

Risk and Strategy in Flight

Marsh Aviation Summit 2026

Prioritizing Pilot Health



Speakers



Kimberly Perkins, PhD

Airline pilot, Research Scientist,
and Co-founder of Involò



Dr Wolfgang Seidl

Workplace Health Expert and
Board Advisor



Captain Andy James

Head of Aviation Operational
Risk Consulting, Marsh

A Billion Dollar Blind Spot

Mental health, safety, and system failure

Kimberly Perkins, PhD

Airline pilot, Research Scientist,
and Co-founder of Invololo



Mental health issues cause catastrophic aviation accidents.

Real Incidents. Real Consequences.

Mental health isn't just personal –
it's a safety imperative

The Washington Post
Democracy Dies in Darkness

EXCLUSIVE

5,000 pilots suspected of
hiding major health issues.
Most are still flying.

Chicago aviation student took own life in
UND plane crash; parents hope some good
can come of it

University working with FAA to get pilots mental health help after student's suicide

Thursday, January 27, 2022



Pilot's 'breakdown' is a reminder: Many fear seeking mental
health help, advocates say



Germanwings Crash Prompts Rethink
Over Pilots' Mental Health

The EU's aviation safety agency proposes mental health assessments for pilots to prevent
"catastrophic" incidents.



We designed for outliers but
most pilots are in the middle.

Most mental health cases are mild to moderate.
We're missing the middle.



A \$1B opportunity lost to an
unaddressed system problem

US\$1bn left on the table... every year!

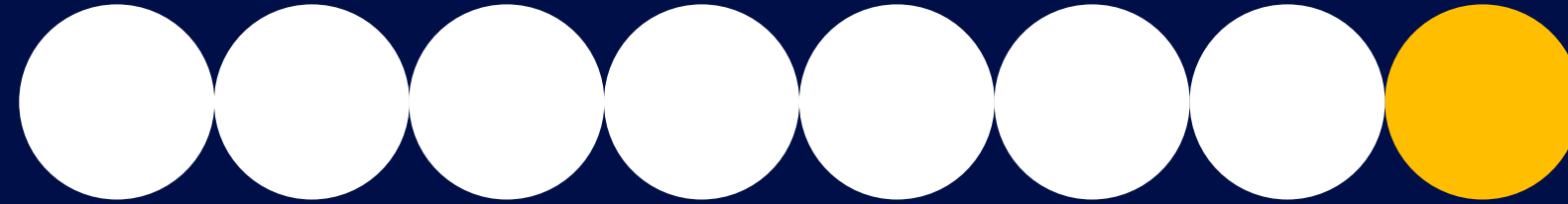
While ignoring a problem both the industry
and passengers care about.



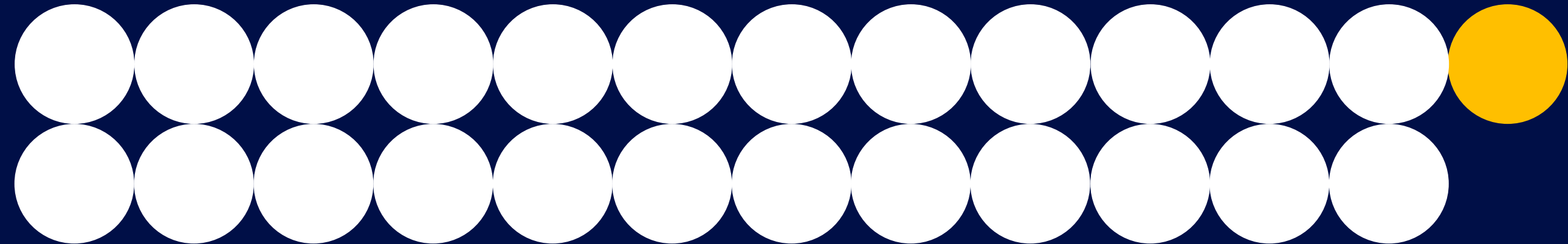
Pilots show higher rates of depression than the general population

1 in 8 pilots meet the
moderate depression
diagnosis criteria (12.6%)

PHQ-9 total score >10



1 in 25 pilots report
having suicidal ideation
(4.1%) within the
previous 2 weeks



Perceptions & barriers to mental health support

98%

Think it's a problem

47%

Unmet need:
wanted support
but felt they couldn't
seek it

12%

Support use: actually
used resources
available to them

4^x

Nearly four times as
many professionals
say they need help as
those who actually
receive it

66%

Psychological barriers:
Outweighed
structural barriers
2 to 1

Pilots avoid traditional mental health support out of fear of losing their medical certification.

Pilots who answer “YES” to having depression/anxiety on their annual certification have had their license suspended.

"If there were a truly anonymous system to talk to someone without FAA involvement, I would have gone years ago."

"I didn't trust that I wouldn't lose my medical. It wasn't worth the risk."

Applicant Must Complete **ALL 20 Items** (Except For Shaded Areas) **PLEASE PRINT** Form Approved OMB NO. 2120-0034

Copy of FAA Form 8500-9 (Medical Certificate) or FAA Form 8420-2 (Medical/Student Pilot Certificate) issued.

FOR REFERENCE ONLY

MEDICAL CERTIFICATE CLASS AND STUDENT PILOT CERTIFICATE

This certifies that (Full name and address):

Date of Birth: Height: Weight: Hair: Eyes: Sex:

has met the medical standards prescribed in part 67, Federal Aviation Regulations, for this class of Medical Certificate.

1. Application For: ☐ Airman Medical Certificate ☐ Airman Medical and Student Pilot Certificate

2. Class of Medical Certificate Applied For: ☐ 1st ☐ 2nd ☐ 3rd

3. Last Name: First Name: Middle Name:

4. Social Security Number: Telephone Number ():

5. Address: Number / Street: City: State / Country: Zip Code:

6. Date of Birth: M / D / Y Y Y Y 7. Color of Hair: 8. Color of Eyes: 9. Sex:

Citizenship: ☐ None ☐ ATC Specialist ☐ Flight Instructor ☐ Recreational

10. Type of Airman Certificate(s) You Hold: ☐ None ☐ ATC Specialist ☐ Flight Instructor ☐ Recreational

en no change in your condition. See Instruction

Yes	No	Condition
☐	☐	Mental disorders of any sort; depression, anxiety, etc.

17.b. Do You Ever Use Near Vision Contact Lens(es) While Flying? ☐ Yes ☐ No

18. Medical History - HAVE YOU EVER IN YOUR LIFE BEEN DIAGNOSED WITH, HAD, OR DO YOU PRESENTLY HAVE ANY OF THE FOLLOWING? Answer "yes" or "no" for every condition listed below. In the EXPLANATIONS box below, you may note "PREVIOUSLY REPORTED, NO CHANGE" only if the explanation of the condition was reported on a previous application for an airman medical certificate and there has been no change in your condition. See Instructions Page

Yes	No	Condition	Yes	No	Condition	Yes	No	Condition	Yes	No	Condition
☐	☐	Frequent or severe headaches	☐	☐	Heart or vascular trouble	☐	☐	Mental disorders of any sort; depression, anxiety, etc.	☐	☐	Military medical discharge
☐	☐	Dizziness or fainting spell	☐	☐	High or low blood pressure	☐	☐	Substance dependence or failed a drug test ever; or substance abuse or use of illegal substance in the last 2 years.	☐	☐	Medical rejection by military service
☐	☐	Unconsciousness for any reason	☐	☐	Stomach, liver, or intestinal trouble	☐	☐	Alcohol dependence or abuse	☐	☐	Rejection for life or health insurance
☐	☐	Eye or vision trouble except glasses	☐	☐	Kidney stone or blood in urine	☐	☐	Suicide attempt	☐	☐	Admission to hospital
☐	☐	Hay fever or allergy	☐	☐	Diabetes	☐	☐	Motion sickness requiring medication	☐	☐	Other illness, disability, or surgery
☐	☐	Asthma or lung disease	☐	☐	Neurological disorders; epilepsy, seizures, stroke, paralysis, etc.	☐	☐		☐	☐	Medical disability benefits

Arrest, Conviction, and/or Administrative Action History --- See Instructions Page

A culture of fear may lead to suboptimal behaviour

"If there were a truly anonymous system to talk to someone without FAA involvement, I would have gone years ago."

"I didn't trust that I wouldn't lose my medical. It wasn't worth the risk."



How can we build
psychological resilience...

...given the current
constraints of the system?



Psychological resilience

The ability to adapt, recover,
and continue performing effectively
under stress or adversity.

The Emotional Intelligence, Health, and Well-Being Nexus: What Have We Learned and What Have We Missed?

Moshe Zeidner*

University of Haifa, Israel

Gerald Matthews

University of Cincinnati, USA

Richard D. Roberts

Educational Testing Service (ETS), Philadelphia, USA

This paper reviews the claimed pivotal role of emotional intelligence (EI) in well-being and health. Specifically, we examine the utility of EI in predicting health and well-being and point to future research issues that the field might profitably explore. EI is predictive of various indicators of well-being, as well as both physical and psychological health, but existing research has methodological limitations including over-reliance on self-report measures, and neglect of overlap between EI and personality measures. Interventions focusing on emotional perception, understanding and expression, and emotion regulation, seem potentially important for improving health and well-being, but research on EI has not yet made a major contribution to therapeutic practice. Future research, using a finer-grained approach to measurement of both predictors and criteria might most usefully focus on intra- and inter-personal processes that may mediate effects of EI on health.

A video abstract of this article can be viewed at http://www.youtube.com/watch?v=2_8JZX1Uc4k.

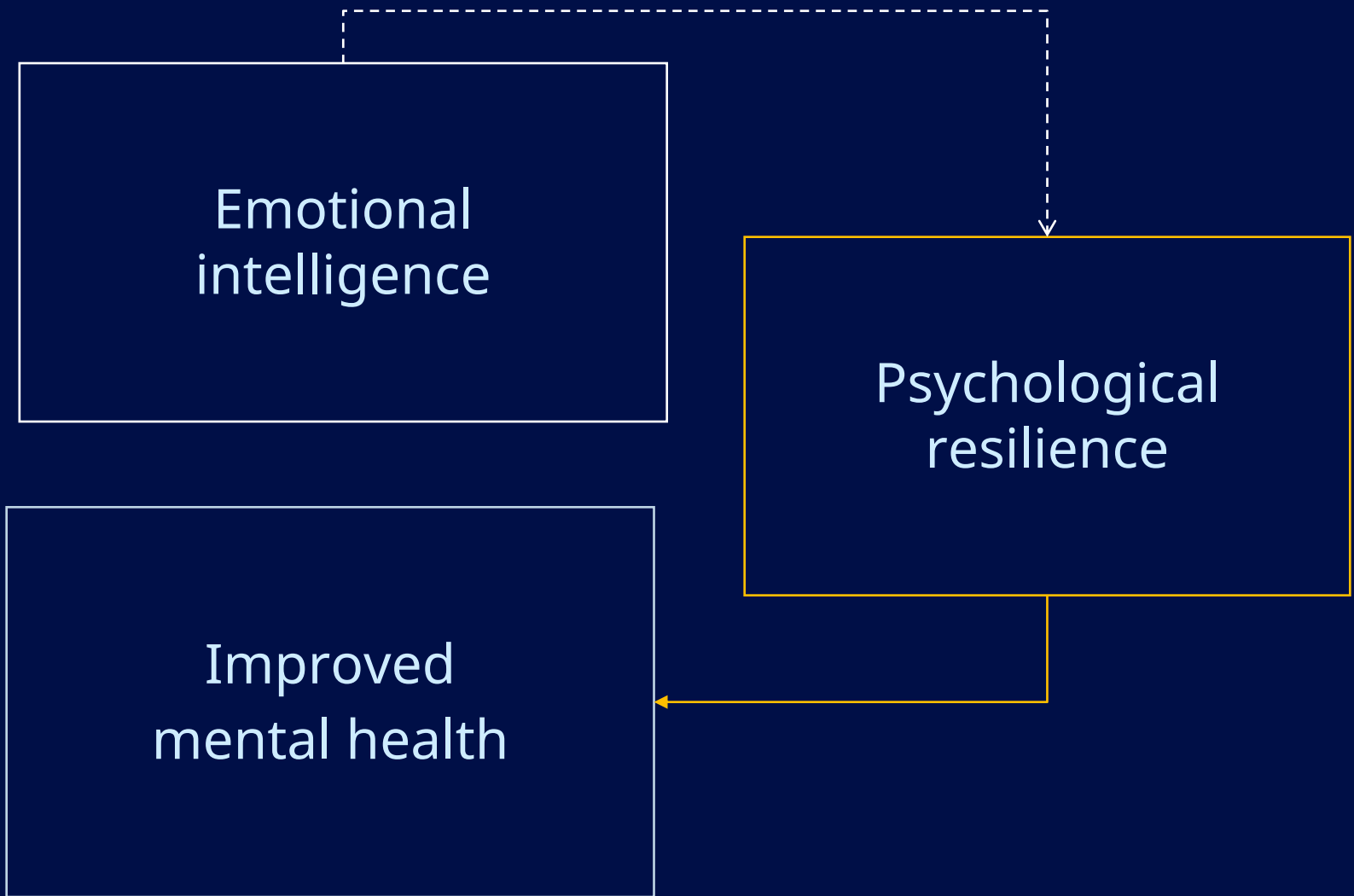
Keywords: emotional intelligence, Five Factor Model of personality, health, inter- and intra-personal processes, well-being

INTRODUCTION

Emotional intelligence (EI) represents a set of hierarchically organised core competencies for identifying, processing, and regulating emotions—both in

* Address for correspondence: Moshe Zeidner, Laboratory for Research in Personality

Emotional intelligence is a strong predictor of psychological resilience



Emotional intelligence helps build psychological safety for the crew.

Applied Human Factors and Ergonomics (AHFE2025), Vol. 199, 2025, 1798–1808
<https://doi.org/10.54941/ahfe1006991> **AHFE**
International

From Awareness to Action: Mapping Emotional Intelligence to Pilot Performance and Policy Reform in Aviation Mental Health

Kimberly Perkins¹, Rachael Merola², and Tasnim Hasan¹

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²Division of Public Administration, Center for Research and Teaching in Economics (CIDE), Mexico City, Mexico

ABSTRACT

This study investigates two guiding questions: (1) Is there a gap between pilots’ mental health needs and their engagement with available institutional resources? (2) How can a focus on emotional intelligence inform educational and policy interventions in aviation? Researchers conducted a global survey of commercial pilots and air traffic controllers, which revealed minimal engagement with available support systems due

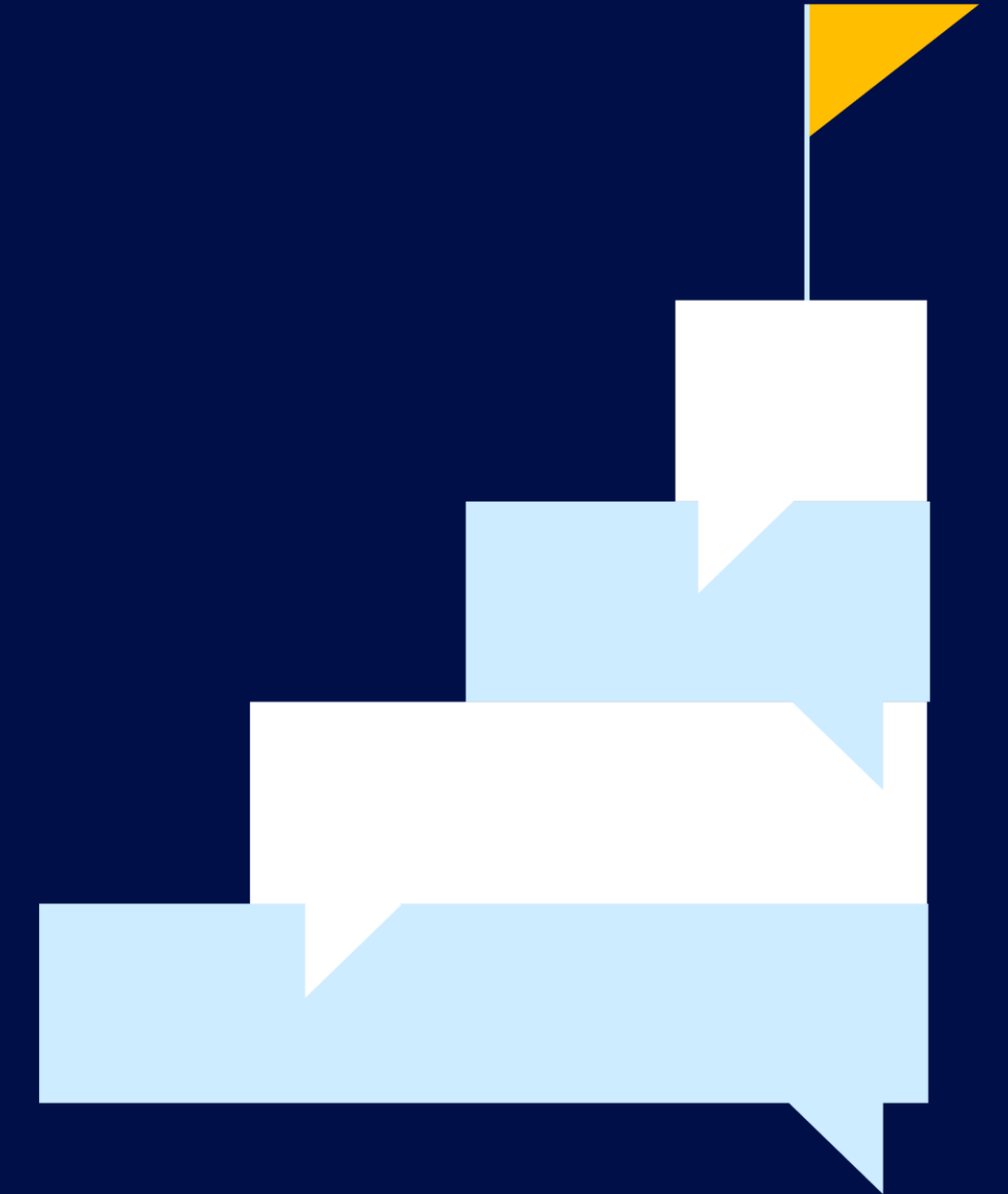
Psychological safety

A shared belief within a team
that it is safe to take interpersonal risks.

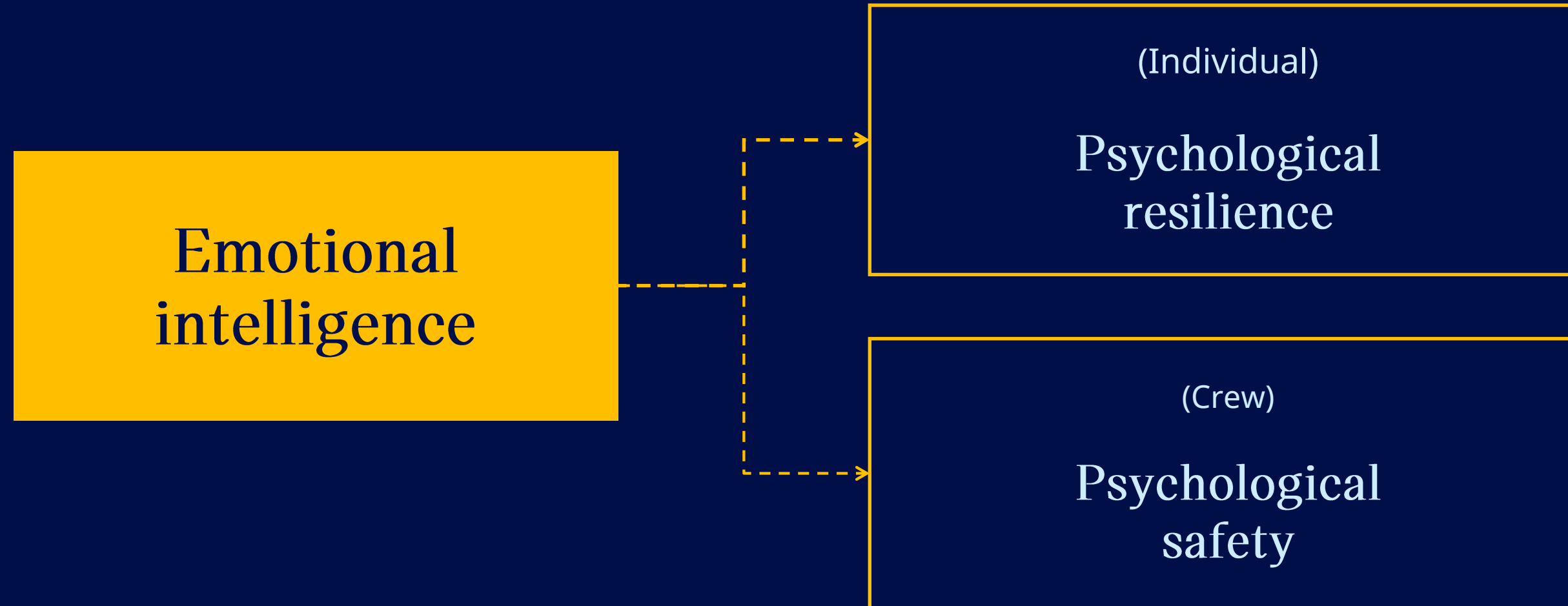


Psychological safety

You are **3x** more likely to get your team members to share safety information when there is psychological safety.



Emotional intelligence is critical... but how do pilots score?



scientific reports

www.nature.com/scientificreports

Check for updates

OPEN

Trait emotional intelligence in American pilots

Zachary Dugger^{1,2}, K. V. Petrides², Nicole Carnegie³ & Bernadette McCrory⁴

There is a dearth of trait emotional intelligence (trait EI) research within an aviation context. Using the Trait Emotional Intelligence Questionnaire (TEIQue), the present study investigated potential trait EI differences between pilots and general population controls in the United States. The forty-four pilots who volunteered to participate were primarily male (93%) and between 24 and 67 years with a wide range of flight experience (150–5000 + hrs.) They were matched with controls based on age, gender, and ethnicity. Comparisons on global trait EI and the four trait EI factors revealed significant differences, with pilots scoring consistently lower than their matched counterparts in *global trait EI*, *Well-being*, *Emotionality*, and *Sociability*, but not *Self-control*. Overall, the findings indicated that pilots felt less connected to their emotional world than controls. Though limited by sample size and participant diversity, the results provide a basis for future studies into the trait EI profile of pilots, which had not been previously investigated.

Trait emotional intelligence can be defined as a constellation of emotional perceptions assessed through questionnaires and rating scales¹. The theory focuses on emotional perceptions and presents a robust operationalization framework, particularly psychometrically². The trait EI model is salient in the scientific literature being the focus of hundreds of peer-reviewed publications (for a review, see³ and dedicated special issues⁴). Since its inception, the construct has been strongly linked to behaviors that constitute key components of the pilot skillset, including leadership⁵, mental toughness⁶, and stress management⁷.

Despite its increasing prominence, little research has focused on trait EI within an aviation context. The isolated studies that have been carried out so far have found that the construct is positively associated with pilot training performance among military flight students in the United Kingdom⁸ and self-reported safety citizenship behaviors in American military pilots⁹. However, in both these studies, only military pilots were evaluated, and no comparisons were conducted to explore differences between pilots and the general population. In stark contrast, personality traits have long been evaluated within aviation research and found to be linked to crew coordination¹⁰, training success¹¹, and pilot selection¹². Pilots appear to have high extraversion scores (particularly evident in facets such as assertiveness, activity, and excitement seeking) when compared to population norms¹³. Pilots also score lower on neuroticism than non-pilot peers, indicating an ability to handle fear, anxiety and stress^{14,15}.

The operation of complex aircraft often involves multiple crewmembers¹⁰. Pilots require teamwork skills, mental and emotional fortitude, as well as adaptability to operate as a cohesive team over prolonged flights, collaborating to accomplish tasks in complex and stressful environments¹⁶. Accomplished pilots must be able to manage emotions, assess risk accurately, and work together with other crewmembers throughout the flight. Therefore, trait EI likely plays a key role in pilots' ability to operate as crewmembers.

The present study investigated possible differences in trait EI between pilots and the general population in the United States. Given the dearth of trait EI research within aviation and the close links between trait EI and personality¹³, our research design was modelled on previous studies into the personality traits of pilots (e.g.,^{13–15}). Participants were evaluated using a standardized psychometric instrument (Trait Emotional Intelligence Questionnaire; TEIQue), allowing for a statistical comparison of two distinct groups: pilots vs non-pilot controls. While the study was exploratory in principle, motivated by similar research that previously examined per-

Summary

Emotional intelligence is foundational to both team and individual resilience.

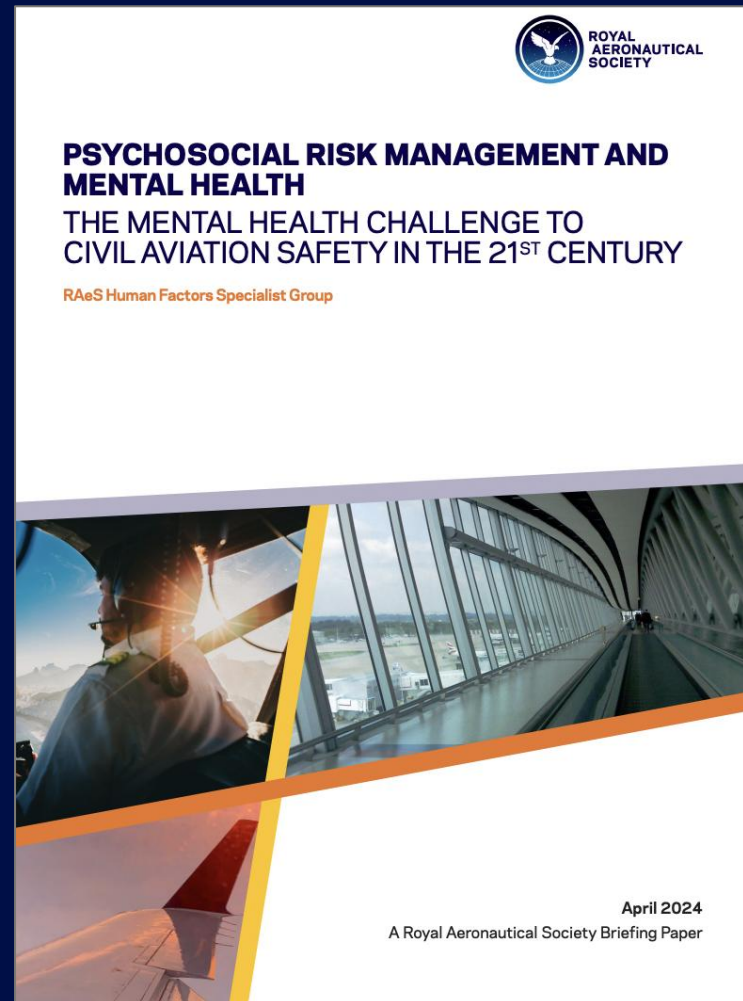
Pilots score higher on depression and lower on emotional intelligence.

At the same time:

- Pilots say they want mental health support
- But few get it.

A gap between need and use—not a lack of resources, but a lack of accessible, trusted pathways.





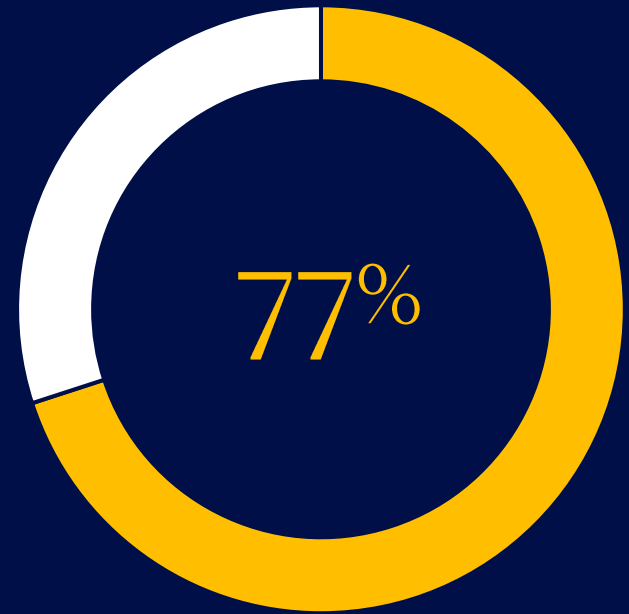
SECTION 5: THE INSURANCE LENS

Crew Mental Health is a top priority for insurance providers.

The mental health of pilots has been a subject of great interest for the insurance sector for many years, and has been the focus of presentations during recent International Union of Aerospace Insurers (IUAI) Annual Members' Conferences. An early incident of note was the Japanese Airlines Flight 350 in February 1982 when the captain allegedly activated the engines' thrust reversers during approach to Haneda Airport, leading to 24 fatalities. This was but one of many incidents. Too many.

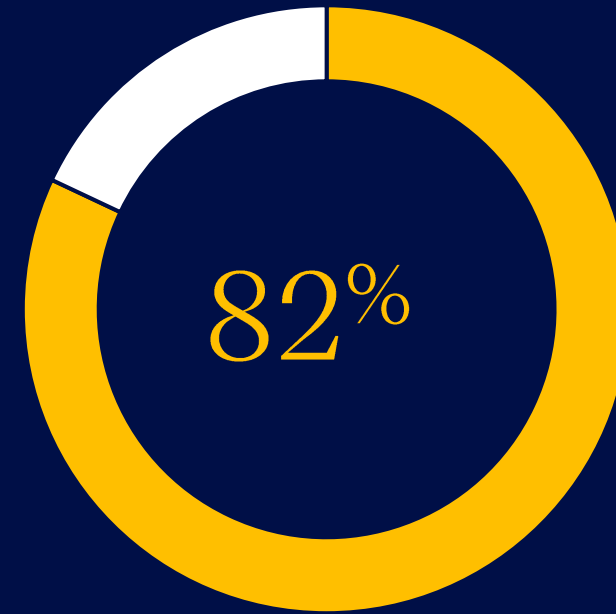


Are passengers aware of this? What do they think about the problem?
Passengers already understand the mental-healthy safety connection

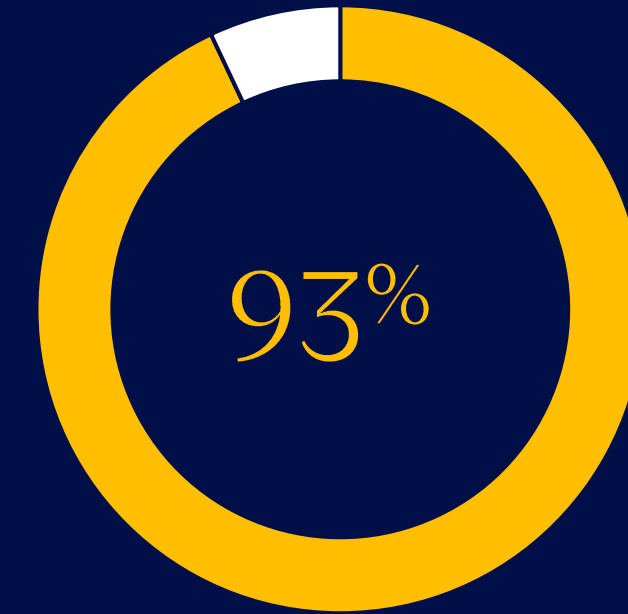


are aware that pilot mental health is an ongoing concern.

n=2781



think about the mental well-being before boarding a flight.



agree that supporting pilot mental well-being contributes directly to flight safety.

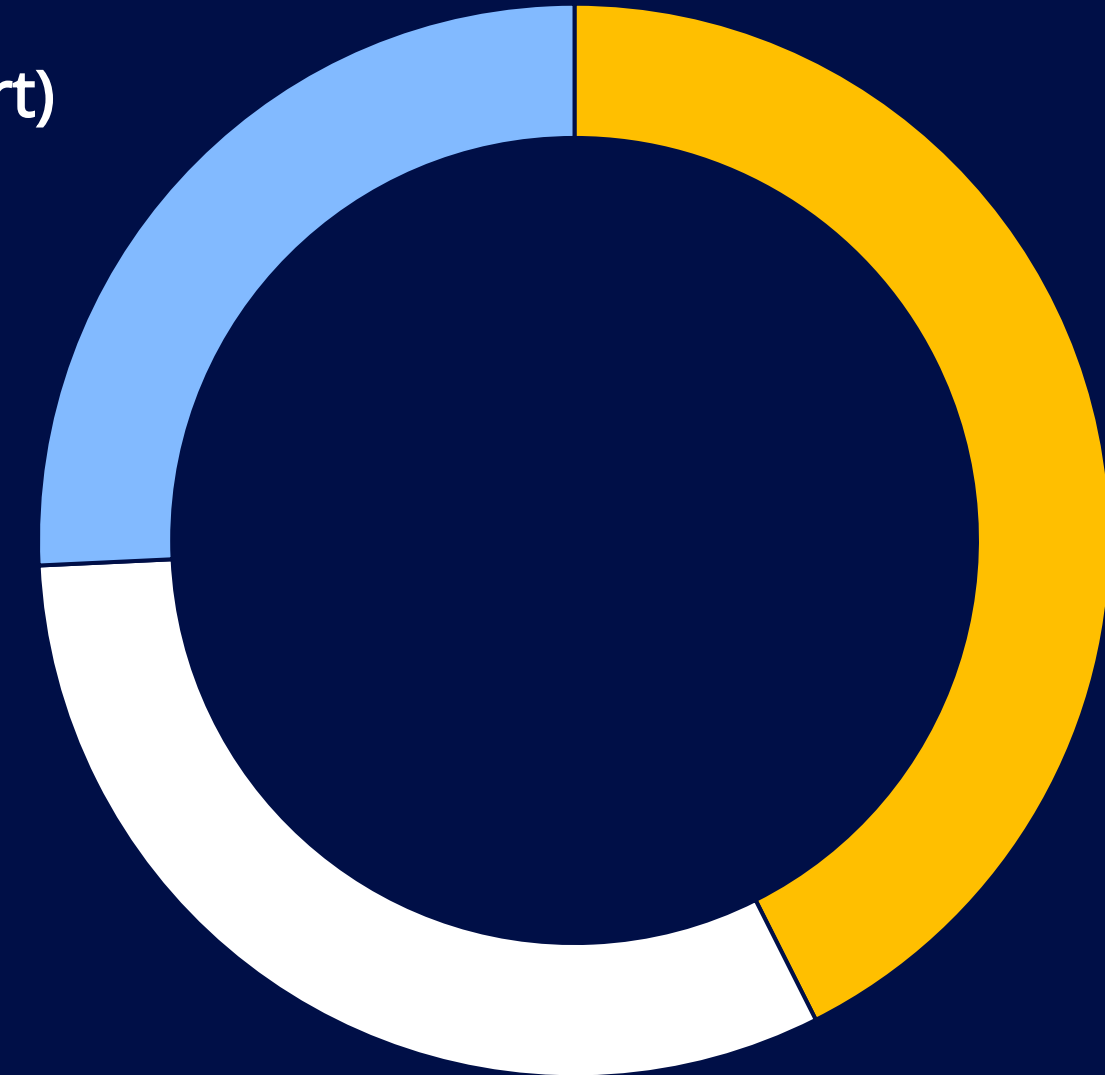
Who is responsible for a solution?

Q. Which groups should hold ultimate responsibility for creating and maintaining systems that support pilot mental health?

n=2739

Union
(Peer Support)
26%

Regulators
32%



Airlines
42%

Brand loyalty – the US\$1bn to US\$3.6bn blind spot (annually)

80%

Said they would prioritize flying on an airline that provided mental health resources and resilience tools to crews.

Passengers choose resources for pilots over cosmetic or experience – focused upgrades.

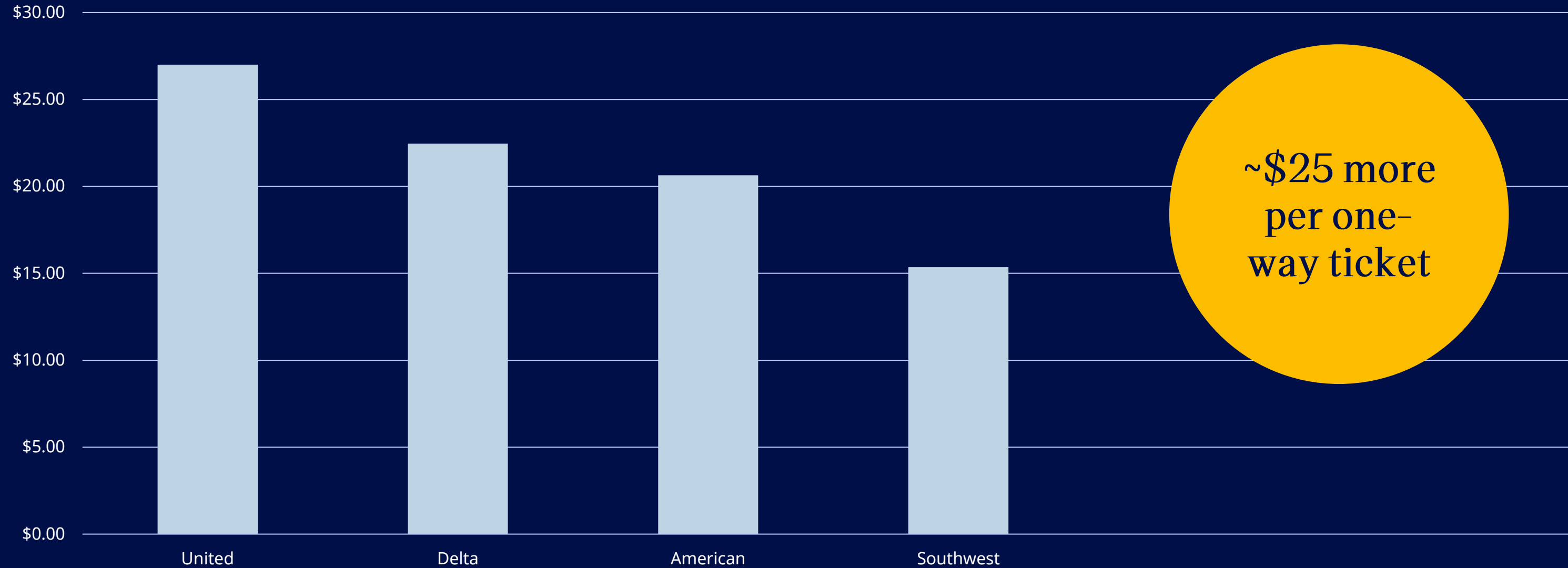
The new priority

Passengers see crew well-being as a signal of airline quality and safety culture.

The shift

Brand loyalty is earned through human investment, not premium seats or perks.

Passengers will pay more



to airlines that
support pilot and
flight attendant
mental health
resources.

Additional revenue potential

% of passengers willing to pay more

Avg \$ passengers will pay

Days in a year

(Daily passengers x 0.80 x \$25 x 365) = Public demand value (in USD)

Public demand value - Cost of program = *Net profit potential*

Net profit by scale



AIRFRANCEKLM
GROUP

1,500 flights per day
125,000 daily passengers

Public demand value $\cong$ \$912.5M
Cost: \$201K

Net revenue potential $\cong$ **\$912.3M**



4,000 flights per day
500,000 daily passengers

Public demand value $\cong$ \$3.65B
Cost: \$1.08M

Net revenue potential $\cong$ **\$3.649B**

\$1,000,000,000

\$3,700,000,000



Takeaways

- Academic research
- Industry insight
- Passengers' preferences

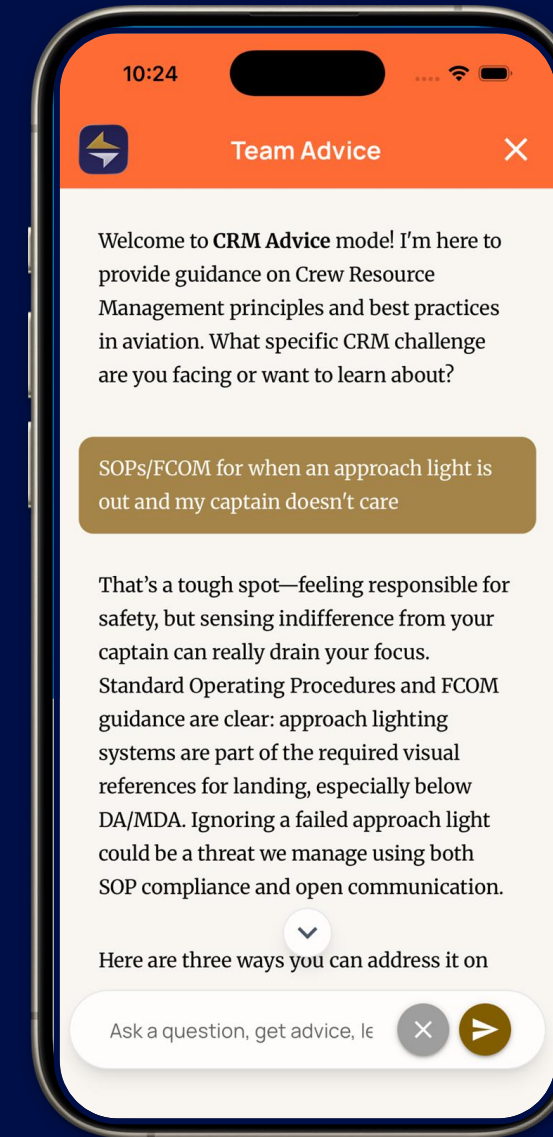
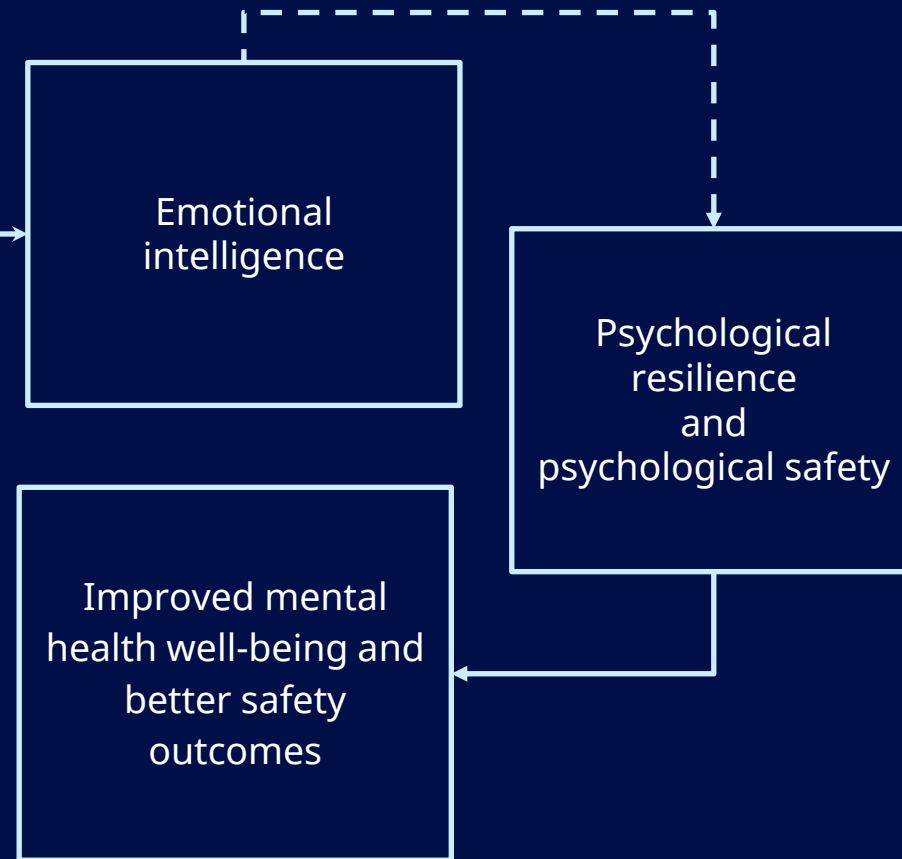
It's time to invest in new tools!



CRMSON

Crew Resource Management Safety Optimizer Nexus

Micro interventions:
learnings & nudges



CRMSON has presented all over the world



600+ aviation professionals engaged with CRMSON, supported by 50+ hours of focus groups, 1,000+ validated survey responses, and 3 in-person workshops.

"We need this!"

- Airline Manager

"We have technology for every part of aviation—except the people. It's time for CRMSON."

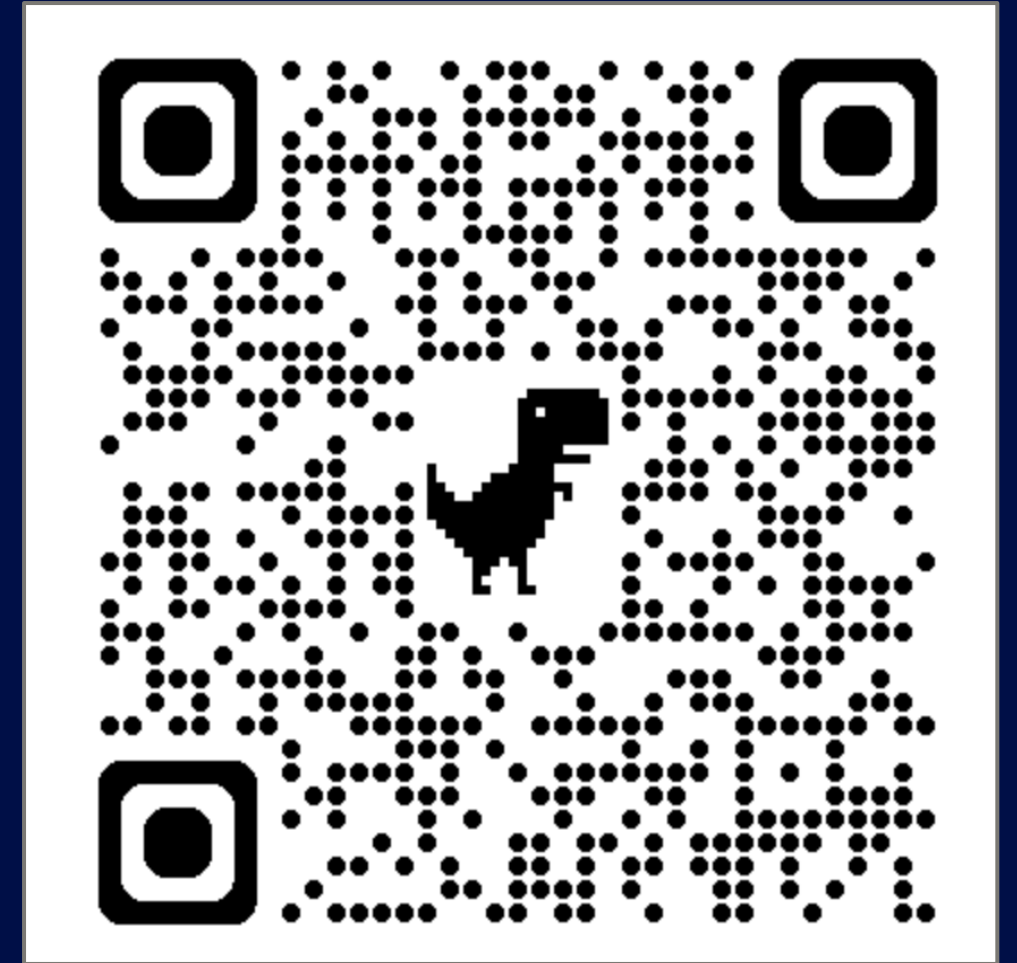
- Airline Captain

"This will fundamentally improve our industry!"

- Airline Captain

Time to try

CRMSON



Dr Wolfgang Seidl

Workplace Health Expert
and Board Advisor



Mental health —
Stepped care pathway
Interventions

Level 1

Psychosocial risk
management system

ISO 45003, (Psychological health and safety at work) connected
into existing SMS, HR and other business management systems

Level 2

Digital
platform

- Bio-psycho-social tool
- Education, Prevention
- Self management
- Signposting to support

Peer to Peer
support

- Less stigma
- Risk of treatment avoidance
- Pilot Assistance Network (PAN)
- Employee assistance centre

Resilience training
and CI Preparedness
For all employees

Level 3

Onsite
counselling

- Face to face
- General counsellors
- Clinical assessment
- Refer serious or 'at risk' cases

EAP counselling and Critical
Incident Response (CIR)

- Telephone based support
- 24/7 hour access
- Assess and treat
- Refer serious or 'at risk' cases

Level 4

Clinical
psychologist

- Specialized support
- Serious or severe symptoms

Targeted resilience
training

Fit for duty
assessments

Return to
work program

Level 5

Psychiatric
intervention

In-patient or out-patient support
with pre-agreed clinic arrangements

Governance

- Health and wellbeing group
- Strategy action plan
- Provider management
- Company policies and procedures
- Flexible benefits programme
- Job design
 - Demands, control, support, relationships, role, change
 - 'Good work'

Discovery phase 1 *Audit and health dashboard*

- Workplace health dashboard
- Issues and key health risks identified and quantified

S- Absence Management (SAM)

Mental health

Musculoskeletal health

Lifestyle factors e.g. Weight, exercise, nutrition, smoking, alcohol

Psychosocial risk management system

Digital platform

Peer to Peer support

Resilience training and CI Preparedness

Onsite counselling

EAP counselling and Critical Incident Response (CIR)

Clinical psychologist

Targeted resilience training

Fit for duty assessments

Return to work program

Psychiatric intervention

Delivery phase 1

Future sickness absence model

Loss of licence insurance
Income protection insurance

MSK/MH early intervention and clinical pathway

Manager training

MSK resilience programme

- Enhanced EAP
- Enhanced digital health program
- MHFA
- Lifestyle challenges

Ongoing evaluation, measurement, and ROI



Benefits optimisation

Communications and marketing

- Communications and marketing plan
- Focus groups e.g. Employee committee
- Central landing point
- Generation of unified health brand
- Targeted health campaign
- Social media campaign
- Wellbeing champions

Data-driven
analysis and strategy

Employee
demographics

Employment
practice liability

Professional
indemnity

Medical plan

HRA/Health
screening

Group income
protection

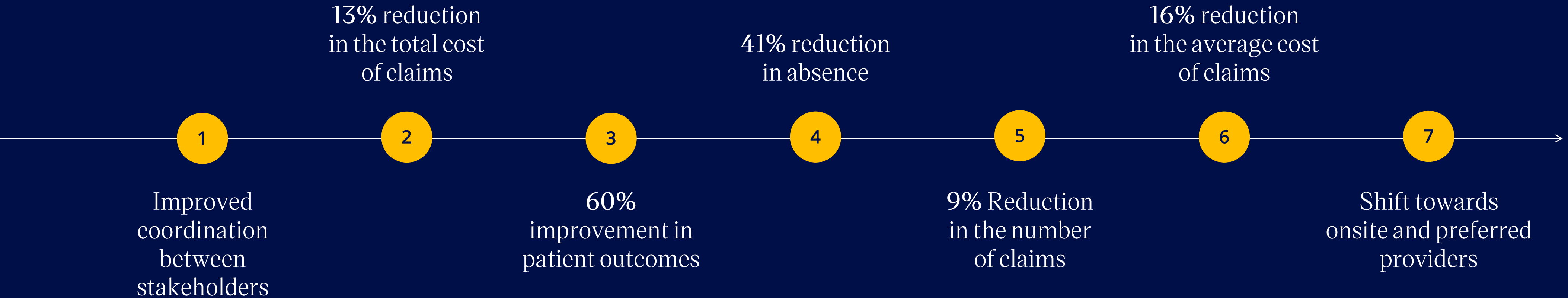
Employee
assistance program

Occupational
health

Sickness
absence



Mental health pathway — ROI



Predictive modelling & synthetic data

MARSH

Multi Country Health Dashboard

Home

Featured

Discover

Notifications

Profile

Help

My Workforce Health

Welcome back | Reporting currency: USD (Jan 2026) | Last updated: 0 hours 10 minutes ago

Wellness Barrier - Current Scenario

Year
2016



Cost
£4,376,065

Long Term Disabled : 1%

Future

With NO Wellness Interventions

With Wellness Interventions

Wellness Barrier - With NO Intervention Strategy



Cost
£3,994,259

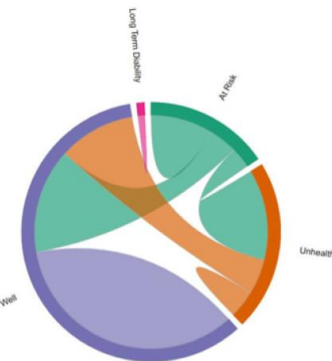
Long Term Disabled : 1%

With Wellness Interventions

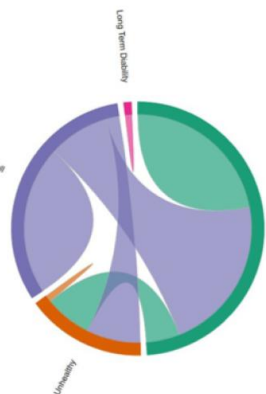
Detailed View

*Click on Images to View

With No Wellness Interventions



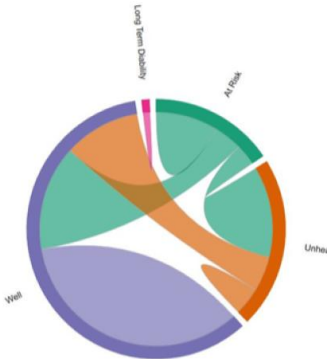
With Wellness Interventions



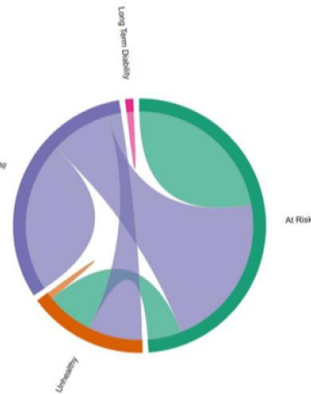
Detailed View

*Click on Images to View

With No Wellness Interventions



With Wellness Interventions



Mental health strategy should address the full care continuum

Making a positive impact

Starting the conversation

Ensuring support is accessible

Finding solution in time of need

1. Culture and Change Management

2. Awareness

3. Access

4. Navigation

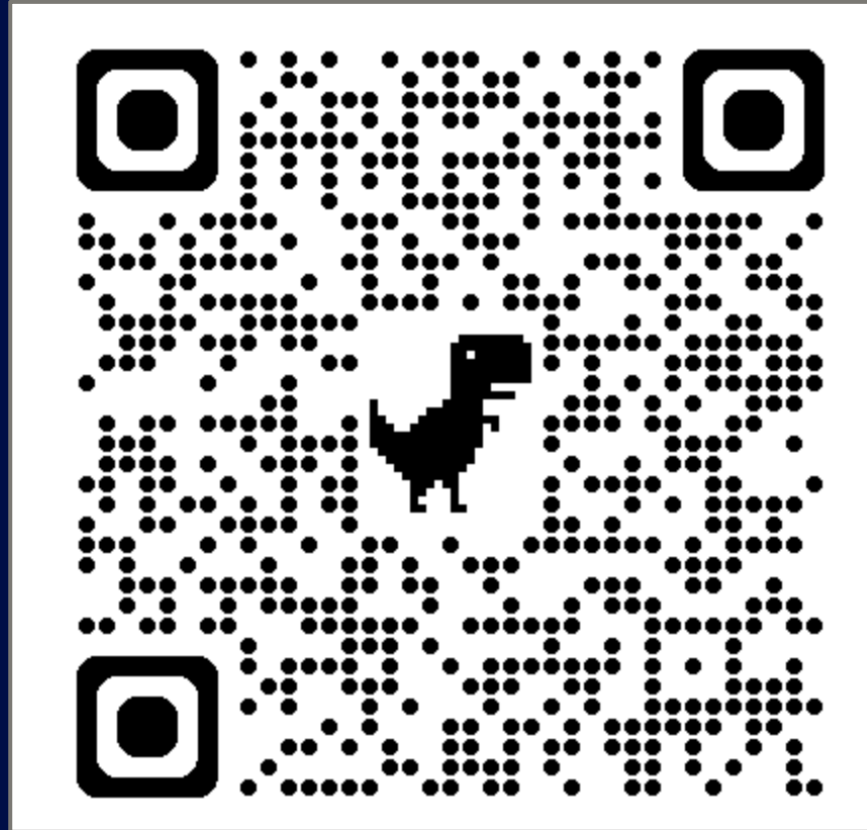
- Leadership engagement
- Voice of the employee
- Psychological safety
- ISO 45003

- Anti-stigma campaigns
- Manager and employee trainings
- Inclusion

- EAP
- Insured benefits
- Mental health pathway

- Digital Platforms and solutions
- AI-powered interactive tools
- Total wellbeing

CRMSON Trial



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Thank you