td>Post-neurotic subject at work</td>
</tr>
<tr>
<td>Identity in work</td>
<td>Loss of identity</td>
<td>Objectification of worker</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Challenges to professionalism</td>
<td>Lack of professionalism</td>
</tr>
<tr>
<td>Safe and effective performance</td>
<td>Performance errors, Unsafe behaviour, Near misses (safety events), Minor safety events</td>
<td>Performance Errors, Safety events, Incidents and accident in work</td>
</tr>
</tbody>
</table>
### States (Aviation Organisation)

<table>
<thead>
<tr>
<th>State to Promote/Support</th>
<th>Manage/Mitigate/Reduce</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy workforce</td>
<td>Health issues arising from stress in work, poor MH in work, absenteeism, presenteeism</td>
<td>Unhealthy workforce, absenteeism, presenteeism,</td>
</tr>
<tr>
<td>Positive work culture, culture of attending to wellbeing, disclosing problems</td>
<td>Fear disclosing MH problems, poor communications between staff regarding health and wellbeing</td>
<td>Unhealthy work culture, lack of disclosure</td>
</tr>
<tr>
<td>Responsible business (CSR &amp; positive contribution to society and environment)</td>
<td>Negative impact – people, society, environment</td>
<td>Negative impact – people, society, environment</td>
</tr>
<tr>
<td>Compliance with regulatory requirements</td>
<td>Compliance breech and penalties</td>
<td>Compliance breech and penalties</td>
</tr>
</tbody>
</table>
Aviation Company: Wellbeing Approach & Culture

- Identity, principles & values/attitudes, culture
- Processes and practices associated with org functions
  - Occupational Health & Support
  - Training
  - EAP
  - Peer Support (small few within company)
  - Safety/Risk
  - Flight Planning/Rostering
My Company Cares About My Wellbeing

- **TCD Survey 2018/2019** (Pilots only, N=1059)
- **TCD COVID Survey 2020** (Pilots Only, N=729)
- **TCD COVID Survey 2020** (All Aviation Workers, N=2050)

---

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My Company Cares About My Wellbeing

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2020 (COVID)
My Company cares about my wellbeing

2020 (COVID)
The process for supporting positive mental health and managing mental health problems in Pilots SHOULD BE clearly defined at an airline level.

2018/2019 (Pre COVID)
The process for supporting positive mental health and managing mental health problems in Pilots **IS** clearly defined at my airline.
Wellness Programmes Provided to Pilots at Airline

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>35.00%</td>
</tr>
<tr>
<td>No</td>
<td>20.00%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5.00%</td>
</tr>
</tbody>
</table>

2018/2019 (Pre COVID)
2018/2019 (Pre COVID)

How effective do you feel these programmes are?
The Safety Management practices at my airline adequately address issues concerning the support & management of Pilot mental health & wellbeing.

2018/2019 (Pre COVID)
Supporting and maintaining positive mental health for aviation 'Safety-Critical Workers' during the COVID-19 pandemic is a key priority for my airline.

2020 (COVID)
Has your company provided you with any specific support to cope with stresses arising from COVID and any changes to your wellbeing?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin Crew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2020 (COVID)
2020 (COVID)
Although your company has not provided any support, would you use this if provided?

- All: 60.00% Yes, 40.00% No
- Pilots: 55.00% Yes, 45.00% No
- Cabin Crew: 70.00% Yes, 30.00% No
- ATC: 50.00% Yes, 50.00% No
- MX: 55.00% Yes, 45.00% No
- Others: 60.00% Yes, 40.00% No
Aviation workers who are currently working in "Safety-Critical' roles need support to maintain their wellbeing during the COVID-19 pandemic
Those 'Safety-Critical' aviation workers who are currently not working, need support to maintain their wellbeing now, so that they are fit to return to work post the COVID-19 pandemic.
Wellbeing Support Provided by Company (COVID)

1. In house company services/support
2. Outside services (paid for by company)
3. Signposted to services outside the company
Examples of Wellbeing Support Provided by Company (COVID)

<table>
<thead>
<tr>
<th>1: In house company services/support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Online wellbeing seminars - power point presentation on wellbeing</td>
</tr>
<tr>
<td>• Access to online resources</td>
</tr>
<tr>
<td>• A phone call to check in with us</td>
</tr>
<tr>
<td>• Virtual coffee/meet up</td>
</tr>
<tr>
<td>• Newsletters on yoga and meditation</td>
</tr>
<tr>
<td>• Flexible working hours</td>
</tr>
<tr>
<td>• Temperature testing</td>
</tr>
<tr>
<td>• New COVID safety procedures</td>
</tr>
<tr>
<td>• The company distributed information about the Pilot Peer Support Programme</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2: Outside Services (Paid for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Counselling with Psychologist</td>
</tr>
<tr>
<td>• Phone line counselling support</td>
</tr>
<tr>
<td>• Physical health support / GP/Medical Assistance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3: Referral Non Company Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Peer Assistance Network (PAN)</td>
</tr>
<tr>
<td>• Mindfulness apps</td>
</tr>
</tbody>
</table>

Focus on EAP, Peer Support & Training
Examples of Support (COVID)
Examples of Support (COVID)

Wordcloud Frequency 20
5. Problem Space, Stakeholders & Wellbeing Culture

- Defining/understanding the problem
  - Identifying and testing solutions
  - Choosing and implementing a solution

Culture, Values & Leadership?

Need to embed wellbeing
- Training
- Occupational health and support
- Safety/Risk
- Flight Planning/Rostering

Org supports are provided – suitability/fit for purpose?

Roles & responsibilities need consideration

Wellbeing Culture?

COVID Context & Need for Support

Need other solutions/ change existing approach...
Peer Support
Have you ever spoken to someone about a MH issue you are experiencing or have experienced?

- **Yes**
  - Pilots (n=630)
  - CCM (n=351)
  - ATC (n=201)
  - MX (n=138)

- **No**
Did you willingly disclose it to your employer?

Yes

No

Pilots (n=258)  CCM (n=198)  ATC (n=89)  MX (n=58)
If you were feeling anxious or depressed, who would you talk to?

- Partner/Spouse
- Family
- Friend
- Medical
- Work colleague
- Line Manager
- PSP
- HR/EAP/OH
- Nobody

Legend:
- Pilots
- CCM
- ATC
- MX
If you were feeling anxious or depressed, who would you talk to?

- Work colleague
- Line Manager
- PSP
- HR/EAP/OH
- Nobody

- Pilots
- CCM
- ATC
- MX
Would you disclose it to your employer?

Yes
- Pilots (n=388)
- CCM (n=148)
- ATC (n=110)
- MX (n=78)

No
- Pilots (n=388)
- CCM (n=148)
- ATC (n=110)
- MX (n=78)
If you thought a work colleague had a serious mental health issue and might present a safety risk, would you report it?

Yes: Pilots (n=646), CCM (n=148), ATC (n=110), MX (n=78)

No: Pilots (n=646), CCM (n=148), ATC (n=110), MX (n=78)
Who would you raise your concern with?

- Line Manager
- Another colleague
- HR/EAP/OH
- AME
- Union Rep
- PSP

Legend:
- Pilots
- CCM
- ATC
- MX
Are you aware of the existence of a PSP within your organisation or staff representative group?

- Pilots (n=643)
- CCM (n=344)
- ATC (n=198)
- MX (n=135)

[Bar chart showing percentages]
If needed, would you approach the PSP for peer support services?

- Pilots: Yes 80%, No 20%
- CCM: Yes 50%, No 50%
- ATC: Yes 40%, No 60%
- MX: Yes 70%, No 30%
If a PSP was in place and if needed, would you approach it for peer support services?

<table>
<thead>
<tr>
<th>Group</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilots</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>CCM</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>ATC</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>MX</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
7. Stress Coping & Resilience
Stress Coping & Self Management

- People vary in relation to their ability to cope successfully with stress (including WRS)
- **The practice of healthy behaviours strengthens the person’s resistance to stress**
- Substitution of maladaptive coping with more adaptive coping
- Common stress coping strategies include exercise, the practice or relaxation techniques and seeking social support and/or social participation.
- **Resilience**
### 7. Stress Coping & Resilience

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>Group</th>
<th>Method/What</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2015 to 2016</td>
<td>Pilots (N= 103)</td>
<td>Informal Interviews</td>
</tr>
<tr>
<td>2</td>
<td>2018</td>
<td>Pilots (N=33)</td>
<td>Workshops</td>
</tr>
<tr>
<td>3</td>
<td>2018/2019</td>
<td>Pilots (N= 1,059)</td>
<td>Wellbeing Survey</td>
</tr>
<tr>
<td>4</td>
<td>2019/2020</td>
<td>Aviation stakeholders (N=15)</td>
<td>Workshops/Interviews</td>
</tr>
<tr>
<td>5</td>
<td>August 2020</td>
<td>All aviation workers (N=2050)</td>
<td>COVID Survey</td>
</tr>
</tbody>
</table>
7. Stress Coping & Resilience

Coping with the stress and anxiety of the COVID-19 Pandemic
(1) in work, (2) lost job/off work, (3) returning to work

Wellbeing Survey 2018/2019

COVID Survey 2020
Using CS Manage WRS

- TCD (2020) – All Workers
- TCD (2020) – Pilots
- TCD (2019) – Pilots Only

0.00% 10.00% 20.00% 30.00% 40.00% 50.00% 60.00% 70.00%
Coping Strategies

2020 (COVID)

- Not all pilots are suffering
- Nearly 60% are using coping mechanisms to manage WRS and its impact on wellbeing
- Pilots using coping mechanisms were found to have lower depression severity levels.

- All stress cannot be removed from the work life of pilots.
- A high stress situation is not always detrimental for a person’s wellbeing.
- The use of coping strategies enables a person to manage WRS in a healthy manner and build resilience.

Frequency
- Daily
- Several times per week
- Once per week
- 2–3 times per month
- Once per month or less

Number of pilots

Exercise, Diet, Sleep, Relaxation, Talking about stress, Professional supports, Talk with colleagues, Talking with family & friends
## Adaptive & Maladaptive Coping (Survey, 2018/2019)

<table>
<thead>
<tr>
<th>Adaptive</th>
<th>Maladaptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Try to do things I enjoy (eating out, watch TV, hobbies, nature/outdoors etc.)</td>
<td>Taking time off work</td>
</tr>
<tr>
<td>Socialise/spending time with family &amp; friends</td>
<td>Taking ‘me time’</td>
</tr>
<tr>
<td>Take exercise/sport</td>
<td>Keeping journal</td>
</tr>
<tr>
<td>Manage my diet and nutrition</td>
<td>Positive thinking</td>
</tr>
<tr>
<td>Focus on sleep &amp; rest</td>
<td>Using mobile apps</td>
</tr>
<tr>
<td>Use specific relaxation-focus behaviour (e.g. yoga, meditation, massage etc.)</td>
<td>Use Computer Based Tools (as part of a clinical support programme)</td>
</tr>
<tr>
<td>Talk about my stress</td>
<td>Intimacy/sexual activity</td>
</tr>
<tr>
<td>Read books about stress management</td>
<td>Prayer/spirituality</td>
</tr>
<tr>
<td>Use professional/organised supports</td>
<td>Keep busy</td>
</tr>
<tr>
<td>Holidays</td>
<td>Volunteering</td>
</tr>
<tr>
<td>Moving to Part/Time working arrangements</td>
<td>Be prepared for work</td>
</tr>
<tr>
<td></td>
<td>Avoidance/Ignore</td>
</tr>
<tr>
<td></td>
<td>Smoking</td>
</tr>
<tr>
<td></td>
<td>Substance misuse - alcohol</td>
</tr>
<tr>
<td></td>
<td>Substance misuse - drugs</td>
</tr>
<tr>
<td></td>
<td>Temper/lash out/aggressive behaviour</td>
</tr>
<tr>
<td></td>
<td>Self-harm</td>
</tr>
<tr>
<td></td>
<td>Withdraw from people</td>
</tr>
<tr>
<td></td>
<td>Disordered eating</td>
</tr>
<tr>
<td></td>
<td>Screaming/throwing things/tantrums</td>
</tr>
<tr>
<td></td>
<td>Crying</td>
</tr>
</tbody>
</table>
Adaptive & Maladaptive Coping (Survey, 2018/2019)

- Have a life outside flying.
- Being outdoors for even just a short walk, even in winter/bad weather and on short layovers
- Try to read books on staying positive. And I day dream about winning the lottery so I can quit being a pilot.
- Sleep more. Go back to bed after school run
- At my home you will not find anything aviation-related. Not reading anything about my company during off time.
- Creating connection with colleagues by personally offering emotional health courses
- Deep breathing, positive self talk.
- Cigarettes, sex
- Bitch
Coping Strategies & Depression Severity

The 3 coping strategies associated with odds of having a higher depression severity level are:

1. Discussing WRS with colleagues 2-3 times a month
2. Focusing on relaxation behaviour once a week
3. Focusing on relaxation behaviour several times a week

The coping strategies most associated with lower depression severity levels are:

1. Focussing on sleep daily
2. Focussing on exercise several times a week
3. Focussing on exercise daily
4. Focussing on exercise 2 to 3 times a month
COVID Situation & Need for Resilience

**Pre COVID-19**, pilots experiencing WRS and wellbeing challenges

**COVID: OPERATIONAL SCENARIOS (FSF)**

1: In work

2: Off work

3: Going back to work

**Is EASA IR/Guidelines Enough?**
Have we the right tools to cope (Pilots, Airlines, Industry)?

How to Fly Straight & Level in Turbulent Times

Resilience & Wellbeing Journey

- **Resilience** is defined as the ‘demonstration of positive adaptation in the face of significant adversity

- It is a response to stressful circumstances, as opposed to a trait or capacity residing in the person (Fikretoglu and McCreary, 2012)

- **Process**

- **Wellbeing Journey** (FSF, 2020)

3. The Wellbeing Behaviours

- Exercise
- Sleep
- Activities
- Stress
- Diet
- Relationships
You’ve made it!
Now maintain it

4. The Wellbeing Toolkit

3 Wellbeing Questions

How am I feeling?
How am I coping?
What can I do for myself and others?


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## Wellbeing Management Across the Three Pillars

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Example</th>
<th>How Am I Doing? Current Rating/ Status? (Good, Ok, Poor)</th>
<th>What Can I Do to Improve this? What Am I Currently Doing to Improve this?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological</td>
<td>Sleep, Diet, Exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Attitude to life, Mood, Stress Management, Use of Coping Strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Support network, social support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Weekly/Daily Checklist

## Weekly To Do

<table>
<thead>
<tr>
<th>AREA</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diet</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>- Breakfast</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>- Lunch</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>- Dinner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Exercise</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
9. Research Roadmap & Next Steps

WHERE WE ARE

- Pre 911
- Germanwings (2015)
- Pre COVID
- Post COVID
- Safety 0/Safety I
- Wellbeing 0
- Safety I
- Wellbeing I

WHERE WE NEED TO BE

- Wellbeing II
- Safety II

Safety II.1

Lived Experience Wellbeing Project
BIOLOGICAL - PSYCHOLOGICAL - SOCIAL

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PEOPLE
PROCESS
PERFORMANCE
Research Roadmap: Tools for Pilots, Airline & Industry

Self Management & Wellbeing-II

1: Pilot Tools (Self Management/Off Duty)
2: Pilot Tools (On Duty)
3: Tools for EAP
4: Tools for Aeromedical Examiners
5: SMS & Flight Planning/Rostering/Wellbeing Integration Tools

Research Roadmap: Tools for Pilots, Airline & Industry

Next Steps: Wellbeing Community & Virtual Challenge

1. Join a User Community
2. Survey on tools
3. Interviews
4. Participate in a wellbeing game/virtual challenge

In progress
- For more information, please email cahilljo@tcd.ie
- Or see: https://www.tcd.ie/cihs/projects/pilot-lived.php
Conclusions

- Aviation organisations need to rethink their **objectives and approach** in terms of providing **appropriate wellbeing supports** for those currently in work and off work.
- Those people who have lost their jobs and/or are experiencing MH difficulties require **immediate support**
- The **roles and responsibilities of different stakeholders** (i.e. workers, organisations, regulator, society/charities, government) in relation to managing wellbeing require rethinking and clarification.
- Aviation organisations need to address issues pertaining to their **wellbeing culture** – promoting healthy behaviour, supporting disclosure around mental health issues/challenges, promoting awareness of MH.
Conclusions

- Organisations and workers need to manage **specific sources of stress** (including work related stress) and **anxiety**, and **specific impact of COVID 19** on aviation workers.
- Aviation workers across different roles are **practising self-care** – this should be encouraged at all levels – linking to promoting a wellbeing culture and safe behaviour.
- Need for **peer support for all aviation workers** – not just pilots.
- The regulator needs to address the **timeline for new regulation** in relation to the management of wellbeing and mental health for safety critical workers – this **cannot be postponed** any further.
– The World Health Organisation have called for **reliable information** about mental health changes associated with the pandemic to be used by policymakers and service providers, so that **decisions are underpinned by knowledge** of the extent of changes in population mental health, and of who is most **vulnerable to symptoms of mental distress**.

Moving Beyond Compliance, Safety-II Approach & Solutions for Pilots & Airlines
Cognition, Technology & Work
https://doi.org/10.1007/s10111-019-00586-z

Stress Coping Booklet
Turbulent Times

The Requirements for New Tools for Use by Pilots and the Aviation Industry to Manage Risks Pertaining to Work-Related Stress (WRS) and Wellbeing....
https://www.mdpi.com/2227-7080/8/3/40

Lived Experience Wellbeing Project
aviationwellbeing@gmail.com
Supports

If you need to talk to somebody about this, we suggest you approach a close family member or friend, or a health professional such as your own Doctor.

<table>
<thead>
<tr>
<th>Source</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samaritans</td>
<td><a href="https://www.samaritans.org">https://www.samaritans.org</a></td>
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<tr>
<td>EASA COVID-19 Support Material</td>
<td><a href="https://www.easa.europa.eu/community/content/covid-19-support-material">https://www.easa.europa.eu/community/content/covid-19-support-material</a></td>
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<td>Aviation Action</td>
<td><a href="https://aviationaction.org/">https://aviationaction.org/</a></td>
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<td>European Aviation Mental Well-being Initiative (EAM-WELL)</td>
<td><a href="http://eppsi.eu/">http://eppsi.eu/</a></td>
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<tr>
<td>European Pilot Peer Support Initiative</td>
<td><a href="http://eppsi.eu/european-aviation-mental-well-being-initiative-eam-well/">http://eppsi.eu/european-aviation-mental-well-being-initiative-eam-well/</a></td>
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<td>RAeS</td>
<td><a href="https://www.youtube.com/watch?v=pT8u87fVV44&amp;feature=emb_title">https://www.youtube.com/watch?v=pT8u87fVV44&amp;feature=emb_title</a></td>
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<tr>
<td>Aerospace Medical Association (AsMA)</td>
<td>COVID-19 - Aviation Personnel and Mental Health Support (David Schroeder, 2020)</td>
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<tr>
<td>American Psychiatric Association</td>
<td><a href="https://psychiatry.ucsf.edu/coronavirus/coping">https://psychiatry.ucsf.edu/coronavirus/coping</a></td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td><a href="https://www.nih.gov/health-information/your-healthiest-self-wellness-toolkits">https://www.nih.gov/health-information/your-healthiest-self-wellness-toolkits</a></td>
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Acknowledgements

• Thanks to all the aviation workers who participated in our research so far.
• Thanks also to the following groups who have supported this survey/research
Thank You

Key Points
– Appropriate Wellbeing supports?
– Immediate support?
– Roles & responsibilities of stakeholders?
– Wellbeing Culture
– Need to manage specific sources of stress.
– Self-care.
– Peer Support for all.
– Regulations needed now