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13-19- APRILE-2026

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

9 results

1

BMC Pulm Med

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. 2026 Apr 17.

doi: 10.1186/s12890-026-04298-9. Online ahead of print.

Efficacy of single-inhaler triple therapies for chronic obstructive pulmonary disease: a systematic review and network meta-analysis

Yu Zhang [#1 2 3], Pei Zhao [#1 2 3], Yudong Zhang [4 5]

Affiliations Expand

- **PMID: 41998645**
- **DOI: 10.1186/s12890-026-04298-9**

No abstract available

Keywords: Beclomethasone dipropionate/ formoterol fumarate/glycopyrronium bromide (BDP/FOR/GLY); Budesonide/formoterol fumarate/glycopyrronium bromide

(BUD/FOR/GLY); Chronic obstructive pulmonary disease; Fluticasone furoate/formoterol fumarate/glycopyrronium bromide (FF/FOR/GLY); Fluticasone furoate/vilanterol/umeclidinium (FF/VIL/UMEC); Single-inhaler triple therapy.

Conflict of interest statement

Declarations. Ethics approval and consent to participate: An ethics statement is not applicable because this study is based exclusively on published literature. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests. Conflict of interest: The authors declare that they have no competing interests.

- **38 references**

Supplementary info

Publication typesExpand

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Cite

2

Sci Rep

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. 2026 Apr 17;16(1):12722.

doi: 10.1038/s41598-026-45975-3.

Hypoxia or tobacco-smoke exposure induce region-specific microvascular remodeling in the brain

Nazli Salik Demirtas [1], Edma Loku [2], Yasmine Porschen [1], Julia Schäffer [2 3], Cheng-Yu Wu [2], Christoph Rummel [4 5], Natascha Sommer [2], Stefan Hadzic [2], Norbert Weissmann [2], Till Acker [6 7], Attila Németh [8 9]

Affiliations Expand

- **PMID: 41998082**

- **DOI: 10.1038/s41598-026-45975-3**

No abstract available

Keywords: Brain microvascular remodeling; COPD; Hypoxia; Lung emphysema; Pulmonary hypertension; Tobacco-smoke.

Conflict of interest statement

Declarations. Competing interests: The authors declare no competing interests.

- **74 references**

Proceed to details

Cite

3

Respiration

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. 2026 Apr 17:1.

doi: 10.1159/000551327. Online ahead of print.

GOLD International COPD Conference 2025 proceedings

Gerard Criner

- **PMID: 41996305**

- **DOI: 10.1159/000551327**

Page 1

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1

Editorial

Thorax

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. 2026 Apr 15:thorax-2025-224633.

doi: 10.1136/thorax-2025-224633. Online ahead of print.

Maintaining the benefits of pulmonary rehabilitation in COPD: a SPACE to fill

Arwel W Jones [1]

Affiliations Expand

- PMID: 41986160

- DOI: 10.1136/thorax-2025-224633

No abstract available

Keywords: Pulmonary Disease, Chronic Obstructive; Pulmonary Rehabilitation.

Conflict of interest statement

Competing interests: None declared.

Supplementary info

Publication typesExpand

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Cite

2

Heart Lung

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. 2026 Apr 14:79:102795.

doi: 10.1016/j.hrtlng.2026.102795. Online ahead of print.

Management of patients with COPD in the emergency department and treatment compliance with clinical guideline recommendations at discharge

Mónica Sachi Martínez Mihara [1], Isabel Pérez Pañart [2], María Sánchez Salamero [2], Eva Campos Picontó [2], Sara Patricia Canales Villa [2], Víctor Latorre [3], Daniel Sáenz Abad [4]

Affiliations Expand

- PMID: 41985297

- DOI: 10.1016/j.hrtlng.2026.102795

Abstract

Background: Chronic obstructive pulmonary disease (COPD) exacerbations are a frequent cause of emergency department visits and are associated with high morbidity, mortality, and healthcare costs. These visits represent an opportunity to optimize patient management and align treatment with guideline recommendations, particularly regarding inhaled triple therapy.

Objectives: To describe the clinical characteristics and management of COPD patients in the emergency department and to identify factors associated with inhaled triple therapy prescription at discharge.

Methods: Retrospective observational study including patients aged >18 years attended at the emergency department of the Hospital Clínico Universitario (Zaragoza, Spain) between July and December 2022, with a diagnosis of COPD exacerbation at discharge. Demographic, clinical, laboratory, and therapeutic variables were analyzed. Logistic regression identified independent predictors of inhaled triple therapy prescription at discharge.

Results: A total of 227 patients were included (mean age: 74.4 years; 70.9% male). Most (93.4%) had a prior COPD diagnosis, and 41.0% were already on maintenance inhaled triple therapy. At discharge, inhaled triple therapy was prescribed in 53.8% of the cases. Independent variables associated with triple therapy prescription included prior use of inhaled triple therapy (odds ratio [OR]:9.4), long-term home oxygen therapy (OR:4.3), and influenza vaccination (OR:3.1). Six months after discharge, 36.0% of patients required hospital admission for COPD exacerbation.

Conclusions: One-third of COPD patients discharged from the emergency department do not receive guideline-recommended inhaled triple therapy. Interventions aimed at standardizing and optimizing emergency department management are needed to improve adherence to clinical guidelines and improve patient outcomes.

Keywords: Chronic obstructive pulmonary disease; Emergency department; Exacerbation; Therapy.

Conflict of interest statement

Declaration of competing interest The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Daniel Saenz Abad reports statistical analysis was provided by AstraZeneca Pharmaceutical Spain. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Full text links

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Thorax

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. 2026 Apr 14:thorax-2025-224183.

doi: 10.1136/thorax-2025-224183. Online ahead of print.

Correlates of 5-year decline in 6-min walk distance in the COPDGene cohort

Aladin M Boriek [1], Joseph Gordon [2 3], Yeongjin Gwon [4], Alessandra Adami [2 5], Janos Porszasz [2 3], Harry B Rossiter [2 3], Mehdi Rambod [6], Divay Chandra [7], Alejandro A Diaz [8], Greg L Kinney [9], Barry J Make [10], Merry-Lynn N McDonald [11], Elizabeth A Regan [10], Stephen Rennard [12], Edwin J R van Beek [13], Richard Casaburi [2 3]

Affiliations Expand

- PMID: 41980814

- DOI: 10.1136/thorax-2025-224183

Abstract

Background: Change in 6-min walk distance (6MWD) over time serves as a measure of change in functional exercise performance. We analysed a large cohort of current or former tobacco smokers over a 5-year period to identify correlates of 6MWD decline.

Methods: A total of 4734 participants with normal spirometry or spirometric evidence of chronic obstructive pulmonary disease (COPD) who completed a 5-year follow-up in the COPDGene study were included. Baseline and 5-year assessments included 6MWD, spirometry, St. George's Respiratory Questionnaire (SGRQ), gender, race and CT measures of emphysema, gas trapping and airway wall thickness. 6MWD decline correlates relative to baseline and 5-year changes were examined using univariate and multivariate linear regression.

Results: At baseline, 2573 had normal spirometry; 487 were classified as GOLD1, 1044 as GOLD2, 514 as GOLD3 and 116 as GOLD4. Average 5-year decline in 6MWD was 35.6±101.7 (SD) metres ($p<0.001$). COPD participants experienced greater 6MWD decline (44.1±101.9 m, $p<0.001$) compared with those with normal spirometry (28.5±101.0 m, $p<0.001$). Only baseline 6MWD and study site accounted for appreciable fractions of 6MWD decline variance (R^2=12.1% and 9.1%, respectively). 5 year change in variables assessed (including FEV_1 and SGRQ) explained only small fractions of 6MWD decline variance (each $R^2 \leq 5\%$).

Conclusion: 6MWD declined significantly, but with high variability; spirometry, CT, health status, demographic and anthropometric measures accounted for only small portions of this variance. Our findings suggest that a meaningful decline in 6MWD

observed over 5 years in COPD patients is in large part related to factors other than decline in pulmonary structure or function.

Keywords: Respiratory Function Tests.

Conflict of interest statement

Competing interests: None declared.

Full text links

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Cite

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Ann Intern Med

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. 2026 Apr 14:e2600985.

doi: 10.7326/ANNALS-26-00985. Online ahead of print.

Pulmonology: What You May Have Missed in 2025

Yusing Gu [1], Sandra Ragheb [1], Michael Unger [2]

Affiliations Expand

- PMID: 41974006

- DOI: 10.7326/ANNALS-26-00985

Abstract

Research in pulmonology generated several landmark publications over the past year. We screened more than 900 studies published in 2025 and selected 8 articles that highlight novel treatments and possible practice-changing evidence in several respiratory conditions. Two articles studied therapeutic options in interstitial lung disease, including a novel antifibrotic agent for pulmonary fibrosis and first-line methotrexate use in sarcoidosis. Two articles outlined the role of corticosteroids in community-acquired pneumonia and selecting patients who may benefit most. One article described evidence for an alternate agent for smoking cessation in patients with or without chronic obstructive pulmonary disease (COPD), while another article

studied the use of mepolizumab in patients with eosinophilic COPD. We also reviewed the first head-to-head trial comparing biologic medications in asthma and chronic rhinosinusitis with nasal polyps. Finally, we summarized the latest evidence of a first-in-class therapeutic agent that reduced exacerbations in patients with bronchiectasis.

Conflict of interest statement

Disclosures: Disclosure forms are available with the article online.

Full text links

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Cite

5

Editorial

Eur Respir J

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. 2026 Apr 16;67(4):2502574.

doi: 10.1183/13993003.02574-2025. Print 2026 Apr.

Joint statement from GOLD/GLI regarding the use of spirometry to define airflow obstruction and diagnose COPD

David M G Halpin [1 2], Sanja Stanojevic [3 2], Meredith C McCormack [4], Dave Singh [5 6], David A Kaminsky [7], Claus F Vogelmeier [8], Laura Gochicoa-Rangel [9], Alvar Agusti [10 11 12 13 14], Brendan Cooper [15 14]

Affiliations Expand

- **PMID: 41748283**

- **PMCID: PMC13084305**

- **DOI: 10.1183/13993003.02574-2025**

Abstract

GOLD and GLI agree on many important issues regarding diagnosing COPD with spirometry, sharing concerns about under-use and agreeing that, in the appropriate clinical context, the fixed ratio can be used to identify COPD-related airflow obstruction https://bit.ly/4tB8cZt

Conflict of interest statement

Conflict of interest: D.M.G. Halpin reports payment or honoraria for lectures, presentations, educational events or participation on a data safety monitoring board or advisory board from AstraZeneca, Boehringer Ingelheim, Chiesi, GSK, Inogen, Novartis, Sanofi, Berlin Chemie, Synairgen and Menarini, and is a member of the board of directors and science committee of the Global Initiative for Chronic Obstructive Lung Disease (GOLD). S. Stanojevic reports payment or honoraria for lectures, presentations, manuscript writing or educational events from Vyaire Medicine and GOLD, participation on an advisory board with Ndd Technologies, is chair of the Global Lung Function Initiative Clinical Research Collaboration, member of the American Thoracic Society Pulmonary Function Testing Committee, a Statistical Editor for Thorax and an Associate Editor of the European Respiratory Journal. M.C. McCormack reports payment or honoraria for lectures, presentations, manuscript writing or educational events from Up To Date, participation on a data safety monitoring board or advisory board with ndd Medical Technologies, consultancy fees from GSK and MCG Diagnostics, and a member of the Global Lung Function Initiative. D. Singh reports consultancy fees from Adovate, Almirall, Anaveon, Apogee, Arcutis Biotherapeutics, Arrowhead, AstraZeneca, Belenos Biosciences, Bial, Celldex, Chiesi, Cipla, CONNECT Biopharm, Covis, DevPro Biopharma LCC, Elpen, Empirico, EpiEndo, Generate Biomedicines, GlaxoSmithKline, Glenmark, Jasper, Kinaset Therapeutics, KOLON, Kymera, Lupin, Melodia, Menarini, MicroA, OM Pharma, OrientEuroPharma, Recipharm, Revolo, RIGImmune Inc., Roche, Roivant Sciences, Sanofi, Sitryx, Synairgen, Tetherex, UCB, Upstream, Verona Pharma, Winward, Zura Bio and Zymeworks, and is an Associate Editor of the European Respiratory Journal. D.A. Kaminsky reports royalties from UptoDate and Elsevier, honoraria for presentations from MGC Diagnostics, and receipt of equipment, material or drugs for research purposes from MGC Diagnostics, Inc. C.F. Vogelmeier reports grants from the German Ministry of Education and Science (BMBF), AstraZeneca, Boehringer Ingelheim, Chiesi, CSL Behring, GlaxoSmithKline and Grifols, consultancy fees from Aerogen, AstraZeneca, Boehringer Ingelheim, CSL Behring, Chiesi, GlaxoSmithKline, Insmed, Menarini, Roche and Sanofi, and payment or honoraria for lectures, presentations, manuscript writing or educational events from Aerogen, AstraZeneca, Boehringer Ingelheim, CSL Behring, Chiesi, GlaxoSmithKline, Insmed, Menarini, Roche and Sanofi. L. Gochicoa-Rangel reports payment for lectures from Chiesi, Vyaire, Sunvou and Thorasys, support for attending meetings from Chiesi, and is vice president of the Sociedad Mexicana de Neumología y Cirugía de Tórax and a member of the Asociación Latinoamericana de Tórax Education committee. A. Agusti reports consultancy fees from GSK, AstraZeneca, Chiesi, Roche and Menarini, payment or honoraria for lectures, presentations, manuscript writing or educational events from GSK, AstraZeneca, Chiesi, Roche, Menarini, Zambon and Glenmark, support for attending meetings from Roche, and is the chair of the Global Initiative for Chronic Obstructive Lung Disease (GOLD) board of directors. B. Cooper received support for attending meetings from the Japanese Respiratory Society.

- 57 references
- 1 figure

Supplementary info

Publication typesExpand

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Cite

6

Thorax

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. 2026 Apr 16;81(5):447-456.

doi: 10.1136/thorax-2024-222908.

Understanding the bidirectional relationship between chronic respiratory disease and cardiovascular disease using genetic evidence

Naesilla Naesilla [1], Jennifer K Quint [1], Verena Zuber [2 3 4]

Affiliations Expand

- PMID: 41241414

- DOI: 10.1136/thorax-2024-222908

Free article

Abstract

Background: Chronic respiratory diseases (CRDs) and cardiovascular diseases (CVDs) are leading global health burdens. Despite being common, CRD and CVD comorbidity is often underestimated due to overlapping symptoms and risk factors. Consequently, their relationship remains unclear.

Aims and objectives: To determine the bidirectional genetic relationship between CRD and CVD and explore smoking and inflammation as potentially shared joint risk factors.

Methods: We conducted bidirectional Mendelian randomisation (MR) to explore CRD-CVD relationships. Summary statistics from genome-wide association studies

were retrieved for chronic obstructive pulmonary disease (COPD), asthma, coronary artery disease (CAD), myocardial infarction (MI), heart failure, atrial fibrillation (AF) and ischaemic stroke (IS). We performed additional analysis including univariable MR for smoking, multivariable MR adjusting for smoking and cis-MR to investigate the role of inflammatory markers.

Results: Our MR analysis found limited genetic evidence of relationships between CRD and CVD, and vice versa. However, a nominally significant genetic association was observed between asthma and an increased risk of AF (OR inverse-variance weighted (OR_{IVW}) 1.036, 95% CI 1.003 to 1.070), remaining weakly significant after adjusting for smoking (OR_{IVW} 1.040, 95% CI 1.008 to 1.074). Genetically predicted lifetime smoking strongly increased all CRD and CVD risk. Additionally, genetically proxied IL6R concentration associated with increased asthma risk and decreased CAD, MI, AF and IS risk, while IL1RN decreased COPD risk but increased CAD and MI risk.

Conclusions: While we found limited genetic evidence linking CRD and CVD, smoking and inflammatory markers commonly affect both. These findings highlight the complexity of CRD-CVD comorbidities, whose pathophysiology likely does not involve direct causation of each other.

Keywords: Asthma; Clinical Epidemiology; Pulmonary Disease, Chronic Obstructive; Smoking.

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

1

Int J Epidemiol

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. 2026 Apr 17;55(3):dyag037.

doi: 10.1093/ije/dyag037.

Is morbidity expanding? An epidemiological framework for understanding morbidity expansion and multimorbidity

Tony Blakely [1], Wondmagegn Demsiss [1], Daniel Ramsay [1]

Affiliations Expand

- PMID: 41996484

- DOI: 10.1093/ije/dyag037

No abstract available

Keywords: aging populations; epidemiological framework; expansion of morbidity; multimorbidity.

Supplementary info

Grants and fundingExpand

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Cite

2

J Affect Disord

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. 2026 Apr 13:407:121795.

doi: 10.1016/j.jad.2026.121795. Online ahead of print.

The impact of physical multimorbidity on common mental disorders and the role of loneliness and social support: A three-year follow-up study

Zedan Zhang [1], Joan Domènech-Abella [2], Jordi Rodeiro-Boliart [3], Ingrid Gete-Alejandro [4], José Luis Ayuso-Mateos [5], Marta Miret [6], Elvira Lara Pérez [7], Jesus Godino-Cruz [8], Josep Maria Haro [9], Beatriz Olaya [10]

Affiliations Expand

- PMID: 41985760

- DOI: 10.1016/j.jad.2026.121795

Abstract

Introduction: This research aimed to examine: (1) the role of chronic physical multimorbidity as a risk factor for common mental disorders, (2) the mediating effects of social support and loneliness on the relationship between physical multimorbidity and common mental disorders, and (3) the association between mediating factors (social support and loneliness) and common mental disorders, as well as potential moderating effects among them in this association.

Methods: A total of 1380 individuals aged 18 and above were interviewed on two occasions between 2019 and 2024. Common mental disorders were evaluated using an adapted version of the Composite International Diagnostic Interview. Physical

multimorbidity was identified using the Functional Comorbidity Index. Loneliness was evaluated using the Three-Item Loneliness Scale. The Oslo Social Support Scale was used to assess social support. Logistic regression models, including mediation and moderation analysis, were used to analyze the data.

Results: Both physical multimorbidity and loneliness were longitudinally associated with common mental disorders. Loneliness and social support mediated the relationship between physical multimorbidity and mental disorders, accounting for 9.75% and 3.05% of the effect, respectively. The association between loneliness and common mental disorders was moderated by social support, with the impact of loneliness on common mental disorders being stronger in those with poor social support.

Conclusion: Improving social support to relieve loneliness might result in a decline in the prevalence of common mental disorders in people with chronic physical conditions.

Keywords: Chronic physical conditions; Common mental disorders; Loneliness; Mediating analysis; Social support.

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

Allergy

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. 2026 Apr 17.

doi: 10.1111/all.70356. Online ahead of print.

Differential Effects of Benralizumab and Mepolizumab on Pro-Resolving Mediators

Jaime Bernaola [1], José Antonio Cañas [2 3], Álvaro Arranz-Fragua [2], José Manuel Rodrigo-Muñoz [2 3], Daniel Rodríguez-González [2 3], Antonio Serrano-Santiago [2], Gema Guillén-Sánchez [2], Alma Martínez Fernández [2], Marcela Valverde-Monge [1 3], Diana Betancor [1 3], Erwin Javier Pinillos-Robles [4], Claudia Rodríguez-Busto [4], María Jesús Rodríguez-Nieto [4 5], Joaquín Sastre [1 3], Victoria Del Pozo [2 3 6]

Affiliations Expand

- **PMID: 41999066**

- **DOI: 10.1111/all.70356**

No abstract available

Keywords: biological drugs; eosinophils; pro-resolving lipid mediators; severe asthma.

Supplementary info

Publication types, Grants and fundingExpand

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2

Review

Curr Obes Rep

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. 2026 Apr 17;15(1):36.

doi: 10.1007/s13679-026-00713-8.

Metabolic Dysfunction-Associated Steatotic Liver Disease and Respiratory Disorders: A Systematic Review of Clinical and Pathophysiological Associations

Vasiliki Epameinondas Georgakopoulou [1], Paschalis Steiropoulos [2], Theodoros Androutsakos [1], Irena Karabella [3], Konstantinos Reppas [1], Evangelos Cholongitas [4], Maria Dalamaga [5]

Affiliations Expand

- **PMID: 41995935**

- **DOI: 10.1007/s13679-026-00713-8**

No abstract available

Keywords: Asthma; Chronic obstructive pulmonary disease; Fibrosis; Hypoxia; Interstitial lung disease; Liver–lung axis; MASLD; Metabolic dysfunction–associated steatotic liver disease; NAFLD; Obesity; Obstructive Sleep Apnea; Pulmonary hypertension; Respiratory disorders.

Conflict of interest statement

Declarations. Animal and Human Rights and Informed Consent: None of the authors of this article conducted any research using either human or animal subjects. Institutional Review Board Statement: Not applicable. Competing interests: The authors declare no competing interests.

- 68 references

Supplementary info

Publication typesExpand

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3

Rhinology

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. 2026 Apr 16.

doi: 10.4193/Rhin26.004. Online ahead of print.

Biologics for chronic rhinosinusitis with nasal polyps: a real-world prospective cohort study

M Blauwblomme [1 2], A-S Viskens [3 4 5], E Bonne [1], E Borgers [6], C Cox [7], G De Vos [8], L Derycke [1], A-S Eeckels [1 2], S Halewyck [9], V Hox [10], P Janssen [11], P Janssen [1 2], W Lemmens [12], F Rogister [13], K Speleman [14], M Syssauw [1 2], O Vanderveken [4 5], E Vandewalle [1 2], S Vanhee [2], B Verhaeghe [15], A V Vroegop [4 5], T Van Zele [1 2], P Gevaert [1 2], P W Hellings [2 16 6]

Affiliations Expand

- **PMID: 41989130**

- **DOI: 10.4193/Rhin26.004**

Abstract

Background: Monoclonal antibody therapies targeting type 2 inflammation for chronic rhinosinusitis with nasal polyps (CRSwNP) have shown efficacy in randomized controlled trials (RCTs), however prospective real-world comparative data across all appro-ved biologics remain limited. We aimed to evaluate the real-world effectiveness of omalizumab, mepolizumab, and dupilumab in patients with severe CRSwNP.

Methodology: A prospective, multicentre, real-world phase IV study in Belgium, enrolling 360 patients with severe CRSwNP initiating treatment with omalizumab (n=65), mepolizumab (n=242), or dupilumab (n=53) between March 2022 and April 2025. Clinical data were collected at baseline and after 6 months. The therapeutic response was evaluated based on EUFOREA criteria.

Results: After 6 months, nasal polyp score (NPS), olfactory function, and patient-reported outcomes improved across all biologics, with concurrent improvements in asthma control within each treatment group. A good-to-excellent multidomain therapeutic response was achieved in 51% of patients, and treatment continuation beyond 6 months was observed in 74% of omalizumab-, 81% of mepolizumab-, and 92% of dupilumab-treated patients. No severe adverse events were reported.

Conclusion: In this real-world cohort, the three registered biologics provided significant clinical benefit in severe CRSwNP, with numerically larger improvements observed in patients treated with dupilumab.

4

Clin Exp Allergy

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. 2026 Apr 16.

doi: 10.1111/cea.70305. Online ahead of print.

The Clinical Value of Measuring Nasal Nitric Oxide in Addition to Exhaled Nitric Oxide in Asthma Associated With Eosinophilic Chronic Rhinosinusitis

Yoshiki Kobayashi [1 2], Quan Dang Ho [2], Nhi Kieu Thi Le [2], Linh Tai Thi Khuc [2], Akihiro Shimamura [2], Kenta Fukui [2], Akitoshi Mitani [2], Kensuke Suzuki [2], Masao Yagi [2], Akira Kanda [1 2 3]

Affiliations Expand

- PMID: 41988879

- DOI: 10.1111/cea.70305

No abstract available

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Breathe (Sheff)

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. 2026 Apr 14;22(2):250329.

doi: 10.1183/20734735.0329-2025. eCollection 2026 Apr.

Blood eosinophil count as a biomarker for therapy guidance in COPD and asthma exacerbations

Anuradha Nalika Godallage [1], Dil Afrose [1], Melika Valizadeh [2], Augusta Beech [3 4], Jens-Ulrik S Jensen [1 5], Pradeesh Sivapalan [1 5]

Affiliations Expand

- **PMID: 41988092**
- **PMCID: PMC13077450**
- **DOI: 10.1183/20734735.0329-2025**

Abstract

This Journal club evaluates recent evidence on the role of blood eosinophil count (BEC) as a biomarker to guide therapy in patients with acute exacerbations of COPD and asthma. The review focuses on three studies with different methodological approaches: a biomarker-directed corticosteroid trial (Bafadhel *et al*., 2012), an acute biologic therapy trial using benralizumab (ABRA, 2025) and a long-term biologic therapy trial using mepolizumab (COPD-HELP, 2025). The biomarker-directed corticosteroid study demonstrated non-inferior symptom improvement while reducing steroid exposure, highlighting the potential to personalise therapy based on BEC. The ABRA trial showed that a single injection of benralizumab reduced treatment failure, prolonged time to exacerbation and improved symptom scores in patients with high eosinophils. By contrast, the COPD-HELP trial found no significant effect of mepolizumab on readmission or mortality, despite substantial eosinophil reduction. Limitations include small sample sizes, heterogeneous populations and reliance on surrogate end-points in some studies. These findings support the use of BEC-guided therapy in acute settings but suggest that long-term biologic treatment post-exacerbation may not improve hard outcomes. Future research should focus on precision medicine strategies targeting eosinophilic exacerbations and identifying patient subgroups who benefit most from biomarker-guided interventions.

Conflict of interest statement

Conflict of interest: P. Sivapalan is a member of the Breathe editorial board. The remaining authors declare no conflicts of interest.

- **20 references**
- **1 figure**

Proceed to details

Cite

6

Review

Dig Dis Sci

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. 2026 Apr 15.

doi: 10.1007/s10620-026-09894-7. Online ahead of print.

Unravelling the Links Between Gastroesophageal Reflux and Lung Disease: New Insights

Jessica A Bradley [1 2], Andree Koop [3], Augustine S Lee [4], Paul Beirne [2], Margaret M Johnson [4], Kenneth R DeVault [3 5], Lesley A Houghton [6 7 8]

Affiliations Expand

- **PMID: 41986862**
- **DOI: 10.1007/s10620-026-09894-7**

Abstract

Gastroesophageal reflux disease (GERD) is a prevalent comorbidity of chronic respiratory diseases including idiopathic pulmonary fibrosis (IPF), non-IPF interstitial lung disease, asthma, chronic obstructive pulmonary disease (COPD) and refractory chronic cough. Prevalence of symptoms of reflux and/ or refractory respiratory symptoms, along with concerns that refluxed gastric contents into the esophagus may micro-aspirate into the lungs causing injury and potentially accelerate disease progression, have resulted in high usage of empirical anti-reflux treatments. However, empirical treatment of reflux (medical or mechanical) is frequently ineffective without obvious explanation for the lack of respiratory improvement. This review provides novel and updated understanding of the

pathophysiological mechanisms that link upper gut dysfunction, reflux (both distal and proximal), lung structure, lung mechanics and breathing patterns, including the potential role of the vagally mediated esophageal-bronchial reflex and the bi-directional nature of these interactions in individual respiratory diseases. We also highlight the need for a consensus between gastrointestinal and respiratory communities and propose a framework for diagnosing and managing GERD in respiratory disease.

Keywords: Gastroesophageal reflux; Motility; Respiratory disease.

Conflict of interest statement

Declarations. Conflict of interest: The authors declare no competing interests.

- 150 references

Supplementary info

Publication typesExpand

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Thorax

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. 2026 Apr 15:thorax-2024-222204.

doi: 10.1136/thorax-2024-222204. Online ahead of print.

Association between overuse of short-acting β2-agonists and the risk of major adverse cardiovascular events among patients with asthma

Chih-Cheng Lai [# 1], Chao-Hsien Chen [# 2], Ya-Hui Wang [3], Cheng-Yi Wang [4], Hao-Chien Wang [5 6 7]

Affiliations Expand

- PMID: 41986159

- DOI: 10.1136/thorax-2024-222204

Abstract

Background: Short-acting β2-agonist (SABA) overuse is associated with increased asthma exacerbations and mortality, yet its impact on cardiovascular disease remains unclear. We investigate the association between SABA overuse and the risk of major adverse cardiovascular events (MACE) in patients with asthma.

Methods: Between 2011 and 2019, patients with asthma were identified from the Taiwan asthma pay-for-performance database. SABA overuse was defined as using ≥3 canisters annually, compared with acceptable use (0-2 canisters/year). Inverse probability of treatment weighting (IPTW) was applied to balance baseline covariates. The primary outcome was 1-year MACE. Secondary outcomes included MACE component (non-fatal myocardial infarction, haemorrhagic stroke, ischaemic stroke) and mortality.

Results: Among 231 970 patients, 28 500 had SABA overuse and 203 470 had acceptable use. In the IPTW-weighted cohort, 1-year MACE incidence was higher in the overuse group (2.82 vs 0.99 per 100 person-years; adjusted HR (aHR) 1.25, 95% CI 1.12 to 1.39). SABA overuse significantly increased the risk of non-fatal MI (aHR: 1.28, 95% CI 1.09 to 1.50), ischaemic stroke (aHR: 1.26, 95% CI 1.08 to 1.46) and mortality (aHR: 1.40, 95% CI 1.24 to 1.58). Haemorrhagic stroke risk was not significantly increased. A non-linear dose-response was observed, with MACE risk peaking at 6-8 canisters annually.

Conclusion: SABA overuse (≥3 canisters/year) is associated with increased risks of MACE and mortality in patients with asthma. These findings emphasise the importance of monitoring SABA use and assessing cardiovascular risk in asthma management.

Keywords: Asthma.

Conflict of interest statement

Competing interests: None declared.

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doi: 10.1177/19412711261442505. Online ahead of print.

Advances in the Application of Additive Manufacturing in Respiratory Inhalation Therapy

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Affiliations Expand

- PMID: 41984640

- DOI: 10.1177/19412711261442505

Abstract

Inhalation therapy has become a cornerstone in the treatment of respiratory diseases such as asthma, chronic obstructive pulmonary disease, and cystic fibrosis, owing to its rapid onset, direct pulmonary targeting, and avoidance of first-pass metabolism. Its clinical scope has expanded beyond conventional respiratory indications to emerging applications, including vaccine delivery, systemic disease management, and localized tumor therapy. However, traditional inhalation systems are often designed for the average patient, overlooking physiological variability that results in inconsistent drug deposition and therapeutic efficacy-particularly in children, elderly patients, and individuals with airway abnormalities. Additive manufacturing (AM), with its high design flexibility and capacity for personalization, offers new possibilities for structural optimization, particle engineering, and *in vitro* model fabrication in inhalation therapy. Growing evidence indicates that 3D-printed inhalation devices and formulation platforms can enhance drug deposition control, patient compliance, and delivery precision. This review provides a comprehensive overview of recent advances in AM applied to inhalation therapy, highlighting its roles in personalized device fabrication, microdose particle design, and *in vitro* model construction, as well as in the exploration of emerging therapeutic strategies. Furthermore, it discusses current technical challenges and translational barriers. Overall, AM is propelling the transition of inhalation therapy from standardized approaches toward intelligent, patient-centered delivery systems, offering both theoretical and technological foundations for next-generation respiratory healthcare.

Keywords: 3D printing; airways; bioprinting; drug delivery to the lungs; inhalation; particle design.

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J Asthma

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. 2026 Apr 15:1-13.

doi: 10.1080/02770903.2026.2660324. Online ahead of print.

Emerging Trends and Research Frontiers in Refractory Asthma: A Comprehensive Bibliometric Analysis from 2004 to 2025

Xun Xu [1], Shiyuan Gao [1], Zhengjun Huang [1], Yong Mao [1]

Affiliations Expand

- PMID: 41984088

- DOI: 10.1080/02770903.2026.2660324

Abstract

Objective: Refractory asthma remains a significant challenge in respiratory medicine, requiring advanced therapeutic strategies and precision medicine approaches. Bibliometric analysis provides insights into research trends, key contributors, and evolving frontiers in this field.

Methods: The present study conducted a bibliometric analysis using data from the Web of Science Core Collection (WoSCC) databases. The included articles between 2004 and 2025 were analyzed scientifically and quantitatively using R 4.3.3, CiteSpace (V 6.3.R1) and VOSviewer (V 1.6.20).

Results: A total of 711 eligible publications were analyzed, with 4,253 authors from 2,824 institutions across 49 countries/regions contributing to this field. The United States, the United Kingdom, and China were the most productive countries. The University of Newcastle, University of Leicester, and Université Paris Cité emerged as leading institutions. *The Journal of Allergy and Clinical Immunology* had the highest publication count and impact. Keyword cluster analysis identified three themes: clinical and epidemiological aspects, immunological mechanisms, and biologic therapies and clinical trials. Emerging research hotspots, include "guidelines", representing future trends.

Conclusions: This study identifies the main research hotspots in refractory asthma, including clinical and epidemiological aspects, immunological mechanisms, and biologic therapies and clinical trials. Future trends in refractory asthma research emphasize guideline-informed precision medicine, integrating biomarkers, digital tools, and individualized treatment strategies to enhance care standardization and effectiveness.

Keywords: Bibliometric analysis; CiteSpace; Refractory Asthma; VOSviewer.

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J Asthma

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. 2026 Apr 15:1-18.

doi: 10.1080/02770903.2026.2660096. Online ahead of print.

Three years treatment with HDM allergen immunotherapy, omalizumab, or combination therapy in allergic asthma: clinical outcomes and biomarkers

Andrzej Bozek [1 2], Martyna Miodonska [1], Dominika Sadowska [1], Jolanta Zalejska Fijolka [2], Janne Winterstein [3], Giorgio Walter Canonica [4]

Affiliations Expand

- **PMID: 41983924**

- **DOI: 10.1080/02770903.2026.2660096**

Abstract

Background: Allergen immunotherapy (AIT) and biologics such as omalizumab are established treatments for allergic asthma, but long-term data on their combined use are limited.

Objective: To compare long-term clinical and immunological outcomes of omalizumab, subcutaneous AIT for house dust mite (SCIT-HDM), and their combination in mild-to-moderate allergic asthma.

Methods: In this prospective, randomized, controlled study, 79 patients with HDM-driven allergic asthma were assigned to omalizumab (A), omalizumab plus SCIT-HDM (B), SCIT-HDM (C), or standard therapy (D). Patients were followed for 36 months. Primary outcomes were changes in inhaled corticosteroid (ICS) dose and annual exacerbations. Secondary outcomes included symptom and medication scores, Asthma Control Test (ACT), asthma quality of life (AQLQ), lung function, remission rates, and biomarkers.

Results: All groups showed significant reductions in ICS use, with greater reductions in groups A and B than in C and D ($p < 0.05$). Combination therapy (B) resulted in lower exacerbation rates and reduced oral corticosteroid use compared to other groups. Improvements in ACT, FEV_1, and AQLQ were observed across all groups, with more consistent benefits in A and B. Clinical remission occurred most often in group B (47%), followed by A (31%), C (29%), and D (14%). Biomarker changes indicated reduced type 2 inflammation and immunological responses to therapy. No serious adverse events or systemic hypersensitivity reactions were observed.

Conclusions: Omalizumab, SCIT-HDM, and their combination improved outcomes over 36 months. Combination therapy showed the most consistent benefits, but results should be interpreted cautiously due to the small sample size. Further studies are needed.

Keywords: allergen immunotherapy; asthma; biologics; house dust mites allergy.

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BMC Pulm Med

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. 2026 Apr 13.

doi: 10.1186/s12890-026-04275-2. Online ahead of print.

Systemic-airway eosinophil discordance and sputum mediator profiling in severe asthma treated with biologics: a retrospective cohort study

Moe Tanaka [1], Toshiyuki Koya [2], Wakana Uji [1], Hiroki Koda [1], Masahiro Endo [1], Kyoichiro Oshima [1], Haruka Sofuku [1], Takahiro Matsuda [1], Shun Naramoto [1], Hiroshi Ueno [1], Ami Aoki [1], Kenjiro Shima [1], Yosuke Kimura [1], Toshiaki Kikuchi [1]

Affiliations Expand

- **PMID: 41975395**

- **DOI: 10.1186/s12890-026-04275-2**

Free article

No abstract available

Keywords: Asthma; Biologics; Clinical remission; IL-6; Induced sputum; Sputum eosinophil.

Conflict of interest statement

Declarations. Ethics approval and consent to participate: The study complied with the Declaration of Helsinki and was approved by the Niigata University Ethics Committee (No. 2524). In accordance with national/institutional policies, individual written informed consent was waived; an opt-out notice describing the study purpose and data handling was posted on the university website and on-site bulletin boards. Patients who opted out were excluded. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests.

- **38 references**

Full text links

Cite

12

Ann Intern Med

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Pulmonology: What You May Have Missed in 2025

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Affiliations Expand

- **PMID: 41974006**

- **DOI: 10.7326/ANNALS-26-00985**

Abstract

Research in pulmonology generated several landmark publications over the past year. We screened more than 900 studies published in 2025 and selected 8 articles that highlight novel treatments and possible practice-changing evidence in several respiratory conditions. Two articles studied therapeutic options in interstitial lung

disease, including a novel antifibrotic agent for pulmonary fibrosis and first-line methotrexate use in sarcoidosis. Two articles outlined the role of corticosteroids in community-acquired pneumonia and selecting patients who may benefit most. One article described evidence for an alternate agent for smoking cessation in patients with or without chronic obstructive pulmonary disease (COPD), while another article studied the use of mepolizumab in patients with eosinophilic COPD. We also reviewed the first head-to-head trial comparing biologic medications in asthma and chronic rhinosinusitis with nasal polyps. Finally, we summarized the latest evidence of a first-in-class therapeutic agent that reduced exacerbations in patients with bronchiectasis.

Conflict of interest statement

Disclosures: Disclosure forms are available with the article online.

Full text links

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J Asthma

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. 2026 Apr 13:1-8.

doi: 10.1080/02770903.2026.2654597. Online ahead of print.

Ability of impulse oscillometry to predict loss of asthma control during pollution period in previously stable patients

Athitarn Tangtermpong [1 2], Warawut Chaiwong [1], Pilaiporn Duangjit [1], Athavudh Deesomchok [1]

Affiliations Expand

- PMID: 41947690

- DOI: 10.1080/02770903.2026.2654597

Abstract

Background: Impulse oscillometry (IOS) is recognized as a sensitive technique for detecting small airway dysfunction (SAD), and previous studies have demonstrated its association with poor asthma control. However, its utility in predicting future

asthma control remains uncertain. This study aimed to assess the predictive value of IOS for future asthma control during high pollution periods.

Methods: Patients with well-controlled asthma were enrolled. Baseline data collection including spirometry, IOS measurements, and asthma control test (ACT) scores was performed between January and February 2024. ACT scores were reassessed during a subsequent high air pollution period (March-April 2024). The diagnostic accuracy of IOS in forecasting future loss of asthma control was evaluated.

Results: Seventy-nine subjects with a mean age of 60.4 ± 14.0 years, 53 females (67.1%) were included. The mean particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$) differed significantly between the nonpollution and pollution periods (21.1 ± 7.8 μg/m³ vs 78.2 ± 31.8 μg/m³, respectively; $p < 0.001$). Twenty-three participants experienced a loss of asthma control during the pollution period. The area under the receiver operating characteristic curve (AUC) for the %predicted difference between R5 and R20 (R5-R20) in predicting loss of asthma control was 0.39 (95%CI: 0.25, 0.53). Further analysis focusing on %predicted R5-R20 indicated no predictive value for asthma control during periods of high pollution (adjusted RR: 1.00; 95%CI: 0.99, 1.01; $p = 0.553$).

Conclusions: IOS do not predict loss of asthma control during air pollution period in patients with previously stable asthma.

Keywords: Asthma; airway resistance; impulse oscillometry; pollution; small airway dysfunction.

14

Thorax

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. 2026 Apr 16;81(5):447-456.

doi: 10.1136/thorax-2024-222908.

Understanding the bidirectional relationship between chronic respiratory disease and cardiovascular disease using genetic evidence

Naesilla Naesilla [1], Jennifer K Quint [1], Verena Zuber [2 3 4]

Affiliations Expand

- **PMID: 41241414**

- **DOI: 10.1136/thorax-2024-222908**

Free article

Abstract

Background: Chronic respiratory diseases (CRDs) and cardiovascular diseases (CVDs) are leading global health burdens. Despite being common, CRD and CVD comorbidity is often underestimated due to overlapping symptoms and risk factors. Consequently, their relationship remains unclear.

Aims and objectives: To determine the bidirectional genetic relationship between CRD and CVD and explore smoking and inflammation as potentially shared joint risk factors.

Methods: We conducted bidirectional Mendelian randomisation (MR) to explore CRD-CVD relationships. Summary statistics from genome-wide association studies were retrieved for chronic obstructive pulmonary disease (COPD), asthma, coronary artery disease (CAD), myocardial infarction (MI), heart failure, atrial fibrillation (AF) and ischaemic stroke (IS). We performed additional analysis including univariable MR for smoking, multivariable MR adjusting for smoking and cis-MR to investigate the role of inflammatory markers.

Results: Our MR analysis found limited genetic evidence of relationships between CRD and CVD, and vice versa. However, a nominally significant genetic association was observed between asthma and an increased risk of AF (OR inverse-variance weighted (OR_{IVW}) 1.036, 95% CI 1.003 to 1.070), remaining weakly significant after adjusting for smoking (OR_{IVW} 1.040, 95% CI 1.008 to 1.074). Genetically predicted lifetime smoking strongly increased all CRD and CVD risk. Additionally, genetically proxied IL6R concentration associated with increased asthma risk and decreased CAD, MI, AF and IS risk, while IL1RN decreased COPD risk but increased CAD and MI risk.

Conclusions: While we found limited genetic evidence linking CRD and CVD, smoking and inflammatory markers commonly affect both. These findings highlight the complexity of CRD-CVD comorbidities, whose pathophysiology likely does not involve direct causation of each other.

Keywords: Asthma; Clinical Epidemiology; Pulmonary Disease, Chronic Obstructive; Smoking.

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

Allergy

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. 2026 Apr 17.

doi: 10.1111/all.70342. Online ahead of print.

Biphasic Effects on Allergen-Specific Type 2 Memory B Cells Over 18 Months Sublingual Immunotherapy for House Dust Mite Allergy

Lin Hsin [1], Simone Reinwald [1 2], Anouk von Borstel [3], Pei Mun Aui [1], Kirsten Deckert [2], P Mark Hogarth [1 4 5], Laurent Mascarell [6], Mark Hew [2 7], Robyn E O'Hehir [1 2], Menno C van Zelm [1 2 8]

Affiliations Expand

- PMID: 41998808

- DOI: 10.1111/all.70342

Abstract

Background: Type 2 memory B cells (Bmem) are the reservoir of pathogenic IgE in allergies. Allergen immunotherapy (AIT) can change the course of disease, but if it involves reprogramming of allergen-reactive Bmem remains unknown. Here, we examine how AIT affects allergen-specific Bmem in house dust mite (HDM) allergic patients.

Methods: HDM allergic patients were longitudinally evaluated over 18 months with or without sublingual HDM-AIT. Visual analog scores, lung function tests, medication scores, serum IgE, and flowcytometric analysis of Der p 1 and Der p 2-specific Type 2 Bmem were performed at t = 0, 4, 12, and 18 months.

Results: Patients on HDM-AIT showed clinical improvement over 18 months with reduced intake of other medications and increases in specific serum IgE, IgG2, and IgG4. Allergen-specific Bmem and the proportions of Type 2 Bmem therein became more abundant at 4 and 12 months and showed upregulation of CD29 and IgG4. At 18 months, the Type 2 Bmem proportions were reduced.

Conclusion: A biphasic Bmem response with early phenotypic changes followed by loss of the Type 2 state was observed during 18 months of AIT. As durable unresponsiveness takes 18 months of AIT, deletion of Type 2 Bmem is likely an important step in disease attenuation. Interventions that expedite this outcome may be beneficial in driving remission.

Keywords: allergen immunotherapy; allergic rhinitis (AR); atopic asthma; house dust mite; type 2 memory B cells.

- 59 references

Supplementary info

Grants and fundingExpand

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Comment

Eur Respir J

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. 2026 Apr 16;67(4):2502018.

doi: 10.1183/13993003.02018-2025. Print 2026 Apr.

Chronic rhinitis in home noninvasive ventilation interface selection

Catarina La Cueva Couto [1], Joana Almeida Borges [2], Marta Drummond [2]

Affiliations Expand

- PMID: 41991212

- DOI: 10.1183/13993003.02018-2025

No abstract available

Conflict of interest statement

Conflict of interest: The authors have no potential conflicts of interest to disclose.

Comment on

- Comparison of oronasal and nasal masks in home mechanical ventilation: an observational cohort and bench study.

Fresnel E, Caillard C, Lebret M, Razakamanantsoa L, Kerfourn A, Dupuis J, Muir JF, Lhuillier E, El Husseini K, Similowski T, Cuvelier A, Patout M.Eur Respir J. 2025 Jan 2;65(1):2302010. doi: 10.1183/13993003.02010-2023. Print 2025 Jan.PMID: 39401860 Free PMC article.

Supplementary info

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3

Review

Clin Exp Allergy

. 2026 Apr 13.

doi: 10.1111/cea.70251. Online ahead of print.

'What' and 'How' to Measure in Allergy and Clinical Immunology: A Systematic Review of Core Outcome Sets and Outcome Harmonisation Processes

Anastasia Demidova [1], Nata Kiknavelidze [2], Kristine Purtskhvanidze [2], Elvina Alieva [3], Mehrshad Ebrahimnejad [3], Svetlana Konchina [3], Azaliya Nurmeeva [3], Igor Matkovskii [3], Elmira Elmurzaeva [3], Siuzanna Davtian [3], Natalia Degtyareva [3], Karl Philipp Drewitz [4], Alan Asmanov [5], Nikolina Banjanin [6], Erna Botjes [7], Pasquale Comberiati [8], Joana Costa [9], Derek K Chu [10], Michelle M Epstein [11], Lyudmila Fedorova [2], Audrey Dunn Galvin [12], Mattia Giovannini [13 14], Matthew Greenhawt [15 16], Kristina R Jamalyan [17], Christina J Jones [18], Ekaterina Khaleva [19], Rebecca C Knibb [20], Yael A Leshem [21 22], Douglas P Mack [23], Isabel Mafra [9], Mary Jane Marchisotto [24], Dragan Mijakoski [25 26], Asel Nurtazina [27], Cevdet Özdemir [28], Diego Peroni [8], Jennifer L P Protudjer [29 30 31 32], Pablo Rodríguez Del Rio [33 34 35], Ann-Marie Malby Schoos [36 37 38], Anita Fossaluzza Schopfer [39], Sasho Stoleski [25 26], Julia Upton [40], Willem van de Veen [41], Jon Genuneit [42], Robert J Boyle [43], Christian Apfelbacher [4], Daniel Munblit [3 44]

Affiliations Expand

- PMID: 41974646

- DOI: 10.1111/cea.70251

Abstract

Background: Heterogeneity in outcome reporting and inconsistent use of outcome measurement instruments in allergy and clinical immunology research affects the comparability, synthesis, and clinical applicability of study findings. Harmonisation efforts, particularly Core Outcome Set (COS) development, aim to address these challenges by establishing standardised, evidence-based and consensus-driven

outcome recommendations. This systematic review aims to map available COS and other harmonisation processes (HP) in allergy and clinical immunology, evaluate their methodological approaches, and assess their alignment with established development standards.

Methods: We systematically searched MEDLINE, EMBASE, and the COMET Initiative database until June 7, 2024 to identify COS and HP. We included studies if they provided recommendations on 'core' outcomes and/or outcome measurement instruments. Data extraction included disease focus, methodological approach, stakeholder involvement, and adherence to the Core Outcome Set-STAndards for Development criteria. We synthesised the data at the initiative (process) level rather than the publication level because harmonisation initiatives are frequently iterative and reported across multiple papers (e.g., protocol, Delphi rounds, consensus statement, and subsequent instrument-selection outputs).

Results: A total of 15,612 records were identified, with 44 studies (representing 22 initiatives both finished and in development) meeting inclusion criteria. The majority of initiatives focused on asthma (n = 9), followed by eczema (atopic dermatitis n = 2; hand eczema = 1; eczema = 1), urticaria (n = 2), allergic rhinitis (n = 2), chronic rhinosinusitis (n = 1), celiac disease (n = 1), Immunoglobulin E (IgE)-mediated food allergy (n = 1), eosinophilic esophagitis (n = 1), and hereditary angioedema (n = 1). No COS or HP addressed drug allergy, anaphylaxis, or other immune-mediated allergic conditions. 'Quality of life' was consistently included in all COS with 'signs and symptoms', 'exacerbations' and 'disease control' frequently selected as well. Methodological approaches to COS development varied widely, with most employing Delphi surveys, consensus meetings, and stakeholder involvement, though levels of engagement differed. COS developers inconsistently adhered to Core Outcome Set-STAndards for Development criteria, with some initiatives demonstrating rigorous methodology while others lacked transparency in key developmental steps.

Conclusion: This review highlights growing efforts to harmonise outcome assessment in allergy and clinical immunology. Major gaps remain in coverage and methodological rigour. Quality of life and patient-reported symptoms are frequently recommended outcomes, yet definitions and measurement tools are inconsistent. Strengthening methodological consistency and expanding COS development to neglected areas are critical next steps to improve outcome reliability and comparability in the field.

Keywords: Delphi; allergic diseases; clinical trial; consensus; core outcome set; harmonisation; immunological conditions; measurement instrument; outcome assessment; quality of life; systematic review.

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

1

Respir Res

. 2026 Apr 17.

doi: 10.1186/s12931-026-03670-x. Online ahead of print.

Quantitative computed tomography body composition analysis for risk stratification in bronchiectasis

Umberto Semenzato [#1], Virginia Santello [#2], Giulia Fichera [#3], Daniele Previtero [#2], Chiara Contin [4], Andrea Rastelli [5], Rossella Valvason [6], Marta Zuffellato [7], Anna Ferrari [8], Alessandro Micelli [3], Chiara Giraudo [3], Andrea Sattin [8], Annamaria Cattelan [8], Paolo Spagnolo [2], Mariaenrica Tinè [2]

Affiliations Expand

- PMID: 41998633

- DOI: 10.1186/s12931-026-03670-x

No abstract available

Keywords: Bronchiectasis; Comorbidities; Computed tomography; Myosteatosis; Nontuberculous mycobacteria; Nutritional status; Personalized medicine; Sarcopenia.

Conflict of interest statement

Declarations. Ethics approval and consent to participate: The study conformed to the Declaration of Helsinki and was approved by the Institutional Review Board of Centre-East Veneto Area (approval no. 6191/AO/25); patients provided informed consent. Clinical trial number: not applicable. Consent for publication: The participants have consented to the submission of this article to the journal. Competing interests: US has received honoraria for lectures or consultancy from AstraZeneca, Chiesi Farmaceutici, GlaxoSmithKline, Insmed, MSD, Menarini, Sanofi, Sanofi Suisse, Zambon. US also acknowledges the financial support from AstraZeneca, Chiesi Farmaceutici, Insmed and Menarini for registration and travelling to medical congresses. CC has received honoraria for lectures or consultancy from Zambon. PS has received consulting fees from Chiesi Farmaceutici, Novartis and PPM Services, advisory board fees from AstraZeneca, Boehringer-Ingelheim, CSL Behring, GlycoCore Pharma, Merck, Novartis, Structure Therapeutics and Trevi, speaker fees from Boehringer-Ingelheim and institutional grants from Chiesi, Roche, Boehringer-Ingelheim and PPM Services.Other authors declare no competing interests. Other authors declare no competing interests.

- 53 references

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Review

Breathe (Sheff)

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. 2026 Apr 14;22(2):260001.

doi: 10.1183/20734735.0001-2026. eCollection 2026 Apr.

The European Respiratory Society guideline for management of adult bronchiectasis: clinical summary

James D Chalmers [1], Oriol Sibila [2], Beatriz Herrero Cortina [3 4], Merete B Long [1], Sanjay H Chotirmall [5 6], Stefano Aliberti [7 8]

Affiliations Expand

- PMID: 41988091
- PMCID: PMC13077454
- DOI: 10.1183/20734735.0001-2026

Abstract

This review provides an overview of the 2025 European Respiratory Society guidelines for adult bronchiectasis. We cover the initial assessment of patients with bronchiectasis to identify the underlying cause, pharmacotherapy including long-term oral and inhaled antibiotic treatment, anti-inflammatory treatments and mucoactive drugs, and non-pharmacological treatments including airway clearance and pulmonary rehabilitation. We provide examples of how to implement the guideline algorithms in practice including how to manage patients during an acute exacerbation and the deteriorating patient. An important component of the new guideline is assessing patients' future risk of exacerbation, which takes into account not just prior history of exacerbations, but also severity of baseline symptoms and additional risk factors such as the underlying cause of bronchiectasis and infection with pathogens like *Pseudomonas aeruginosa*. The guideline provides an evidence-based framework for identifying the appropriate treatments for individual patients taking into account the heterogeneity and complexity of bronchiectasis.

Conflict of interest statement

Conflict of interest: J.D. Chalmers reports grants or contracts from AstraZeneca, Chiesi, Genentech, Gilead Sciences, GlaxoSmithKline, Insmed, Grifols, Trudell, Verona and Boehringer Ingelheim, and consulting fees from AstraZeneca, Biomx, Chiesi, CSL Behring, Expedition, GlaxoSmithKline, Insmed, Grifols, Boehringer Ingelheim, Pfizer, Sanofi/Regeneron and Zambon. O. Sibila and B. Herrero Cortina have no conflicts of interest to disclose. M.B. Long has received consulting fees from Grifols. S.H. Chotirmall declares grants or personal fees from Boehringer Ingelheim, Chiesi, Inovio and Pneumagen. S. Aliberti has received research grants from Insmed, Chiesi, Takeda and Fisher & Paykel, and received consultancy or speaker fees from GSK, Insmed, Zambon, AstraZeneca, CSL Behring GmbH, Menarini and MSD Italy.

- **37 references**
- **3 figures**

Supplementary info

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Ann Intern Med

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. 2026 Apr 14:e2600985.

doi: 10.7326/ANNALS-26-00985. Online ahead of print.

Pulmonology: What You May Have Missed in 2025

Yusing Gu [1], Sandra Ragheb [1], Michael Unger [2]

Affiliations Expand

- **PMID: 41974006**
- **DOI: 10.7326/ANNALS-26-00985**

Abstract

Research in pulmonology generated several landmark publications over the past year. We screened more than 900 studies published in 2025 and selected 8 articles that highlight novel treatments and possible practice-changing evidence in several respiratory conditions. Two articles studied therapeutic options in interstitial lung disease, including a novel antifibrotic agent for pulmonary fibrosis and first-line

methotrexate use in sarcoidosis. Two articles outlined the role of corticosteroids in community-acquired pneumonia and selecting patients who may benefit most. One article described evidence for an alternate agent for smoking cessation in patients with or without chronic obstructive pulmonary disease (COPD), while another article studied the use of mepolizumab in patients with eosinophilic COPD. We also reviewed the first head-to-head trial comparing biologic medications in asthma and chronic rhinosinusitis with nasal polyps. Finally, we summarized the latest evidence of a first-in-class therapeutic agent that reduced exacerbations in patients with bronchiectasis.