



**PPSP AntiSkid: Treatment and
control system for commercial
airline pilots with mental
disorders**

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1. Background
2. Major diagnoses of mental disorders
3. Treatment utilisation and outcome

1.1 History

- 1985 First airline management/ union-initiated initiative after alcohol- related death cases
- 1987 Peer supported professional treatment and control concept for alcohol use disorders
- 1995 First of a series of regular meetings with German Federal Aviation Agency (LBA)
- 2000 Covering illicit drugs
- 2016 Covering other mental disorders (AMC MED.B.055/060)
Strong increase in new patients
- 2017 Early intervention programs (indicative prevention; these patients continue to fly)
- 2018 Development of a Management Manual for mayor procedures
- 2019 LBA approval of the Management Manual
- 2020/22 Corona imposed restrictions: second strong increase in new patients

1.2 Current structure

Participants

- (1) 17 airlines with about 10,000 pilots
- (2) About 30 peers (pilots with clinical training)
- (3) 19 psychotherapists in outpatient private practices
- (4) 3 inpatient treatment centres for mental disorders;
- (5) Network of AME, AEMC
- (6) Laboratory with forensic approval
- (7) Professional supervision

Close cooperation with Pilot associations, AME and Federal Aviation Authority (LBA)

However: Strict compliance with data protection rules

1 Background

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1.3 Treatment programs and patient allocation

	Substance use disorders (SUD)	Other mental disorders (MD)
Combined inpatient/outpatient treatment	Program S1 (3 years) → All acute cases with F10.2	Program M1 (2 years) → Cases with severe and acute symptoms (e.g. depression)
Outpatient treatment only	Program S2 (3 years) → Cases with F10.2, currently abstinent or F10.1	Program M2 (2 years) → All other cases
Indicated prevention (outpatient only)	Prevention program SP (1 year) → Problem substance use without diagnosis and no threat to flight safety	Prevention program MP (1 year) → Emotional stresses without diagnosis and no threat to flight safety

1.4 Documentation

- (1) All processes/quality controls manualized and mandatory
- (2) Digital case files
- (3) Quarterly video-based case reviews
- (4) Regular reports to AME and German Federal Aviation Authority LBA
 - Admission report: clinical examination, diagnoses, program allocation
 - Report on treatment progress and proposal for conditional fitness to fly
 - Further annual/bi-annual reports on treatment progress
 - Final report, proposal for unconditional fitness to fly

1.5 Distribution of tasks

Peer tasks

- Confidants: “Door opener” to professional support
- Initial interview with possible patients
 - Patient needs / problems
 - Program information
 - Program documents (after supervisor decision)
- Counselling of significant others
- Hospital admission support, visits
- Regular group meetings during outpatient therapy phase
- Regular patient contacts
- Report of critical signs / incidents to therapist and supervisor
- Airline staff lectures
- **No therapeutic responsibility**

Supervisor tasks

- Patient diagnoses
- Professional supervision of clinics / therapists / peers / patient progress
- Contacts to AME and LBA
- Regular reports on treatment progress and flight fitness for AME and LBA
- Program evaluation
- Program updates
- Selection of professional partners
- Peer training (mental disorders, motivational interviewing)

2.1 Epidemiology: commercial pilots

- 1) **3,485 pilots** (86% male, 54% > 40 years; 45% US, web-based anonymous survey)
 - **Results:** 13% clinically relevant depression score, Hypnotic drug use: 7%, Suicidal thoughts in the past two weeks: 4% (Wu et al., 2016)
- 2) **328 pilots from 3 gulf companies** (Total sample:?)
 - 35% had abnormal high HADS (depression) scores (Aljurf, Olaish & BaHammam, 2018)
- 3) **1,147 pilots from European companies** (13% of European pilots` professional association)
 - 40% high burn-out symptoms (Demerouti, Veldhuis, Coombes & Hunter, 2019)
- 4) **1,133 pilots** (Europe ??)
 - 63% exhibited “inappropriate presenteeism” (duty without being fit for fly)
(Johansson & Melin, 2018)
- 5) **84 pilots** (Germany)
 - 14% with clinically significant mental distress (BSI - GSI T scores =/> 63)
(Zika, 2022)

2.2 Diagnoses

1. According to ICD-10 diagnostic criteria

(1) SUD

- F10.1, F10.2
- Z (problems related to work, family, life conditions without mental disorder)

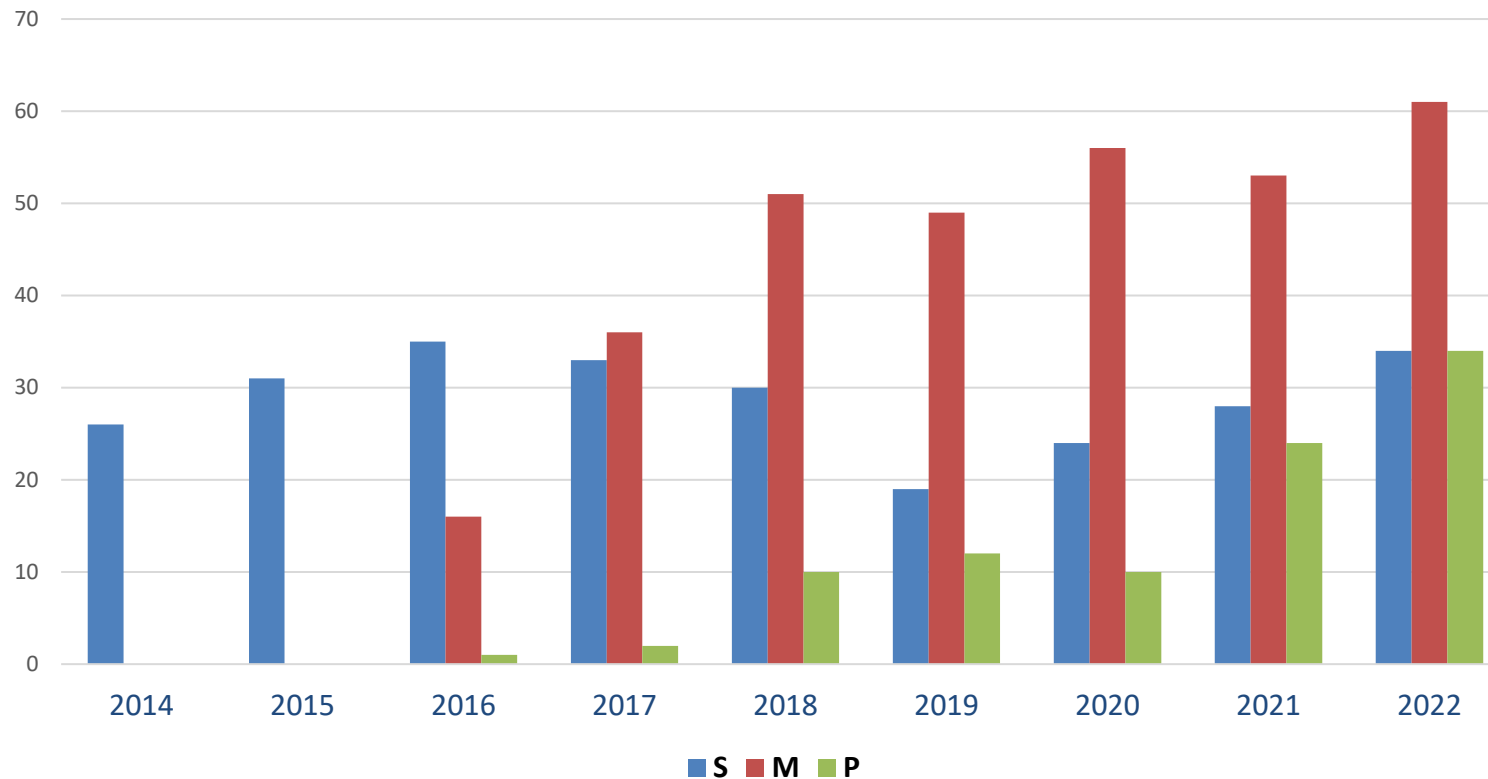
(2) MD

- Affective disorders (F32/F33 depressive disorders)
- Neurotic disorders (F43.2 Adjustment disorders)
- Other neurotic disorders (e.g., PTBS, social anxiety, specific phobia/flight anxiety)

2. Problem substance use and mental “distress” (without clinical diagnosis)

- Indicative prevention
- Early intervention to avoid progress to and onset of mental disorders

3.1 Case load: Annual total number of treated cases 2014-2022



*as of December 31, 2022

3.2 New cases and overall cases per year 2018-2023*

Programme	S (SUD)	M (MD)	P (Prevention)	All new cases	All cases
2018	3	16	8	27	81
2019	6	16	4	26	80
2020	12	21	5	38	90
2021	8	21	18	47	105
2022	8	27	18	53	129
2023*	6	26	13	45 (54)	134 (143)

*as of October 30, 2023

3.3 Patient overview (all)

Substance use disorders (SUD)

251

All cases since 1987

29

Current cases
(on 31.12.2022)

222

Treatment
completed

Other mental disorders (MD)

171

All cases since 2016

59

Current cases
(on 31.12.2022)

112

Treatment
completed

3 Treatment outcome

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3.4 Patient characteristics (all)

		MD		SUD	
N		171		251	
Gender	female	5.8 %	(10)	2.0 %	(5)
	male	94.2 %	(161)	98.0 %	(246)
Age	average	42.1	years	42.7	years
Position	CPT	47.4 %	(81)	60.6 %	(152)
	SFO/FO	52.6 %	(90)	32.7 %	(82)
	other	0.0 %	(0)	6.7 %	(17)
Access	self	59.1 %	(101)	41.0 %	(103)
	colleague	6.4 %	(11)	31.0 %	(78)
	Supervisor	6.4 %	(11)	10.0 %	(25)
	Federal Aviation Office	10.5 %	(18)	4.8 %	(12)
	AME	12.9 %	(22)	3.2 %	(8)
	others	4.7 %	(8)	10.0 %	(25)

3.5 SUD - Patient diagnoses (all)

All patients in S-Programmes	100.0%	(251)
Indicated prevention, controls (no diagnoses)	15.9 %	(40)
Patients with substance use disorders	84.1 %	(211)
AUD	78.9 %	(198)
Abuse (F10.1)	21.9 %	(55)
Dependence (F10.2)	45.0 %	(113)
Harmful substance use (i.a. F10.8)	12.0 %	(30)
Other Substances	5.2 %	(13)
Cannabis (F12)	2.0 %	(5)
Cocaine (F14)	1.6 %	(4)
Other, Poly-SUD (F11, F15, F19)	1.6 %	(4)

3.5 MD - Patient diagnoses (all)

All patients in M-Programmes	100.0 %	(171)
Indicated prevention (no diagnosis)	15.2 %	(26)
Patients with MD diagnoses	84.8 %	(145)
Affective disorders (F30-39)	20.5 %	(35)
Bipolar affective disorders (F31)	0.6 %	(1)
Affective disorders (F32, F33)	18.7 %	(32)
Dysthymia (F34.1)	1.3 %	(2)
Neurotic disorders (F40-48)	61.4 %	(105)
Specific phobia (F40.2)	4.7 %	(8)
PTSD (F43.1)	2.9 %	(5)
Adjustment disorders (F43.2)	31.0 %	(53)
Other (Agoraphobia, Social Phobia, GAD, OCD)	22.8 %	(39)
Schizophrenia and delusional disorder (F20-29)	1.2 %	(2)
Behavioral syndromes associated with physiological disturbances and physical factors (F50-F59)	1.7 %	(3)

3 Treatment outcome

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3.6 Treatment characteristics (cases with completed treatment*)

		MD	SUD
N		112	222
Programme type	Inpatient/outpatient	40.2 %	79.3 %
	Outpatient only	43.7 %	9.0 %
	Indicated prevention	16.1 %	11.7 %
Proposal for fitness to fly with limitations		4.7 months	2.9 months
Total duration of treatment (months)	Inpatient and outpatient (including inpatient treatment)	23.4 months	26.5 months
	Outpatient only	17.2 months	24.3 months
	Indicated prevention	11.5 months	15.5 months

*as of December 31, 2022

3.7 Treatment results

	MD (N=94) ¹⁾	SUD (N=196) ¹⁾
Early retirement for other than therapeutic reasons	(11)	(1)
Unfit - diagnoses according to MED.B.055 (g)) ²⁾	(3)	-- --
<i>Change of job/ decided to quit being a pilot</i>	(5)	-- --
<i>Other reasons (e.g., somatic illness)</i>	(3)	(1)
Therapy terminated	100.0 % (83)	100.0 % (195)
Successful treatment (fit to fly)	82.0 % (68)	87.7 % (171)
Unsuccessful (unfit to fly)	18.0 % (15)	12.3 % (24)
Unfit (relapse after regular programme)	4.8 % (4)	9.7 % (19)
Unfit (relapse after extended programme)	-- --	2.6 % (5)
Unfit (no success during treatment)	9.6 % (8)	-- --
Suicide (1 +[1] ³⁾) or suicide attempt (1)	3.6 % (3)	-- --

¹⁾Indicated prevention cases excluded; ²⁾Schizophrenia, psychosis, bipolar disorder; ³⁾Suicide before treatment onset; as of December 31,2022

1. Effective cooperation of peers and professionals, AME and LBA (German licencing authority)
2. Fast, manualised processes combined with long-term support and control
3. Peers are a core component for success
4. Modern abstinence control technology
5. Combination of support and control is necessary, however a challenge for peers and therapists
6. Pilots hardly accept needs for „emotional support“ and tend to seek psychotherapy very late → more information and preventive activities needed
7. Compliance with EASA regulations and data protection laws
8. Close cooperation with the German Federal Aviation Office LBA and airlines
9. Airlines must accept professional secrecy rules for unfit pilots – however regulations for breach of secrecy are important (laws for severe emergency)

Research needs

10. MD prevalence and risk factors among pilots? → surveys needed
11. Long-term outcome stability? → random follow-up

Corona-related “impact” or association

1. Sharp increase of new MD cases: 2020: +50%, 2021: +100% (compared to 2019)
2. For the first time: severe expressions of depressive disorders
3. For the first time: suicidal thoughts and behaviour
4. Implementation of suicide risk management
5. Among others, training of peers in suicide risk assessment

Homepage: <https://www.antiskid.info/en/>

Annual joint meeting of peers and outpatient psychotherapists in September 2023

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