ERS literature update
February-March 2018

Composed for group 1.02 by Anouk W. Vaes, PhD and Sarah Houben-Wilke, PhD of the department of Development and Education in CIRO, Horn, the Netherlands

PULMONARY REHABILITATION

Religious coping and religiosity in patients with COPD following pulmonary rehabilitation.
da Silva GP, Nascimento FA, Macêdo TP, Morano MT, Mesquita R, Pereira ED.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 4;13:175-181. doi: 10.2147/COPD.S146400. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29379282

Mindfulness-based cognitive therapy in COPD: a cluster randomised controlled trial.
Farver-Vestergaard I, O'Toole MS, O'Connor M, Løkke A, Bendstrup E, Basdeo SA, Cox DJ, Dunne PJ, Ruggeri K, Early F, Zachariae R.
Eur Respir J. 2018 Jan 31;51(2). pii: 1702082. doi: 10.1183/13993003.02082-2017. Print 2018 Feb.
https://www.ncbi.nlm.nih.gov/pubmed/29386337

Acceptability and validity of a home exercise diary used in home-based pulmonary rehabilitation: a secondary analysis of a randomised controlled trial.
Lahham A, McDonald CF, Mahal A, Lee A, Hill CJ, Burge AT, Cox NS, Moore R, Nicolson C, O'Halloran PD, Gillies R, Holland AE.
Clin Respir J. 2018 Feb 2. doi: 10.1111/crj.12773. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29392881

Efficacy of supervised maintenance exercise following pulmonary rehabilitation on health care use: a systematic review and meta-analysis.
Jenkins AR, Gowler H, Curtis F, Holden NS, Bridle C, Jones AW.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 10;13:257-273. doi: 10.2147/COPD.S150650. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29391784

A new pulmonary rehabilitation maintenance strategy through home-visiting and phone contact in COPD.
Li Y, Feng J, Li Y, Jia W, Qian H.
Patient Prefer Adherence. 2018 Jan 11;12:97-104. doi: 10.2147/PPA.S150679. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29391781

Home-based neuromuscular electrical stimulation as an add-on to pulmonary rehabilitation does not provide further benefits in patients with chronic obstructive pulmonary disease: A multicenter randomized trial.
Bonnevie T, Gravier FE, Debeaumont D, Viacroze C, Muir JF, Cuvelier A, Netchitaïlo M, Roy AL, Quieffin J, Marques MH, Médrinal C, Dupuis J, Tardif C.
Arch Phys Med Rehabil. 2018 Feb 16. pii: S0003-9993(18)30100-X. doi: 10.1016/j.apmr.2018.01.024. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29457998

Variability in Quality of Life Outcomes Following a Pulmonary Rehabilitation Program in Patients With COPD.
Porto EF, Castro AAM, Cortopassi F, de Souza GF, Jardim JR.
J Cardiopulm Rehabil Prev. 2018 Mar;38(2):118-123. doi: 10.1097/HCR.0000000000000292.
https://www.ncbi.nlm.nih.gov/pubmed/29465498

The feasibility of early pulmonary rehabilitation and activity after COPD exacerbations: external pilot randomised controlled trial, qualitative case study and exploratory economic evaluation.
Cox M, O'Connor C, Biggs K, Hind D, Bortolami O, Franklin M, Collins B, Walters S, Wailoo A, Channell J, Albert P, Freeman U, Bourke S, Steiner M, Miles J, O'Brien T, McWilliams D, Schofield T, O'Reilly J, Hughes R.
Health Technol Assess. 2018 Mar;22(11):1-204. doi: 10.3310/hta22110.
https://www.ncbi.nlm.nih.gov/pubmed/29516853

The relationship between exercise capacity and different functional markers in pulmonary rehabilitation for COPD.
Kerti M, Balogh Z, Kelemen K, Varga JT .
Int J Chron Obstruct Pulmon Dis. 2018 Feb 28;13:717-724. doi: 10.2147/COPD.S153525. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29535512

Pulmonary Rehabilitation and Exercise Training in Chronic Obstructive Pulmonary Disease.
Gloeckl R.
Dtsch Arztebl Int. 2018 Feb 23;115(8):117-123. doi: 10.3238/arztebl.2018.0117.
https://www.ncbi.nlm.nih.gov/pubmed/29526182

In people with chronic obstructive pulmonary disease, home-based pulmonary rehabilitation produces similar results to a hospital-based outpatient program [synopsis].
Hill K.
J Physiother. 2018 Mar 16. pii: S1836-9553(18)30009-2. doi: 10.1016/j.jphys.2018.02.003. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29555422

In people with chronic obstructive pulmonary disease, home-based pulmonary rehabilitation produces similar results to a hospital-based outpatient program [commentary].
Maltais F.
J Physiother. 2018 Mar 19. pii: S1836-9553(18)30010-9. doi: 10.1016/j.jphys.2018.02.004. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29567380

EXERCISE TESTING AND TRAINING

Efficacy of yoga training in chronic obstructive pulmonary disease patients: A systematic review and meta-analysis.
Li C, Liu Y, Ji Y, Xie L, Hou Z.
Complement Ther Clin Pract. 2018 Feb;30:33-37. doi: 10.1016/j.ctcp.2017.11.006. Epub 2017 Nov 11.
https://www.ncbi.nlm.nih.gov/pubmed/29389476

Relationship between exercise endurance and static hyperinflation in a post hoc analysis of two clinical trials in patients with COPD.
Singh S, Maltais F, Tombs L, Fahy WA, Vahdati-Bolouri M, Locantore N, Riley JH.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 8;13:203-215. doi: 10.2147/COPD.S145285. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29386889

A study on nonlinear estimation of submaximal effort tolerance based on the generalized MET concept and the 6MWT in pulmonary rehabilitation.
Szczegielniak J, Latawiec KJ, Łuniewski J, Stanisławski R, Bogacz K, Krajczy M, Rydel M.
PLoS One. 2018 Feb 9;13(2):e0191875. doi: 10.1371/journal.pone.0191875. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29425213

Effect of tiotropium on spontaneous expiratory flow-volume curves during exercise in GOLD 1-2 COPD.
Porszasz J, Carraro N, Cao R, Gore A, Ma S, Jiang T, Maltais F, Ferguson GT, O'Donnell DE, Shaikh A, Rossiter HB, Casaburi R.
Respir Physiol Neurobiol. 2018 Feb 10. pii: S1569-9048(17)30350-6. doi: 10.1016/j.resp.2018.02.006. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29438808

Gait analysis in patients with chronic obstructive pulmonary disease: a systematic review.
Zago M, Sforza C, Bonardi DR, Guffanti EE, Galli M.
Gait Posture. 2018 Feb 13;61:408-415. doi: 10.1016/j.gaitpost.2018.02.007. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29462775

The Glittre-ADL Test Cut-Off Point to Discriminate Abnormal Functional Capacity in Patients with COPD.
Gulart AA, Munari AB, Klein SR, Santos da Silveira L, Mayer AF.
COPD. 2018 Feb;15(1):73-78. doi: 10.1080/15412555.2017.1369505.
https://www.ncbi.nlm.nih.gov/pubmed/29469676

A Simplified Approach to Select Exercise Endurance Intensity for Interventional Studies in COPD.
Degani-Costa LH, O'Donnell DE, Webb K, Aranda LC, Carlstron JP, Cesar TDS, Plachi F, Berton DC, Neder JA, Nery LE.
COPD. 2018 Feb 27:0. doi: 10.1080/15412555.2018.1428944. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29485343

The effect of a regular walking program on dyspnoea severity and quality of life in normal weight, overweight, and obese patients with chronic obstructive pulmonary disease.
Yilmaz FT, Aydin HT.
Int J Nurs Pract. 2018 Mar 2. doi: 10.1111/ijn.12636. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29498156

Functional Electrical Stimulation-A new therapeutic approach to enhance exercise intensity in Chronic Obstructive Pulmonary Disease patients : a randomised controlled cross-over trial.
Medrinal C, Prieur G, Combret Y, Quesada AR, Debeaumont D, Bonnevie T, Gravier FE, Dupuis Lozeron E, Quieffin J, Contal O, Lamia B.
Arch Phys Med Rehabil. 2018 Mar 7. pii: S0003-9993(18)30153-9. doi: 10.1016/j.apmr.2018.02.002. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29524398

Inspiratory muscle training reduces diaphragm activation and dyspnea during exercise in COPD.
Langer D, Ciavaglia CE, Faisal A, Webb KA, Neder JA, Gosselink R, Dacha S, Topalovic M, Ivanova A, O'Donnell DE.
J Appl Physiol (1985). 2018 Mar 15. doi: 10.1152/japplphysiol.01078.2017. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29543134

High-Frequency Airway Oscillating Device for Respiratory Muscle Training in Subjects With COPD.
Daynes E, Greening NJ, Harvey-Dunstan TC, Singh SJ.
Respir Care. 2018 Mar 13. pii: respcare.05837. doi: 10.4187/respcare.05837. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29535259

Exercise Performance of Lowlanders with COPD at 2,590 m: Data from a Randomized Trial.

Furian M, Hartmann SE, Latshang TD, Flueck D, Murer C, Scheiwiller PM, Osmonov B, Ulrich S, Kohler M, Poulin MJ, Bloch KE.
Respiration. 2018 Mar 2. doi: 10.1159/000486450. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29502125

Magnetic Stimulation Therapy in Patients with COPD: A Systematic Review.
Polastri M, Comellini V, Pacilli AMG, Nava S.
COPD. 2018 Mar 20:1-6. doi: 10.1080/15412555.2018.1439910. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29558200

PHYSICAL ACTIVITY

Associations of total and type-specific physical activity with mortality in chronic obstructive pulmonary disease: a population-based cohort study.
Cheng SWM, McKeough Z, Alison J, Dennis S, Hamer M, Stamatakis E.
BMC Public Health. 2018 Feb 17;18(1):268. doi: 10.1186/s12889-018-5167-5.
https://www.ncbi.nlm.nih.gov/pubmed/29454345

Low leisure-based sitting time and being physically active were associated with reduced odds of death and diabetes in people with chronic obstructive pulmonary disease: a cohort study.
McKeough Z, Cheng SWM, Alison J, Jenkins C, Hamer M, Stamatakis E.
J Physiother. 2018 Mar 21. pii: S1836-9553(18)30014-6. doi: 10.1016/j.jphys.2018.02.007. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29574168

Physical activity in the morning and afternoon is lower in patients with chronic obstructive pulmonary disease with morning symptoms.
van Buul AR, Kasteleyn MJ, Chavannes NH, Taube C.
Respir Res. 2018 Mar 27;19(1):49. doi: 10.1186/s12931-018-0749-4.
https://www.ncbi.nlm.nih.gov/pubmed/29587841

TELEMEDICINE

How will telemedicine change clinical practice in chronic obstructive pulmonary disease?
Vitacca M, Montini A, Comini L.
Ther Adv Respir Dis. 2018 Jan-Dec;12:1753465818754778. doi: 10.1177/1753465818754778.
https://www.ncbi.nlm.nih.gov/pubmed/29411700

Using Robots at Home to Support Patients With Chronic Obstructive Pulmonary Disease: Pilot Randomized Controlled Trial.

Broadbent E, Garrett J, Jepsen N, Li Ogilvie V, Ahn HS, Robinson H, Peri K, Kerse N, Rouse P, Pillai A, MacDonald B.
J Med Internet Res. 2018 Feb 13;20(2):e45. doi: 10.2196/jmir.8640.
https://www.ncbi.nlm.nih.gov/pubmed/29439942

Telemonitoring and home hospitalization in patients with chronic obstructive pulmonary disease: study TELEPOC.
Mirón Rubio M, Ceballos Fernández R, Parras Pastor I, Palomo Iloro A, Fernández Félix BM, Medina Miralles J, Zamudio López E, González Pastor J, Amador Lorente C, Mena Hortelano N, Domínguez Sánchez A, Alonso-Viteri S.
Expert Rev Respir Med. 2018 Feb 20. doi: 10.1080/17476348.2018.1442214. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29460648

The efficacy of telehealth delivered educational approaches for patients with chronic diseases: A systematic review.
Rush KL, Hatt L, Janke R, Burton L, Ferrier M, Tetrault M.
Patient Educ Couns. 2018 Feb 15. pii: S0738-3991(18)30053-3. doi: 10.1016/j.pec.2018.02.006. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29486994

Continuous remote monitoring of COPD patients-justification and explanation of the requirements and a survey of the available technologies.
Tomasic I, Tomasic N, Trobec R, Krpan M, Kelava T.
Med Biol Eng Comput. 2018 Mar 5. doi: 10.1007/s11517-018-1798-z. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29504070

Telemonitoring in COPD: The CHROMED Study, a Randomized Clinical Trial.
Walker PP, Pompilio PP, Zanaboni P, Bergmo TS, Prikk K, Malinovschi A, Montserrat JM, Middlemass J, Šonc S, Munaro G, Marušič D, Sepper R, Rosso R, Siriwardena AN, Janson C11, Farre R, Calverley PMA, Dellaca' RL.
Am J Respir Crit Care Med. 2018 Mar 20. doi: 10.1164/rccm.201712-2404OC. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29557669

Evaluation and Exploration on the Effect of the Management of Chronic Obstructive Pulmonary Disease in Rural Areas Through Internet-based Network Consulting Room.
Yan Y, Liu L, Zeng J, Zhang L.
Med Princ Pract. 2018 Mar 20. doi: 10.1159/000488591. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29558756

PATIENT REPORTED OUTCOME MEASURES

Independent determinants of disease-related quality of life in COPD - scope for nonpharmacologic interventions?
Brien SB, Stuart B, Dickens AP, Kendrick T , Jordan RE, Adab P, Thomas M.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 9;13:247-256. doi: 10.2147/COPD.S152955. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29386893

Narrative medicine to improve the management and quality of life of patients with COPD: the first experience applying parallel chart in Italy.
Banfi P, Cappuccio A, Latella ME, Reale L, Muscianisi E, Marini MG.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 11;13:287-297. doi: 10.2147/COPD.S148685. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29391786

Symptom burden and self-management in persons with chronic obstructive pulmonary disease.
Bringsvor HB, Skaug K, Langeland E, Oftedal BF, Assmus J, Gundersen D, Osborne RH, Bentsen SB.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 24;13:365-373. doi: 10.2147/COPD.S151428. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29416327

Patterns and predictors of exhaustion episodes in patients with stable COPD: A longitudinal study.
Medina-Mirapeix F, Bernabeu-Mora R, Giménez-Giménez LM, Montilla-Herrador J, García-Vidal JA, Benítez-Martínez J.
Int J Clin Pract. 2018 Feb 12. doi: 10.1111/ijcp.13068. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29436160

Assessment of depression before and after inpatient rehabilitation in COPD patients: Psychometric properties of the German version of the Patient Health Questionnaire (PHQ-9/PHQ-2).
Schuler M, Strohmayer M, Mühlig S, Schwaighofer B, Wittmann M, Faller H, Schultz K.
J Affect Disord. 2018 Feb 21;232:268-275. doi: 10.1016/j.jad.2018.02.037. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29499510

Medication adherence and health-related quality of life among patients with chronic obstructive pulmonary disease.
Horvat N, Locatelli I, Kos M, Janežič A.
Acta Pharm. 2018 Mar 1;68(1):117-125. doi: 10.2478/acph-2018-0006.
https://www.ncbi.nlm.nih.gov/pubmed/29453914

The cutoff point of clinical chronic obstructive pulmonary disease questionnaire for more symptomatic patients.
Jo YS, Park S, Kim DK, Yoo CG, Lee CH.
BMC Pulm Med. 2018 Feb 27;18(1):38. doi: 10.1186/s12890-018-0601-0.
https://www.ncbi.nlm.nih.gov/pubmed/29482616

Prevalence of Pain in Copd Patients and Associated Factors: Report From a Population Based Study.
de Miguel-Díez J, López-de-Andrés A, Hernandez-Barrera V, Jimenez-Trujillo I, Del Barrio JL, Puente-Maestu L, Martinez-Huedo MA, Jimenez-García R.
Clin J Pain. 2018 Feb 26. doi: 10.1097/AJP.0000000000000598. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29485534

Different Pattern of Chronic Obstructive Pulmonary Disease Assessment Test Score between Chronic Bronchitis and Non-chronic Bronchitis Patients.
Yoo SH, Lee JH, Yoo KH, Jung KS, Rhee CK.
Tuberc Respir Dis (Seoul). 2018 Mar 7. doi: 10.4046/trd.2017.0088. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29527842

Patients' perspective of the impact of COPD on quality of life: a focus group study for patients with COPD.
Jarab A, Alefishat E, Mukattash T, Alzoubi K, Pinto S.
Int J Clin Pharm. 2018 Mar 14. doi: 10.1007/s11096-018-0614-z. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29542033

Depressive status explains a significant amount of the variance in COPD assessment test (CAT) scores.
Miravitlles M, Molina J, Quintano JA, Campuzano A, Pérez J, Roncero C; DEPREPOC study investigators.
Int J Chron Obstruct Pulmon Dis. 2018 Mar 6;13:823-831. doi: 10.2147/COPD.S154791. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29563782

Distinct pain profiles in patients with chronic obstructive pulmonary disease.
Bentsen SB, Miaskowski C, Cooper BA, Christensen VL, Henriksen AH, Holm AM, Rustøen T.
Int J Chron Obstruct Pulmon Dis. 2018 Mar 6;13:801-811. doi: 10.2147/COPD.S150114. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29563780

INTERSTITIAL LUNG DISEASE

Diagnosis and management of idiopathic pulmonary fibrosis: Thoracic Society of Australia and New Zealand and Lung Foundation Australia position statements summary.

Jo HE, Prasad JD, Troy LK, Mahar A, Bleasel J, Ellis SJ, Chambers DC, Holland AE, Lake FR, Keir G, Goh NS, Wilsher M, de Boer S, Moodley Y, Grainge C, Whitford HM, Chapman SA, Reynolds PN, Beatson D, Jones LJ, Hopkins P, Allan HM, Glaspole I, Corte TJ.
Med J Aust. 2018 Feb 5;208(2):82-88.
https://www.ncbi.nlm.nih.gov/pubmed/29385965

Idiopathic pulmonary fibrosis: pathogenesis and management.
Sgalla G, Iovene B, Calvello M, Ori M, Varone F, Richeldi L.
Respir Res. 2018 Feb 22;19(1):32. doi: 10.1186/s12931-018-0730-2.
https://www.ncbi.nlm.nih.gov/pubmed/29471816

Using 6-Min Walk Distance Expressed as a Percentage of Reference to Evaluate the Effect of Pulmonary Rehabilitation in Elderly Patients With Interstitial Lung Disease.
Igarashi A, Iwanami Y, Sugino K, Gocho K, Homma S, Ebihara S.
J Cardiopulm Rehabil Prev. 2018 Feb 26. doi: 10.1097/HCR.0000000000000305. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29485525

Does the severity of interstitial lung disease affect the gains from pulmonary rehabilitation?
Deniz S, Şahin H, Yalnız E.
Clin Respir J. 2018 Mar 2. doi: 10.1111/crj.12785. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29498799

Prevalence of lung cancer in patients with interstitial lung disease is higher than in those with chronic obstructive pulmonary disease.
Jung HI, Park JS, Lee MY, Park B, Kim HJ, Park SH, Choi WI, Lee CW.
Medicine (Baltimore). 2018 Mar;97(11):e0071. doi: 10.1097/MD.0000000000010071.
https://www.ncbi.nlm.nih.gov/pubmed/29538197

Randomised clinical trial of an early palliative care intervention (SUPPORT) for patients with idiopathic pulmonary fibrosis (IPF) and their caregivers: protocol and key design considerations.
Lindell KO, Nouraie M, Klesen MJ, Klein S, Gibson KF, Kass DJ, Rosenzweig MQ.
BMJ Open Respir Res. 2018 Feb 19;5(1):e000272. doi: 10.1136/bmjresp-2017-000272. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29531748

Performance of the St George's Respiratory Questionnaire in patients with connective tissue disease-associated interstitial lung disease.
Suzuki A, Kondoh Y, Swigris JJ, Ando M, Kimura T, Kataoka K, Yamano Y, Furukawa T, Numata M, Sakamoto K, Hasegawa Y.
Respirology. 2018 Mar 25. doi: 10.1111/resp.13293. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29575410

ASTHMA

Exercise and Asthma.
Côté A, Turmel J, Boulet LP.
Semin Respir Crit Care Med. 2018 Feb;39(1):19-28. doi: 10.1055/s-0037-1606215. Epub 2018 Feb 10.
https://www.ncbi.nlm.nih.gov/pubmed/29427982
More interesting papers have been published in 'Seminars in Respiratory and Critical Care Medicine', issue 01: Evolving Concepts in Asthma, please see link below:
https://www.thieme-connect.com/products/ejournals/issue/10.1055/s-008-38505

Exercise Improves Physical Activity and Comorbidities in Obese Adults with Asthma.
Freitas PD, Silva AG, Ferreira PG, da Silva A, Salge JM, Carvalho-Pinto RM, Cukier A, Brito CM, Mancini MC, Carvalho CRF.
Med Sci Sports Exerc. 2018 Feb 9. doi: 10.1249/MSS.0000000000001574. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29432326

Outcomes of the Montana Asthma Home Visiting Program: A home-based asthma education program.
Fernandes JC, Biskupiak WW, Brokaw SM, Carpenedo D, Loveland KM, Tysk S, Vogl S.
J Asthma. 2018 Feb 9:1-7. doi: 10.1080/02770903.2018.1426766. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29425075

Association Between Obesity and Acute Severity Among Patients Hospitalized for Asthma Exacerbation.
Luthe SK, Hirayama A, Goto T, Faridi MK, Camargo CA Jr., Hasegawa K.
J Allergy Clin Immunol Pract. 2018 Feb 13. pii: S2213-2198(18)30093-X. doi: 10.1016/j.jaip.2018.02.001. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29452277

Higher mortality of adults with asthma: a 15 year follow-up of apopulation-based cohort.
Lemmetyinen RE, Karjalainen JV, But A, Renkonen RLO, Pekkanen JR, Toppila-Salmi SK, Haukka JK.
Allergy. 2018 Feb 20. doi: 10.1111/all.13431. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29461632

Update in Asthma 2017.
Gray LE, Sly PD.
Am J Respir Crit Care Med. 2018 Feb 21. doi: 10.1164/rccm.201801-0002UP. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/29466678

A systematic review of associations of physical activity and sedentary time with asthma outcomes.
Cordova-Rivera L, Gibson PG, Gardiner PA, McDonald VM.
J Allergy Clin Immunol Pract. 2018 Mar 3. pii: S2213-2198(18)30127-2. doi: 10.1016/j.jaip.2018.02.027. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29510231

Nordic consensus statement on the systematic assessment and management of possible severe asthma in adults.
Porsbjerg C, Ulrik C, Skjold T, Backer V, Laerum B, Lehman S, Janson C, Sandstrøm T, Bjermer L, Dahlen B, Lundbäck B, Ludviksdottir D, Björnsdóttir U, Altraja A, Lehtimäki L, Kauppi P, Karjalainen J, Kankaanranta H.
Eur Clin Respir J. 2018 Mar 6;5(1):1440868. doi: 10.1080/20018525.2018.1440868. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29535852

Comparing the effect of pulmonary rehabilitation in patients with uncontrolled and partially controlled asthma.
Sahin H, Naz I.
J Asthma. 2018 Mar 13:1-8. doi: 10.1080/02770903.2018.1443468. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29533692

Asthma and health related quality of life in late midlife adults.
Urbstonaitis R, Deshpande M, Arnoldi J.
Res Social Adm Pharm. 2018 Mar 9. pii: S1551-7411(17)30783-0. doi: 10.1016/j.sapharm.2018.03.003. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29555405

ADVANCED DISEASE / END OF LIFE / PALLIATIVE CARE

Palliative Care and Interventional Pulmonology.
Ali MS, Sorathia L.
Clin Chest Med. 2018 Mar;39(1):57-64. doi: 10.1016/j.ccm.2017.11.001. Epub 2017 Dec 19.
https://www.ncbi.nlm.nih.gov/pubmed/29433725

Low uptake of palliative care for COPD patients within primary care in the UK.
Bloom CI, Slaich B, Morales DR, Smeeth L, Stone P, Quint JK.
Eur Respir J. 2018 Feb 14;51(2). pii: 1701879. doi: 10.1183/13993003.01879-2017. Print 2018 Feb.
https://www.ncbi.nlm.nih.gov/pubmed/29444916

Do-not-resuscitate orders as part of advance care planning in patients with COPD.

Raskin J, Vermeersch K, Everaerts S, Van Bleyenbergh P, Janssens W.
ERJ Open Res. 2018 Feb 16;4(1). pii: 00116-2017. doi: 10.1183/23120541.00116-2017. eCollection 2018 Jan.
https://www.ncbi.nlm.nih.gov/pubmed/29479534

Management of COPD in End-of-Life Care by Spanish Pulmonologists.
Ecenarro PS, Iguiñiz MI, Tejada SP, Malanda NM, Imizcoz MA, Marlasca LA, Navarrete BA.
COPD. 2018 Mar 20:1-6. doi: 10.1080/15412555.2018.1441274. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29558226

COMORBID CONDITIONS

The revised GOLD 2017 COPD categorization in relation to comorbidities.
Kahnert K, Alter P, Young D, Lucke T, Heinrich J, Huber RM, Behr J, Wacker M, Biertz F, Watz H, Bals R, Welte T, Wirtz H, Herth F, Vestbo J, Wouters EF, Vogelmeier CF, Jörres RA.
Respir Med. 2018 Jan;134:79-85. doi: 10.1016/j.rmed.2017.12.003. Epub 2017 Dec 5.
https://www.ncbi.nlm.nih.gov/pubmed/29413512

Malnutrition and sarcopenia assessment in patients with chronic obstructive pulmonary disease according to international diagnostic criteria, and evaluation of raw BIA variables.
de Blasio F, Di Gregorio A, de Blasio F, Bianco A, Bellofiore B, Scalfi L.
Respir Med. 2018 Jan;134:1-5. doi: 10.1016/j.rmed.2017.11.006. Epub 2017 Nov 17.
https://www.ncbi.nlm.nih.gov/pubmed/29413494

Chronic obstructive pulmonary disease and the risk of 12 cardiovascular diseases: a population-based study using UK primary care data.
Morgan AD, Rothnie KJ, Bhaskaran K, Smeeth L, Quint JK.
Thorax. 2018 Feb 3. pii: thoraxjnl-2017-210865. doi: 10.1136/thoraxjnl-2017-210865. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29438071

Exacerbations of Chronic Obstructive Pulmonary Disease and Cardiac Events: A Cohort Analysis.
Kunisaki KM, Dransfield MT, Anderson JA, Brook RD, Calverley PMA, Celli BR, Crim C, Hartley BF, Martinez FJ, Newby DE, Pragman AA, Vestbo J, Yates JC, Niewoehner DE; SUMMIT Investigators.
Am J Respir Crit Care Med. 2018 Feb 14. doi: 10.1164/rccm.201711-2239OC. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29442524

Characteristics associated with mortality in patients with chronic obstructive pulmonary disease (COPD)-heart failure coexistence.

Plachi F, Balzan FM, Sanseverino RA, Palombini DV, Marques RD, Clausell NO, Knorst MM, Neder JA, Berton DC.
Prim Health Care Res Dev. 2018 Feb 21:1-5. doi: 10.1017/S1463423618000117. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29463343

Chronic Obstructive Pulmonary Disease (COPD) as a disease of early aging: Evidence from the EpiChron Cohort.
Divo MJ, Celli BR, Poblador-Plou B, Calderón-Larrañaga A, de-Torres JP, Gimeno-Feliu LA, Bertó J, Zulueta JJ, Casanova C, Pinto-Plata VM, Cabrera-Lopez C, Polverino F, Carmona Píréz J, Prados-Torres A, Marin JM; EpiChron—BODE Collaborative Group.
PLoS One. 2018 Feb 22;13(2):e0193143. doi: 10.1371/journal.pone.0193143. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29470502

Anxiety and Depression in Chronic Obstructive Pulmonary Disease: Recognition and Management.
Yohannes AM, Kaplan A, Hanania NA.
Cleve Clin J Med. 2018 Feb;85(2 Suppl 1):S11-S18. doi: 10.3949/ccjm.85.s1.03.
https://www.ncbi.nlm.nih.gov/pubmed/29494328

Systemic vascular dysfunction is associated with emphysema burden in mild COPD.
Zelt JT, Jones JH, Hirai DM, King TJ, Berton DC, Pyke KE, O'Donnell DE, Neder JA.
Respir Med. 2018 Mar;136:29-36. doi: 10.1016/j.rmed.2018.01.007. Epub 2018 Jan 12.
https://www.ncbi.nlm.nih.gov/pubmed/29501244

Physiopathological relationship between chronic obstructive pulmonary disease and insulin resistance.
Machado FVC, Pitta F, Hernandes NA, Bertolini GL.
Endocrine. 2018 Mar 6. doi: 10.1007/s12020-018-1554-z. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29512058

Prevalence of chronic obstructive pulmonary disease (COPD) not diagnosed in a population with cardiovascular risk factors.
Montserrat-Capdevila J, Seminario MA, Godoy P, Marsal JR, Ortega M, Pujol J, Castañ MT, Alsedà M, Betriu À, Lecube A, Portero M, Purroy F, Valdivielso JM, Barbé F.
Med Clin (Barc). 2018 Mar 7. pii: S0025-7753(18)30061-7. doi: 10.1016/j.medcli.2017.12.018. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29525115

Two risk factors for depression in chronic obstructive pulmonary disease.
Xu K, Li X.
Med Sci Monit. 2018 Mar 8;24:1417-1423.
https://www.ncbi.nlm.nih.gov/pubmed/29518064

Patterns of Body Composition Relating to Chronic Respiratory Diseases Among Adults in Four Resource-Poor Settings in Peru.
Trompeter G, Grigsby MR, Miele CH, Wise RA, Gilman RH, Miranda JJ, Bernabe-Ortiz A, Checkley W; CRONICAS Cohort Study.
Lung. 2018 Mar 20. doi: 10.1007/s00408-018-0109-7. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29556728

Skeletal Muscle Dysfunction in Chronic Obstructive Pulmonary Disease (COPD): What We Know and Can Do for Our Patients.
Jaitovich A, Barreiro E.
Am J Respir Crit Care Med. 2018 Mar 19. doi: 10.1164/rccm.201710-2140CI. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29554438

A study on the prevalence of depression and the severity of depression in patients of chronic obstructive pulmonary disease in a semi-urban Indian population.
Agarwal A, Batra S, Prasad R, Verma A, Jilani AQ, Kant S.
Monaldi Arch Chest Dis. 2018 Mar 19;88(1):902. doi: 10.4081/monaldi.2018.902.
https://www.ncbi.nlm.nih.gov/pubmed/29557571

Sleep Disruption as a Predictor of Quality of Life Among Patients in the Subpopulations and Intermediate Outcome Measures in COPD Study (SPIROMICS).
Zeidler MR, Martin JL, Kleerup EC, Schneider H, Mitchell MN, Hansel NN, Sundar K, Schotland H, Basner RC, Wells J, Krishnan JA, Criner GJ, Cristenson S, Krachman S, Badr MS; SPIROMICS Research Group.
Sleep. 2018 Mar 9. doi: 10.1093/sleep/zsy044. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29534240

Increased rate of osteoporosis, low lean mass, and fragility fractures in COPD patients: association with disease severity.
Graumam RQ, Pinheiro MM, Nery LE, Castro CHM.
Osteoporos Int. 2018 Mar 21. doi: 10.1007/s00198-018-4483-z. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29564475

Chronic Obstructive Pulmonary Disease in Lung Cancer Patients: Prevalence, Underdiagnosis, and Clinical Characterization.
Mouronte-Roibás C, Leiro-Fernández V, Ruano-Raviña A, Ramos-Hernández C, Abal-Arca J, Parente-Lamelas I, Botana-Rial M, Priegue-Carrera A, Fernández-Villar A.
Respiration. 2018 Mar 27. doi: 10.1159/000487243. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29587299

Mental disorders in chronic obstructive pulmonary diseases.

Montserrat-Capdevila J, Godoy P, Marsal JR, Ortega M, Pifarré J, Alsedà M, Castañ MT, Barbé F.
Perspect Psychiatr Care. 2018 Mar 25. doi: 10.1111/ppc.12274. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29577318

Obstructive Sleep Apnea Syndrome and chronic obstructive pulmonary disease: Overlap or Syndrome.
Marín-Oto M, Marín JM.
Arch Bronconeumol. 2018 Mar 22. pii: S0300-2896(18)30066-8. doi: 10.1016/j.arbres.2018.02.012. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29576199

PERSPECTIVES / STATEMENTS / EDITORIALS

Diagnosis of Chronic Obstructive Pulmonary Disease: Breathing New Life into an Old Debate.
Bhatt SP.
Ann Am Thorac Soc. 2018 Feb;15(2):163-165. doi: 10.1513/AnnalsATS.201709-733ED.
https://www.ncbi.nlm.nih.gov/pubmed/29388821

The "Obesity Paradox" in Chronic Obstructive Pulmonary Disease: Can It Be Resolved?
Iyer AS, Dransfield MT.
Ann Am Thorac Soc. 2018 Feb;15(2):158-159. doi: 10.1513/AnnalsATS.201711-901ED.
https://www.ncbi.nlm.nih.gov/pubmed/29388820

From systems biology to P4 medicine: applications in respiratory medicine.
Noell G, Faner R, Agustí A.
Eur Respir Rev. 2018 Feb 7;27(147). pii: 170110. doi: 10.1183/16000617.0110-2017. Print 2018 Mar 31.
https://www.ncbi.nlm.nih.gov/pubmed/29436404

Palliative care for people with COPD: effective but underused.
Halpin DMG.
Eur Respir J. 2018 Feb 14;51(2). pii: 1702645. doi: 10.1183/13993003.02645-2017. Print 2018 Feb.
https://www.ncbi.nlm.nih.gov/pubmed/29444923

Deciphering COPD and associated cardiovascular impairment.
Payne GA, Wells JM.
Lancet Respir Med. 2018 Feb 21. pii: S2213-2600(18)30047-X. doi: 10.1016/S2213-2600(18)30047-X. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29477450

Advance care planning in severe COPD: it is time to engage with the future.
Andreas S, Alt-Epping B.
ERJ Open Res. 2018 Feb 16;4(1). pii: 00009-2018. doi: 10.1183/23120541.00009-2018. eCollection 2018 Jan.
https://www.ncbi.nlm.nih.gov/pubmed/29479536

Physical Activity in COPD. Significance, Prognosis, Measurement and Therapeutic Interventions.
Rabinovich RA.
Arch Bronconeumol. 2018 Mar 1. pii: S0300-2896(18)30026-7. doi: 10.1016/j.arbres.2018.01.011. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29503063

COPD as a Risk Factor for Cardiovascular Disease: A View from the SUMMIT.
Hurst JR, Sin DD.
Am J Respir Crit Care Med. 2018 Mar 13. doi: 10.1164/rccm.201802-0347ED. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29533679

OTHER

2017 Global Initiative for Chronic Obstructive Lung Disease reclassifies half of COPD subjects to lower risk group.
Högman M, Sulku J, Ställberg B, Janson C, Bröms K, Hedenström H, Lisspers K, Malinovschi A.
Int J Chron Obstruct Pulmon Dis. 2018 Jan 3;13:165-173. doi: 10.2147/COPD.S151016. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29379281

Trajectories of change in cognitive function in people with COPD.
Park SK.
J Clin Nurs. 2018 Feb 3. doi: 10.1111/jocn.14285. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29396870

Characterizing undiagnosed chronic obstructive pulmonary disease: a systematic review and meta-analysis.
Johnson KM, Bryan S, Ghanbarian S, Sin DD, Sadatsafavi M.
Respir Res. 2018 Feb 7;19(1):26. doi: 10.1186/s12931-018-0731-1.
https://www.ncbi.nlm.nih.gov/pubmed/29415723

Health Services Burden of Undiagnosed and Overdiagnosed COPD.

Gershon AS, Thiruchelvam D, Chapman KR, Aaron SD, Stanbrook MB, Bourbeau J, Tan W, To T; Canadian Respiratory Research Network.
Chest. 2018 Feb 6. pii: S0012-3692(18)30238-1. doi: 10.1016/j.chest.2018.01.038. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29425675

Quality of care and clinical outcomes of chronic obstructive pulmonary disease in patients with schizophrenia. A Danish nationwide study.
Jørgensen M, Mainz J, Lange P, Paaske Johnsen S.
Int J Qual Health Care. 2018 Feb 8. doi: 10.1093/intqhc/mzy014. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29432585

Between hope and hopelessness: COPD patients' and their family members' experiences of interacting with healthcare providers - a qualitative longitudinal study.
Andersen IC, Thomsen TG, Bruun P, Bødtger U, Hounsgaard L.
Scand J Caring Sci. 2018 Feb 15. doi: 10.1111/scs.12565. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29446474

The relationship between chronic obstructive pulmonary disease and frailty: a systematic review and meta-analysis of observational studies.
Marengoni A, Vetrano DL, Manes-Gravina E, Bernabei R, Onder G, Palmer K.
Chest. 2018 Feb 22. pii: S0012-3692(18)30310-6. doi: 10.1016/j.chest.2018.02.014. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29477493

Predictors of COPD in symptomatic smokers and ex-smokers seen in primary care.
Tupper OD, Kjeldgaard P, Løkke A, Ulrik CS.
Chron Respir Dis. 2018 Jan 1:1479972318761655. doi: 10.1177/1479972318761655. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29486583

Disease Management Plus Recommended Care versus Recommended Care Alone for Ambulatory COPD Patients.
Kalter-Leibovici O, Benderly M, Freedman LS, Kaufman G, Molcho Falkenberg Luft T, Murad H, Olmer L, Gluch M, Segev D, Gilad A, Elkrinawi S, Cukierman-Yaffe T, Chen B, Jacobson O, Key C, Shani M, Fink G; Chronic Obstructive Pulmonary Disease Community Disease Management (COPD-CDM) investigators.
Am J Respir Crit Care Med. 2018 Mar 1. doi: 10.1164/rccm.201711-2182OC. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/29494211

Association of energy and protein intakes with length of stay, readmission and mortality in hospitalised patients with chronic obstructive pulmonary disease.

Ingadottir, Beck AM, Baldwin C, Weekes CE, Geirsdottir OG, Ramel A, Gislason T, Gunnarsdottir I.
Br J Nutr. 2018 Mar;119(5):543-551. doi: 10.1017/S0007114517003919.
https://www.ncbi.nlm.nih.gov/pubmed/29508694

Population-based analysis of patients with COPD in Catalonia: a cohort study with implications for clinical management.
Vela E, Tényi Á, Cano I, Monterde D, Cleries M, Garcia-Altes A, Hernandez C, Escarrabill J, Roca J.
BMJ Open. 2018 Mar 6;8(3):e017283. doi: 10.1136/bmjopen-2017-017283.
https://www.ncbi.nlm.nih.gov/pubmed/29511004

Characteristics and risk factors for inconsistency between the risk of exacerbations and the severity of airflow limitation in COPD based on GOLD 2017: A retrospective, cross-sectional study.
Huang WC, Wu MF, Chen HC, Hsu JY; Taiwan Obstructive Lung Disease Consortium.
PLoS One. 2018 Mar 12;13(3):e0193880. doi: 10.1371/journal.pone.0193880. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29529075

The Comparison of Clinical Variables in Two Classifications: GOLD 2017 Combined Assessment and Spirometric Stage of Chronic Obstructive Pulmonary Disease.
Candemir I, Ergun P, Kaymaz D, Tasdemir F, Egesel N.
Tuberc Respir Dis (Seoul). 2018 Mar 7. doi: 10.4046/trd.2017.0114. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29527845

Home noninvasive ventilatory support for patients with chronic obstructive pulmonary disease: patient selection and perspectives.
Storre JH, Callegari J, Magnet FS, Schwarz SB, Duiverman ML, Wijkstra PJ, Windisch W.
Int J Chron Obstruct Pulmon Dis. 2018 Feb 28;13:753-760. doi: 10.2147/COPD.S154718. eCollection 2018.
https://www.ncbi.nlm.nih.gov/pubmed/29535515

Patterns of Time Use across the Chronic Obstructive Pulmonary Disease Severity Spectrum.
Hunt T, Williams MT, Olds TS, Dumuid D.
Int J Environ Res Public Health. 2018 Mar 16;15(3). pii: E533. doi: 10.3390/ijerph15030533.
https://www.ncbi.nlm.nih.gov/pubmed/29547535

Results of a Patient Survey Regarding COPD Knowledge, Treatment Experiences, and Practices With Inhalation Devices.
Dhand R, Mahler DA, Carlin B, Hanania N, Ohar J, Pinto-Plata V, Shah T, Eubanks D, Braman SS.
Respir Care. 2018 Mar 20. pii: respcare.05715. doi: 10.4187/respcare.05715. [Epub ahead of print]

https://www.ncbi.nlm.nih.gov/pubmed/29559537

Risk of fall in patients with COPD.
Hakamy A, Bolton CE, Gibson JE, McKeever TM.
Thorax. 2018 Mar 21. pii: thoraxjnl-2017-211008. doi: 10.1136/thoraxjnl-2017-211008. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29563161

Effectiveness of a chronic obstructive pulmonary disease integrated care pathway in a regional health system: a propensity score matched cohort study.
Wu CX, Hwang CH, Tan WS, Tai KP, Kwek LSL, Chee TG, Choo YM, Phng FWL, Chua GSW.
BMJ Open. 2018 Mar 22;8(3):e019425. doi: 10.1136/bmjopen-2017-019425.
https://www.ncbi.nlm.nih.gov/pubmed/29572394

Improvement in the management of chronic obstructive pulmonary disease following a clinical educational program: results from a prospective cohort study in the Sicilian general practice setting.
Ferrara R, Ientile V, Piccinni C, Pasqua A, Pecchioli S, Fontana A, Alecci U, Scoglio R, Magliozzo F, Torrisi SE, Vancheri C, Vitulo P, Fantaci G, Ferrajolo C, Cazzola M, Cricelli C, Caputi AP, Trifirò G.
NPJ Prim Care Respir Med. 2018 Mar 23;28(1):10. doi: 10.1038/s41533-018-0077-7.
https://www.ncbi.nlm.nih.gov/pubmed/29572448

Occupational exposures and 20-year incidence of COPD: the European Community Respiratory Health Survey.
Lytras T, Kogevinas M, Kromhout H, Carsin AE, Antó JM, Bentouhami H, Weyler J, Heinrich J, Nowak D, Urrutia I, Martinez-Moratalla J, Gullón JA, Pereira-Vega A, Raherison-Semjen C, Pin I, Demoly P, Leynaert B, Villani S, Gislason T, Svanes C, Holm M, Forsberg B, Norbäck D, Mehta AJ, Probst-Hensch N, Benke G, Jogi R, Torén K, Sigsgaard T, Schlünssen V, Olivieri M, Blanc PD, Vermeulen R, Garcia-Aymerich J, Jarvis D, Zock JP.
Thorax. 2018 Mar 24. pii: thoraxjnl-2017-211158. doi: 10.1136/thoraxjnl-2017-211158. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/29574416