Welcome!

We will begin momentarily

Lung Health Community of Practice Series 1

Psychological distress and depression

Project ECHO
Palliative Care - Canada
BY Pallium Canada

Facilitator: Diana Vincze, Pallium Canada
Presenter: Dr. Alan Kaplan
Date: 15 January 2025

Territorial Honouring

The Palliative Care ECHO Project

The Palliative Care ECHO Project is a 5-year national initiative to cultivate communities of practice and establish continuous professional development among health care providers across Canada who care for patients with life-limiting illness.

Stay connected: www.echopalliative.com

The Palliative Care ECHO Project is supported by a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.

Health Canada Santé Canada

Project ECHO Palliative Care - Canada BY Pallium Canada

LEAP Lung

- Learn the essentials for providing a palliative care approach.
- Ideal for any health care professional (e.g. physician, nurse, pharmacist, social worker, etc.) who provide care to patients with advanced lung diseases.

- **Key features:**
  - Created and reviewed by Canadian experts
  - Evidence-based
  - Regularly updated and approved
  - Practical, case-based
  - Accredited

Pallium Canada

LEAP LUNG

Learn more about the course and topics covered by visiting

https://www.pallium.ca/course/leap-lung/

Introductions

Facilitator

Diana Vincze
Palliative Care ECHO Project Manager, Pallium Canada

Panelists/ Presenter

Danielle Hill RRT, CRE, CSFI
Respiratory Therapist, Arnprior And District Family Health Team

Jody Hamilton, BSW, MSW
Director Community Programs & Partnerships, Lung Health Foundation

Dr. Joshua Wald, MD, FRCPC (respirologist)
Associate Professor

Dr. Alan Kaplan, MD CCFP(EM) FCFP CPC(HC)
Chairperson, Family Physician Airways Group of Canada
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Geneviève Lalumière, BScN, RN MN
Clinical Nurse Specialist and Coordinator Regional Palliative Consultation Team, Bruyère Continuing Care

Disclosure

Relationship with Financial Sponsors:

Pallium Canada

- Not-for-profit
- Funded by Health Canada
- Boehringer Ingelheim supports Pallium Canada through an in-kind grant to expand interprofessional education in palliative care.

Disclosure

This program has received financial support from:

- Health Canada in the form of a contribution program
- Pallium Canada generates funds to support operations and R&D from Pallium Pocketbook sales and course registration fees
- An educational grant or in-kind resources from Boehringer Ingelheim.

Facilitator/ Presenter/ Panelists:

- **Diana Vincze**: Palliative Care ECHO Project Manager at Pallium Canada.
- **Geneviève Lalumière:** Nothing to disclose
- **Dr. Alan Kaplan:** Speaking Engagements/Honoraria/Consulting fees: ALK, Astra Zeneca, Boehringer Ingelheim, Covis, Eisai, GSK, Idorsia, Pfizer, Moderna, NovoNordisk, Sanofi, Teva, Trudell, Valeo. Educational companies: MD Briefcase, PeerView, Respiplus.
- **Jody Hamilton:** Nothing to disclose
- **Danielle Hill:** Speaker/Honoraria fees from GSK and AstraZeneca
- **Dr. Joshua Wald:** Speaking fees and honoraria from GSK, AstraZeneca, Canadian Institute for the transfer of knowledge (CITE) and the lung health foundation.

Disclosure

Mitigating Potential Biases:

- The scientific planning committee had complete independent control over the development of program content

Welcome and Reminders

- Please introduce yourself in the chat!
- Your microphones are muted. There will be time during this session for questions and discussion.
- You are also welcome to use the Q&A function to ask questions, but also feel free to raise your hand!
- This session is being recorded and will be emailed to registrants within the next week.
- Remember not to disclose any Personal Health Information (PHI) during the session.
- Each session has been approved for 1.0 CSRT CPD credit by the Canadian Society of Respiratory Therapists (CSRT).
- This event is also an Accredited Group Learning Activity through the Royal College of Physicians and Surgeons of Canada. You may claim a maximum of **5.00 hours.**

Objectives of this Series

After participating in this program, participants will be able to:

- Describe what others have done to integrate palliative care services into their practice
- Share knowledge and experience with their peers
- Increase their knowledge and comfort around integrating a palliative care approach for their patients with advanced lung disease.

Overview of Topics

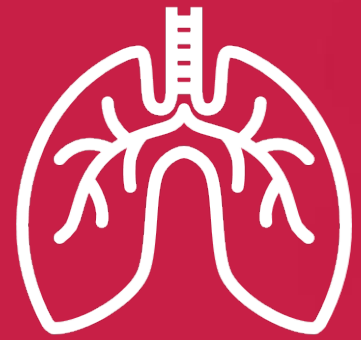
Session #	Session title	Date/ Time
Session 1	Palliative care in advanced respiratory illnesses	February 28, 2024 from 12-1pm ET
Session 2	COPD Management	May 1, 2024 from 12-1pm ET
Session 3	Pulmonary Fibrosis	June 28, 2024 from 12-1pm ET
Session 4	Symptom management in advanced respiratory illnesses	September 18, 2024 from 12-1pm ET
Session 5	Psychological distress and depression	January 15, 2025 from 12-1pm ET

Objectives of this Session

After participating in this session, participants will be able to:

- Recognize and Understand Psychological Distress in Respiratory Illnesses
- Develop Screening and Assessment Skills for Depression
- Implement Collaborative Care Approaches
- Develop Patient-Centered Interventions for Psychological Well-being
- Promote Education and Communication on Mental Health

Psychological distress and depression



Psychological distress and depression: in lung health

Alan Kaplan MD CCFP(EM) FCFP

Chair, Family Physician Airways Group of Canada

Learning Objectives

1

Recognize the importance of psychologic illness in respiratory illnesses

2

Discuss how they can be measured in practice

3

Review treatments: and comparative safety

GINA 2024
Anxiety and Depression in Asthma

Anxiety and depression

Clinical features

Anxiety symptoms and psychiatric disorders, particularly depressive and anxiety disorders, are more prevalent among people with asthma.[540,541] Psychiatric comorbidity is also associated with worse asthma symptom control and medication adherence, and worse asthma-related quality of life.[542] Anxious and depressive symptoms have been associated with increased asthma-related exacerbations and emergency visits.[529] Panic attacks may be mistaken for asthma.

Diagnosis

Although several tools are available for screening for anxious and depressive symptomatology in primary care, the majority have not been validated in asthma populations. Difficulties in distinguishing anxiety or depression from asthma symptoms may therefore lead to misdiagnosis. It is important to be alert to possible depression and/or anxiety in people with asthma, particularly when there is a previous history of these conditions. Where appropriate, patients should be referred to psychiatrists or evaluated with a disease-specific psychiatric diagnostic tool to identify potential cases of depression and/or anxiety.

Management of Anxiety and Depression in Persons with Asthma

Management

There have been few good quality pharmacological and non-pharmacological treatment trials for anxiety or depression in patients with asthma, and results are inconsistent. A Cochrane review of 15 randomized controlled trials of psychological interventions for adults with asthma included cognitive behavior therapy, psychoeducation, relaxation, and biofeedback.[530] Results for anxiety were conflicting, and none of the studies found significant treatment differences for depression. Drug treatments and cognitive behavior therapy[531] have been described as having some potential in patients with asthma; however, current evidence is limited, with a small number of studies and methodological shortcomings.

Depression and Anxiety in patients with ILD

EXPERT REVIEW OF RESPIRATORY MEDICINE
2020, VOL. 14, NO. 9, 859–862
https://doi.org/10.1080/17476348.2020.1776118

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EDITORIAL

Depression and anxiety in patients with interstitial lung disease

Abebaw Mengistu Yohannes

School of Behavioral and Applied Sciences, Azusa Pacific University, Azusa, CA, USA

ARTICLE HISTORY Received 19 March 2020; Accepted 20 May 2020

KEYWORDS ILD; depression; anxiety; pulmonary rehabilitation; antidepressant drug therapy

Depression and anxiety in patients with interstitial lung disease

Abebaw Mengistu Yohannes

https://doi.org/10.1080/17476348.2020.1776118

PUBLISHED ONLINE:
12 June 2020

Table 1 of 2

Table 1. Prevalence of anxiety and depressive symptoms in ILD patients.

Authors	Depression and measures	Anxiety and measures	Type of intervention	Comments
Lee et al. [4] N = 112	Depression 26% HADS	Anxiety 21%	N/A	Anxiety was associated with impaired quality of life.
Glaspole et al. [10] N = 102	Depression 14% HADS	Anxiety 21%	N/A	In 12 months follow-up, prolonged anxiety and depression was related with severe dyspnea and cough.
Holland et al. [6] N = 124	Depression 23% HADS	Anxiety 31% HAD	N/A	Depression and anxiety were related with dyspnea symptoms and presence of comorbidities.
Akhtar et al. [9] N = 118	Depression 49% WSDI	N/A	Only 9 patients were receiving antidepressant drug therapy for treatment of depression.	Women had elevated symptoms depression compared to men.
Ryerson et al. [7] N = 52	Depression 21% CESD	N/A	N/A	Depression was associated with increased dyspnea, pain, and impaired sleep disturbance.
Ryerson et al., [5] N = 52	Depression 23% CESD	N/A	N/A	Increased dyspnea is associated with depression, functional status and pulmonary function impairment.
Coelho et al. [8] N = 63	Depression 57% BDI	Anxiety 60% BAI	N/A	Depression and anxiety were associated with impaired quality of life, increased dyspnea and reduced exercise capacity.

N/A = not applicable.

In ILD?

- Anxiety and depression are common in patients with ILD, but frequently overlooked and un- or under-treated. The adverse impact of depression and anxiety is enormous by impairing quality of life, decreasing exercise capacity and increased acute exacerbation and hospital admission and dependency on their caregivers.
- Untreated depression and anxiety are associated with poor compliance to medical treatment, early dropout from rehabilitation, impaired quality of life, increased dyspnea, social isolation, healthcare utilization, and premature mortality in ILD patients
- Management strategies still need to be studied…

Yohannes, A. M. (2020). Depression and anxiety in patients with interstitial lung disease. Expert Review of Respiratory Medicine, 14(9), 859–862. https://doi.org/10.1080/17476348.2020.1776118

Symptoms overlap!

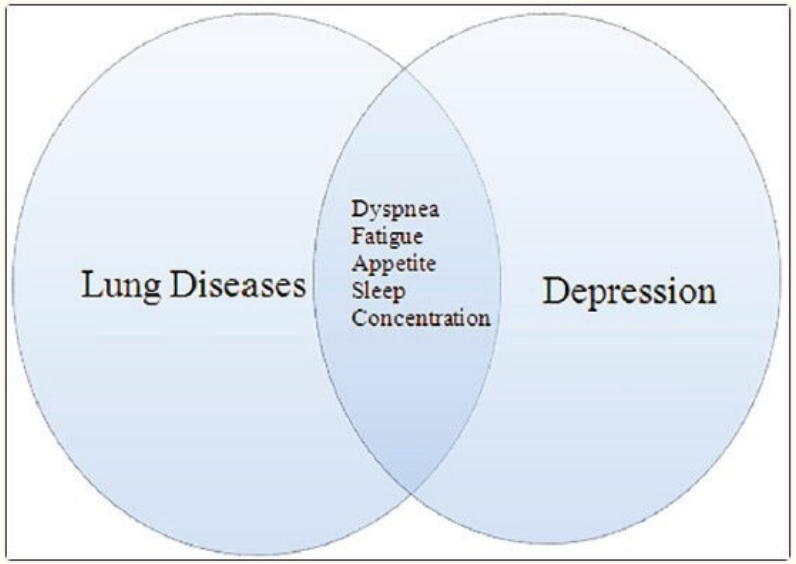
Review Article

Depression in Pulmonary Arterial Hypertension and Interstitial Lung Diseases

Sameer Verma[1], Jose Cardenas-Garcia[1], Prasanta R. Mohapatra[2], Arunabh Talwar[1]

[1]Department of Pulmonary, Critical Care and Sleep Medicine, North Shore – Long Island Jewish Health System, New York, USA [2]Department of Pulmonary Medicine, All India Institute of Medical Sciences, Sijua, Bhubaneswar, Odisha, India

Figure 1.



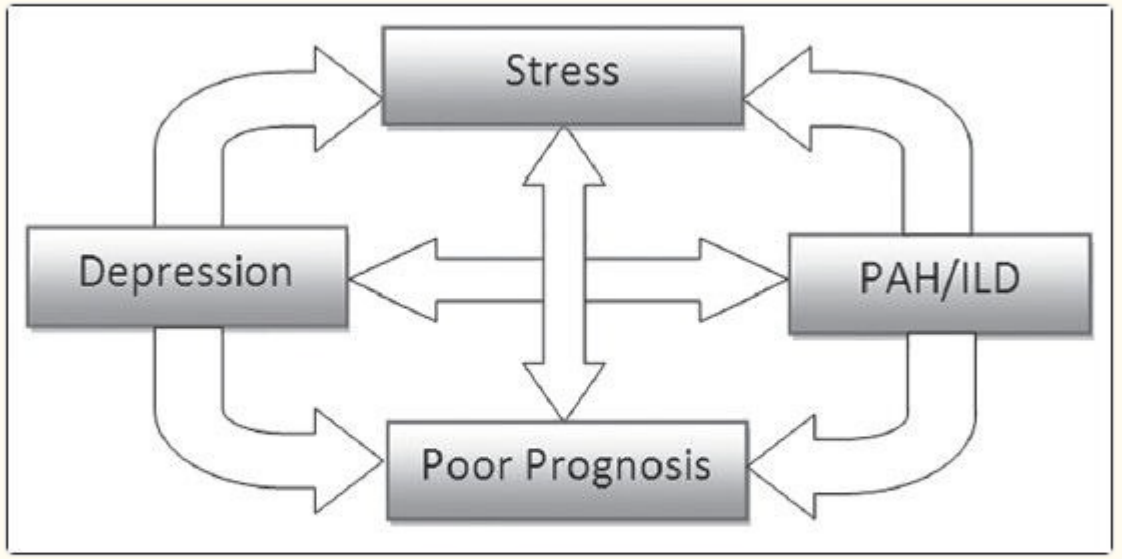
Open in a new tab

Overlap of depressive symptoms in lung diseases

Verma S, Cardenas-Garcia J, Mohapatra PR, Talwar A. Depression in pulmonary arterial hypertension and interstitial lung diseases. N Am J Med Sci. 2014 Jun;6(6):240-9. doi: 10.4103/1947-2714.134368. PMID: 25006558; PMCID: PMC4083524.

Stress Worsens Prognosis

Figure 3.



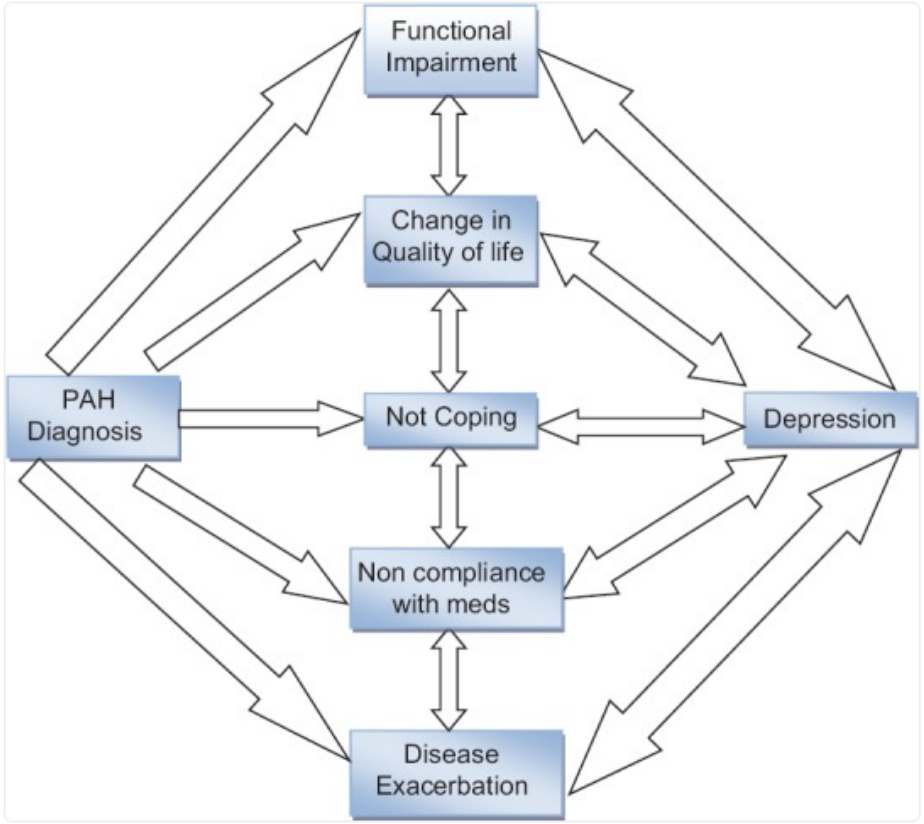
Open in a new tab

Co-relationship between depression and PAH/ILD

Verma S, Cardenas-Garcia J, Mohapatra PR, Talwar A. Depression in pulmonary arterial hypertension and interstitial lung diseases. N Am J Med Sci. 2014 Jun;6(6):240-9. doi: 10.4103/1947-2714.134368. PMID: 25006558; PMCID: PMC4083524.

Mechanistically.. (multidirectional)

Figure 1.



Relationship between pulmonary artery hypertension and depression

Verma S, Sahni S, Vijayan VK, Talwar A. Depression in pulmonary arterial hypertension: An undertreated comorbidity. Lung India. 2016 Jan-Feb;33(1):58-63. doi: 10.4103/0970-2113.173072. PMID: 26933309; PMCID: PMC4748667.

Mental disorders: Important comorbidities in **COPD**

- Anxiety and depression are common in COPD and are associated with poorer health status and increased risk of exacerbations and emergency hospital admissions[1]
- Multiple studies have demonstrated an association between cigarette smoking and increased anxiety symptoms or disorders[2]
- Smoking, depression and anxiety are all associated with a higher risk of death in people with COPD[3]

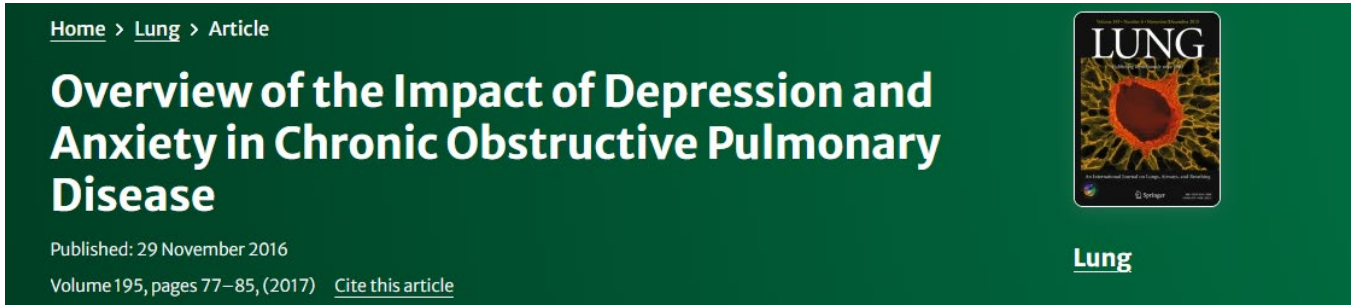
1. GOLD 2022. Available at: https://goldcopd.org/2022-gold-reports-2/;
2. Moylan S, et al. Brain Behav 2013;3:302-26; 3. Lou P, et al. Respir Care 2014;59:54-61.

COPD and mental health

- Mental health problems are common among people with COPD[1-3]
  - ~30% have comorbid depression (increasing to ~80% with increasing severity)
  - 10–30% have comorbid anxiety
- Prevalence increases with age and as symptoms worsen and is associated with poorer QoL
- Depression is underdiagnosed and undertreated in people with COPD
- PCPs often have low confidence to evaluate and treat mental health problems due to the complex inter-relationships between them and symptoms such as breathlessness; guidelines for such are lacking

QoL, quality of life.

1. Pollok J, et al. Cochrane Database Syst Rev 2019;3:CD012347; 2. Sohanapal R, et al. Trials 2020;21:18(2020); 3. Yohannes AM, Alexopoulos GS. Eur Respir Rev 2014;23:345-9.



They are Common in COPD and increases risk of exacerbations

- The prevalence of anxiety/depression at the start of the study was of 15.6%.
- During the 2 years of monitoring, 77.9% of the patients suffered at least moderate-to-severe exacerbation.
- 54.1% were frequent exacerbators.
- Anxiety/depression were strongly associated with moderate–severe frequent exacerbation in the crude analysis (ORc = **2.28**).

Montserrat-Capdevila, J., Godoy, P., Marsal, J.R. et al. Overview of the Impact of Depression and Anxiety in Chronic Obstructive Pulmonary Disease. Lung 195, 77–85 (2017). https://doi.org/10.1007/s00408-016-9966-0

Proposed Taxonomy (Etiotypes) for COPD

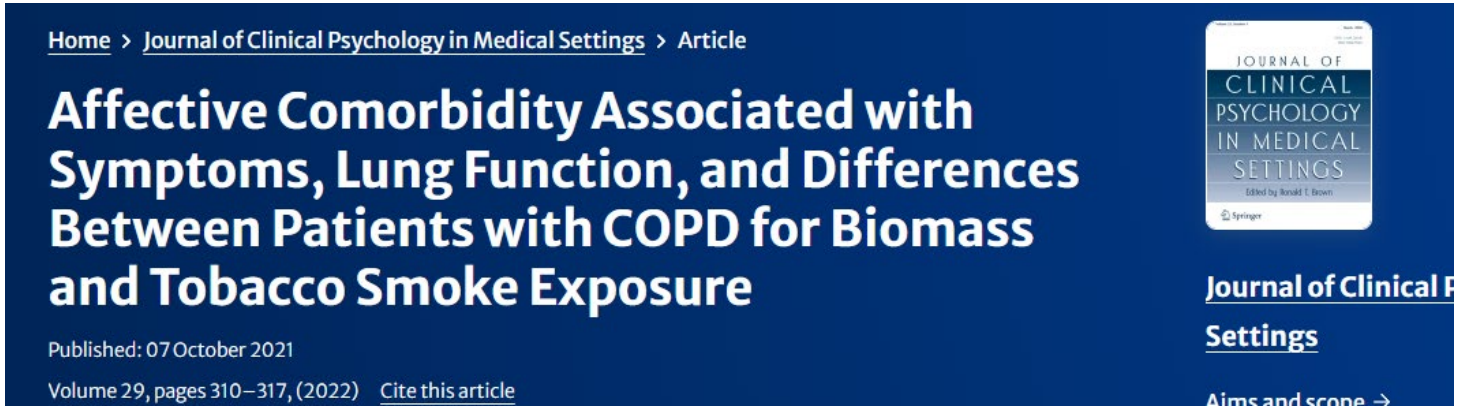
Table 1.1

Classification	Description
Genetically determined COPD (COPD-G)	Alpha-1 antitrypsin deficiency (AATD) Other genetic variants with smaller effects acting in combination
COPD due to abnormal lung development (COPD-D)	Early life events, including premature birth and low birthweight, among others
Environmental COPD	
Cigarette smoking COPD (COPD-C)	• Exposure to tobacco smoke, including *in utero* or via passive smoking • Vaping or e-cigarette use • Cannabis
Biomass and pollution exposure COPD (COPD-P)	Exposure to household pollution, ambient air pollution, wildfire smoke, occupational hazards
COPD due to infections (COPD-I)	Childhood infections, tuberculosis-associated COPD, HIV-associated COPD
COPD & asthma (COPD-A)	Particularly childhood asthma
COPD of unknown cause (COPD-U)	

*Adapted from Celli et al. (2022) and Stolz et al. (2022)

2023 Teaching Slide Set

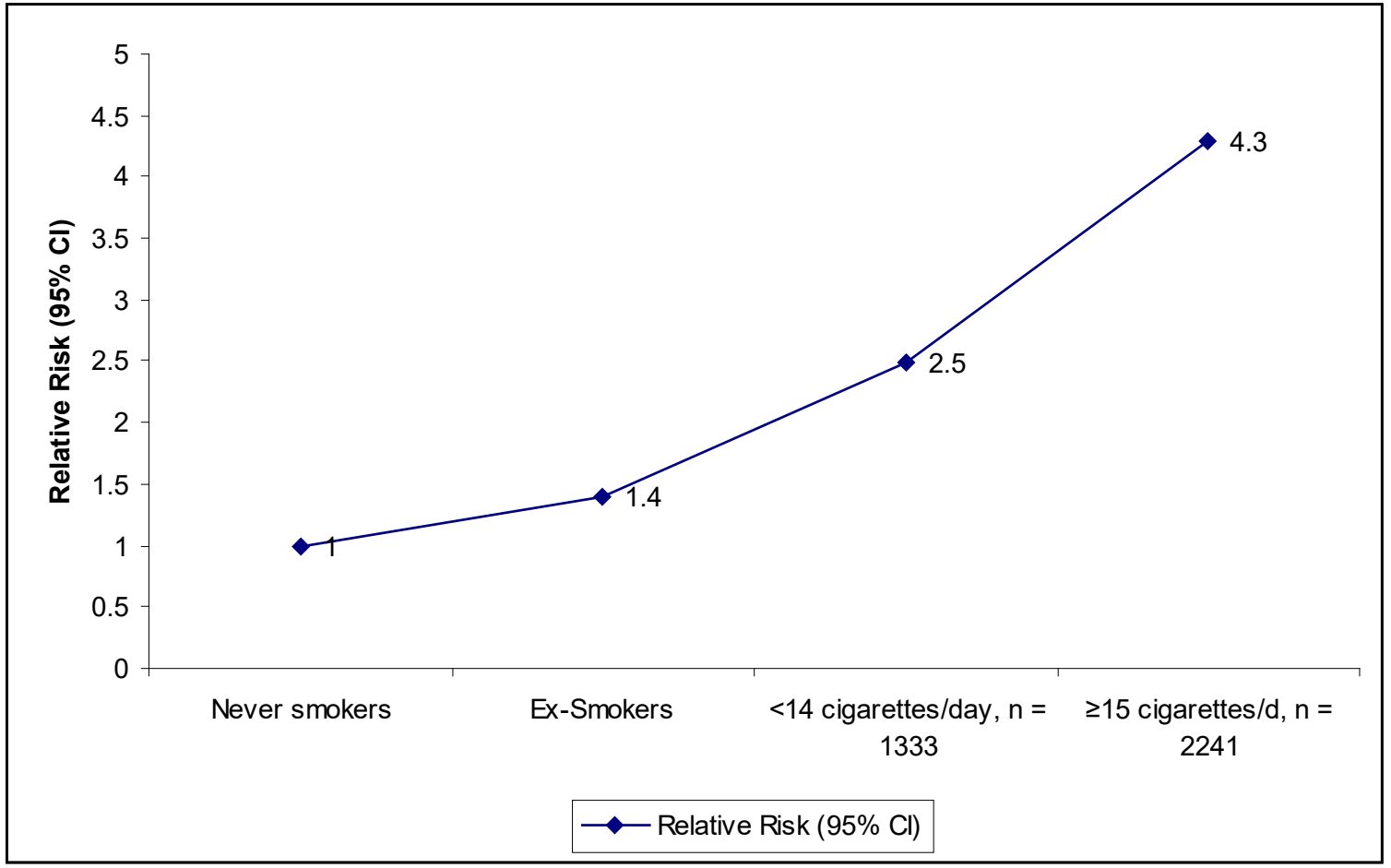
Differs in COPD with Different Etiologies



- Studied the prevalence of affective comorbidity (depression and anxiety) associated with lung function, functional capacity, dyspnea, and quality of life; as well as the differences between groups of patients diagnosed with COPD associated with biomass (COPD-BE) and patients with COPD secondary to tobacco (COPD-TS)
- The variables of dyspnea and quality of life were associated with depression and anxiety, explaining 25% and 24% of the variability, respectively. Depression is higher in COPD-BE patients compared to COPD-TS patients

Hernández-Pérez, A., Vargas-Núñez, I., Moreno-Jiménez, B. et al. Affective Comorbidity Associated with Symptoms, Lung Function, and Differences Between Patients with COPD for Biomass and Tobacco Smoke Exposure. J Clin Psychol Med Settings 29, 310–317 (2022). https://doi.org/10.1007/s10880-021-09828-7

Suicide Risk Is Directly Proportional to Smoking (Non-Respiratory population)



Miller M et al. *Am J Public Health*. 2000;90:768-773

Tobacco use and poor mental health

- Smoking, depression and anxiety are all associated with a higher risk of death among people with COPD
- Support people with COPD to quit tobacco use and reassure them that:
  - Quitting reduces anxiety and depression
  - Quitting is the single most important intervention to slow progression, increase survival and reduce morbidity[1-3]
- See IPCRG Desktop Helper No. 4. Helping patients quit smoking[4]

1. GOLD 2022 Report. Available at https://goldcopd.org/2022-gold-reports-2/; 2. Williams S, et al. IPCRG Position paper No. 1. Available at: https://www.ipcrg.org/primaryrespiratorycare; 3. Tonnesen P. Eur Respir Rev 2013;1:241-50; 4. Desktop Helper No. 4 - Helping patients quit tobacco - 3rd edition. https://www.ipcrg.org/desktophelpers/desktop-helper-no-4-helping-patients-quit-tobacco-3rd-edition.

Screen for Depression/ Anxiety

Patient Health Questionnaire-2 (PHQ-2)

Share

The PHQ-2 inquires about the frequency of depressed mood and anhedonia over the past two weeks. The PHQ-2 includes the first two items of the PHQ-9.

- The purpose of the PHQ-2 is to screen for depression in a "first-step" approach.
- Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder.

Over the **last 2 weeks**, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	+1	+2	+3
2. Feeling down, depressed or hopeless	0	+1	+2	+3

PHQ-2 score obtained by adding score for each question (total points)

Interpretation:

- A PHQ-2 score ranges from 0-6. The authors identified a score of 3 as the optimal cutpoint when using the PHQ-2 to screen for depression.
- If the score is 3 or greater, major depressive disorder is likely.
- Patients who screen positive should be further evaluated with the PHQ-9, other diagnostic instruments, or direct interview to determine whether they meet criteria for a depressive disorder.

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Total Score ___ = Add Columns ___ + ___ + ___

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Assessment of mental health problems

- Anticipate presence of comorbid depression and anxiety
- Employ active listening, show empathy, observe carefully
- Be alert for physical symptoms

Patient Health Questionnaire 4 (PHQ-4)[1]

Over the last 2 weeks how often have you been bothered by these problems: 0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day					
1. Feeling nervous, anxious or on edge	0	1	2	3	A score of 3 or more considered + for anxiety
2. Not being able to stop or control worrying	0	1	2	3	
3. Little interest or pleasure in doing things	0	1	2	3	A score of 3 or more considered + for depression
4. Feeling down, depressed or hopeless	0	1	2	3	
Categories of psychological distress based on total score: • None: 0–2 • Mild: 3–5 • Moderate: 6–8 • Severe: 9–12					
Source: https://qxmd.com/calculate/calculator_476/patient-health-questionnaire-4-phq-4.					

Additional tools if score is high: PHQ-9 (depression), GAD7 (anxiety) Available in multiple languages

1. Available at: https://qxmd.com/calculate/calculator_476/patient-health-questionnaire-4-phq-4.

Patient Health Questionnaire (PHQ-9)

Name: _____ Date: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

For office coding: Total Score _____ = _____ + _____ + _____

Total Score _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

☐ Not difficult at all ☐ Somewhat difficult ☐ Very difficult ☐ Extremely difficult

Your name:

Today's date:

CAT
COPD Assessment Test™

How is your COPD? Take the COPD Assessment Test™ (CAT)

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers, and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

For each item below, place a mark (X) in the box that best describes you currently. Be sure to only select one response for each question.

Example: I am very happy 0 X 2 3 4 5 I am very sad

			SCORE
I never cough	0 1 2 3 4 5	**I cough all the time**	
I have no phlegm (mucus) in my chest at all	0 1 2 3 4 5	**My chest is completely full of phlegm (mucus)**	
My chest does not feel tight at all	0 1 2 3 4 5	**My chest feels very tight**	
When I walk up a hill or one flight of stairs I am not breathless	0 1 2 3 4 5	**When I walk up a hill or one flight of stairs I am very breathless**	
I am not limited doing any activities at home	0 1 2 3 4 5	**I am very limited doing activities at home**	
I am confident leaving my home despite my lung condition	0 1 2 3 4 5	**I am not at all confident leaving my home because of my lung condition**	
I sleep soundly	0 1 2 3 4 5	**I don't sleep soundly because of my lung condition**	
I have lots of energy	0 1 2 3 4 5	**I have no energy at all**	
		TOTAL	

Alberta Health Services

Affix patient label within this box

Edmonton Symptom Assessment System Revised (ESAS-r)

Please circle the number that best describes how you feel NOW:

No Pain	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Pain
No Tiredness *(Tiredness = lack of energy)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Tiredness
No Drowsiness *(Drowsiness = feeling sleepy)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Drowsiness
No Nausea	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Nausea
No Lack of Appetite	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Lack of Appetitie
No Shortness of Breath	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Shortness of Breath
No Depression *(Depression = feeling sad)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Depression
No Anxiety *(Anxiety = feeling nervous)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Anxiety
Best Wellbeing *(Wellbeing = how you feel overall)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Wellbeing
No _____ Other Problem *(For example constipation)*	0	1	2	3	4	5	6	7	8	9	10	Worst Possible _____

Patient Name _____

Date *(yyyy-Mon-dd)*

Time *(hh:mm)*

Completed by *(Check one)*
- ☐ Patient
- ☐ Family Caregiver
- ☐ Health Care Professional Caregiver
- ☐ Caregiver-assisted

Body Diagram on Reverse

New tools being evaluated also

Home › Lung › Article

Development and Validation of a Screening Tool for Generalized Anxiety and Major Depressive Disorder in Patients with Chronic Obstructive Pulmonary Disease

RESEARCH | COPD | Published: 29 November 2024

Volume 203, article number 6, (2025) Cite this article

Lung

Aims and scope →

Submit manuscript →

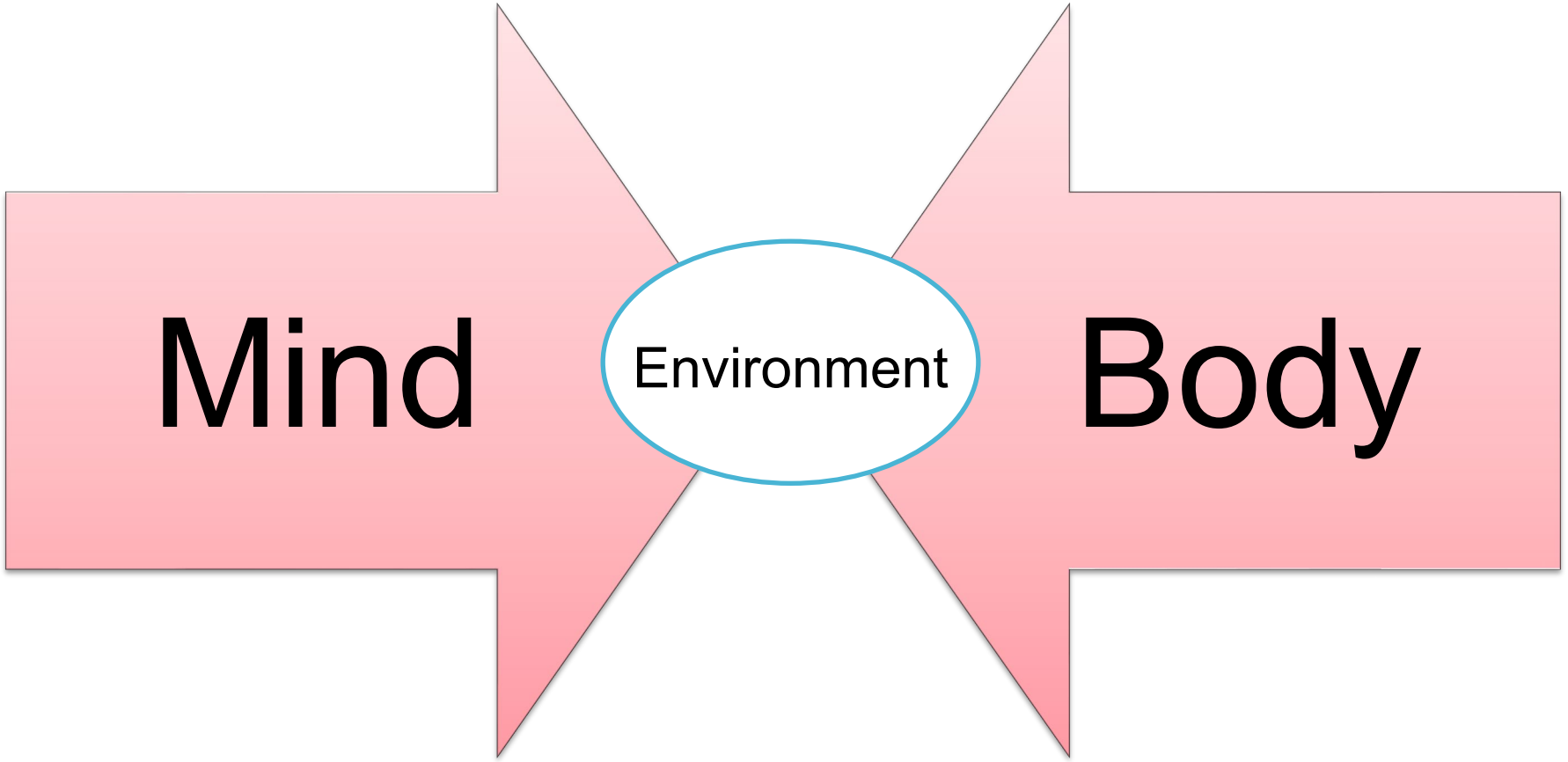
Liu, M., Yang, X., Wang, D. et al. Development and Validation of a Screening Tool for Generalized Anxiety and Major Depressive Disorder in Patients with Chronic Obstructive Pulmonary Disease. Lung 203, 6 (2025). https://doi.org/10.1007/s00408-024-00767-2

Use OARS skills in assessment

O	Open questions	To learn about their feelings and beliefs e.g. "Would you like to tell me more about how you feel?" "How do you experience breathlessness?"
A	Affirmations	Be positive and reinforcing; build a relationship and demonstrate empathy "It's great that you are willing to discuss your sadness, I am here to help you."
R	Reflection	"It sounds as though you have thought a lot about your symptoms and you know what to do."
S	Summary	"So let's make a summary of what we discussed."

Available at: https://www.euro.who.int/__data/assets/pdf_file/0008/394208/Session-5.pdf

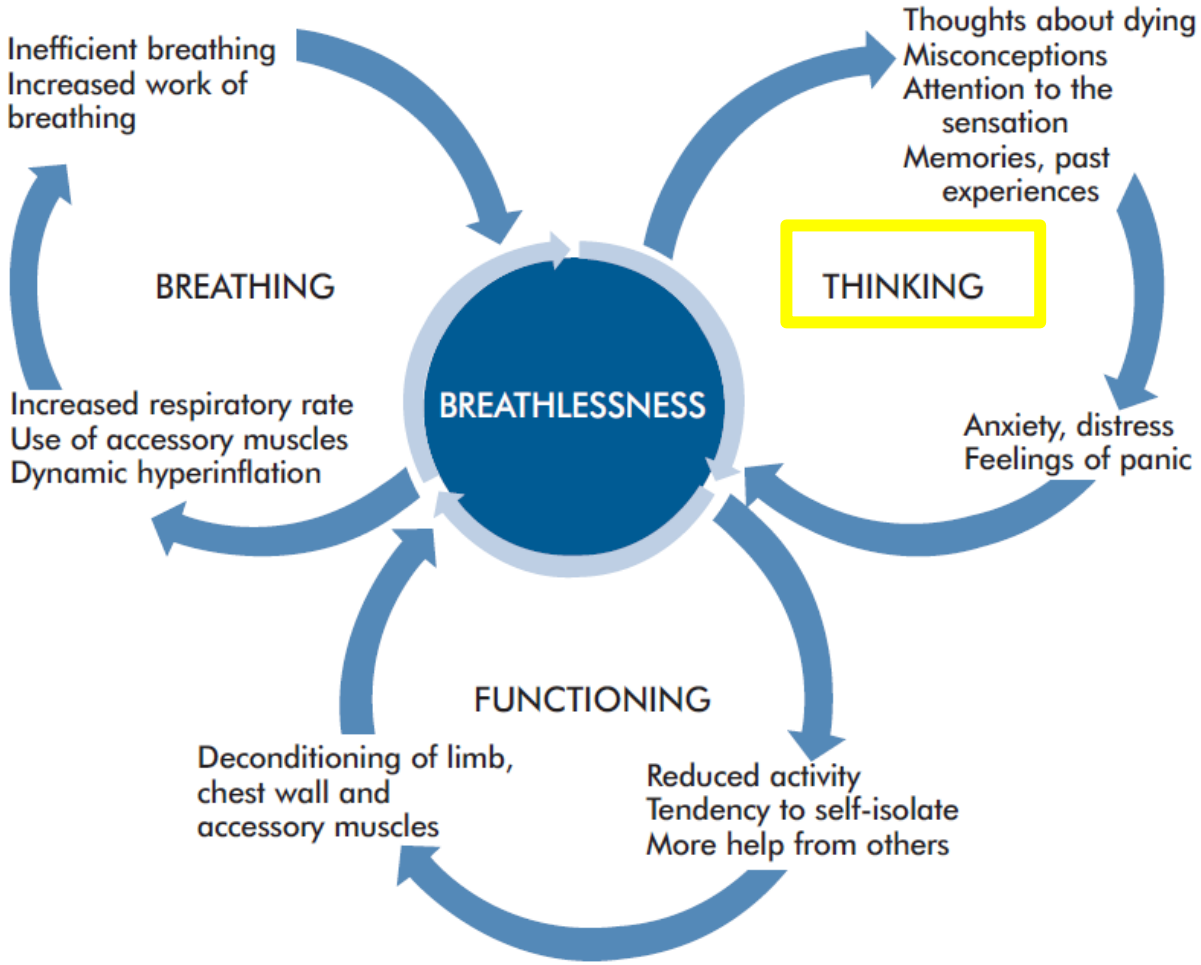
Managing COPD and depression



Breathlessness and psychological distress

- Breathlessness can contribute to anxiety, feelings of panic, frustration, anger and low mood

- Interventions should seek to:
  - Address negative thoughts
  - Manage COPD symptoms
  - Manage anxiety and low mood



Spathis A, et al. npj Prim Care Respir Med 2017;27:27.

Interventions to address breathlessness may relieve symptoms of depression

Intervention	Purpose/aim
Cognitive behavioral therapy	Problem-solving approach that challenges unhelpful thoughts/behaviours; reduces anxiety in COPD in short-term and increases pulmonary rehabilitation attendance
Mindfulness/meditation	20-minute mindful breathing reduces breathlessness in lung disease, and anxiety/depression in advanced disease; enhances non-evaluative attention and may increase self-efficacy
Relaxation techniques	Some evidence that relaxation interventions can help anxiety, breathlessness and fatigue in COPD. Guided imagery ("thinking of a nice place"), progressive muscular relaxation and counting are most acceptable
Acupuncture/pressure	Improves breathlessness in advanced disease and may reduce anxiety
Singing therapy	Most evidence suggests singing therapy can improve lung function; some evidence suggests it may improve anxiety and QoL; anecdotal evidence also suggest it is of value
Positive psychology giving sense of control/confidence	Not evidence-based, however, holistic breathlessness services reduce anxiety/depression and use positive psychology, improving self-efficacy
Social presence	Experimental evidence in healthy volunteers for social presence reducing breathless perception; patients describe reassurance from presence of others

Available at: https://www.ipcrg.org/dth12.

Pulmonary Rehabilitation can help also

Depression and anxiety in patients with interstitial lung disease

Abebaw Mengistu Yohannes

https://doi.org/10.1080/17476348.2020.1776118

PUBLISHED ONLINE:
12 June 2020

Table 2 of 2

Table 2. The efficacy of pulmonary rehabilitation on clinically relevant variables in ILD patients.

Authors	Intervention	Primary outcome(s)	Depression and anxiety	Comments
Deniz et al. [11] N = 57	Single blind, 8 weeks PR,	6-minute, SGRQ HADS	Using HAD scale	There was statistically significant improvement in QOL, in anxiety and depression scores and exercise capacity.
Perez-Bogered et al. [12] N = 60	RCT, 6 months PR with 1 year follow-up	Exercise capacity (6-minute) and Quality of life (SGRQ)	Not examined	PR was effective in improving QoL and exercise capacity and maintained upto one year.
Igarashi et al. [13] N = 40	Single bling, 3 months PR, Older people aged > 65 years	6-minute walk test	Not examined	13 patients completed PR and improvement was observed in exercise capacity.
Dowman et al. [17] N = 142	RCT, 8 weeks PR, and 6-months follow-up	6-minute walk test, QoL (SGRQ), MRC (dyspnea)	Not examined	PR was effective in improving exercise capacity, QoL and dyspnea in ILD.
Tonelli et al. [19] N = 41	Single-blind, 8 weeks PR,	Lung function, ISWT, 6-minute walk test, QoL (SGRQ), MRC (dyspnea	Not examined	PR improves QoL, exercise capacity and reduce dyspnea symptoms.
Dreher et al. [16] N = 319 – PR N = 29 – NPPV	Retrospective PR, Inpatient PR	6-minute walk test, HRQoL, dyspnea	Not examined	Significant improvement in exercise capacity. Individualized PR with NPPV is feasible for ILD.
Ryerson et al. [14] N = 54	Single blind, 6–9 weeks PR from 3 centers and 6-months follow-up	6-minute walk test, QoL (SGRQ), MRC (dyspnea) GDS	Depression measured using GDS	PR improved exercise capacity, QoL and reduced depressive symptoms.
Ferreira et al. [				

Yohannes AM. Depression and anxiety in patients with interstitial lung disease. Expert Rev Respir Med. 2020 Sep;14(9):859-862. doi: 10.1080/17476348.2020.1776118. Epub 2020 Jun 12. PMID: 32460643.

Pharmacological interventions to address mental health problems in COPD

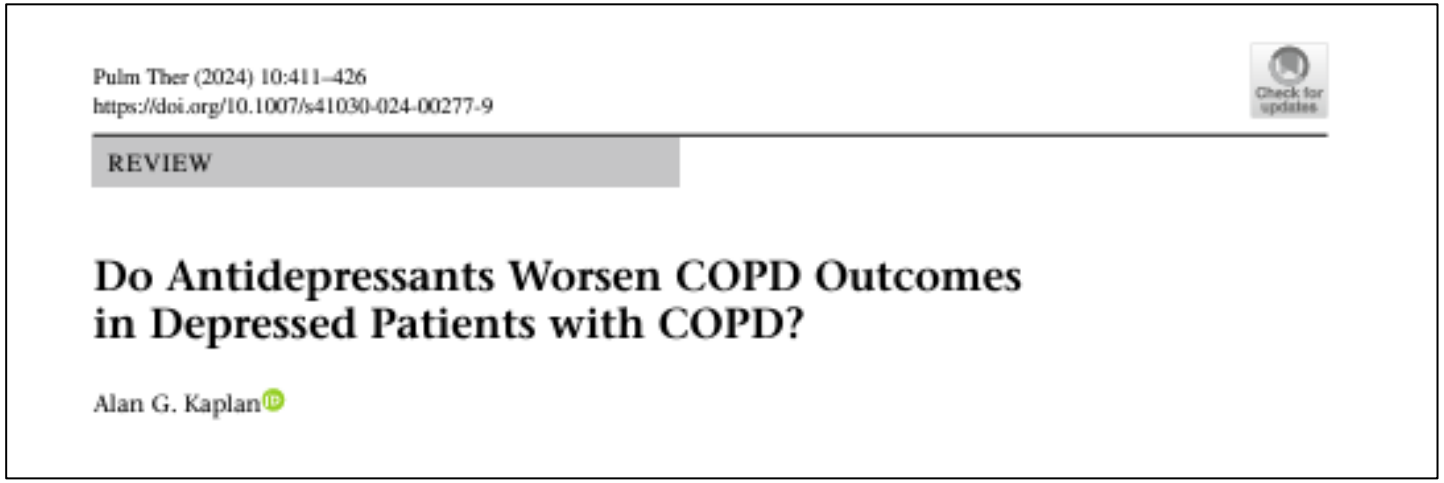
- Manage breathlessness using bronchodilator therapy[1]
- Treat tobacco dependence[2]
- Consider antidepressant medication for low mood:[2]
  - SSRIs (preferred)
  - TCAs (not for those with severe COPD)

More to come on this

- Consider benzodiazepines for management of acute, distressing anxiety[3] but not for breathlessness[4]

SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant.

1. GOLD 2022 Report. Available at https://goldcopd.org/2022-gold-reports-2/; 2. Pollok J, et al. Cochrane Database Syst Rev 2019;3:CD012347; 3. NICE. BNF. Hypnotics and anxiolytics. Available at: https://bnf.nice.org.uk/treatment-summary/hypnotics-and-anxiolytics.html; 4. Simon S, et al. Cochrane Database Syst Rev 2010;1: CD007354.



Pulm Ther (2024) 10:411–426
https://doi.org/10.1007/s41030-024-00277-9

REVIEW

Do Antidepressants Worsen COPD Outcomes in Depressed Patients with COPD?

Alan G. Kaplan

Key Summary Points

Chronic obstructive pulmonary disease (COPD) commonly coexists with depression, and depression is related to poorer outcomes.

Depression and anxiety can also heighten patient sensitivity to symptoms, leading to poorer disease control.

Recent database or case–control studies have suggested an adverse relationship between the use of antidepressants and COPD outcomes.

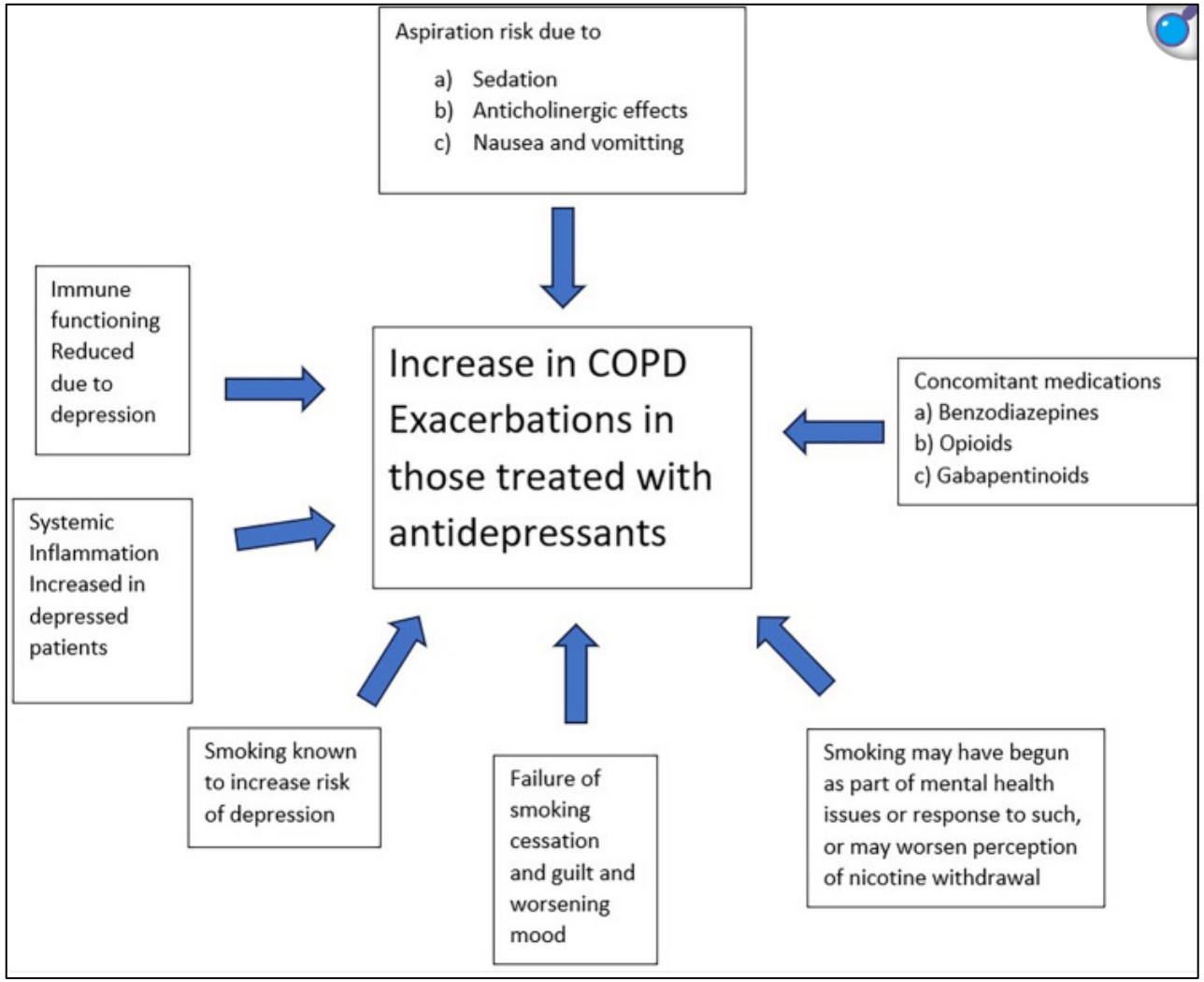
There are multiple potential mechanisms that could be responsible for this.

Antidepressant pharmacotherapy is crucial for the management of these patients and should not be avoided due to these studies, which are suggestive but contain assumptions and are certainly not definitive.

Each patient with COPD should be assessed for mental health issues and supported with both non-pharmacological and pharmacological treatments in an individualized manner.

Kaplan AG. Do Antidepressants Worsen COPD Outcomes in Depressed Patients with COPD? Pulm Ther. 2024 Dec;10(4):411-426. doi: 10.1007/s41030-024-00277-9. Epub 2024 Nov 8. PMID: 39516453; PMCID: PMC11574234.

Mechanisms that could lead to worsened outcomes for COPD patients given antidepressants



Kaplan AG. Do Antidepressants Worsen COPD Outcomes in Depressed Patients with COPD? Pulm Ther. 2024 Dec;10(4):411-426. doi: 10.1007/s41030-024-00277-9. Epub 2024 Nov 8. PMID: 39516453; PMCID: PMC11574234.

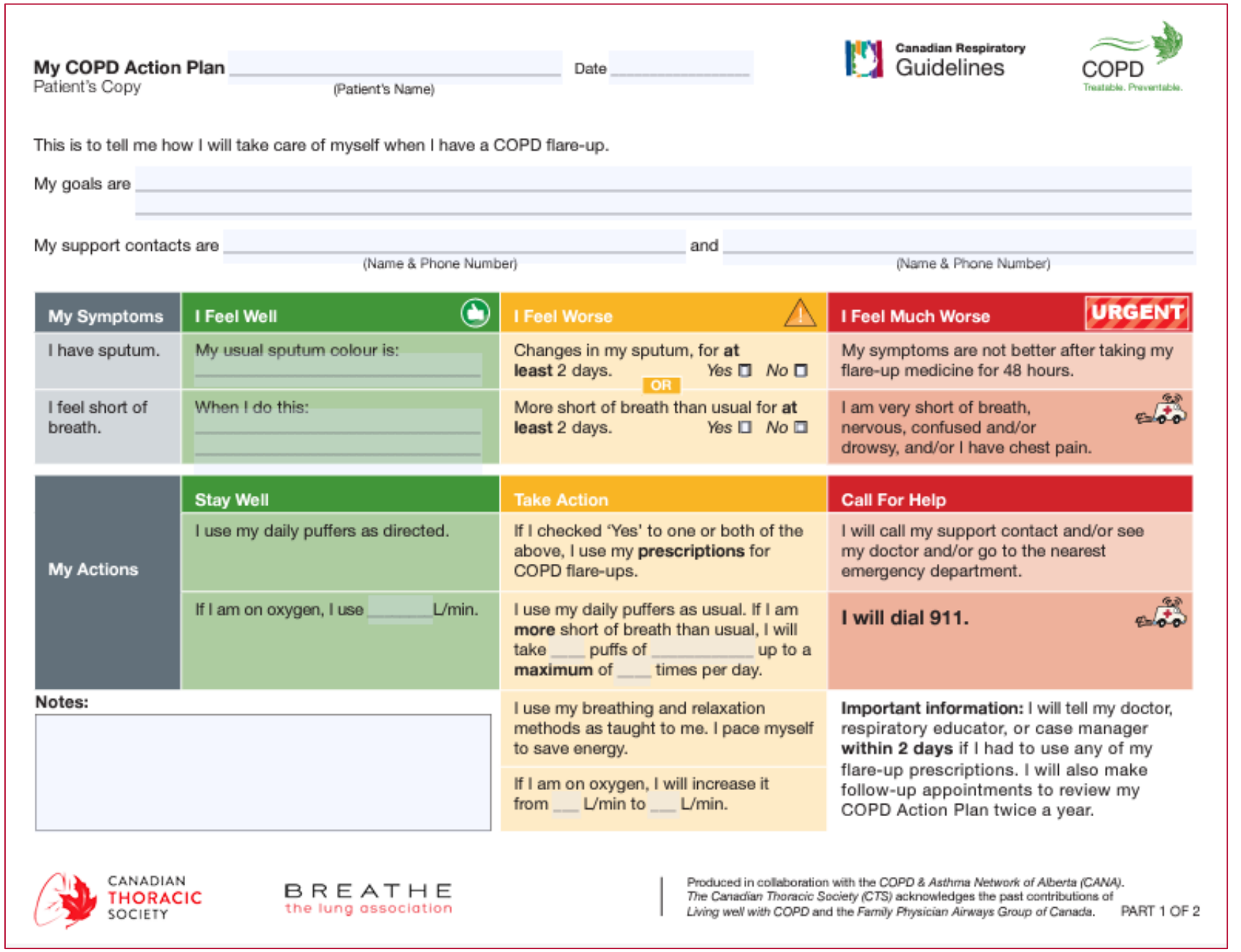
Treatment Options

Treatment of Depression in patients with COPD

1. Make the diagnosis, consider screening tests and use of validated scoring tools
   -consider bipolar disease
2. Non pharmacologic therapy
   CBT
   Counselling
   Exercise/Pulmonary Rehabilitation
   Smoking cessation
   Mucus therapy
   Self management plans
   Self help groups
3. Pharmacologic therapy after assessing risks vs benefits:
   SSRI
   SNRI
   Tricyclic antidepressants
   Newer agents
   Adjuncts
   ECT
   Avoid sedating medications and anticholinergic side effects if possible

Box 1: Treatment of Depression in patients with COPD. *COPD* chronic obstructive pulmonary disease, *CBT* cognitive behavioral therapy, *SSRI* selective serotonin reuptake inhibitor, *SNRI* serotonin–noradrenaline reuptake inhibitor, *ECT* electroconvulsant therapy

Kaplan AG. Do Antidepressants Worsen COPD Outcomes in Depressed Patients with COPD? Pulm Ther. 2024 Dec;10(4):411-426. doi: 10.1007/s41030-024-00277-9. Epub 2024 Nov 8. PMID: 39516453; PMCID: PMC11574234.



My COPD Action Plan
Patient's Copy

_____ Date _____
(Patient's Name)

Canadian Respiratory Guidelines

COPD
Treatable. Preventable.

This is to tell me how I will take care of myself when I have a COPD flare-up.

My goals are _____

My support contacts are _____ and _____
(Name & Phone Number) (Name & Phone Number)

My Symptoms	I Feel Well	I Feel Worse	I Feel Much Worse URGENT
I have sputum.	My usual sputum colour is: _____	Changes in my sputum, for **at least** 2 days. *Yes* ☐ *No* ☐ OR	My symptoms are not better after taking my flare-up medicine for 48 hours.
I feel short of breath.	When I do this: _____ _____	More short of breath than usual for **at least** 2 days. *Yes* ☐ *No* ☐	I am very short of breath, nervous, confused and/or drowsy, and/or I have chest pain.

My Actions	Stay Well	Take Action	Call For Help
	I use my daily puffers as directed.	If I checked 'Yes' to one or both of the above, I use my **prescriptions** for COPD flare-ups.	I will call my support contact and/or see my doctor and/or go to the nearest emergency department.
	If I am on oxygen, I use _____ L/min.	I use my daily puffers as usual. If I am **more** short of breath than usual, I will take ___ puffs of _____ up to a **maximum** of ___ times per day.	**I will dial 911.**
		I use my breathing and relaxation methods as taught to me. I pace myself to save energy.	**Important information:** I will tell my doctor, respiratory educator, or case manager **within 2 days** if I had to use any of my flare-up prescriptions. I will also make follow-up appointments to review my COPD Action Plan twice a year.
		If I am on oxygen, I will increase it from ___ L/min to ___ L/min.	

Notes:

CANADIAN THORACIC SOCIETY

BREATHE the lung association

Produced in collaboration with the *COPD & Asthma Network of Alberta (CANA)*. *The Canadian Thoracic Society (CTS)* acknowledges the past contributions of *Living well with COPD* and the *Family Physician Airways Group of Canada*. PART 1 OF 2

Project ECHO Palliative Care - Canada BY Pallium Canada

https://cts-sct.ca/wp-content/uploads/2018/03/4915_THOR_COPDActionPlanUpdate_Editable_Eng_v006.pdf

Canadian Respiratory Guidelines

COPD ACTION PLAN (Physician's copy)

Pharmacological Treatment

1. Short-acting (beta$_2$-agonists and anticholinergic) bronchodilators to treat wheeze and dyspnea. Continue all of your long acting bronchodilators or inhaled steroids as prescribed.
2. Prednisone (oral) → 25-50 mg once daily for 10 days for patients with moderate to severe COPD.
3. Antibiotic choice is prescribed based upon the presence of risk factors as below.
4. Severe AECOPD complicated by acute respiratory failure is a medical emergency. Consider consultation with an emergency specialist or respirologist.

Antibiotic Treatment Recommendations for Acute COPD Exacerbations[1, 2]

Group	Probable Pathogens	First Choice	Alternatives for Treatment Failure
I, Simple Smokers FEV1 > 50% ≤ 3 exacerbations per year	H. influenzae M. catarrhalis S. pneumoniae	Amoxicillin, 2nd or 3rd generation cephalosporin, doxycycline, extended spectrum macrolide, trimethoprimsulfamethoxazole (in alphabetical order).	Fluoroquinolone β-lact/ β-lactamase inhibitor.
II, Complicated, as per I, plus at least one of the following should be present: FEV1<50% predicted; ≥4 exacerbations/ year; ischemic heart disease; use home oxygen or chronic oral steroids; antibiotic use in the past 3 months.	As in group I, plus: Klebsiella spp. and other Gram-negative bacteria Increased probability of β-lactam resistance.	Fluoroquinolone β-lact/ β-lactamase inhibitor (in order of preference).	May require parenteral therapy. Consider referral to a specialist or hospital.
III, Chronic Suppurative II, plus: Constant purulent sputum; some have bronchiectasis; FEV1 usually <35% predicted; chronic oral steroid use; multiple risk factors.	As in group II, plus: P. Aeruginosa and multi-resistant Enterobacteriaceae.	Ambulatory - tailor treatment to airway pathogen; P. Aeruginosa is common (ciprofloxacin) Hospitalized - parenteral therapy usually required.	

General Recommendations for the Physician

- Patients need to be instructed to call or visit their treating physician if symptoms persist or worsen after 48 hrs in spite of patient-initiated treatment. Please instruct patients to notify their doctor, respiratory educator, or case manager within 2 days of filling any of their prescriptions for a COPD flare-up.
- Prescriptions for antibiotics and prednisone can be refilled twice each, as needed, for 1 year. Pharmacists may fax the doctor's office after any portion of the prescriptions for COPD flare-up has been filled.
- To reduce the risk of antibiotic resistance, if more than one treatment is required over 3 months, the class of antibiotics should be changed on subsequent courses of therapy.
- Review with your patient measures to prevent future COPD exacerbations including smoking cessation, annual influenza vaccination, pneumococcal vaccination and appropriate use of inhaled daily medications.
- Consider referral to a local respiratory educator and pulmonary rehabilitation program if available.

International Primary Care IPCRG Est. 2001 Respiratory Group

DESKTOP HELPER

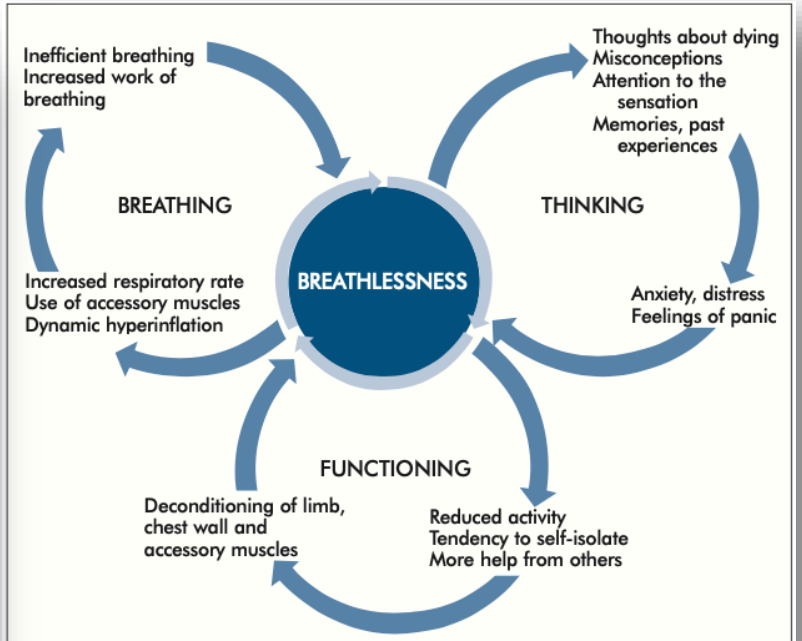
No. 12 March 2022

COPD and Mental Health: Holistic and Practical Guidance for Primary Care

Table 2: OARS

O	Open questions	To learn about their feelings and beliefs e.g. "Would you like to tell me more about how you feel?" "How do you experience breathlessness?"
A	Affirmations	Be positive and reinforcing; build a relationship and demonstrate empathy "It's great that you are willing to discuss your sadness, I am here to help you."
R	Reflection	"It sounds as though you have thought a lot about your symptoms and you know what to do."
S	Summary	"So let's make a summary of what we discussed."

Source: https://www.euro.who.int/__data/assets/pdf_file/0008/394208/Session-5.pdf



Reproduced with permission of the Cambridge Breathlessness Intervention Service.[15]
See: https://www.btf.phpc.cam.ac.uk/

Available at: https://www.ipcrg.org/dth12.

Approach to management of depression (overall, no specific data for CRD)

Table 1. Lifestyle factors and interventions for depression.

Potential lifestyle risk factors	Interventions
Poor sleep pattern	Encourage good sleep hygiene – regular bedtime and wake up time, bed is for sleep and not for other activities (TV, social media). There are useful apps that provide basic psychoeducation and a sleep diary.
Alcohol misuse	Encourage safe drinking. If there is heavy use and the patient is seeking treatment, refer to an addiction medicine service. If they are not seeking treatment, do a brief intervention.
Substance misuse	Provide psychoeducation about the harmful effects of substances, advise abstinence, formal counselling or refer to addiction medicine services.
Smoking	Encourage smoking cessation, and consider motivational interviewing and nicotine replacement therapy.
Unhealthy diet	Psychoeducation about healthy diet and the harms associated with processed food. Encourage Mediterranean diet and increased intake of fruit and vegetables.
Lack of exercise	Encourage regular exercise (e.g. daily walks), emphasising a graded approach to exercise.

Choosing an antidepressant

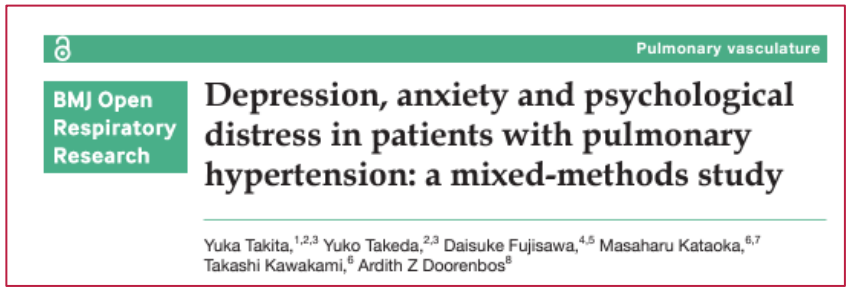
SUMMARY

A biopsychosocial and lifestyle approach should be used when managing depression. Many patients seen in primary care do not require drug therapy.

Evidence-based treatments such as psychological therapies and antidepressant drugs are effective for depression. All patients should receive education about depression.

Shared decision making with the patient is critical if an antidepressant is prescribed. The choice of antidepressant depends on its efficacy and tolerability, the depressive presentation, patient preference and drug interactions.

Boyce P, Ma C. Choosing an antidepressant. Aust Prescr. 2021 Feb;44(1):12-15. doi: 10.18773/austprescr.2020.064. Epub 2021 Feb 1. PMID: 33664544; PMCID: PMC7900278.



Themes and subthemes to explore

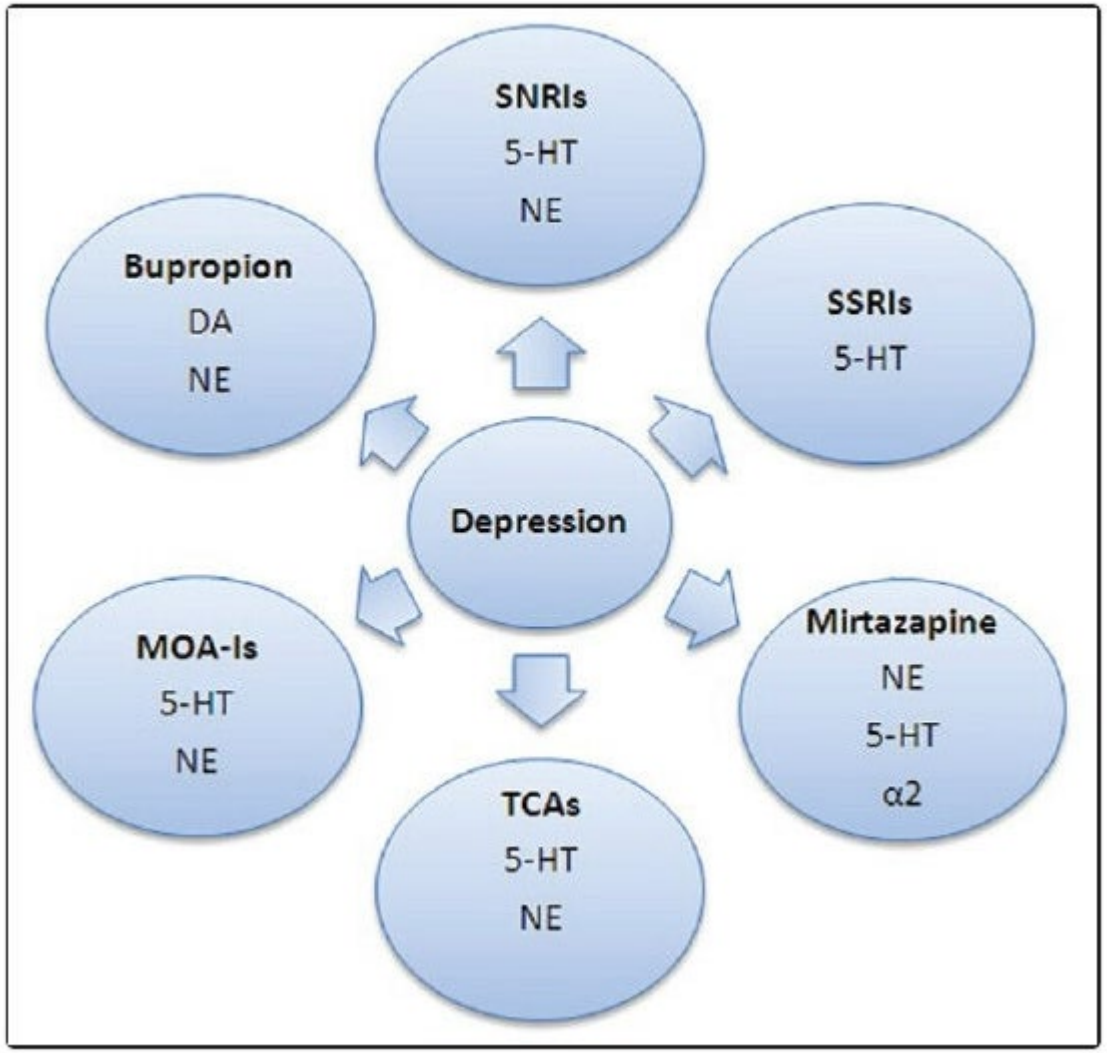
Yuka Takita, Yuko Takeda, Daisuke Fujisawa, Masaharu Kataoka, Takashi Kawakami, Ardith Z Doorenbos - Depression, anxiety and psychological distress in patients with pulmonary hypertension: a mixed-methods study: BMJ Open Respiratory Research 2021;8:e000876.

Table 5 Themes and subthemes

Theme	Subtheme	
	PAH	CTEPH
Loss of myself	Disappointment in self when unable to play a social role	
	Loss of independence	
	Irritability regarding physical disability	
	Loss of purpose of life	
	Hopelessness	
	Anxiety about finances that is increasing because I cannot work	
	Seeking reasons for the current situation	
	Stress about activity limitations	
	Discouragement and regret for past actions	
Isolation from my surroundings	Having no one who listens to my feelings	
	Not wanting to be a burden to others	
	Lack of understanding from others	
	Hard to move like others	
	Feeling of alienation from friends	
Hassle associated with oxygen therapy	Appearance with oxygen	
	Burden of going out with oxygen	
	Difficulty in moving because of pulling oxygen cylinder	Sense of restraint linked to oxygen
		Pain when oxygen tube is pulled
Fear of illness progression/deterioration	Fear of disease progression	Anxiety that illness will last for a lifetime
	Shock of getting worse	Anxiety about physical weakness
	Anxiety and conflict regarding injection therapy	Anxiety about breathlessness
	Despair due to the possibility of starting injection therapy	
Suffering from side effects	Balance between strong side effects and life	
	Endurance of side effects that cannot be tolerated due to deterioration of health	
	Distress due to side effects	
	Lethargy caused by side effects	
	Negative emotions caused by side effects	
	Decrease in ADL due to side effects	
	Ineffective countermeasures for pain	
	Resignation to having to cope with side effects	
Rumination on illness due to breathlessness		Associating illness with breathlessness
		Emotional pain by dyspnea on exertion

ADL, activities of daily living; CTEPH, chronic thromboembolic pulmonary hypertension; PAH, pulmonary arterial hypertension.

Class choices



Verma S, Cardenas-Garcia J, Mohapatra PR, Talwar A. Depression in pulmonary arterial hypertension and interstitial lung diseases. N Am J Med Sci. 2014 Jun;6(6):240-9. doi: 10.4103/1947-2714.134368. PMID: 25006558; PMCID: PMC4083524.

Table 2. Efficacy of antidepressants compared to placebo.

Antidepressant	Odds ratio	95% confidence interval
Amitriptyline	2.13	1.89–2.41
Mirtazapine	1.89	1.64–2.20
Duloxetine	1.85	1.66–2.07
Venlafaxine	1.78	1.61–1.96
Paroxetine	1.75	1.61–1.90
Fluvoxamine	1.69	1.41–2.02
Escitalopram	1.68	1.50–1.87
Sertraline	1.67	1.49–1.87
Vortioxetine	1.66	1.45–1.92
Agomelatine	1.65	1.44–1.88
Fluoxetine	1.52	1.40–1.66
Citalopram	1.52	1.33–1.74
Clomipramine	1.49	1.21–1.85
Desvenlafaxine	1.49	1.24–1.79
Reboxetine	1.37	1.16–1.63

Boyce P, Ma C. Choosing an antidepressant. Aust Prescr. **2021** Feb;44(1):12-15. doi: 10.18773/austprescr.2020.064. Epub 2021 Feb 1. PMID: 33664544; PMCID: PMC7900278.

Choice based on Symptoms

Table 4. Symptoms and initial antidepressant choice.

Symptoms	Preferred antidepressant
Anxiety	Selective serotonin reuptake inhibitors Moclobemide
Weight loss, reduced appetite	Mirtazapine Mianserin
Sleep disturbance, insomnia	Agomelatine Mirtazapine Mianserin Tricyclic antidepressants
Sexual dysfunction	Agomelatine
Blunting, anhedonia, demotivation	Selective serotonin reuptake inhibitors Serotonin noradrenaline reuptake inhibitors Agomelatine Monoamine oxidase inhibitors Reboxetine
Melancholia, severe depression	Serotonin noradrenaline reuptake inhibitors Tricyclic antidepressants Vortioxetine Monoamine oxidase inhibitors
Pain	Duloxetine Tricyclic antidepressants
Cognitive difficulties	Vortioxetine

PLUS:
Activating:
SNRI
Effexor
Fetzima(2)

1) Boyce P, Ma C. Choosing an antidepressant. Aust Prescr. 2021 Feb;44(1):12-15. doi: 10.18773/austprescr.2020.064. Epub 2021 Feb 1. PMID: 33664544; PMCID: PMC7900278.
2) Hermens M, et al. Ann Gen Psychiatry. 2006;22;5:3. doi:10.1186/1744-859X-5-3.

Adverse effects

Table 3. Antidepressant adverse effects and their limitations on use.

Class	Major adverse effects				Ease of switching (half-life)
	Weight gain	CNS effects – sedation/agitation	Sexual	Withdrawal syndrome	
Selective serotonin reuptake inhibitors (SSRIs)	•	••	•••	••†	••
Serotonin noradrenaline reuptake inhibitors (SNRIs)	•	••	•••	•••	••
Serotonin modulator (vortioxetine)	•	•	••	••	•••
Noradrenaline reuptake inhibitor (reboxetine)	•	•	••	•	••
Tricyclic antidepressants (TCAs)	•••	•••	•••	•••	•••
Reversible inhibitor of monoamine oxidase A (moclobemide)	•	••	•	•	•••
Tetracyclic (mianserin)	••	••	•	••	•
Noradrenergic and specific serotonergic (mirtazapine)	•••	•••	••	••	•
Monoamine oxidase inhibitors (MAOIs)	••	•••	••	••	•••
Melatonergic (agomelatine)	•	•	•	•	•

Boyce P, Ma C. Choosing an antidepressant. Aust Prescr. 2021 Feb;44(1):12-15. doi: 10.18773/austprescr.2020.064. Epub 2021 Feb 1. PMID: 33664544; PMCID: PMC7900278.

Ottawa Depression Algorithm

- *Has the patient responded to a particular antidepressant in the past?*
  - Consider using that antidepressant
- *Has there been a family history of response to a certain antidepressant?*
  - Consider using that antidepressant
- *Is the patient on multiple medications? Consider...*
  - Citalopram (Celexa)
  - Escitalopram (Cipralex)
  - Venlafaxine (Effexor)
  - Desvenlafaxine (Pristiq)
  - Mirtazapine (Remeron)
- *Is there chronic pain? Consider...*
  - Duloxetine (Cymbalta)
  - Venlafaxine (Effexor)
- *Is there cardiovascular illness? Consider...*
  - Sertraline (Zoloft)
- *Is there poor sleep, poor appetite, weight loss? Consider...*
  - Mirtazapine (Remeron)

https://ottawadepressionalgorithm.ca/en/content?id=40

Ottawa Depression Algorithm

- *Does the patient want to minimize the risk of sexual side effects? Consider...*
  - Bupropion (Wellbutrin)
  - Vilazadone (Viibryd)
  - Vortioxetine (Trintellix)-at doses of 10 mg and below
  - Mirtazapine (Remeron)
  - Desvenlafaxine (Pristiq)
- *Is the patient a child/youth (age < 18)? Consider...*
  - Fluoxetine (Prozac)
- *Is the patient in the perinatal period? Consider...*
  - Sertraline (Zoloft)
  - For more information, visit MotherToBaby
- *Is cost an issue? If so, then consider these less costly medications...*
  - Citalopram (Celexa)
  - Escitalopram (Cipralex)
  - Sertraline (Zoloft)
  - Mirtazapine (Remeron)
  - Bupropion (Wellbutrin)
  - Venlafaxine (Effexor)
- *Patient preference*

Otherwise, choose...

- Any SSRI or SNRI

https://ottawadepressionalgorithm.ca/en/content?id=40

Adjunctive therapies to antidepressants

- Antipsychotics
  - Second-generation antipsychotics like olanzapine (Zyprexa®) and quetiapine (Seroquel®) can be used to treat depression. Third-generation antipsychotics like aripiprazole (Abilify®) and brexpiprazole (Rexulti®) can also be used.
- Esketamine
  - A nasal spray derivative of ketamine that can quickly relieve depressive symptoms. However, it can be sedating and dissociative, so it must be administered in a clinical setting.
- Other medications
  - Lithium, thyroid hormone, omega-3 fatty acids, modafinil, and S-adenosil-L-metionine are some other adjuncts that can be used.

RESEARCH Open Access

The impact of impaired sleep quality on symptom change and future exacerbation of chronic obstructive pulmonary disease

Ling Lin[1,2,3], Qing Song[1,2,3], Jiaxi Duan[4], Cong Liu[1,2,3], Wei Cheng[1,2,3], Aiyuan Zhou[5], Yating Peng[1,2,3], Zijing Zhou[1,2,3], Yuqin Zeng[1,2,3], Yan Chen[1,2,3], Shan Cai[1,2,3] and Ping Chen[1,2,3*]

Abstract

Purpose Study the impact of impaired sleep quality on symptom change and future exacerbation of chronic obstructive pulmonary disease (COPD) patients.

Methods This was a prospective study. Patients with COPD were recruited into the study and followed up for one year. Pittsburgh sleep quality index (PSQI) was collected at baseline. Symptom change was assessed with Minimum clinically important difference (MCID) in COPD Assessment Test (CAT) at 6-month visit, which is an indicator to assess symptom improvement. Exacerbation was recorded during the one-year visit. PSQI score > 5 was defined as poor sleep quality, whereas PSQI score ≤ 5 was defined as good sleep quality. MCID was defined as attaining a CAT decrease ≥ 2.

Results A total of 461 patients were enrolled for final analysis. Two hundred twenty-eight (49.4%) patients had poor sleep quality. Overall, 224 (48.6%) patients attained MCID at 6-month visit and the incidence of exacerbation during the one-year visit was 39.3%. Fewer patients with impaired sleep quality achieved MCID than patients with good sleep quality. Good sleepers were significantly more likely to attain MCID (OR: 3.112, $p < 0.001$) than poor sleepers. Fewer poor sleepers in GOLD A and D groups attained MCID with ICS/LABA, and fewer poor sleepers in the GOLD D group attained MCID with ICS/LABA/LAMA than good sleepers. Poor sleep quality was a greater risk factor of future exacerbation in Cox regression analysis. The ROC curves showed that PSQI score had a predictive capacity for future exacerbation. More patients with poor sleep quality experienced future exacerbation in GOLD B and D group with treatment of ICS/LABA/LAMA compared to good sleepers.

Conclusions COPD patients with impaired sleep quality were less likely to achieve symptom improvement and were at increased risk of future exacerbation compared to patients with good sleep quality. Besides, sleep disturbance may affect the symptom improvement and future exacerbation of patients with different inhaled medication or in different GOLD groups.

Keywords COPD, Sleep quality, Symptom change, Exacerbation

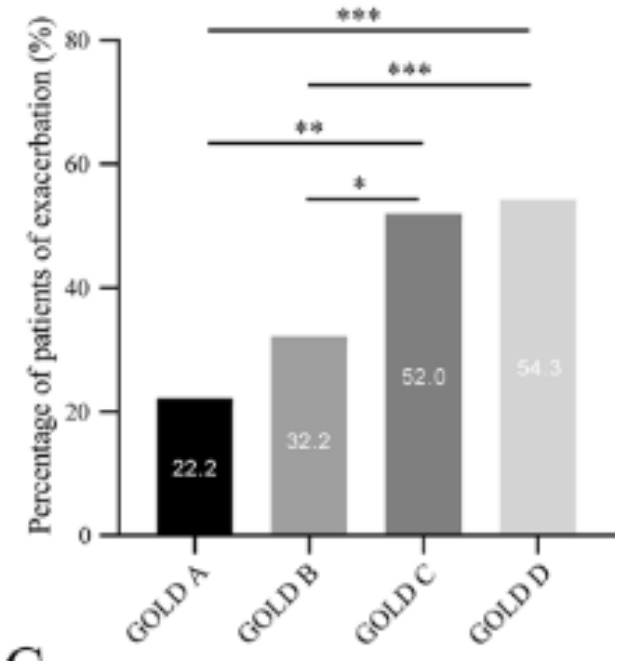
Table 2 MCID response rate and exacerbation of patient during the one-year visit according to sleep quality

Variables	Total N = 461	Bad sleeper N = 228	Good sleeper N = 233	*P*-value
CAT at 6th month[a]	10.7 ± 6.1	13.6 ± 5.6	7.9 ± 4.7	<0.001
Change in CAT[c]	1(8)	0(9)	2(6)	0.021
MCID of CAT [b]				
Yes	224(48.6)	93(40.8)	131(56.2)	0.001
No	237(51.4)	135(59.2)	102(43.6)	
Exacerbations in the one year[c]	0(1)	0(1)	0(0)	<0.001
Exacerbation in the one year [b]				<0.001
Yes	181(39.3)	108(47.4)	73(31.3)	
No	280(60.7)	120(52.6)	160(68.7)	
Severe exacerbation in the one year [b]				0.017
Yes	117(25.4)	69(30.3)	48(20.6)	
No	344(74.6)	159(69.7)	185(79.4)	
Frequent exacerbation in the one year [b]				0.008
Yes	65(14.1)	42(18.4)	23(9.9)	
No	396(85.9)	186(81.6)	210(90.1)	

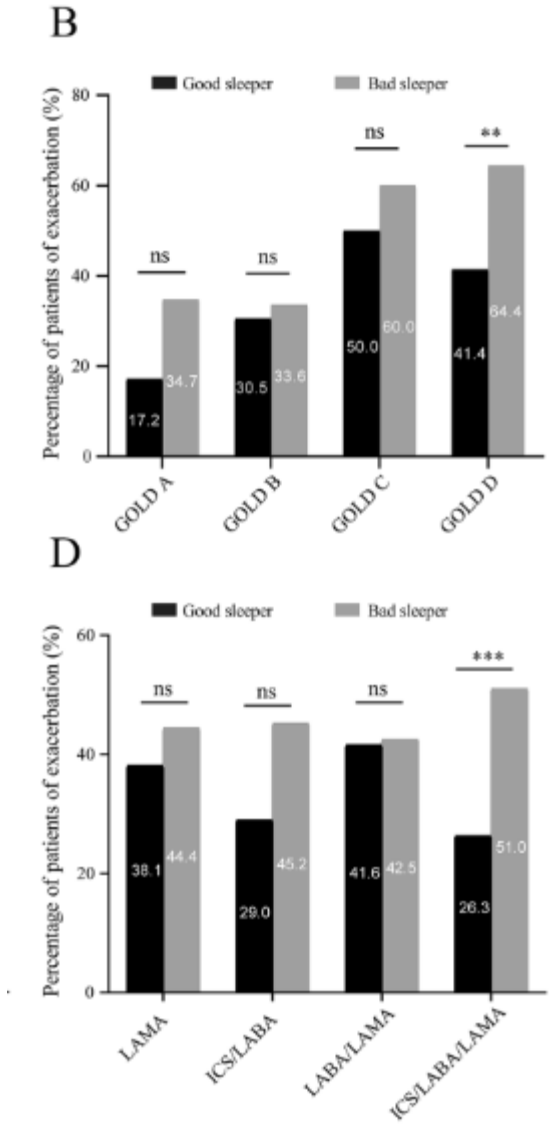
[a]Mean ± SD; [b]Counts with percentage are indicated; [c]Median (IQR)

Abbreviations: CAT, COPD Assessment Test; MCID, minimum clinically important difference.

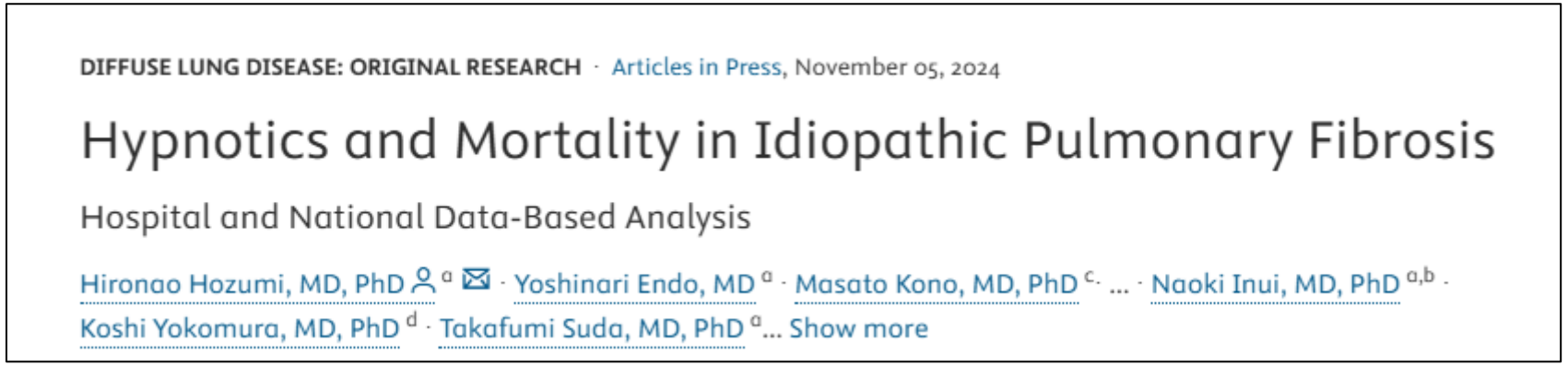
Exacerbation and sleep



Worse disease had more exacerbations



Worse disease had more exacerbations If not sleeping



DIFFUSE LUNG DISEASE: ORIGINAL RESEARCH · Articles in Press, November 05, 2024

Hypnotics and Mortality in Idiopathic Pulmonary Fibrosis

Hospital and National Data-Based Analysis

Hironao Hozumi, MD, PhD [a] · Yoshinari Endo, MD [a] · Masato Kono, MD, PhD [c] · ... · Naoki Inui, MD, PhD [a,b] · Koshi Yokomura, MD, PhD [d] · Takafumi Suda, MD, PhD [a] ... Show more

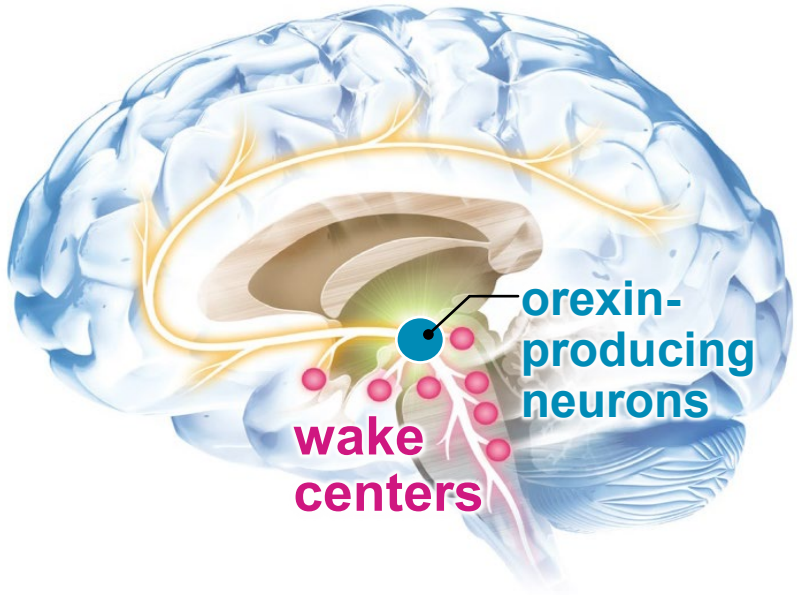
- The continuous use of hypnotics was associated with an increased risk of all-cause mortality and disease progression

Insomnia as a Disorder of Excessive Wakefulness

Orexins

Neuropeptides that promote states of wakefulness

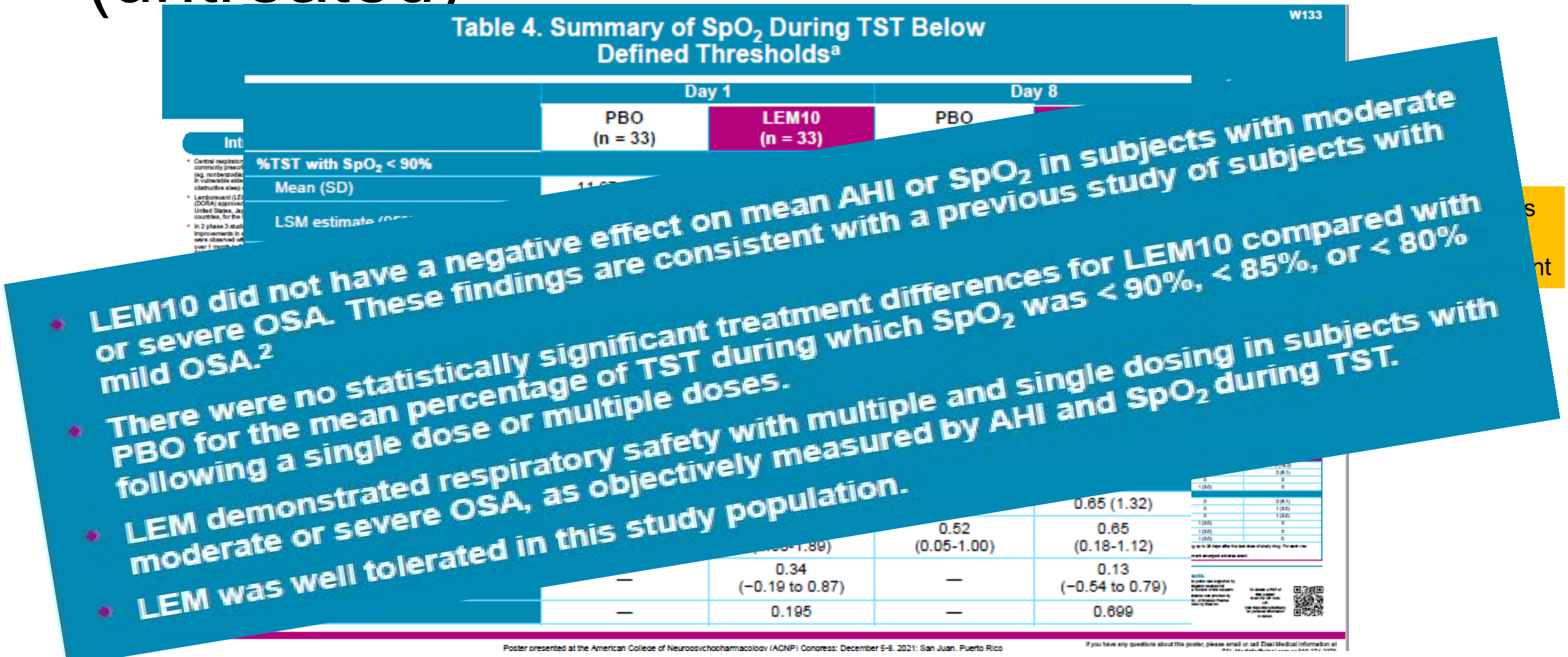
- Believed **orexin** signaling pathway is hyperactive at night in persons with insomnia
- Antagonizing the **orexin** pathway dampens excessive wakefulness at night



NEW TREATMENT PARADIGM:
Facilitate sleep by reducing wakefulness, NOT by inducing sedation

Mieda M. *Neurosci Res.* 2017;118:56-65.

Lemborexant in Moderate to Severe OSA (untreated)



- LEM10 did not have a negative effect on mean AHI or SpO_2 in subjects with moderate or severe OSA. These findings are consistent with a previous study of subjects with mild OSA.[2]
- There were no statistically significant treatment differences for LEM10 compared with PBO for the mean percentage of TST during which SpO_2 was < 90%, < 85%, or < 80% following a single dose or multiple doses.
- LEM demonstrated respiratory safety with multiple and single dosing in subjects with moderate or severe OSA, as objectively measured by AHI and SpO_2 during TST.
- LEM was well tolerated in this study population.

Conclusion

- Depression in chronic respiratory diseases is under-diagnosed
- Treatment includes supportive empathy and counselling and other cognitive therapies
- Assistance with dyspnea can help mood and psychologic distress
  - Pulmonary Rehabilitation
  - Optimize bronchodilators
  - Opioids
- Pharmacologic treatments should be individualized; there is no one treatment specific for lung diseases
  - But be cautious with sedating medications which may increase the risk of exacerbations.

Questions?

Wrap Up

- Please fill out the feedback survey following the session! Link has been added into the chat.
- A recording of this session will be e-mailed to registrants within the next week.
- Thank you for your participation!

Thank You

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