

LIBRA JOURNAL CLUB

5-14-JUNE-2025

Our legal office confirmed that articles NOT OPEN ACCESS cannot be distributed to the members of the list. Thus, we will transmit only the titles of articles.

ABSTRACTS of almost all these articles are available from PubMed, and full papers can be obtained through your institutions' library.

OPEN ACCESS articles are available by accessing the articles from PubMed using just the PMID for the search (eg PMID: 35514131 without . at the end)

(copd OR "Pulmonary Disease, Chronic Obstructive"[Mesh])

1

COPD

-
-
-

. 2025 Dec;22(1):2512749.

doi: 10.1080/15412555.2025.2512749. Epub 2025 Jun 13.

[Expression and Predictive Value of Angiotensin II Type 1 Receptor in Pulmonary Hypertension Associated with Chronic Obstructive Pulmonary Disease](#)

[Ruigin Ni](#)^{1,2}, [Mengrong Xie](#)³, [Jingying Zhang](#)^{1,2}, [Mingmei Zhong](#)¹

Affiliations Expand

- PMID: 40512521
- DOI: [10.1080/15412555.2025.2512749](https://doi.org/10.1080/15412555.2025.2512749)

Abstract

Clear and effective treatment for pulmonary hypertension (PH) caused by chronic obstructive pulmonary disease (COPD) has not been established, and thus promptly identifying patients with PH is of particular importance. In this study, by comparing Angiotensin II expression in patients with COPD and COPD-PH, we analysed the risk factors of PH and evaluated the predictive value of these in PH. Therefore, this prospective study selected COPD of patients as research subjects, which were divided into COPD and COPD-PH groups according to whether they were

complicated with PH. Lung function, general laboratory index, N-terminal pro brain b-type natriuretic peptide (NT-proBNP), Angiotensin-2, and other cytokines levels were compared between the two groups, and the risk factors of COPD-PH were explored through multivariate binary regression analysis. Lastly, receiver operating characteristic curve was used in evaluating the predictive value of risk factors for COPD-PH. The results show that the COPD-PH group has higher Angiotensin-2, logistic analysis showed that Angiotensin-2, NT-proBNP, age, and FEV1%pred were independent risk factors for COPD-PH and had high predictive value for COPD-PH. The AUROC for Angiotensin-2 and NT-proBNP for predicting COPD-PH were 0.646 and 0.751. When Angiotensin-2 \geq 39.55 pg/ml, NT-proBNP \geq 134.03 pg/ml, the sensitivity for COPD-PH prediction was 44.7 and 93.6%, respectively, and the specificity rates were 83.1 and 49.2%, respectively. When Angiotensin-2 was combined with NT-proBNP, enhanced the AUROC to 0.766, exceeding Angiotensin-2 alone, which may be useful in the prediction of COPD-PH.

Keywords: Chronic obstructive pulmonary disease; angiotensin-2; predictive value; pulmonary hypertension; risk factors.

Supplementary info

MeSH terms, SubstancesExpand

Full text links



[Proceed to details](#)

Cite

Share

2

Int J Chron Obstruct Pulmon Dis

-
-
-

. 2025 Jun 7:20:1829-1842.

doi: 10.2147/COPD.S517864. eCollection 2025.

[Burden of Exacerbations in Patients Newly Initiating an Inhaled Regimen for COPD: A Claims Analysis](#)

[Sanjay Sethi](#)¹, [Emily S Wan](#)^{2,3}, [Vickram Tejwani](#)^{4,5}, [Claudia Lamprey](#)⁶, [Kavita Aggarwal](#)⁶, [Amy Dixon](#)⁶, [Yi Pan](#)⁷, [Trishul Siddharthan](#)⁸

Affiliations Expand

- PMID: 40510054
- PMCID: [PMC12159538](#)
- DOI: [10.2147/COPD.S517864](#)

Abstract

Background: Chronic obstructive pulmonary disease (COPD) is a progressive disease that has a great impact on healthcare resource utilization (HRU). Large-scale real-world evidence studies evaluating the clinical and economic impact of current maintenance inhaler therapies are scarce.

Objective: To assess annual exacerbation rate and COPD-related HRU in patients with COPD before and after initiation of an inhaled treatment regimen.

Methods: The Optum Clinformatics® Data Mart database was used to identify inpatient, outpatient, and pharmacy claims from patients aged ≥ 40 years with COPD in the United States from January 2016 to June 2023. The index date was the date of the first prescription claim for a new inhaled maintenance therapy after a 12-month maintenance treatment-free baseline period. The primary outcome was the proportion of patients with ≥ 1 moderate/severe exacerbation within 12 months post-index. The average number of moderate/severe exacerbations per patient and the proportion of patients with inpatient, emergency department (ED), office, and outpatient visits within 12 months post-index were also assessed.

Results: Of the 137,691 included patients, 51.5% were female and 74.6% were White, with a mean (standard deviation [SD]) age of 70.9 (9.49) years and a mean (SD) Elixhauser Comorbidity Index of 5.67 (3.29). Most (48.3%) patients were initiated on long-acting beta-agonists/inhaled corticosteroids (LABA/ICS). The proportions of patients with exacerbations significantly decreased overall (pre-index, 45.5%; post-index, 37.0%; $P < 0.001$). However, more than one-third of patients still experienced an exacerbation 12 months after initiating treatment. The proportion of patients with COPD-related HRU generally decreased; however, 5.0% and 2.9% of patients had inpatient and ED care post-index, respectively.

Conclusion: Despite use of inhaled treatments for COPD, patients continue to experience exacerbations and HRU. Better implementation of guideline-based COPD care and novel therapies for persistent exacerbation burden are needed to improve care of the COPD population in real-world settings.

Keywords: chronic obstructive pulmonary disease; exacerbations; healthcare resource utilization; outcomes research; real-world data.

© 2025 Sethi et al.

Conflict of interest statement

EW has served on a scientific advisory board for Verona Pharma and reports grant funding from the US Department of Veterans Affairs. VT reports grant funding from the NIH/NHLBI, Grifols and Fisher & Paykel Healthcare, as well as consulting fees

from ThermoFisher and Sanofi/Regeneron all outside the scope of this work. CL, KA, and AD are employees of Verona Pharma and may own stock. YP is an employee of Stratevi, a research consulting firm that received funding from Verona Pharma. TS has received personal fees from Verona Pharma and Apogee Therapeutics for advisory work. The authors report no other conflicts of interest in this work.

- [31 references](#)
- [5 figures](#)

Supplementary info

MeSH terms, SubstancesExpand

Full text links



[Proceed to details](#)

Cite

Share

3

EBioMedicine

-
-
-

. 2025 Jun 11:117:105800.

doi: 10.1016/j.ebiom.2025.105800. Online ahead of print.

[Proteomic biomarkers of emphysema-predominant and non-emphysema-predominant chronic obstructive pulmonary disease](#)

[Yu-Hang Zhang](#)¹, [Peter J Castaldi](#)¹, [Russell P Bowler](#)², [Katherine A Pratte](#)³, [Gregory L Kinney](#)⁴, [Kendra A Young](#)⁴, [Heena Rihwani](#)¹, [Sharon M Lutz](#)⁵, [Craig P Hersh](#)⁶, [Michael H Cho](#)⁶, [Jarrett D Morrow](#)¹, [Edwin K Silverman](#)⁷

Affiliations Expand

- PMID: 40505416
- DOI: [10.1016/j.ebiom.2025.105800](https://doi.org/10.1016/j.ebiom.2025.105800)

Free article

Abstract

Background: Chronic Obstructive Pulmonary Disease (COPD) is a complex and heterogeneous disease. Emphysema-predominant and non-emphysema predominant COPD are two major disease subtypes capturing important aspects of COPD heterogeneity. Molecular differences between these COPD subtypes are unknown.

Methods: We assessed plasma proteomic associations (using SomaScan) with emphysema-predominant vs. non-emphysema predominant COPD subtypes in COPDGene; replication of significant associations was performed in SPIROMICS. We performed pathway analyses on COPD subtype plasma proteomic associations and used weighted gene correlation network analysis to find COPD subtype-associated protein correlation networks. We tested previously reported COPD genetic variants for association with COPD subtypes and COPD subtype-associated proteomic biomarkers.

Findings: One hundred and twenty-four proteins were significantly associated with COPD subtypes in COPDGene, with 64 proteins (65 SOMAmers) validated in SPIROMICS. Higher correlations were observed between proteomic biomarkers with greater expression levels in non-emphysema predominant participants with COPD. Cell adhesion, collagen-containing extracellular matrix, and epithelial mesenchymal transition were biological pathways enriched for COPD subtype proteomic associations. One COPD subtype-associated correlation network module was identified, including highly connected proteomic biomarkers like PXDN and EFNA2. We observed significant genetic effects on COPD subtypes for rs2579762 in LRMDA and on COPD subtype-associated proteomic biomarkers including sRAGE and Ganglioside GM2 Activator.

Interpretation: We identified and replicated multiple plasma proteomic biomarkers associated with emphysema-predominant vs. non-emphysema predominant COPD. Pathway analyses, correlation-based network analyses, and genetic association analyses of these proteins may provide insight into the molecular heterogeneity of COPD.

Funding: National Heart, Lung, and Blood Institute (NIH).

Keywords: COPD; Correlation network analysis; Emphysema; Proteomics; Quantitative trait locus analysis.

Copyright © 2025 The Author(s). Published by Elsevier B.V. All rights reserved.

Conflict of interest statement

Declaration of interests The authors report the following conflicts of interest: In the past three years, EKS has received grant support from Bayer and Northpond Laboratories. CPH has received grant support from Alpha-1 Foundation, Bayer, Boehringer-Ingelheim, and Vertex, and consulting fees from Chiesi, Ono, Sanofi, and Takeda. JDM has received support from an Alpha-1 Foundation Research Grant. MHC has received grant support from Bayer. PJC has received grant support from Sanofi and Bayer, and consulting fees from Verona.

Full text links



[Proceed to details](#)

Cite

Share

4

Chronic Obstr Pulm Dis

-
-
-

. 2025 Jun 10.

doi: 10.15326/jcopdf.2024.0585. Online ahead of print.

[Impact of an Inpatient COPD Care Pathway on Hospital Care Process and Outcome Metrics](#)

[Nancy Kim](#)^{1,2}, [Wei Teng](#)², [Olukemi Akande](#)², [Deborah Rhodes](#)^{1,2}, [Carolyn L Rochester](#)^{3,4}

Affiliations Expand

- PMID: 40504940
- DOI: [10.15326/jcopdf.2024.0585](#)

Free article

Abstract

Background: Variable hospital care for COPD and underutilization of pulmonary rehabilitation (PR) may contribute to poor outcomes. Clinical pathways can optimize care by providing real-time decision support based on evidence and expert consensus. An inpatient COPD pathway was implemented in May 2021.

Research question: To evaluate the impact of the COPD pathway on LOS, discharge disposition, resource use, PR referrals and readmissions.

Study design and methods: A two-part COPD pathway embedded into the electronic health record was built by multidisciplinary providers across a large academic medical center. Providers could place orders and document notes directly from the pathway. We identified all COPD hospitalizations one year after pathway implementation using International Classification of Disease, Tenth Revision, Clinical Modification (ICD-10-CM) codes according to methods used by the Centers for Medicare & Medicaid Services.

Results: 766 patients contributed 971 hospitalizations. The pathway was opened in 142 (14.6%) hospitalizations. No significant differences in demographics, insurance or smoking status were noted between pathway versus non-pathway patients. Bivariate analyses demonstrated lower LOS (5.4 days v. 7.1 days, $p=0.001$) and total costs (\$5,756 v. \$8,781, $p < 0.001$) with pathway use, but no significant difference between 30-day readmissions (16% v 22%, $p=0.12$). In multivariable analysis, pathway use was associated with greater PR referrals (OR 5.76 95% CI 2.47-13.45, $p < 0.001$) and discharges to home (OR 1.96 95% CI 1.13-3.39, $p=0.016$).

Interpretation: Despite low utilization, pathway use was associated with more PR referrals and discharges to home with a trend toward lower LOS, resource use, and decreased readmissions.

Keywords: COPD; care pathway; discharge; electronic health record; hospitalization.

JCOPDF © 2025.

Full text links



[Proceed to details](#)

Cite

Share

5

Eur J Prev Cardiol

-
-
-

. 2025 Jun 12:zwaf338.

doi: 10.1093/eurjpc/zwaf338. Online ahead of print.

[Risk of cardiovascular events and all-cause death in patients with chronic obstructive pulmonary disease](#)

[Mickael Guglieri](#)¹, [Jean Baptiste De Freminville](#)¹, [Fabrice Ivanes](#)¹, [Arnaud Bisson](#)¹, [Laurent Fauchier](#)¹

Affiliations Expand

- PMID: 40504885
- DOI: [10.1093/eurjpc/zwaf338](https://doi.org/10.1093/eurjpc/zwaf338)

No abstract available

Keywords: cardiovascular events; chronic obstructive pulmonary disease; risk factors.

Full text links



[Proceed to details](#)

Cite

Share

6

Cardiol J

-
-
-

. 2025 Jun 12.

doi: 10.5603/cj.102835. Online ahead of print.

[The relationship between inspiratory muscle strength and exercise tolerance in patients with coronary heart disease](#)

[Tao Shen](#)¹, [Jinglin Li](#)^{2,3}, [Yanxin Song](#)², [Chuan Ren](#)², [Wei Zhao](#)^{2,4}

Affiliations Expand

- PMID: 40503857
- DOI: [10.5603/cj.102835](#)

Free article

Abstract

Background: There has been insufficient research on the assessment of exercise capacity in patients with coronary heart disease (CHD) following percutaneous coronary intervention (PCI) who exhibit inspiratory muscle weakness (IMW).

Methods: A retrospective cohort study involving CHD patients who underwent PCI at Peking University Third Hospital Heart Rehabilitation Center between January 2019 and December 2021 was conducted. Patients who had undergone inspiratory muscle testing and cardiopulmonary exercise testing (CPET) were included, and their clinical data were collected and analyzed.

Results: A total of 571 post-PCI CHD patients were included in the study. The average age was 60.8 ± 4.3 years, and 479 male patients (83.9%) were included. The average maximal inspiratory pressure (MIP) of the enrolled patients was 90.7 ± 26.1 cm H₂O, with 56 patients (9.8%) presenting with IMW. The IMW group had lower peak oxygen uptake (VO₂peak) (17.4 ± 4.2 vs. 19.3 ± 5.1 ml/min/kg, $P < 0.001$) and oxygen uptake efficiency slopes (OUES) (1464.7 ± 368.5 vs. 1619.2 ± 400.4 , $P=0.004$). MIP correlated with VO₂peak ($r = 0.719$, $P < 0.001$) and OUES ($r = 0.622$, $P < 0.001$). Multivariate regression analysis revealed that VO₂peak (OR = 0.917, 95% CI = 0.858 ~ 0.980) and history of chronic obstructive pulmonary disease (COPD) (OR = 1.705, 95% CI = 0.934 ~ 3.112) were independent risk factors for IMW.

Conclusions: After PCI, CHD patients exhibiting IMW, especially those with comorbid COPD, demonstrated reduced exercise tolerance and oxygen uptake efficiency.

Keywords: cardiopulmonary exercise testing; chronic obstructive pulmonary disease; coronary heart disease; exercise tolerance; inspiratory muscle weakness.

Full text links



[Proceed to details](#)

Cite

Share

7

Published Erratum

Sci Rep

-
-
-

. 2025 Jun 11;15(1):20051.

doi: 10.1038/s41598-025-03794-y.

[Author Correction: Association of hepatic steatosis and liver fibrosis with chronic obstructive pulmonary disease among adults](#)

[Dayang Zheng](#)¹, [Xiang Liu](#)¹, [Wei Zeng](#)¹, [Wangyan Zhou](#)², [Chunxiang Zhou](#)³

Affiliations Expand

- PMID: 40500293

- PMID: [PMC12159180](#)

- DOI: [10.1038/s41598-025-03794-y](#)

No abstract available

Erratum for

- [Association of hepatic steatosis and liver fibrosis with chronic obstructive pulmonary disease among adults.](#)

Zheng D, Liu X, Zeng W, Zhou W, Zhou C. *Sci Rep.* 2024 May 11;14(1):10822. doi: 10.1038/s41598-024-61696-x. PMID: 38734742 Free PMC article.

Supplementary info

Publication types [Expand](#)

Full text links

nature portfolio 

[Proceed to details](#)

Cite

Share

8

Am J Respir Crit Care Med

-
-
-

. 2025 Jun 11.

Online ahead of print.

[Post-COPD: Can Emphysema Be Repaired?](#)

[J Michael Wells](#)¹, [Jerry A Krishnan](#)², [R Chad Wade](#)³, [Greg Kinney](#)⁴, [Robert A Wise](#)⁵, [Enid Neptune](#)⁶, [Francesca Polverino](#)⁷, [Nicola A Hanania](#)⁸, [Matthew Moll](#)⁹, [Melanie Königshoff](#)¹⁰, [Divay Chandra](#)¹¹, [Frank Sciruba](#)¹², [Nathaniel Marchetti](#)¹³, [Raúl San José Estépar](#)¹⁴, [Alejandro A Diaz](#)¹⁵, [Karim El-Kersh](#)¹⁶, [Mario Castro](#)¹⁷, [Ying Zhang](#)¹⁸, [Janet T Holbrook](#)¹⁹, [Elizabeth A Sugar](#)²⁰, [Monica Kraft](#)²¹, [Robert J Kaner](#)²², [Barry Make](#)²³, [Stephen Rennard](#)²⁴

Affiliations [Expand](#)

- PMID: 40498633

Abstract

Clinical and translational observations suggest that repair or new growth of alveolar structures in humans is feasible. The pathways and mechanisms for repairing damaged alveoli have been characterized in *in vivo* and *ex vivo* models, and many of these major biological pathways involved in facilitating lung repair have been validated in adult human lung tissue. Improvements in imaging, functional studies, and biomarkers have led to sensitive measures of treatment effects and clinical outcomes that can be used to study emphysema repair in humans with emphysema. Additionally, the development of innovative platform clinical trial designs now allows for the simultaneous testing of multiple drugs and treatment response biomarkers within a heterogeneous population, helping to distinguish responders from non-responders. Several approved medications targeting pathways involved in lung repair could be tested to treat emphysema (e.g., all-trans retinoic acid, thiazolidinediones, metformin, non-steroidal anti-inflammatory drugs, and lithium). These advances enable feasible assessment of the scientific premise of lung repair in human emphysema in clinical trials.

Keywords: alveolar repair; emphysema.

Full text links



[Proceed to details](#)

Cite

Share

9

Allergy

-
-
-

. 2025 Jun 10.

doi: 10.1111/all.16610. Online ahead of print.

[Dupilumab and Blood Eosinophilia: A Disease-Specific Phenomenon?](#)

[Andrea Portacci](#)¹, [Remo Poto](#)^{2,3}, [Gilda Varricchi](#)^{2,4}, [Giovanna Elisiana Carpagnano](#)¹

Affiliations Expand

- PMID: 40492692

- DOI: [10.1111/all.16610](https://doi.org/10.1111/all.16610)

No abstract available

Keywords: COPD; CRSwNP; Dupilumab; asthma; atopic dermatitis; eosinophilic esophagitis; hypereosinophilia.

- [25 references](#)

Full text links



[Proceed to details](#)

Cite

Share

10

BMC Pulm Med

-
-
-

. 2025 Jun 9;25(1):288.

doi: [10.1186/s12890-025-03757-z](https://doi.org/10.1186/s12890-025-03757-z).

[The clinical usefulness of neutrophil percentage/albumin ratio in predicting the one-month mortality in chronic obstructive pulmonary disease patients hospitalized with community-acquired pneumonia](#)

[Sule Gul¹, Mehmet Atilla Uysal², Ayse Yeter², Ramazan Eren², Baris Demirkol³, Elif Yelda Ozgun Niksarlioglu²](#)

Affiliations Expand

- PMID: 40490700
- PMCID: [PMC12147314](#)
- DOI: [10.1186/s12890-025-03757-z](https://doi.org/10.1186/s12890-025-03757-z)

Abstract

Background: Community-acquired pneumonia (CAP) is a significant cause of hospitalization in chronic obstructive pulmonary disease (COPD), negatively impacting both morbidity and mortality. The neutrophil percentage-to-albumin ratio (NPAR) is a recently introduced indicator combining systemic inflammation and nutritional status. This study aimed to clarify the prognostic significance of NPAR in predicting one-month mortality among COPD patients hospitalized with CAP.

Methods: Medical records of the study population between January 1, 2014, and December 31, 2020, were retrospectively reviewed. NPAR values at admission were calculated. The Cox proportional hazards model was used to investigate the association between the NPAR, log NPAR, and one-month mortality. Receiver operating characteristic (ROC) analysis was performed to compare the predictive value of log NPAR with established clinical scoring systems.

Results: A total of 508 patients were included in the study. Higher NPAR and log NPAR were significantly associated with one-month mortality in Cox analysis after adjustment for age and gender (HR:2.175, p :0.01 and HR:6.853, p :0.031). However, after adjusting for additional confounding factors, NPAR and long NPAR were no longer significantly associated with one-month mortality. ROC analysis demonstrated that log NPAR had a superior predictive value for one-month mortality compared to PSI and CURB-65 scores (AUC for log NPAR: 0.654, for PSI: 0.596, and CURB-65: 0.569, p :0.005). Furthermore, higher NPAR was associated with disease severity, prolonged hospital stays, and treatment-related mortality (all p < 0.05).

Conclusions: NPAR may be a useful biomarker for assessing one-month mortality, disease severity, and treatment outcomes in COPD patients with CAP. Further research is needed to determine its role in guiding therapeutic decisions.

Keywords: Albumin; COPD; Community acquired pneumonia; Mortality; Neutrophil.

Conflict of interest statement

Declarations. Ethics approval and consent to participate: This study adhered to the principles outlined in the Declaration of Helsinki and was carried out with the approval of the University of Health Sciences Ethical Committee (11/12-2024/11). The requirement for informed consent was waived by the Institutional Review Board due to the retrospective nature of the study and the use of anonymized clinical data. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests. Clinical trial number: Not applicable.

- [34 references](#)
- [2 figures](#)

Full text links



[Proceed to details](#)

Cite

Share

11

Observational Study

Medicine (Baltimore)

-
-
-

. 2025 Jun 6;104(23):e41997.

doi: 10.1097/MD.00000000000041997.

[The analysis of risk factors associated with readmission in patients with exacerbation of COPD](#)

[Haibing Su](#)¹, [Feng Li](#)¹, [Jie Li](#)²

Affiliations Expand

- PMID: 40489832
- PMCID: [PMC12150916](#)
- DOI: [10.1097/MD.00000000000041997](#)

Abstract

This study aims to evaluate risk factors for readmission within 6 months after acute exacerbation of chronic obstructive pulmonary disease (COPD) and to develop a multifactorial predictive model. A total of 151 patients with acute exacerbation of COPD, admitted to our hospital from October 2021 to December 2023, were included in this retrospective analysis. Data on baseline characteristics, medical history, lung function, lifestyle, comorbidities, inflammatory markers, and treatment adherence were obtained from electronic medical records to identify risk factors associated with readmission. Univariate and multivariate logistic regression analyses were used to identify independent risk factors, construct a predictive model, and assess its predictive efficacy using the receiver operating characteristic (ROC) curve. Patients in the readmission group were older (69.8 ± 9.5 years vs 65.2 ± 8.4 years, $P = .048$), had a higher proportion of males (76.4% vs 59.5%, $P = .032$), higher body mass index (25.3 ± 3.8 kg/m² vs 23.1 ± 3.2 kg/m², $P = .018$), more frequent exacerbations (3.2 ± 1.0 episodes vs 1.5 ± 0.8 episodes, $P = .009$), longer disease duration (12.1 ± 7.3 years vs 8.4 ± 5.7 years, $P = .043$), and higher GOLD classification (70% in stages III-IV vs 50%, $P = .043$) and BODE index (5.1 ± 1.4 vs 3.8 ± 1.2 , $P = .022$). Additionally, they had a higher prevalence of cardiovascular

comorbidities (55.6% vs 31.6%, $P = .015$), lower FEV1 levels ($45.3 \pm 10.1\%$ vs $52.7 \pm 8.5\%$, $P = .033$), higher levels of C-reactive protein (CRP) (15.2 ± 6.5 mg/L vs 10.4 ± 4.9 mg/L, $P = .005$), fractional exhaled nitric oxide (FeNO) (32.5 ± 10.4 ppb vs 26.7 ± 8.9 ppb, $P = .03$), and end-tidal carbon dioxide partial pressure (PetCO₂) (40.1 ± 6.3 mm Hg vs 36.2 ± 5.7 mm Hg, $P = .028$), all of which were significant independent risk factors for readmission. The area under the ROC curve for the multivariate regression model was 0.801, indicating good predictive efficacy. This study evaluates multiple factors affecting readmission risk after acute exacerbation of COPD, highlighting the importance of early identification of high-risk patients and constructing an effective predictive model. Further large-sample, multi-center studies are needed to validate these findings and explore personalized interventions to reduce readmission rates and improve the quality of life for COPD patients.

Keywords: acute exacerbation; chronic obstructive pulmonary disease (COPD); predictive model; readmission; risk factors.

Copyright © 2025 the Author(s). Published by Wolters Kluwer Health, Inc.

Conflict of interest statement

The authors have no funding and conflicts of interest to disclose.

- [21 references](#)
- [2 figures](#)

Supplementary info

Publication types, MeSH terms [Expand](#)

Full text links



[Proceed to details](#)

Cite

Share

12

BMC Rheumatol

-
-
-

. 2025 Jun 6;9(1):66.

doi: 10.1186/s41927-025-00520-z.

Prevalence of osteoporosis in chronic diseases: an umbrella review of 283 observational studies from 13 systematic reviews

Víctor Juan Vera-Ponce^{1,2}, Jhosmer Ballena-Caicedo^{3,4}, Fiorella E Zuzunaga-Montoya⁵, Joan A Loayza-Castro³, Lupita Ana Maria Valladolid-Sandoval^{3,4}, Luisa Erika Milagros Vásquez-Romero³, Stella M Chenet^{3,4}, Rafael Tapia-Limonchi^{3,4}, Carmen Inés Gutierrez De Carrillo^{3,4}

Affiliations Expand

- PMID: 40481555
- PMCID: [PMC12142958](#)
- DOI: [10.1186/s41927-025-00520-z](#)

Abstract

Introduction: Osteoporosis is a disease characterized by decreased bone mineral density and deterioration of bone microarchitecture, which increases fracture risk. In the context of various chronic pathologies, this condition may present an even higher prevalence, impacting morbidity, mortality, and healthcare burden.

Objective: To synthesize and compare available evidence from systematic reviews on the prevalence of osteoporosis across different chronic diseases.

Methodology: An umbrella review following PRISMA guidelines was conducted, focusing on systematic reviews (with or without meta-analysis) reporting prevalence data of osteoporosis in adults with at least one chronic disease. Databases, including PubMed/MEDLINE, Scopus, Web of Science, and EMBASE, were searched, covering publications between 2009 and 2023, without language restrictions. Two independent reviewers performed study selection and data extraction, resolving discrepancies through consensus. A risk of bias assessment was conducted using the ROBIS tool. Prevalence estimates reported in each review were analyzed, classifying diseases according to the magnitude of the percentages found.

Results: Thirteen systematic reviews were evaluated (twelve included meta-analyses). The highest prevalence of osteoporosis was observed in patients with Chronic Obstructive Pulmonary Disease (up to 36.8%) and diabetes mellitus (approximately 27.7%). Other conditions, such as rheumatoid arthritis, multiple sclerosis, liver cirrhosis, and celiac disease, showed variable prevalence but were equally relevant in clinical terms. Methodological heterogeneity, both in diagnostic criteria and populations, was a notable factor.

Conclusions: The results highlight the need for systematic assessment of bone health in patients with chronic diseases, particularly those with a higher prevalence of osteoporosis. These findings underscore the importance of timely screening strategies and multidisciplinary approaches to prevent fractures and optimize comprehensive care.

Clinical trial number: Not applicable.

Keywords: (MeSH): osteoporosis; Chronic disease; Prevalence; Systematic review; Umbrella review.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval and consent to participate: Since this manuscript is a secondary database study, it was not required. Consent for publication: Not applicable. Informed consent: Since this is a secondary data analysis, informed consent was not required. Competing interests: The authors declare no competing interests.

- [45 references](#)
- [2 figures](#)

Full text links



[Proceed to details](#)

Cite

Share

13

Thorax

-
-
-

. 2025 Jun 5:thorax-2024-221883.

doi: 10.1136/thorax-2024-221883. Online ahead of print.

[Optimised oxygenation improves functional capacity during daily activities in patients with COPD on long-term oxygen therapy: a randomised crossover trial](#)

[Linette Marie Kofod](#)^{1,2}, [Ejvind Frausing Hansen](#)³, [Barbara Christina Brocki](#)⁴, [Morten Tange Kristensen](#)^{5,6}, [Nassim Bazeghi Roberts](#)⁷, [Elisabeth Westerdahl](#)⁸

Affiliations Expand

- PMID: 40473413
- DOI: [10.1136/thorax-2024-221883](#)

Abstract

Background: Minimising hypoxaemia during submaximal walking tests has a positive effect on exercise capacity and dyspnoea in patients with chronic obstructive pulmonary disease (COPD) on long-term oxygen therapy (LTOT). However, the impact of optimising oxygenation during everyday tasks remains unexplored. Therefore, we investigated the effects of maintaining a target saturation on activities of daily living (ADL) using automated oxygen titration compared with conventional fixed oxygen flow.

Methods: In a double-blinded, randomised crossover trial, patients with COPD on LTOT performed two GlittreADL tests to assess the functional capacity of everyday activities using (1) their fixed oxygen dose and (2) an adjusted flow from 0 to 8 L/min targeting a peripheral oxygen saturation (SpO₂) of 90-94%. A closed-loop device automatically titrated the oxygen based on information from a Bluetooth wrist pulse oximeter.

Results: 31 patients (mean±SD age: 72.8±5.9 years, forced expiratory volume in 1 s of % predicted: 36.7±12.7) were included. The patients reduced the time to perform the ADL test by median (IQR) 38 (12-73) s, $p<0.001$, using automated titration compared with the fixed oxygen flow. The oxygen flow in the automated arm more than tripled to 5.4 (4.1-6.8) versus 1.6 (1.1-2.1) L/min (fixed) during the test, $p<0.001$, while the time spent within SpO₂-target was increased from 19% to 49%, $p=0.002$. Correspondingly, the patients experienced less dyspnoea (BorgCR10); 5 (3-7) versus 6 (4-8), $p<0.001$, in favour of the automated oxygen titration.

Conclusions: Improving oxygenation and extending the time spent within target saturation reduced dyspnoea and improved functional capacity in ADL in patients with COPD on LTOT.

Trial registration number: [NCT05553847](https://www.clinicaltrials.gov/ct2/show/study/NCT05553847).

Keywords: COPD Pathology; Exercise; Hypoxemia; Long Term Oxygen Therapy (LTOT); Pulmonary Rehabilitation.

© Author(s) (or their employer(s)) 2025. No commercial re-use. See rights and permissions. Published by BMJ Group.

Conflict of interest statement

Competing interests: The principal investigator has no competing interest regarding this study. One of the investigators (EFH) is a co-inventor of the automated oxygen device used in present study and holds shares in O2matic, which manufactures the device. O2matic was not involved in protocol writing, data analysis or interpretation, or in any other way in the writing or editing of the manuscript. None of the remaining investigators have any conflict of interest.

Supplementary info

Associated dataExpand

Full text links



[Proceed to details](#)

Cite

Share

14

Comment

Eur Respir J

-
-
-

. 2025 Jun 5;65(6):2500386.

doi: 10.1183/13993003.00386-2025. Print 2025 Jun.

[Is it time to use pre-bronchodilator spirometry to rule out COPD?](#)

[Panaiotis Finamore](#)¹, [Claudio Pedone](#)², [Simone Scarlata](#)³, [Davide Fontana](#)³, [Anna Zito](#)³, [Raffaele Antonelli Incalzi](#)³

Affiliations Expand

- PMID: 40473300
- DOI: [10.1183/13993003.00386-2025](#)

No abstract available

Conflict of interest statement

Conflict of interest: The authors have no financial nor non-financial competing interests related to the present manuscript to declare.

Comment on

- [GOLD Science Committee recommendations for the use of pre- and post-bronchodilator spirometry for the diagnosis of COPD.](#)

Singh D, Stockley R, Anzueto A, Agusti A, Bourbeau J, Celli BR, Criner GJ, Han MK, Martinez FJ, Montes de Oca M, Ozoh OB, Papi A, Pavord I, Roche N, Salvi S, Sin DD, Troosters T, Wedzicha J, Zheng J, Volgelmeier C, Halpin D. Eur Respir J. 2025 Feb 6;65(2):2401603. doi: 10.1183/13993003.01603-2024. Print 2025 Feb. PMID: 39638416 Free PMC article. Review.

Supplementary info

Publication typesExpand

Full text links



[Proceed to details](#)

Cite

Share

15

Comment

Eur Respir J

-
-
-

. 2025 Jun 5;65(6):2500794.

doi: 10.1183/13993003.00794-2025. Print 2025 Jun.

[Reply: Spirometry remains the GOLD standard test for COPD diagnosis](#)

[Dave Singh](#)¹, [Alvar Agusti](#)², [Claus Vogelmeier](#)³, [David Halpin](#)⁴

Affiliations Expand

- PMID: 40473298
- PMCID: [PMC12138026](#)
- DOI: [10.1183/13993003.00794-2025](#)

Abstract

Spirometry is a feasible and essential part of the diagnostic process for COPD <https://bit.ly/4jwsZbm>

Conflict of interest statement

Conflict of interest: D. Singh reports consultancy fees from Adovate, Aerogen, Almirall, Apogee, Arrowhead, AstraZeneca, Bial, Boehringer Ingelheim, Chiesi, Cipla, CONNECT Biopharm, Covis, CSL Behring, DevPro Biopharma LCC, Elpen,

Empirico, EpiEndo, Genentech, Generate Biomedicines, GlaxoSmithKline, Glenmark, Kamada, Kinaset Therapeutics, Kymera, Menarini, MicroA, OM Pharma, Orion, Pieris Pharmaceuticals, Pulmatrix, Revolo, Roivant Sciences, Sanofi, Synairgen, Tetherex, Teva, Theravance Biopharma, Upstream and Verona Pharma. A. Agusti reports grants from GSK, AZ and Menarini, payment or honoraria for lectures, presentations, manuscript writing or educational events from GSK, AZ, Chiesi, Menarini, Zambon, MSD and Sanofi, and a leadership role with GOLD (Chairman, Board of Directors; unpaid). C. Volgelmeier reports grants from the German Ministry of Education and Science (BMBF), AstraZeneca, Boehringer Ingelheim, Chiesi, CSL Behring, GlaxoSmithKline, Grifols and Novartis, consultancy fees from Aerogen, AstraZeneca, Boehringer Ingelheim, CSL Behring, Chiesi, GlaxoSmithKline, Insmad, Menarini, Novartis, Nuaira, Roche and Sanofi, and payment or honoraria for lectures, presentations, manuscript writing or educational events from Aerogen, AstraZeneca, Boehringer Ingelheim, CSL Behring, Chiesi, GlaxoSmithKline, Insmad, Menarini, Novartis, Roche and Sanofi. D. Halpin reports payment or honoraria for lectures, presentations, manuscript writing or educational events from AstraZeneca, Boehringer Ingelheim, Chiesi, GSK, Inogen, Novartis, Pfizer, Sanofi and Menarini, support for attending meetings from Menarini, and participation on a data safety monitoring board or advisory board with Chiesi.

Comment on

- [GOLD Science Committee recommendations for the use of pre- and post-bronchodilator spirometry for the diagnosis of COPD.](#)

Singh D, Stockley R, Anzueto A, Agusti A, Bourbeau J, Celli BR, Criner GJ, Han MK, Martinez FJ, Montes de Oca M, Ozoh OB, Papi A, Pavord I, Roche N, Salvi S, Sin DD, Troosters T, Wedzicha J, Zheng J, Volgelmeier C, Halpin D. *Eur Respir J*. 2025 Feb 6;65(2):2401603. doi: 10.1183/13993003.01603-2024. Print 2025 Feb. PMID: 39638416 Free PMC article. Review.

- [4 references](#)

Supplementary info

Publication types [Expand](#)

Full text links



[Proceed to details](#)

Cite

Share

16

Semin Respir Crit Care Med

-

-
-

. 2025 Jun 11.

doi: 10.1055/a-2618-7422. Online ahead of print.

[Nocturnal Hypoxemia in Respiratory Medicine: Pathophysiology, Measurement, and Association with Outcomes](#)

[Mohammadreza Hajipour](#)¹, [Gonzalo Labarca](#)^{2,3}, [Najib Ayas](#)¹, [Ali Azarbarzin](#)⁴

Affiliations Expand

- PMID: 40404132
- DOI: [10.1055/a-2618-7422](#)

Abstract

Nocturnal hypoxemia is a prevalent feature of various respiratory diseases, significantly impacting patient outcomes and therapeutic strategies. Oximetry, a noninvasive and widely accessible tool, enables the measurement of nocturnal hypoxemia through oxyhemoglobin saturation (SpO₂)-derived metrics such as the oxygen desaturation index, percentage of sleep time with SpO₂ below 90%, mean SpO₂, and measures of the area under the desaturation curve (e.g., sleep apnea-specific hypoxic burden). While these metrics are well established in obstructive sleep apnea (OSA), their application in other respiratory conditions, including chronic obstructive pulmonary disease, pulmonary hypertension, obesity hypoventilation syndrome, heart failure, neuromuscular disorders, pregnancy, and high-altitude residents, remains an area of active investigation. This review explores the pathophysiology of hypoxemia in these conditions and evaluates the role of SpO₂-derived metrics in risk stratification beyond OSA. We also discuss the challenges of interpreting SpO₂ data, particularly the difficulty differentiating disease-related hypoxemia from comorbid OSA. Additionally, we examine the limitations of oximetry, including sensor inaccuracies, motion artifacts, and skin pigmentation. Finally, we emphasize the need for further research to standardize these metrics across diverse conditions and advocate for their integration into clinical practice to enhance patient management and outcomes.

Thieme. All rights reserved.

Conflict of interest statement

N.A. reports consulting or speaking fees from Jazz, Cerebra, Powell Mansfield, Eli Lilly, Nox in the past 3 years (all <\$5,000). A.A. serves as a consultant for Inspire, Respicardia, Cerebra, Eli Lilly, and Apnimed. Apnimed is developing pharmacological treatments for obstructive sleep apnea. A.A.'s interests were reviewed by Brigham and Women's Hospital and Mass General Brigham in accordance with their institutional policies.

Full text links

LinkOut to
related resource



[Proceed to details](#)

Cite

Share

17

Multicenter Study

Eur Respir J

-
-
-

. 2025 Jun 5;65(6):2401618.

doi: 10.1183/13993003.01618-2024. Print 2025 Jun.

[Accelerated epigenetic ageing worsens survival and mediates environmental stressors in fibrotic interstitial lung disease](#)

[Gillian C Goobie](#)^{1,2,3}, [Daniel-Costin Marinescu](#)^{4,5}, [Ayodeji Adegunsoye](#)⁶, [Jean Bourbeau](#)⁷, [Christopher Carlsten](#)^{4,5,8}, [Rachel L Clifford](#)⁹, [Dany Doiron](#)¹⁰, [Qingling Duan](#)^{11,12}, [Kevin F Gibson](#)³, [Amanda Grant-Orser](#)¹³, [Ana I Hernandez Cordero](#)^{2,14}, [Kerri A Johannson](#)¹³, [Daniel J Kass](#)³, [Sharon E Kim](#)³, [Janice M Leung](#)^{4,2,14}, [Xiaoyun Li](#)³, [Wan Tan](#)^{4,2}, [Chen Xi Yang](#)², [S Mehdi Nourai](#)³, [Christopher J Ryerson](#)^{4,2}, [Tillie L Hackett](#)^{2,15}, [Yingze Zhang](#)³

Affiliations Expand

- PMID: 39884761
- DOI: [10.1183/13993003.01618-2024](https://doi.org/10.1183/13993003.01618-2024)

Abstract

Background: The role of epigenetic ageing in the environmental pathogenesis and prognosis of fibrotic interstitial lung disease (fILD) is unclear. We evaluated whether ambient particulate matter with diameter $\leq 2.5 \mu\text{m}$ (PM_{2.5}) and neighbourhood disadvantage exposures are associated with accelerated epigenetic ageing, and whether epigenetic age is associated with adverse clinical outcomes in patients with fILD.

Methods: This multicentre, international, cohort study included patients with fILD from the University of Pittsburgh (UPitt, n=306) and University of British Columbia

(UBC, n=170). 5-year PM_{2.5} exposures were estimated using satellite-derived hybrid models. Neighbourhood disadvantage was calculated using US and Canadian census-based metrics. Epigenetic age difference (EAD=epigenetic age-chronological age) was calculated using GrimAge analysis of blood DNA methylation data. Linear models assessed associations of exposures with EAD. Cox models assessed associations of EAD with transplant-free survival. Causal mediation analysis evaluated EAD mediation of exposure-survival relationships.

Results: Median epigenetic age was 11.7 years older than chronological age in patients with fILD. In combined cohort analysis, each interquartile range (IQR) increase in PM_{2.5} was associated with 2.88 years (95% CI 1.39-4.38; p<0.001) increased EAD. In UPitt, each IQR neighbourhood disadvantage increase was associated with 1.16 years (95% CI 0.22-2.09; p=0.02) increased EAD. Increased EAD was associated with worse transplant-free survival (hazard ratio 1.17 per 1-year increase in EAD, 95% CI 1.10-1.24; p<0.001), with EAD mediating 40% of the PM_{2.5}-survival relationship and 59% of the neighbourhood disadvantage-survival relationship. Epigenetic age was also more strongly associated with transplant-free survival than chronological age.

Conclusions: Epigenetic age acceleration is associated with worse survival and mediates adverse exposure impacts in fILD.

Copyright ©The authors 2025. For reproduction rights and permissions contact permissions@ersnet.org.

Conflict of interest statement

Conflict of interest: G.C. Goobie has received research funding and support through the PFF Scholars Award Program, the University of British Columbia (UBC) Clinician Investigator Program and Division of Respiratory Medicine, a Boehringer Ingelheim Investigator Initiated Study grant, the Canadian Institutes of Health Research, the Canadian Lung Association, and Michael Smith Health Research BC; she has received speaking honoraria from Boehringer Ingelheim within the past year. D-C. Marinescu receives support outside of the submitted work from Michael Smith Health Research BC, UBC Division of Respiratory Medicine and Boehringer Ingelheim. A. Adegunsoye has received grants from the National Institutes of Health and personal fees from Genentech, Inogen, Medscape, AbbVie, PatientMpower, Brainomix and Boehringer Ingelheim. J. Bourbeau reports grants from McGill University, the McGill University Health Centre Foundation, the Canadian Institutes of Health Research, Grifols, Novartis, Sanofi and the Respiratory Health Network of the Fonds de la recherche en santé du Québec, grants and personal fees from AstraZeneca Canada Ltd, Boehringer Ingelheim Canada Ltd, GlaxoSmithKline Canada Ltd and Trudell Canada Ltd, and personal fees from Pfizer Canada Ltd and COVIS Pharma Canada Ltd, outside the submitted work. C. Carlsten receives salary support from the Canada Research Chair programme. R.L. Clifford is supported by a University of Nottingham Anne McLaren fellowship. A. Grant-Orser receives speaking honoraria and is on the advisory board of Boehringer Ingelheim. A.I. Hernandez Cordero receives support from the Canadian Institutes of Health Research, Research Excellence, Diversity, and Independence Early Career Transition Award. K.A. Johansson receives support outside of the submitted work from the University Hospital Foundation, the Three Lakes Foundation, Boehringer Ingelheim, Pliant Therapeutics, Hoffman-La Roche, Thyron SAB, AbbVie and Brainomix. D.J. Kass receives consultant fees from Calliditas Therapeutics,

unrelated to the submitted work. J.M. Leung receives support from the Canada Research Chairs Program and the GlaxoSmithKline Chair in COPD. W. Tan receives Canadian Institutes of Health Research (CIHR)/Rx&D Collaborative Research Program Operating Grants with industry partners AstraZeneca Canada Ltd, Boehringer Ingelheim Canada Ltd, GlaxoSmithKline Canada Ltd, Merck, Novartis Pharma Canada Inc., Nycomed Canada Inc. and Pfizer Canada Ltd, for conducting the longitudinal population-based Canadian Cohort for Obstructive Lung Disease (CanCOLD) study on COPD. S.M. Nouraiie has received funding from a Boehringer Ingelheim Investigator Initiated Study grant and the Division of Pulmonary, Allergy, Critical Care, and Sleep Medicine at the University of Pittsburgh. C.J. Ryerson receives support outside of the submitted work from Boehringer Ingelheim, Pliant Therapeutics, AstraZeneca, Trevi Therapeutics, Veracyte, Hoffman-La Roche and Cipla. T.L. Hackett is supported by a Tier I Canada Research Chair. The remaining authors have no potential conflicts of interest to report.

Comment in

- [Rejuvenation as a future for pulmonary fibrosis.](#)

Tsiri P, Crestani B. Eur Respir J. 2025 Jun 5;65(6):2500640. doi: 10.1183/13993003.00640-2025. Print 2025 Jun. PMID: 40473303 No abstract available.

Supplementary info

Publication types, MeSH terms, Substances Expand

Full text links



"Multimorbidity"[Mesh Terms] OR Multimorbidity[Text Word]

1

Chronic Obstr Pulm Dis

-
-
-

. 2025 Jun 10.

doi: 10.15326/jcopdf.2025.0631. Online ahead of print.

[COPD and Schizophrenia](#)

[Sophie Ratcliffe](#)¹, [David M G Halpin](#)²

Affiliations Expand

- PMID: 40504939
- DOI: [10.15326/jcopdf.2025.0631](https://doi.org/10.15326/jcopdf.2025.0631)

Free article

Abstract

The prevalence of COPD is higher in people with schizophrenia than in the general population even after adjusting for smoking, but schizophrenia has not generally been considered in discussions of COPD multimorbidity. People with schizophrenia die prematurely and COPD is an important but neglected cause of this mortality. People with schizophrenia have a higher prevalence of ever smoking tobacco than the general population. The link between COPD and schizophrenia may be partially explained by higher rates of smoking, but may also be syndemic, with shared genetic, socioeconomic and environmental risk factors and common pathophysiological mechanisms. People with a mental illness tend to receive medical care intermittently, there is often a lack of continuity of care and primary and preventive services are infrequently used. Physical symptoms may be viewed as "psychosomatic" leading to under-diagnosis. People with schizophrenia are less likely to receive adequate general medical care, including investigation and treatment, in line with guidelines. Antipsychotic drugs are associated with adverse effects that may be problematic in people with COPD. The management and outcomes for people with schizophrenia and COPD could be improved by reducing stigma, developing Integrated services, undertaking physical health checks that include asking about respiratory symptoms and arranging spirometry when indicated, care coordination that includes addressing physical health issues, vaccination, support with smoking cessation, exercise and pulmonary rehabilitation.

Keywords: COPD; mutimorbidity; schizophrenia.

JCOPDF © 2025.

Full text links



[Proceed to details](#)

Cite

Share

2

Circ Rep

-
-

•
. 2025 Apr 22;7(6):403-410.

doi: 10.1253/circrep.CR-24-0137. eCollection 2025 Jun 10.

[Impact of Tailored Multidisciplinary Cardiac Rehabilitation on Patients With Cardiovascular Diseases and Multimorbidity in Convalescent Rehabilitation Hospitals in Japan - A Multicenter, Prospective Observational Study](#)

[Ryo Miyazawa](#)^{1,2}, [Yoshitaka Iso](#)^{1,3}, [Satoshi Yamamoto](#)⁴, [Tomohiro Matsuo](#)⁵, [Tomoyuki Morisawa](#)⁶, [Tetsuya Takahashi](#)⁶, [Shigeru Makita](#)^{7,8}, [Shigeru Fujimoto](#)⁹

Affiliations Expand

- PMID: 40497123
- PMCID: [PMC12148360](#)
- DOI: [10.1253/circrep.CR-24-0137](#)

Abstract

Background: Data on cardiac rehabilitation (CR) outcomes in patients with cardiovascular disease (CVD), frailty, and multimorbidity in post-acute settings are limited. This study aimed to evaluate the feasibility and efficacy of individualized, multidisciplinary CR in convalescent rehabilitation hospitals (cRHs).

Methods and results: This multicenter, prospective, observational study included 72 consecutive patients transferred from acute care hospitals. Personalized CR programs were implemented in cRHs. Primary outcomes were changes in the Barthel Index (BI) and functional independence measure (FIM) scores. Secondary outcomes included assessments of physical and cognitive function, and nutritional status. Mean participant age was 78.6±11.8 years. Prior to admission, 51.4% experienced acute decompensated heart failure (ADHF). The average length of stay was 59.5±39.2 days. BI and FIM scores improved from admission to discharge. The following parameters improved: Short Physical Performance Battery, knee extensor strength, comfortable gait speed, 6-min walk distance, New York Heart Association classification, and cognitive function (Mini-Mental State Examination). Discharge dispositions included 53 (73.6%) home discharges, and 19 (26.4%) outpatient CR post-discharges. Patients with post-ADHF and patients with other conditions both showed functional improvements, but Δ BI and Δ FIM were lower in the post-ADHF group.

Conclusions: Tailored multidisciplinary CR in cRHs effectively improves daily living activities and physical and cognitive outcomes in patients with CVD with complex conditions. Expanded use of these hospitals may help address clinical challenges.

Keywords: Cardiac rehabilitation; Convalescent rehabilitation hospitals; Heart failure; Multimorbidity.

Copyright © 2025, THE JAPANESE CIRCULATION SOCIETY.

Conflict of interest statement

T.T. is an Editorial Team member of Circulation Reports.

- [43 references](#)
- [1 figure](#)

Full text links



[Proceed to details](#)

Cite

Share

3

J Clin Endocrinol Metab

-
-
-

. 2025 Jun 10:dgaf342.

doi: 10.1210/clinem/dgaf342. Online ahead of print.

[The relationships between MASLD, extrahepatic multimorbidity and all-cause mortality in UK Biobank cohort](#)

[Qi Feng](#)¹, [Chioma N Izzi-Engbeaya](#)², [Andrea D Branch](#)³, [Benjamin H Mullish](#)^{4,5}, [Pinelopi Manousou](#)^{4,5}, [Mark Woodward](#)^{1,6}

Affiliations Expand

- PMID: 40493745
- DOI: [10.1210/clinem/dgaf342](#)

Abstract

Background & aims: This study aimed to estimate the impact of metabolic dysfunction-associated steatotic liver disease (MASLD), with and without multimorbidity, on all-cause mortality.

Methods: We analysed data from the UK Biobank. MASLD was identified as a fatty liver index (FLI) ≥ 60 and presence of cardiometabolic risk factors. Multimorbidity

was defined as ≥ 2 of the long-term conditions (LTCs) in a pre-specified list of 47 extrahepatic conditions. Hazard ratios (HRs) from adjusted Cox models quantified the association between MASLD, multimorbidity and all-cause mortality.

Results: Of the 438,840 participants, 131,020 (29.9%) had MASLD at baseline. The participants with MASLD at baseline had a higher prevalence of multimorbidity than those without (21.3% vs. 14.4%). In addition to cardiometabolic risk factors, MASLD was strongly associated with several LTCs, particularly metabolic, cardiovascular, cancers, kidney, mental/behavioural, and respiratory diseases. During a median follow-up of 13 years, MASLD was associated with higher mortality (HR 1.16 (95%CI: 1.13, 1.19)), with stronger associations in females and in those with low LTC counts (≤ 3 LTCs). Each additional LTC at baseline was associated with 30% and 38% higher mortality in MASLD (HR 1.30 (1.29, 1.32)) and non-MASLD (HR 1.38 (1.37, 1.40)) populations, respectively. Among the 47 LTCs, 16 were associated with increased mortality in people with MASLD.

Conclusion: Those with MASLD exhibited a higher prevalence of extrahepatic multimorbidity and a 16% higher rate of mortality than those without, underscoring the impact of liver steatosis on mortality and highlighting the need to target LTCs to improve outcomes and reduce healthcare burdens.

Keywords: MASLD; NAFLD; UK Biobank; all-cause mortality; long-term conditions; multimorbidity; sexual dimorphism.

© The Author(s) 2025. Published by Oxford University Press on behalf of the Endocrine Society.

Full text links



[Proceed to details](#)

Cite

Share

4

Cerebrovasc Dis

-
-
-

. 2025 Jun 5:1-18.

doi: 10.1159/000546563. Online ahead of print.

[Carotid Atherosclerosis shows Distinct Patterns of Atheroinflammation and Microcalcification relating to Frailty and Multimorbidity](#)

[Nicholas R Evans](#), [Shiv Bhakta](#), [Claudia Zeicu](#), [Jason M Tarkin](#), [Mohammed M Chowdhury](#), [James H F Rudd](#), [Elizabeth A Warburton](#)

- PMID: 40472822
- DOI: [10.1159/000546563](#)

Abstract

Introduction: Atherosclerosis involves several important pathophysiological processes, in particular inflammation within the atherosclerotic plaque (atheroinflammation) and microcalcification. Not only do these processes have implications for plaque rupture and consequent thromboembolic events, but the burden of systemic atheroinflammation has also been implicated in downstream organ dysfunction. This study aimed to establish the relationships between different patterns of vascular pathophysiology, frailty, and multimorbidity.

Methods: Individuals with ischaemic stroke due to symptomatic carotid atherosclerosis underwent vascular imaging using positron emission tomography with both 18F-fluorodeoxyglucose (FDG, measuring atheroinflammation) and 18F-sodium fluoride (NaF, measuring microcalcification). Pre-morbid frailty was measured using the Clinical Frailty Scale (CFS), and pre-stroke multimorbidity was assessed using the Charlson Co-morbidity Index (CCI).

Results: Fifty-two carotids (26 symptomatic culprit atheroma, 26 asymptomatic non-culprit atheroma) were included. On univariable analysis, FDG uptake was associated with CFS ($rs=0.68$, $P<0.001$ for the non-culprit artery), which remained significant after adjustment for covariables ($\beta=1.89$, $P<0.001$). In contrast, NaF uptake was associated with CCI ($rs=0.54$, $P<0.01$ for most-diseased segment uptake in the culprit artery), which remained significant on multivariable analysis ($\beta=0.81$, $P<0.01$). There was no association between FDG uptake and CCI, nor between NaF uptake and CFS.

Conclusion: We demonstrate that frailty and multimorbidity show different patterns of vascular pathophysiology. In particular, the association between diffuse atheroinflammation and frailty elucidates the inflammatory basis of frailty that may underlie its disease- and treatment-modifying effects in stroke.

S. Karger AG, Basel.

Full text links



[Proceed to details](#)

Cite

Share

Int J Pharm Pract

-
-
-

. 2025 Jun 6;33(3):262-271.

doi: 10.1093/ijpp/riaf013.

[Unmet healthcare needs of people with multimorbidity-can community pharmacists close the gap?](#)

[Catarina Samorinha](#)^{1,2}, [Sanah Hasan](#)^{3,4}, [Kevin Mc Namara](#)⁵, [Amna M Othman](#)⁶, [Polly Duncan](#)⁷, [Karem Alzoubi](#)^{1,2,6}, [Hamzah Alzubaidi](#)^{1,2,5,6}

Affiliations Expand

- PMID: 40184221
- DOI: [10.1093/ijpp/riaf013](https://doi.org/10.1093/ijpp/riaf013)

Abstract

Objectives: Identify factors associated with unmet healthcare needs in patients with multimorbidity and determine the support community pharmacists can offer to meet these needs.

Methods: People with multimorbidity were recruited from community pharmacies where research assistants approached all patients and asked them questions to determine their eligibility: having two or more chronic conditions, being at least 18 years old, and speaking either Arabic or English. Those who met the criteria were invited to participate in the study. Consenting participants completed a survey designed based on international guidelines, utilizing validated tools to measure healthcare needs, quality of life, treatment burden, and medication self-efficacy. Generalized linear models were used to identify predictors of unmet needs.

Key findings: Two hundred and twenty-four participants completed the survey (response rate = 81%). Participants indicated significant healthcare needs particularly in areas such as communication and relationships ($M = 4.4 \pm 0.9$) and medication information ($M = 3.8 \pm 0.7$). Higher education and medication self-efficacy were associated with lower needs for counselling ($B = -0.966$; $P < .001$ and $B = -1.13$; $P < .001$, respectively) and communication ($B = -0.547$; $P < .008$ and $B = -0.088$; $P = .003$, respectively).

Conclusions: This study demonstrated community pharmacists' potential to address multimorbidity. To optimize their role, primary healthcare delivery needs to be reorganized to empower pharmacists to support patients with complex healthcare needs.

Keywords: community pharmacists; multimorbidity; needs assessment; treatment burden.

© The Author(s) 2025. Published by Oxford University Press on behalf of the Royal Pharmaceutical Society. All rights reserved. For commercial re-use, please contact reprints@oup.com for reprints and translation rights for reprints. All other permissions can be obtained through our RightsLink service via the Permissions link on the article page on our site—for further information please contact journals.permissions@oup.com.

Supplementary info

MeSH terms, Grants and fundingExpand

Full text links



"asthma"[MeSH Terms] OR asthma[Text Word]

1

Respir Investig

-
-
-

. 2025 Jun 6;63(5):711-717.

doi: [10.1016/j.resinv.2025.06.002](https://doi.org/10.1016/j.resinv.2025.06.002). Online ahead of print.

[Clinical and complete remission in patients with severe asthma with 24-month dupilumab treatment](#)

[Tomoko Tajiri](#)¹, [Motohiko Suzuki](#)², [Hirono Nishiyama](#)³, [Tatsuro Suzuki](#)³, [Yuki Amakusa](#)³, [Keima Ito](#)³, [Yuta Mori](#)³, [Kensuke Fukumitsu](#)³, [Satoshi Fukuda](#)³, [Yoshihiro Kanemitsu](#)³, [Takehiro Uemura](#)³, [Hirotugu Ohkubo](#)³, [Masaya Takemura](#)³, [Yutaka Ito](#)³, [Tetsuya Oguri](#)³, [Akio Niimi](#)³

Affiliations Expand

- PMID: [40482373](https://pubmed.ncbi.nlm.nih.gov/40482373/)
- DOI: [10.1016/j.resinv.2025.06.002](https://doi.org/10.1016/j.resinv.2025.06.002)

Abstract

Background: A few studies have reported asthma clinical remission with 24-month dupilumab therapy; however, complete remission remains unknown. In this post hoc analysis of our previous study, the achievement rates of clinical and complete remissions, and the factors associated with clinical remission with 24-month dupilumab therapy were assessed in adult patients with severe asthma.

Methods: Twenty-eight patients who had participated in our previous study were included. The primary outcome was the achievement rates of three-component clinical remission, four-component clinical remission, and complete remission at 24 months. The secondary outcome was the factors associated with achievement of four-component clinical remission at 24 months. Three-component or four-component clinical remission was defined as: 1) no significant asthma symptoms; 2) oral corticosteroid-free; 3) exacerbation-free; with or without 4) normalized pulmonary function. Complete remission was defined as four-component clinical remission plus 5) the resolution of asthma-related inflammation and 6) negative airway hyperresponsiveness.

Results: At 24 months, 19 (68 %), 16 (57 %), and 2 patients (7 %) achieved three-component, four-component clinical remission, and complete remission, respectively. At 24 months, patients with a higher incidence of comorbid chronic rhinosinusitis with nasal polyps, lower incidence of comorbid depression/anxiety, higher type 2 biomarkers, lower inhaled corticosteroid dose, better asthma control at baseline, and fewer exacerbations, unscheduled physicians' visit or hospitalization in the previous year more frequently achieved four-component clinical remission than those without (all $P < 0.05$).

Conclusions: The achievement rates of clinical or complete remission were maintained for up to 24 months in patients with severe asthma receiving dupilumab therapy.

Trial registration: This study was registered in the UMIN Clinical Trial Registry (UMIN000038669).

Keywords: Airway hyperresponsiveness; Asthma; Clinical remission; Complete remission; Dupilumab.

Copyright © 2025 The Japanese Respiratory Society. Published by Elsevier B.V. All rights reserved.

Conflict of interest statement

Declaration of competing interest The authors have no conflicts of interest.

Full text links



[Proceed to details](#)

Cite

Share

2

PLoS One

•

-
-

. 2025 Jun 6;20(6):e0325553.

doi: 10.1371/journal.pone.0325553. eCollection 2025.

[Association between continuity of primary care and preventable hospitalization in adults with asthma: A cohort study](#)

[Sangwan Kim](#)¹, [Eunjung Choo](#)², [Eun Jin Jang](#)³, [Nam Kyung Je](#)⁴, [Iyn-Hyang Lee](#)^{5,6}

Affiliations Expand

- PMID: 40478861
- PMCID: [PMC12143515](#)
- DOI: [10.1371/journal.pone.0325553](#)

Abstract

Objective: Hospitalization often indicates deteriorating health, longer treatment times, and higher healthcare costs. This study aimed to investigate associations between continuity of care (COC) and asthma-related hospitalizations using a rigorous methodology.

Methods: This retrospective cohort study was conducted using national health insurance claims data. The study included adults with a diagnosis of asthma between 2015 and 2016 in a primary care setting. The exposure was measured using continuity of care indices (COCIs) during the first two years after inclusion. Cohorts were categorized into two groups based on COCI levels. The primary outcome was the incidence of asthma-related hospitalizations, and the secondary outcomes were emergency department (ED) utilization, systemic corticosteroid use, and asthma-related medical costs.

Results: A total of 24,173 patients were eligible for analysis, 13,212 of whom were continuously cared for by primary doctors (the continuity group), and 10,961 non-continuously (the non-continuity group). During a 2 year-follow-up period, 230 patients (1.74%) were hospitalized in the continuity group and 404 (3.69%) in the non-continuity group. After adjusting for confounding covariates, patients in the non-continuity group were found to be at significantly higher risk of hospital admission (adjusted hazard ratio (aHR)=2.04 [95% confidence interval = 1.73 ~ 2.41]). In addition, the risk of ED visits, systemic corticosteroid use, and costs were higher for patients in the non-continuity group (aHR = 2.26 [1.32 ~ 3.87], adjusted OR=1.58 [1.35 ~ 1.82], and $\exp\beta = 1.41$ [1.37 ~ 1.45], respectively).

Conclusions: In adult asthma patients at the early stages of illness, increased continuity of primary care was found to be associated with fewer hospitalizations, fewer ED visits, and lower healthcare expenditures.

Copyright: © 2025 Kim et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Conflict of interest statement

The authors have declared that no competing interests exist.

- [46 references](#)
- [4 figures](#)

Supplementary info

MeSH termsExpand

Full text links



[Proceed to details](#)

Cite

Share

3

Tob Induc Dis

-
-
-

. 2025 Jun 5:23.

doi: 10.18332/tid/204254. eCollection 2025.

[Immediately scheduled for an appointment to smoking cessation clinics: Key to quitting smoking in chronic airway disease - a multicenter randomized study](#)

[Dilek Karadoğan¹](#), [Tahsin Gökhan Telatar²](#), [İlknur Kaya³](#), [Siahmet Atlı⁴](#), [Neslihan Köse Kabil⁵](#), [Feride Marım³](#), [Merve Yumrukuz Şenel⁶](#), [Aycan Yüksel⁷](#), [Burcu Yalçın⁸](#), [Ökkeş Gültekin⁹](#), [Merve Erçelik¹⁰](#), [Metin Akgün¹¹](#)

Affiliations Expand

- PMID: 40475312
- PMCID: [PMC12139391](#)

- DOI: [10.18332/tid/204254](https://doi.org/10.18332/tid/204254)

Abstract

Introduction: A significant proportion of patients with chronic airway diseases continue to smoke even after the diagnosis. In addition, smoking cessation support continues to be a neglected issue in real-life settings by physicians for that patient group. Therefore, in our search for a solution to this issue, we conducted our study to evaluate the effect of arranging immediate appointments to smoking cessation outpatient clinics on smoking cessation success in patients with chronic airway disease.

Methods: This multicenter, randomized, parallel-arm prospective study ([NCT05764343](https://clinicaltrials.gov/ct2/show/study/NCT05764343)) was conducted in pulmonary outpatient clinics between November 2022 and June 2023. Current smoker patients aged ≥ 18 years diagnosed with COPD, asthma, or bronchiectasis for at least 6 months were included and sequentially randomized in a 1:1 ratio. Both arms received brief smoking cessation interventions, and the intervention arm had immediate access to a smoking cessation clinic appointment. In contrast, the control arm received a standard quitline appointment for routine service. The primary endpoint was the self-reported smoking cessation rate at 3 months, analyzed using an intention-to-treat approach.

Results: The study comprised 198 patients in the immediate appointment arm and 199 in the usual care arm. The quit rate was significantly higher in the immediate appointment arm (26.7%) than in the usual care arm (16.5%, $p=0.014$). Access to smoking cessation medication was 69.3% in the intervention group against 22.0% in the control group ($p<0.001$). Multivariable analysis identified access to smoking cessation medication as the sole significant predictor of cessation success at 3 months (adjusted odds ratio, AOR=5.64; 95% CI: 2.89-11.03).

Conclusions: Our study revealed that access to evidence-based smoking cessation support is positively associated with successful quitting. Compared to the usual care arm, the immediately appointment-scheduled arm has a higher access rate of cessation support. Therefore, smoking cessation support, including pharmacotherapy, should be part of routine care for patients with chronic airway diseases.

Clinical trial registration: The study is registered on the official website of ClinicalTrials.gov Identifier: ID [NCT05764343](https://clinicaltrials.gov/ct2/show/study/NCT05764343).

Keywords: lung diseases; obstructive; smoking cessation.

© 2025 Karadoğan D. et al.

Conflict of interest statement

The authors have completed and submitted the ICMJE Form for disclosure of Potential Conflicts of Interest and none was reported.

- [25 references](#)
- [2 figures](#)

Supplementary info

Associated dataExpand

Full text links



[Proceed to details](#)

Cite

Share

4

Obstet Gynecol

-
-
-

. 2025 Jun 5.

doi: 10.1097/AOG.0000000000005948. Online ahead of print.

[Asthma in Pregnancy](#)

[August D Sigelko¹](#), [Mary E Streck](#), [Krysta S Wolfe](#)

Affiliations Expand

- PMID: 40472372
- DOI: [10.1097/AOG.0000000000005948](https://doi.org/10.1097/AOG.0000000000005948)

Abstract

Asthma affects up to 10% of pregnancies and confers risk to both mother and child. Adverse maternal outcomes associated with asthma include preeclampsia, preterm labor, and increased risk of cesarean delivery. Maternal asthma also increases risks of low birth weight and small-for-gestational-age birth weight, as well as pediatric respiratory disease, including neonatal respiratory distress and early-onset asthma. Despite these risks, evidence suggests that both chronic asthma and acute asthma exacerbations remain undertreated in pregnancy. Recent landmark clinical trials in nonpregnant individuals have shown that, even for patients with mild disease, using as-needed inhaled corticosteroids combined with long-acting bronchodilators as rescue therapy dramatically reduces exacerbations. Inhaled corticosteroids are considered safe in pregnancy and are effective in reducing symptoms, preventing exacerbations, and mitigating some adverse pregnancy outcomes. Therefore, inhaled corticosteroids should be included as a mainstay in the treatment regimens

of all pregnant women with asthma, preferably with an inhaled corticosteroid and rapid-onset bronchodilator combination inhaler for as-needed use and for daily maintenance use in those with more persistent asthma symptoms or risk factors for complications. Clinicians should actively discourage discontinuation or de-escalation of asthma therapies during pregnancy and educate women on the safety and importance of these medications for both themselves and their offspring. Asthma exacerbations during pregnancy confer additional risk, so they must be promptly recognized and treated with systemic corticosteroids and bronchodilators. This Clinical Expert Series article provides an overview of asthma in pregnancy, with a focus on its potential adverse health effects and the core principles of asthma evaluation and treatment in pregnancy.

Copyright © 2025 by the American College of Obstetricians and Gynecologists. Published by Wolters Kluwer Health, Inc. All rights reserved.

Conflict of interest statement

Financial Disclosure The authors did not report any potential conflicts of interest.

- [132 references](#)

Full text links



[Proceed to details](#)

Cite

Share

5

J Paediatr Child Health

-
-
-

. 2025 Jun 5.

doi: 10.1111/jpc.70101. Online ahead of print.

[Characteristics and Outcomes of Paediatric Patients With Severe Acute Asthma in Retrieval](#)

[Kuangjun Li](#)^{1,2}, [Emily R Le Fevre](#)², [Tiffany Pizzuto](#)¹, [Marino Festa](#)², [Stuart Haggie](#)^{1,3}

Affiliations Expand

- PMID: 40470734

- DOI: [10.1111/jpc.70101](https://doi.org/10.1111/jpc.70101)

Abstract

Aim: To describe the characteristics, management, and outcomes of a paediatric cohort with severe acute asthma or wheeze retrieved to tertiary care.

Methods: A retrospective cohort study of children ≥ 1 year old with severe acute asthma or wheeze retrieved to tertiary paediatric centres by a statewide paediatric retrieval service, January 2017 to May 2023. Data of clinical characteristics, pharmacotherapy, respiratory support, and outcomes were collected.

Results: We included 325 patients, median age 6.8 years (IQR 3.8-10.5) and 61% male. High rates of nebulised bronchodilators, systemic corticosteroids, intravenous magnesium sulphate, and adjunct aminophylline use were observed. Ketamine was the preferred sedative agent among cases managed with mechanical or non-invasive ventilation. Intravenous salbutamol use declined significantly during the study ($p = 0.04$). Intubation rates were low (6.8%), non-invasive ventilation was the most common respiratory support (37.2%), and high-flow nasal cannula use increased over the study ($p < 0.01$). Overall, 65.5% of patients were admitted to intensive care. We report two deaths (0.9%) following intensive care admission and infrequent complications, including air leak (2.2%) and haemodynamic instability (2.8%). Variables associated with intensive care admission include pre-existing asthma diagnosis, preventer prescription, and previous intensive care admission ($p < 0.05$).

Conclusion: Contemporary severe acute asthma management frequently includes adjunct aminophylline and non-invasive ventilation. Clinical outcomes were overall good with short intensive care and hospital stays, low mortality rates, and infrequent complications. Children with pre-existing asthma diagnosis, preventer prescription, or prior PICU admission for asthma were more likely to require PICU care.

Keywords: asthma; intensive care; paediatric asthma; retrieval; severe acute asthma; ventilation.

© 2025 Paediatrics and Child Health Division (The Royal Australasian College of Physicians).

- [24 references](#)

Full text links



[Proceed to details](#)

Cite

Share

Pediatrics

-
-
-

. 2025 Jun 5:e2024070153.

doi: 10.1542/peds.2024-070153. Online ahead of print.

[Adoption of Dexamethasone for Asthma Exacerbations](#)

[Sriram Ramgopal](#)¹, [Kenneth A Michelson](#)¹

Affiliations Expand

- PMID: 40467067
- DOI: [10.1542/peds.2024-070153](#)

Abstract

Background: Previous work has demonstrated that dexamethasone has similar efficacy to prednisolone/prednisone for the management of asthma exacerbations. We sought to evaluate trends in the use of dexamethasone for asthma among children discharged from the emergency department (ED) and to evaluate the association of corticosteroid choice with return visits and hospitalizations.

Methods: We conducted a retrospective cross-sectional analysis of 28 hospitals between 2010 and 2024, including children (<18 years) discharged from the ED with an acute asthma exacerbation who received either dexamethasone or prednisolone/prednisone. We identified trends in corticosteroid selection using breakpoint analysis and evaluated the association of corticosteroid selection with any ED return visit and return visits leading to hospitalization within 7 days.

Results: We included 491 576 encounters (median age of 6.2 years [IQR 4.0-9.8]; 62.4% for boys). Of these, 216 874 (44.1%) received prednisolone/prednisone and 274 702 (55.9%) received dexamethasone. There was an increase in use of dexamethasone (91.1% given prednisolone/prednisone in 2010; 95.3% given dexamethasone by 2024). We identified breakpoints in September 2013 and December 2015. During the 27-month period between these points, adoption of dexamethasone increased by 0.7% per month, (95% CI 0.6-0.9%). Dexamethasone was associated with a higher adjusted odds of return visit (1.07, 95% CI 1.03-1.11) and a lower adjusted odds of hospitalization within 7 days relative to prednisolone/prednisone (0.90, 95% CI 0.84-0.97).

Conclusion: We identified a transition toward dexamethasone use for children with asthma discharged from pediatric EDs. This was particularly pronounced between 2013 and 2015, approximately 15 years after the first dexamethasone trials were published.

Copyright © 2025 by the American Academy of Pediatrics.

Full text links



[Proceed to details](#)

Cite

Share

7

Curr Opin Allergy Clin Immunol

-
-
-

. 2025 Jun 5.

doi: [10.1097/ACI.0000000000001081](https://doi.org/10.1097/ACI.0000000000001081). Online ahead of print.

[Advancing precision medicine for asthma by focusing on type 2 cytokines and alarmins](#)

[Remo Poto](#)^{1,2,3}, [Andrea Portacci](#)⁴, [Rory Chan](#)⁵, [Gianluca Lagnese](#)^{1,2}, [Mattia Giovannini](#)^{6,7}, [Gilda Varricchi](#)^{1,2,8}

Affiliations Expand

- PMID: 40464795
- DOI: [10.1097/ACI.0000000000001081](https://doi.org/10.1097/ACI.0000000000001081)

Abstract

Purpose of review: Asthma is a heterogeneous disease encompassing distinct phenotypes and endotypes. Advances in elucidating the pathogenic role of type 2 (T2) cytokines and epithelial-derived alarmins have profoundly reshaped our understanding of airway inflammation in asthma. This review provides an updated perspective on how these mediators contribute to asthma pathobiology and examines their integration into emerging precision medicine strategies.

Recent findings: Biologic agents targeting T2 cytokines (IL-4, IL-5, and IL-13) and alarmins (TSLP and IL-33) have demonstrated efficacy across a broad spectrum of severe asthma phenotypes. Recent evidence underscores the central role of alarmins in orchestrating both innate and adaptive immune responses within the airways. In parallel, the development of alarmin-associated molecular and clinical biomarkers is expanding patient stratification beyond traditional eosinophilic and allergic profiles.

Summary: Advancing our understanding of alarmins and T2 cytokines offers new opportunities to refine asthma endotyping, personalize therapeutic decisions, and pursue sustained disease remission. Future directions include the integration of multiomics, real-world evidence, and novel biomarker platforms to consolidate the next phase of precision medicine in asthma and optimize long-term disease modification strategies.

Keywords: alarmins; asthma; biologics; precision medicine; type 2 inflammation.

Copyright © 2025 Wolters Kluwer Health, Inc. All rights reserved.

- [72 references](#)

Full text links



[Proceed to details](#)

Cite

Share

8

Review

Expert Rev Clin Immunol

-
-
-

. 2025 Jun 10:1-17.

doi: 10.1080/1744666X.2025.2514607. Online ahead of print.

[The interplay between asthma and type 2 diabetes mellitus: mutual interactions and therapeutic implications](#)

[Mario Cazzola](#)¹, [Nicola A Hanania](#)², [Clive P Page](#)³, [Luigino Calzetta](#)⁴, [Maria Gabriella Matera](#)⁵, [Paola Rogliani](#)¹

Affiliations Expand

- PMID: 40452109
- DOI: [10.1080/1744666X.2025.2514607](#)

Abstract

Introduction: Asthma and type 2 diabetes mellitus (T2DM) are chronic diseases with a significant global health burden. Recent studies have highlighted the complex relationship between these two diseases, particularly regarding their pharmacological management.

Areas covered: This review discusses the mechanisms linking asthma and T2DM and the interactions between asthma and T2DM therapies, highlighting the potential clinical implications. We examine the effects of asthma medications on glycemic control and diabetes management and review the effects of commonly used T2DM medications on outcomes in patients with asthma.

Expert opinion: Effectively managing asthma and T2DM requires an understanding of the beneficial and adverse effects of asthma drugs on glucose metabolism. It is also essential to consider the potential benefits of diabetes treatments on respiratory health and the impact of obesity on both diseases. Such knowledge can facilitate the optimization of drug plans and the minimization of adverse effects, while exploiting potential synergies between treatments for these diseases. However, to improve understanding of the complex mechanisms underlying the interaction between these chronic diseases, further research using a comprehensive approach that includes inflammatory pathways, metabolic factors, therapeutic interventions, gender differences, and lifestyle influences is needed.

Keywords: Asthma; hyperglycemia; inflammation; pharmacological interferences; type 2 diabetes mellitus.

Supplementary info

Publication typesExpand

Full text links



[Proceed to details](#)

Cite

Share

9

J Asthma

-
-
-

. 2025 Jun 5:1-5.

doi: 10.1080/02770903.2025.2513060. Online ahead of print.

[Impact of ERS/ATS 2022 bronchodilator response guidelines in asthma control](#)

[Clara Seghers Carreras](#)¹, [Miguel Jiménez Gómez](#)¹, [Begoña Peña Del Cura](#)¹, [Lucía Ortega Ruíz](#)¹, [Fernando Vargas Ursúa](#)², [Cristina Martín-Arriscado Arroba](#)³, [Carlos Melero Moreno](#)⁴, [Rocío Magdalena Díaz Campos](#)¹

Affiliations Expand

- PMID: 40440059
- DOI: [10.1080/02770903.2025.2513060](https://doi.org/10.1080/02770903.2025.2513060)

Abstract

Objective: To determine whether the bronchodilator response (BDR) according to the new cutoff values is associated with worse asthma control compared with the 2005 definition.

Methods: Prospective study on moderate to severe asthma patients under clinical follow-up. Patients were classified based on the BDR using both ERS/ATS 2022 and 2005 thresholds. We collected clinical and functional data, along with exacerbations over a one-year follow-up period.

Results: Among the 198 patients included, mean age was 60.2 years-old (SD 16.3), with 74.7% being women and 69.7% having severe asthma. According to the 2005 threshold, 46 (23.2%) showed bronchodilator responsiveness, whereas with the 2022 recommendations decreased to 38 (19.2%). The agreement between the 2005 and 2022 ERS/ATS criteria for BDR positivity was 92.17%, with a Cohen's kappa coefficient of 0.76 ($p < 0.001$). Using the 2022 cutoff values, patients with BDR had a significantly lower mean asthma control test score (19.9 vs 22.5; $p = 0.001$), while no difference was observed with the 2005 criteria. The relative risk of exacerbations after one year follow-up was 1.23 (CI 95% 1-1.25) with the 2022 recommendations, compared to 1.09 (CI 95% 0.88-1.38) with the 2005 criteria.

Conclusions: The use of the new BDR criteria could provide a valuable marker of asthma control, allowing for better risk stratification and more informed therapeutic decisions.

Keywords: Asthma; asthma control; bronchodilator response; exacerbations; lung function.

Full text links



[Proceed to details](#)

Cite

Share

10

Review

Med Clin (Barc)

-
-
-

. 2025 Jun 13;164(11):106916.

doi: 10.1016/j.medcli.2025.106916. Epub 2025 Apr 10.

[Allergic rhinitis](#)

[Article in English, Spanish]

[Victoria Cardona](#)¹, [Arnau Salvany-Pijuan](#)², [Javier Pereira-González](#)²

Affiliations Expand

- PMID: 40215921
- DOI: [10.1016/j.medcli.2025.106916](https://doi.org/10.1016/j.medcli.2025.106916)

Abstract

Allergic rhinitis is an inflammation of the nasal mucosa caused by immunoglobulin E, presenting with symptoms such as sneezing, nasal itching, congestion, and rhinorrhea. It is often associated with conjunctivitis and asthma, significantly impacting quality of life. An integrated care approach is recommended, spanning from pharmacy and primary care to specialized care for severe or poorly controlled cases. Treatment includes avoiding allergens and using medications like antihistamines and intranasal corticosteroids. Combinations of these medications in a single intranasal spray have shown greater efficacy. In severe cases, immunotherapy is effective if tailored to the causing allergen. Tools like visual analogue scales and mobile applications facilitate monitoring and management of rhinitis, optimizing care and improving patient self management. In this narrative review, all these aspects will be addressed.

Keywords: Alergia; Allergen immunotherapy; Allergy; Antihistamines; Antihistamínicos; Corticosteroides intranasales; Inmunoterapia con alérgenos; Intranasal corticosteroids; Rhinitis; Rhinoconjunctivitis; Rinitis; Rinoconjuntivitis.

Copyright © 2025 Elsevier España, S.L.U. All rights reserved.

Supplementary info

Publication types, MeSH terms, SubstancesExpand

Full text links



"rhinitis"[MeSH Terms] OR rhinitis[Text Word]

1

Meta-Analysis

J Glob Health

-
-
-

. 2025 Jun 13:15:04155.

doi: 10.7189/jogh.15.04155.

[Is there a bidirectional relationship between allergic rhinitis and irritable bowel syndrome? A meta-analysis](#)

[Yifen Huang](#) ^{#1}, [Lun Cai](#) ^{#1}, [Jie Liu](#) ^{#1}, [RongRong Yang](#) ¹, [Liping Wei](#) ², [Xiongbin Gui](#) ³, [Huazheng Luo](#) ¹

Affiliations Expand

- PMID: 40511506
- DOI: [10.7189/jogh.15.04155](#)

Abstract

Background: Some studies suggest a link between allergic rhinitis (AR) and irritable bowel syndrome (IBS), but evidence is insufficient. This meta-analysis aimed to explore the relationship between AR and IBS.

Methods: We searched the relevant literature in six electronic databases. We included a total of nine articles, seven of which took AR as the research object, two of which took IBS as the research object. We performed a meta-analysis using random effects and estimated the resultant odds ratio (OR).

Results: A total of 10 627 patients with AR were included in seven studies, including 956 patients diagnosed with AR in the IBS population and 9671 patients diagnosed with AR in the non-IBS population. By heterogeneity test, $X^2 = 10.12$, F-statistic (F) = 6, P = 0.12, $I^2 = 41\%$, OR = 2.88, and Z-score (Z) = 21.97 (P < 0.00001), the results were statistically significant. Patients with AR have an increased risk of developing IBS compared to patients without AR. A total of 1099 patients with IBS were included in two studies, including 384 patients with IBS in AR patients and 715

patients with IBS in the healthy population. After the heterogeneity test, $X^2 = 0.11$, $F = 1$, $P = 0.74$, $I^2 = 0\%$, $OR = 2.15$, and $Z = 11.81$ ($P < 0.00001$), the results were statistically significant. Patients with IBS have an increased risk of developing AR compared to patients without IBS.

Conclusions: The bidirectional association between AR and IBS provides a basis for exploring potential new mechanisms between the two.

Registration: No. INPLASY202440057.

Copyright © 2025 by the Journal of Global Health. All rights reserved.

Conflict of interest statement

Disclosure of interest: The authors completed the ICMJE Disclosure of Interest Form (available upon request from the corresponding author) and disclose no relevant interests.

Supplementary info

Publication types, MeSH terms Expand

Full text links



[Proceed to details](#)

Cite

Share

2

J Allergy Clin Immunol Pract

-
-
-

. 2025 Jun 10:S2213-2198(25)00538-0.

doi: 10.1016/j.jaip.2025.04.060. Online ahead of print.

[A novel approach to consider Planetary Health in guideline development: a GRADE approach using the Allergic Rhinitis and its Impact on Asthma \(ARIA\) 2024-2025 guidelines as a case-study](#)

[Rafael José Vieira¹, Bernardo Sousa-Pinto¹, Alina Herrmann², Josep Antó³, Sian Williams⁴, Antonio Bognanni⁵, Ana Margarida Pereira¹, Tari Haahtela⁶, Grigorios I Leontiadis⁷, Oliver Pfaar⁸, Arunas Valiulis⁹, Torsten Zuberbier¹⁰, Thomas Piggott¹¹, Holger J Schünemann¹², Jean Bousquet¹³; ARIA 2024-2025 guideline panel](#)

Affiliations Expand

- PMID: 40505857
- DOI: [10.1016/j.jaip.2025.04.060](https://doi.org/10.1016/j.jaip.2025.04.060)

Abstract

The concept of planetary health emphasizes the inherent connection between the health of humans and the health of the planet, on which human health depends. The planetary boundaries framework describes nine planetary life support systems, including climate change and biodiversity, and defines a safer operating space for humanity. The healthcare sector, while striving to improve human health, contributes significantly to exceeding those planetary boundaries, for instance through greenhouse gas emissions, water use, and waste generation. The integration of Planetary Health considerations into health guidelines is, therefore, essential to achieve a delicate sustainable balance between improving individual human health and minimizing planetary health impacts. The Grading of Recommendations, Assessment, Development and Evaluation (GRADE) Working Group is developing guidance for incorporating Planetary Health into the health guideline development process. In this paper, we address the need for evidence to support planetary health considerations in allergic disease guidelines. In addition, we review sources of evidence, such as lifecycle assessment studies, which provide evidence about the environmental impacts of medical products over the full lifecycle from production to disposal. Finally, we present the 2024-2025 Allergic Rhinitis and Its Impact on Asthma (ARIA) guidelines as an example of how to account for Planetary Health when direct quantitative evidence is limited., showcasing how Planetary Health considerations were embedded into the guideline development process through a dedicated criterion in the Evidence-to-Decision framework.

Keywords: Allergic rhinitis; Asthma; GRADE; Health Guidelines; Planetary Health.

Copyright © 2025. Published by Elsevier Inc.

Full text links



[Proceed to details](#)

Cite

Share

3

J Asthma Allergy

•

-
-

. 2025 Jun 6:18:967-981.

doi: 10.2147/JAA.S525508. eCollection 2025.

[Prevalence, Change and Burden of Systemic Corticosteroid Use in Type 2 Inflammation Associated Diseases Over 25 Years - A Nationwide Danish Study](#)

[Kjell Erik Julius Håkansson](#)^{1,2}, [Inge Raadal Skov](#)³, [Steven Arild Wuyts Andersen](#)^{4,5}, [Zargha Ali](#)⁶, [Anders Løkke](#)^{7,8}, [Rikke Ibsen](#)⁹, [Ole Hilberg](#)^{7,8}, [Howraman Meteran](#)¹, [Claus R Johnsen](#)¹⁰, [Vibeke Backer](#)^{4,5}, [Charlotte Suppli Ulrik](#)^{1,5}

Affiliations Expand

- PMID: 40503461
- PMCID: [PMC12152964](#)
- DOI: [10.2147/JAA.S525508](#)

Abstract

Background: Systemic corticosteroid use in type 2 inflammation-associated diseases including asthma, atopic dermatitis, allergic rhinitis, and chronic rhinosinusitis has been associated with adverse outcomes, and corticosteroid-sparing treatments are available.

Objective: Assess temporal changes in systemic corticosteroid use and the impact of type 2 inflammation multimorbidity (eg multiple concurrent type 2 inflammation-associated diseases) and specialist assessment on systemic corticosteroid exposure.

Methods: Using nationwide databases, all Danish adults with asthma, atopic dermatitis, allergic rhinitis, or chronic rhinosinusitis, based on hospital diagnoses or redeemed prescriptions between 1997 and 2021 were included in an open, serial cross-sectional cohort.

Results: Over 25 years, a total of 2,151,209 Danish adults were included. Of those with a single diagnosis (type 2 inflammation monomorbidity), 13.9% had asthma, 19.2% allergic rhinitis, 52.9% atopic dermatitis, and 14.0% chronic rhinosinusitis. In terms of type 2 inflammation multimorbidity, 75.1% of included individuals had one, 21.3% two and 3.5% three diagnoses, respectively. Overall, 9.6% of type 2 monomorbid individuals redeemed systemic corticosteroids, with asthma (16.5%) and atopic dermatitis (6.0%) having the highest and lowest prevalence of use. Systemic corticosteroid use peaked in 2006 (10.6%) and was lowest in 2020 (7.2%). Exposure > 5 mg prednisolone/day was constant around 15% overall among users. Type 2 inflammation multimorbidity was associated with increases in systemic corticosteroid use at 9.6%, 16.0% and 20.9% for one, two and three diagnoses, respectively. A median referral delay of 4.1 [8.1] years from first systemic

corticosteroid redemption to specialist assessment was seen. Specialist assessment led to a 64.9% reduction in median annual systemic corticosteroid exposure overall.

Conclusion: In type 2 inflammation associated diseases, systemic corticosteroid use remains common despite the introduction of corticosteroid-sparing treatments. Timely referrals to specialist assessment could reduce the overall systemic corticosteroid exposure.

Keywords: allergic rhinitis; asthma; atopic dermatitis; chronic rhinosinusitis; corticosteroid sparing; prednisolone.

Plain language summary

This study looked at how often a type of medicine called systemic corticosteroids is used by people with certain health conditions related to inflammation such as asthma, allergies, atopic eczema and chronic rhinosinusitis, in Denmark over the past 25 years. Systemic corticosteroids (eg *prednisolone*) are strong medications that help reduce inflammation in the body. While they can be very effective towards severe symptoms, long-time use can lead to serious health problems, including weight gain, diabetes, and weakened bones. The study aimed to determine how many patients with these inflammatory diseases were using systemic corticosteroids and how this has changed over time. They found that overall, about 9.6% of patients with one of these conditions used systemic corticosteroids. Among these patients, asthma patients had the highest usage at 16.8%, while those with atopic eczema had the lowest at 6.0%. Overall, the study observed a decrease in the use of these medications since 2006, especially during the COVID-19 pandemic. However, patients with multiple conditions, such as having both asthma and allergies, tended to rely more on systemic corticosteroids. Importantly, the study showed that patients who visited a specialist after starting systemic corticosteroids were able to significantly reduce their use of these medications, but many patients had to wait several years before being seen by a specialist. In conclusion, even though there are safer treatments available, many people still depend on systemic corticosteroids. Timely help from specialists can assist in reducing the need for these medications and the associated health risks.

© 2025 Håkansson et al.

Conflict of interest statement

IRS, RI, ZA and CRJ has no conflicts to declare. KEJH has received personal fees from AstraZeneca, Chiesi, GSK, Sanofi and TEVA outside of the submitted work. AL has received personal fees from AstraZeneca, GSK, TEVA, Chiesi, Sanofi Genzyme, Boehringer-Ingelheim, Orion Pharma, Novartis, ALK-Abello, Mundipharma and Pfizer outside of the submitted work. OH has received personal fees from AstraZeneca, GSK, TEVA, Chiesi, Sanofi Genzyme, Boehringer-Ingelheim outside of the submitted work. HM has received personal fees from GSK, Teva, AstraZeneca, Novartis, Sanofi-Aventis, Airsonett AB, and ALK-Abelló A/S outside of the submitted work, and has received a research grant from ALK-Abelló A/S. VB has received personal fees from GSK, Sanofi Genzyme, AstraZeneca, TEVA, Chiesi, Boehringer-Ingelheim, Novartis, ALK-Abello, Mundipharma Menarini, Birk and Pfizer outside of the submitted work. SA has consulted for Ambu A/S outside of the submitted work. CSU has received personal fees from AstraZeneca, GSK, Sanofi, Chiesi, Boehringer

Ingelheim, Mundipharma, Pfizer, Berlin Chemie, Menarini, Hikma Pharmaceuticals, TEVA, Orion Pharma, Novartis, TFF Pharmaceuticals and Actelion outside the submitted work. The authors report no other conflicts of interest in this work.

- [43 references](#)
- [5 figures](#)

Full text links



[Proceed to details](#)

Cite

Share

4

Review

Eur J Med Res

-
-
-

. 2025 Jun 11;30(1):474.

doi: 10.1186/s40001-025-02740-y.

[Mechanisms, diagnosis, and treatment of olfactory dysfunction in rhinosinusitis](#)

[Hai Zhu](#)¹, [Siyuan Qu](#)¹, [Mengdan Gong](#)¹, [Yizhen Xiang](#)¹, [Shengqi Gan](#)¹, [Yaoshu Teng](#)², [Dong Ye](#)³

Affiliations Expand

- PMID: 40500803
- PMCID: [PMC12153118](#)
- DOI: [10.1186/s40001-025-02740-y](#)

Abstract

Background: Olfactory dysfunction is a common symptom of chronic rhinosinusitis (CRS), affecting approximately 60-80% of patients. This impairment significantly impacts patients' quality of life and increases the risk of hazardous events.

Objective: This study aims to summarize and analyze the epidemiology, risk factors, and pathogenesis of CRS-related olfactory dysfunction. It also describes subjective and objective methods for olfactory assessment and discusses the latest diagnostic and therapeutic approaches, while proposing future research directions.

Methods: A comprehensive literature review was conducted to analyze the pathophysiology, clinical characteristics, and treatment strategies for CRS-related olfactory dysfunction. This study compares different olfactory assessment tools, examines the role of inflammatory factors, and evaluates the effectiveness of various treatments.

Results: The pathogenesis of CRS-related olfactory dysfunction involves conductive factors, inflammatory processes, and olfactory bulb disuse atrophy. While surgical and pharmacological treatments are effective for some patients, the overall efficacy remains debatable. Traditional olfactory training emerges as a promising, non-invasive therapeutic approach with significant potential.

Conclusions: Olfactory dysfunction is a prevalent issue among CRS patients and is closely associated with type 2 inflammation. Future research should focus on understanding the dynamic changes in olfactory bulb volume and the functional transition of olfactory neuroepithelial stem cells. Although corticosteroid therapy is widely used, the optimal administration route requires further investigation, and the long-term efficacy of surgical treatment remains a topic of ongoing debate.

Keywords: Imaging techniques; Neuroepithelial stem cells; Olfactory dysfunction; Olfactory testing; Psychophysical testing; Rhinosinusitis; Traditional Chinese medicine.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval and consent to participate: Not applicable. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests.

- [97 references](#)
- [2 figures](#)

Supplementary info

Publication types, MeSH terms, Grants and fundingExpand

Full text links



[Proceed to details](#)

Cite

Share

5

Review

Allergy

-
-
-

. 2025 Jun 10.

doi: 10.1111/all.16611. Online ahead of print.

[The Impact of Rhinovirus, Syncytial Respiratory Virus and Helminth Infection on the Risk of New-Onset Asthma and Other Allergic Conditions-A Systematic Review for the EAACI Guidelines on Environmental Science for Allergic Diseases and Asthma](#)

[Ioana Agache](#)¹, [Josefina Salazar](#)², [Yesenia Rodriguez-Tanta](#)², [Fiorella Karina Fernandez Saenz](#)^{2,3}, [Tari Haahtela](#)⁴, [Claudia Traidl-Hoffmann](#)⁵, [Athanasios Damialis](#)⁶, [Letizia Vecillas](#)⁷, [Mattia Giovannini](#)^{8,9}, [Kari C Nadeau](#)^{10,11}, [Isabella Pali-Schöll](#)^{12,13}, [Oscar Palomares](#)¹⁴, [Harald Renz](#)^{15,16}, [Jurgen Schwarze](#)¹⁷, [Bernardo Sousa Pinto](#)^{18,19}, [Marilyn Urrutia-Pereira](#)^{20,21}, [Carina Venter](#)²², [Donata Vercelli](#)^{23,24,25,26}, [Tonia Winders](#)²⁷, [Ivan Sola-Arnau](#)^{2,3,28}, [Pablo Alonso-Coello](#)^{2,3,28}, [Carlos Canello-Aybar](#)^{2,3}, [Marek Jutel](#)²⁹, [Cezmi A Akdis](#)³⁰

Affiliations Expand

- PMID: 40495394
- DOI: [10.1111/all.16611](https://doi.org/10.1111/all.16611)

Abstract

This systematic review evaluated the association between lower respiratory tract infections (LRTI) in infancy with respiratory syncytial virus (RSV), rhinovirus (RV) or infestation with helminths and the risk of developing asthma and allergic diseases. The risk of bias was assessed with ROBINS-E, and the certainty of evidence (CoE) with GRADE. Meta-analysis applied a random-effects model. RSV LRTI is likely associated with an increased risk of developing asthma by age 7 (OR 3.02, 95% CI 2.23-4.09; $I^2 = 98\%$; moderate CoE). The impact on wheezing, atopic dermatitis (AD), and allergic rhinitis is uncertain. RV LRTI may be associated with increased risk of developing asthma (OR 8.40, 95% CI 2.56-27.55; $I^2 = 43\%$; low CoE). The impact on wheezing and AD is uncertain. *Trichuris trichiura* infestation might be associated with reduced risk of new-onset wheezing (OR 0.57, 95% CI 0.35-0.94; very low CoE) or AD (HR: 0.35, 95% CI 0.18-0.67; very low CoE). The association between *Ascaris*

lumbricoides and hookworm infestation and the risk of developing asthma or AD is uncertain. Infestation with any helminths might be associated with reduced risk of new-onset asthma by age 5 (OR: 0.60, 95% CI 0.38-0.95; very low CoE) and wheezing (OR 0.70, 95% CI 0.51-0.95; very low CoE). More high-quality studies are needed to confirm these findings.

Keywords: GRADE; allergy; asthma; guideline; helminths; rhinovirus; syncytial respiratory virus; systematic review.

© 2025 European Academy of Allergy and Clinical Immunology and John Wiley & Sons Ltd.

- [114 references](#)

Supplementary info

Publication types [Expand](#)

Full text links



[Proceed to details](#)

Cite

Share

6

Multicenter Study

NPJ Prim Care Respir Med

-
-
-

. 2025 Jun 5;35(1):28.

doi: 10.1038/s41533-025-00434-w.

[Characterizing acute respiratory infections in primary care for better management of viral infections](#)

[Hortense Petat](#)¹, [Matthieu Schuers](#)², [François Le Bas](#)³, [Xavier Humbert](#)³, [Andry Rabiaza](#)³, [Sandrine Corbet](#)⁴, [Astrid Vabret](#)⁴, [Meriadeg Ar Gouilh](#)⁴, [Christophe Marguet](#)⁵

Affiliations [Expand](#)

- PMID: 40473668
- PMCID: [PMC12141667](#)
- DOI: [10.1038/s41533-025-00434-w](#)

Abstract

Acute respiratory infections (ARI) are the most common infections in the general population and represent an important socio-economic burden. Characterizing ARIs in primary care in patients of all ages in terms of clinical presentation, and virological results. We conducted a prospective multicenter study in primary care: 36 French general practitioners (GPs) included patients from all ages presenting with symptoms of ARI, and performed a nasopharyngeal swab, which was analyzed by Multiplex RT-PCR. 685 patients of all ages were included in the cohort. We found associations between clinical diagnosis and respiratory viruses: influenza was associated with the diagnosis of flu-like syndrome ($p < 0.001$), HRV with rhinitis ($p < 0.05$), and RSV with bronchiolitis ($p < 0.001$) and bronchitis ($p < 0.05$). Respiratory distress was associated with RSV ($p = 0.002$), and a cough at the inclusion was significantly not associated with the influenza virus ($p = 0.009$). Antibiotic prescriptions were not associated with any specific virus. By day 7, persistent cough was significantly associated with active and passive smoking (respectively $p = 0.01$ and $p < 0.001$), influenza and RSV-positive samples ($p < 0.05$) and an age of less than 2 years ($p < 0.01$). With this prospective cohort performed in primary care including patients of all ages, we characterized viral respiratory infections, to better understand correlations between clinical data and virological results.

© 2025. The Author(s).

Conflict of interest statement

Competing interests: The authors declare no competing interests. Ethical approval: We obtained the agreement of the “Est II” protection committee (study reference 18/10/10/63004) in January 2019. An information document was given to each patient included (non-opposition document).

- [26 references](#)
- [3 figures](#)

Supplementary info

Publication types, MeSH terms [Expand](#)

Full text links

nature portfolio 

[Proceed to details](#)

Cite

Share

7

Review

Med Clin (Barc)

-
-
-

. 2025 Jun 13;164(11):106916.

doi: 10.1016/j.medcli.2025.106916. Epub 2025 Apr 10.

[Allergic rhinitis](#)

[Article in English, Spanish]

[Victoria Cardona](#)¹, [Arnau Salvany-Pijuan](#)², [Javier Pereira-González](#)²

Affiliations Expand

- PMID: 40215921
- DOI: [10.1016/j.medcli.2025.106916](https://doi.org/10.1016/j.medcli.2025.106916)

Abstract

Allergic rhinitis is an inflammation of the nasal mucosa caused by immunoglobulin E, presenting with symptoms such as sneezing, nasal itching, congestion, and rhinorrhea. It is often associated with conjunctivitis and asthma, significantly impacting quality of life. An integrated care approach is recommended, spanning from pharmacy and primary care to specialized care for severe or poorly controlled cases. Treatment includes avoiding allergens and using medications like antihistamines and intranasal corticosteroids. Combinations of these medications in a single intranasal spray have shown greater efficacy. In severe cases, immunotherapy is effective if tailored to the causing allergen. Tools like visual analogue scales and mobile applications facilitate monitoring and management of rhinitis, optimizing care and improving patient self management. In this narrative review, all these aspects will be addressed.

Keywords: Alergia; Allergen immunotherapy; Allergy; Antihistamines; Antihistamínicos; Corticosteroides intranasales; Inmunoterapia con alérgenos; Intranasal corticosteroids; Rhinitis; Rhinoconjunctivitis; Rinitis; Rinoconjuntivitis.

Copyright © 2025 Elsevier España, S.L.U. All rights reserved.

Supplementary info

Publication types, MeSH terms, SubstancesExpand

Full text links



chronic cough

1

Clinical Trial

J Patient Rep Outcomes

-
-
-

. 2025 Jun 11;9(1):65.

doi: 10.1186/s41687-025-00888-z.

[Psychometric validation of the severity of chronic cough diary, leicester cough questionnaire, and a cough severity visual analogue scale in patients with refractory chronic cough](#)

[Andrew Trigg](#)¹, [Nathan Clarke](#)², [Christoph Gerlinger](#)^{3,4}, [Ulrike Krahn](#)⁵, [Adam Gater](#)², [Claudia Haberland](#)³

Affiliations Expand

- PMID: 40498172
- PMCID: [PMC12158865](#)
- DOI: [10.1186/s41687-025-00888-z](#)

Abstract

Background: Refractory chronic cough (RCC) is commonly reported in primary care and associated with significant morbidity. Patient-reported outcome (PRO) measures are important for evaluating the efficacy of antitussive medications for RCC in clinical trials from the patient-perspective. Psychometric properties of Severity of Chronic Cough Diary (SCCD) Cough Severity and Cough Frequency, Leicester Cough Questionnaire (LCQ) Total and Physical Domain and Cough Severity Visual Analogue Scale (VAS) scores using data from a 12-week Phase 2b

trial evaluating the efficacy of eliapiixant in patients with RCC ([NCT04562155](#)) are reported.

Results: Quality of completion for the SCCD, LCQ and Cough Severity VAS across the study was high, no ceiling or floor effects were observed at baseline. Internal consistency for LCQ Total and Physical domain scores was also high (Cronbach's alpha = 0.939 and 0.806, respectively). SCCD Cough Frequency and Cough Severity, LCQ Total and Physical domain, and Cough Severity VAS scores demonstrated strong test-retest reliability (Intraclass correlation coefficient ≥ 0.848) among participants defined as stable between Week 3 and Week 4 according to Patient Global Impression of Severity (PGI-S) ratings and Awake Cough Count readings. Construct validity was supported by known-groups comparisons, with large differences (effect sizes 1.99-4.16) observed between groups categorized according to PGI-S ratings and objective Awake Cough Counts. Ability to detect improvement was supported by large effect sizes (≥ 0.8) observed for mean changes in SCCD, LCQ and Cough Severity VAS scores from baseline to Week 12 among participants classified as 'improved' according to PGI-S/PGI-C ratings and Awake Cough Counts. Triangulated thresholds (score range) for meaningful within-patient improvement based on anchor-based assessments were -0.82 for SCCD Cough Frequency (0-4), -0.69 for SCCD Cough Severity (0-4), 2.36 for the LCQ Total (3-21), 0.77 for the LCQ Physical (1-7) and -17.73 for the Cough Severity VAS (0-100) scores.

Conclusion: Findings support the reliability, validity and responsiveness of the newly developed SCCD Cough Frequency and Severity items as fit-for-purpose PRO measures of cough frequency or severity for use in drug development programs within RCC. The LCQ Total, LCQ Physical Domain and Cough Severity VAS also exhibit acceptable measurement properties for use in this population.

Keywords: Cough severity VAS; Leicester cough questionnaire; Meaningful change; Patient-reported outcome; Psychometric validation; Refractory chronic cough; Reliability; Severity of chronic cough diary; Validity.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval and consent to participate: The Institutional Review Board/Independent Ethics Committee at each center approved the protocol. The study was carried out in accordance with Good Clinical Practice guidelines, the Declaration of Helsinki, and the Council for International Organizations of Medical Sciences International Ethical Guidelines. All participants provided written informed consent. Consent for publication: Not applicable. Competing interests: AT is an employee of Bayer plc. CG, UK and CH are employees of Bayer AG. NC and AG are employees of Adelphi Values, which was contracted by Bayer AG to support the conduct of this research.

- [62 references](#)
- [2 figures](#)

Supplementary info

Publication types, MeSH terms, Substances, Associated dataExpand

Full text links



[Proceed to details](#)

Cite

Share

2

Am J Respir Crit Care Med

-
-
-

. 2025 Jun 6.

Online ahead of print.

[Initial Success: Camlipixant in Refractory Chronic Cough](#)

[Yang Rui](#)¹, [Zhe Chen](#)^{2,3}

Affiliations Expand

- PMID: 40479590

No abstract available

Full text links



[Proceed to details](#)

Cite

Share

3

Am J Respir Crit Care Med

-
-
-

. 2025 Jun 6.

Online ahead of print.

[Reply to Rui and Chen: Initial Success: Camlipixant in Refractory Chronic Cough](#)

[Jaclyn A Smith](#)^{1,2}

Affiliations Expand

- PMID: 40479589

No abstract available

Keywords: P2X3 antagonist; camlipixant; refractory chronic cough.

"bronchiectasis"[MeSH Terms] OR bronchiectasis[Text Word]

1

ERJ Open Res

-
-
-

. 2025 Jun 9;11(3):00962-2024.

doi: 10.1183/23120541.00962-2024. eCollection 2025 May.

[Impact of long-term high-flow nasal therapy on mucus plugs in patients with bronchiectasis](#)

[Claudia Crimi](#)^{1,2}, [Santi Nolasco](#)^{1,2}, [Raffaele Campisi](#)², [Mattia Nigro](#)^{3,4}, [Pietro Impellizzeri](#)², [Andrea Cortegiani](#)^{5,6}, [Alberto Noto](#)⁷, [Andrea Gramegna](#)^{8,9}, [Carlo Vancheri](#)^{1,2}, [Francesco Blasi](#)^{8,9}, [Nunzio Crimi](#)^{1,2}, [Stefano Aliberti](#)^{3,10}, [Annalisa Carlucci](#)^{11,12}

Affiliations Expand

- PMID: 40491465
- PMCID: [PMC12147106](#)
- DOI: [10.1183/23120541.00962-2024](#)

Abstract

Patients with bronchiectasis treated with long-term high-flow nasal therapy showed a significant improvement in mucus plug score <https://bit.ly/3NV39zl>.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: C. Crimi reports honoraria for lectures from GSK, Sanofi, AstraZeneca, Vitalaire, Fisher & Paykel, ResMed and Philips, outside the submitted work. A. Cortegiani reports honoraria for lectures from Fisher & Paykel. A. Gramegna reports honoraria for lectures and participation in advisory boards from Vertex, outside the submitted work. F. Blasi reports grants and personal fees from AstraZeneca and Insmmed, outside the submitted work; personal fees from Chiesi, GlaxoSmithKline, Grifols, Menarini, OM Pharma, Pfizer, Sanofi, Vertex, Viatrix and Zambon, outside the submitted work. S. Aliberti reports grants or contracts from Insmmed Incorporated, Chiesi, Fisher & Paykel and GSK, outside the submitted work; royalties or licenses from McGraw Hill, outside the submitted work; consulting fees from Insmmed Incorporated, Insmmed Italy, Insmmed Ireland Ltd, Zambon Spa, AstraZeneca UK Limited, AstraZeneca Pharmaceutical LP, CSL Behring GmbH, Grifols, Fondazione Internazionale Menarini, Moderna, Boehringer Ingelheim, Chiesi, MSD Italia S.r.l., BRAHMS, Physioassist SAS, AN2 Therapeutics and GlaxoSmithKline Spa and Vertex, outside the submitted work; payment or honoraria for lectures, presentations, speakers' bureaus, manuscript writing or educational events from GlaxoSmithKline Spa, Thermofisher Scientific, Insmmed Italy, Insmmed Ireland Ltd, Zambon, Fondazione Internazionale Menarini and Vertex outside the submitted work; and participation on a data safety monitoring or advisory board for Insmmed Incorporated, Insmmed Italy, AstraZeneca UK Limited and MSD Italia S.r.l, outside the submitted work. The remaining authors have nothing to disclose.

- [16 references](#)
- [1 figure](#)

Supplementary info

Publication types [Expand](#)

Full text links



[Proceed to details](#)

Cite

Share

2

Tob Induc Dis

-
-
-

. 2025 Jun 5:23.

doi: 10.18332/tid/204254. eCollection 2025.

[Immediately scheduled for an appointment to smoking cessation clinics: Key to quitting smoking in chronic airway disease - a multicenter randomized study](#)

[Dilek Karadoğan¹](#), **[Tahsin Gökhan Telatar²](#), **[İlknur Kaya³](#), **[Siahmet Atlı⁴](#), **[Neslihan Köse Kabil⁵](#), **[Feride Marım³](#), **[Merve Yumrukuz Şenel⁶](#), **[Aycan Yüksel⁷](#), **[Burcu Yalçın⁸](#), **[Ökkeş Gültekin⁹](#), **[Merve Erçelik¹⁰](#), **[Metin Akgün¹¹](#)**********************

Affiliations Expand

- PMID: 40475312
- PMCID: [PMC12139391](#)
- DOI: [10.18332/tid/204254](#)

Abstract

Introduction: A significant proportion of patients with chronic airway diseases continue to smoke even after the diagnosis. In addition, smoking cessation support continues to be a neglected issue in real-life settings by physicians for that patient group. Therefore, in our search for a solution to this issue, we conducted our study to evaluate the effect of arranging immediate appointments to smoking cessation outpatient clinics on smoking cessation success in patients with chronic airway disease.

Methods: This multicenter, randomized, parallel-arm prospective study ([NCT05764343](#)) was conducted in pulmonary outpatient clinics between November 2022 and June 2023. Current smoker patients aged ≥ 18 years diagnosed with COPD, asthma, or bronchiectasis for at least 6 months were included and sequentially randomized in a 1:1 ratio. Both arms received brief smoking cessation interventions, and the intervention arm had immediate access to a smoking cessation clinic appointment. In contrast, the control arm received a standard quitline appointment for routine service. The primary endpoint was the self-reported smoking cessation rate at 3 months, analyzed using an intention-to-treat approach.

Results: The study comprised 198 patients in the immediate appointment arm and 199 in the usual care arm. The quit rate was significantly higher in the immediate appointment arm (26.7%) than in the usual care arm (16.5%, $p=0.014$). Access to smoking cessation medication was 69.3% in the intervention group against 22.0% in the control group ($p<0.001$). Multivariable analysis identified access to smoking cessation medication as the sole significant predictor of cessation success at 3 months (adjusted odds ratio, AOR=5.64; 95% CI: 2.89-11.03).

Conclusions: Our study revealed that access to evidence-based smoking cessation support is positively associated with successful quitting. Compared to the usual care arm, the immediately appointment-scheduled arm has a higher access rate of cessation support. Therefore, smoking cessation support, including pharmacotherapy, should be part of routine care for patients with chronic airway diseases.

Clinical trial registration: The study is registered on the official website of ClinicalTrials.gov Identifier: ID [NCT05764343](#).

Keywords: lung diseases; obstructive; smoking cessation.

© 2025 Karadoğan D. et al.

Conflict of interest statement

The authors have completed and submitted the ICMJE Form for disclosure of Potential Conflicts of Interest and none was reported.

- [25 references](#)
- [2 figures](#)

Supplementary info

Associated dataExpand

Full text links



[Proceed to details](#)

Cite

Share

3

Radiol Phys Technol

-
-
-

. 2025 Jun 5.

doi: 10.1007/s12194-025-00920-3. Online ahead of print.

[Bronchiectasis and airspace enlargement surrounding the lung nodule in dual-energy CT pulmonary angiography: comparison between iodine map and monochromatic image](#)

[Koichiro Yasaka](#)¹, [Jun Kanzawa](#)², [Shohei Inui](#)², [Takatoshi Kubo](#)², [Osamu Abe](#)²

Affiliations Expand

- PMID: 40471409
- DOI: [10.1007/s12194-025-00920-3](https://doi.org/10.1007/s12194-025-00920-3)

Abstract

The purpose of the study is to investigate the degree and performance in the differential diagnosis of bronchiectasis/airspace enlargement in an iodine map obtainable from CT pulmonary angiography compared with monochromatic images. This retrospective study included 62 patients with a lung nodule who underwent CT pulmonary angiography. The iodine map and monochromatic image (70 keV) were reconstructed. Three readers evaluated the degree of bronchiectasis/airspace enlargement with a 4-point scale. A reference standard was established in 39 patients, and the performance of bronchiectasis/airspace enlargement in the differential diagnosis was evaluated in them. The degree of bronchiectasis/airspace enlargement in the iodine map (median score = 1/2/1 for reader 1/2/3) was significantly more prominent than that in the monochromatic image (median score = 0/1/0 for reader 1/2/3) ($p < 0.001$ for all readers). Using bronchiectasis/airspace enlargement, primary lung carcinoma and malignant lymphoma could be differentiated from other diseases, excluding lung infarct, with an area under the receiver operating characteristic curve (AUC) (reader 1/2/3) of 0.718/0.867/0.803 in the combinations of iodine map plus monochromatic image and 0.496/0.828/0.450 in the monochromatic image ($p \leq 0.047$ for two readers). Lung metastasis from colorectal carcinoma could be differentiated from other diseases with an AUC of 0.851/0.976/0.838 in the combinations of iodine map plus monochromatic image, which was significantly superior to the monochromatic image (0.378/0.780/0.459) ($p \leq 0.012$ for all readers). Bronchiectasis/airspace enlargement was more prominently observed in the iodine map than in the monochromatic image. This image finding in the iodine map provided added value in the differential diagnosis of malignant lung nodules compared with monochromatic images alone.

Keywords: Bronchiectasis; Lung cancer; Lung nodule; Multidetector computed tomography.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Conflict of interest: The authors have no relevant financial or non-financial interests to disclose. Ethics approval: The Research Ethics Committee of the Faculty of Medicine of the University of Tokyo approved this retrospective study. This study adhered to the Declaration of Helsinki. Informed consent: The requirement for obtaining written informed consent was waived.

- [28 references](#)

Full text links

